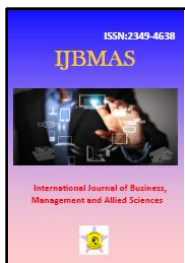

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CONSUMER BEHAVIOR ON USAGE OF MOBILE APPS IN SMARTPHONE

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ABSTRACT

The aim of this research work is to know the usage patterns of selected mobile apps in Smartphone. The primary data is collected through structured questionnaire and it is analyzed by using SPSS software. The age group and occupation has an impact on frequency of usage of mobile apps. It is found that youngsters are more interested in using social networking sites through Smartphone.

Keywords: Smartphone, mobile phone, mobile apps, mobile payments, online transactions.

Introduction

Smartphones are used for carrying out various tasks like checking email, downloading and installing mobile apps, paying utility bills and performing online financial transactions. In the era of digitalization it is essential to use Smartphone for performing online transactions. The number of Smartphone users worldwide is projected to amount to nearly 2.7 billion by 2019. It is expected that, by 2017, almost a third of the total global population will use a Smartphone (Statista, n.d.). India, the second most populous country in the world, is projected to pass the United States in number of Smartphone users in 2017. Around 223 million people in the U.S. will use a Smartphone by 2017, compared to 340 million in India. In this paper the terms Smartphone, mobile phone is interchangeable.

Research Objectives

1. To know usage pattern of mobile apps on Smartphone
2. To know the impact of age group and occupation on usage of mobile apps in Smartphone.

Literature Review

Osman et al (2012) had conducted a survey for describing impact of design, computing power and operating platform on purchasing decision of smartphones. According to Lee et al (2014) overdependence on smartphone lead to stress and gender has an impact on level of stress among the users. The extensive usage of social networking services on smartphones makes and individual additive to mobile phone (Salehan and Negahban, 2013). The social networking size of the user increases the intensity of smartphone usage.

Among Smartphone users men experience less social stress compared to women. The age of an individual negatively influence the usage of smartphone which means as people grow olders they

are less likely to spend more time on smartphones (Deursen et al, 2015). There are thousands of mobile apps available for smart phones and billions of downloads are being done by Smartphone users (Xu et al, 2015). According to Persaud and Azhar (2012) organizations are need to consider factors like brand trust, shopping style and values for effective mobile marketing of products.

Chen et al (2011) had adopted technology acceptance model (TAM) and stated that behavioral intention towards smartphones is positively influenced by perceived usefulness and perceived ease of use. The Smartphone is one of the most innovative of mobile devices. The user's adoption of this innovation comes with much consideration that may consist of need to use, perception to use, and so on (Joo and Sang, 2013). According to Lee et al (2014) the over usage of online content through smartphones is causing sleep deprivation and attention deficit among youth.

Smartphone users are communication applications during day time and playing games at night time. In the last few years the Smartphone users have increased rapidly and their application usage behavior had drastically changed (Bohmer et al, 2011). The end users of Smartphone access diverse content and it is tough to predict the exact number of sessions based on usage criteria (Soikkeli et al 2011). According to Kim et al (2010) personal innovativeness, compatibility and convenience influence mobile payment usage behavior.

Donner and Tellez (2008) had explained the relationship between economic development and usage of mobile banking. The infrastructure of information and communication system had been supporting the adoption of mobile banking. The Smartphone services support tourists for selection of various services at their destinations. The security of online transactions had enhanced with one time password (Acharya et al 2013).

Research Methodology

A structured questionnaire had been used for primary data collection and secondary data had been procured from books, journals and internet sources. The respondents should be either 18 or above 18 years for participating in the survey and they have experience of using Smartphone. The activity of eight different mobile applications on Smartphone mentioned in Table 1 is measured through frequency of usage. The objective of the research is explained for the respondents and all the respondents belong to Telangana State.

Data Analysis

The sample size is 120 and 58 percent are male respondents and 42 percent are female respondents. Among the respondents 35 percent belongs to '18 to 24 years' age group, 28 percent belongs to '25 to 32 Years' age group, 23 percent belongs to '33 to 40 Years' age group and remaining 14 percent belongs to 'Above 40 Years' age group. From the perspective of occupation 34 percent are students, 29 percent are employees, 22 percent are self employed and 15 percent belongs to 'others' category.

Table 1: Frequency of activities on Smartphone

Activity on Smartphone	Email	Camera	Watching Videos	Playing Games	Checking Face book	Using Whats App	Payin g Utilit y Bills	Listening Music
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Never	14.20	0.00	14.20	7.50	0.00	0.00	27.50	15.80
Once a Month	27.40	15.00	7.50	14.20	14.20	0.00	44.20	0.00
Once a Week	14.20	21.70	8.30	28.30	8.30	5.00	22.30	6.70
Once a Day	7.50	7.50	20.80	0.00	14.10	17.50	6.00	23.70
Several Times a Day	21.50	20.00	6.70	21.70	15.00	21.70	0.00	13.30

Once an Hour	1.00	8.30	5.80	5.80	14.20	23.30	0.00	12.00
Several Times an Hour	6.70	21.70	21.70	15.00	19.20	19.20	0.00	22.50
All the Time	7.50	5.80	15.00	7.50	15.00	13.30	0.00	6.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(Source: Prepared from primary data.)

The variation in using mobile apps can be observed in Table 1. Among the respondents 27.40 percent are using email on their Smartphone once a month. The camera is used more 'once in a week' by 21.70 percent of respondents. Approximately 28 percent are using mobile phone for playing games once a week. Facebook is used by 19.20 percent of respondents 'several times a day' which is similar to usage of WhatsApp. Nearly 44 percent of the respondents are using 'once a month' for paying utility bills. Approximately 24 percent of respondents are listening music 'once a day'.

H1. The age group has an impact on Whatsapp usage in Smartphone.

Table 2. WhatsApp Usage * AGE Cross tabulation

WhatsApp Usage	AGE				Total
	18 to 24 Years	25 to 32 Years	33 to 40 Years	Above 40 Years	
Once a Month	0	0	0	9	9
Once a Week	10	9	0	0	19
Once a Day	0	18	9	0	27
Once an Hour	8	0	18	0	26
Several times an Hour	8	0	0	8	16
All the Time	16	7	0	0	23
	42	34	27	17	120

Table 3. Chi-Square Tests Between WhatsApp and Age Group

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	170.702 ^a	15	.000
Likelihood Ratio	177.734	15	.000
Linear-by-Linear Association	9.387	1	.002
N of Valid Cases	120		

a. 12 cells (50.0%) have expected count less than 5. The minimum expected count is 1.28.

H1 is accepted because 'p' value in Table 3 is less than 0.05. It means age group of employees had an impact on usage of WhatsApp in Smartphone. From Table 2 it is also observed that young people of '18 to 24 Years' age group are using WhatsApp more frequently compared to other age groups. From Table 3 it is evident that WhatsApp is being used 'All the Time' by '18 to 24' Years compared to other age groups.

H2. The 'occupation' has an impact on usage of 'Utility' mobile app in Smartphone.

Table 4. OCCUPATION * UTILITY Cross tabulation

Count

		UTIL				Total
		Never	Once a Month	Once a Week	Once a Day	
OCCU	Student	16	8	18	0	42
	Employee	8	17	0	8	33
	Business	0	9	9	9	27
	Others	9	9	0	0	18
	Total	33	43	27	17	120

Table 5. Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	57.688 ^a	9	0.000
Likelihood Ratio	80.367	9	0.000
Linear-by-Linear Association	.031	1	0.859
N of Valid Cases	120		

a. 5 cells (31.2%) have expected count less than 5. The minimum expected count is 2.55.

H2 is accepted because 'p' value is less than 0.05 shown in Table 5. It is also evident from Table 4 that employees and students are using mobile apps for utility payments.

Discussion

Smartphone is assisting people for carrying out variety of tasks. The youngsters are using Smartphone for entertainment and social networking. The middle aged group are using for mostly for emails and payment of utility bills. Since data plans are affordable in recent years the usage of internet on mobile phone had rapidly increased. Due to severe competition among major networking providers like Airtel, Reliance Jio and BSNL the price of data and voice call had reduced drastically.

Since the internet usage on mobile phone had enhanced it had given an opportunity for marketing organizations to reach target customers through mobile advertisements. It is also possible to implement customized advertisements through Smartphone. For example when an individual use read online news than advertisements or contests can be conducted through mobile app.

Conclusion

It is found from this study that consumers are using Smartphone for entertainment and performing some online transactions. The comforts have increased for mankind with the advent of internet through Smartphone. It is also observed that people are using Smartphone for performing both personal and professional tasks. The usage of Smartphone had tremendously increased especially 4G phones in the past three years. The consumers are using mobile phones with large screens with more storage capacity.

The business organizations should develop customized mobile advertisements for marketing products. It is also important to consider social networking sites for mobile advertisements. The usage of various apps in Smartphone depends on age and occupation of an individual. Almost all the apps considered in this study are being frequently used on Smartphone. It is also observed that Smartphone users are frequently using social networking sites. The cost of Smartphone is decreasing year to year whereas speed or performance is rapidly increasing.

References

- [1]. Lee, Y. K., Chang, C. T., Lin, Y., & Cheng, Z. H. (2014). The dark side of smartphone usage: Psychological traits, compulsive behavior and technostress. *Computers in Human Behavior*, 31, 373-383.
- [2]. Osman, M. A., Talib, A. Z., Sanusi, Z. A., Shiang-Yen, T., & Alwi, A. S. (2012). A Study of the Trend of Smartphone and its Usage Behavior in Malaysia. *International Journal of New Computer Architectures and their Applications (IJNCAA)*, 2(1), 274-285.
- [3]. Salehan, M., & Negahban, A. (2013). Social networking on smartphones: When mobile phones become addictive. *Computers in Human Behavior*, 29(6), 2632-2639.
- [4]. Van Deursen, A. J., Bolle, C. L., Hegner, S. M., & Kommers, P. A. (2015). Modeling habitual and addictive smartphone behavior: The role of smartphone usage types, emotional intelligence, social stress, self-regulation, age, and gender. *Computers in human behavior*, 45, 411-420.
- [5]. Xu, Q., Erman, J., Gerber, A., Mao, Z., Pang, J., & Venkataraman, S. (2011). Identifying diverse usage behaviors of smartphone apps. In *Proceedings of the 2011 ACM SIGCOMM conference on Internet measurement conference* (pp. 329-344). ACM.
- [6]. Persaud, A., & Azhar, I. (2012). Innovative mobile marketing via smartphones: Are consumers ready?. *Marketing Intelligence & Planning*, 30(4), 418-443.
- [7]. Chen, K., Chen, J. V., & Yen, D. C. (2011). Dimensions of self-efficacy in the study of smart phone acceptance. *Computer Standards & Interfaces*, 33(4), 422-431.
- [8]. Joo, J., & Sang, Y. (2013). Exploring Koreans' smartphone usage: An integrated model of the technology acceptance model and uses and gratifications theory. *Computers in Human Behavior*, 29(6), 2512-2518.
- [9]. Lee, U., Lee, J., Ko, M., Lee, C., Kim, Y., Yang, S., ... & Song, J. (2014). Hooked on smartphones: an exploratory study on smartphone overuse among college students. In *Proceedings of the 32nd annual ACM conference on Human factors in computing systems* (pp. 2327-2336). ACM.
- [10]. Bohmer, M., Hecht, B., Schöning, J., Krüger, A., & Bauer, G. (2011, August). Falling asleep with Angry Birds, Facebook and Kindle: a large scale study on mobile application usage. In *Proceedings of the 13th international conference on Human computer interaction with mobile devices and services* (pp. 47-56). ACM.
- [11]. Soikkeli, T., Karikoski, J., & Hammainen, H. (2011). Diversity and end user context in smartphone usage sessions. In *Next generation mobile applications, services and technologies (NGMAST), 2011 5th international conference on* (pp. 7-12). IEEE.
- [12]. Kim, C., Mirusmonov, M., & Lee, I. (2010). An empirical examination of factors influencing the intention to use mobile payment. *Computers in Human Behavior*, 26(3), 310-322.
- [13]. Donner, J., & Tellez, C. A. (2008). Mobile banking and economic development: Linking adoption, impact, and use. *Asian journal of communication*, 18(4), 318-332.
- [14]. Acharya, S., Polawar, A., & Pawar, P. Y. (2013). Two factor authentication using smartphone generated one time password. *IOSR Journal of Computer Engineering (IOSR-JCE)*, 11(2), 85-90.
- [15]. Statista. (n.d.). *Number of smartphone users in India from 2015 to 2022 (in millions)*. Retrieved January 2018, from Statista: <https://www.statista.com/statistics/467163/forecast-of-smartphone-users-in-india>