

# BASELINE STUDY ON SMARTPUR

*Linking the SDGs parameters with Smart village in Bharatpur district, Rajasthan*



**NOKIA**



About this baseline study:

The Smartpur project aims to create a digitally integrated sustainable rural ecosystem. It works towards this objective through a rural entrepreneurship model by integrating technology in existing uses and practices across six pillars: education, health, livelihoods, financial inclusion, governance, and entertainment. The programme is implemented across 10 districts in 7 states: Haryana (Nuh), Uttar Pradesh (Barabanki and Ghazipur), Rajasthan (Alwar and Bharatpur), Telangana (Yadadri Budanagiri), Andhra Pradesh (Visakhapatnam Parawada Mandal and Prakasam), Karnataka (Chamrajnagar), and Tamil Nadu (Kanchipuram). This study evaluates the project pillars across 3 broad thematic areas within its ecosystem of work: Access to information, access to services, patterns of digital use.

This particular study relates to the Bharatpur district in Rajasthan and includes the following villages:

**Hub Centre-** Ladamka

**Spoke Centres-**

- Ardooka
- Daniyalpur Khera
- Jhanjhar
- Kishanpura
- Pali
- Rustampur
- Teski
- Thekri

### Key findings

- Common access points like cyber cafes and common service are significant in areas of low connectivity, like in terms of renewing health insurance.
- ICTs rank the lowest in terms of access to information (education, financial inclusion, health) and services (digital literacy centres, diagnostic labs) which can be seen with 272 out of 323 people responding that their village does not have digital literacy centre.
- Despite Ladamka being the Hub, Jhanjhar has the highest smartphone penetration at 19%. Although Ladamka has better access to digital services and engagements like, having vocational centres and career guidance centres in village, booking online appointments, applying for certificates online and renewing health insurance, availing digital literacy course and registering on job portals.
- No respondent reported having a diagnostic lab in their village.
- Out of 46 who responded having a career guidance centre in their village, 45 (96%) belong to village Ladamka which is the hub centre.
- There are substantial gaps between desirability and availability of skills training with the highest being for Entrepreneurship skills training and Vocational skills at 17% and 14% each respectively
- Training in ICT skills rank the lowest within rural capability development, with only 7% respondents having received training and 17% desire for training in ICT skills. This highlights a possibility that ICT skills are not viewed as an important livelihood skill.

## Socio-economic and infrastructural context

The survey was done in 9 villages across 3 blocks, Pahari, Nagar, and Sikri in Bharatpur district of Rajasthan. Out of 323 respondents surveyed, 214 were male (66%), 109 were female (34%).

Nearly two-third of the respondents is within the age group of 31-45 years and 46-60 years (31% each), followed by 25% who are in the category of 15-30 years and lastly 13% who are in the age group of 61-75 years. More than half of the respondents (51%) were without even the basic primary education. Moreover, 92% of those without even basic formal primary education (comprising 46.4% of the total respondents) are over the age of 30, indicating high levels of adult illiteracy. Exclusionary barriers on access to education acts an indicator for entrenching the vicious cycle of poverty with 44% of those being illiterate or having primary education having monthly income equal to and below Rs. 6000.

42% and 28% are farmers and daily wagers respectively. Out of the total number of 109 female respondents 45% are housewives. Further, 21% and 23% of the female respondents are employed as daily wagers and farmers respectively and each earn 2500 as their monthly income. 71% of the respondents earn up to 5000 monthly. There were 25 (7%) respondents who have monthly income equal to or above Rs. 20,000.

With regards to the patterns of usage of water, 144 of 323 respondents are using bore wells, 68 use hand pumps, and 131 uses well and only 1 respondent uses pond. With respect to toilet usage, 65% use private toilets (211), 34% (110) defecate in open and 2 respondents (1%) use community toilet. 81% responded to having electricity. Of those having access to electricity, 64% respondents have its supply for 6 to 8 hours, 27% for 12 hours, and 8% for 2-4 hours. None of the villages reported having a 24 hours supply. Ladamka, being the hub centre does not have 24 hour supply of electricity, although 72% respondents of Ladamka have 12 hour supply, 12% have 6-8 hour's supply and 16% has 2-4 hours supply of electricity. The lower supply and availability of electricity in the hub centre can become a bottle neck for anchoring the spoke centres.

## ICT Uses and Practices

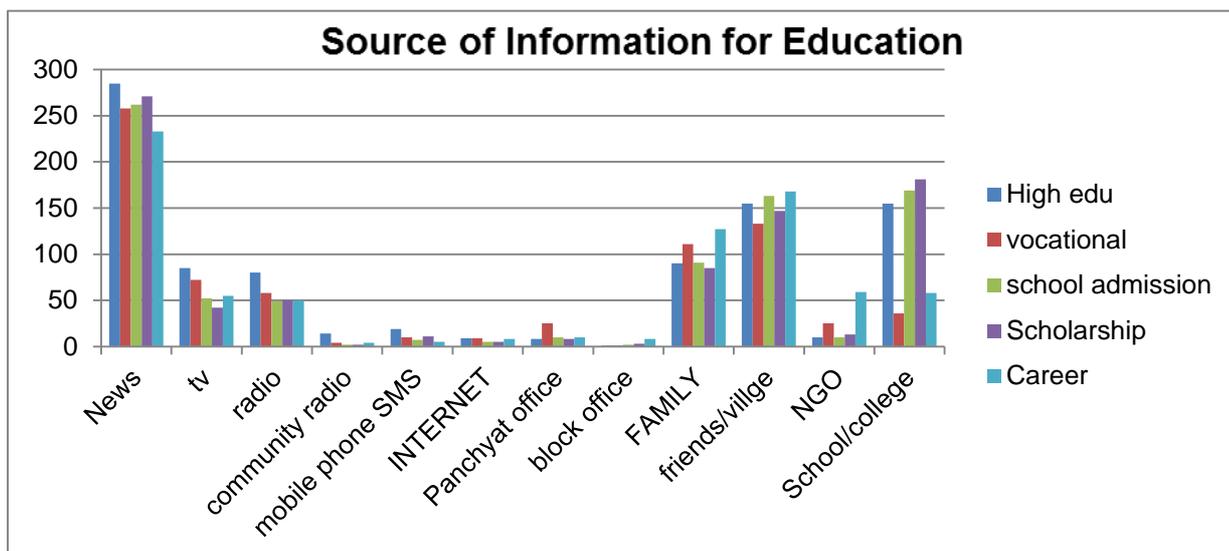
Smartphone penetration stands at 53% (171 out of 323) with 83% owning basic phones. Jhanjhar has the highest smartphone penetration standing at 19% followed by Pali at 16%, Ardooka at 15%, and Ladamka at 14%. Out of those owning basic phone (269), 63% i.e. 169 respondents have monthly income below Rs. 6000. Of those owning a basic phone and having a monthly <6000, 41% were farmers and 32% of 169 were daily wagers. Calling remains the primary function for which mobile phones are used followed by Text/SMS and social networking. Out of 323 respondents, 89 have memory cards which were primarily used for storing entertainment content like songs, movies/ videos, and photos. An overwhelming 98% responded to having no internet connectivity. Among the 152 respondents with no smartphones, none of the respondents have internet connectivity. Amongst a total of 6 (2%) respondents having internet connectivity, 50% of the respondents have Jio and Vodafone connection each. Out of the 99 respondents who have a prepaid or postpaid connection, around 52% of the respondents found the connection quality satisfactory, followed by 37% respondents who said they find it bad. While only 11% found the quality of the connection good.

With regard to the availability of photocopying facility, about 65% of the respondents have to travel more than 3 km to get this facility whereas only 13% (41) avail this service within 1 km. all the 41 respondents availing this service within 1 km belong to Teski. Moreover, among those travelling 3 km for Xerox, around 44% of the respondents were farmers and 26% were daily wagers where imputed costs, like travelling cost and loss of wages of daily wager, would further go against the affordability factor.

## Access to information

### *Education:*

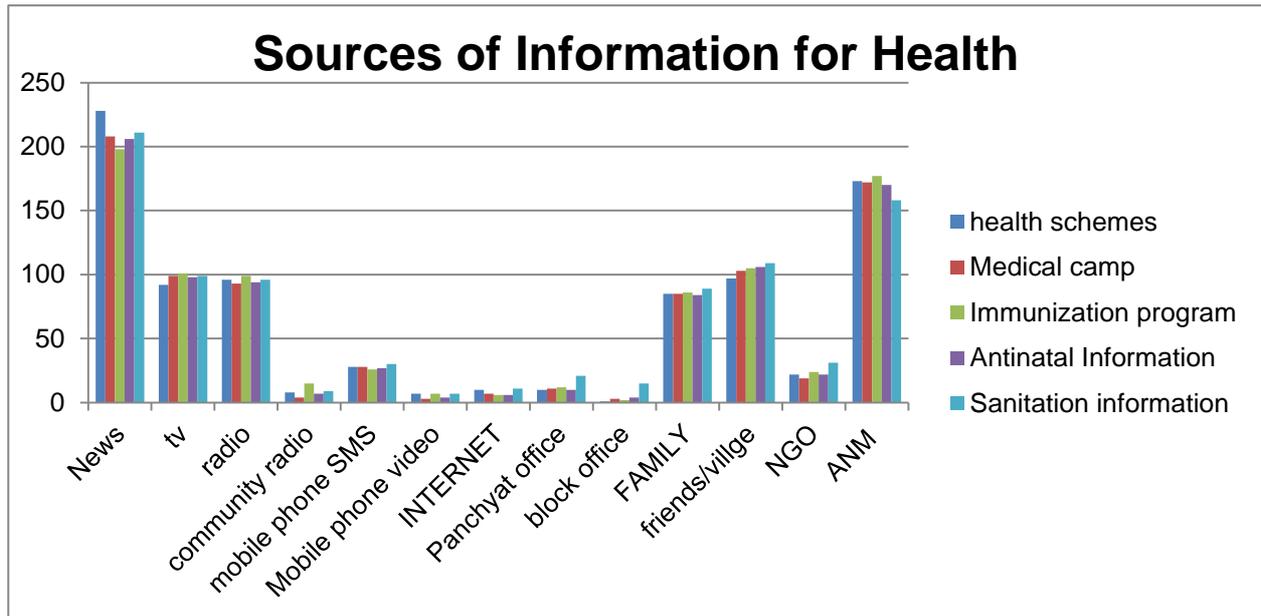
Newspapers rank as the highest source of information across all information categories Overall, Newspapers and Schools/Colleges rank as the first and second sources of information respectively. Comparing across information categories newspapers are more likely to be the source for higher education related information than career related information while Friends/Village are more likely to be the source of career related information compared to information on vocational training. Access to information on mobile phone through SMS and internet ranks amongst the bottom four along with community radio and block office. Mobile phones ranks 3rd among bottom 5 sources of information. Between mobile by SMS and mobile by internet, mobile phone by SMS ranks higher. Mobile phone by SMS ranks higher and more likely to be the source of information about higher education, vocational training, school admission and scholarship related information.



### *Health:*

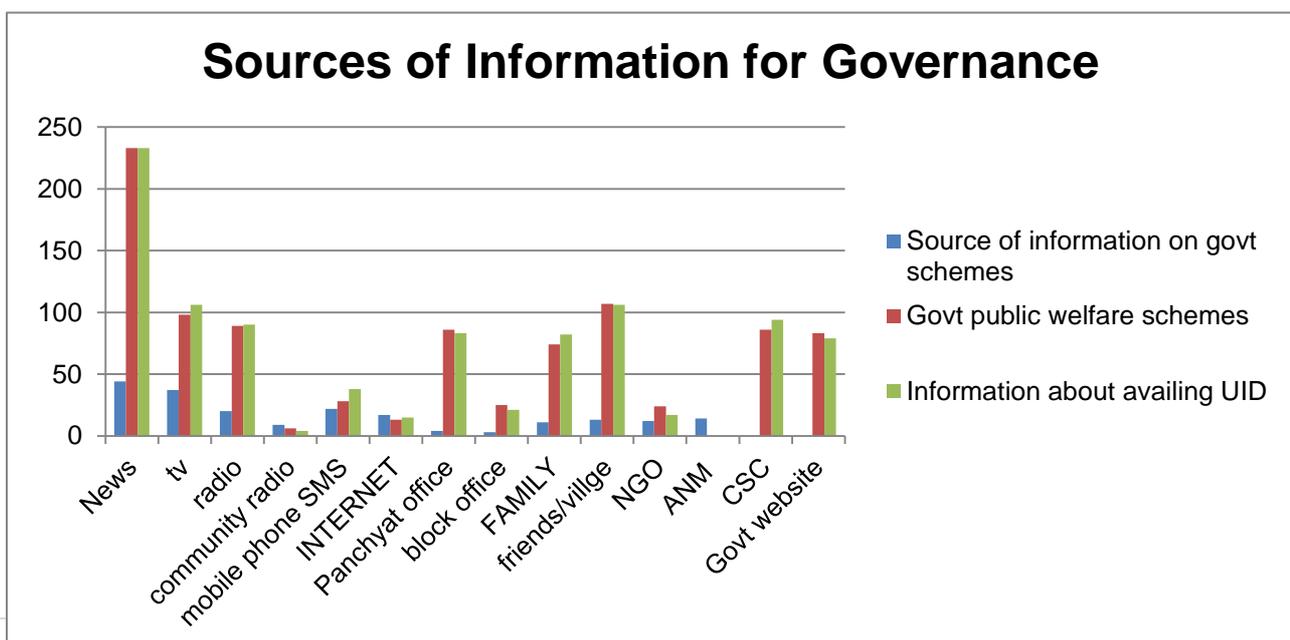
With regard to access to health related information, Newspapers rank as the highest source of information followed by ANM/ Health Staff. There are limited intra-category variation within given sources of access to health information. However, though newspapers rank high across all information categories, they are more likely to be the source of information related to health schemes, over other information categories. Further, ANMs/Health Staff are more likely to be the source of information related to immunization programs. Friends/ Village Members rank higher than Family as a source of information across all information categories. Mobile phones rank second among bottom six sources of information. Between mobile by SMS,

video and internet, mobile by SMS ranks higher. Mobile by SMS is a source of information about health schemes, medical camps, immunization programs and Antenatal, pre-natal, family planning information.



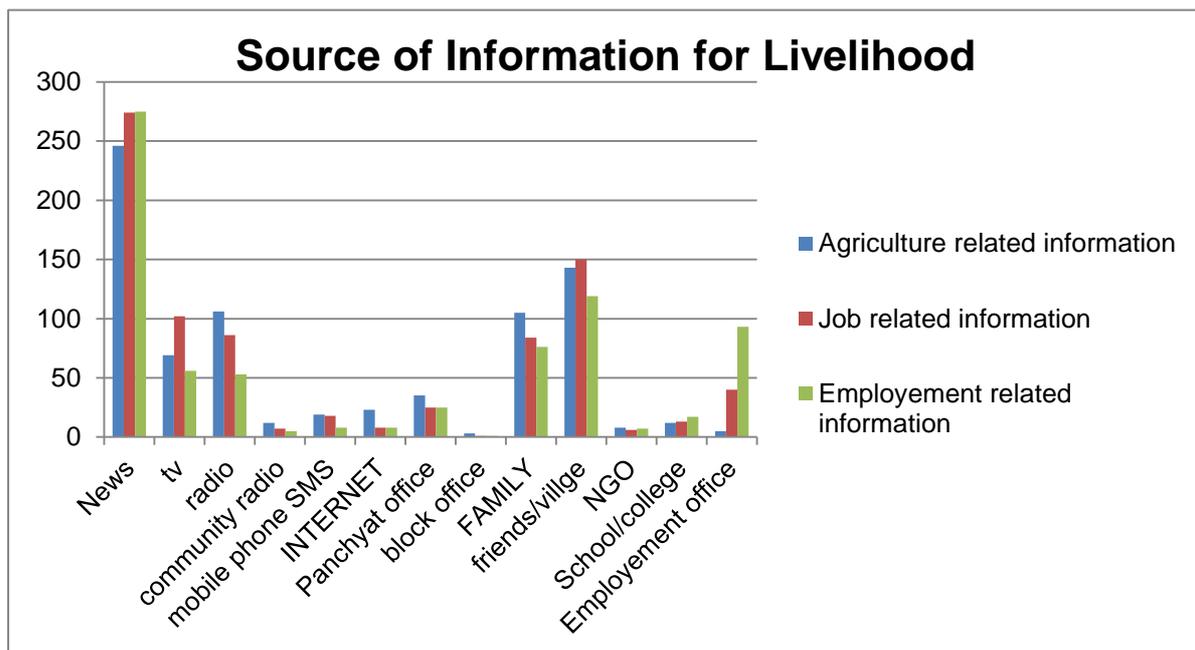
**Governance:**

Out of 323 people only 16% people are aware of any social protection schemes. Out of the 52 respondents who are aware of government schemes, majority get the information from newspaper and television. ANM/Health staffs rank below mass media like newspaper and TV as a source of information on health related social protection schemes. Overall Friends/village is the third most popular source of gaining information across all information categories, after newspaper and television. For information related to government public welfare schemes, Newspaper ranks the highest, followed by friends/villagers and television which ranks third in terms of providing the information. Mobile internet and community radio rank last, along with block office and NGO. Apart from newspaper which ranks highest in providing information related to availing Aadhar/UID related information, both TV and NGO rank second and CSC centres ranks third in terms of providing information related to Aadhar/UID. Access to information via NGO remains the most popular source amongst the bottom five sources of information.

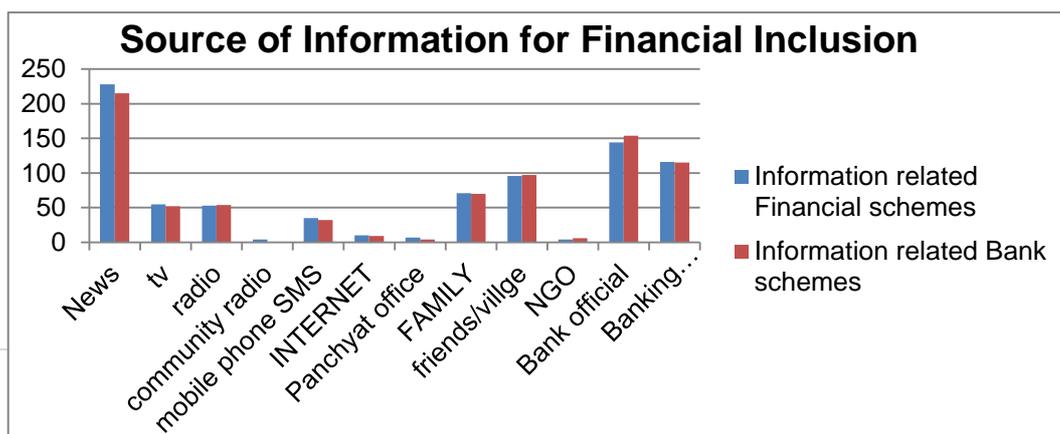


*Livelihoods:*

Newspapers, Village and friends and family rank among the top sources of access to livelihood related information. Amongst them, newspapers rank the highest across all information categories and remains the widely used medium to access information regarding agriculture, jobs and employments, although it is more likely to be the source of both employment and job related information. Friends and village are more likely to be the source of job related information over other information categories and employment office is most likely to be the source of employment related information. Mobile phones ranks sixth among bottom six sources of information across all the categories. Between mobile by SMS and mobile by internet, mobile by SMS ranks higher as a source of information. Mobile by SMS is a source of information for agriculture, job and employment related information. Access to information via mobile phone through internet is mostly used for availing agriculture related information, followed by job related information and lastly information related to employment registration and enrolment. Radio is used mostly for availing agriculture related information followed by job related information and lastly employment related information. NGOs and Panchayat office also have a very limited role in providing livelihood related information



*Financial Inclusion:*



Newspaper ranks high among all sources of information categories while Bank official rank the second highest. Newspaper are more likely to be the information source for finance related information while, bank officials are more likely to be the source of information related to bank services and schemes rather than financial related schemes. Banking correspondent ranks third and is more likely to provide finance related information rather than information related to bank schemes. Among the bottom five sources, access to information via SMS rank the highest.

### Access to services

#### *Education:*

Out of 323 respondents, 272 said their village does not have a digital literacy centre while 51 had no idea about the centre. A total of 9 respondents replied that someone from their family has taken a digital literacy course. Out of the 9 who responded of taking digital literacy course, 3 respondents each were from Kishanpura village and Ardooka respectively, 2 from Teski and 1 from Ladamka. Only 1 respondent out of a total of 9 who responded of taking computer course has an active internet connection. Given the increasing importance of the internet in full digital participation, a constraint in limiting full participation in digital literacy courses could be the lack of internet connectivity, where only 1 out of the 9 respondents had reported having internet connectivity.

No one out of the total 323 respondents reported having a vocational centre in their village. Although 7 respondents, replied that someone from their family is getting vocational course. Out of a total of 7 respondents who are engaged in some course, 6 of them have received certificate. Out of a total of 6 respondents who have received certificates, 4 of them are from village Teski and 1 each from Ardooka and Ladamka. 46 out of 323 respondents reported having a career guidance centre in their villages. Out of 46 who responded having a career guidance centre in their village, 45 (96%) belong to village Ladamka. A total of 49 respondents were surveyed from Ladamka and 45 responded of having a career guidance centre which means that 91% of the respondents from Ladamka were aware about the presence of career guidance centre

#### *Health:*

No respondents reported having a diagnostic lab in their village. 51% of the respondents reported visiting hospital at least once a month and 11% reported having visited a hospital yearly. 229 out of 323 i.e. 90% of the respondents do not have a telemedicine facility in their villages while 29 people did not know what telemedicine was. Out of 2 people who reported as having a telemedicine facility in their villages, 1 belonged to Daniyalpur khera and 1 from Jhanjhar. Given that only 2% of the respondents from both the villages of Jhanjhar and Daniyalpur reported to having a telemedicine facility in the village shows extremely low penetration of telemedicine facility in their villages.

#### *Governance:*

67% of the total respondents have not availed any schemes and entitlements; this can be as a result low levels capability with regard to interfacing with e-governance as indicated by 78% who were unable to apply for certificates online. Only 12% people have reported any type of grievances related to government schemes. This may be because of the low access to information about basic rights and entitlements. Only 3 out of 323 people know about RTI. Among the respondents who availed the schemes and entitlements, 43%

of respondents benefitted from social security schemes, followed by NREGA which benefitted 29% of the respondents. Given a large section of the population lacks access to information about governance schemes which curtails their ability to avail social protection that they are entitled to, this provides scope for intervention with regard to providing last mile access to information through programmatic intervention like the DEF flagship SoochnaSeva and SoochnaPreneur model using designated access points and ICT enabled community members to provide last mile access to information on social protection schemes.

#### *Livelihood:*

19 respondents reported that women from their families go for vocational training and they have to travel 1-10 kilometers to attend it. Distance of vocational training centers is potentially a significant barrier to women's capability development and low levels of women's participation in vocational and skills training. 98% of the respondents said that they would like to attend skills training in their panchayat. When the respondents were asked about the skill area in which they have received support or training, it's found that 37% of the total 323 respondents have received training in vocational skills (119), followed by 36% (115) who have received training in Entrepreneurship skills, while 23% (75) in Financial literacy, 19% (60) in Leadership and life skills and lastly 7% (21) in ICT skills. Training in ICT skills rank the lowest along with leadership and life skills within rural capability development. This highlights a possibility that ICT skills are not viewed as important livelihood skills despite technology assuming centre-stage within economy, governance, and society. Only 1% people have received any agriculture related training or support over last one year, despite the fact that 136 out of 323 (42%) are farmers, training and support related to it is overwhelmingly low.

When asked about the skill areas in which the respondents require training, 53% (170) of total respondents wanted in Entrepreneurship skills, while 51% (164) wanted in Vocational skills, 24% (79) in Leadership and life skills, followed by 21% (69) in Financial literacy and lastly 17% (55) require training in ICT skills. There's a gap of 17% that can be seen in terms of availability and deliverability of training specifically for Entrepreneurship skills, 14% for Vocational skill, 10% for ICT skills and lastly 5% gap in Leadership and life skills.

#### *Financial Inclusion:*

Out of 323 respondents only 18 said that they have Point of Sale (POS) access centre in their area. The villages that reported POS availability are Teski and Kishanpura. 116 and 52 people have access to banking correspondent and banking kiosk respectively. Only 22% people know how to use an ATM machine and 28% people have access to debit or credit cards. 86% of the people are not even aware of different types of banking available. Out of 44 (14%) people who are aware of the different types of banking, 41 (93%) prefer direct banking and 57% (25) prefer online banking. This is because in the absence of access to information and infrastructure relating to alternatives like internet/ mobile/ online banking this is the only form of interface they have had with banks.

#### *Entertainment:*

When it comes to availing the local options for entertainment, 30% people prefer going to movie theatre (97), followed by 28% respondents who prefer going to both community hall (91) and cinema hall (90) respectively. Out of the total 323 respondents, 27 people prefer going to both cinema and movie hall.

## Patterns of online usage

### *Education:*

Out of the total 323 respondents, 272 reported not having a computer/ digital literacy centre in their village and 51 had no idea about it. While 9 respondents reported availing digital literacy course. Out of these 9 who although did not report of having digital literacy centre but have availed the digital literacy course, 3 respondents each are from village Ardooka and Kishanpura respectively, 2 from Teski and 1 from Ladamka. This underscores a greater need for engagement with the local community with regard to availing digital literacy. Only 26% of the respondents have registered for higher education course online. However, among the 83 people who register online, only 2 reported as having internet connectivity. The gap between low internet connectivity and comparatively higher levels of engagement show that people might potentially be using common access points like cyber cafes, CSC, and schools.

### *Health:*

Only 14% of the respondents are able to book appointment online while 82% are not able to book an appointment online. Out of the 45 respondents who reported being able to book appointment online 44 respondents are from Ladamka, this corresponds with 96% respondents from Ladamka who responded having a career guidance centre. Cash remains majorly the mode of payment for hospital bills with 99% of the respondents preferring it. Only 1% opt for card payment (2) and <1% (1) use the online mode of payment. Out of the total 323 respondents, 53% (171) are owners of a smartphone. Out of the 171 smartphone owners, 4% (6) have an active internet connection, but none of these 6 of the respondents pays their hospital bills online. This signifies that there are different patterns of online use and engagement. Thus more information regarding the various other usage of internet in arena of accessing healthcare can be provided to the population at large to ascertain whether they have an effect on online use and engagement patterns.

Only 3% of the respondents purchase health related items online whereas an overwhelming 92% do not. 10 respondents have health insurance, out of these 10 respondents who have health insurance 7 are from Ladamka and 4 respondents (40%) out of 10 renew health insurance online

A total of 7 respondents out of 10 having health insurance also have smartphone (with 5 people owning smartphones in Ladamka itself). Although all the 7 respondents having health insurance and smartphone, do not have internet connectivity. Despite this 2 renew their insurance online and 5 renew it offline, this can potentially indicate that it is highly likely that they access these services through shared connections and common access points like cyber cafes and CSCs.

### *Governance:*

Out of 12% (38) who reported any grievances related to government schemes, 71% (27) preferred the offline method. Only 1 out of 3 people filed an RTI, that 1 person filed it offline. Around 78% respondents were not able to apply for the certificates like birth/ death certificate, Aadhar card, voter ID etc. online. Out of the 72 respondents who were able to apply for certificates online, 46 were from Ladamka, 13 from Thekri. Out of these 72 respondents who were able to apply for certificates online, 56% (40) had smartphones and only 5% (2) of them reported as having internet connectivity. This can potentially indicate that it is highly likely that they access these services through shared connections and common access points like cyber cafes and CSCs.

### *Livelihoods:*

21 out of 365 people registered themselves on job portals, out of them 15 (71.4%) were from Ismailpur, 15 own smartphones, and only 3 reported as having internet connectivity (all the 3 respondents belonged to Ismailpur). Only 7 people reported as using Skype for online job interviews. Out of those who used Skype, modes of access reveal a mix of CSC and CSC as well as mobile phones. This reiterates the importance of common access points for areas with limited internet connectivity.

#### *Financial inclusion:*

Only 14% of the respondents are familiar with different types of banking. Out of that direct banking (93%) ranks the highest in terms of the preferred mode of banking followed by online banking (57%) and phone banking (52%) respectively. Out of 323 respondents only 10 use online mode of money transfer, whereas majority of the people i.e. 274 still prefer direct banking for financial transactions. Out of 323 respondents, 171 own a smartphone. Out of 171 owning smartphone, 6 respondents' access internet, as a result the extent of digital financial inclusion remains fairly low in terms of using online banking (1 respondent) and online financial transaction (2 respondents). The low penetration of digital financial inclusion is not just the result of few people using internet but also the quality of service, which plays an important role with only 1 out of a total of 6 respondents who have an internet connection, found the internet quality as good while 3 out of 6 found the quality as satisfactory and 2 out of 6 found the internet quality as bad. Only 42 respondents out of 323 pay their utility bills online irrespective of the fact that only 6 respondents have activated internet banking facility. With only 4% of the total respondents owning a digital media device with internet, the extent of utilizing digital services for financial purpose remains low; more awareness and digital financial literacy can be generated about the different types of banking, methods, and safety protocols.

#### *Entertainment:*

Keeping in line with the patterns of online usages and practices mentioned above, only close to 6% pay for entertainment online. Out of these 19 people, only 1 respondent uses apps for online transaction and have activated internet banking. 80 (25%) respondents in total responded to using online entertainment. However, when asked about the type of online entertainment used, an overwhelming majority (198 respondents – corresponding to 73%) answered YouTube. out of which 198 respondents who responded to using YouTube, 131 have smartphones, 67 have memory cards, and 125 do not have internet connectivity. This can indicate practices of shared connection and devices usage and downloading and storing content on memory cards to be accessed later, a practice that is not uncommon in areas of low connectivity.

### Key Recommendations

#### *Cross-cutting recommendations:*

- Understand individual and institutional access requirements that can act as barriers to realising key development objectives across programme pillars
- Develop a strategy to integrate available capacities and institutional and infrastructural presence when defining programme outcomes
- Focus on developing an integrated access to information and access to services ecosystem that takes into account current patterns of online uses and practices with steps to leverage and augment them through sustained and targeted programme intervention

- Identify gaps between available capacities, aspirations, and uses and practices to define horizontal cross-cutting targets required for the overall success of the programme
- Identify how digital media can be used to democratise access to information and access to services
- Identify local institutions and stakeholders to act as nodes to disseminate information and awareness as well as serve to anchor the programmatic intervention in moving towards a sustainable model
- Re-examine relationships between Hub and Spokes

#### *Education:*

- Understand and define the functional aspects of digital literacy as per pillar wise requirements and define concrete parameters of measurement
- Identify different learning needs for different demographics with a focus on developing future capabilities in the village by integrating STEM education in classrooms
- Identify key success factors, gaps, and challenges in Ladamka and Ardooka driving higher digital literacy and engagement in the village

#### *Health:*

- Recognise the importance of local area camps and drives and the significant awareness component that it holds
- Harness the capacity of local ANM/ Health staff as important partners in the process
- Understand the multi-faceted issues in health delivery including but not limited to information, infrastructure, access, and governance

#### *Governance:*

- Understand in a comparative perspective with DEF's SoochnaSeva and SoochnaPreneur model what are the last mile service delivery constraints
- Mapping beneficiaries through the entitlement survey

#### *Livelihood:*

- Map opportunities for training and capacity-building and potential livelihood opportunities available in the village
- Identify and evaluate potential livelihood opportunities in terms of local viability, feasibility, and sustainability

#### *Financial Inclusion:*

- Define parameters of evaluating financial inclusion and digital financial inclusion
- Outline programme intervention and strategy within the framework of parameters

#### *Entertainment:*

- Examine individual and community needs for entertainment
- Identify practices for accessing entertainment content online