

Internet Technology Adoption Vs Demographics: A Case Study of Solan of Himachal Pradesh and Chandigarh

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ABSTRACT

The present investigations were carried out to study the effect of different demographic factors on the use and ownership of mobile phones and internet. Male respondents had slightly higher access to internet than female whereas reverse trend was recorded for the access of internet on both mobile phone and PC/Laptop. Age group of 10-20 years of age had 100% internet usage followed by 21-30 years. Undergraduates used maximum internet followed by post graduates. Respondents belonging to higher family income groups had more use of internet than the lower income groups. Internet usage among students was found to be maximum. Female respondents had higher ownership of smartphones and other kind of mobile phones as well. Maximum ownership of smartphone was found in 10-20 years of age group. Undergraduates also had the highest ownership of smartphones whereas ownership of other kind of mobile phones was higher among illiterates and 10+2 categories. Higher income groups possessed more smartphones and other kind of mobile phones were owned maximum by lowest income group.

Key words: Internet, smartphone, demographics, youth, technology

Introduction

The 21st century emerged as the age of communication. Mobile telephony and internet seamlessly became an essential part of our life. The telecommunication revolution in India is one of the most successful accomplishments of the liberalization policy. Mobile phone is the symbol of this revolution. It makes the world fit into our pocket.

Mobile phone is described as a magical device and a miraculous technology (Anonymous, 2005). It is a perfect combination of the traditional and new media. A person would always carry such a mobile device everywhere throughout his life (Sharples, 2000). It is an electronic communication device that is portable, personal, private, accessible and connected.

Mobile telephony is not only a tool for communication but also for empowerment.

The use of internet enabled mobile phone i.e. smart phone has enabled users to share pictures, videos and stories instantaneously giving an impetus to social mobility and expression. The mobile phone is defined as a person - to- person communication technology which crosses time and space barriers. College students use their mobile phones to keep their umbilical cord with their parents while they were away from their parental homes. (Geser, 2005).

India today has the largest population in the world with approximately 600million people under the age of 25(Takaki, 2010). This is about 10% of the world's population. Moreover, India is a growing economy as well. Thus, it is important to study the patterns of technology adoption among the people of India. Various parameters have been used to derive meaningful information

Results

The results obtained in the present studies have been summarized in Table-1 and Table-2

The results obtained (Table-1) clearly indicate that the male respondents had slightly higher use of internet than female respondents. Access to internet through mobile phone was also higher in male

for getting an insight into technology adoption patterns in India.

Methodology

This paper is based on the responses to a questionnaire developed by the authors for the purpose of the study. Solan town in Himachal Pradesh, India and the Union Territory of Chandigarh, India were taken as the universe due to their cosmopolitan culture and emergence as an educational hub. Sixty respondents were chosen on random sampling basis and out of these fifty five completed the survey successfully. The authors did the survey by personally visiting the respondents. The survey was carried out to gain data on internet access and ownership patterns on the basis of demographic factors like gender, age, educational qualification, family income and occupation. The data obtained from the survey was converted into percentage for uniformity and ease of understanding.

whereas there was not much difference in the access of internet on both mobile phone and PC/Laptop between both the genders. The percentage of respondents not using internet was slightly higher in female respondents.

Table-1: Internet Access Demographics

	Access to Internet(%)	Access Internet mostly on Mobile phone(%)	Access Internet on both Mobile phone and PC/Laptop (%)	Don't use internet (%)
Gender				
a) Male (n=32)	81.25	12.5	68.75	18.75
b) Female(n=23)	78.26	8.69	69.5	21.7
Age Groups(in years)				
a) 10-20(n=17)	100	11.76	88.23	0.00
b) 21-30(n=15)	93.33	13.33	80.00	6.66
c) 31-40(n=13)	53.84	0.00	53.84	46.15
d) Above 40(n=10)	60	20	40	40
Educational Qualification				
a) Illiterate(n=3)	33.33	33.33	0.00	66.66
b) Matric (n=3)	33.33	33.33	0.00	66.66
c) 10+2(n=3)	33.33	33.33	0.00	66.66
d) Undergraduate(n=23)	100	8.69	91.30	0.00
e) Postgraduate(n=13)	84.61	30.76	53.84	15.38
e) Others(n=10)	70	10	60	30
Family Income(in Rs)				
a)Less than 20,000(n=11)	45.45	9.09	36.36	54.54
b)20,001-40,000(n=12)	75	8.33	66.66	25
c) 40,001-60,000(n=17)	100	17.64	82.35	0
d)Above 60,000(n=15)	80	6.66	73.33	20
Occupation				
a)Students (n=24)	100	12.5	87.5	0.00
b)Unemployed(n=3)	66.66	0.00	66.66	3.33
c)Business(n=9)	55.55	22.22	33.33	44.45
d)Professionals (n=18)	66.66	5.55	61.11	33.33
e)Others(n=1)	100	0.00	100	0.00

When four different age groups were assessed for the access of the internet it was observed (Table-1) that all the respondents between 10-20 years of age had used the internet, followed by the age groups of 21-30, above 40 and 31-40 years. Respondents above 40 years used the internet maximum through mobile to the extent of 20% followed by 13.33% by 21-30, 11.76% by 10-20 and nil by 31-40%. The use of internet both through mobile phone and PC/Laptop was directly proportional to corresponding increase in the age of respondents. The age group of 31-40 years has the maximum percentage (46.15%) of non-users of internet followed by the age group of above 40 years.

When information was gathered on the use of internet by the respondents having different educational qualifications, there was no difference on the use of internet through mobile phone or through PC/Laptop among illiterates, matric and 10+2 respondents. Undergraduates used maximum internet followed by post graduates and others. However, use of internet through mobile phone was minimum by undergraduates and maximum by postgraduates. Undergraduate respondents accessed the internet maximum through both phone and PC/Laptop.

Respondents having Rs. 40,001-60,000/- income per month used maximum internet (100%) followed by those who had income above Rs. 60,000 per month and minimum by those who had monthly income less than Rs. 20,000/- There was no definite pattern in the use of internet through mobile phones among different income groups. Least use of mobile phones to access internet was made by the respondents having monthly income less than Rs. 20,000/-.

When respondents of different occupations were assessed for the use of internet, it was observed that 100% of the students and others category used internet for various purposes. This was followed by unemployed and professionals (66.6%) and business class. Unemployed and others did not use mobile phones for accessing the internet whereas the business class used mobile phones to the extent of 22.22% followed by students (12.5%) and professionals(5.55%). There was no definite trend in the use of mobile phone and PC/Laptop for the access of internet in people belonging to different occupations. Maximum percentage (44.45%) of respondents belonging to business class did not use internet followed by those belonging to professional category, unemployed and students (Table-1).

Table - 2 : Ownership Demographics

	Own a smart phone (%)	Own a mobile phone (not a smartphone)(%)	Don't possess a mobile phone(%)
Gender			
a)Male (n=32)	68.75	25	6.25
b)Female(n=23)	78.26	39.13	0.00
Age Groups(in years)			
a)10-20(n=17)	88.23	5.88	5.88
b)21-30(n=15)	53.33	46.66	0.00
c)31-40(n=13)	46.15	53.84	0.00
d)Above 40(n=10)	70	20	10
Educational Qualification			
a)Illiterate(n=3)	33.33	66.66	0.00
b)Matric (n=3)	33.33	33.33	33.33
c)10+2(n=3)	33.33	66.66	0.00
d)Undergraduate(n=23)	82.60	13.04	4.34
e)Postgraduate(n=13)	69.23	17.39	0.00
f)Others(n=10)	50	50	0.00
Family Income(in Rs)			
a)Less than 20,000(n=11)	27.27	63.63	9.09
b)20,001-40,000(n=12)	66.66	25	8.33
c)40,001-60,000(n=17)	82.35	17.64	0.00
d)Above 60,000(n=15)	73.33	20	6.66
Occupation			
a)Student(n=24)	83.33	12.5	4.16
b)Unemployed(n=3)	0.00	100	0.00
c)Business(n=9)	44.44	44.44	11.11
d)Professional(n=18)	61.11	38.88	0.00
e)Others(n=1)	100	0.00	0.00

The male respondents had a smart phone to the extent of 68.75% and 25% of

the male respondents had mobile phone, other than a smart phone and 6.25% respondents had no mobile phone (Table-

2). Similarly, among the females more than two-third of the respondents had a smart phone and only 24.74% respondents had other kinds of mobile phones.

When respondents of different age groups were assessed for the ownership of the phones, respondents between age group of 10-20 years of age possessed a smart phone followed by 70% in the age group of above 40 years, 53.33% between 21 to 30 years and 46.15 % between 31-40 years. Maximum respondents between 31-40 years of age possessed other kinds of mobile phones followed by the respondents between 21-30 years (46.66%).

Undergraduate respondents owned a smart phone to the extent of 82.6% followed by post graduates (69.23%), others (50%) and respondents belonging to other three categories possessed smart phones to the extent of 33.33%. Respondents belonging to illiterate and 10+2 category owned other mobile phones to the extent of 66.66% followed by others (50%). There was no illiterate, 10+2, post-graduate and other respondents who did not possess any kind of mobile phones (Table-2).

Family income had very little impact for owning a mobile phone by the respondents. However, a smart phone was owned even by those having an income of less than Rs. 20,000 per month. The respondents belonging to other income

groups owned smart phones to the extent of 66.6 -82.35 %.(Table-2). The percentage of respondents belonging to the minimum monthly income category possessed mobile phones other than smart phones, which was the highest across all categories (63.63%). All the people having income between Rs40,001-60,000/- possessed a mobile phone.

Occupation had a significant effect on the ownership of the kind of phones. Unemployed respondents didn't own smart phones (0.00%) whereas smart phone ownership ranged from 44.44%-100% in other groups. All the unemployed respondents owned a mobile phone (not a smart phone) followed by business (44.44%) and professionals(38.88%).

Discussion

According to the data collected by the authors, it was found that more males access the internet than females. This was contrary to the findings of Ishii (2004) and Pagani (2004) where female users outnumbered males in the internet usage. It is evident from the results presented above that the demographic factors had a pronounced effect on the possession of smart phones or other kind of mobile phones. Similar findings have been reported by (Assael, 1981).

Singh and Sahu (2008) suggested that mobile phone distribution unlike computers is not restricted to those with higher socio-economic status. The results obtained by the

authors also suggest the same. The mobile phone penetration rate in India is higher than computers. The results obtained clearly indicate that the youth are more adaptive to technology than others. The undergraduate and student community showed the maximum percentage of internet use and ownership of smart phones. Mobile phones are often used as a sign of social standing by teenagers and the brand and attributes of the cell phone can be a status symbol. Interestingly, students and undergraduates are a part of the dependent population. Thus, their expenditure on internet use and smart phones is borne by their families. Chen et al. (2007) stated that mobile technology allowed students to share their experiences with their families and provide them a mean to fulfill their familial roles for getting emotional and mental support from families. Cell phone technology provides effective communication and has revolutionized the way of communication among colleagues, family members and peer groups (Ling and Yttri, 2002).

It was observed that people with lower socio-economic status i.e. illiterate and those having monthly income less than Rs. 20,000 showed high percentage of mobile phone ownership. This is can be attributed to the use of the mobile phone as a tool of socialization. Frempong et al. (2007) said that mobile phones help to strengthen social ties among the poor and provide them an

opportunity to communicate in the case of emergencies. Professionals keep themselves abreast with new technologies in order to be in tune with the times as evident by the 100% mobile phone ownership.

The percentage of females possessing a smart phone and a simple mobile phone were higher than males. The mobile phone ownership was 100% in the females unlike the males. It has been widely reported that women possess mobile phones due to security concerns. According to Skog (2002) male participants in a study stressed on the technical functions of mobile phones, while females valued the social aspects, such, as design, ring tone, and colour. The impact of cell phone use on an individual varies with their age, sex etc which in turn affect their usage (Turner et al.2008).

Ultimately, it is clear that cell phones are used by a variety of individuals in all walks of life, but it is the young people who use them the most. It is for this reason that we must pay special attention to the “mobile youth culture” (Castells et al., 2007; Ling, 2004).

Conclusion

The internet and mobile technologies have swept across India-the nation of more of a billion. The youngsters irrespective of their socio-economic background have been at the centre of this digital revolution. In addition to the wide use of internet by females they

appear to be equally conscious about the social status and quality of the gadget.

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