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ORIGINAL ARTICLE

"An In-depth study on the Preferences of Value Added Services among the Mobile Users in Ahmedabad City"

Sharif Memon[1] and Jasmin. Padiya[2]

Associate Professor - Marketing,GLS Institute of Computer Technology (GLSICT-MBA)
Gujarat Law Society Campus,Law Garden, Ellis Bridge,
Ahmedabad –380006
Email: sharif@glsict.org, Email: jasmin@glsict.org

Abstract:
The rapidly-growing valued-added services segment has been one of the instrumental factors in India's runaway success in mobile telephony. Value-added services are increasingly being viewed as an instrument for customer retention and service differentiation by the telecom operators given the rapidly increasing competition. The demand for the VAS is higher among younger population. This research paper is an attempt to analyze the importance, usage & loyalty amongst the mobile users.

Keywords: *Telecom, VAS*

INTRODUCTION

The value-added services market is growing rapidly in India. According to a consultation paper published by the TRAI, the VAS contributes around 10%-14% of the total revenue of mobile telecom service providers. A confluence of factors such as the falling costs of value added services, enhanced handsets qualities, lowering age profile of mobile users have helped in stimulating the growth in this segment. Also, a host of innovative contents and packaging provided by the service providers is also luring the customers. Moreover, the consumers are increasingly looking for entertainment, different means for performing transactions and accessing information at their finger tips. VAS helps the consumers in receiving the same and hence is expected to become a major revenue segment for the telephone operators.

DIFFERENT VAS CATEGORIES

	Entertainment VAS	Information VAS	M-Commerce
Definition	These services provide entertainment for leisure time. These services usually generate mass appeal	These are the services which provide some useful information to the end user. The user interest comes from personal or relevant component of the content.	These are the services which involve some transaction non mobile

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Current status	Entertainment VAS is driving the VAS market both in terms of volume and revenue.	Information VAS is getting popular with different categories depending on the relevance	M-Commerce is currently in embryonic stage
Drivers	Industry focus is on Entertainment VAS with new players coming from media and movie houses e.g. STAR, Rajshri	Entities using mobile as another channel to deliver information is driving information VAS. E.g. stock updates, bank account information, travel information, etc.	RBI guidelines is expected to give a big boost to m-Banking
Challenges	Currently, music is the biggest component. Challenge is to drive the usage of other content/services like game	Marketing is the biggest challenge since Information need differs across different segments Credibility of the source is another challenge since there are alternate channels available to get Information VAS	Identifying the best access mode to provide m-Commerce is a big challenge ™ Handset penetration and usage of the key access mode (GPRS) of m-commerce is low in India ™ Allaying security concerns
Future status	Entertainment VAS is expected to remain the VAS driver for the next few years	Information VAS is going to be key to address the needs of growing rural market	m-Commerce has the potential to emerge as a key VAS component once security concerns are addressed

LITERATURE REVIEW

ARTICLE 1: INDIA EMERGES AS A GLOBAL HUB FOR VAS

India has become a hot spot for global technology companies trying to cash in on the booming telecom market here by offering Value Added Services to telecom companies. In the urban markets, where the voice mobile telephony is just about reaching as the saturation level the operators are also looking at VAS operations as the new source of income.

As voice ARPU is declining global, maintaining and increasing the subscriber base and deploying the right value added services quickly and efficiently has become critical for operator to sustain their profitability and growth. VAS demand has increased in rural areas and is likely to go up further with languages being used to provide such services, he said.
(Source: The Times OF India, dated Aug 16, 2006)

ARTICLE 2: MOBILE OPERATORS SEE VAS AS MAJOR GROWTH ENGINE FOR REVENUES

Amid fierce competition with per second tariff pulse, which is upsetting their top line, the mobile operators are now focusing on value added services, such as, caller tunes, ringtones and others to make up for the depleting revenues.

Realizing that future growth of revenues would come from value added services (VAS); many telecom service providers have recently tied up with software exporters to launch application store, where users can browse and download applications some for free or others at some cost. Mobile service providers are seeing a steady shift in value from providing connectivity to monetizing digital demand, an analyst said.
(Source: The Financial Express, dated Jan 11, 2010)

ARTICLE 3: MORE FROM YOUR MOBILE

Providers of value added services (VAS) and mobile download, who of late have become a separate industry in their own right, expect their market to triple once 3G services are launched. According to industry estimates, the VAS market, backed by the Indian trend for entertainment, has been growing over 100% year-on-year. The mobile downloads market broadly includes video, audio, games and wallpapers. The videos again include video ringtones, movie clips, animation and unaired content of television

programs.

It is not just 3G which is expected to boost the VAS industry, but also the increasing use of high-end handsets. In the recent past, vendors have begun making manufacturing more and more handsets with colored screens, enhanced memories and stereo sounds. Handset prices are also falling, which is again good news for mobile downloads enthusiasts.
(Source: The Financial Express, dated Oct 17, 2006)

ARTICLE 4: POWERFUL BOTTOM OF PYRAMID – GAME CHANGER FOR INDIAN TELECOM

India, specifically rural India is on the eye of every set of people: whether it's Politician, Bureaucrats, Business Houses, FMCG companies etc. Telecom Companies are no different than this. Market Analyst predicts that India will be the vanguard runner in achieving highest GDP growth rate in the Global Economy plethora and amongst South East Asian Economies & BRIC Economies.
(Source: Telecom Talk, dated March 26, 2011)

RESEARCH METHODOLOGY

RESEARCH PROBLEM

To Study mobile user's preference towards Value Added Services (VAS) offered by various telecom service providers for Ahmedabad city.

OBJECTIVES OF THE STUDY

- To study the mobile user's preference towards Value Added Services (VAS).
- To study the customer preference towards GPRS.
- To study variation in GPRS usage with different demographics.
- To measure the awareness level & ease of usage of the customers with VAS.
- To analyze the customer's satisfaction level with price charged for VAS by the telecom service providers.
- To know the relation between expense on mobile & VAS.
- To analyze the preference of VAS among different demographics.
- To know the usage level of customers regarding different type of VAS.

RESEARCH DESIGN

Research Design is a descriptive & cross-sectional study.

•DESCRIPTIVE STUDIES:

Descriptive studies are undertaken in many circumstances. When the researcher is interested in knowing the characteristics of certain groups such as age, sex, educational level, occupation or income, a descriptive study may be necessary. Other cases where descriptive study could be taken up are when the objective of study is to answer the question like who, when, where and why of the subject under investigation. Descriptive studies can be divided into two broad categories cross-sectional and longitudinal. Here the cross-sectional research design has been used.

•CROSS-SECTIONAL STUDIES:

Cross-sectional studies are used when the research is carried out in particular time only". Cross-sectional studies are concern with a sample of element from a given population. Cross-sectional studies are two types. First is field study and second is survey method. Although the distinction between them is not clear cut, there are some practical differences, which need different techniques and skills. Hence survey method used as descriptive & cross-sectional.

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•RESEARCH INSTRUMENT:

Structured questionnaire was used for the purpose of the data collection as the instrument. Questionnaire consisted of both close ended and open ended questions.

•SAMPLING PLAN:

•Sample population: Population of Ahmedabad city.
•Sampling unit: All Mobile Users.
•Sample size: 238
•Sampling technique: Stratified convenient sampling.
•Geographic scope: Ahmedabad city.
•Strata used:

TABLE 1 STRATA SELECTED

Segment	No. of Samples
SOHO	24
Youth	69
Family	37
Young Professionals	54
Mid & Sr. Level Executives	54
Total	**238**

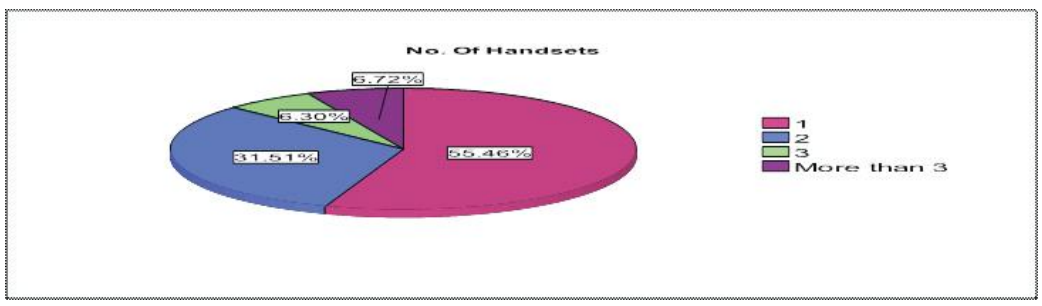
LIMITATION OF THE RESEARCH

Some of the major limitations of my study are mentioned below.
•The survey work was conducted in Ahmedabad city only so it cannot cover the preference of other areas.
•The sample size taken for the survey work was 238 because of the limited time period there is chances of error in data analysis.
•There is a chance of error in the response because of the limitation of the knowledge of the respondent.

ANALYSIS

1)RESPONDENTS & NUMBER OF HANDSETS

Fig 1 Number Of Handsets



INTERPRETATION:

As shown in above graph a majority of 55.46% people have one handset, followed by 31.51% having two handsets, 6.72% having three and 6.30% have more than three handsets.

2)PREFERRED TECHNOLOGY OF HANDSET.

TABLE 2 CDMA PREFERENCE

	CDMA	Frequency	Percent
Valid	Yes	63	26.5
	No	174	73.1
	Total	237	99.6
Missing	9.00	1	.4
Total		238	100.0

Table 3 GSM Preference

	GSM	Frequency	Percent
Valid	Yes	212	89.1
	No	25	10.5
	Total	237	99.6
Missing	9.00	1	.4
Total		238	100.0

INTERPRETATION:

As shown in above we can infer that a majority of 77% people have GSM connection. Referring to the findings of first question we can say that majority of people have single mobile connection which has GSM technology in it.

1)HANDSET SPONSORED BY MOBILE

In the survey it got revealed that majority of 81.09% doesn't have sponsored mobile. While only 18.91% of people have sponsored mobile. It was observed that sponsored mobile was found in segment of young professionals have just entered into the organization and the segment of middle and senior level executives. But only few professionals have sponsored mobile. So a potential is found for telecom companies to target this segment by offering various value added services and various offers to encourage more usage of VAS.

2)PRICE RANGE & BRAND OF YOUR MOBILE HANDSET.

TABLE 4: PRICE RANGE & MOBILE BRAND

	Frequencies				
	Handset 1	**Handset 2**	**Handset 3**	**Handset 4**	**Total**
Below 2000	24	16	2	2	44
2000-5000	74	24	11	4	113
5000-8000	53	26	2	3	84
8000-11000	38	18	2	2	60
11000-14000	17	11	2	0	30
Above 14000	31	9	10	3	53

INTERPRETATION:

Majority of price range of mobile handset falls in between Rs. 2000-5000 which is makes 29% of the total population & followed by 22% of people having mobile handset of price range Rs. 5000-8000. In today's scenario GPRS enabled mobile handset are available within above ranges, hence telecom companies can offer more GPRS supported VAS.

TABLE 5: BRAND OF HANDSET

	Frequencies				
	Handset 1	**Handset 2**	**Handset 3**	**Handset 4**	**Total**
Nokia	137	36	12	6	191
Samsung	33	26	0	4	63
LG	14	11	5	0	30
Sony Ericsson	17	8	0	0	25
Motorola	13	11	1	4	29
Others	21	13	11	0	45

INTERPRETATION

From the above table it is seen that 50% people use Nokia as their handset followed by Samsung, Others, Motorola, LG & Sony having 16%, 12%, 8%, 8% & 6% market share respectively so there exist a potential for telecom companies to collaborate with Nokia to provide various VAS supported by Nokia Handsets.

1)MOBILE CONNECTION

TABLE 6: MOBILE CONNECTION OF THE RESPONDENTS

Mobile Connection	No. Of Respondents
Airtel	59
Idea	45
BSNL	38
Reliance	44
Vodafone	109
Virgin	1
Tata	43
Others	0

INTERPRETATION:

The table shows that 32% of market share is captured by Vodafone followed by Airtel, Idea, Tata, and Reliance & BSNL with a share of 18%, 13%, 13%, 13% & 11%. So it can be said that the leaders like Vodafone & Airtel, in order to sustain their position should offer innovative VAS to its customer while the companies like Tata, Idea, Reliance & BSNL should do more sales promotion & introduce new offering to the market.

1)TYPE OF MOBILE CONNECTION

TABLE 7: TYPE OF MOBILE CONNECTION- PREPAID/ POST-PAID

No. Of Handsets	Type Of Connection	
	Prepaid	**Post-paid**
Handset 1	136	101
Handset 2	57	52
Handset 3	12	21
Handset 4	11	9

TABLE 8: TOTAL PREPAID & POST-PAID CONNECTIONS

Type Of Connection	No. Of Respondents
Prepaid	216
Post-paid	183

INTERPRETATION:

From above table it is seen that a majority of 54% customers have prepaid connection while the post-paid connection are 46%. So there is not a vast difference in both the type of mobile connection. So telecom companies should give equal preference to both the type of customers in offering the VAS.

1)PREFERENCE TOWARDS GPRS

(A) PURPOSE OF USING GPRS

TABLE 9: PURPOSE OF USING GPRS

Purpose of use	No. Of users
Surfing	79
Downloading	46
Social Networking	27
Chatting	15
News Updates	38
Others	19

INTERPRETATION:

The table shows that the majority of 35% people who uses GPRS prefer surfing the most, followed by downloading, news updates, social networking, others and chatting. So telecom companies can encourage surfers to download the more contents and to have the usage of other services like news updates, social networking, chatting, etc.

(B) REASON FOR LESS USAGE OF GPRS

•Lack of knowledge to use GPRS.
•High price perception to use GPRS.
•Easy access to internet via computer or laptop.
•Less awareness regarding use of GPRS.

Above were some of the most common responses obtained via an open ended question.

1)SOURCE OF INFORMATION REGARDING VAS

TABLE 10: SOURCE OF INFORMATION

Source	No. of Respondents
TV Advertisement	97
Newspapers	66
Magazines	15
Text & Calls from company	126
Internet	64
Reference from friends/family	89
Others	6

INTERPRETATION:

As shown in above, it is seen that majority of customers get information from text and calls from companies, followed by TV Ads, Reference from friends and family, internet, newspapers and magazines. So telecom companies should prefer text and calls to give information to customers regarding VAS. And also they should give preference to word of mouth and other sources.

1)USAGE PATTERN OF VARIOUS VAS

TABLE 11: USAGE PATTERN OF VARIOUS VAS (WHERE 5 IS HIGHEST & 1 IS LEAST USAGE)

VAS Type	Highest	Higher	Normal	Lower	Least
Entertainment	54	46	44	23	31
Information Based	59	53	43	29	14
M-Commerce	45	40	40	30	43
Social	19	37	33	67	42
Enterprise	20	25	38	47	68

TABLE 12: MEAN USAGE OF VARIOUS VAS

Type Of VAS	Mean
Entertainment	3.3400
Information	**3.5700**
M-commerce	3.0700
Social	2.6200
Enterprise	2.4000

INTERPRETATION:

Here, customers prefer information and entertainment VAS which falls in category between normal and higher usage. Followed by m-commerce, social and enterprise base VAS. So it is clear that the telecom companies should give more innovative VAS in information and entertainment based VAS, and should

give more offerings in other categories to encourage more usage of that VAS. In this research rank 1 is for the highest pattern, 2 for high, 3 for normal, 4 for lesser and 5 for least usage.

1)AWARENESS AND USAGE LEVEL FOR DIFFERENT TYPE OF VAS

TABLE 13: AWARENESS & USAGE LEVEL OF DIFFERENT ENTERTAINMENT VAS

Entertainment VAS	Awareness & Usage Level		
	Aware But Not Using	Aware & Using	Not Aware
SMS	29	190	2
Animations	141	48	40
Religious Chants	162	9	58
Ringtones	106	117	7
Quiz	172	34	23
Music on demand	164	46	20
Mobile Themes	127	84	19
Wallpapers	110	111	11
Jokes	164	56	11
Video Clips	144	54	29
Mobile Radio	120	92	17
Mobile Games	104	105	21

INTERPRETATION:

It is seen that among the various VAS in Entertainment category, consumer are aware maximum about quiz, jokes and music on demand but they are not using. So they should be motivated to use more of these services. While more offers should be given in other categories to encourage their usage.

TABLE 14: AWARENESS & USAGE LEVEL OF DIFFERENT ENTERTAINMENT VAS

Information VAS	Awareness & Usage Level		
	Aware But Not Using	Aware & Using	Not Aware
Cricket Alerts	137	85	7
Astrology	187	32	11
Travel Related Details	146	55	28
Banking Alerts	104	110	16
Vaastu	179	19	31
News	129	88	10
Stock Portfolio Mgmt	158	37	32
Fengshui	152	11	65

INTERPRETATION:

From above chart it is seen that among the various VAS in information category, consumer are aware maximum about astrology, Vaastu and stock portfolio but not using, so they should be motivated to use more of these services. Customer should be given more offerings in other categories to encourage their usage.

Further, it is seen that consumers are aware and using the banking alerts, cricket alerts and news the most. So they should be given more choices among these categories and should be motivated to use other services more by giving more offers and innovative services in remaining categories.

11) M-COMMERCE & VAS

TABLE 15: AWARENESS & USAGE LEVEL OF DIFFERENT M-COMMERCE VAS

M-Commerce VAS	Awareness & Usage Level		
	Aware But Not Using	Aware & Using	Not Aware
Mobile Banking	124	19	14
Ticketing	144	68	18
Travel Holiday Booking	164	27	38

INTERPRETATION:

It is seen that among the various VAS in M-Commerce category, consumer are aware but not using travel and holiday booking so they should be motivated to use more of these services while they should be given more offerings in other categories to encourage their usage.

12) AWARENESS & USAGE OF SOCIAL VAS

TABLE 16: AWARENESS & USAGE LEVEL FOR SOCIAL VAS

Social VAS	Awareness & Usage Level		
	Aware But Not Using	Aware & Using	Not Aware
Mail	113	100	17
Dating	179	16	33
Voice SMS	166	46	17
Mobile Greetings	150	51	28
Internet Search	126	87	16
Advertising	178	25	27

INTERPRETATION:

From above chart it is seen that among the various VAS in social category, consumer are aware but not using dating so they should be motivated to use more of these services. While they should be given more offers in other categories to encourage their usage.

Moreover, it is seen that consumers are aware and using mail the most. So they should be given more choices among this category and should be motivated to use other services more by giving more offers and innovative services in remaining categories.

From above table it is seen that consumer have least awareness about dating. So they should give more advertisement and awareness through various sources, by which they can have preference towards this services.

13) COMPARISON BETWEEN MONTHLY EXPENSE ON MOBILE & MONTHLY EXPENSE ON VAS

TABLE 17: MONTHLY EXPENSES ON MOBILE

Monthly Expense On Mobile	No. Of Respondents
Below 100	12
100-300	43
300-500	45
500-700	38
700-900	30
900-1000	17
Above 1000	36

INTERPRETATION

Here, it is seen that majority of 20.36% of respondents have their monthly expense on mobile in the range of 300-500 INR. While 19.46% & 17.19 have their monthly expense in range of 100-300 INR & 500-700 INR respectively this forms the majority of respondents. So telecom companies should provide VAS at affordable rates so that usage of VAS is affordable and people are encouraged to use VAS more.

TABLE 18: MONTHLY EXPENSE ON VAS

Monthly expense on VAS	No. Of Respondents
Below 25	82
25-50	50
50-100	49
100-200	23
Above 200	23

INTERPRETATION:

However, it is seen that majority of 36% of respondents have their monthly expense on VAS in the range of below 85 INR. While 22% & 21.5 have their monthly expense in range of 25-50 INR & 50-100 INR respectively that forms the majority of respondents. It was found from research that the reason behind less usage of VAS is not due to less awareness & familiarity with VAS but it is due to consumer's perception that telecom companies charge more than that offered by them.

CHI SQUARE TEST

REASON

The reason behind doing $\chi 2$ test between Monthly Mobile Expense Vs Monthly VAS Expenses is to find that whether expense on VAS depends upon one individual expense on mobile. Through this test we can check whether that with increase in the expense on mobile is there an increase expense on VAS or not.

HYPOTHESIS: 1

H0: There is no significant dependence between Monthly Mobile Expense & Monthly VAS Expenses.
H1: There is significant dependence between Monthly Mobile Expense & Monthly VAS Expenses.

TABLE 19: CASE PROCESSING SUMMARY FOR MONTHLY EXPENSE ON MOBILE VS VAS

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Monthly Mobile Expense Vs Monthly VAS Expense	221	92.9%	17	7.1%	238	100.0%

TABLE 20: MONTHLY MOBILE EXPENSE VS MONTHLY VAS EXPENSE CROSS TABULATION

Monthly Expense On Mobile	Monthly VAS Expense					Total
	Below 25	25-50	50-100	100-200	Above 200	
Below 100	9	3	0	0	0	12
100-300	18	9	15	1	0	43
300-500	14	13	13	4	1	45
500-700	17	9	5	5	2	38
700-900	10	6	5	6	3	30
900-1000	6	3	4	4	0	17
Above 1000	8	7	3	3	15	36
Total	82	50	45	23	21	221

TABLE 21: STATISTICS RESULTS FOR MONTHLY MOBILE EXPENSE VS MONTHLY VAS EXPENSE

	Value	Df
Pearson Chi-Square	81.065[a]	24
Likelihood Ratio	73.951	24
Linear-by-Linear Association	25.756	1
N of Valid Cases	221	

Calculations:
$\chi 2cal = 81.065$
$\chi 2tab = 36.415$
$\chi 2cal > \chi 2tab.$

INTERPRETATION:

Hence H0 is accepted which say that there is no dependence between Monthly Mobile Expense & Monthly VAS Expense.

CORRELATION TEST

REASON

As concluded from $\chi 2$ test that Monthly Mobile Expense & Monthly VAS Expense are independent we will further cross check with a correlation test to find the degree of correlation between the above two variables.

TABLE 22: CORRELATION TEST SUMMARY FOR MONTHLY EXPENSE ON MOBILE VS VAS

		Value	Asymp. Std. Error
Interval by Interval	**Pearson's R**	.342	.062
Ordinal by Ordinal	**Spearman Correlation**	.282	.065
N of Valid Cases		221	

INTERPRETATION:

After doing correlation test, the degree of correlation between Monthly Mobile Expense & Monthly VAS Expense is found to be r = 0.342, which shows that there is a negligible correlation between the two variables.

14) EXPECTED FUTURE VAS BY THE RESPONDENTS.

•Video calling
•CUG without charge
•Job alerts\
•Mobile educational tutorials
•Talk back channel
•DTH on mobile
•Message reading service like a phone call.
•GPS
•Shopping via mobile
•Live cricket telecast
•Online exams & degree certificates

The above were the most common responses obtained through an open ended question regarding the future expectation of VAS. It has been found that customers are much excited to use VAS but the obstacle is related to price justification.

15) CONNECTION VS FAMILIARITY, EASE & PRICE JUSTIFICATION

TABLE 23: CONNECTION VS FAMILIARITY, EASE & PRICE JUSTIFICATION

Mobile Connection	Familiarity	Ease	Justified
Airtel	1.07	0.66	-0.62
Idea	1.06	0.49	-0.76
BSNL	0.82	0.06	-1.03
Reliance	1.06	0.48	-0.45
Vodafone	1.22	0.65	-0.29
Virgin	0	1	-1
Tata	1.25	0.8	0.07

INTERPRETATION:

The user of TATA has the maximum familiarity with VAS followed by the user of Vodafone, Airtel, Idea and BSNL. However, it is seen that the user of Virgin mobile connection have maximum ease of use VAS,

followed by TATA, Airtel, Vodafone, Idea, Reliance and BSNL.

As shown in above table the user of the mobile connection TATA agrees to the price charged for VAS while the other companies have negative perception towards price charged for the VAS in the mind of people which is the major reason for the less usage of the VAS by their respective users.

16) SPONSORED MOBILE CONNECTION VS. USAGE OF VAS

REASON

The reason behind using this test is to check that whether those respondents having their mobile sponsored by the organization they work with, use more of VAS or not.

TABLE 24: SUMMARY OF STATISTICS FOR SPONSORED MOBILE CONNECTION VS. USAGE OF VAS

		Monthly VAS Expense					Total
		Below 25	25-50	50-100	100-200	Above 200	
Sponsored	Yes	15	9	4	7	10	45
	No	67	41	45	16	13	182
Total		82	50	49	23	23	227

TABLE 25: TEST RESULTS FOR SPONSORED MOBILE CONNECTION VS. USAGE OF VAS

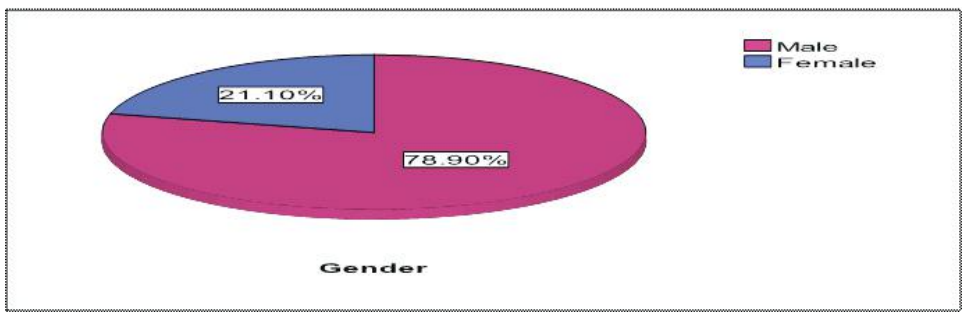
		Value	Asymp. Std. Error[a]	Approx. Sig.
Interval by Interval	Pearson's R	-.139	.075	.036
Ordinal by Ordinal	Spearman Correlation	-.105	.073	.116

CALCULATIONS:

r = 0.136
There is negative co-relation between sponsored mobile and usage of VAS. So it proves that usage pattern doesn't change whether mobile is sponsored or not.

DEMOGRAPHICS

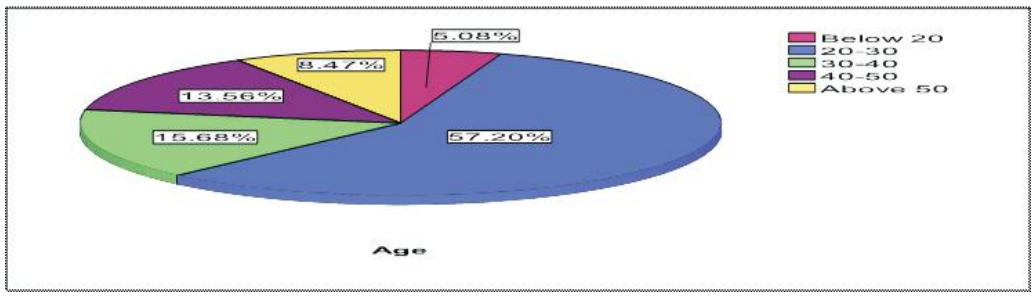
FIG 2: GENDER PROPORTIONS



INTERPRETATION:

Majority respondents of the research are males with 78.9 % while female are 21% of the total sample size.

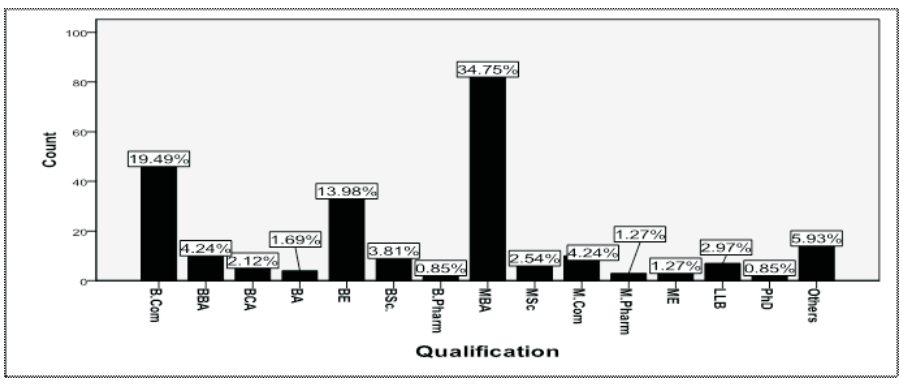
FIG 3: AGE PROPORTIONS



INTERPRETATION:

The total sample consists of 57% of respondents within age group 20-30 years since they are hardcore users of mobile. While remaining respondents share 15.68%, 13.56%, 8.5% & 5.08% of share from total sample size respectively.

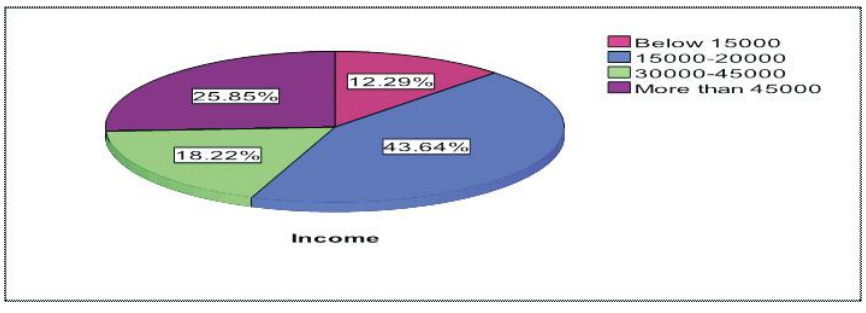
FIG 4: QUALIFICATION PROPORTIONS



INTERPRETATION:

34.75% of the respondents are having management background while remaining major respondents were B.com, B.E. The others were from various divergent backgrounds as shown in the graph. Since majority of respondents are high qualified, which could be the reason behind high amount of VAS familiarity & awareness as shown is preceding graphs.

FIG 5: FAMILY MONTHLY INCOME PROPORTIONS



INTERPRETATION:

43.64% of respondents are having an income range from 15000-20000 & also a good amount of respondents have income range of more than 45000. So from this it can be said that telecom companies should bifurcate their services with above mention income class so that they can be motivated to use more of VAS. Since income range found in research is not too low so there is some potential to get more revenue through VAS.

ANOVA FOR GENDER

REASON

With this test it can be analyzed that whether there is variation in preference towards GPRS between male and female

HYPOTHESIS: 2

H0: There is no significant difference of GPRS usage pattern between male and female.
H1: There is significant difference of GPRS usage pattern between male and female.

TABLE 26: ANOVA RESULTS FOR GENDER

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.379	1	.379	1.866	.173
Within Groups	47.680	235	.203		
Total	48.059	236			

CALCULATION:

Fcal=1.866
Ftab=3.84
Here Fcal<Ftab.
Here H0 is rejected. So it infers that there is variation in usage of GPRS between male and female. This result could be used for further research to know the pattern of usage of GPRS between male and female so that they can be targeted accordingly.

ANOVA FOR AGE

REASON

With this test it can be analyzed that whether there is variation in preference towards GPRS between different age groups

HYPOTHESIS: 3

H0: There is no significant difference of GPRS usage pattern between different age groups.
H1: There is significant difference of GPRS usage pattern between different age groups.

TABLE 27: ANOVA RESULTS AGE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.368	4	.592	2.998	.019
Within Groups	45.611	231	.197		
Total	47.979	235			

CALCULATION:

Fcal=2.37
Ftab=2.2998
Here Ftab<Fcal
H0 is accepted here & it proves that GPRS usage doesn't differ between different age groups. So telecom companies can target all age groups in the same manner.

ANOVA FOR QUALIFICATION

REASON

With this test it can be analysed that whether there is variation in preference towards GPRS between different qualifications.

HYPOTHESIS: 4

H0: There is no significant difference of GPRS usage pattern between different qualifications.
H1: There is significant difference of GPRS usage pattern between different qualifications.

TABLE 28: ANOVA RESULTS FOR QUALIFICATIONS

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.519	14	.466	2.508	.002
Within Groups	41.024	221	.186		
Total	47.542	235			

CALCULATION:

Fcal=2.508
Ftab=1.71
Ftab<Fcal
H0 is accepted here & it proves that GPRS usage doesn't differ between different qualifications so telecom companies should target different qualifications in same manner.

ANOVA FOR INCOME GROUP

REASON

With this test it can be analyzed that whether there is variation in preference towards GPRS between different qualifications.

HYPOTHESIS: 5

H0: There is no significant difference of GPRS usage pattern between different income groups.
H1: There is significant difference of GPRS usage pattern between different income groups.

TABLE 29: ANOVA RESULTS FOR INCOME GROUPS

	Sum of	df	Mean Square	F	Sig.
Between Groups	.993	3	.331	1.649	.179
Within Groups	46.550	232	.201		
Total	47.542	235			

CALCULATION

Fcal=1.649
Ftab=2.60
Fcal<Ftab

H0 is accepted here & it proves that GPRS usage doesn't differ between different income levels. So telecom companies can target different income groups in the same manner.

KEY FINDINGS

•A majority of people (55.46%) have one handset, followed by 31.51% having two handsets, 6.72% having three and 6.30% have more than three handsets.
•A majority of people (77%) have GSM connection. So it can be infer that majority of people have single mobile connection which has GSM technology in it.
•A Majority of price range of mobile handset falls in between 2000-5000 INR which is makes 29% of the total population & followed by 22% of people having mobile handset of price range 5000-8000 INR.
•50% people use Nokia as their handset followed by Samsung, Others, Motorola, LG & Sony having 16%, 12%, 8%, 8% & 6% market share respectively.
•Among the various telecom companies 32% of market share is captured by Vodafone followed by Airtel, Idea, Tata, and Reliance & BSNL with a share of 18%, 13%, 13%, 13% & 11%.
•A majority of people (71.73%) have positive preference towards GPRS.
•Majority of people (35%) who uses GPRS prefer surfing the most, followed by downloading, news updates, social networking, others and chatting.
•Customers prefer information and entertainment VAS which falls in category between normal and higher usage. Followed by m-commerce, social and enterprise base VAS.
•Among the various VAS in Entertainment category, consumer are aware maximum about quiz, jokes and music on demand but they are not using
•In Entertainment VAS consumers are aware and using the SMS most, followed by ringtones, wallpapers and mobile games, but they have least awareness about religious chants and animations and video clippings.
•Among the various VAS in information category, consumer are aware maximum about astrology, Vaastu and stock portfolio but not using, and they are aware and using the banking alerts, cricket alerts and news the most, but they have least awareness about Fengshui.
•Majority of respondents (36%) have their monthly expense on VAS in the range of below 85 INR. While 22% & 21.5 have their monthly expense in range of 25-50 INR & 50-100 INR respectively that forms the majority of respondents.
•There is no dependence between Monthly Mobile Expense & Monthly VAS Expenses.
•The most common expected future VAS amongst customers are Video calling, CUG without charge, Job alerts, Mobile educational tutorials, Talk back channel, DTH on mobile, Message reading service like a phone call., GPS, Shopping via mobile, Live cricket telecast, Online exams & degree certificates.
• Majority of people agree to familiarity and ease of use with VAS but they are not using VAS more due to their perception of high prices charged by telecom companies for VAS.
•The users of TATA have the maximum familiarity with VAS followed by the user of Vodafone, Airtel, Idea and BSNL. While the users of Virgin mobile connection have maximum ease of use VAS, followed by TATA, Airtel, Vodafone, Idea, Reliance and BSNL.

CONCLUSION

As there is a tremendous growth in Indian telecom industry, the telecom companies are devising various strategies to attract new customers and introducing innovative services to retain the existing customers. The companies are focusing mainly on VAS as ARPU is decreasing so they have opportunity to earn revenue through offering it according to consumer preference. They should offer mainly GSM based VAS as it is preferred more over CDMA. As mainly young professionals and mid and senior level executives have sponsored mobile connection so telecom companies should tap these opportunity to encourage more VAS usage. Many handsets which are in low range are GPRS enabled so telecom companies should offer more GPRS based VAS services. Most of the consumers are willing to use GPRS but lake the knowledge about how to use so telecom companies should give knowledge about the GPRS. Also many of the consumers are having negative perception about the pricing for VAS, so telecom companies should make consumer aware

about the pricing. And the usage pattern of male and female vary so telecom companies should offer VAS according to their preference. Also the usage pattern and preference vary for different age group, income level so the telecom companies should devise their strategies accordingly

FUTURE SCOPE OF RESEARCH:

The research has done to check the variations in VAS & GPRS usage pattern of different genders, age groups, income levels & qualification. So depending on this result further research can be made to design different strategies to offer VAS to above demographic components.

BIBLIOGRAPHY

•Friday, Apr 06, 2007.[Booming-mobile-vas-industry-fails-to-woo-venture-funds] . Financial express Retrieved from http://www.financialexpress.com on Oct. 29, 2010.
•Monday, Jan 11, 2010.[mobile-operators-see-vas-as-major-growth-engine-for revenues]. Financial express Retrieved from http://www.financialexpress.com on Oct. 29, 2010.
•Wednesday, Mar 05, 2008. [Value added-services-seen-driving-telecom-revenue]. Financial express Retrieved from http://www.financialexpress.com on Nov.1, 2010.
•Usha Rajeev. Nov 28, 2008. [The-future-of-mobile-connectivity-is-vas]. Financial express Retrieved from http://www.financialexpress.com on Nov. 1, 2010.
•Monday, Aug 29, 2005. [Value added-services-telecoms-ringing]. Financial express. Retrieved from http://www.financialexpress.com on Nov. 8, 2010.
•Sanjay Swamy. Tuesday, Oct 20, 2009. [MVAS-route-to-improving-telecom-margins] Financial express Retrieved from http://www.financialexpress.com on Nov. 8, 2010.
•Friday, Dec 16, 2005. [vas-pie-grows-but-content-providers-languish]. Financial express. Retrieved from http://www.financialexpress.com on Nov. 10, 2010.
•PTI, Aug 16, 2006.[India-business/India-emerges-as-a-global-hub-for- VAS/article show]. Times of India. Retrieved from http://timesofindia.indiatimes.com on Nov.10, 2010.
•IAMAI Repot (2008). Mobile value added services- A report by IAMAI & eTechnology group @ IMRB. Retrieved on Nov. 10, 2010, from www.iamai.in/Upload/Research/mobilevasinindia.
•Palo Alto, California. Future of Mobile Value Added Services (VAS) in India. [PowerPoint slides]. Retrieved from Stanford University, on Nov. 12, 2010.
•Profile of TATA Teleservices. Retrieved from http://www.tatateleservices.com on Nov. 15, 2010.
•Profile of Airtel. Retrieved from http://www.airtel.in on Nov. 15, 2010.
•Profile of Ideacellular. Retrieved from http://ideacellular.com on Nov. 15, 2010.
•Profile of Spice Telecom. Retrieved from http://www.spiceindia.com on Nov. 15, 2010.
•Profile of Reliance Telecom. Retrieved from http://www.rcom.co.in on Nov. 15, 2010.
•Profile of Vodafone India. http://www.vodafone.in on Nov. 15, 2010.
•Profile of BSNL http://www.bsnl.co.in/about.htm on Nov. 15, 2010.
•Profile of MTNL http://www.mtnl.net.in/aboutus.htm on Nov. 15, 2010.