Customer Preference of Mobile Apps in W.B: Demographic Study

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Abstract

In present scenario the usage of mobile apps is enhancing drastically. As it provide new platform in different fields. Mobile apps development provides better option for marketing. Currently mobile apps for different services and products across different platform are downloaded to meet various needs. The effectiveness and efficiency of these application is on rise which encourage the developers with numerous ideas and innovativeness. Thus business can develop its infrastructure by providing better services to its customer. Although the mobile apps in India is developing day by day. But in West Bengal mobile app is yet to be develop. The aim of this research study is to know how demographic factors affects the customer preference regarding the usage of mobile apps.

Keywords: Demographic factors, Timely information, perceived monetary risk, ensure better performance, Customer preferences

1. Introduction

According to statistics, India has its fastest growing telecom network in the world with its high potential and development population in the world's per telecom regularity authority of India, the number of telephone subscriber in India is increased from 1039.34 million at the end of Nov 2015. The number of mobile subscriber in India is reached to 980 million in June 2015. Out of total Indian population 1 in every 120 are tablets users. India has the highest number of internet users per year, as compared to any other country in the world. As on June 30, 2015, 52 million consumers gained access to the Internet vs the previous year, according to IAMAI (The Internet and Mobile Association Of India). More importantly, over 60% of consumers access the internet via their mobile devices — 213 million people at end of June. Every day Indian spend an average of three hours on their mobile phones, based on survey done by Ericsson. The majority of this is spent mostly on m-commerce and other consumer apps to fulfill their daily needs.

1.1 Overview

Mobile application is a process of software creation for mobile devices It is basically a computer generated program designed to run on smart phones and other mobile devices.

1.2 History

The first mobile phone was made by Martin Cooper of Motorola to Dr. Joel S. Engel of Bell Labs on the 3rd day of April 1973. It took two decades of R&D to get first mobile application for smart phones. The credit goes to IBM Simon, who introduced the world with the first smart phone with applications. It had a calendar, address book, clock, calculator, notepad, email, and a touch screen with a QWERTY keyboard.

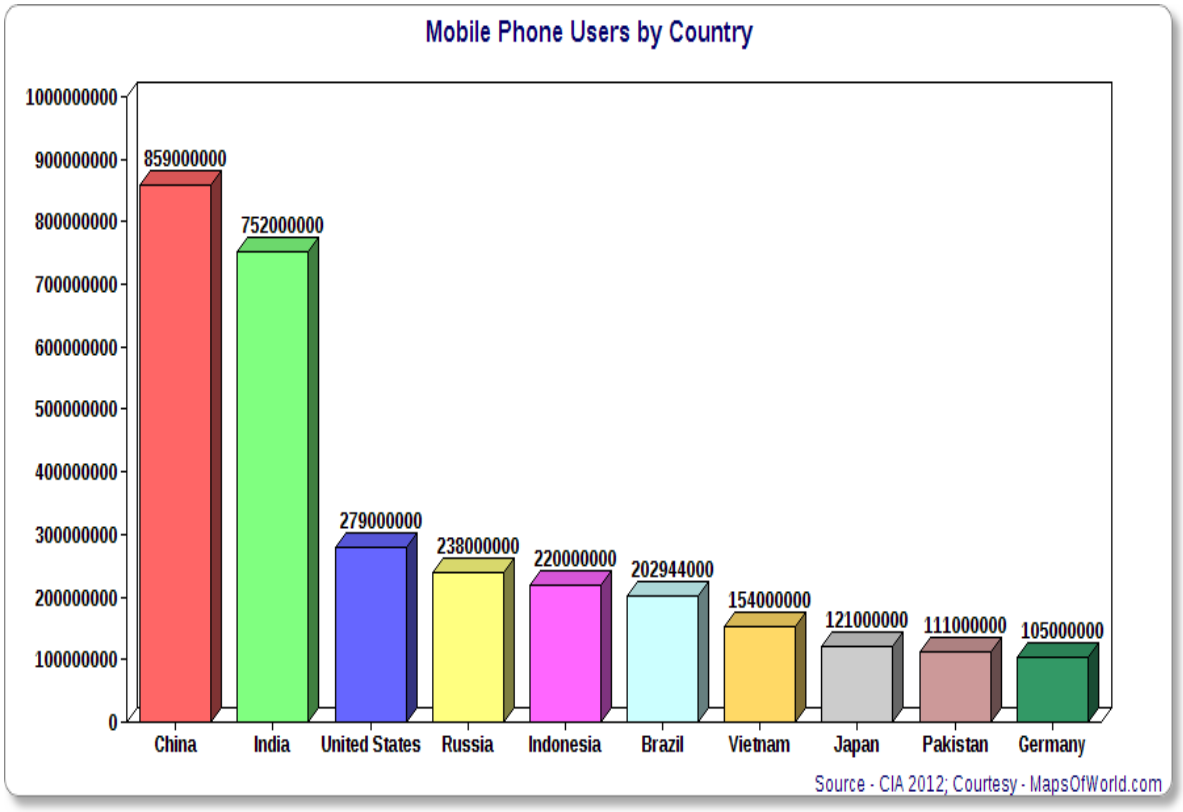
1.3 Evolution

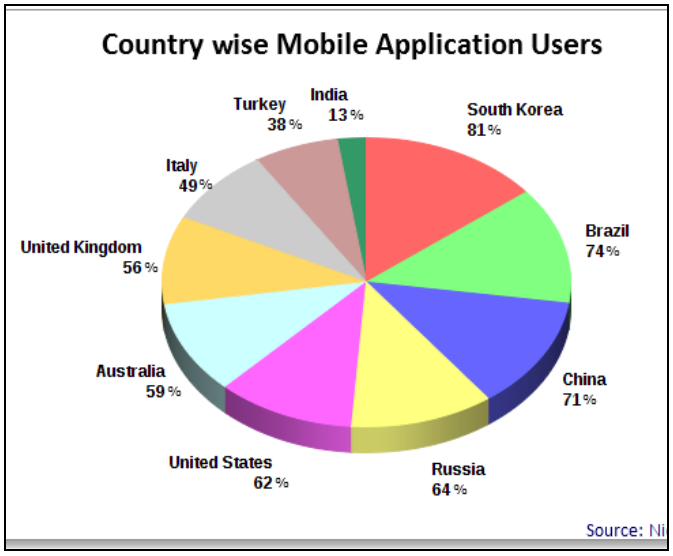
In early 90s, the first mobile phone application was introduced. First SMS application was introduced in early 90s. In late 90s, SMS communication became a craze in younger generation, but spread among all age group. Mobile phone manufacturers started providing more apps which ultimately increase in user demands through Internet by using WAP technology. Though receiving an app through WAP was complex, and it needed an attention to simplify it. User's demand was increased for more entertainment and business through mobile applications. It was in 2007-2008 when Apple released its first iPhone and then App Store.

1.4 Demography

In this Demography section, just have a look on the top 10 countries in terms of cell phone users.

Now, let's have a look on the number of application users in the following ten countries in comparison to mobile phone users.





2. Literature review

A new model for investigating consumer's behavioral intention in mobile advertising is developed and related to mobile marketing theory and practice (Mika Westerlund, Risto Rajala 2009). However attributes of environment and cultural infiuences are explore to develop a model on consumer attitudes towards M- Commerce (Qi Ying Su *et al*. 2010) [13].

The conventional shopping process involves a human being have to visit the store personally for purchasing the item. A purchase decision is then made according to the information so gathered. However, a number of unique challenges a company have to face, if he/she prefers to execute this process using a mobile device. Taking this aspect into consideration, Ryan Anthony Brown *et al*. (2011) [5] propose the use of an Intelligent Agent for performing the Mobile Shopping on behalf of customers.

Antero Juntunen (2012) [2] analyze the NFC mobile ticketing business model holistically from a techno-economic viewpoint and identify the critical business model issues that affect the commercial deployment of such services. Using single case methodology, the authors evaluate the NFC (Near field Communication) mobile ticketing business model with the help of the Service, Technology, Organization, Finance STOF Model.

M-Commerce validates the user satisfaction and technology acceptance model in business to customer (Morteza Ghobakhaloo *et al*. 2013) [11]. M-Tourism usability can be procure by emphasizing on the significance of fast and reliable access to content, as well as the quality – particularly conciseness, accuracy and coverage – of the relevant information (AlessendroInversini *et al*. 2013) [1].

Shaik Shaked Ahamad (2014) [3] identified a Secure and Optimized Proximity Mobile Payment (SOPMP) Framework using NFC (Near Field Communication) technology. Khaing Sandar *et al*. (2014) [10] illustrated that although Google clouds offers a poor performance but it is the most cost effective compared to other clouds. Mobile apps must design in such a way, so that it can use to call for more novel data to influence eco-friendly behaviour (Eli Typhina 2015) [8]. Mobile apps contributes to exploration of strategic moves by mobile payment innovates through platform ecosystem (Junying Zhong 2016) [9]. According to a recent survey, more than half of all such apps are rarely been downloaded. The

study thus examines consumer stickiness to continue to use mobile apps, using the post-acceptance model of information system continuance and technology acceptance model. (*I-Chan Fang, Shih-Chieh Fang*). Another recent study done in which it investigate the factors influencing the adoption of apps Survey provides a detailed understanding of how and why specific factors affects the customer preference (Aparna Chatterjee 2016) [6].

3) Research Objectives

To identify any significant association between the demographic attributes and dimensions of customer preferences in W.B

4) Research Methodology

4.1 Data collection methodology

In this research study, is descriptive, exploratory and empirical in nature. To meet the objectives of the study stated above both qualitative and quantitative techniques are to be used.

4.1a) Data Source

Primary Data: Primary data were collected effectively with the help of the self-administered questionnaire. Primary data collection is based mainly on the information available through self-administered questionnaire among conveniently selected respondents of different categories and a pilot survey is done to finalize it.

Proposed questionnaire contain two parts: i) the demographic details of the respondents it consist questions pertaining to the respondents' demographic profiles, such as age, gender, educational qualification, and annual income were asked. ii) Part 2 consisted of, where the respondents has to choose most preferable factors of adaptation as per their opinion. The researcher administered the instruments personally to the Convenient sampling techniques is adopted to collect primary data from respondents through final questionnaire. Survey is conducted among 100 respondent of W.B

Secondary Data: Moreover, available information on this context published in different journals, books and magazines and websites is taken into consideration for the study as secondary source.

4.1 b) Sampling Plan

Population: Smart phone user across all demographic characteristics.

Sampling Frame: Customer List (s) of the selected Local mobile shop / local service provider and selected user of social networking sites

Sample Units: Smart phone user of Kolkata district across all demographic attributes.

Sampling Method: Randomly some local mobile shops to be selected for customer lists. Buyers of smart phones are selected using Simple Random.

Sample size: 100 (approximately)

4.2) Data Analyses Methodology

The data collected from the survey will be subjected to data cleaning in order to identify missing value, sample characteristics and meet the assumptions of normality. After this, the Descriptive statistics and frequency distribution tables and chi-square testing are used to summarize the respondents' demography. The researchers will ensure that all items meet the acceptable limit level.

H_O1: There is no significant association between age level and preferred factors of adaptation.

H_a1: There is significant association between age level and preferred factors of adaptation.

Table 1: AGE * FACTORS Cross tabulation

Count								
		FACTORS						Total
		Timely information	Security	Ensure better performance	Highly effective technology	User friendliness	Perceived risk	
AGE	BELOW 21	7	5	2	2	3	2	21
	21-35	5	5	6	6	4	1	27
	35-50	1	3	2	1	4	5	16
	50-65	4	2	4	3	5	0	18
	ABOVE 65	5	1	5	4	1	2	18
Total		22	16	19	16	17	10	100

Table 2: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.030[a]	16	.808
Likelihood Ratio	11.491	16	.778
Linear-by-Linear Association	.085	1	.771
N of Valid Cases	100		

20 cells (80.0%) have expected count less than 5. The minimum expected count is 2.72.

Respondents were asked to indicate the type of adaptation factors preferred by them. Six types of factors were given for their choice and preferences are shown in (table-1) with their respective frequencies. Data shows that 22 of the respondents prefer Timely information in mobile apps where as16.Respondants prefer security as the most important factor for adapting mobile apps.19 people prefer ensure better performance. Only 10 people prefer perceived monetary risk factor, which is the least preferable factor.

Since from the above analyses in (table 2), the calculated value is 11.030 p-value is .808 (asymp sig 2 sided) which is >.05 (level of significance), therefore H_{01} is accepted, the result is not significant. Therefore we can infer there is no

significant association between the age and and preferred factors of adaptation.

H_O2:- There is no significant association between gender and preferred factor of adaptation.

H_A2:-There is significant association between gender and preferred factor of adaptation.

Table 3: Gender * Factors Cross tabulation

Count								
		Factors						Total
		Timely information	Security	Ensure better performance	Highly effective technology	User friendliness	Perceived monetary risk	
Gender	Male	16	8	17	12	10	5	68
	Female	6	8	5	2	3	8	32
Total		22	16	22	14	13	13	100

Table 4: Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.117[a]	5	.150
Likelihood Ratio	8.324	5	.139
Linear-by-Linear Association	1.179	1	.278
N of Valid Cases	100		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.44.

Table 3 reveal that 22 respondents prefer timely information and ensure better performance is the highest preferable factors. 16 prefer security, 14 prefer highly effective technology whereas 13 respondents prefer user friendliness and perceived risk, which are the least preferable factors. Out of total 100 respondents 68 are male and 32 are female.

To test whether age have significant impact on preferred factors of adaptation on mobile apps chi square test is conducted. Analysis revealed (Table 4) that calculated value is 8.11 4 and the p-value is (asymp. sig 2 sided). 150, therefore H_{01} is accepted at 5% significance. Hence we can infer there is no significant association between the gender and and preferred factors of adaptation.

$H_0$3:- There is no significant association between education qualification and preferred factor of adaptation.

H_A3:- There is significant association between education qualification and preferred factors of adaptation.

Table 5: Education qualification * Factors Cross tabulation

Count								
		Factors						Total
		Timely information	Security	Ensure better performance	Highly effective technology	User friendliness	Perceived monetary risk	
Education qualification	Secondary	3	2	1	3	4	4	17
	Higher secondary	5	3	3	1	5	1	18
	Graduation	9	2	7	3	3	3	27
	Post-graduation	4	3	2	2	2	2	15
	others	4	1	2	5	4	7	23
Total		25	11	15	14	18	17	100

Table 6: Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.660[a]	20	.610
Likelihood Ratio	17.899	20	.594
Linear-by-Linear Association	.415	1	.520
N of Valid Cases	100		

Table 5 shows that timely information is the most preferable factor as 25 respondents prefer it.18 respondents prefer user friendliness, 17 prefer perceived monetary risk and the least preferable factor is security. As per education qualification out of total 100 respondents 17 are having secondary education, 18 having higher secondary education, 27 are graduates, 15 are post graduates and rest 23 belong from other.

Form the above chi square analysis it is found that the calculated value is 17.660 and the p-value is .610 (Asymp. sig 2 sided) which is > .05 level of significance, therefore the $H_0$1 is accepted, the result is not significant. Hence there is no significant association between the gender and preferred factors of adaptation.

5) Conclusion and suggestion

From the above 3 analyses it is observed that

1. Statistically there is no significant association between age and preferred factors of adaptation
2. There is no significant association between gender and preferred factors adaptation
3. There is no significant association is found between education and preferred factors.

Hence from my survey and analyses it is observed that there is no relationship between demographic variables (age, gender, education qualification) and preferred factors (timely information, security, ensure better performance, highly

effective technology, user friendliness and perceived monetary risk).

In addition, as an important determination of Mobile apps choice, company must focus in building their reputation/reliability by providing timely information as the respondents have shown their highest priority on choosing this factor it. This is an important factors as this will help to increase the inflow of the mobile apps user.

6) Limitation and future scope of research

The main objective of this research is to analyze the any association among the demographic variables (like Gender, age, income) and the customer preferred factors of adaptation about mobile apps. Researchers only used 100 respondents to draw inference on the population which is a very small number compared to the massive population of the research. In Future research sample size can be extended for analyses and for better inferences.

References

1. AI, LV. Tourism mobile application usability -The case ot i Ticono. International Journal of E-Service and Mobile Apps, 2013; 5(2).
2. AJ, VK. Critical business model issues in deploying NFC technology for mobile service: Case mobile ticketing. International Journal of E- Service and Mobile Apps. 2012; 4(3):23-41.
3. Ahemed SS, Siba VS. A secured and optimized proximity mobile payment frame work with formal verification. International Journal of E- Service and Mobile Apps, 2014; 6(1):66-92.
4. Bresnahan Timothy, Davis Jason P, Yin Pai-Ling. Economic value creation in mobile applications NBER volume on Science and innovation policy, forthcoming; Stanford University Graduate School of Business Research, 2014, 14-08.
5. Brown RA, Narayan SS. Intelligent store agent for mobile shopping. International Journal of E- Service and Mobile Apps, 2011; 3(1):57-72.
6. Chatterjee A. International Journal of Science Technology and Management. Factors affecting customer adaptation towards mobile apps in W.B. 2016; 5(5):72-80.
7. Chatterjee A, Shah TR Dr, Ghosal I. International journal of science technology and management. A Perceptional study from the customer point of view on mobile apps in Kolkata district, 2016; 5(6):244-255.
8. ET. Eco - Apps design to influence environmentally friendly behaviour. International Journal of E- Service and Mobile Apps, 2015; 7(1):1-21.
9. JZ. Platform as strategy collective innovation in mobile payment eco system. International Journal of E- Service and Mobile Apps, 2016; 8(1):18-36.
10. KS, YM. Cost effective for Erlangen traffic of mobile learning over clouds. International Journal of E- Service and Mobile Apps, 2014; 6(2):1-11.
11. MG, TS. Adaptations of mobile commerce the market of end user satisfaction on system acutance. International Journal of E- Service and Mobile Apps, 2013; 5(1):26-50.
12. RH, DF, DD. Usability of mobile applications: Literature review and rationale for a new usability model. Journal of Interaction Science. 2013.
13. Su QY, CA. Consumer attitude towards mobile commerce- A model to capture cultural and environmental influence. International Journal of E-Service and Mobile Apps, 2010; 2(2):1-25.
14. Yang KC. Telemetries and informatics. Exploring Factors Affecting the Adoption of Mobile Commerce in Singapore, 2005; 22(03):257-277.
15. http://web.usm.my/aamj/19022014/Art%205%2887-104%29.pdf
16. http://www.getmobileexposure.com/4-benefits-of-mobile-apps-for-consumers
17. http://www.igi-global.com/article/a-secure-and-optimized-proximity-mobile- payment-framework-with-formal-verification/111066
18. http://www.arraydev.com/commerce/JIBC/2007-12/bhatti_Final.pdf
19. *https://www.devsaran.com/blog/mobile-application-development-insight*
sustainable