

Chapter 5

Data Analysis and Interpretation

The Chapter interprets the uses of mobile phone for various purposes and adoption of mobile phone related innovations by housewives and women of rural households of Sonitpur District, Assam, Tamil Nadu, Uttar Pradesh and Uttarakhand. Data collected in line with the questionnaire survey, personal interview and focus group discussion have contributed an explanation to the research objectives and research questions e.g. the gender divide in mobile phone uses, role of SHGs and NGOs in empowering women, various challenges to women in household and society and barriers to effective use of mobile phone. The consequences of uses of mobile phone and internet services are analyzed to find out if acceptance of mobile phone has enhanced capabilities of women and helps to empower them.

Second section of the chapter presents some cases from the rural fields of Uttarakhand, Uttar Pradesh and Tamil Nadu that involve various stakeholders who not only participate in technology deployment and skill development for the poor and marginalized rural women but also contribute to implement various Government sponsored social security schemes for them in partnership with Government. The study assesses the role of select NGOs for instance, Hand in Hand, IINREM, SEWA Bharat, Vidyal and the role of application developers in India such as ZMQ Social enterprise and Samhita Trust which introduce various intervention programs sponsored by Government in collaboration with telecom partners such as Uninor, Tata Indicom and Sakshen International. The section highlights the already existing initiative on mobile phone and mobile phone enabled services and information and communication technologies by private organizations, Government and NGOs for women empowerment and assesses some case studies across the world as well as in India that shows the use mobile phone for employment generation.

5.01 Uses of Mobile Phone by Household

The composition of the surveyed households varies across the villages, however, households in Sonitpur District is largely traditional, extended but less joint and conjugal. There are single-parent families, isolated from kin and ‘female households’,

where mother is the only breadwinner with a little support from friends and relatives. Households can expect likely support from the community members based on their relationship with neighborhood and village community.

The allocation of time spends in household activities by housewife or homemaker is amount to 84 hours per week (12 hours a day). This band of time comprises caring, child rearing, house work or household maintenance, kinship maintenance including self-time. Women who are in labour force spend around 28 hours per week (4 hours a day) in household whereas 56 hours (8 hours a day) spent on labor force/marketing/domestic work. Men do spent equal amount of time at work (56 hours per week), however, the amount of time spent on housework is less than 2 hours a day and that counts less than 14 hours a week at home. In a household with a child aged three or younger, average time women give to child care is more in comparison to husband (Figure 3).

SL No	Allocation of time per day	Female		Male
		Working Women	Housewife	
1	Time spend in labor force/ market/working	8 hours	0 hours	8 hours
2	Time spend in household/ caring/informal activities	4 hours	12 hours	2 hours

With the possession of a converged mobile phone, household production and child care tend to be performed in the absence of direct supervision as the presence of mother for a child can be substituted by the time given to mobile phone in co-coordinating, monitoring and caregiving activities. The mother possessing a mobile phone can probably set her own work-pace and time devoted to child care may be considered pleasurable enough to serve as a fair substitute for leisure time.

Mobile phone ownership provides improved access to health, education, business and employment prospects for households once members of households are being connected. Women of Sonitpur District believe that a mobile phone helps them to connect with others in their needs and to lead a more secure and productive life. Women business owners in particular perceive the phone as an essential productivity tool (See 6.5; Figure 8.3.1) which has supported them to unlock economic opportunities; with more than half

saying they have used a mobile phone to earn additional income. 95 percent of women state that they have started feeling more independent (See 6.5; Figure 8.1.2) by owning a mobile phone, however, the amount of time they spent in household has not reduced.

Sl. No.	Level of income	Total Households N=640	Percentage
1	Less than 3000	80	12.5
2	4000-9000	130	20.3125
3	10000-15000	180	28.125
4	16000-21000	160	25
5	above 22000	90	14.0625

Sl. No	Capability indicator of improved standard of living	Number of Women Respondents N= 640	Percentage (%)
1	Increased economic stability	480	75
2	Reduced cost of credit	120	18.75
3	Increased income	380	59.375
4	Increased safety and security	340	53.125
5	Reduced boredom	320	50

Sl. No	Capability indicators of increased self esteem	Number of Women Respondents N= 640	Percentage (%)
1	Go out of home freely	380	59.375
2	Meet officials	110	17.1875
3	Attend village meeting	240	37.5
4	Actively participate in local political process	90	14.0625
5	Gain family respect	180	28.125
6	Gain influence in society	380	59.375

Survey findings also suggest that 20 percent of total households surveyed are engaged in formal occupation and 79 percent of them are found to engage themselves in informal sector activities (See Figure 2.2). There are around 12 percent extremely poor households of total surveyed households with income Rs. 3000 per month. 20 percent

households fall within the income bracket of Rs. 4000 to 9000. On the other hand, 14 percent households earn more than Rs. 22000 per month (Figure 2.3).

This shows a clear rich-poor division in Sonitpur District. Household income per month is the indicator of economic prosperity of the household. The survey findings bring out that total income of some households rest in Rs.15000-20000 from the primary sector.

Sl. No	Occupation	Total households N=290	Percentage
1	Formal	60	20.68966
2	Informal	230	79.31034

However, income from the secondary sources adds another Rs.6000 in the household and the contributors of this amount are mostly the women and young folk of the households. 37 percent of total surveyed households earn additional income from informal sources around the income brackets of Rs. 2000-3000. Survey findings on the ratio of income earned from primary and secondary occupations bring out that 11 percent of total households are found in 20:80 category (20 percent from secondary sources whereas 80 percent from primary sources) where 38 percent of total households fall in 40: 60 category 40 percent comes from informal sources while 50 percent households fall in 50:50 category (out of total 440 households) (See Figure 2.4;2.5). 14 percent households have no additional income and 17 percent households have earned additional income per month that is amount to above Rs.10000. Uses of mobile phone have contribution in earning additional income. 51 percent of households have experienced an increasing scale of income (30 percent) after using mobile phone (Figure 5.11). Although approximate scale of income after using mobile phone varies, mobile phone uses have significantly improved the standard of living especially of women members of households. 73 percent households earn income in cash while 26 percent households earn income in other forms such as food, cloths etc. (Figure 2.6).

Approx. 43 percent of the total surveyed households spend above or below 100 on mobile phone per month and this section of households have fallen in BPL category. Another 34 percent of total households spend around Rs. 500 (above or below) on

mobile phone per month. 2 percent of total households spend around Rs. 1000 (above and below) per month on mobile phone.

SL No	Additional Income	Total Households N=640	Percentage
1	No additional income	90	14.0625
2	2000-3000	240	37.5
3	4000-6000	130	20.3125
4	7000-9000	70	10.9375
5	Above 10000	110	17.1875

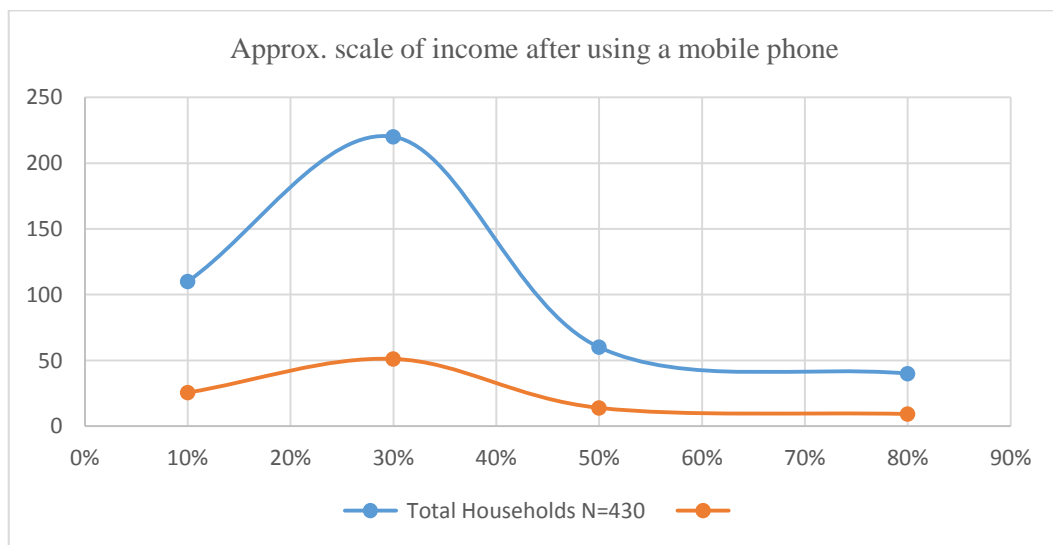


Figure 5.11

In respect to expenditure on other information and communication technology, around 3 percent of total surveyed households spend Rs. 100 (above or below) per month on internet; another 3 percent of total households spend around Rs. 500 (above or below) per month in accessing net whereas 4 percent households spend Rs. 1000 per month on internet; these section owns either dongle or regular internet connection from a network at monthly payable basis at home (See figure 2.7)

Newspaper reading habit is found quite prominent among households of Sonitpur District. 70 percent of households spend around Rs.500 per month and only 1 percent of total households spend around Rs. 1000 per month on newspaper and periodicals that includes various magazines such as prantik, garixashi, sakhi etc. Except extremely poor households in Jahajduba and Tarajan villages, households in Sonitpur District are found

to consume a TV set and spend Rs. 100 (32 percent lower middle income households use to have a special recharge) and Rs. 500 per month (34 percent of middle income households).

As per survey responses, 48 percent households use to spend Rs. 100 per month on education. This section of households belongs to lower middle income group who are aware of educational rights. For 29 percent of total surveyed households, expenditure on education falls around Rs. 500 per month. Another 34 percent households spend a comparatively higher amount on education (Rs. 1000 per month) as they consider private schools and colleges as a better alternative for their children. 17 percent households have regular monthly expenditure on health that comes around Rs. 100 (above and below) per month. 9 percent households spend around Rs. 500 per month on health, 3 percent of total households spend around Rs. 1000 per month on health, while total of 11 households (not in percentage) spend more than Rs. 2000 per month on health while 5 households spend more than Rs.3500 per month on health. Health expenditure includes cost of medicine, doctor's charges, transportation cost to hospital, clinic and so on (See figure 2.7).

The financial status of household is represented in the monthly expenditure on various basic needs and on communication services that further show a significant and interesting difference between rural and urban or semi-urban regions. However, households of both rural and urban region spend almost the same amount of money on mobile phone.

A good number of households are found to possess either Airtel or Vodaphone connection. While choosing a particular network, many households are found to give importance to good connectivity and coverage (37 percent); cheap call rate (39 percent) as their first preferences. 17 percent of total surveyed households consider good quality service as another key reason to choose a network; only 3 percent of total households consider fair prices and a nominal section of 1 percent consider attractive scheme as a reason behind choosing a particular network. While purchasing a particular brand of mobile phone, 42 percent and 40 percent households consider price factor (low price handset) to be an important determinant. Households (only 6 percent of total households) are not found to consider weight and size (light weight or compact size) as important element while purchasing a brand new mobile phone (Figure 7.5; 7.6).

Table 7.5 Source: Questionnaire Survey with 640 respondents			
Sl. No.	Reason for choosing the brand	1st preference of respondents N=640	Percentage
1	Low price	270	42.1875
2	Easy to use	260	40.625
3	Light weight/compact size	40	6.25
4	Enhance technological features	70	10.9375

Table 7.6 Source: Questionnaire Survey with 640 respondents			
Sl. No.	Factors while choosing a particular cellular network	1st preference of respondents N=640	Percentage
1	Good connectivity and coverage	240	37.5
2	Cheap call rates	250	39.0625
4	Quality service	113	17.65625
5	Fair prices	25	3.90625
6	Attractive scheme	12	1.875

The level of spending on mobile phone suggests that many households give huge worth to a mobile phone. Women members of those households fall in the income bracket of Rs.1500 to Rs.3000 (See Figure 2.3) are relatively hesitant to keep a mobile phone in their custody are of late found to be motivated to purchase and to own a phone to primarily stay connected with friends and family members. These women spend on average Rs. 10 to Rs.30 per month of household income on the mobile phone recharge (See Figure 5.6) which has embraced the return of enhancing relational capability, smoothly overseeing family responsibilities, thus, women experience a sense of autonomy and increasing participation in household decision.

Mobile phone helps to reduce travel time and monetary costs, decrease physical risks and accomplish any task related journey. 34 percent of total surveyed households' state that their total expenditure on transport falls above or below Rs. 500 per month. 12 percent of total surveyed households spend Rs. 100 per month on transport while for another 12 percent of total household's expenditure on transport amount to Rs. 1000 per month. Mobile phone amplifies efficiency in activities by increasing temporal accessibility, by

enabling prompt communication in any business-related activities and allows people to manage several activities regardless of their physical location.

Almost half (59 percent) of women have said that use of mobile phone has increased in participation in community activities. Women have experienced an improved sense of coordination of various festivals and rituals due to enhanced sense of reciprocity (51 percent). They could listen to each other more (90 percent) and discuss issues together (40 percent). Coordination of social events is mostly achieved through sending short messages to multiple recipients. Use of mobile phone reduces time and monetary costs associated with the coordination of social activities. Mobile communication is used to enrich the social capital in the common, shared and collective cultural ambience of the village societies (See Figure 6.5; Figure 8.1.2). Mobile phones enable the adult members of households to draw complex interactions and coordination between different portfolio of income sources and geographically distant productive activities, thus, allow rural households to engage in many activities simultaneously which can further be translated into improved income earning and cost savings (See Figure 8.3.1).

Another important use of mobile phone is getting support during emergencies. Since there is a lack of necessary social services in many rural areas, mobile phones can be used to seek for help during urgent situations. The phones were also used to consult distant veterinarians in case of livestock problems. In the surveyed villages, participants of households reported that events of maternal mortality have dropped compared to previous years after the use of cell phone which facilitates speedy and instantaneous communication to hospitals. There are many households use mobile phones to report crime to police and warn other villagers and co-ordinate meetings to find out a resolution to any community problem (See Figure 7.3; Figure 8.1.2).

Table 7.3 Questionnaire Survey with 640+65 respondents

Sl. No	USE OF MOBILE PHONE TO UPDATE INFORMATION AS PER EXPLICIT INFORMATION NEEDS	CONTROL GROUP N= 640	PERCENTAGE (PERCENT)	INTERVENING GROUP N=65	PERCENTAGE (%)
1	Talk only use	640	100	65	100
2	Market information such as use of market light app	20	3.125	40	61.53846154
3	Mobile Krishi	20	3.125	40	61.53846154
4	Weather information	-		20	30.76923077
5	Mobile Health or use for Health information	260	40.625	50	76.92307692
6	Talking to clients (business purpose)	140	21.875	65	100
7	Use of mobile phone as a substitute to transportation	489	76.40625	65	100
8	Retrieve information about disasters	60	9.375	10	15.38461538
9	Checking Examination Results	80	12.5	35	53.84615385
10	Searching employment opportunities	90	14.0625	50	76.92307692
11	Mobile phone to reach new contacts and opportunities.	110	17.1875	65	100
12	M-banking or money transfer	30	4.6875	60	92.30769231
13	Use mobile phone to communicate with children's school teachers	130	20.3125	35	53.84615385

Mobile phones have reduced the cost of accessing information, as between potential employers and employees, and of small producers gaining access to market prices in different locations. They have also enabled rural people to access knowledge about crop and livestock rearing. In the fields of education and health, mobile phones have increased access to information in villages. Cheapening and thus increasing access to information and knowledge enhances capabilities and enables both cost reduction and increase production.

Transaction costs have been reduced, as the search is carried out over the phone. The phone also enables small producers to reduce their transportation and wastage costs by making deliveries more in line with the demands of consumers. Reduced transportation and transaction costs, and denser interactions between buyers and sellers, be they in the product or the labour markets, accrue in addition to the benefits resulting from access to better information and knowledge (See Figure 7.3; Figure 8.3.1). A major and somewhat neglected dimension of mobile phone usage is that making communication substantially cheaper which promotes social interaction. The spread of low-cost smartphones and of education will play a big role in making the smartphone the main way in which rural India will access the internet.

Survey findings show that rural women who are working outside home, in farms and other enterprises have considered mobile phones as a tool to improve their standard of living. Nearly all working women in household own a mobile phone. After owning a mobile phone rural women can easily find a part time employment or engagement for them to stand on their feet or to generate additional income for household. Farmer's households are found using mobile phones to improve farming practices and maximize the sale of their goods.

Changes in Parent-Child Relationships

It is found that within the family, the adoption of the mobile phone has meant to change power and control in the parent-child relationship by allowing more autonomy to children and by helping parents to minutely co-ordinate daily life.

The challenges in the co-ordination and communication between parents and children after owning a mobile phone are apparent in surveyed households of the two wards of Sonitpur District. Some parents from the town area of Sonitpur District (two wards) report about conflicts between adolescents and themselves on the payment of higher amount of mobile phone bill. Around 6 percent of the parents are conscious about the perceived danger of obsessive use of mobile phone considering the most obvious sleeping disorder. Many parents dismiss the use of mobile phone as punishment and some set a common rule for children having mobile phone by not allowing to keep mobile phone with children at night considering the sleeping issue. Many youth are reportedly being awakened every night by a text message or voice call.

5.02 Gender Divide in Mobile phone Adoption

Household members are found to use cell phone for the purposes such as formal and official information searching, shopping, paying bill, access to job portal etc. (See Figure 7.2). Use of mobile internet for information seeking purpose, of late, has been popular in rural Sonitpur District. These user members of households mostly belong to the age bracket of 18 to 40 years and use smart phone converged with internet technology for email and chatting with friends, colleague and relatives.

Sl No	SMS literacy	Women Total N=640	Percentage
1	View text message but can't send	360	56.25
2	View and can send text message	280	43.75

Almost all women respondents of the surveyed households (100 percent) are found capable of individually handling the very basic functions of making and receiving calls in mobile phone (See Figure 6.5; 7.1). The majority of women do not satisfy the degree of SMS literacy. Around 56 percent of the surveyed women view text messages out of which only 43 percent of women are able to send text messages (See Figure 6.3). Many of those SMS illiterate women are literate and have sound knowledge in English. Majority of housewives among the womenfolk of surveyed households are apprehensive about sending SMS on account of possible mistakes and subsequent fear of putting themselves into uneasy and embarrassed position at the receiver's end. 17 percent women with primary education can send text messages. 28 percent women with primary education can only view but can't send a text message. 31 percent of women with education up to secondary level can view text messages while 14 percent women with secondary education can send a text message. 3 percent of total women with higher education can view but can't send text messages while six percent of total surveyed women with higher education can send text messages (Figure 6.4).

Sl No.	Degree of SMS literacy	Control group N=543	Percentage (percent)	Intervening group N=65	Percentage (%)
1	Primary education and can send text messages	80	14.73296501	35	53.84615385
2	Primary and can only view text messages	110	20.25782689	0	0
4	Secondary education and can send text message	130	23.94106814	30	46.15384615
5	Secondary education and can view text messages	143	26.33517495	0	0
7	Higher education and can send text messages	60	11.04972376	0	0
8	Higher education and can view text messages	20	3.683241252	0	0

On the other hand, women are found to avoid using complex functions of mobile phones. Women above 35 years of age with primary education had a relatively less score on mobile phone literacy, while women at or below 35 years of age with secondary education or above score relatively high on mobile phone literacy. Only 6 percent women can access internet through mobile phone (Figure 7.1). 50 percent of women are aware of mobile internet but they have not tried to use internet through mobile phone (Figure 7.2). In Tamil Nadu and Uttar Pradesh, women are found to get access to job portal (18 percent) to seek for employment opportunities through mobile phone. The use of mobile phone for accessing job portal by men (21 percent) is higher than women (0 percent). However, some women look for employment opportunities (14 percent) such as contract as well as contact, availability of job and other information by using mobile phone (See Figure 7.3). 6 percent of women who can access mobile internet browse social networking site through mobile phone, do shopping through mobile phone (See Figure 7.2). This small section of women does take part in online discussion and forum by providing their opinion via mobile phone. However, the use of mobile internet is found more among men than women. 4 percent of surveyed control group* women experience m-banking or money transfer through mobile phone in comparison to 92 percent of women of intervening group. 40 percent women use mobile phone for health related information such as get timely reminder and timely suggestion from doctors, ANM or Asha workers in relation to health (See Figure 7.3).

Table 7.2 Source: Questionnaire Survey with 705 respondents					
SL No	Mobile Internet use	Control Group N=640	Percentage (percent)	Intervening group N=65	Percentage (%)
1	Are not aware of mobile internet	0	0	0	0
2	Aware of mobile internet but have not accessed it	320	50	5	7.692307692
3	Access to job portal	0	0	12	18.46153846
4	Browse social networking site or What's app	40	6.25	10	15.38461538
5	Taking part in discussion on mobile discussion sites or forum	0	0	0	0
6	Google through mobile to retrieve information	40	6.25	37	56.92307692
7	Mobile shopping	40	6.25	35	53.84615385
8	Paying bills through mobile phone	40	6.25	40	61.53846154

Regarding the specific telecommunication needs, 46 percent of total women surveyed in Sonitpur District prefer to have a best priced handset; 20 percent women consider good connectivity as the first preference; 14 percent women consider full talk time on all recharge as the most preferred requirement. Other telecommunication needs such as free SMS (7 percent), lower call rate for those women who participate in community groups (6 percent), Free SIM (1 percent), VAS offer (3 percent) do not count much as compared to subsidized handset and good connectivity.

Sl. No.	Uses of Applications of Mobile Phone	Female				Male			
		Not Available	Available but not used	Available and used	Percentage of female users	Not Available	Available but not used	Available and used	Percentage of male users
1	Calling purpose	0	0	640	100	0	0	640	100
2	Use of SMS	0	360	280	43.75	0	340	300	46.875
3	Use of beeping services	0	590	50	7.8125	0	630	10	1.5625
4	Use of camera	260	220	160	25	180	240	220	34.375
5	Use of recorder	0	620	20	3.125	0	530	110	17.1875
6	Use of calculator	0	480	160	25	0	210	230	35.9375
7	Use of headphone to listen to music	0	610	30	4.6875	0	460	180	28.125
8	Use of touch screen	595	15	30	4.6875	525	5	110	17.1875
9	Use of Internet or google	320	280	40	6.25	290	210	140	21.875
10	Use for communication-social media, what's app or hike	320	280	40	6.25	290	210	140	21.875

11	Use of Bluetooth	0	630	10	1.5625	0	610	30	4.6875
12	Use of calendar	0	220	420	65.625	0	80	560	87.5
13	Use of clock	0	200	440	68.75	0	60	580	90.625
14	Game	0	637	3	0.46875	0	470	170	26.5625
15	GPS	0	637	3	0.46875	0	610	30	4.6875
16	Video	260	360	20	3.125	180	240	210	32.8125
17	Book Reading	320	300	20	3.125	320	300	20	3.125
18	Use of Online Shopping	320	280	40	6.25	290	210	140	21.875

50 percent of surveyed women do not possess a high end mobile phone, smartphone with all essential features, while only 10 percent women have owned smart phone. 10 percent of surveyed men are found to own smartphone or a phone with technologically enhanced features (See figure 7.5). Only 4 percent of men with a high end mobile phone have known to and used GPS to get the detail of route and distance. Women are found to have curiosity to know about GPS and other advance features. However, majority of women require support and assistance from others to operate application of mobile phone (See figure 7.1;6.5). Very less number of women (3 percent) uses video application of mobile phone whereas 32 percent of men love to use video function of mobile phone. Neither women nor men like to avail the book reading application in mobile phone (3 percent) (Figure 7.1). Only 6 percent women in comparison to 21 percent men use instant messaging apps and prefer to connect with near and dear one anytime anywhere. Those 6 percent women with internet literacy do shopping via mobile phone, pay bills through mobile phone (Figure 7.2) as compared to 21 percent men. Both men and women in Sonitpur District are found to be avid users of clock and calendar. Still men users of clock (90 percent) and calendar (87 percent) are found more than women (68 percent and 65 percent respectively)(Figure 7.1).

37 percent of total surveyed households have used mobile phone for last two to six years, 51 percent of the total households have used mobile phone for seven to eleven years and 10 percent of households have a long experience with mobile phone for more than 11 years (See Figure 5.7). These old users have said that they are more informed about health, environment problem in their neighborhood than before after keeping a mobile phone in their custody. 12 percent of women use mobile phone to check exam results and 20 percent women are regularly in touch with teachers about school meetings, children's educational progress in school (See Figure 7.3).

More men than women were found to have uses of applications of mobile phone (See Figure 7.1). 43 percent women compared to 46 percent men use SMS. 25 percent of total women as against 34 percent of men use camera; only 3 percent women show interest in recording as compared to 17 percent men; 25 percent of women use calculator function compared to 35 percent of total men (See Figure 7.1). Many women of low income

Table 6.5 Source: Questionnaire Survey with 640+65 respondents (including questions 5.2; 5.3; 5.4; 5.5; 5.9; 5.10; 8.1; 8.2; 8.3;8.4; 8.5;8.6;8.7;8.8,8.9)

SI No.	User's Experience With Mobile Phone	Control Group Total No=640	Percentage	Intervention Group Total No=65	Percentage
1	Friendly with Key pad	320	50	65	100
2	Know to use Touch Screen features	60	9.375	52	80
3	Suffered from network connectivity loss	280	43.75	7	10.76923077
4	Suffered from power shortage	40	6.25	0	0
5	Borrowing cell phone	70	10.9375	3	4.615384615
6	Increased participation in community	380	59.375	65	100
7	Encouraged entrepreneurship in community	60	9.375	58	89.23076923
8	Mobile phone is at par and even better than other form of communication technology	530	82.8125	65	100
9	Increasing autonomy	610	95.3125	65	100
10	Increasing productivity	620	96.875	65	100
11	Increasing safety and security	340	53.125	65	100
12	Increasing income	380	59.375	65	100
13	Increasing decision making power	320	50	65	100
14	Increased accountability towards a business	180	28.125	65	100

15	Improve standard of living	480	75		
16	Oversee family responsibilities	590	92.1875	65	100
17	Makes happy and content	320	50	65	100
18	Economic development of household is possible	570	89.0625	65	100
19	Problem in activating mobile no	40	6.25	0	0
20	Perceive danger of obsessive use of mobile phone, Makes me less tolerant	40	6.25	0	0

households said that they don't understand the use the calculator function. This finding indicates an opportunity to train women on how to use this application to increase informed decision making, efficient and informed action to lead to greater productivity. Survey findings show that men are more fascinated to use mobile phone to listen to music (28 percent) as against only 4 percent of total women.

Out of 290 women with occupation in surveyed households in Sonitpur District, 79 percent are engaged in informal or unorganized work or sectors in villages whereas only 20 percent of women are regularly salaried (See Figure 2.2). Women with occupation have been quite use to communicate with clients, suppliers or producers belonging to associations via mobile phone, which further indicates a connection with marketing decisions. It is also found that many of these women in informal work contribute to the respective household economy by selling their handicraft products like mats, clothes etc. The uses of mobile phones have helped women rural traders to find a better market and to check out price information, to make advance arrangements with suppliers and customers. Enabling prompt communication of business information, mobile phone can reduce costs and speed up transaction processes; thus, improve rural businesses (See Figure 7.3). 37.5 percent of total women of the surveyed households are farmers and are found to use mobile phone to obtain information about crop or livestock production (See Figure 2.1). This indicates the connection of women members of the households with production decisions. It has made it evident that relational capability has been improved with the use of the mobile phone which has resulted benefits in business and earning of income.

Mobile phone ownership provides improved access to health, education, business and employment prospects for households after they are being connected. Women surveyed across low and middle-income households in Sonitpur District are found to believe that a mobile phone helps them to connect with others it their needs and to lead a more productive and secured life. Women business owners in particular perceive the phone as an essential productivity tool which has supported them to unlock economic opportunities; with more than half saying they have used a mobile phone to earn additional income. 95 percent of women state that they have started feeling more independent with a mobile phone (See Figure 8.1.2), however, the amount of time they spent in household has not reduced.

Survey findings show that rural women who are working outside home, in farms and other enterprises have considered mobile phones as a tool to improve their standard of living. Nearly all working women in households own a mobile phone. After owning a mobile phone, rural women can easily find a part time employment or engagement for them to stand on their feet or to generate additional income for household. Farmer's households are found using mobile phones to improve farming practices and maximize the sale of their goods. 76 percent of women perceive transportation and operational efficiency to be a primary beneficial impact of the mobile phone; they consider mobile phone as a cheap, fastest and convenient substitute to transportation (Figure 7.3). 59 percent of total women started feeling comfortable to go out after possessing mobile phone. 17 percent women at home started meeting officials; 37 percent of total surveyed women have started attending village meeting; 14 percent of total women have motivated to actively participate in local political process (See Figure 8.1.2). 21 percent of women use mobile phone to communicate with business client; 17 percent women use mobile phone to reach new contacts and opportunities (Figure 7.3). As per the findings on capability indicators, 28 percent of women stated that they have gained respect in their families and they have started taking active participation in decision making, become more mobile and independent. They said that these changes owe to the uses of mobile phone. 59 percent of women have experienced increasing influence in society (Figure 8.1.2).

However, many farming households have not even tried innovation on agro services and mandi prices on different commodities or use of market light app and so on. Only 3 percent of total households are aware of mobile krishi and tried to access information via using app (See Figure 7.3). Majority of households are unaware of such services.

Gender Division in Consuming Household Goods

It is found that most of the household assets such as land, houses, vehicles, livestock and electronic equipment of households are specially possessed by men in households. Women, on the other hand, typically possessed smaller assets such as clothes, utensils, poultry etc. Jointly owned assets are fewer and this typically includes furniture, farm tools and sometimes business accounts. Mobile phones are found to be possessed by both men and women members of households. There is no pronounced difference in the

ownership of these assets between rural and urban areas. It is found that women tend to rely on their husband, neighbor and relatives for immediate information than on the sources of information and communication technology, i.e. radio, TV etc. More men than women consider mass media and ICT as an important source of information. According to John A Lent (1985), women rarely use mass media as a source of information because they are often too busy with both productive and reproductive activities to watch TV or to listen to the radio. In addition, it has been documented that persons who are already marginalized by limited access to resources, by being located in remote rural areas, or by their gender are more likely to experience unequal access to information (Dixon, 1978). Further, family responsibilities and larger workload, economic disempowerment and cultural norms limit the ability of rural women to receive, seek, and use information (Seth, 2001; Batliwala, 1993).

5.03 Women, Production Activities and Use of Mobile Phone

Women, while fulfilling domestic needs in households are equally engaged in production and selling of handicrafts and to participate in market. Woman's contribution to the household economy through the sale of their handicraft products like mats, clothes are other instances found in survey areas. Majority of women in rural Sonitpur District are found to be engaged in the agricultural labor force. This declines the notion that farmers are essentially men when women can at best assist male farmer in agricultural production. Due to non-entry into formal job market and nature of hereditary occupation compelled many women to take up agriculture and allied services without any formal training. More women than men use mobile phones for agriculture emergency assistance, which dismantles the usual assumption that women use mobile phone only to maintain kinship, rather women do make multiple use of mobile phone in order to increase agricultural productivity in rural India. The existing use of mobile phone by women is found to sell surplus agricultural products for profit. This finding further underscores the necessity of continually integrating stakeholders' to design training sessions for women to use mobile phone for fast agriculture and business related information and to fulfill the local needs. Due to poverty, many women could not mobilize resources for engagement in other livelihood activities and are compelled to confine within four boundaries of home.

31 percent of total surveyed women have primary education while 45 percent of total women have education up to secondary level. Only 13 percent of surveyed women have higher education and an insignificant number of women (9 percent) are with vocation education (See Figure 6.1). Good numbers of women employed in agriculture use of mobile phone but don't possess digital literacy in relation to use of computer, internet and converged function of mobile phone. Mobile phones have also helped a great deal in increasing both productivity and income in the field of vegetable farming in rural areas. Vegetable-growing farmers sell their vegetables at the local market situated within a radius of 10-15 km from villages. They enquire about the price of vegetables from other markets situated in a radius of around 100-200 km through their mobile phones and accordingly decide the appropriate sale price of their vegetables at the local market (responses of interview and focus group discussion). This has helped them secure better prices, reduce wastage, provide timely service and ensure easier access to buyers.

Regarding the interest of engagement with farming, many women are of the opinion that institutional support services for agriculture and extension education, credit provision, can motivate them to take agriculture as a source of livelihood. Women opine that mobile phone can facilitate networking among themselves, thus provide incentives to encourage collaboration and group activity among them. Besides agriculture, many women are found to be involved in crafts and commercial activities. Local social norms and values are likely to influence the productive use of mobile phones. Nonfarm activities have been part and parcel of the household economy in rural areas and women are found to engage as predominant participants and contributors in informal economy (See Figure 2.2). The majority of the population in the country is already engaged in informal unorganized sector of economy. The survey findings reveals that a large numbers of women are engaged in contract based economic activities such as weaving of baskets, sewing, selling farm products (responses of interview and focus group discussion). The study reveals gender differences in mobile phone uses in rural Sonitpur District. The study reveals that lack of knowledge regarding how to use the device and the underlying cost factor tend to dissuade women not to become an enthusiastic user of mobile phone. The study found that the use of mobile phone by men is related mostly to business purpose, while the use of mobile phone by women is related to kinship maintenance. Increased monthly expenditure on mobile phone on buying pre-paid does not lead to the increase in household earning or income. Use of mobile phone is

positively related to increase autonomy and economic independence of women member of the household (See Figure 8.1.2; 8.3.1). Hence, average expenditure on mobile phone could lead to increase income in households as per the opinion of village women. Increasing use of mobile phone is positively related to household management.

Women are found to travel less frequently compared to male counterpart of households. Household responsibilities and security issues often restrict women to travel freely. This limits women to make new contacts and to expose to opportunities outside home. Since men in households own mobile phone for relatively earlier and longer than women do, men earn more familiarity with the device and learn new uses. The perceived usefulness of mobile phone for increasing contacts and job opportunities are realized more by men than women. This limits the business use of mobile phone for women. Men are found to leverage more from heterogeneous ties than women in use of mobile phone for business purpose. Women after using mobile phone have started saving travel time between the market and suppliers; they are exposed to market and can toll product prices. Mobile phone has been instrumental in role swapping of paid work and unpaid household task.

The women in the surveyed household positively accommodate mobile phone as a means to quick and easy access to information on situations of probable risk and uncertainty, finding out children's and spouse's whereabouts and delays in returning home, etc. Finally, the women accepted mobile phone as time-saver, cost effective technology that aids to manage effective co-ordination between meetings and travelling. The adoption of mobile phones with advanced features (Figure 7.1) by women in rural areas suggests that mobile phones are becoming affordable and accessible in rural areas. Being a tool to share feelings and experiences with a further scope for enrichment, mobile phone in custody of a woman can open avenues to address the issues which were previously considered as beyond the capacity of women. Mobile phone has become catalyst to knowledge networking for women by broadening the scope of activities. Women can experience the much required flexibility in time and space at home and at office and get a space to navigate in between home and office by access to mobile phone. The provision of flexi-timing is important for housewife as well as for working women as it saves the working women from social isolation by helping division of work at the household.

A typical mobile phone user in Sonitpur District thus makes some 5-10 calls per day and has the device usually on person. He uses the silent mode and SMS messages and is rather pragmatic (but not too pragmatic), perceiving mobile phone as a communication tool. However, it seems that one third of the users also find it fun to use the mobile phone. In addition, roughly one tenth of mobile phone users cares somehow about the appearance of their mobile phones and may thus develop a specific relationship to their device. It is found out that the users are open to the use of new technology products although few women and elderly members in the household have to face difficulty in learning the gadgets. Learning to use the mobile phone beyond its essential functions such as making a call and receiving a call as per them was not considered necessary by most of the respondents belonging to women and elderly section. The respondents irrespective of Gender assert the importance of learning a technology in order to save time and become efficient in household daily activities. However, they prefer to learn to operate a Mixer grinder or a microwave oven over a mobile phone technology and other ICT. In regard to allowing children to own and use a mobile phone, the women and elderly respondents believe that children should be given cell phone only after a certain age once they attain certain level maturity and responsibility to make proper use of a mobile phone.

The survey findings suggest a difference in the mindset between Working Women and Housewives regarding the attached importance to own and use of mobile phone. Almost every surveyed working woman except a few wage laborers is found to use a mobile phone regularly whereas housewives are found to use mobile phone occasionally. Most women attach a low importance to the recreation and hobbies which are derived from and associated with communication technology. Working women prefer to devote the free time to family/children. Women in Sonitpur District are found to give high priority to family than self which shows high on collectivism in studying the variables called individualism vs. collectivism.

5.04 Role of SHGs in Empowering Women

Among the existed community groups or organizations, women are found mostly to participate in SHGs than to other groups. SHGS are small, economical, homogeneous, affinity groups of rural poor with full of potentialities to contribute to village upliftment.

Primary education is one of the foremost criteria for women who want to participate in SHGs which are taken into consideration for target intervention. In every group, it is found to have at least two or three person having primary education that can keep records and undertake other administrative tasks. An amount of Rs. 10 to Rs.50 per month is required to contribute by individual members of SHGs. For rural women of Sonitpur District, this amount is affordable as a participation cost. Operational efficiency of all the SHGs is not same. Many SHGs are plagued by internal problems and lack of effective leadership which result discontinuation or temporary breaking off. Many SHGs are not simply restricted its activities in microfinance, loan disbursement, debit and credit facilities for women. SHGs involve numbers of activities, i.e. vegetable cultivation, dairy farming, promotion of micro- entrepreneurs. The select NGOs offer demand driven skill training and special capacity building programs including functional literacy and skill training to women via SHGs, in a way, mobilize women through SHGs and to empower them. The NGO, Hand in Hand offer training to more than 40 economic activities that ranges from beautician, embroidery, tailoring, cell phone repairing, artificial jewelry making and so on with an aim to build the capability of women and to promote micro-entrepreneurship in these sectors and to enable them to adopt scientific practices to increase the productivity of their enterprises. Even various technology solutions or mobile enabled value added services on health, education and microfinance are delivered to women through community-organized self-help groups (SHGs).

Women in SHGs

93 percent women (of total N=65) from Tamil Nadu, Uttar Pradesh and Uttarakhand express that self-help groups helps them to reduce their poverty level than earlier. With the support of micro finance, they experience a significant improvement in saving habit and reduction of cost of credit. SHGs in partnership with NABARD have provided only savings and credit services to women participants. There is no provision of insurance in the surveyed SHGs. Majority of women agreed that NGOs could be important facilitators in obtaining loans from banks and other financial institutions. They agreed that NGO intervention could be effective in receiving technical assistance to start up new undertakings and for improvisation of their current ventures in future. Around 25 (3 percent) of total women (N=640) who have participated or have experiences in NGO activities in Sonitpur District apart from 65 women from outside Assam strongly agree

for the requirement of NGO intervention for the promotion and development of self-employment of women. 28 percent of total households (N=640) surveyed in Sonitpur District possess a positive attitude towards the intervention of NGOs in a village. Women by associating themselves with an NGO that works on women empowerment are capable of self-actualizing their views and ideas. Majority of women endorse that engagement with NGOs provides them with higher level of accomplishment. After joining SHGs, many women experience change in their agency with an increased income. Increasing income has brought due stability in household economy and reduced the cost of credit. For many women, experiencing empowerment represents change in agency due to which there is an increasing participation in social events and development of a sense of inclusion into a broader process of society (Figure 10.5).

Table 10.5 Source: Questionnaire Survey with 75 Respondents

Sl No	Capabilities of women after participating NGOs-SHG or NGO-Community Groups	Total Women respondents N=75	Percentage
1	Greater economic stability	72	96
2	Reduced cost of credit	70	93.33333
3	Obtain entrepreneurial skills	60	80
4	Acquired an identity at home & in society	75	100
5	Improve group dynamics	75	100
6	Improve marketing skills	75	100
7	Improve Financial skills	75	100
8	Better business decision	75	100
9	Engaged in managerial work	65	86.66667
10	Gained more access to schemes and scholarship	70	93.33333
11	Gained more access to legal information	40	53.33333

Development of Personal Agency and Autonomy

The capacity for the women to go out of their homes independently of other family members was a clear statement of an increased autonomy of action. The increased capabilities of women owe to use of mobile phone and participation in community organizations. In fact, there is a strong sense of socialization among women in low

income households. Visible agency of change represents the ability to sit together to discuss issues, solve problems together. Women have inculcated more cognitive abilities and a habit of listen to each other more (Figure 8.1.2; 10.5). Use of mobile phone technology has led to increasing interaction of women participants of NGO Programme by connecting them with government officials and local officials and bank managers. Participation in SHGs has made it mandatory for women to have bank accounts for their savings. Enhanced sense of belongingness to the community has been found as those women participants are more concerned about the issues that affect their groups and the villages. Women after participating in community groups are found have increased capacity for an independent action and an increased level of respect from the family with some change in the respondent's power and authority within the household.

Women who make utility use of mobile phone are found to experience an increasing capacity to deal with various domestic problems such as small disputes, problems with children, and their education; even some serious household problems such as alcoholism and domestic violence in households. 53 percent women consider that joining NGO-Community Group programs has enhanced easy access to legal information as well as schemes and scholarship (93 percent) (Figure 10.5). Women after participating NGO-SHG or NGO -Community Groups have experienced an improved group dynamics.

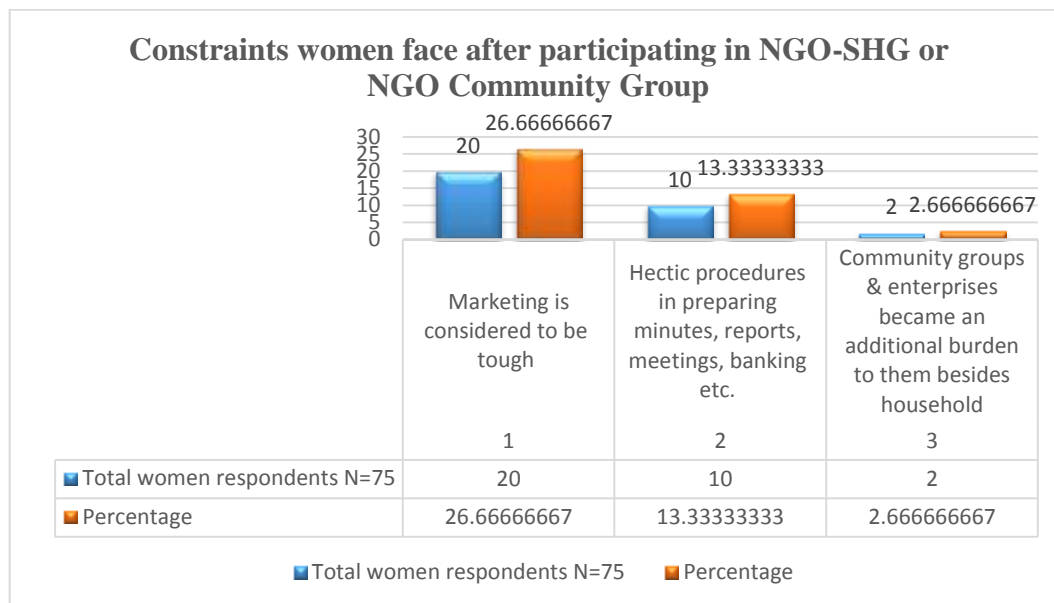


Figure 10.7

They have learned marketing skills which they considered to be tough at times (20 percent) (Figure 10.7), managerial skills how to prepare minutes, reports etc.

However, 13 percent of 75 women said that they faced difficulty in managerial and marketing procedure initially (Figure 10.7), then, they experience to take a better business decision with improved financial skills (Figure 10.5). On the other hand, 2 percent of 75 women held the view that participation in Community Groups has become an additional burden for them and those fewer women are newly married. Nevertheless, every woman has their own narratives which are not beyond patriarchal gender relations in society and familial form of control and coercion. Intervention of NGO via SHGs has been accomplished in educating girls and to develop skills and capabilities by working on the constraints factors that hinder them to harness their skills. The changes in agency record the activity of group members to send their daughters to school, whereas before they would not. SHGs did provide support for girls' education, and so the groups had some role in the increase in the number of girls staying longer at school.

Participation of women in Gram Panchayat

In male dominated and patriarchal village society, women have to accommodate in a limited space with less opportunities to participate in village process and in community building. Indian government by enacting affirmative action policy made 35 percent of seats of gram panchayat reserved to women. The District Collector appoints gram panchayat chairpersons in such a way as to ensure an adequate representation of women and scheduled castes and scheduled tribes' in these positions. In Deri Macha village of Uttar Pradesh, the gram sabhas are operating smoothly. However, few women are elected into the gram panchayat. It is found that the membership of women in SHGs works as a platform to participate in broader community processes. Women after being associated with SHGs have started singing the tune of advocacy around developments in roads, water and villages around, and also regarding access to public facilities. Women participants have learned the value of co-operation and mutual support of working together as a SHG. At the same time, mobile phone poses to be the facilitating instrument to embrace those values of reciprocity and cooperation.

5.05 Challenges to Women in Households and Society

There are certain constraints that hinder women to participate in community groups. Women are not motivated to participate due to struggle they face with poor living conditions (49 percent) livelihood insecurity (93 percent); illiteracy and lack of proper employment (46 percent) gender inequality at home and elsewhere (33 percent), health problems (5 percent) etc. In fact, the perennial constraints in accessing information (53 percent) have been obstructing women to participate freely and at her will in a community group or organization. Works of two contemporary scholars, Deka (1996) and DasGupta (1997) demonstrated how labour, sexuality and fertility of women are systematically controlled in India. Many rural women report that her relation to productive property or land is always mediated through her relation to her husband, father, or brother. Women especially housewives and non-working women are resource-less and economically and emotionally dependent on male members in a family.

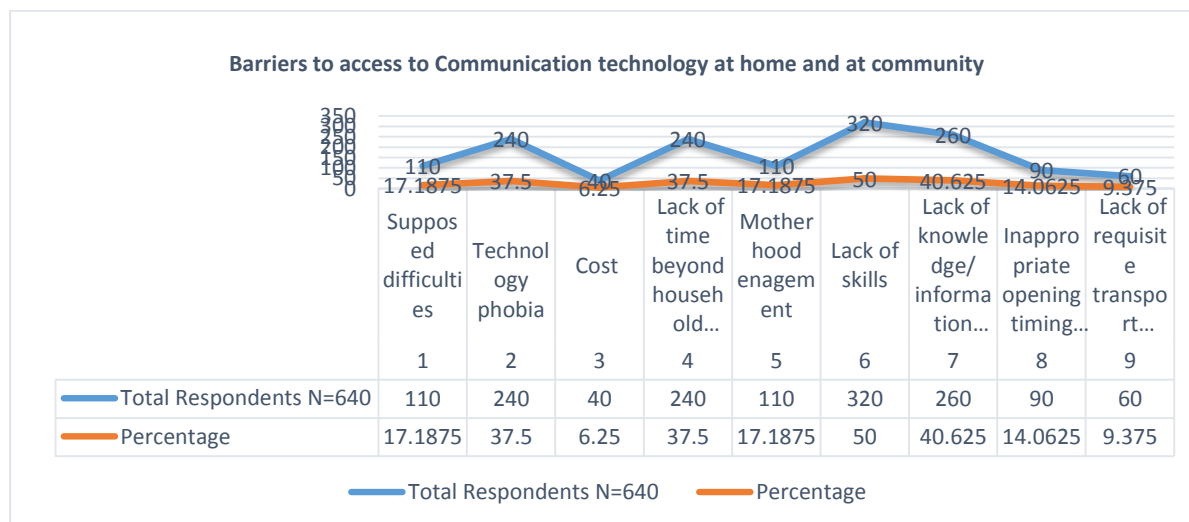
Due to the unequal, resource-less position of women within family and in society, majority of women are apathetic and less motivated to see the positive aspects of collective action or co-operation. Although many women experience the uneven gender relations, they are not willing to speak out their sufferings. Various prevailing religious activities, prejudices and customs, in Indian Society have decisively influenced in legitimizing and justifying inequalities. Cultural values, beliefs, customs, written and oral mythology and religious literature have largely influenced the families of Assam. Cultural values and beliefs allocated role models and role expectations from the members of the family. Family planning programs has very little impact on rural families because of their prejudice and other traditional beliefs.

5.06 Barriers to Effective Use of Mobile Phone

Failure of various government sponsored ICT (Information and Communication technology) scheme in Assam such as CIC (Community Information Centre) shows the lack of interest of rural households to take the benefit of such schemes. Prejudices among women folk on the supposed difficulties to operate Internet (17 percent), technology-phobia (37 percent), the cost of operation and owning (6 percent), lack of time beyond household management (37 percent), child rearing (17 percent), and informal activities, lack of skills (50 percent), even lack of knowledge regarding the benefits of ICTs (40

percent) close to their socio-economic realities have failed ICT related projects in rural areas (Figure 9.2.1).

Figure 9.2.1



Women access to Internet café, CIC, Arunodoy Kendra relatively less than men. Out of 70 women who are interested to access communication technology, only 23 of them goes to an Internet café/CIC once/twice/thrice a week. 40 women of 70 go to local internet café/CIC once a month as per their need and requirement of information (Figure 9.2). On the other hand, majority of housewives (75 percent) prefer voice service (listen to a person from opposite end) over computational voice service (25 percent) when they are asked about the nature of service they want from Information Centre (Figure 9.8).

Table 9.2 Source: Questionnaire Survey with 70 Respondents		
SL No	Frequency of access to Internet Café/CIC/Arunodoy Kendra	Female N=70
1)	Once/twice/thrice a week	23
2)	Once a month	40
3)	Once in six month	7
4)	Once in one year	0
5)	Have not visited yet	0

5.07 Village Readiness for Mobile Internet Connectedness

The survey findings bring out that Internet café user in the two wards of Sonitpur District as compared to Rural Sonitpur District is higher in numbers. Internet café is also used when the villagers have to download any official document and for official transaction through email. On a query related to the means and instrument of accessing internet in rural Sonitpur District in Assam, it is found that many women between the age brackets of 15 to 35 access internet through mobile phone. The services that the women primarily

Sl. No	Nature of service from information Centre	Total Households N= 640	Percentage
1	Voice services (want to listen to a person from opposite end)	480	75
2	Computational voice services	160	25

use are whatsapp, facebook, google search, and various other mobile phone apps (Figure 7.2). Looking closer to the combination of the users' profession and the number of alternatives for internet access, survey findings suggest that proportionately large numbers of government sector or private sector employees in the rural households have alternative internet access either at home or at their work places who are not interested in owning a mobile phone with convergent features (Figure 7.2). The large unorganized workforce in India comprises blue collared workers such as drivers, carpenters, painters, maids, waiters, and office boys etc. constitute the 'have not' section of digital divide. They cannot afford to own a computer and have lack of skill to operate a computer and to surf internet. In many case, because of time constraints and distance, this section of people cannot reach the internet café or kiosk nearby vicinity of their residence. The penetration of the mobile phone in rural Sonitpur District is really of great success. The Use of mobile phone technology and services has bridged the gap between cities and rural areas in Sonitpur District.

As per survey findings, PC-Internet penetration is highest in India among the population belonging to age group of 25-34 years. However, it is found that for rural users, cost remains a key hindrance (Figure 9.2.1) to go even mobile-only internet use, while urban users are seen conveniently absorbed into mobile only internet users. The field survey

outlines some critical parameters which differentiate mobile-only internet users. Young cohorts (male is a dominant ratio than the women) mostly get access to web through mobile phone. Many young men of households prefer to access internet on mobile phone because they do not have Personal Computer at home. Their preference to access web on mobile phone is guided by ease, fast and cheap access. They play games on their mobile, use mobile internet for playing games every day; access to social networking sites on mobile phone and become an everyday users.

On questions related to the requirement of 'information push' services, women of rural households including both housewives and girls (of surveyed households) are looking for receiving 'job alert' on mobile phone either through SMS or through Voice calls. A free of cost voice based job registration facility and information service is what rural households prefer most. On the other hand, some unemployed, self-employed women in villages or women who are mostly engaged in informal economy (not restricted to Sonitpur District) are found to use multimedia functions or convergent applications of mobile phone to search a job. 50 percent of total women surveyed have not heard about the job portal and they all are from the villages of Sonitpur District, while 20 percent of surveyed women have heard as well as accessed to job portals either 'Naukri' or 'Monster'. Almost all of the surveyed women are interested to find available job avenues.

The concerns for having a contribution to family income and to settle individual life are some reasons that stimulate women to do a job. (Role of housewives and identity) Whereas most people in the surveyed villages of Uttar Pradesh, Uttarakhand and Tamil Nadu do not have a bank account, but by using M-Pesa service, villagers of Uttarakhand made the far-flung money transaction possible. Mobile phones enable practical, social and economic transformation of the rural dwelling housewives. Another 80 percent of women belong to Below Poverty Line (BPL) households are found to own and use mobile phone. Their use of mobile phone is essentially utility specific and they mostly use voice function of the mobile phone corresponding to listening to music.

5.08 Village Library: Village Amenities

Pathekakuri library of Pathekakuri village of Sootea development block is one of the oldest libraries in Assam. This library was introduced with an idea and motive of being

Students' library was started by the youths of Pathekakuri village. This library was established in 1953. The eagerness to learn and tremendous spirit and enthusiasm of villagers made the library a successful one. The reading room of the library has the capacity to accommodate twenty readers to read a day. The reading room is kept open from 2 pm to 4 pm. They try to fulfill the information needs of the people of the village by providing books, journals, newspapers and other facilities such as TV set, radio for timely news and entertainment. However, libraries in nearby villages are not properly maintained, there is no books, only newspapers are kept for reading. However, this library has not offered any internet or computer facilities so far. These libraries are not run by trained professional librarians. These are directed and managed by the committees or the clubs with financial help of public. The library in Pathekakuri village has been carrying out different activities and performances like singing, dancing, playing drama and making of arts and crafts. Such manifold educational activities have been helpful in uplifting the personalities of the youths of Pathekakuri. However, these libraries could be made as an enabler of various services to the village community in different fields such as agriculture, livestock, nursery, handloom and handicraft etc. and to expose villagers to the market for such goods, services and various public work activities.

5.09 Brief of the Project Sanchar Shakti Scheme of Government of India

There are many schemes launched by the government for the improvement of livelihood of rural populace. Sanchar Shakti project is one of such that integrate mobile phone with development of women. The purpose of the project is to improve the quality of life and incomes of disadvantaged women in a sustainable manner through the promotion of livelihood opportunities and strengthening of local institutions that relate to livelihood and social development. The project intends to provide opportunities to create or enhance livelihood prospects for the poor households by applying the principle of self-help groups. The project endeavors to improve community institutions includes self-help groups (SHG) which could provide a range of support services and linkages to women. The project has enclosed 959 villages of 17 development blocks in 5 districts for its operation. The project strived to form and overhaul 3950 community-based organizations that include self-help groups, gaon panchayats and federations through which mobilization and participation of women would be materialized. The project has facilitated various demonstrations for livelihood enhancement of target community based

on the potential activity of the community, the needs of the community and available skills and resources in the community. Government through this project has undertaken initiatives such as enterprise development in select areas, training of women, and to create employment opportunities for women.

BSNL is entrusted to use USO fund from subsidy support scheme for instituting dual mode Broadband Enabled Rural Public Service Terminals (RPST). RPST are assigned to provide support to Women SHGs to meet necessary standards for secure financial transactions as per RBI guidelines. BSNL is to dispense accessories to RPST, i.e. a card reader for credit/debit applications, biometric sensor (for secure authentication) and a USB Bluetooth dongle/adapter, thermal printer and a UPS with 24 hours back up power supply. The selected SHGs function as franchisees would sell value added services to the rural public. Value added services (VAS) will generate additional revenue for the SHG as SHGs would earn commission on services delivered through the RPST. From an exhaustive list of services, RPST would deliver select VAS e.g. banking services, cash withdrawals and money transfer, payments or transactions for Government programs (NREGA, Pension, PDS etc.), booking ticket for railway, bus and airline and other utility bill payments, insurance services (General and Micro) for crop, cattle, health and home insurance and mobile top-ups etc. Increasing State reliance on NGO sectors and delegation of the responsibilities for administering number of projects to NGOs and local social organizations demonstrated the viability of NGO intervention to development. Majority of welfare and development related projects on women, youth and downtrodden sections are managed by NGOs, with Government as a state partner.

The project Sanchar Shakti is growth oriented; employment oriented and have contributed to generate fiscal revenue. The tax legislation of India is favorable to various early mega projects. The study attempts to capture the insight of women about their experiences of change in personal agency. The changes that NGO programs brought to the life of women through intervention are hard to quantify as these changes did not encompass the positive transformation of gender relations at household level. The study anticipated to look at the intervention programs of NGOs on women empowerment on its own terms and its resulted outcome which brought visible changes into daily lives of women. One of the outcomes of NGOs intervention in the SHGs shows the expanded choices of women and their capacity for taking action. Women who participated in SHGs

are identified with improvement in their standard of living. While only a minority of respondents nominated economic benefits in answer to the unprompted open-ended questions on “change”, women did notice in their earnings after participating NGO intervention programme via village SHGs. Economic benefits accrued from NGO intervention as described by women include having increased assets, ready cash, the reduced cost of credit and general economic stability in the household. The income they earn enabled women to invest in children’s education, and purchase household items that women consider as necessary for a better standard of living. A greater disposable income that reduced cost of credit and provided ready savings, have further led to opportunities for women to make a broader set of choices. Other beneficiary women reported an increased capacity to send their children to school, purchase of clothes, utensils and other household necessitates and the accumulation of assets, i.e. cattle or goats etc. for households. The economic benefits in both urban and rural areas gave the women a much stronger sense of security not only in economic terms but also in social terms.

Case Study 1: Mobile Phone Distribution Model

IINREM, a Noida based NGO, in collaboration with Government of India and Tata Tele service is working on empowerment of Women Community in Gautam Buddha Nagar District of Uttar Pradesh. The NGO under Sanchar Shakti project aims to organize and empower the underprivileged rural women for sustainable and comprehensive development leading to improved quality of life and empowerment through the educational initiatives. The project was started in 2012 October pursuing the aim to alleviate poverty by building capacity of poor rural women. Accordingly women of those select villages are mobilized into SHGs where they were provided various skill training and means to create new enterprise and to strengthening existing enterprises. The project introduced digital literacy program with the belief that digitally literate and capable women can contribute to family income and can improve lifestyle.

Around 50 mobile phones have been distributed to the women of Gautam Buddha Nagar locality. After using mobile phone women were more confident, competent and empowered in the field of socio economic and political sector and thus contribute to development. By pursuing integrated development model, this NGO has intervened to enable women to work for their own development. The NGO has provided support to women members of households of the select District by introducing new income

enhancement program. In connection to this program, the NGO has worked on awareness building program of new technologies among women empowering them by providing training on skill development. IINREM has formed SHGs in Gautam Buddh Nagar District and engaged women who participated in SHGs in micro finance activities in the select areas.

An initiative has been taken by the NGO, IINREM in the remote areas of NCR Delhi and on the border of Uttar Pradesh to form more than 100 women Self-help groups. Nearly 1000 women are associated with the organization in the livelihood promotional activities. Due to lack of education there is very low literacy rate among women in the remote areas. The participation in SHGs has helped many women to obtain entrepreneurial skills and a means to be economically empowered. NGO IINREM has provided skill training and capacity development to run business on animal husbandry, tailoring and petty shops. The IINREM has developed and field tested a curriculum for capacity building of SHGs and women entrepreneurs. Stakeholders of Tata tele-services have arranged various meeting with panchayat members of the village, meeting held with the department of rural development, government of India to seek co-operation for the successful implementation of the project. NGO has trained community members to provide business support services such as repairing sewing machines, helping with writing out bank loan application form etc. Training has helped members to gain access to schemes that could support the enterprises. Training provided to women has helped them to make better business decisions and improve their marketing and financial skills. Women in Deri Macha have acknowledged the fact that they have exposed to better business activities in the areas of agriculture, food processing, retail and textiles.

Role of IINREM was to form SHG, promote development and contribute to poverty reduction, using capacity building, provide skill training, Repair sewing machine, writing out bank loan application, gain access to schemes and services. Women of the community were noticeably able to take better business decision, improved marketing skills and financial skills, new and better business activities open up in retail, textiles, agriculture, capacity development to run a business, run petty shops, animal husbandry, tailoring etc. IINREM in partnership with National mission for empowerment of women, Ministry of Women and Child Development, Govt. of India initiates the thematic

Convergence Project for women empowerment in the District, Gautam Budh Nagar, Uttar Pradesh.

SEAGA (Socio-Economic and Gender Analysis) perspective looks at the discussion and consultations that NGO IINREM with Government and other stakeholders in order to create an enabling environment for women in the District level. Discussion and consultation also stressed on gender budgeting by including financial component in the District level budget that allowing provisions on safety and security of women and its effective operation. The said project would entail the following activities in the District in partnership with the various government departments, agencies and the police. Gautam Buddha Nagar area is one the crime prone areas. The NGO has mapped the Gautam Buddha Nagar District for the information on the Nature/kind of VAW occurring in the district documentation of Safe Noida Booklet. The crime prone pockets/areas of the District have been identified with a safety audit to detect violence prone areas. The NGO has built a robust complaint reparation mechanism for women by bringing about a sensitized police-victim interface of crises mitigation via technology through a dedicated 24 hours conventional landline phone for women in distress, with the follow up of monitoring and complaints.

Various awareness generation activities on the safety, security issues of women have been carried out by the NGO in the nearby areas. A mobile application for the safety purpose of women with GPS service that can locate the exact location of the caller has been launched in the District. The app names the number of danger areas of the city. The prompt SOS calling and in built auditory mechanism facilitate to make immediate call to police in case the woman feels any kind of danger.

Case 1:

Bhagawati is a widow with two children. She joined SHG of IINREM in January 2012. With little formal education, her participation in SHG brought the opportunity to learn new concept like group dynamics, financial management etc. The SHG training has instilled in her the confidence to start an enterprise. With a loan of Rs. 5000, she started a petty shop in her locality. She earns about Rs. 50-75 a day from her shop. Bhagawati is participating in household economy by helping her

husband in meeting the household expenses. Further, she has planned to expand her shops.

The presence of IINREM in Gautam Buddh Nagar, Uttar Pradesh has given a ray of hope to many women like Bhagwati. Participation in SHG and microfinance program has helped Bhagwati to be independent and to be a successful entrepreneur in her native Village.

Case 2:

Before Hemalata joined the NGO programme, she was not at all confident with the 'computer stuff'. It was her husband or the male relative who fixes a leaky tap, a defunct printer, a loose TV connection. She never calls a person outside home to fix problem at home. She did not know how to fill a cheque deposit form and get cash withdrawal from bank and she even knew nothing about insurance. After she participated in NGO intervention programme via SHGs, she found herself no longer distressed with technical stuff. She experience a heightened sense of autonomy as she could manage those fixing activities herself which made her baffled in previous years. She no longer believes in gender division in select skills and roles to be performed in household while realizing the importance of co-dependence for smooth running of a house.

Case Study 2: Sanchar Shakti: Hand in Hand, India in collaboration with Sakshen Telecom

Hand in Hand India in collaboration with Sakshen telecom has accomplished the Government endeavor Sanchar shakti in villages of Tamil Nadu. By introducing HUB and Shthree Shakti Kendra in target areas which are functioning as training cum production centers for entrepreneurs, Hand in Hand has provided training and enterprise promotion activities to women. Both these initiatives as a part of the strategy to empower women have provided support to entrepreneurs. Hub are registered entities which provides market information, facilitate market tie ups, organized vocational training and training on financial management for women. Around 200 women are associated with HUB. Entrepreneurs' hub is an initiative to connect entrepreneurs to the market, support

entrepreneurs in producing orders, facilitate market linkages for bulk orders and marketing, and introduce market friendly designs to members, co-ordinate with the Government and development agencies to promote enterprises in a sustainable manner.

The NGO, Hand in Hand has carried out a study known as 'M-Gril study' on enterprises as per which the average SHG bank loan per member is amount to be around 12,000. SHG requires higher loan in order to promote microenterprises. The NGO documentation says that those women who are in SHGs for more than five years and who had promptly repaid three bank loans are eligible to get higher loans. However, it is found that not all SHG members are willing to expand their business. Members who are enterprising enough can avail bigger loans by forming activity based groups, joint liability groups, livelihood groups of 4 to 10 members for effective credit deepening and can involve into independent economic activities.

NGO Hand in Hand is a public charitable trust established in 2002 in Tamil Nadu, India, initially work in the key areas of microfinance, education, health, environment and IT and governance to address factors pertaining to poverty. Telecom Partner **Sakshen** was engaged in providing training on village level functioning of value chain, maintaining accounts and so on.

Case study 3 : 'Soochna Shakti' for Women

Government's Sanchar Shakti scheme incentivizes private telecommunication and information providers to create empowering values added services (VAS) to women in which Uninor becomes telecom partner. Sanchar shakti aims to increase rural female SHG members' access to information and education in subjects such as health, sanitation, hygiene and social issues via mobile phone channel. As a part of this scheme as subsidized by the Indian Government, Uninor launched the VAS product offering 'Soochna Shakti' or 'Empowerment through Information' as a pilot project by training 50 entrepreneurs and providing health, education, employment and financial information for rural women (Uninor Report). Information services of Soochna Shakti VAS scheme such as news alerts and expert advices on employment, health, education, and finance are available for a cost of Rs. 10 per month to the user. Information could be made accessible to by dialing a short code on an IVR (voice-based) portal.

Content was developed in association with various Government bodies, NGOs, universities and private organizations in order to ensure relevance, credibility and accuracy. Many women were benefitted by the awareness program on health offerings on cervical cancer through Soochna shakti VAS. However, some VAS can assist only women with English learning. As per Uninor report, 50 women entrepreneurs have increased the sale combining SIMS and recharge from 30,000 units in August 2010 to 120,000 units by July 2011. Due to family reasons, 18 women out of 50 entrepreneurs who initially joined the project in October 2010 have left.

Case 3:

In Villupuram District of Tamil Nadu, women members of SHG have formed activity based groups with the guidance and support of the NGO, Hand in Hand. NGO has employed a multifaceted approach to train targeted women members of SHG to empower women and let them progress up the economic pyramid.

Case 4

Farida, a member of local SHG in Melkodungalur Village, Tamil Nadu received necessary assistance from SHGs and training from Hand in Hand to run a Citizen Centre Enterprises. Her participation in SHG has enabled to educate her children and to manage a family. Moreover, her entrepreneurial skills have not only given her an identity both at home and in society but also made her economically independent. She coaches ten other children of her locality about the basics of computer applications and also apprises neighbor villagers of governance services that can be availed online.

Case study 4: GSMA m Women Programme: The CCE Model for Mobile Retail Entrepreneur

The Programme “mWomen” of GSMA is based on public-private partnership in order to increase the rate of acceptance of mobile phone by women of developing world. The programme is designed to leverage the mobile phone channel to provide life-enhancing value added services specifically designed for women on health, education, finance and

entrepreneurship. The Programme has claimed to enable mobile phone ownership for 150 million women and to close the mobile phone gender gap by 50 percent over three years.

By forming partnership with Cherie Blair Foundation for Women, United Nations Development Programme, and 30 mobile industry companies including Airtel, Google, Orange, Nokia, Uninor, Vodafone and many others, GSMA mWomen programme has spanned across 115 developing countries of the world. Uninor being a partner of GSMA mWomen Programme has been committed to reduce mobile phone gender gap and to empower women since the launching of the programme in October 2010. Norway-based mobile operator, Uninor, with network capabilities covering 75 percent of population of India has been dealing in Indian market since 2008.

Under GSMA mWomen Programme, stakeholders and NGOs work together to close the mobile phone gender gap and leverage mobile phone to provide life-enhancing VAS for women in developing countries. Uninor has partnered with Hand in Hand to pilot GSMA mWomen Programme to empower women. Uninor is committed to provide entrepreneurship opportunities to women to run retail outlets such as citizen centers in villages. Uninor is committed to make sure that their customers get the full benefits of mobile communications in their daily lives. The development-oriented goal of the initiative, for instance, introducing women into the mobile phone value chain and improving social and economic opportunities for women. It is found that the initiative has increased the access to mobile phone and ICT services for citizens especially women. The increased access has contributed to reduce the mobile phone gender gap in India. Uninor has developed a sustainable innovative Mobile Distribution model to close the mobile phone gender gap.

50 women are selected to be entrepreneurs from SHGs female community in Vellore and Tiruvanmalai Districts of rural Tamil Nadu provided with social and ICT training, loans for technical equipment (including a computer, printer, desk, and chair and power generator). The chosen locations where Uninor introduced the project are relatively remote and the levels of mobile phone and ICT usage in the outlying areas are considered to be low. Uninor has provided skill training to the members of entrepreneurs on how to sell Uninor mobile products, top-ups and services.

Uninor has provided internet connection to each Citizen Center, free of charge for one year. The NGO, Hand in Hand facilitates the receiving of loan by woman entrepreneur and the member of SHG to get Rs 30,000 to purchase equipment including a computer, printer, desk, chairs and a power generator. Every month, the entrepreneur made a contribution of Rs. 2000 to cover and repayment. The Citizens Centers of Hand in Hand aim to improve access to information, computing and communications which is a vital enabler to families and of their socio-economic empowerment. By participating in CCE, entrepreneurs started earning between Rs. 2,500 and Rs. 15,000 per month. Women are introduced to value chain and provided with access to increasing socio-economic opportunities and they started receiving life enhancing VAS. Increased access to service solutions by women such as health, education, and micro-finance has reduced mobile phone related gender gap. Many villagers including men, women and children have taken admission for basic computer awareness courses. Empowerment is reflected when villagers have filed successful petitions for road repairs or water connections.

However, a few villagers were found to hold up demerits of the whole scheme questioning the actual intent of those Uninor sponsored entrepreneurs and the actual benefits the community derives from such programme. It is found that the entrepreneurs purchase mobile phone products from mobile operator, Uninor and then sell to community charging higher rate.

Case study 5: CSP Women Under BC Model by NGO Sewa Bharat

The hilly areas of Uttarakhand limit mobility and livelihood options for women. Agriculture sustains majority of family livelihood activities in Todhara and Simtoli Villages in Almora District. Many women are found to be engaged in informal economy, however, difficulties appear when they are exploited by middlemen and would have to face risk of job loss, and bear the brunt of economic shocks.

Sewa Bharat by adopting an integrated approach connects women to diverse development activities. Sewa Bharat is helping women farmers to market their goods and to eliminate middlemen of the villages. NGO Sewa Bharat has facilitated direct market linkages to create ethical and transparent supply chains that link informal women workers to domestic international companies. To ensure sustainability of the livelihoods

of women, Sewa Bharat organizes training sessions for women to build their technical skills and to improve business capacities. NGO Sewa Bharat has taken the task of organizing women into working collectives and made them feel empowered to demand fair employment and decent working conditions.

Since 2006, Sewa Bharat has mobilized around 10,170 informal women workers across Almora, Dehradun, and Rudraprayag Districts of Uttarakhand for collective empowerment. Women of the villages have owned and managed producer's cooperative that are set up in 2013. There are around 24,213 bank accounts opened in previously unbanked areas through the model- 'Business Correspondence'. In Almora, around 7,500 women workers are mostly engaged in farming and cattle rising and have joined the Sewa movement for their empowerment and economic development. In June 2013, with the support of Sewa Bharat, 125 women farmers set up their own Sewa Ekta Swahyata Sahakarita producer's cooperative. Sewa Bharat has been collaborating with private and government agencies to deliver technical training for its women members to build their capacities, increase their productivity, and to help them to manage their own businesses.

In order to support holistic development of women and to promote their livelihoods, SEWA Bharat facilitates linkages among women farmers of Almora District with government schemes. Over 50 women farmers living below the poverty line (BPL) are connected to BPL card scheme. These women are provided with subsidies to maintain their livestock and have been offered scholarships for their children's education. In Tadhora and Simtoli Villages of Tadhiket block of Almora District, 150 pension schemes are connected through BC model by using point of service machine (POS) machines worth Rs. 5,00,000. Women after joining SHGs, have accessed to capital. They reduced their dependency level on exploitative moneylenders. Women have inculcated the importance of savings and financial credential. In Almora of Uttarakhand, Sewa Bharat runs SHG, a group of 10-20 women having similar occupation, residency and same economic condition. The members financially support one another in savings, internal loan disbursement and repayment. SHGs formed by Sewa Bharat organize monthly meetings to make women aware of schemes and to train them. SHGs have facilitated group members to open a single collectively-owned bank account in nationalized banks. SHGs have facilitated access to additional funding from banks through cash credit

linkages for women. Around 55 bank accounts have been opened for women dairy farmers to save money for livestock.

Women who joined SHGs and take part in various SHG sponsored activities have emerged out to be the leader and successful entrepreneur and have secured a hard notched political and social identity for themselves. Sewa Bharat acts as a platform to build alliances and supportive networks. Women have gained confidence and developed networks with government to get legal and economic information which in turn acts like building recognition for them in mainstream economy. Women workers who are engaged in informal economy are major contributors to the financial growth of India, yet the women remained trapped in poverty. Their personal financial development is stunted by limited access to fair capital, formal financial services, and economic opportunities. The community micro-finance program of SEWA Bharat empowers women as independent financial actors. Sewa Bharat has introduced a three-prong model for financial inclusion of women and for their independence. The three prong model includes Self Help Groups (SHGs), Thrift and Credit Cooperatives, Business Correspondent respectively.

In entire Uttarakhand District, Sewa Bharat has formed around 145 SHGs, the benefit of which has reached to around 1,401 women. These SHGs have a record of saving of Rs. 30,68,120 and loan disbursed to the members so far is Rs.51,54,439. Under the functioning of Business Correspondent (BC) model, Sewa Bharat has partnered with the State Bank of India to promote financial inclusion and simultaneous income generation across remote villages and hilly areas of Uttarakhand, India. BC model facilitated to open around 12,292 savings accounts and 11,921 no frill accounts and over 400 loans worth more than Rs. 36 million to be distributed to women members of the targeted village communities. BC model has provided employment opportunity to 34 Sewa members, and has generated total income of Rs. 2,84,483 for poor women (figures as of December 2013). BC model envisages training a cadre of local women as 'Customer Service Points' (CSPs). Local cadres of Sewa Bank are known as 'saathis' and appointed as customer service points (CSPs) in villages. CSP women are provided with mobile phone alongside training on using point of sale (POS) and mobile phone technology. Using a mobile phone and point of sales (POS) machine, women appointed as CSPs go to remote areas to collect customer information through bio-data (finger print scanning,

voice recording, and photographs). As a result, women client in remote areas could access to SBI financial services like zero balance accounts, saving collection, cash withdrawal, remittances and loan applications. The BC model also helps to connect those on the margins with over 300 government schemes by acting as a portal to distribute entitlements to the needy. Bank saathis are local women who carry out door-to-door banking service delivery. As bank saathis have risen from the community, they are sensitive to the needs of women for social security, livelihood support, health services, and skill building and can therefore connect members with Sewa's diverse development programs.

BC model has been successful in generating income for the women participants at CSP. Women at customer service point (CSP) have received commission (as per the guidelines of Reserve Bank of India) on the number of accounts opened; on transaction, loan, fixed deposit (FD) and regular deposit (RD).

The rural poor of Simtoli Village are financially connected by facilitated for opening bank accounts directly with the State Bank of India and are made to be financially connected. A Little World (ALW), the technology provider leverages low cost technology to integrate micro banking with network brand ZERO. The ZERO platforms convert mobile phones into secure and self-sufficient bank branches. Through the SEWA-SBI financial inclusion project, poor women from Uttarakhand have been empowered with financial skills.

SEWA Bharat supported women to become producer, to run companies and cooperatives. By participating in SHGs and co-operatives formed by Sewa Bharat, around 1,976 poor women workers have been empowered as shareholders. On the other hand, a total number of 3,121 women SHG members have been able to earn fair wages through diverse livelihood programs. The cooperative model that is employed by the NGO in rural community has been an accomplishment. In Almora District of Uttarakhand, women in cooperatives are engaged in organic spice and chili production and have started earning income. It is noticed that women could learn and develop technical skills after joining NGO intervention scheme via SHGs. Many women have gained confidence to participate in village to community development.

Case study 6: Self-directed Learning through Mobile Phone by Vidyal NGO

Since 1986, after being registered as NGO, Vidyal NGO has been contributing to strengthen the rural economy of Tamil Nadu and facilitated self-reliance of the village community through community participation. Vidyal aims to build a state of ideal community living at which the poor and marginalized will be socially, politically, and economically empowered. To accomplish its pursuit, Vidyal organized people, provided education and created opportunities to enable them to solve their problems by themselves for sustainable development. The NGO facilitates 'Life Long Learning' as designed for rural community of Rasingapuram village, Theni District of Tamil Nadu aiming at knowledge empowerment of women by providing information on livelihood and to ensure security. The NGO has involved the village community to develop voice mail messages. Accordingly, a total of 5156 voice mail messages have been locally developed on information related to goat, agriculture and health, legal and financial inclusion.

Vidyal has been coordinating and collaborating with other institutions including Arul Anandar college, Madurai, Aharam Traditional Crop Producers Company Ltd. (ATCPCL), Legal Aid Cell, Government of Tamil Nadu, M. S. Swaminathan Research Foundation (MSSRF), AIRTEL-IFFCO (Indian Farmers Fertiliser Co-operative), Vidivelli Women Federation for the purpose of lobbying and advocacy towards women empowerment and development and promotion of self-directed learning programs.

NGO Vidyal has identified needs and concerns of poor women of targeted Theni District who are vulnerable to prejudices, injustice and violence of patriarchal society. Women with limited access to legal and judicial institutions suffer from high transaction costs with less negotiating capacity with legal and judicious institutions. Lack of awareness on legal rights has been a nation-wide issue where the facilities of legal aid cell cannot be fully utilized by women. There is noticeably prevailing absence of awareness on access to various development programmes among women.

Vidyal has promoted self-directed learning in legal, constitutional and human rights among poor women through mobile phones. The programme is designed to disseminate mobile phone based message to SHG members, Rasingapuram Theni District, Tamil Nadu. It has created awareness among women and enabled them to interact with appropriate institutional mechanisms and reduced the transaction cost. Association with

NGO Vidyal, SHGs are found to enhance the negotiation capacity of women with various stakeholders at the household level as well as at community level. Self-directed audio materials through mobile phone help women members of SHGs to use Indian Citizen Eligibility Identification System (ICLIS) and to identify their eligibility in various development programs of the state and central government.

The Theni project was designed to empower women, hence, put a focus on empowering 4000 women members who joined Self-Help Groups. Vidyal organized people's forum for collective action enabling to access technical expertise, sensitize people about their socio-economic-environment issues and facilitate the access to Government Programmes. NGO Vidyal has strengthened the horizontal transfer of knowledge in legal, constitutional and human rights through structured mobile phone conversations among women.

As per project records, 10 locally produced VCD (Video Compact Disk) materials, 96 locally produced Voice Mail materials have been regularly mailed to 250 SHGs and 300 members. The project records 600 hours of conversations relevant to legal, constitutional, human rights and livelihood through horizontal transfer of knowledge and 60 hours of interaction with legal experts with multi-media based ICLIS software package. As women are provided with information, not only about labour laws and legal rights, but also about legal mechanisms for arbitration, women workers attempt to navigate and show reliance on these mechanisms rather than go out on strike for claiming their rights.

An Ideal Organization, ZMQ Social Enterprise: Platform towards Mobile Phone for Development

ZMQ is a social enterprise with the motto "Technology for Development" under the chairmanship of Hilmi Quraishi. The enterprise develops tools, applications, and solutions for mobile technology (and other ICTs) for the bottom-of-the-pyramid markets, based on viable and self-sustaining business models in support of the social cause. ZMQ Software Systems uses information and communication technologies, especially mobile technology, to address various gaps in communication and awareness, training and

capacity building, data collection, monitoring and surveillance. For health care, it intervenes in patient tracking and referral management, diagnostic support, treatment, care and support. Mobile phone for development serves as a one-stop window for organizations to go Mobile and achieve value based solutions for rural India. ZMQ has provided opportunities to many corporates like Microsoft, Intel, Tata Chemical, Terra pack, Reliance etc. for their CSR programs through partnership. Various mobile based infrastructure solutions it has offered includes games for training, social games, and eLearning programs etc. ZMQ's 'Mobile for Development (M4D)' initiative provides unique partnership opportunity for Corporates, Government organizations, NGOs, Development agencies and institutions to exploit the ubiquity of mobile phones to achieve their social goals and to connect them with people.

ZMQ uses Mobile Technology to reach out to grass-root communities in low resource settings in rural areas of Asia, Africa and Latin America. Under the initiative Mobile for All, ZMQ is advocating for 'Universal Right to Connectivity' as a 'Right to Life', for delivering free basic lifeline services e.g. primary healthcare, health communication, disaster information, and emergency services to people especially unreached, under-privileged through low-end and affordable mobile phones.

ZMQ Local bank organized network group provides an organized Integrated MFI (Microfinance India) helpline platform for rural women to empower them through mobile phone by connecting them to distribution channel and MFIs. Delivering right to information to women, make them independent, educate them about all aspects of life, free of cost access to MFI-lifeline services both financial (micro-finance) and non-financial (pregnancy, child immunization, post-natal care, family planning).

ZMQ generates revenues by selling mobile games and other tools through various mobile phone platforms where mobile phone operators get the major share of revenue (70%). Many a times, corporate or organization support games or other tools while making it free of cost for the subscribers. Sometimes beneficiary subscribers pay the subscription fees for the services taken. For example: ASHAs and PHCs (hospitals) are used as hubs for registration based on a subscription fees to be paid by the beneficiary authority. Sometimes, Government pays the subscription fee by integrating the services with the national or state healthcare system for universal standards and solutions like TB and DOTS.

On the other hand, Samhita ^[42] aims to achieve “collective good” by helping people through creating symbiotic relationships between organizations that have the means and resources to bringing about change in the grassroots and to enable that change. The “Samhita ecosystem” provides a credible platform and access network of NGOs, companies, donor agencies, individuals, philanthropists, foundations and researchers to achieve their specific goals to address social issues as well as to reach out to bottom-of-the-pyramid (BoP). It provides inputs on corporate social responsibility (CSR) initiatives that address core business needs, by engaging with the community, design social initiatives, coordinate implementation of programs as well as measure the impact of initiatives.

5.10 Review of Mobile Phone Based Model for Employment Generation

The survey substantiated that the mobile phone has been contributed to create indirect employment. Mobile ecosystem comprises of infrastructure and support services, device manufacturer, network operators, distributors and retailers, content and services has contributed to create job. There are merely 10.5 million jobs directly supported by the mobile ecosystem across the world. The network operators register the largest share of 3.8 million jobs, while distributors and retailers provide another 2.6 million jobs. Handset manufacturers create 0.9 million jobs, while infrastructure and support services cater to around 1.5 million jobs and around 1.8 million jobs are supported by content and service providers (GSMA Intelligence, 2013). Rapid, dynamic and continuous technological development has resulted various innovative applications and tools for mobile phone and Internet. Internet and mobile telephony has reached a stage in India where numbers of internet based services can be translated over a mobile phone based ecosystem to cater to masses. Various businesses have already leveraged this whitespace and tried with many innovations. With the innovation in numerous services and applications, the mobile phone device created a space for people to experience social innovation.

Mobile phone based employment generation model have been successful in countries such as Mexico and Africa as a useful tool to connect employers with job seekers. These mobile phone model represent the communication link among job portals, job seekers and employers where jobseekers can search for employment in databases of around 40,000- 45,000 employers. Assured Labour, a Mexico based online job portal has

registered to have 2,000 employers and 150,000 jobseekers (Ungerleider, Neal. 2011). In Haiti, Konbit has been partnered with mobile phone service provider and local radio disk jockey in order to advertise its service through mobile phone and make users aware of the services. The experience of Bolivia, once the lowest mobile phone penetrated region is imitable. Bolivia has expanded the mobile cellular network in rural areas and extended the basic services with the appropriate utilization of investment of International Finance Corporation (IFC), a member of the World Bank group. The unique local mobile phone based employment related narratives of Digicel in Pacific island region ¹¹, Ruralfone in Brazil ¹², Telefonica Cellular of Bolivia ¹³ can serve to be models that could be emulated in India. However, services that are offered by the companies in India such as Assured Labour¹⁴, Babajob¹⁵ and Souktel¹⁶ are not free of cost and use SMS user fees as a revenue stream. Although these companies have created job matching networks by providing the job seekers the access to employers' database, employees who get recruited through these portal actually needs the promise of sustainability and profitability of the job.

Nevertheless, a few cost effective network are functioning in India which can provide easy access to job opportunities. These mobile phone networks have served the informal labour market by linking employers and job-seekers specially targeting the poor and disempowered of a region. For instance, Mahindra group's two leading voice based employment players in India, Saral Rozgar and Babajob, developed a mobility based job network platform for employment seekers for a cost of Rs.30 per month with a provision to send jobs alerts over phone by SMS.

5.11 Implication of Intervention on Women: Emulating the experience of Hand in Hand

Through self-help group model, NGO Hand in Hand has implemented village upliftment programs in the target areas based on integrated development approach with a primary emphasis on job creation. The NGO Hand in Hand has formed around 59,000 SHGs so far. The services rendered by these SHGs are benefitting over 8 lakh women across Tamil Nadu, Karnataka, Madhya Pradesh, Odisha, Maharastra, Rajasthan, Uttar Pradesh and Puducherry as per the report of the NGO Hand in Hand. The employed integrated development approach of NGO, Hand in Hand includes the model of job creation and capacity building of women. During the financial year 2012-13, Hand in Hand, India has created 1.3 million jobs that have improved the livelihoods of the marginalized women

and have transformed the lives of the poor. The NGO, Hand in Hand operates a network of 41,910 Self Help Groups (SHGs), the benefit of which has reached to around 606,369 marginalized women in Tamil Nadu. SHGs have provided the women member an access not only to microcredit but also training and skill development to help them to build sustainable livelihood for themselves and their families. In Tamil Nadu, NGO, Hand in Hand has facilitated establishment of Citizen Centre Enterprises to be functioning on the grounds of participation of women in SHGs. The NGO, Hand in Hand has adopted a village for a period of two years, train the women volunteers of the village to become capable to run various development related activities thus, to promote ownership of the project by the village itself. Volunteers of a village have ensured to convince villagers about the fruits of development activities, constantly motivate the villagers and to create awareness on various matters.

The role of Local Self-Governance or Gram Panchayat in the connection between NGO and SHG or other community groups is such that it has ensured community participation of women during the course of the project execution by NGO and has encouraged rural women to actively participate in the village development, to attend Gram Sabha meetings and to get involved in the decision making for the community. Gram Panchayat also monitors the work progress of community groups or organizations and carries out review meeting to keep track of development in the villages. NGO intervention programs also involve E-literacy and income generation through IT kiosks in the village premise. Besides this, in order to promote good governance, a right protection committee has been formed.

Moreover, the NGO Hand in Hand introduces Citizen Centre Enterprises, a concept similar to information kiosks with an aim to improve communication and access to information through CCE for socio-economic empowerment of the underprivileged women of rural India. Citizen Centre Enterprises (CCE) work as an information technology-equipped kiosk equipped with resources such as computers, internet access, public phone, library and IT training material. Women participants in SHGs get microfinance loans via an SHG to buy equipment to establish CCE and to become entrepreneurs. CCE enables women entrepreneurs to start mobile retail business. Entrepreneurs of CCE are further provided with training on ICT and internet access by NGO, Hand in Hand. The responsibility of facilitating the establishment of CCE and to

improve the physical conditions of CCE retail outlets has been taken by NGO Hand in Hand and Uninor Telecom. Women of CCEs further offer information, communication services along with mobile products and training services to local communities.

Since joining the project, women of eight SHGs have added significant material and non-material goods to their household. At household level, assets owned by women have increased. Women have accumulated materials goods after participating in SHGs formed by NGOs and these include washing machine, kitchen utensils, and gas stove, a new LPG cooking gas connection, gold jewelry, home renovations and improvements and so on.

NGOs at various point of time carried out certain development projects designed to target one village community with certain development oriented- right based and need based goals and subsequent course of action and planned implementation. The women entrepreneurs of those select villages of Tamil Nadu have experienced improvement in earning and spending power in due course of the project intervention.

Various training sessions carried out by Uninor and by Hand in Hand on how to use mobile phones and mobile enabled Value Added Service to improve their lives. They have introduced programme to train a total of 6,072 people in the select village communities, majority of them are women. Mobile enabled value added services have evidently improved awareness of women on government schemes. Rural Women of Tamil Nadu are found to serve as effective distributors of mobile phone products and services. Those women provide a new distribution channel for telecom operators. Expansion of a distribution channel formed by female entrepreneurs has brought more women into the other parts of the value chain- to the distributor level. This facilitated a competitive local market within the community as established retailers are forced to lower their prices and bring mobile connectivity within the reach of more people. Several participants have expanded their distribution areas beyond the traditional town center to new areas including outside colleges and workplaces. Some also have started to sell personalized combinations of products and services to meet their customers' needs more faithfully than other retailers in the area. The group of 32 entrepreneurs has been able to contribute towards asset building for themselves, for their families and for their businesses. 15 entrepreneurs have invested earnings to expand their business activities.

Women experienced an income hike which is further related to improved livelihood opportunities. The negotiating power of women who joined the NGO program is found to increase while dealing with banks, governments and marketing agencies.

Many women acknowledge about their increasing influence in family decisions regarding children's education and choice of health service. The women also felt more secure with an improved lifestyle and a greater self-esteem as a result of participation in such programs. The evaluation of Uninor report finds that women are benefitted from owning mobile phones in a number of ways. Owning a mobile phone has increased income and professional opportunities of many women. Women feel safer and more independent by owning a mobile phone.