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Factors affecting on mobile usage in rural area

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Abstract
India is on the path of digitalization and it is one of the large markets by mobile connections. The rural India has significant role in mobile revolution. Mobiles have brought up big impact in various aspects in India from communication to business. The present study aims to investigate how rural consumers use mobile and which are the factors affecting on usage. For the study structured questionnaire was used and total 65 rural consumers using mobile were surveyed. The majority of respondents surveyed were male and single; their monthly income was between Rs. 15001 to 30000 per month. Majority of respondents were spending below 200 Rs monthly on mobile and majority of respondents spends less than 2 hours per day. The factors affecting on mobile usage are Need and social status, Perceived usefulness, Social influence, Perceived risk control (Fitness to use) and Product attributes. The problem faced by the rural mobile user are problem of charging, Hanging of phone, Battery life of phone, Language of phone, Network issue, Slow internet, High call rates, Call Drop, Complex Technology, Improper support from call centre.

Keywords: Rural Mobile Usage, Mobile Usage, Rural Communication

1. Introduction
Mobile is one of the important devices for the Indians; the usage of mobile is increasing rapidly among Indian. In the present era of the information and communication technology the mobile plays a significant role in human life and it brought almost every aspects of human life in urban and rural both. According to the census 2011, around 69% population resides in rural. As an affordable and accessible means of communication, rural communities are realizing the potential of mobile telephony to create economic opportunities and strengthen social networks. (http://www.e-agriculture.org)
Mobile is not unknown device in the rural India. According to the wearesocial.net report there is 73 percent penetration of mobile in India compare to 93% in world. The mobile internet has 11% penetration and average time spend by internet users is 2 hour 36 minutes and 57% mobile users use social media apps. According to the TRAI report there are 996.44 Millions total telephone subscribers are there and among them 419.31 are rural telephone subscribers.

Table 1: Status of Telephone in India

Particulars	Wireless	Wireless	Total
Total Telephone Subscribers (Millions)	969.89	26.59	996.46
Urban Telephone Subscribers (Million)	555.71	21.47	577.18
Rural Telephone Subscribers (Million)	414.18	5.12	419.31
Overall Tele-density	77.27	2.12	79.38
Urban Tele-density	143.08	5.53	148.61
Rural Tele-density	47.78	0.59	48.37
Share of Urban Subscribers	57.30%	80.73%	57.92%
Share of Rural Subscribers	42.70%	19.27%	42.08%

Source: TRAI Press Release 34/2015

1.1 Consumer Behaviour
The behavior that consumer display in searching for, purchasing, using , evaluating and disposing of products and services that they expects will satisfy their needs. (Schiffman *et al*., 2010).

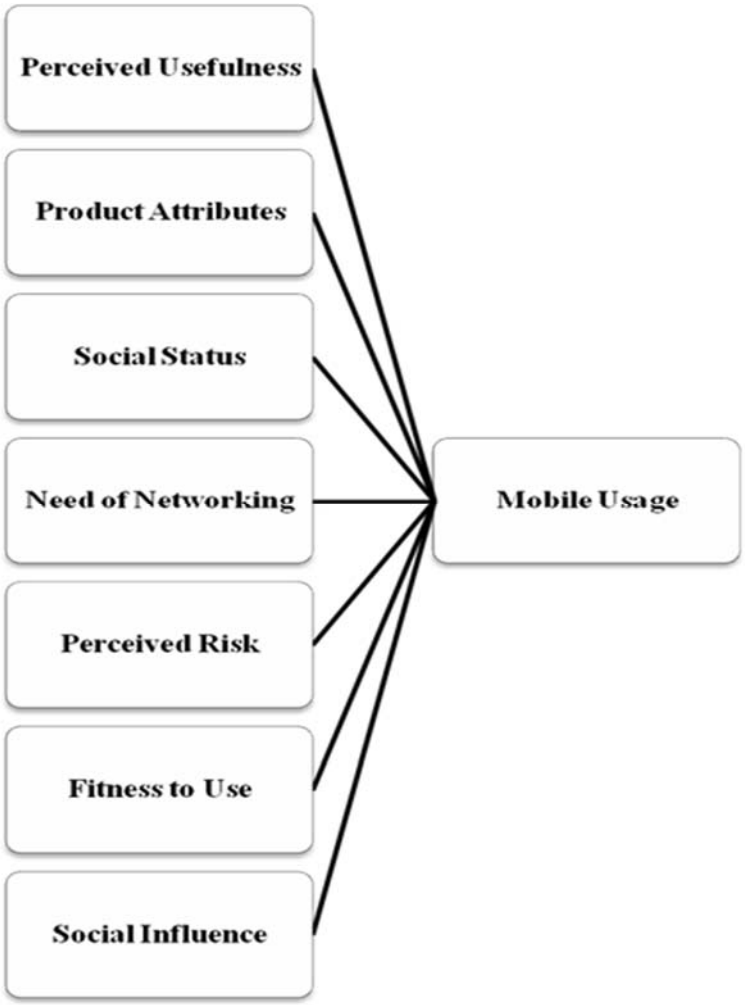

Fig 1: Conceptual framework of Research (Factors affecting on Rural Mobile Usage)

2. Review of Literature

Mesay Sata (2013) studied on "Factors Affecting Consumer Buying Behavior of Mobile Phone Devices" and found correlation between six factors i.e. price, social influence, durability, brand, product features and after sales service with the decision to buy a mobile phone device. Accordingly, all factors have a positive and significant relationship with the decision to buy a mobile phone. The highly correlated factor that influences the decision to acquire a mobile phone is the selling price of the cellular device. Majority of the respondents indicated price as main consideration when they decide to buy their mobile phone.

Kanakaiah Madasi, Ch. Raghupataiah (2013) studied on "Buying Behaviour towards Mobile Phone: A Comparative Analysis of Rural and Urban Consumers "and found significant difference of quality, functions and brand consciousness for purchase of mobile phone between rural and urban consumers. Study indicates that rural consumers are less quality, functions and brand conscious compare to urban consumers. The study indicates that rural consumer mostly use friends, T.V. and mobile phone retailer as the source of information, the purchase decision is taken by self-decision, with the help of family, and friends.

Mridanish Jha (2013) studied on "A Comparative Study of The Buying Behaviour of rural and urban consumers towards mobile phone in Bihar" and found that the urban consumer of Bihar gives first preference to the brand name, then features of mobile like dual sim followed by user friendly. In case of rural, the rural consumer of Bihar gives first preference to the feature like dual sim, Hindi settings when purchasing a mobile phone. The price of mobile phone stands at second position as a factor influencing purchase decision. The advertisement of the mobile phone is ranked at third place.

Singh *et al* (2014) studied on "Factors Affecting Buying Behaviour of Rural Consumers" where 180 respondents were covered from Kurukshetra district and found that the eight factors like price, quality, warranty, advertisement, brand, friends recommendations, family members recommendation and packaging which rural consumers consider while making purchase decisions. It was also found that factors effect on rural consumer change with age and income the effect of price and quality on buying behaviour of rural consumer increases significantly with increase in age and income.

Inderjeet Sethi *et al.* (2014) studied on "Influence of Cultural, Social and Marketing Factors on the Buying Behavior of Telecom Users: A Comparative Study of Rural, Semi-Urban and Urban Areas in and Around Chandigarh" and found that Urban area, 57% of the respondents agree where as 49% strongly agree that they need the service provider that leads to maximum interaction, in Semi urban areas, 74% of the respondents strongly agree that they need maximum interaction where as in rural areas, 100% of the respondents strongly agree that they will choose the service provider which leads them for maximum interaction with their near ones. Sex as a cultural factor effects the purchasing behaviour of the customers. In Comparison to rural, semi urban and urban area, the females of rural are more dependent on their family/spouse. The females above the age of 42 are also influenced by their children. The female respondents in the Semi urban and urban area are maximum working and so are

less dependent on their family. They are educated enough to take their own decisions. Addition to that the prestige, social class, brand image, word of mouth, Advertisement Campaign and innovation in services are considered by the urban, semi urban and rural respondents.

Khaing Wai Naing and Sirion Chaipoopirutana (2014) studied on " The Factors Affecting Purchase Intention of a Smart Phone in Yangon, Myanmar" and found that the strong positive relationship between perceived quality and emotional value, product image and consumer aspiration, consumer aspiration and purchase intention, and attitude towards product and purchase intention. There is a moderated positive relationship between perceive quality and purchase intention, emotional value and purchase intention, and product image and purchase intention. Very weak negative relationship between each variable and which means that there is a very weak negative relationship between product image and consumer uncertainty, and consumer uncertainty and purchase intention.

Uddin *et al.* (2014) studied on Factors Affecting Customers' Buying, Decisions of Mobile Phone: A Study on Khulna City, Bangladesh and Factor analysis was applied to extract the underlying factors affect mobile phone purchasing decision. The results show that the most important factor is physical attributes. The other factors are pricing, charging and operating facilities, size and weight, friends' and colleagues' recommendations, neighbors' recommendations and advertising.

3. Significance of the study

The penetration of technology in various sectors put Rural India is in transforming phase. The way of communication and entertainment in rural area is also changed. The penetration of Mobile, television is increasing in rural India in such scenario it is necessary to know the usage pattern and factors affecting on mobile in rural area. The present study investigates the Mobile usage pattern and factors affecting on mobile in rural area. The study also focuses on problems faced by mobile users and factors considered for selection of service provider. The study will help out the players to know how rural consumer behaves in case of mobile and in case of service provider.

4. Research Methodology

The present study was descriptive in nature. The primary data were collected from jabalpur (Madyapradesh) and Kolhapur (Maharashtra) nearby rural areas using structured questionnaire as research tool by applying convenience sampling technique and secondary data were obtained from government reports, journals, websites etc. The study conducted with following objectives.

4.1. Objectives

1. To investigate mobile usage of rural consumers.
2. To study the factors affecting on mobile usage in rural area.
3. To study the Problems faced by mobile users in rural.

To fulfil the stated objectives the structured questionnaire was used. The questionnaire contains questions related to demographic profile of respondent such as gender, age, income, mobile usage etc and the research questions.

5. Data Analysis

The collected data were tabulated and analysed with help of computer software. The statistical tools employed for present study are frequencies, percentage, mean, Factor Analysis. Exploratory factor analysis using principal component analysis approach was used to determine the most important variables from the large number of variables in the set of data that influence consumers.

Table 2: Profile of Respondents

Parameters	Frequency	Percent
Gender		
Male	62	95.4
Female	3	4.6
Total	65	100.0
Marital Status		
Single	37	57.0
Married	27	41.5
Divorced	1	1.5
Total	65	100.0
Monthly Income		
Below 15000	8	12.3
15001-30000	35	53.9
30001-45000	13	20.0
45001-60000	1	1.5
60001-75000	2	3.1
More than 75000	6	9.2
Total	65	100.0
Monthly Expenditure		
Less Than 200	34	52.3
200-400	15	23.1
400-600	9	13.8
600-800	5	7.7
800-1000	2	3.1
Total	65	100.0
No of mobile in house		
1	9	13.8
2	37	56.9
3	9	13.8
4	8	12.3
5	2	3.2
Total	65	100.0
Hours Spent on mobile		
Less Than 2 Hours	41	63.1
2 - 4 Hours	12	18.5
4 - 6 Hours	5	7.7
6 - 8 Hours	5	7.7
8-10 Hours	2	3.2
Total	65	100.0

As shown in above table the majority of respondents (62) were male. The 37 respondents were single while 27 were married. 35 respondents were having Rs. 15001 to 30000 monthly income, 34 respondents spends less than 200 Rs on mobile monthly and 15 respondents spend between 200 -400 Rs as mobile expenditure monthly. 37 respondents have 2 mobile at home and 41 respondents spends less than 2 hours on the mobile.

5.1 Reliability Test Alpha

The respondents were asked to respond on 5 point likert scale for 20 statements. Out of 20 statements 18 statements were considered for analysis. To check the reliability of scale Cronbach's Alpha was calculated and it was obtained 0.892 for present scale.

Table 3: Cronbach's Alpha

Reliability Statistics	
Cronbach's Alpha	N of Items
.892	18

The reliability test Alpha was developed by Lee Cronbach in 1951 to provide a measure of the internal consistency of a test or scale; it is expressed as a number between 0 and 1. (Tavakol *et al*. 2011). As a rule of thumb, the value of alpha greater than 0.7 is good and acceptable. For the present study Cronbach's Alpha obtained 0.892. So the data are reliable for further analysis.

Table 4: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.793
Bartlett's Test of Sphericity	Approx. Chi-Square	551.912
	Df	153
	Sig.	.000

The Bartlett's test of Sphericity and Kaiser Meyer –Olkin (KMO statistics) measure of sample adequacy were used to assess the suitability of data for carrying out the factor analysis. Generally the value of Kaiser-Meyer-Olkin Measure of Sampling Adequacy test is accepted greater than 0.6. For the present data it is obtained 0.793 and Bartlett's Test of Sphericity found significant. So, the factor analysis can be performed for the present data.

5.2 Factor Analysis

Respondents were asked to answer 20 prepared statements using 5-point Likert scales where 1 is strongly agree and 5 is strongly disagree. Out of 20 statements 18 statements were considered for analysis. The principle component extraction performed where the eigenvalue greater than 1 was considered. Varimax with Kaiser Normalization rotation method was employed. The Rotated Component Matrix was presented sorted by size and the coefficients were suppressed having value below 0.4. The factor analysis yielded 5 factors were which explains 68.31% of total variance as shown in below table.

Table 5: Total Variance Explained

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative%	Total	% of Variance	Cumulative%	Total	% of Variance	Cumulative%
1	6.842	38.013	38.013	6.842	38.013	38.013	3.785	21.028	21.028
2	1.864	10.355	48.367	1.864	10.355	48.367	3.234	17.965	38.993
3	1.381	7.672	56.040	1.381	7.672	56.040	1.983	11.018	50.010
4	1.161	6.451	62.490	1.161	6.451	62.490	1.911	10.615	60.626
5	1.047	5.817	68.307	1.047	5.817	68.307	1.383	7.682	68.307
6	.856	4.754	73.062						
7	.698	3.878	76.940						
8	.675	3.752	80.692						
9	.638	3.542	84.234						
10	.550	3.054	87.288						
11	.457	2.539	89.828						
12	.453	2.519	92.346						
13	.318	1.769	94.115						
14	.290	1.612	95.727						
15	.259	1.439	97.165						
16	.223	1.239	98.405						
17	.182	1.010	99.414						
18	.105	.586	100.000						
Extraction Method: Principal Component Analysis.									

Factor 1: Need and social status

The first factor was labelled Need and social status. It is due to high loading to the statements like Through mobile any contact is one touch away, Mobile is essential part of life, Without mobile can't move, Mobile usage is status, mobile usage is style, preferred mobile with advanced features, price when purchase of mobile.

Factor 2: Perceived usefulness

The second factor labelled as perceived usefulness due to high loading to the statements like brand preference while purchasing mobile, easy and fit to use mobile, Mobile usage gives excitement, and An easy tool to find out any information.

Factor 3: Social Influence

The third factor labelled as social influence due to high loading to the statements like I choose mobile recommended by others and looking to the resale value.

Factor 4: Perceived risk control (Fitness to use)

The fourth factor labelled as Perceived risk control (Fitness to use) due to high loading to the statements like I choose mobile according to my use and mobile keeps me out of worry.

Factor 5: Product attributes

The fifth factor labelled as Product attributes due to high loading factor to Looking to the advertisements while selecting mobile and Durability of mobile.

Table 6: Rotated Component Matrix

Rotated Component Matrix[a]					
Statements	Component				
	1	2	3	4	5
I feel any contact is one touch away through mobile	.778				
Mobile is essential part of life.	.748				
Without mobile I cannot move anywhere	.736				
Mobile usage is status	.679				
Mobile usage is style.	.605				
I choose advanced featured mobile	.558	.512			
I look price while purchase mobile	.497				
I look to the brand while purchase mobile		.812			
I choose easy and fit to use mobile		.676			
Mobile usage gives me excitement.	.453	.658			
Mobile is an easy tool to find out any information		.654			
Mobile has changed my life.		.486	.475		
I choose mobile recommended by others			.864		
I look resale value of mobile while purchase			.658		
I choose mobile according to my use.				.763	
Mobile keeps me out of worry in unwanted conditions				.757	
I look to advertisements while select mobile					.856
Mobile should be durable					.629
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.					
a. Rotation converged in 7 iterations.					

5.3 Problems faced by mobile users in rural area.

Respondents were asked to rate on the 5 point scale where 1 = Always and 5= Never for the various aspects of mobile to investigate the problem faced by the mobile users in rural.

Table 7: Problems faced by mobile users in rural area

Statistics		
Particulars	**Mean**	**Std. Deviation**
Battery life	1.82	.768
Complex technology	2.60	.898
Hang of Phone	1.80	.814
Charging	1.78	.893
Language	1.92	.907
Unwanted Marketing Call	2.74	.735
Slow Internet	1.97	.809
Call Drop	2.49	1.017
Improper Network	1.95	.799
High Call Rate	2.05	1.082
Improper support from call centre	2.62	.947

The study has also investigate the problems faced by the rural users and found that the rural users faces problem of charging, Hanging of phone, Battery life of phone, Language of phone, Network issue, Slow internet, High call rates, Call Drop, Complex Technology, Improper support from call centre.

Table 8: Factors considers for selection of service provider by Mobile users

Statistics		
Parameters	**Mean**	**Std. Deviation**
Proper Network	1.69	.789
Cost	1.40	.553
Call Rates	1.38	.577
Internet Schemes	1.66	.691
Retailers Recommendation	2.37	.651
Friend Recommendation	2.42	.635
Calling SMS Schemes	2.32	.752
Internet Speed	1.91	.765
Call Centre Service	2.35	.991
Advertisement	2.72	.857

The study has also investigate on the factors which considered by the rural users while using the mobile network provider. The study has found that the most important factor considered by the rural is call rates followed by the cost , then internet schemes, Proper network, internet speed, Calling and SMS schemes, Call centre services, Recommendations and lastly advertisements,

6. Conclusion

The present study was investigating on the mobile usage, factors affecting on mobile usage and problems faced by the users while using mobile in rural area. The study found that majority of respondents spends less than 200 Rs monthly on mobile and spends less than 2 hours per day for mobile. The factors affecting on mobile usage are Need and social status, Perceived usefulness, Social influence, Perceived risk control (Fitness to use) and Product attributes. The rural users faces problem of charging, Hanging of phone, Battery life of phone, Language of phone, Network issue, Slow internet, High call rates, Call Drop, Complex Technology, Improper support from call centre. The study also investigate the factors which considered by the rural users while using the mobile network provider and found that call rates followed by the cost, internet schemes, Proper network, internet speed, Calling and SMS schemes, Call centre services, Recommendations and lastly advertisements were considered.

7. References

1. Amreek Singh, V. S. (2014). Factors Affecting Buying Behaviour of Rural Consumers. *International Journal of Management and Social Sciences Research*, Volume 3, No. 8, PP.8-12.
2. Chaipoopirutana, K. W. (Aug 13-14, 2014). The Factors Affecting Purchase Intention of a Smart Phone in Yangon, Myanmar. *International Conference on Trends in Economics, Humanities and Management (ICTEHM'14)*, (pp. pp.190-194). Pattaya (Thailand).
3. Dr. Kanakaiah Madasi, C. R. (2014). Buying Behaviour towards Mobile Phone: A Comparative Analysis of Rural

and Urban Consumers. *Journal of Commerce & Management Thought*, Vol. V-1, 2014, pp.119-135.

4. Inderjeet Sethi, A. C. (2014). Influence of Cultural, Social and Marketing Factors on the Buying Behavior of Telecom Users: A Comparative Study of Rural, Semi-Urban and Urban Areas in and Around Chandigarh. *Journal of Marketing Management*, Vol. 2, No. 1, pp. 97-110.
5. INDIA, T. R. (2015). *Press Release No. 34/2015*. New Delhi: TRAI.
6. Jha, M. (2013). A Comparative Study of the Buying Behaviour of Rural and Urban Consumers towards Mobile Phone in Bihar. *International Journal of Advanced Research in Management and Social Sciences*, Vol. 2, No. 4, pp. 114-125.
7. Leon G. Schiffman, L. L. (2010). *Consumer Behavior, 10th Edition.* Dorling Kindersley (India) Pvt. Ltd. Licensees of Pearson Education in South Asia.
8. Md Reaz Uddin, N. Z. (2014). Factors Affecting Customers' Buying Decisions of Mobile Phone: A Study on Khulna City, Bangladesh. *International Journal of Managing Value and Supply Chains*, Vol.5, No. 2 pp.21-28.
9. Mohsen Tavakol, R. D. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2:53-55.
10. Sata, M. (2013). Factors Affecting Consumer Buying Behavior of Mobile Phone Devices. *Mediterranean Journal of Social Sciences*, Vol 4 No 12 PP. 103-112.