CHAPTER-FIVE

DATA ANALYSIS AND INTERPRETATION OF THE RESEARCH STUDY

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DETAILED CONTENT AT A GLANCE

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DATA ANALYSIS & INTERPRETATIONS OF THE RESEARCH STUDY

5.0: INTRODUCTION:

The researcher after the collection of primary data from mobile commerce (m-Commerce) users from selected four cities of Gujarat State, had attempted to analyse, interpret, and report its results arrived at by using SPSS 25.0 for windows. The collected primary data had been categorized, tabulated, analysed and interpreted and results had been presented in tabular and graphical form as follows:

5.1 PROFILE OF SELECTED M-COMMERCE USERS

The researcher has provided the profile of users who have used or are using different m-Commerce application for making online purchases. The demographic details based on age, educational qualification, marital status, family type and monthly income of m-Commerce users living in Vadodara, Ahmedabad, Surat and Rajkot city, the selected four cities of Gujarat State are given in table number 5.1. The Graphic representation of the same is shown from Graph number 5.1 to 5.6.

Table Number: 5.1:
Demographic Details of Selected m-Commerce Users
(Number and Percentage)

Background of selected m-Commerce users		Vadodara	Ahmedabad	Surat	Rajkot	Gujarat State
Age Groups (In years)	16 to 30	126(43.4)	148(29.6)	140(32.9)	126(47.5)	540(36.5)
	31 to 50	164(56.6)	206(41.2)	229(53.9)	139(52.5)	738(49.9)
	Above 50	0(0.0)	146(29.2)	56(13.2)	0(0.0)	202(13.6)
Gender	Male	136(46.9)	242(48.4)	212(49.9)	125(47.2)	715(48.3)
	Female	154(53.1)	258(51.6)	213(50.1)	140(52.8)	765(51.7)
Marital Status	Married	228(78.6)	416(83.2)	341(80.2)	207(78.1)	1192(80.5)
	Unmarried	62(21.4)	84(16.8)	84(19.8)	58(21.9)	288(19.5)
Family Type	Joint	139(47.9)	242(48.4)	202(47.5)	117(44.2)	700(47.3)
	Nuclear	151(52.1)	258(51.6)	223(52.5)	148(55.8)	780(52.7)
Occupation	Student	99(34.1)	123(24.6)	117(27.5)	102(38.5)	441(29.8)
	Service	120(41.4)	214(42.8)	180(42.4)	98(37.0)	612(41.4)
	Self-Employed	66(22.8)	140(28.0)	115(27.1)	61(23.0)	382(25.8)
	Non-working	5(1.7)	23(4.6)	13(3.1)	4(1.5)	45(3.0)
Annual Income	Less than 6 Lakhs	87(30.0)	141(28.2)	134(31.5)	72(27.2)	434(29.3)
	6 to 9 Lakhs	117(40.3)	161(32.2)	135(31.8)	113(42.6)	526(35.5)
	9 to 12 Lakhs	49(16.9)	107(21.4)	94(22.1)	47(17.7)	297(20.1)
	More than12 Lakhs	37(12.8)	91(18.2)	62(14.6)	33(12.5)	223(15.1)
Total		**290(100.0)**	**500(100.0)**	**425(100.0)**	**265(100.0)**	**1480(100.0)**

Graph Number: 5.1: Profile of the Selected m-Commerce Users (As per Age Group in Years)
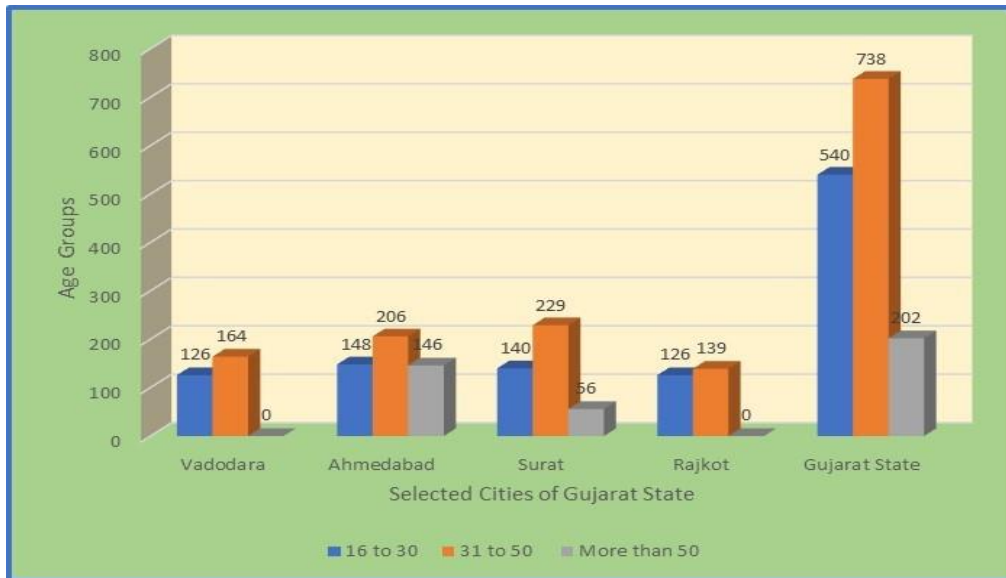
From the Table 5.1and Graph Number 5.1, it can be interpreted that in case of the age group of 16 to 30 years 48 percent of the m-Commerce users belong to Rajkot, 43 percent are from Vadodara, 33 from Surat and 30 percent from Ahmedabad city with 36.5 percent of the overall responses from the Gujarat State. There was not much difference in the use of m-Commerce irrespective of city among the age group of 31 to 50. The highest responses in the category were from users of Vadodara city (57 percent) followed by Surat city (54 percent), Rajkot city (53 percent) and Ahmedabad city (41 percent). This category had the maximum responses among all age group category i.e., 49.9 percent responses in the Gujarat State. There were few m-Commerce users in the age group of above 50 years consists of just 13.6 percent responses collected from the Gujarat State. City wise bifurcation about the same revealed only two cities from which researcher was able to collect responses under this age group i.e., 29.2 percent responses from Ahmedabad city and 13.2 percent responses from Surat city of the Gujarat State.

Graph Number: 5.2: Profile of the Selected M-Commerce Users (As per Gender)
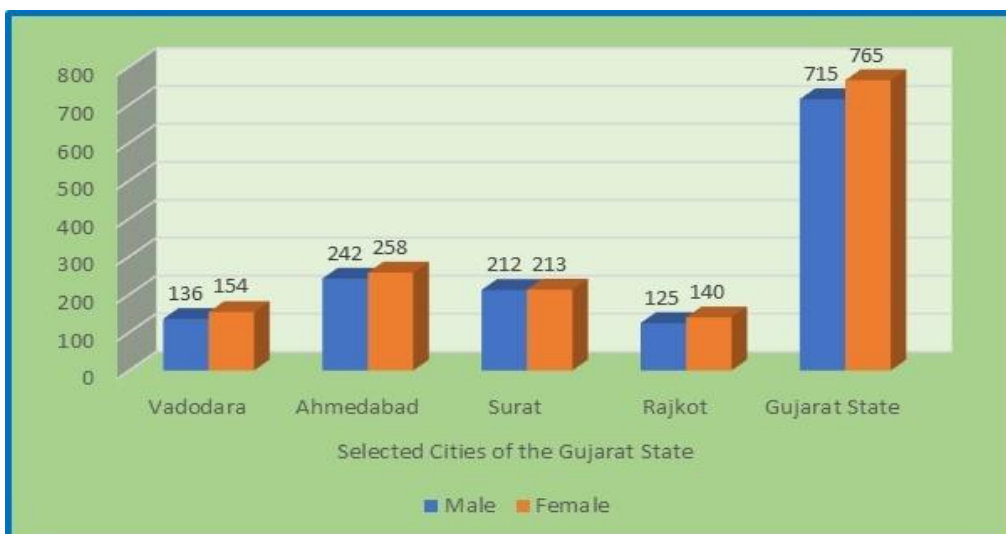
From the Table 5.1 and Graph Number 5.2, it can be inferred that there was not much difference in the male and female m-Commerce users in the Gujarat State. Minor difference of 50 responses (3.4 percent) was seen between the female and male m-Commerce users, with females using more of the m-Commerce application compared to the male. City wise difference revealed that Surat city is having lesser difference (1 response) followed by Rajkot city (difference of 15 responses), Ahmedabad city (difference of 16 responses) and Vadodara city (difference of 18 responses) of Gujarat State.

Graph Number: 5.3: Profile of the Selected M-Commerce Users (As per Marital status)
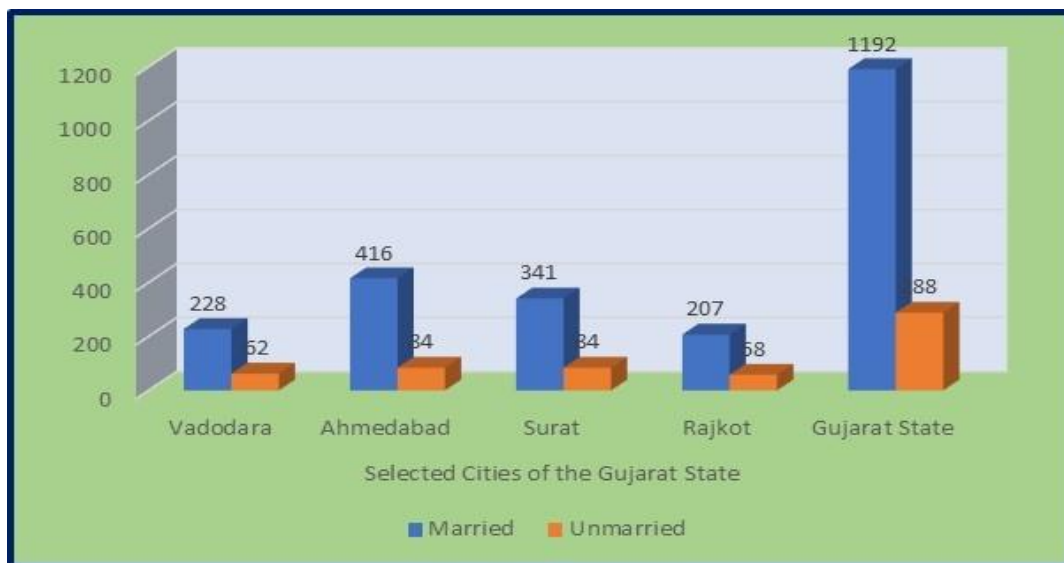
From the Table 5.1 and Graph Number 5.3, it is established that m-Commerce applications were used more by married users compared to the unmarried users in the Gujarat State. The difference in the use of m-Commerce application based on the marital status was around 61 percent in the Gujarat State. Lesser difference in the use of m-Commerce application was seen in the Rajkot city (56.2 percent) followed by Vadodara city (57.2 percent), Surat city (60.4 percent) and the Ahmedabad city (66.4 percent) of the Gujarat State.

Graph Number: 5.4: Profile of the Selected m-Commerce Users (As per Type of family)
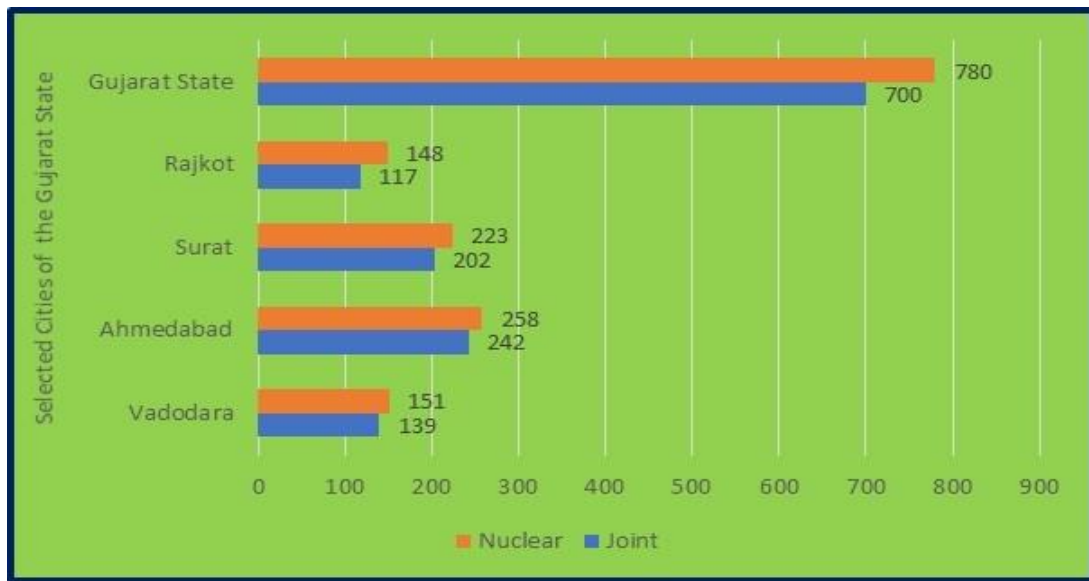
From the Table 5.1 and Graph Number 5.4 it is conferred that Gujarat State has more or less same number of people living in joint and nuclear family. Not much difference in the responses was found among m-Commerce users based on the family in which they live. 47.3 percent of responses were received from the joint family and 52.7 percent responses were received from the nuclear family (difference of 5.4 percent) in the Gujarat State. Less difference was examined in the responses collected from Ahmedabad city (3.2 percent difference), Vadodara city (4.2 percent difference) and Surat city (5 percent difference) from the overall difference of 5.4 percent of Gujarat State. Rajkot city reported the maximum difference of 11.6 percent in terms of use of m-Commerce applications based on the family type of the users.

Graph Number: 5.5: Profile of the Selected m-Commerce Users (As per Occupation)
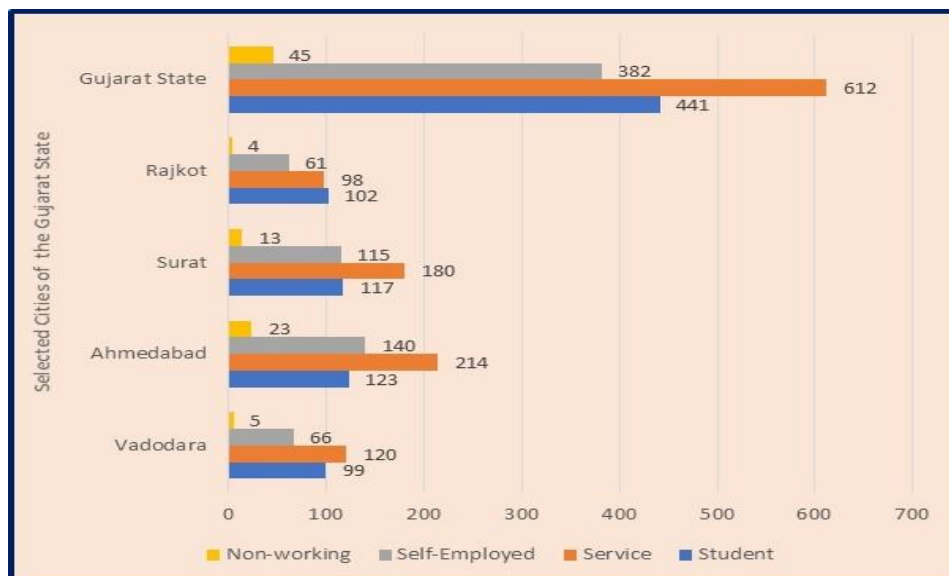
Table 5.1 and Graph Number 5.5 display m-Commerce users based on four different occupations i.e., students, users from service sector, self-employed and m-Commerce users not performing any economic activity (not working).

Majority of the responses were collected from the people from service sector (41.4 percent) followed by students (29.8 percent), self-employed (25.8 percent) and 3 percent from unemployed people. Except in Rajkot, where student's usage mobile commerce was slightly higher than the service sector employees, city-level responses showed a similar pattern with service sector employees being the primary users.

Graph Number: 5.6: Profile of the Selected m-Commerce Users (As per Income)

The Table 5.1 and Graph Number 5.6 display m-Commerce users based on their annual income. Based on the responses collected, it is inferred that majority of the m-Commerce users were of the annual income between 6 to 9 lakhs. Minor difference (0.3) in the percentage of the majority of m-Commerce users with different income category was seen in the Surat city which has 31.8 percent users in 6 to 9 lakhs category and 31.5 percent in less than 6 lakhs category.

In the other selected cities, notable difference was seen among the different category of users regarding the use of m-Commerce application. The data suggested that m-Commerce was becoming more popular among middle-class households.

5.2: VIEWS REGARDING FRIENDLIEST OPERATING SYSTEM IN MOBILE PHONES

Table number 5.2 and Graph number 5. 7 depicts the selected users' response regarding the most user-friendly operating system in mobile phones. From the overall responses received from Gujarat state, it was inferred that Android is the most user-friendly operating system with more than 90 percent of the users from all the selected cities of the State had agreed to it. The next preferred operating system by the users was iOS followed by the windows operating system while engaging in m-Commerce.

Table 5.2:

Friendliest Operating System in Mobile Phones (Number and Percentage)

Operating system	Vadodara	Ahmedabad	Surat	Rajkot	Gujarat State
Android	279(96.2)	464(92.8)	403(94.8)	253(95.5)	1399(94.5)
iOS	10(3.4)	27(5.4)	18(4.2)	12(4.5)	67(4.5)
Windows	1(.3)	9(1.8)	4(.9)	0(.0)	14(.9)
Total	**290(100)**	**500(100)**	**425(100)**	**265(100)**	**1480(100)**

In the case of city of Vadodara city, majority of m-Commerce users (96 percent) felt that Android operating system was the friendliest operating system. Similar trend was found in other cities, 93 percent of users of Ahmedabad city, 95 percent of Surat city and 95 percent of Rajkot city found Android as the most friendlies operating system. The other preferred operating system was iOS. 5 percent m-Commerce users in Ahmedabad and Rajkot cities, 4 percent in Surat city and 3 percent in Vadodara city found iOS as a user-friendly operating system. Windows was found to be the least user friendly among the three operating systems. Overall, only 0.9 percent users had given the opinion that Windows was the friendliest operating system; two percent users from Ahmedabad city, 0.9 percent from Surat city and 0.3 percent from Vadodara city found it as the friendliest operating system whereas none of the m-Commerce users from Rajkot city found it the as the user-friendly operating system.

Graph Number: 5.7: Selected m-Commerce User's Responses Regarding Friendliest Operating System

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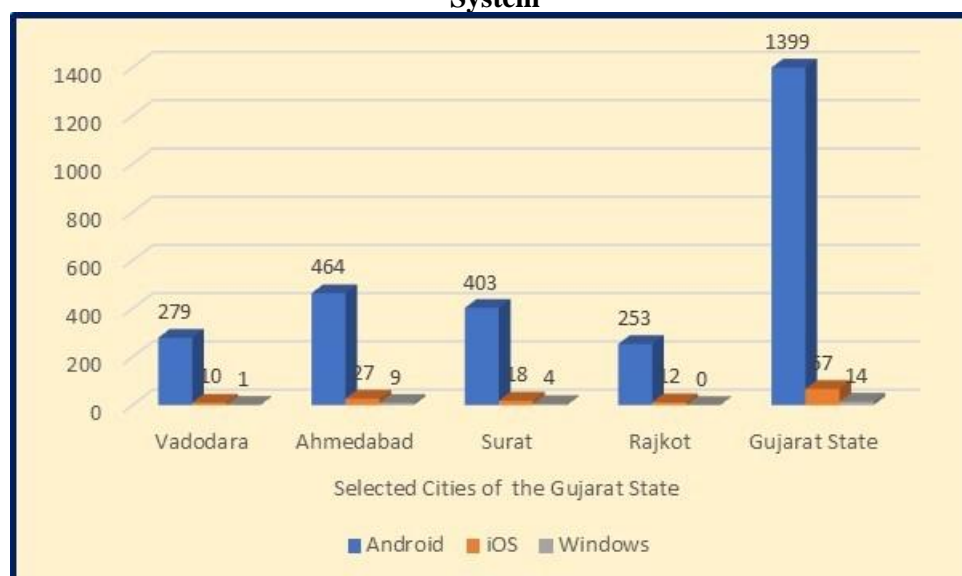
5.3 FREQUENCY, PLACE, AVERAGE TIME AND PREFERRED TIME SPENT FOR SHOPPING VIA MOBILE PHONES

5.3.1: Frequency of Shopping Using Mobile Phones:

Table number 5.3 and Graph number 5.8 exhibit the responses for frequency of online shopping using the mobile phones. Responses were collected in four categories namely, once in month, once in fortnight, one in a week and the last category was about the user's 'uncertainty' regarding the frequency of m-Commerce usage.

Table 5.3:

Selected Users' Response Regarding Frequency of Shopping by Using Mobile Phones

(Number and Percentage)

Frequency of shopping	Vadodara	Ahmedabad	Surat	Rajkot	Gujarat State
Once in a month	106(36.6)	133(26.6)	117(27.5)	86(32.5)	442(29.9)
Once in a fortnight	62(21.4)	124(24.8)	97(22.8)	59(22.3)	342(23.1)
Once a Week	15(5.2)	43(8.6)	40(9.4)	15(5.7)	113(7.6)
Uncertain	107(36.9)	200(40.0)	171(40.2)	105(39.6)	583(39.4)
Total	**290(100)**	**500(100)**	**425(100)**	**265(100)**	**1480(100)**

The data analysis of all the four cities showed that nearly 40 percent (39.4 percent) of the users involved in shopping using mobile phones, whenever they felt it was necessary to buy something, so they were uncertain about the frequency. Nearly 30 percent of the people used mobile phones for shopping once in a month, 23.1 percent once in a fortnight, 7.6 percent used mobile once in a week for shopping.

City-wise analysis showed similar trend where 36.6 percent mobile phone users of Vadodara city, 32.5 percent of Rajkot city, 27.5 percent of Surat city and 26.6 percent of Ahmedabad city, shop only once in a month. While, 24.8 percent users of Ahmedabad city, 22.8 percent of Surat city, 22.3 percent of Rajkot city and 21.4 percent of Vadodara city shop once in a fortnight; and 9.4 percent users of Surat city and Ahmedabad city, 5.7 percent of Rajkot city and 5.2 percent in Vadodara city shop once in a week.

Nearly 40 percent of the people in all the cities were not sure about the frequency of buying using mobile phones as these users take impulse purchase decision. M-Commerce companies should pay more focus on this segment and should adopt some strategy that would help to draw the attention of impulsive buyers towards company's products and services and to increase their frequency of shopping by offering some attractive schemes and giving rewards or rebate based on their purchase behaviour.

Graph Number: 5.8: Selected Users' Response Regarding Frequency of Shopping by Using Mobile Phones
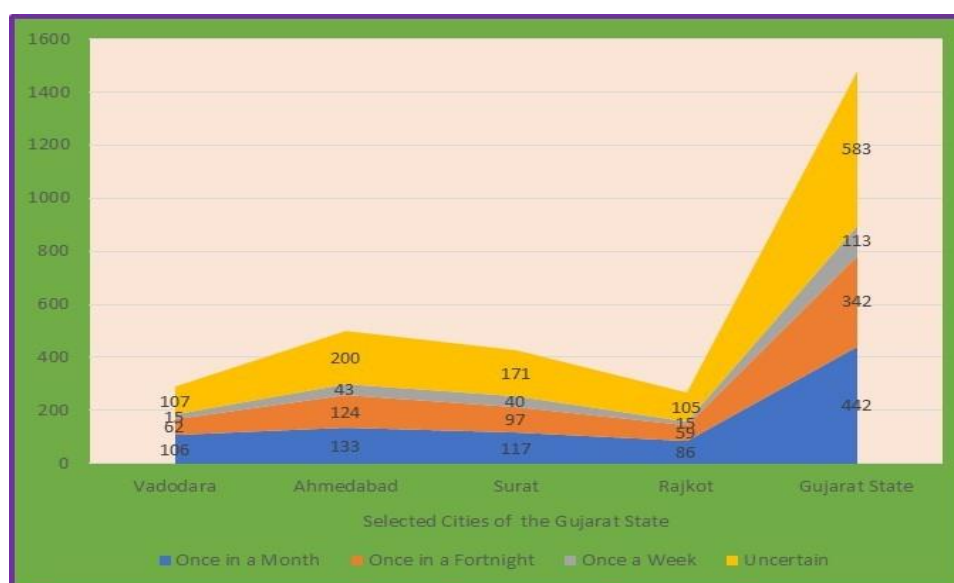
5.3.2: Preferred place for Involving in shopping using mobile phones:

Table number 5.4 and Graph number 5.9 exhibit the responses regarding their favourite place for shopping and responses were collected in three categories, namely, workplace, home or anywhere else. Nearly forty seven percent of users involved in shopping via mobile when they are at home.

Table 5.4:

Selected Users' Response Regarding Preferred Place of Shopping Using Mobile Phones (Number and Percentage)

Place of shopping	Vadodara	Ahmedabad	Surat	Rajkot	Gujarat State
Work Place	94(32.4)	136(27.2)	116(27.3)	79(29.8)	425(28.7)
Home	134(46.2)	230(46.0)	197(46.4)	127(47.9)	688(46.5)
Anywhere	62(21.4)	134(26.8)	112(26.4)	59(22.3)	367(24.8)
Total	**290(100)**	**500(100)**	**425(100)**	**265(100)**	**1480(100)**

City-wise analysis showed similar trend in all the selected four cities, as nearly 47 percent of users found home as their favourable place for mobile shopping. Next preferred place was their workplace for users of Vadodara (32.4 percent), Ahmedabad (27.2 percent) Surat (27.3 percent) and Rajkot (29.8 percent) respectively. 26.8 percent of users from Ahmedabad, 26.4 percent of users from Surat, 22.3 percent from Rajkot and 21.4 percent from Vadodara have given the opinion that they did not have any preferred place while engaging in m-shopping. Thus, similar trend was examined among the users from Gujarat state regarding the preferred place of shopping via mobile phones.

Graph Number: 5.9: Selected Users' Response Regarding place of Shopping by Using Mobile Phones

5.3.3: Preferred Time of Shopping Using Mobile Phones:

Table number 5.5 and Graph number 5.10 exhibits the responses regarding their favourite time for shopping and responses were collected in four categories, namely, morning, afternoon, evening or late evening. Nearly 60 percent have given the opinion that their favourite time for shopping is late evening.
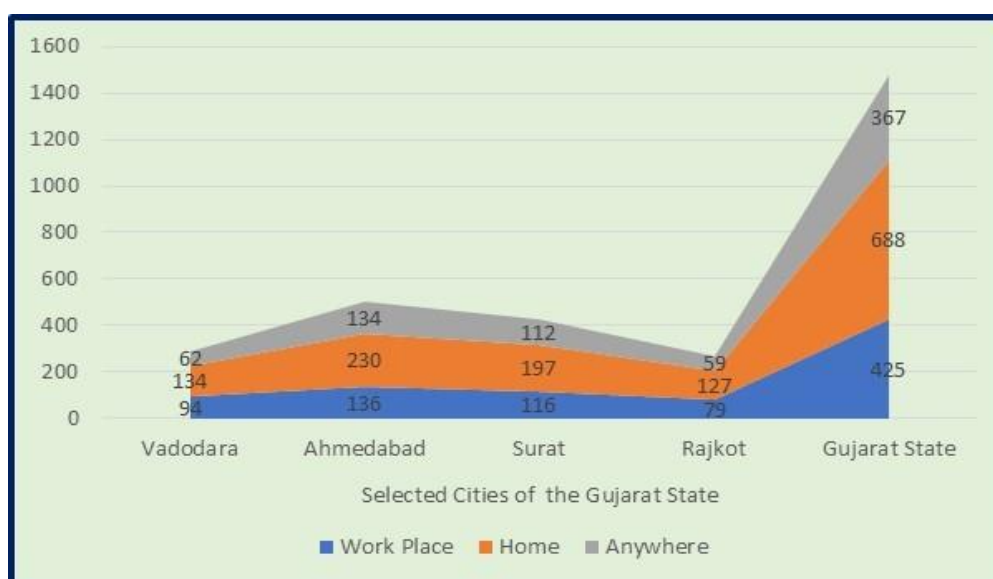
Table 5.5:

Selected Users' Response Regarding Preferred Time of Shopping Using Mobile Phones (Number and Percentage)

Preferred time of shopping	Vadodara	Ahmedabad	Surat	Rajkot	Gujarat State
Morning	35(12.1)	79(15.8)	62(14.6)	34(12.8)	210(14.2)
Afternoon	40(13.8)	78(15.6)	64(15.1)	54(20.4)	236(15.9)
Evening	42(14.5)	57(11.4)	50(11.8)	37(14.0)	186(12.6)
Late evening	173(59.7)	286(57.2)	249(58.6)	140(52.8)	848(57.3)
Total	**290(100)**	**500(100)**	**425(100)**	**265(100)**	**1480(100)**

City-wise analysis also showed a similar trend, as user in all the selected four cities preferred late evening for mobile shopping. More than 50 percent (57.3 percent) preferred late evening timing for shopping via mobile in all the four cities, 59.7 percent in Vadodara, 58.6 percent in Surat, 57.2 percent in Ahmedabad and 52.8 percent in Rajkot preferred late eventing time for shopping. As the preferred time for shopping of m-commerce users in all the cities were in the late evening, it reassured the role of family in buying decision. Companies can attract customers by providing some limited time offers during late evening to convert prospects into actual customers as well as to increase the purchasing frequency of existing customers.

Graph Number: 5.10: Selected Users' Response Regarding Preferred Time of Shopping by Using Mobile Phones

5.3.4: Average Time spent on Shopping Using Mobile Phones:

Table number 5.6 and Graph number 5.11 exhibits the responses regarding the average time for shopping and responses were collected in four categories, namely less than 30 minutes, 30 to 60 minutes and more than 30 minutes. Similar result was found in all the categories with slight preference to 30 to 60 minutes as nearly 38 percent preferred to spend that time duration while shopping through m-Commerce application.

Table 5.6:

Selected Users' Response Regarding Average time spent on Shopping Using Mobile Phones (Number and Percentage)

Average time of shopping	Vadodara	Ahmedabad	Surat	Rajkot	Gujarat State
Less than 30 minutes	91(31.4)	160(32.0)	141(33.2)	75(28.3)	467(31.5)
30 to 60 minutes	116(40.0)	184(36.8)	144(33.9)	112(42.3)	556(37.6)
More than 60 minutes	83(28.6)	156(31.2)	140(32.9)	78(29.4)	457(30.9)
Total	**290(100)**	**500(100)**	**425(100)**	**265(100)**	**1480(100)**

City-wise analysis showed that nearly 30 percent users from all the four cities use less than 30 minutes for shopping, Similar results in case of more than 60 minutes also. In case of Rajkot, 42.3 percent users spent between 30 to 60 minutes followed by Vadodara (40 percent), Ahmedabad (36.8 percent) and Rajkot (33.9 percent). As majority of the people (nearly 69 percent) spent more than half an hour on mobile for shopping, this medium has very good potential as a medium of commerce in the near future. As home was their preferred place to engage in m-Commerce, they may be spending some time in discussing with others before taking final purchase decision that may be the reason for spending minimum half an hour to one hour to take purchase decision.

Graph Number: 5.11: Selected Users' Response Regarding Average Time Spent on Shopping by Using Mobile Phones
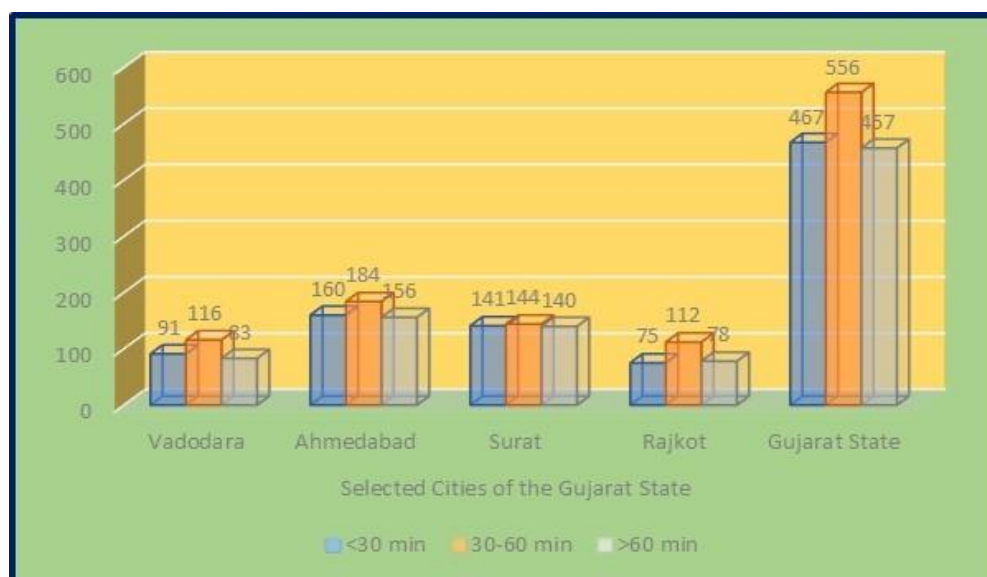
5.4: SOURCE OF INFORMATION FOR SHOPPING VIA MOBILE PHONES:

Table number 5.7 and Graph number 5.12 demonstrates the responses regarding the source of information for mobile shopping and responses were collected in different categories showed newspaper and SMS were the main source of information followed by television as well as friends, family, relatives and colleagues. E-mail and hoardings were the least preferred source of information about shopping through mobile phones,

Table 5.7: Selected Users' Response Regarding Source of Information for Shopping Using Mobile Phones (Number and Percentage)

Source of Information	Vadodara	Ahmedabad	Surat	Rajkot	Gujarat State
Newspaper	57(19.7)	125(25.0)	87(20.5)	53(20.0)	322(21.8)
Hoardings	5(1.7)	8(1.6)	7(1.6)	5(1.9)	25(1.7)
Family Members	35(12.1)	59(11.8)	67(15.8)	41(15.5)	202(13.6)
Friends	48(16.6)	69(13.8)	62(14.6)	40(15.1)	219(14.8)
Colleagues	35(12.1)	56(11.2)	56(13.2)	27(10.2)	174(11.8)
E-mail	9(3.1)	13(2.6)	7(1.6)	11(4.2)	40(2.7)
SMS	60(20.7)	95(19.0)	72(16.9)	48(18.1)	275(18.6)
TV	41(14.1)	75(15.0)	67(15.8)	40(15.1)	223(15.1)
Total	**290(100)**	**500(100)**	**425(100)**	**265(100)**	**1480(100)**

Overall analysis showed that Newspaper was the slightly more preferred medium than SMS and email was the least preferred medium as it was revealed that 21.8 percent of the respondent were getting information from newspapers. 18.6 percent via SMS, nearly 15.1 percent from TV and from friends, nearly 13.6 percent from family members and approximately 11.8 percent from colleagues. Only about 2.7 percent of people were getting information via email and remaining 1.7 percent was getting information via hoardings.

Graph Number: 5.12: Selected Respondent's Response Regarding the Source of Information for Shopping via Mobile
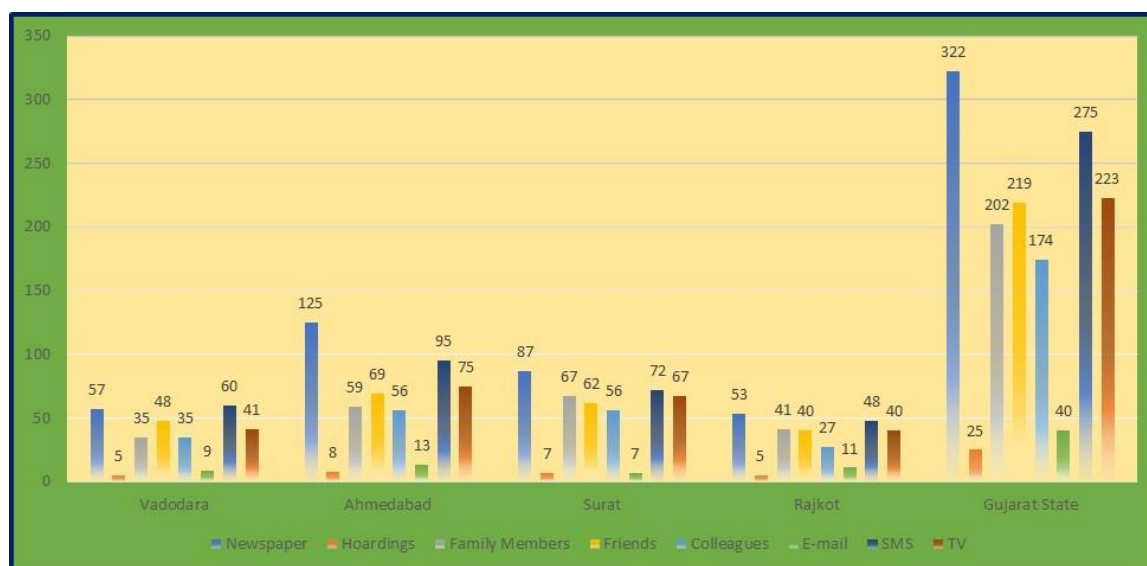
5.5: REASON FOR DOWNLOADING AND USING M-COMMERCE APPS:

Table number 5.8 and Graph number 5.13 displays the responses regarding the reason for downloading and using m-Commerce apps in four categories viz., to avail discount, easy purchase, easy refund and user-friendliness. Responses were collected from the selected four cities of Gujarat.

Table 5.8: Selected Users' Response Regarding the Reasons for Downloading and Using m-Commerce Apps (Number and Percentage)

Reason for downloading m-Commerce app	Vadodara	Ahmedabad	Surat	Rajkot	Gujarat State
To avail discount	143(49.3)	224(44.8)	202(47.5)	128(48.3)	697(47.1)
Easy purchase	151(52.7)	282(56.4)	215(50.6)	140(52.8)	788(53.2)
Easy refund	173(59.7)	288(57.6)	233(54.8)	146(55.1)	840(56.8)
User friendliness	111(38.3)	207(41.4)	173(40.7)	101(38.1)	592(40.0)
Total	**290(100)**	**500(100)**	**425(100)**	**265(100)**	**1480(100)**

The overall analysis showed that the main reason for downloading m-Commerce apps in Gujarat State was the facility of easy refund (56.8 percent), convenience in purchasing products (53.2 percent), availability of attractive offers and discounts (47.1 percent) and the user-friendliness (40 percent) of the applications.

City-wise analysis also showed similar pattern with availability of easy refund option being the primary reason downloading and using mobile apps. 59.7 percent in Vadodara, 57.6 percent in Ahmedabad, 55.1 percent in Rajkot and 54.8 percent in Surat city used the apps due to easy refund policy. The other reasons being the convenience involved in purchasing through mobile apps, availability of discount offers and user-friendliness of m-Commerce apps.

As the products are bought without touching and feeling, consumers are worried about the actual look and feel of the product. As m-Commerce companies are giving options for easy return and refund, it has attracted many people towards adopting this medium of commerce. The other attraction being, the easy purchase of products and services from variety of option with just a few click. As both men are women are into workforce, due to time constraint they find it difficult to go to physical store which has resulted into the development of online purchase especially through mobile. Though mobile was a powerful medium of commerce nowadays, its user interface and small screen size and operating system has to be optimised before the content is delivered to customers. Small screen size creates problem when customers are looking for exclusive visuals about the products they want to buy.

Graph Number: 5.13: Selected Respondent's Response Regarding the Reason for Downloading m-Commerce Apps
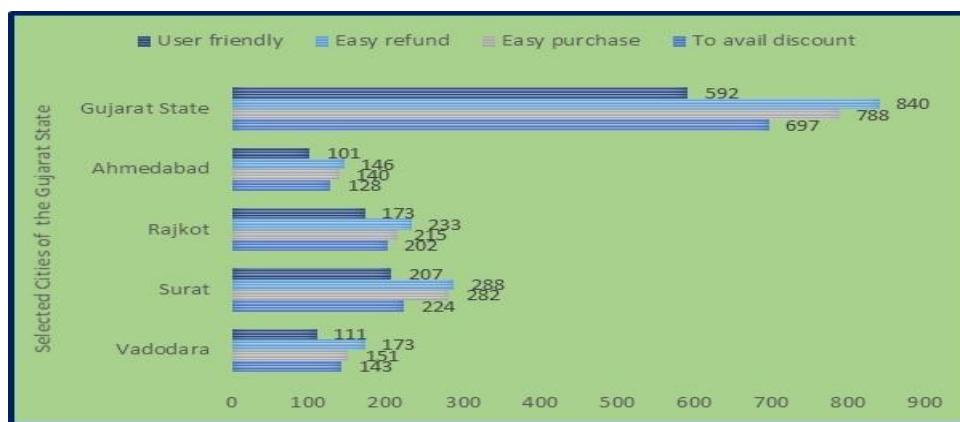
5.6: NUMBER OF MOBILE APPS USED FOR M-COMMERCE TRANSACTION:

Table number 5.9 and Graph number 5.14 exhibit the responses regarding the number of apps used for m-Commerce transactions and the results showed that majority of users have downloaded and used more than two apps to engage in m-Commerce transactions.

Table 5.9:
Selected Users' Response Regarding Number of Mobile Apps Used for m-Commerce transaction (Number and Percentage)

Number of Applications downloaded and used	Vadodara	Ahmedabad	Surat	Rajkot	Gujarat State
1 to 2	24(8.3)	50(10.0)	39(9.2)	21(7.9)	134(9.1)
3 to 4	123(42.4)	184(36.8)	174(40.9)	103(38.9)	584(39.5)
5 to 6	128(44.1)	238(47.6)	189(44.5)	129(48.7)	684(46.2)
6 and above	15(5.2)	28(5.6)	23(5.4)	12(4.5)	78(5.3)
Total	**290(100)**	**500(100)**	**425(100)**	**265(100)**	**1480(100)**

The Graph number 5.14 and Table number 5.9 indicate the selected respondent's response regarding number of apps used by m-Commerce users. The overall data showed that 46.2 percent have downloaded and used 5 to 6 m-Commerce apps and 39.5 percent users have used 3 to 4 apps, 9.1 percent have used 1 to 2 apps and 5.3 percent have downloaded and used more than 6 apps to engage in m-Commerce.

The results found encouraging as majority of the users (90.9 percent) have downloaded more than two applications for engaging in m-Commerce which provides greatest opportunities for m-commerce service providers and developers. City-wise comparison also showed a similar result as the majority of users in Rajkot (87.6 percent), Vadodara (86.5 percent), Surat (85.4 percent) and Ahmedabad (84.4 percent) have downloaded and used more than two applications in their mobile to engage in m-Commerce transactions. The m-Commerce merchants and service providers should explore and use m-Commerce apps for better customer engagement and develop effective loyalty programme for customer retention.

Graph Number: 5.14: Selected Respondent's Response Regarding Number of mobile Apps Downloaded for engaging in m-Commerce
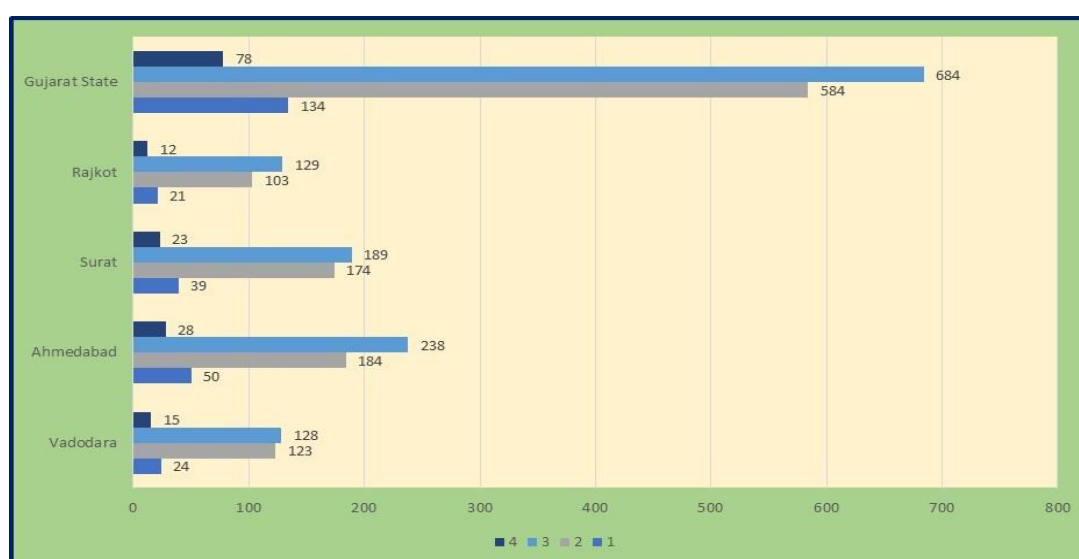
5.7: KIND OF PRODUCTS OR SERVICES BOUGHT THROUGH M-COMMERCE TRANSACTIONS:

The Table number 5.10 (Annexure IV) indicated the respondent's response regarding the purchase of 25 different product/services through the use of mobile phones. The overall response of Gujarat state revealed that majority of users used m-Commerce for paying phone bills (54.1 percent), buying electronic items (52.4 percent) and ordering food items (49.9 percent).

While, the users' least preferred user was for buying educational equipment (0.9 percentage), flowers and gifts (3 percent) and health and fitness equipment (5.2 percent).

Vadodara city users mostly preferred to pay phone bills (52.4 percent), buying electronic items (51.4 percent) and paying for Taxi and Travel services (50.3 percent) through different m-Commerce application. While, buying educational equipment (1 percent) and flowers and gifts (2.1 percent) and the fund transfer (5.9 percent) were the least preferred activities.

Users of Ahmedabad city mostly used to pay phone bills (53.4 percent), buy electronic items (52.6 percent), and purchase bags and luggage (52.4 percent) via m-Commerce application. While, buying educational equipment (1.0 percent), baby products (1.8 percent) and flowers and gift (3.4 percent) were the least preferred product bought through m-Commerce applications.

Surat city users were found using m-Commerce mostly for paying phone bills (54.4 percent), purchasing electronic items (52.2 percent) and food items (50.8 percent). While used least for buying educational equipment (0.7), baby products (0.7 percent) and flowers and gift (3.1 percent).

Similarly, users of Rajkot city used the m-Commerce for paying phone bills (56.6 percent), Taxi and Travel services (53.6 percent) and buying electronic items (53.2 percent). While the use of m-Commerce for buying baby products (nil), educational equipment (1.5 percent), and flowers and gift (3.0 percent) were reported to be the least.

Hence, electronic items (52 percent) were the most bought products and the payment of phone bills was the most used services by the users of m-Commerce applications. While the users least preferred to buy books, furniture and industrial goods with the use of m-Commerce applications.

5.8 SELECTED USERS' RESPONSE REGARDING THE OVERALL AWARENESS, DOWNLOAD AND USAGE OF M-COMMERCE APPLICATIONS

The Table number 5.11 (Annexure IV) display the awareness and use of top 60 m-Commerce applications.

m-Commerce users of Gujarat State were highly aware about the IRCTC (98 percent), OYO (89 percent), Uber and Swiggy (68 percent each), applications. The most downloaded m-Commerce applications include Amazon (43 percent), MakeMyTrip (39 percent) and Bookmyshow (36 percent). While the most used applications were Zomato (50 percent), followed by Amazon and Flipkart (47 percent each). The least preferred m-Commerce applications among the users includes, Dacathon (0.8 percent), Jabong (0.9 percent) and Goffer (1.7 percent).

Users of Vadodara city were highly aware about the IRCTC (97.2 percent), OYO (90 percent) and Swiggy (66.2 percent). The most downloaded m-Commerce applications include Amazon (45.2 percent), MakeMyTrip (39.7 percent) and Bookmyshow (35.9 percent) while the most used applications were Zomato (49 percent), followed by Amazon and Flipkart (45 percent each). The least preferred m-Commerce applications among the users include, Jabong and Snapdeal (1 percent each) followed by ebay and Decathon (1.4 percent each).

Ahmedabad city users were highly aware about the IRCTC (97.2 percent), OYO (89.2 percent) and Uber (70 percent) applications. The most downloaded m-Commerce applications include Amazon (50 percent), MakeMyTrip (38.6 percent) and Bookmyshow (37 percent), while the most used m-Commerce applications were Amazon (50 percent), Zomato (49.8 percent) and Flipkart (49.6 percent each). The least preferred m-Commerce applications among the users were Dacathon and Jabong (0.2 percent each) and ebay (1.4 percent).

The users of Surat city were highly aware about the OYO (88.9 percent), Swiggy (68 percent) and MakeMyTrip (61.6 percent) applications. The most downloaded m-Commerce applications include Amazon (44.2 percent), MakeMyTrip (38.4 percent) and Bookmyshow (34.6 percent). While the most used m-Commerce applications were Zomato (44 percent), Amazon (44 percent) and Flipkart (43 percent). The least preferred m-Commerce applications among the users include, Dacathon and OLX (0.5 percent each) and Jabong (1.2 percent).

The users of Rajkot city were highly aware about the IRCTC (97.6 percent), OYO (89.5 percent) and Uber (68 percent) applications. The most downloaded m-Commerce applications include Amazon (47.1 percent), MakeMyTrip (38.6 percent) and Bookmyshow (35.8 percent). While the most used m-Commerce applications were Flipkart and Zomato (49 percent each) followed by Amazon (48 percent). The least preferred m-Commerce applications among the users include, Snapdeal and Dacathon (0.8 percent each) and Jabong (1.1 percent).

From the overall response of Gujarat state, it has been seen that the least preferred m-commerce applications include some of the popular brands like TATAcliq, Bigbasket, Voonik, Limeroad, Shopify, Nykaa, Firstcry, Groupon, Quickr, Banggood, Justdial, Caratlane, Infibeam, Yebhi, Croma store, Rediff.com, Fabindia, Craftsvilla, shopping. India times, starbucks, as wells as Shein, H&M, Aliexpress, Smartshopper, Indiamart, Travelguru as the adoption rate of these applications are almost nil. From the above, it can be concluded that amazon and Flipkart are quite close to each other in terms of popularity among m-Commerce users. Other popular applications among users include movie ticket booking, travel and taxi service applications as well as buying food items. In some of the m-commerce applications (for example, IRCTC and OYO), awareness is very high but usage rate is very low. These companies had to make some effort and develop strategies to convert awareness into downloads and then to actual usage.

5.9 PERCEPTION OF M-COMMERCE USERS FOR THE COST INVOLVED IN M-COMMERCE TRANSACTION:

Table Number 5.12 (Annexure IV) demonstrate the responses for cost perceived by the user's while doing m-Commerce transaction. Perceived cost involved with m-Commerce transaction was measured with 9 statements. Overall response of Gujarat state showed that 93.9 percent users were of an opinion that smartphone was not expensive and 95.4 percent responded favourably to the statement that transaction fee was not high. Among the user's 91.4 percent felt that m-Commerce transactions helped them to save money. 95.7 percent users have given the opinion that internet services were not expensive, 85.1 percent felt that they did not have to incur additional expense to switch from wired to wireless payment option. 93.6 percent have given the opinion that wireless network connection fee was not expensive and 81.6 percent have disclosed that they have necessary means and resources to use m-commerce applications, 91.6 percent users are not worried about the fraudulent charges they may have to pay if involved with m-Commerce. 93.9 percent users felt that m-Commerce was not a burden for them.

86 percent users of Vadodara city revealed that smartphone was not expensive. 84.5 percent have given the opinion that transaction fee was not high and 94.8 percent commented that m-commerce transaction help them to save money. 90.3 percent felt that internet services were not expensive, 85.2 percent have revealed that they did not have to incur additional expenses to shift from wired to wireless platform. 92.4 percent have disclosed that the wireless network connection fees were affordable and 90.3 percent had revealed that they had enough resources to manage it. 80 percent users said that they are not worried about the fraudulent charges involved with m-Commerce and 91.7 percent users felt that m-Commerce transactions are not burden for them.

Among the Ahmedabad city users, 97.8 percent users found that smart phones were quite affordable, 98 percent have given the opinion that transaction fee was not high and 90.6 percent said that m-Commerce transaction help them to save money. 97.2 percent users had revealed that internet services were not expensive, 79 percent of the users revealed that they did not have to incur additional expenditure to shift from wired to wireless option. 95.8 percent have said the wireless network connection fees were not high and 70.4 percent users had enough resources to involve with m-Commerce transactions. 96.2 percent were not worried about fraudulent and unreasonable charges involved with m-Commerce and 96.2 percent felt that m-Commerce was not a burden for them.

95.8 percent users of Surat city have given the opinion that the price of smartphone was quite affordable to them. 98.4 percent felt that transaction fee in involved in m-Commerce was not high, 89.6 percent users felt that m-Commerce transactions help them to save money, 96.7 percent have given the opinion that internet services were not expensive, 88.7 percent were of the opinion that they need not have to incur additional expenses to move from wired network (landline) to wireless (mobile) option. 93.3 percent commented that wireless network connection fee for m-Commerce were not high and 83.8 percent had revealed that they have enough resources to involve with m-Commerce transaction. 94.1 percent of the users were not afraid of fraudulent charges involved with m-Commerce transaction and 94.6 percent users said that engaging in m-Commerce was not a burden for them.

92.8 percent users of Rajkot city had agreed that buying smartphone was quite affordable to them as handset prices are low in India compared to other counties. 97.7 percent were of the opinion that transaction fee was not high. 92.1 percent revealed that m-Commerce transaction help them to save money. 97.4 percent revealed that internet service was not expensive, 90.9 percent users did not have to incur additional expenses to move from wired to wireless network. 90.2 percent users revealed that network connection fee was not expensive, 89.4 percent users had disclosed that they had all the means and resources to involve with m-Commerce transactions. 91.3 percent are not worried about fraudulent charges involved with m-commerce and 90.6 percent felt that m-commerce transactions are not burden on them.

5.10 PERCEPTION REGARDING PERSONALISATION OF M-COMMERCE TRANSACTION:

Table 5.13 (Annexure IV) revealed the m-Commerce users' observation regarding personalisation of offers and its relevance in m-Commerce adoption. Personalisation of m-Commerce transaction was studied by using 5 statements.

82.9 percent m-Commerce users of Gujarat state were willing to accept offers on sales, discounts and promotional coupons of their preferred products. 81.9 percent of the users felt that they should have the choice to register for mobile advertisement only for preferred category of products.85.1 percent have revealed that it is very important receive information on products of their choice and 94.5 percent of the m-Commerce users agreed that m-Marketers should keep updated information about their customers to understand their changing needs and thereby provide personalised offers as per their requirements and 74 percent users showed willingness to share information about their favourite products with mobile marketers.

92.8 percent of users from Vadodara city have shown interest in receiving personalised messages on offers and promotional coupons. 91 percent felt that they should have the choice to register for mobile advertisement only for their preferred products and services. 95.9 percent users felt that it is very important to receive information on their preferred choice. 93.8 percent of users have given the opinion that it is necessary for m-commerce merchants to provide personalised offers to customers and 82.4 percent users were willing to share information on their preferred products with mobile marketers.

60.6 percent users of Ahmedabad city showed willingness to receive personalised messages on sales, discounts and other promotional offers. 68 percent preferred to have the choice to register for mobile advertisements only for selected category of products. 65.8 uses felt that it is very important to received information of their preferred product choice. 96.6 percent users have given the opinion that m-Commerce vendors should update customer data to provide better personalised offers and 69 percent users have shown willingness to share information with m-Commerce vendors regarding their product choice.

96.6 percent users from Surat city have shown their interest to receive promotional offers, discounts and coupons regarding their preferred product and services. 90.6 percent preferred to have the choice to register for mobile advertisement only for selected category of product and services of their choice. 96.5 percent felt that it is quite important to receive information of their preferred product choice. 95.3 percent users felt it necessary for m-commerce vendors to keep customer data updated to provide efficient services and 76.7 percent have shown their willingness to share information with m-Commerce vendors regarding their preferred category of product and services.

91.7 percent users from Rajkot city have expressed their willingness to accept promotional offers of their choice of products and services. 84.2 percent users would like to have the choice to register for mobile advertisement for their preferred product category.

91.7 felt it necessary to receive information of product of their choice. 90.2 users felt it necessary that the mobile marketers should update customer information to improve the conversion rate. 71.7 percent were willing to share information with mobile marketers about information of their preferred products and services.

As customers shown willingness to receive promotional offers, companies should try to understand their target market, their special requirements and design customised products and services according to consumers' choices. Users have also showed their willingness to share information about their preferred choice, collecting this kind of information would help the company to understand customer requirements and design products and services accordingly. As customers did not want to receive messages from other companies which is not there among their preferred choice list, companies should go for permission-based marketing before sending messages to consumers otherwise it may generate negative impact in customer's mind regarding company's products and services.

5.11 PERCEPTION REGARDING PRIVACY OF M-COMMERCE TRANSACTION:

Table 5.14 (Annexure IV) displayed the selected respondent's observation regarding Privacy related problems faced by them during m-Commerce transaction. Privacy of selected m-Commerce users from four major cities of Gujarat was measured with 3 statements.

Overall response of Gujarat state revealed that 73.2 percent felt that m-Commerce transactions invade their privacy. 73.4 percent users felt that location-based information collected by m-Commerce companies invades their privacy and 74.5 percent users insisted that their personal information should be kept as confidential by mobile marketers.

81.4 percent users of Vadodara city felt that m-Commerce invades their privacy. 82.8 have given the opinion that collecting location-based information affects their privacy and 83.3 percent demanded that mobile marketers should treat consumers' personal and financial information as confidential.

68 percent users of Ahmedabad city disclosed that m-Commerce invades their privacy. 66.6 percent informed that collecting information about users' location also affects their privacy and 69.6 asked mobile marketers to keep the collected information about users' preferred product and services confidential.

74.4 percent users of Surat city revealed that m-Commerce invades their privacy, 76.2 percent users disclosed that location-based information also affected their privacy, and 75.1 percent users wanted the mobile marketers to keep their personal information as confidential.

73.2 percent of Rajkot city had revealed that m-Commerce invades users' privacy, 71.3 percent revealed that exposing location-based information also affects their privacy and 72.8 percent demanded that the users' personal and financial information collected by mobile marketers should be kept confidential.

Majority of people from all the four cities felt that m-Commerce invades users' privacy and want m-Commerce companies to keep customers' data confidentially.

The worry regarding information privacy may hinder users' intention to continue with m-Commerce therefore m-Commerce companies should be able to convince the users and assure them that their data would be protected by using proper encryption methods.

5.12 PERCEPTION REGARDING PERCEIVED TRUST INVOLVED IN M-COMMERCE TRANSACTION:

Table Number: 5.15 (Annexure IV) demonstrate the responses for users' Perceived Trust on the m-Commerce transaction. Perceived Trust of the respondent was measured through 9 statements.

Overall response of Gujarat state revealed that, 75.3 percent users felt confident while making online purchase through mobile. 75.4 percent users felt that m-commerce vendors are committed and fulfil their promise. 94.7 percent commented that m-Commerce vendors are efficient in serving the customers 94.8 percent said that vendors perform activities as per users' expectation. 95.1 percent have given the opinion that advancement in security system improve trustworthiness of m-Commerce transactions.96.2 percent have given the opinion that online store that display assurance seal are trust worthier. 96.8 percent users felt confident in giving debit and credit card details while involving with m-Commerce transaction and 96.7 percent have given the opinion that payment process is quite smooth and secure. 97.3 percent users would like to have the choice to opt in and opt out to share personal information with third parties.

83.3 percent users of Vadodara city showed confidence while making online purchases. 84.1 percent users felt that m-Commerce vendors fulfil their promises and are highly committed to users. 95.9 percent have given the opinion that m-Commerce users are efficient in serving the customers. 96.2 percent users have given the opinion that m-Commerce users perform activities as per customers' expectations.96.2 percent users have given the opinion that advanced security system enhances the trust worthiness of transaction, 97.2 percent commented that display of assurance seal improve trust worthiness, 97.6 percent felt confident in disclosing debit and credit card details and 97.6 percent users felt that payment process was smooth and secure. 97.2 percent users wanted the choice to opt in and opt out the disclosure of personal information with third parties.

69.8 users of Ahmedabad city were confident while making online purchase via mobile, 69.6 percent users felt that m-Commerce users were committed to them to fulfil their agreement and 94.4 percent felt that vendors are efficient at serving the customers. 94.4 percent have given the opinion that vendor perform as per users' expectation. 94.8 percent have given the opinion that advances security system improved trustworthiness of m-Commerce transaction. 96 percent felt that online stores that display assurance seal are trust worthier, 96.6 percent users felt confident in disclosing debit and credit card details, 96.6 percent have given the opinion that payment process was smooth and secure, 97.6 percent would like to have the choice to opt in and opt out to share personal information with third parties.

77.6 percent users of Surat city were confident while involving with m-Commerce transactions, 77.6 percent have given the opinion that they are committed and fulfil their agreement, 94.6 percent users have given the opinion that m-commerce users are efficient in serving the customers, 94.8 users have given the opinion that m-commerce users perform activities as per customers' expectations. 95.1 percent felt that updated security system would improve trustworthiness, 96 percent users have given the opinion that online store that display assurance seal are trust worthier, 96.5 percent felt confident in giving debit and credit card details, 96.5 percent users mentioned that m-commerce process was smooth and secure and 97.6 percent commented that they would like to have the choice to opt in and opt out to share personal information with the third parties.

72.8 percent users of Rajkot city felt confident while making online purchase. 72.8 percent users have given the opinion that they are committed and fulfil their agreement. 94.3 percent users felt that users are efficient in serving the customers, 94 percent users believed that vendors perform as per users' expectations. 94.7 percent have given the opinion that advanced security system enhances the trustworthiness of the system. 95.8 percent believed that online stores that display assurance seal are trust worthier. 96.6 percent users felt confident in giving debit and credit card details and 96.2 percent felt that payment process was smooth and secure.96.2 percent users preferred to have the choice to opt in and opt out to share personal and financial information with third parties.

It was found that users expressed high confidence level on m-commerce transactions and have faith in m-Commerce vendors which is quite a good sign for the greater adoption of m-commerce services. As users associated their level of trust with the display of assurance seal by the vendors, this aspect should be given due consideration. Even though users showed willingness to disclose card details, they preferred to have control over their information, so companies should ask customers' permission before disclosing information with third parties.

5.13 PERCEPTION REGARDING PERCEIVED RISK INVOLVED IN M-COMMERCE TRANSACTION:

Table Number: 5.16 (Annexure IV) revealed selected respondent's observation regarding Perceived risk involved in m-Commerce adoption. Perceived risk related with m-Commerce transactions were measured by 7 statements. The first 6 statements were reverse coded in the questionnaire in a scale of 1 to 5 where 1 represents strongly agree and 5 represents strongly disagree.

Overall response of Gujarat state revealed that from among the respondents, 95.2 percent users felt that m-Commerce transactions cannot be easily tampered by others. 96.8 percent had a view that m-Commerce transactions do not have potential risk, 97 percent found that the information shared by m-Commerce merchants are trust worthy, 96.8 percent felt confident in feeding their financial and account related details while making payment, 75.8 percent users commented that m-commerce companies provide adequate information on the website and have enough operational reliability.

75.8 percent users did not show any concern regarding the risk of unauthorized third party overseeing the payment process. 57.2 percent have given the opinion that regulations regarding to m-Commerce transactions have minimized privacy risk associated with m-Commerce transactions.

95.5 percent of users in Vadodara city were of the opinion that others cannot easily tamper users' information in m-Commerce transactions, 97.2 percent felt that m-Commerce transaction do not have any potential risk, 98 percent have given the opinion that m-Commerce transactions are trust worthy, 97.2 percent users felt that feeding payment details via mobile do not have any potential risk, 92.8 percent has disclosed that m-commerce websites and applications have adequate information and have enough operational reliability. 92.8 percent users did not show much concern regarding the risk of unauthorised third party overseeing the payment process and 89 percent revealed that recent regulation have helped to minimise the privacy risk involved with m-Commerce transactions.

95.2 percent users of Ahmedabad city have given the opinion that others cannot tamper m-Commerce transactions very easily, 96.8 percent revealed that m-Commerce transaction do not have potential risk, 96.8 percent have given the opinion that m-commerce transaction are trustworthy and 96.8 percent users were not much worried about the risk involved with feeding payment details via smartphone, 73 percent users have felt that m-Commerce companies provide adequate information on their website and have enough operational reliability. 73 percent did not show much concern regarding the risk of unauthorised third party overseeing the payment process and 51.2 percent felt that recent regulations helped them to reduce privacy risk involved with m-Commerce transaction.

95.3 percent users of Surat city have given the opinion that other cannot tamper users' information that has been shared with m-Commerce vendor, 96.7 percent have given the opinion that m-Commerce transaction do not have potential risk. 96.7 percent felt that the information shared by m-Commerce merchants are trust worthy. 96.7 percent have given the opinion that feeding payment details via mobile do not involve potential risk, 71.8 percent revealed that m-commerce companies provide adequate information on their website and has enough operational reliability.71.8 percent users did not show much concern regarding the risk of third party overseeing the payment process. 48 percent felt that recent regulations on m-Commerce minimise the privacy risk involved with m-Commerce transactions.

94.7 percent users of Rajkot city felt that others cannot tamper information with m-Commerce transactions. 96.6 percent had have given the opinion that m-commerce transactions do not have potential risk. 96.6 percent felt that m-Commerce transactions are trust worthy. 96.6 percent commented that feeding payment details on smartphone do not have potential risk. 69.1 percent users revealed that there is adequate information given in the m-Commerce websites and have enough operational reliability.69 percent users were not much worried about the risk of unauthorized third party overseeing the payment process and 48.7 percent felt that regulations of m-Commerce minimise the privacy risk involved with m-Commerce.

From the above it can be seen that users from all the four cities were not much concerned about the potential risk involved with m-commerce transaction and as they felt that m-commerce companies are following adequate measures to make the transactions more and more safe. The users were also satisfied with the content and quality of information provided by m-Commerce websites and mobile applications which is a good sign for further growth of m-Commerce business.

5.14 PERCEPTION REGARDING PERCEIVED EASE OF USE INVOLVED IN M-COMMERCE TRANSACTION:

Table Number: 5.17(Annexure IV) has analysed the selected respondent's observation regarding Perceived Ease of Use with respect to m-Commerce adoption. The Perceived Ease of Use related with m-Commerce transactions were measured with 5 statements.

Overall response of Gujarat state revealed that 75.8 percent users found it easy to use smartphone for m-Commerce transaction, 75.8 percent found interaction through m-Commerce was very clear and understandable, 87.6 percent were comfortable with m-Commerce applications, 87 percent revealed that it was convenient to get information on offers and promotional coupons and 90 percent revealed that it was easy for them to become skilful at using cell phone or PDA for m-Commerce transactions.

92.8 percent users in Vadodara city revealed that it was easy to use smartphone for m-Commerce, 92.8 percent told that interacting with m-Commerce was clear and understandable, 95.9 Percent felt that using m-commerce was comfortable with online transactions, 95.9 percent disclosed that it was convenient to get information on offers and promotional coupons and 96 percent gave the opinion that it was easy to become skilful at using cell phone or PDA for m-commerce transactions.

73 percent users of Ahmedabad city felt that it was easy to use smartphone for m-Commerce, 73 percent gave the opinion that interacting with m-commerce was clear and easy to understand, 74.6 percent said that it was easy to use mobile for online transactions, 76.2 felt that it was convenient to get offers and promotional coupons and 80 percent found it easy to become skilful at using cell phone or PDA for m-Commerce transactions.

71.8 percent users of Surat city felt that it was easy to use smart phone for m-Commerce transactions, 72 percent felt that interacting with m-Commerce was clear and easy to understand, 91.1 percent revealed that using mobile was comfortable with online transaction, 88.5 percent found it easy to get information on offers and promotional coupons via mobile and 93.2 percent gave the opinion that it was easy to become skilful for using cell phone or PDA for m-commerce transactions.

69.1 percent users of Rajkot city, were of the opinion that it was easy to use smartphone for m-Commerce transactions, 69 percent said that interacting with m-Commerce was clear and easy to understand, 97.4 percent revealed that using mobile for m-Commerce transaction was comfortable. 95.5 percent found it easy to get information on offers and promotional coupons via mobile and 97.7 percent have revealed that it was easy to become skilful for using cell phone or PDA for m-commerce transactions.

As users have expressed constructive opinion regarding the comfortability of using m-commerce applications for online purchases as well as for obtaining information about offers and promotional coupons, m-commerce Companies should aim to learn the consumers' preferred choice based on their search history and deliver personalised offers to enhance the sales.

5.15 PERCEPTION REGARDING PERCEIVED USEFULNESS INVOLVED IN M-COMMERCE TRANSACTION:

The analysis of Table Number: 5.18 (Annexure IV) revealed the Selected respondent's observation regarding Perceived Usefulness with regard to M-Commerce transactions. Perceived Usefulness involved with m-Commerce transaction was analysed through 7 statements.

Overall response of Gujarat state revealed that 94.5 percent users felt that searching and comparing products and services was quite easy via mobile. 75.3 percent felt that m-Commerce helped them to accomplish task and made their life better. 75.1 percent were of an opinion that m-Commerce reflect users' personality and 72.5 percent revealed that using m-Commerce has helped to improve their knowledge about the products and services. 72.4 percent felt that m-Commerce were flexible as it can be operated from anywhere and at any time. 72 percent felt that m-Commerce users were better informed than other application users.

96.9 percent users of Vadodara city felt that searching and comparing products via mobile was easy, 84 percent observed that m-Commerce helped in better accomplishment of task, 83.8 revealed that m-Commerce has made their life better, 84.1 percent said that it has helped them to reflects their personality.

72.4 percent were of the opinion that m-Commerce has given new products/service information earlier than others, 73 percent disclosed that due to high level of flexibility, they were able to do transactions from anywhere at any time they wanted and 72.4 percent observed that m-Commerce users were better informed than those who depend other media, i.e., television, newspaper and magazines for information.

89.4 percent of users in Ahmedabad city revealed that it was easy to search and compare products via m-Commerce, 69.8 percent were of the opinion that it has helped them in accomplishing the task better and 69.8 percent users gave an opinion that it has made their life better. 69.4 percent users have given the opinion that using m-Commerce reflects users' personality, 73.2 percent users said that it has helped them to know more about new products and services much before than others, 73 percent users revealed that it has provided them the flexibility to conduct transaction anytime, anywhere and 71.4 percent commented that the people using m-Commerce are better informed than others.

95.8 percent users of Surat city, said that it was easy to search and compare products and services via mobile,77.4 percent found that it has helped them to accomplish their task better, 77 percent mentioned that m-Commerce reflects users' personality and makes their life better , 72 percent said that it has provided them with enough flexibility to conduct transaction , 72.2 percent get information about new products and services faster than others and 72.5 percent have given their opinion that m-Commerce users are better informed that those who got information via television, newspaper and magazines.

99.2 percent users of Rajkot city, felt that it was easy to search product and services via m-Commerce, 72.8 percent commented that it has helped them in accomplishing task better, 72.8 percent revealed that m-Commerce has made their life more comfortable. 72.5 percent uses revealed that the use of m-Commerce had reflected their personality 71.7 percent got information about products quite faster than others, 72 percent told that m-Commerce provides flexibility to conduct business transactions anywhere at any time and 72 percent were of the opinion that people using m-commerce are better informed than those who us other media.

As users have given the opinion that m-commerce provides flexibility and has helped them in accomplishing the task better with updated information on products and services, m-Commerce companies have to ensure that the same level of services should get extended for future transactions.

5.16 PERCEPTION REGARDING SOCIAL NORMS INVOLVED IN M-COMMERCE TRANSACTION:

Table Number: 5.19 (Annexure IV) explored the selected respondent's observation regarding Social Norms with regard to m-Commerce adoption. Social norms with regard to m-Commerce transaction were measured through 8 statements.

73.6 percent users of Gujarat state revealed that, people who are important in their life wanted them to use m-Commerce services as majority (73.4 percent) of their friends and relatives have already used it. 73.2 percent believed that using m-Commerce services was a good idea, 72.5 percent believed that m-payment services were beneficial to individuals who are important to them. 72.7 percent disclosed that they trusted their intuition than others' advice, 71.8 percent revealed that before purchasing the products, they sought out the opinion of people who have tried those new products and services; 74 percent commented that friends and relatives have influenced their decision to use m-Commerce, 75.5 percent emphasised the significant role played by mass media in m-Commerce adoption.

72.4 percent of Vadodara city residents believed that they should use m-Commerce because important people in their life wanted them to use it and majority (72.4 percent) of their friends and colleagues have used it. 72.4 percent believed that adopting m-Commerce was a good idea, 73 percent users revealed that the important people in their life believed that m-payment services are beneficial to them, 91.7 percent of users seek out the opinions of people who have tried new products before their actual purchase, 95.9 percentage claimed that friends, relatives, and the media have affected their decision to use m-commerce.

74.6 percent users of Ahmedabad city said that people who are important to them thought that they should use m-Commerce services as majority (75.6 percent) of their friends and relatives have already used it. 74.4 percent believed that using m-Commerce services was a good idea, and 72.6 percent believed that m-payment services are beneficial to individuals who are important to them. While using new technology, 74 percent of users trusted their intuition than others' advice, and 66.2 percent seek out the opinion of those who have tried new products before buying them.

In addition, 71.8 percent of users said that friends and relatives influenced their decision to use m-Commerce, and 72.4 percent said that mass media recommendations influenced their decision to use m-Commerce.

74.6 percent users of Surat city have given the opinion that the people who are important in their life wanted them to use m-Commerce services and majority (72.5 percent) of their friends and relatives have already used it. 73.4 percent believed that people who are important to them thought that using im-commerce was a good idea, 72.9 percent revealed that important people in their life thought that m-payment services are beneficial, 72 percent have given the opinion that they trusted their intuition than listening to others while adopting technology and 67.1 percent sought out the opinion of others who tried new products before purchasing them, 67.8 percent disclosed that friends and relatives have influenced their decision to use m-Commerce, 68.2 percent commented that mass media recommendations have influenced their decision to use m-Commerce.

71.7 percent users of Rajkot city revealed that important people in their life wanted them to use m-Commerce as majority (71.7 percent) of their friends and relatives have already used them. 72 percent reported that significant people in their lives have agreed that using m-Commerce was a good idea, 71.7 percent believed that using m-payment services were useful to them. While using technology, 71.7 percent said that they trust their intuition than receiving advice from others, while 68.3 percent seek out the opinions of those who tried new products or brands before buying them, 69.4 percent revealed that the friends and relatives have influenced their decision to use m-Commerce, 70.6 percent disclosed that mass media recommendations have also influenced their adoption decision.

Even though, users have said that they trust their intuition that listening to others advice, it has been revealed that they consult important people in their life before trying new products and services. This shows the relevance of social norms especially with regard to new product and services, which should be explored by the mobile commerce companies, by targeting these reference group when introducing new products and services.

5.17 PERCEPTION REGARDING PERCEIVED BEHAVIOURAL CONTROL INVOLVED WITH M-COMMERCE TRANSACTION:

Table Number: 5.20 (Annexure IV) reported the selected respondent's observation regarding Perceived Behavioural Control with regard to m-Commerce adoption which was measured through selected 8 statements.

The overall response of Gujarat state revealed that 67.8 percent of users were able to use m-Commerce services without assistance, 67.8 percent said that they had necessary means and resources to use m-Commerce services, 68 percent had knowledge and ability to use m-Commerce services, 67.9 percent were waiting to receive the services, 67.8 percent had agreed to recommend m-Commerce services to others, 68 percent disclosed that they had control over m-Commerce transactions, 67.9 had access to the software, hardware, and network services needed to use it and 67.3 percent revealed that they have high intention to use m-Commerce services in the future.

65.5 percent users of Vadodara city users believed that they have utilised m-Commerce services without assistance,65.5 percent said that they had the means and resources as well as the knowledge and competence to do so, 65.5 percent of users indicated they are looking forward to receive more m-commerce services in the future, 66 percentage were ready to recommend m-Commerce services to others, 65.5 percent believed that they had control over their m-commerce transactions, 55.5 percent had access to the software, hardware, and network services needed to use it, and 66 percent showed a strong desire to continue with m-Commerce services.

70.4 percent of Ahmedabad city residents said they performed m-Commerce transactions without others assistance, 69 percent said they had the appropriate means and resources, and 70.2 percent said they knew how to use the services, 70.2 percent of consumers said they were waiting to receive services and 70.2 percent said they would recommend it to friends. 70.4 percent of users believed that m-Commerce transactions are under their control, 69.2 percent had appropriate software, hardware, and network services to use it. Furthermore, 67.8 percent of users have expressed a strong desire to use m-Commerce services in the future.

65.6 percent of Surat users were able to utilise m-commerce without assistance, 67.3 percent of users had the requisite means and resources as well as the knowledge and capacity to use it. 66.4 percent were anxiously waiting to receive m-Commerce services and 66.1 percent showed readiness to recommend it to others. 66.4 percent of users believed that they had control over m-commerce transactions, 67.5 percent had the required software, hardware, and network services to use it, and 67.1 percent had a high intention to involve in m-Commerce services in the future.

68.7 percent of Rajkot city users were able to utilise m-Commerce without the assistance of others, 68.7 percent of users had the necessary means and resources, 69 percent were having the knowledge and capacity to use it. 68.7 percent showed readiness to receive m-Commerce services as they were always looking for it and 68.7 percent showed willingness to recommend it to others. 69 percent believed that m-Commerce transactions were under their control, 68.7 percent had the requisite hardware, software, and network services, and 69 percent had shown a strong desire to use m-Commerce services in the future.

Mobile commerce businesses should take advantage of consumers' familiarity with interfaces and their readiness to receive service and suggest it to others in order to raise adoption rates. Existing customers' positive comments on m-commerce services can aid in their adoption. m-Commerce merchants should continue exploring this opportunity and building and maintaining trust among users in order to keep current users for the foreseeable future. Consumers have indicated that transactions are under their control and that they have always been prepared to embrace this technology, which will provide ample opportunities for the growth of m-Commerce services in the country.

5.18 PERCEPTION REGARDING ATTITUDE INVOLVED IN M-COMMERCE TRANSACTION:

Table Number: 5.21 (annexure IV) has analysed the selected respondent's observation to know their Attitude with regard to m-Commerce adoption which was measured through 9 statements.

69 percent users of Gujarat state said that using m-Commerce was a good idea, 72.6 percent were in favour of using it, 72 percent observed that it was beneficial for them, 69.7 percent hold positive views about it and 49.7 percent were satisfied with it. 58.7 percent felt that it was essential to use m-Commerce, 56.4 percent hold positive views towards mobile coupons or discounts, 49 percent performed online scanning before making purchases and 48,6 percent really enjoyed buying products and services via m-Commerce.

83.8 percent users of Vadodara city felt that using m-Commerce was a good idea, 85.2 percent were in favour of using it as it was beneficial for them. 84.1 percent hold positive perception about it, 48.6 percent felt satisfied while performing m-Commerce transactions, 57.9 percent suggested that m-Commerce services was essential to them, 57.2 percent hold positive views towards mobile coupons and offerings, 49 percent revealed that they undertook online scanning before actual purchase and 48.6 percent users really enjoyed buying products and services via m-Commerce services.

66.8 percent users of Ahmedabad city felt that using m-Commerce was a good idea, 72.2 percent users were in favour of it, 66.8 percent of users felt that m-commerce was beneficial to them, 67.2 percent hold positive views about it, 51 percent felt satisfied with it and 59 percent found that it was essential to use it. 57.6 percent hold positive views towards mobile coupons and offerings and 50.8 percent had performed online scanning before purchase, 51 percent revealed that they enjoyed buying products and service using smart phone

.62.4 percent users of Surat city felt that using m-Commerce was a good idea, 65.6 percent were in favour of using it, 69.2 felt it was beneficial to use m-commerce services. 65.6 percent commented that they hold positive perception towards it, 52.5 percent were satisfied with m-Commerce transactions, 62.1 percent users felt that it was essential to use it, 56.5 percent hold positive views towards coupons and discounts,52.9 percent have performed online scanning prior to purchase and 51.3 percent really enjoyed buying product and services via mobile.67.5 percent users of Rajkot city said that using m-Commerce was a good idea, 70.6 percent were in favour of it and 71.3 percent said that it was beneficial to users, 64.9 percent hold positive perception about it. 44.2 percent felt satisfied with it, 53.6 percent felt that was essential to use it, 53.2 percent hold positive views towards coupons and discounts. 44.5 percent have performed online scanning prior to purchase and 44.2 percent revealed that they enjoyed buying products and services via m-Commerce.

Despite the fact that customers believed using m-Commerce was a good idea and had a positive perception of it, satisfaction levels were at 50% in Ahmedabad and Surat, and below 50% in Vadodara and Surat. m-Commerce companies should look into the cause of dissatisfaction among the chosen group of users and strive to take corrective action as soon as possible to avoid losing clients forever.

5.19 PERCEPTION REGARDING ADOPTION INTENTION OF M-COMMERCE APPLICATIONS:

Table Number: 5.22 (Annexure IV) reported selected respondent's observation of adoption intention of M-Commerce applications. Adoption intention of m-commerce was measured through 11 statements. 83.2 percent users of Gujrat state felt that the cost to perform m-Commerce transactions were less than other channels, 85.9 percent preferred to use it if received personalised offers; 83.6 percent showed willingness to adopt m-Commerce if privacy was taken care of, 86.6 percent have shown readiness to adopt it as they trust the applications, 79.7 percent commented that recent laws helped them to reduce risk and has aided in improving the adoption rate. 84.7 percent users felt that user-friendliness of m-Commerce interface has helped in smooth adoption, 84.7 percent said that hassle free shopping through smartphone improved the adoption, 82 percent users felt that positive attitude of society resulted into better adoption, 86.2 percent gave the opinion that they would continue to use m-Commerce in the near future. 83.9 percent had disclosed that they would use it more frequently in the future than now and 84.7 percent showed willingness to strongly recommend m-Commerce service to others.

90 percent of Vadodara city residents believed that the total cost of conducting transactions via mobile phones were lower than that of other channels, 91 percent preferred to use it, if they received personalised offers from vendors, 89.7 percent indicated they would absolutely utilise it if their privacy was protected. As the users trust m-Commerce, 93.8 percent of consumers wanted to adopt it. Recent laws, according to 85.2 percent of users, have helped them to lessen the risk associated with m-Commerce adoption, which influences its acceptance, 92.1 percent believed that m-Commerce user-friendliness makes it easy to adopt. 92.4 percent of users revealed that hassle-free shopping via mobile influences its adoption, 89 percent felt that society's positive attitude toward m-Commerce influences its adoption, 93.4 percent intended to make more m-Commerce transactions in the future than they do now, and 92.4 percent have expressed their readiness to strongly recommend m-Commerce services to others.

81.4 percent of Ahmedabad city residents believed that m-commerce channels were less expensive than other channels, 85 percent users said they would use m-commerce applications if the offers were personalised. 81.4 percent of users would use m-Commerce if privacy was protected, 83.6 percent wanted to use it because they trusted it, and 78.8 percent stated that recent risk-reduction laws had increased m-commerce acceptance. 82.6 percent said that user-friendliness made it easy to adopt, and 81.8 percent disclosed that hassle-free mobile shopping has promoted its adoption. 81.2 percent claimed that society's positive attitude has aided its adoption, 83.6 percent said that they wanted to continue with m-commerce in the near future. 82.4 percent indicated they would use mobile commerce transactions more often in the future than they do now and 82.4 percent showed readiness to strongly recommend m-Commerce services to others.

87.1 percent of Surat city residents believed m-commerce transactions were less expensive than other channels, 87 percent preferred to use it if the services were personalised, 86.6 percent showed willingness to use it provided their privacy was protected. 89.9 percent of users were ready to adopt it as they have trust in it, and 82.1 percent of users believed that recent risk-reduction legislation have aided adoption of m-Commerce applications. 88.7 percent users claimed that user-friendliness makes adoption easy and 88.2 percent users said that hassle-free shopping improve m-commerce adoption. 84.2 percent of users claimed that society's positive attitude has encouraged adoption, and 89.2 percent were ready to continue with m-Commerce services. 87.1 percent of users indicated they have plan to use m-commerce services more frequently in the near future than they do now, and 88 percent were ready to recommend it to others.

72.8 percent of Rajkot city residents believed that m-Commerce were less expensive than other channels, while 80.4 percent preferred personalised offers. 76.6 percent of consumers wanted to adopt m-Commerce provided their privacy was protected, 79.2 percent were ready to adopt it as they trust it. 71.1 percent of users opined that recent laws that has introduced to lower the risk involved in m-commerce transactions has helped them to adopt m-Commerce. 74% of users said that the system's user-friendliness has prompted them to adopt it, hassle-free purchasing was another important factor for adoption for 75.8% of users. 72.1 percent of users claimed that society's positive attitude has influenced their adoption, and 78.5 percent showed readiness to continue with m-Commerce transactions in the future, 75.1 percent users commented that they would increase the frequency of m-Commerce use in the future and 75.5 percent were ready to strongly recommend it others.

The users perceived that the m-Commerce channel was less expensive than others, which may lead to increase their frequency of involving in m-commerce transaction and their continuing intention of m-Commerce. Even though users believe that recent legislation has reduced the risk associated with m-commerce transactions, they remain concerned about privacy issues. Users have expressed trust in this channel, stating that its convenience of use and hassle-free shopping have aided its adoption. Positive societal perceptions have boosted its adoption, with consumers agreeing to use m-Commerce more frequently than before. They have also revealed that they will recommend m-Commerce services to others which may help to improve the adoption rate.

5.20 PERCEPTION REGARDING USERS' OVERALL SATISFACTION WHILE INVOLVING WITH M-COMMERCE TRANSACTION

Table number 5.23 and Graph Number 5.15 revealed the selected users' response regarding user's overall satisfaction involved with m-Commerce Transactions.

Table Number: 5.23

**Selected Users'' Response Regarding Overall Satisfaction from   m-Commerce Transaction**

M-Commerce users' Overall Satisfaction	Vadodara	Ahmedabad	Surat	Rajkot	Gujarat State
Dissatisfied	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
No Opinion	82(28.3)	171(34.2)	150(35.3)	84(31.7)	487(32.9)
Satisfied	105(36.2)	152(30.4)	142(33.4)	90(34.0)	489(33.0)
Highly Satisfied	103(35.5)	177(35.4)	133(31.3)	91(34.3)	504(34.1)
Total	**290(100)**	**500(100)**	**425(100)**	**265(100)**	**1480(100)**

From the table it could be seen that users were satisfied with the use of m-Commerce applications. Form the 1480 m-Commerce users of Gujarat State total 67.1 percent were the satisfied users from which 34.1 percent were found to be highly satisfied with the use of m-Commerce applications.

Because of the user-friendly interfaces, vast choice of items and services, and improved customer experience, the majority of m-Commerce users were satisfied with the applications. People are drawn to this medium because of the faster and safer mobile payment methods, as well as the prompt delivery and mobile-responsive website. Companies were able to deliver personalised notifications to customers as a result of location tracking, and the product suggestions and customer reviews aided them in selecting products from the company's website and from mobile apps.

Smart phones now have a larger screen and more memory, as well as a longer battery life and backup and a better digital display, thanks to technological advancements. Improved internet connectivity at a lower cost, better and faster mobile applications, and greater data security have all contributed to increased customer satisfaction. Customers' discontent with m-Commerce has been alleviated by a simple return policy and fast shipping tracking.

Graph Number: 5.15: selected respondent's response regarding users' overall satisfaction level involved with m-Commerce transactions
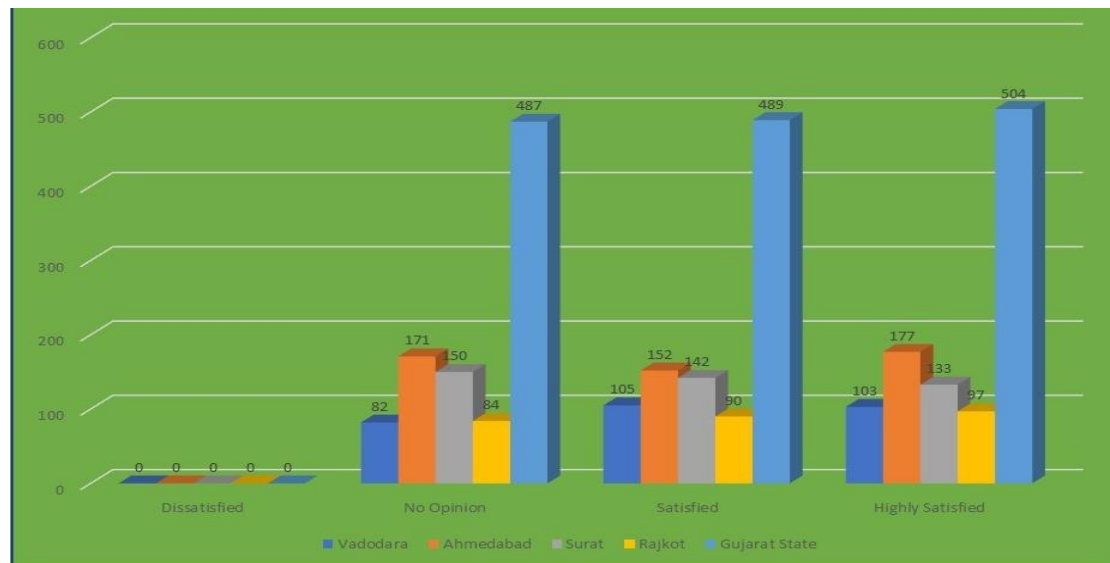
Many factors had contributed to customer satisfaction, like personalised offers, easy comparison of product, variety of payment option, brand visibility, convenient checkouts, updates through push notification, better instore experiences with mobile optimisation, bar code or QR code scanner for better product information, customer support facility with the help of chatbot and messenger applications, variety of payment methods like credit card, PayPal, or cryptocurrency which they could easily be integrated into the mobile store.

Most of the companies are slowly moving towards m-Commerce due to vaster audience base, helps to strengthen their brand, also helps to keep up with competitors, better conversion and sales. Technological advancement and changes in buying habits of consumers definitely leads to mobile centric approach while doing business. Merchants are also satisfied due to wider audience base, enhanced user experience, direct communication and easily adaptability as per the customer's needs. it also helps in increasing customer interactions and also to improve the number of transactions. The rise of mobile has also led to new trends in marketing like mobile content marketing. Reaching customers at right time through geo tracking and programmatic advertising. Also, can gain valuable knowledge about consumers purchase behaviour through mobile analytics allow tracking consumer data from the moment of product discovery till the purchase.

5.21 DISCUSSIONS AND INTERPRETATIONS

The age group that has maximum responses from mobile commerce users from all the four selected cities of Gujarat are in the category of 31 to 50 but there was not much difference found in the city wise analysis. Another major category was 16 to 30 years, with maximum users from Rajkot and minimum from Ahmedabad. The study proved that people in the age group of 18 to 50 were the main users of m-commerce as they comprise of 86.4 percent of the entire users.

In the Gujarat State, 52 percent of m-Commerce users were females, and 48 percent were male. More and more women are taking on leadership roles in the home and the workplace, and this trend is only expected to continue. It's important for m-Commerce merchants and service providers to recognise the growing number of female customers and build appealing offerings to meet their needs. Due to the high percentage of married people using m-Commerce applications in Gujarat, it has been determined that married people are more likely than unmarried people to utilise m-Commerce applications. In Gujarat, there was 61 percent difference in the adoption of m-Commerce applications was found based on marital status of m-Commerce users. The adoption of m-Commerce applications differed less in Rajkot (56.2 percent), Vadodara (57.2 percent), Surat (60.4 percent), and Ahmedabad (66.4 percent) of Gujarat State. Joint families accounted for 47 percent of m-Commerce customers, while nuclear families accounted for 53 percent. With 48 percent, Ahmedabad City topped the list of m-Commerce users in the joint family category, while Rajkot City topped the list of m-Commerce users in the nuclear family category with 56 percent. There was little difference (approximately 5.4 percent) in m-Commerce users' responses based on the type of family they live in, as Gujarat State has almost the same number of persons living in joint and nuclear families. The responses received from Ahmedabad city (3.2 percent difference), Vadodara city (4.2 percent difference), Surat city (5 percent difference), and Rajkot city (11.6 percent difference) revealed the least variation in terms of use of m-Commerce applications based on the users' family type.

The majority of m-Commerce users are from the service sector (41.4 percent), followed by students (29.8 percent), self-employed (25.8 percent), and unemployed persons (3.3 percent). Except in Rajkot, where students use mobile commerce at a slightly higher rate than service sector employees, city-level responses showed a similar pattern with service sector employees being the primary users. Based on the responses, it can be assumed that the majority of m-Commerce consumers had an annual income of between 6 and 9 lakhs. Except in Surat, where there is just a 0.3 percent difference between the income groups of 0 to 6 lakhs and 6 to 9 lakhs, there was a noticeable income gap in all other cities. The data suggested that m-Commerce was becoming more popular among middle-class households.

Android was the most popular operating system among m-Commerce users, with more than 90 percent of users in all four cities using it. Vadodara leads with 96.2 percent of users, followed by Rajkot (95.5 percent), Surat (94.8 percent), and Ahmedabad (92.8 percent). iOS is the other popular operating system. In the cities of Ahmedabad and Rajkot, 5% of m-Commerce users, 4 percent in Surat, and 3 percent in Vadodara, regarded iOS to be a user-friendly operating system.

Windows was judged to be the least user-friendly of the three operating systems studied, with an overall user of 0.9 percent. The popularity of Android as the friendliest operating system may be due to its flexibility, functionality and freedom of choice over wide range of sizes, shapes, features, price points etc. In terms of shopping frequency, the data analysis of all four cities revealed that over 30 percent of individuals used their mobile phones for shopping once a month, 23.1 percent once every two weeks, 7.6 percent once every week, and the remaining 39.4 percent were unsure how many times they used their phones for shopping. According to a city-by-city analysis, 36.6 percent of mobile phone users in Vadodara, 32.5 percent in Rajkot, 27.5 percent in Surat, and 26.6 percent in Ahmedabad shop only once a month. While 24.8 percent of Ahmedabad city residents, 22.8 percent of Surat city residents, 22.3 percent of Rajkot city residents, and 21.4 percent of Vadodara city residents shop once every two weeks, and 9.4 percent of Surat and Ahmedabad city residents, 5.7 percent of Rajkot city residents, and 5.2 percent of Vadodara city residents shop once every week. Nearly 40% of consumers in all cities were unsure how often they should buy things with their phones. It revealed that people make purchases on the spur of the moment. M-Commerce companies should pay more attention to this segment and adopt a strategy that will help to increase the frequency of shopping by developing appealing schemes and offering rewards or rebates based on frequency. This will encourage users and non-users to shop more frequently through m-Commerce applications.

Nearly 50 percent people had preferred to buy products when they were at home and 57 preferred to shop in the late evening. From this it is clear that family played a very important role in the buying decision and product choice. M-Commerce merchants should try to understand the role played by different family members in purchase decision and their attitude towards the products and services offered by the company and develop a suitable positioning strategy to attract them towards the company and its products and services.

69 percent of users spent more than half an hour on mobile for shopping. As m-Commerce applications allowed comparative shopping they would have analysed the offers of different m-Commerce vendors, compared different brands and would have consulted with family members before taking the final call. The m-Commerce merchant should have clearly understood the kind of family system existing in the society and the role played by each and every member in the family as an initiator, influencer and as a decision maker. Companies should have rescheduled the time of giving attractive offers, for example in case of products where colleagues and friends had played a major role, offers could have been given during office hours. But for products meant for the family it was better to give offers in the late evening. As SMS is regarded as an effective source of getting information, customised offers could have been given during these family hours. As push notification served as a personal communication channel between the client and the service providers, this could have been used to inform customers about ongoing offers, new arrivals, short term discounts and exclusive promotion offers. Social media could also be used to market products meant for the family.

Regarding the main source of information, 22 percent of the respondent were getting information from newspapers. 19 percent were getting information via SMS, 15 percent of the users were getting information from TV and friends 14 percent form family members, 12 percent from colleagues. Only 3 percent people were getting information via email and remaining 2 percent were getting information via hoardings. As Newspaper was the main source of information in all the cities except Vadodara, m-Commerce companies could have used this as the main medium for giving information about new products and services as well as to provide other offers. As newspaper has more credibility among people, special grand offers, could be announced through this medium of information.

Even though sometimes customers got irritated with unwanted promotions via SMS, permission-based marketing could be used effectively to promote m-Commerce sale as it is the second most important source of information for m-Commerce users. Television commercial as well as word of mouth can also be explored for information sharing thereby increasing the adoption rate. As more and more people are techno-savvy, email can also be used to provide customised schemes to target market. Even though hoardings were not so popular among customers in getting product or service information, the potential of this medium also should be explored. m-Commerce companies should create simplistic but creative content, like AMUL's hoadings, which can create mass appeal among customers and gradually develop a brand identity for the company and may also leads to brand loyalty. The customers may also overcome the fear of insecurity of online transaction and would engage in actual buying behaviour. So relevant issue-based hoardings could also be used to provide information about a new product, product modification and special offers to m-Commerce users.

Surprising, in all the four cities, Easy refund was the top most reason for consumers to adopt m-shopping applications. Customers wanted to know the return and refund policies of the company before clicking the buy button. One might have developed a superior product, able to differentiate the product or service offering from those of competitors and may be giving top-notch customer service but what makes true difference is the generous return policies that may lead to increase sales and ensure repeat purchase. Easy refunds are the major service, m-Commerce vendors can give it to customers to ensure customer retention and repeat sales. As this is the leading reason for downloading applications, m-Commerce vendors should adopt transparent policies regarding return and refund which can help consumers to overcome the insecurity they feel while engaging in m-Commerce.

Another major reason was easy purchase. As many online users adopted smartphone as a medium to browse, compare prices and make purchases, a mobile friendly user interface is required as people expect faster results through this medium of commerce.

A website created with responsive design which can optimise itself for the small display and touchscreen of the smart phone can ensure easy shopping. People use smartphone for faster response. Slow response or sluggish performance may prevent users to visit the applications store again, so companies should find a web-host that can provide a speed boost and thereby create more traffic towards m-Commerce applications store.

Another key reason for downloading applications was to avail discounts. Due to stiffer competition, online sellers offer products at irresistible rates that no offline retailer can offer. For new online shoppers, these online vendors provide sign up bonus in the form of coupon vouchers to attract and retain them. Many m-Commerce vendors follow "No question asked return policy' and easy return, if the product fails to meet the customer's expectation.

Absence of middlemen, large reach of online stores and the use of drop shipping suppliers (who ship product directly to online customers, thereby avoiding the warehouse charges) can help companies to generate profit despite huge discount offers to customers. The other chief reason was user friendly interfaces of mobile applications that can attract the attention of the user. The user interface should contain relevant information, interactive icons and procedures that are fast and simple to understand. When optimizing mobile applications, companies should ensure that it has a light interface (to avoid buffering), optimized content and reduced image size to facilitate m-Commerce. In short with mobile applications customers can get benefits of speed and simplicity, avail discounts and customised notification, thereby helping in increased customer retention.

85 percent had downloaded two to three applications apart from the pre-installed applications. As the customer's billing, debit or credit card details and shipping information is already stored in the mobile app, ordering through this medium has become quite hassle-free. Financial incentives attract people. By providing discounts on their first purchase, m-Commerce vendors are not only giving them incentives to download the applications but also give them a reason to make another purchase. Receiving applications exclusive coupons and offers and to earn bonus point for a loyalty programme are also attracting customers to download applications. As applications users had spared sometime in downloading the applications and browsing through it, m-Commerce vendors consider this category of consumers as more loyal and treat them with personalized information and attractive offers. By leveraging analytics and purchasing behaviour, companies can send customised offerings and updates through push notification accordingly.

The overall data analysis of all the four cities revealed that 54 percent of the users were using mobile smartphone for paying phone bill. The main item bought through mobile were electronic items (52 percent) followed by food (50 percent), taxi services (49 percent), hotel booking (48 percent), bag and luggage (47 percent), movie tickets (46 percent), travel tickets (44 percent), clothes (30 percent) and fashion accessories (28 percent).

As the study showed that across different categories, many consumers are still reluctant to buy products online, it has become necessary for retailers to understand the buying behaviour, drivers and inhibitors and develop tactics accordingly. Push up messages, incentives like discounts, coupons can be used to attract the customers through online buying especially through mobile.

Electronic appliances and accessories were the major purchase through mobile. Even if customers walk into brick and motor electric store to see the product physically, they prefer to shop from large online market places like Amazon and flipkart. As the purchasing power has increased, the youngest population of India who are known as gadget enthusiastic want to buy latest models of cameras, headphones, PCs, mobiles and its accessories preferably through online, have prompted some companies to launch their product through m-Commerce platform.

Online food ordering was another popular category. Even though it has started in 1994, become famous in the recent years. As both husband and wife are into workforce they were forced to move from grandma's recipe and toil for several hours in the kitchen to more convenient way of ordering through online especially through mobile applications. After a long day of hectic work, you can treat yourself with variety of customised food items without wasting time by standing in a queue at the restaurant.

Those who are new to online food ordering get enticing promotion offers which help them to order more items. Companies are also benefited by these tempting promotional offers as it generates more sales and customer retention.

Customers preferred online food ordering as it offers limitless dining options and expose them to variety of cuisines which they are not familiar with. Ordering from home is easy as you need not had to remind the waiter about your food preferences, salt-spicy level, diet restriction etc Food ordering applications display food items as per the customers requirement and give suggestions as per the customer's earlier order. Repeating previous orders are also quite easy. These restaurants send push notification if there is any new combo offer or special discount is offered by customer's favourite restaurants. Due to this personalized dining experience online food delivery services are the preferred choice among the mass public.

Online apparel shopping was another favourite category among consumers as it offers wide choices in shapes, sizes, colour combinations, compositions, and budget and not restricted by store's working hours. In physical store you may be getting the help of sales person who will display different products which indirectly put pressure on consumers to buy the product to please the sale person for the kind help, even if they don't like the stuff displayed. In short, Online shopping of apparels especially through mobile applications were preferred due to excellent choices from many sellers at all sizes, shape and colours even from abroad, affordable price range, attractive discounts and rebates, ability to shop at your convenient time, no queues in the trial rooms, no pressure from sales person, avoidance of crowded market place and parking space etc.

Since ancient time people were fond of fashion accessories which has become an inseparable part of clothing. It helps to make a fashion statement and help people to outstand from the crowd. Matching accessories like jewellery, sunglasses, bracelet-watches, hair accessories define your style statement and elegance. Online shopping helps you to a wide variety of choice, can select form Indian and foreign designers, customised accessories according to your physiques and can get products as per the price range preferred by the customer.

It provides niche opportunities for the vendors to develop gender-neutral accessories and also bags, wallets, sunglasses and belts among other things. As customisation is the necessity now, people can get products as per their choice of colour, size and shape. Retailer can Consider offering monograms or custom graphics on the products offered which will add a unique, personalised touch to regular products. Beauty and personal care products are another fast-growing category in online shopping through mobile applications. Beauty products, grooming and personal care products also provide wide variety of choice and price range to select. There is a growing demand for organics products also. m-Commerce companies can explore this opportunity turn it into a successful business venture. Home and kitchen products are also slowly moving into online, the main advantage being the convenience in reordering every day item and customers can even automate recurring purchases on monthly or weekly basis.

As per the result of the survey, buying baby care products online was not the preferred choice, as it requires extra cautious when buying baby care products especially for new moms who had to search for toxin-free natural products. It is very tedious to go through product labels and checking for fragrance components for some people. As buyers are more cautious about ingredients, retailers had to work on labels carefully, avoid phthalate- and paraben-free products, include natural and organic products and offer hypoallergenic products suitable for the gentle skin of babies. These actions can improve the online customer base.

Response regarding awareness, download and use of m-Commerce applications showed that travel applications, food applications, payment applications, entertainment applications were quite popular along with Amazon and flipkart.

Online stores like Amazon provides service solution for imaging, accounting and end to end management of seller business account, transportation, cataloguing, keeping track of orders, shipping them on time and advertising of products so that sellers can concentrate on their core business. Amazon seller applications ensures smooth communication between buyer and seller and also perform tasks such as order fulfilment, listing, tracking shipment etc. It also helps in share the product listing with friends, families and fans on WhatsApp, Facebook and other social networks using this app. Customers are also benefited from the extremely efficient shipment services as they can track shipments, get faster and timely delivery of product. Amazon prime members get extra benefits like free shipment, faster delivery, access to Prime video and music etc which enables better customer traction. Moreover, these companies are creating job opportunities in India.

Amazon and flipkart are two e-commerce market giants and investing millions of dollars in India in various marketplaces, infrastructure and supply chain management. Both the companies are enticing customers with attractive offers, for example, flipkart has launched "flipkart pay later" option that can avail loan for 45 days without interest. The company has also introduced "super coins" to those customers who shops for more than Rs.100. Unlike flipkart membership, Amazon subscribers had to pay for prime membership.

Flipkart also ensures Pan-India outreach, minimum set up cost, no need of any separate logistics framework, access to market trends and negligible marketing cost. It offers a massive category of products ranging from every day appliances to high end beauty items which has made shopping experience more colourful, convenient and flawless for consumers. Flipkart's 'The Big Billion Days' and Amazon's "Great India Festival" has offered products at predatory pricing or deep discounting that has attracted many people towards online shopping especially through mobile. Amazon's festive bonanza has attracted 91 percent new customers from 98. 4 percent of India's pin codes and 66 percent new prime sign ups in just 48 hours according to Amazon. As these companies sell products at near-cost prices, it affected the small retailers which forced the Government to draft new e-commerce policy in 2018 which prevents ecommerce restricted companies from impacting the price of products directly or indirectly.

After Flipkart, Swiggy had the most users. Its outstanding logistical network and large salesforce have allowed it to overcome Zomato in the cluttered food sector. Swiggy's success was due to their constant on-time delivery and partnerships with leading eateries to ensure customer happiness and retention. Aside from the popular Biriyani delicacies, individuals wanted office cappuccinos and masala chai to get over the post-lunch slump. Post-lockdown, Pani puri, the most missed street chaat, was in high demand. In 2019, super grains, vegan, high protein, and keto-friendly foods were in great demand on Swiggy Health Hub. As a result, Swiggy Health Hub has introduced nutritious foods like high-protein khichdi, high-fiber idli, low-fat salads and keto-friendly sandwiches to its menu. Understanding changing client needs and upgrading food items and delivery accordingly still rules the country's online meal delivery services. The increasing demand for online food delivery has prompted App-based cab-hailing service providers Uber and OLA to enter into this segment with UberEATS and OLA cafe.

Mobile travel applications were another popular category with players like MakeMyTrip and Goibibo. The role of sales agent was taken over by this applications as people prefer to make their own travel arrangements through these user-friendly mobile applications which enables flight, train, hotel and cab booking, price comparison, getting destination delicacies, finding local attractions (through geo-location); real-time weather forecasting sharing pictures and videos from their travels; posting feedback etc through the same platform with just a few clicks and all the paper work can be avoided.

The use of IOT based geolocation smart systems in these applications helps to explore different destination around the world, get amazing incentive and discounts. automate different operations including booking, invoicing, billing, enable cashless travel, get customised services and also saves a considerable amount of money and time. With the help of machine learning and big data, travel applications are getting more updated and customised and also helps in widening customer based and improve customer loyalty. With machine learning and big data, travel applications are now getting cleverer and smarter. More and more travel applications are custom made. Mobile based travel applications have helped in widening customer base and improving client loyalty and also helps in streamline transactions.

After demonetisation Indians are slowly moving towards cashless transaction through digital medium which they think more safer and quicker. Demonetisation had led to the growth of the company as seven million transactions worth INR 120 crore has taken place in Paytm within just 12 days. During global pandemic, people realised that mobile wallets are here to say and when we talk about mobile wallets the two words that come to our mind is "Paytm karo". Paytm is the undisputed leader in the digital payment market. It has changed the retailing scenario by introducing new payment method. This online wallet which has started with limited utilities can now be utilised to perform almost all the operations, can pay bills, transfer funds to other bank accounts, buy tickets, book hotel etc to name a few. The easy-to-use application where merchants can sign up for Paytm even without a bank account has attracted thousands of merchants towards it.

Apart from demonetisation, aggressive merchant acquisition drive, ease of operation, cash back offers, user friendly features had attracted many people towards this medium. Paytm is quite user friendly can be adopted by any one with less technical knowledge like vegetable vendors, street sellers etc. It is the first digital payment bank in India now extended operation into m-tailing, payment wallet etc. Paytm. India's largest mobile payment platform help customers to transfer money promptly to anyone at zero cost using the Paytm Wallet. Paytm gives huge amount of cashback to customers, the cash back cannot be refunded in customers bank account so people spend that amount to buy more products and services. Adding money, making payment as well as accepting money is quite easy through Paytm Wallets. By scanning QR code or entering their mobile number in the pay option in the mobile applications helps to do instant payment. The easy-to-use applications along with reward points had encouraged people use Paytm even for low value transactions like paying for vegetable and grocery bills which has made these applications more popular among common men.

Regarding the cost, majority of the users (94 percent) have given the opinion that smart phone is not expensive. Transaction fee and network connection fee are less in India. People are not scared of the fraudulent charges they may had to pay if they continue with m-Commerce. M-Commerce users preferred to get personalised messages on sales, special price and promotional coupons for the products of their favour.

Users felt that getting updated information through messages are required but it should be sent only after taking the recipient's permission. Majority of users (73 percent) have given the opinion that m-Commerce is an invasion on their privacy.

m-Commerce users had high confidence while engaging in purchase. Users felt that merchants are efficient and committed. Technological advancement in Internet security made m-Commerce transaction trust worthy. Display assurance seals are trust worthier in m-Commerce. m-Commerce users felt confident in giving debit and credit card information while engaging in online transactions, payment process in m-Commerce was smooth and secure and they had control over what information to share or not to share with third parties.

M-Commerce users felt that others cannot easily tamper with information regarding their m-Commerce transaction and regulations on M-Commerce can minimize the privacy risks to some extent. Interacting with M-Commerce was clear and easy to understand and it provides the convenience in getting information about promotional offers and coupons and it would be easy to become skilful at using cell phone or PDA for M-Commerce transactions. It was easy to search and compare products and services on smartphone. It also helped them to accomplish the task faster, made life better and well informed about the product and services. Society, friends, colleagues all played major role in purchase decision. First time users normally seek out the opinion of those who had tried new products or brands before they try them. Mass media also influence purchase decision. Users had commented that they had used m-Commerce without the help of others as they had necessary means and resources as well as the required knowledge and ability to use m-Commerce services. They reported that transactions were entirely within their control and showed willingness to recommend m-Commerce service to others.

Users commented that they had benefited from m-Commerce services and developed positive perception about using it. They felt that it was essential to use m-Commerce and had positive views towards offering mobile coupons for discounts.

Cost of performing transactions via mobile were less than the other channels which prompted them to adopt it. Users preferred products which are customised and expressed willingness to buy it provided their privacy is taken care of. They also have given the opinion that the recent laws introduced to reduce transaction risk of users' data had restored their confidence in the system and prompted them to adopt m-Commerce services. User friendliness of the mobile applications and the positive attitude of society towards M-Commerce have also influenced its adoption. The m-Commerce users had expressed their willingness to continue with M-Commerce transactions in the near future and are planning to increase the usage rate. Nearly 70 users were satisfied with m-Commerce services. No one has shown any dissatisfaction towards this medium of commerce which is a positive sign for the growing popularity of mobile as a medium of commerce.

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