

# BASELINE STUDY ON SMARTPUR

*Linking the SDGs parameters with Smart village in Chamrajnagar district, KR*



**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 Bhuvanagiri), 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 Chamrajnagar district in Karnataka and includes the following villages:

**Hub Centre:** Hosadoddi

**Spoke Centres:**

- Ajjipura
- Dommanagadde
- Gangandoddi
- Hosadoddi
- Kanchalli
- Kempaianahatti
- Kuratti Hosur
- Manchapura
- Puduramapura

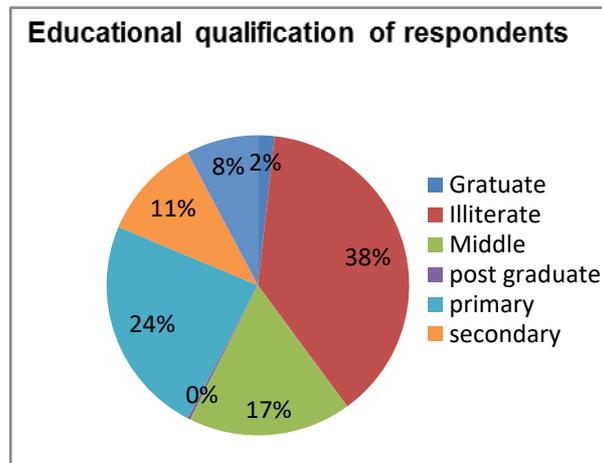
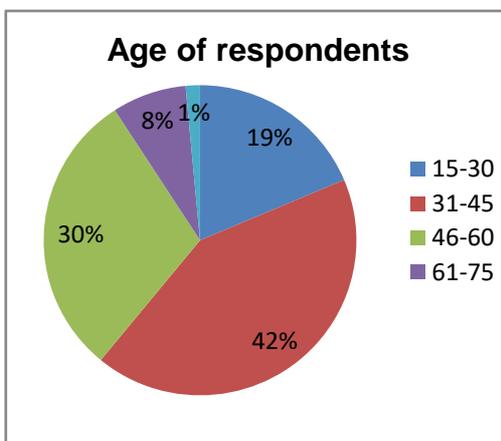
### Key findings

- Common access points like cyber cafes and common service are significant in areas of low connectivity like in terms of registering for higher education courses online where 103 people have registered online but only 40 have an active internet connection,
- Despite Hosadoddi being the Hub, Ajjapura has the highest smartphone penetration at 24% with greater access to services and higher levels of engagement in terms of availing digital literacy course, registering on job portals, applying certificates or having diagnostic labs, vocational centre and digital literacy centre.
- Hosadoddi, the hub centre has the availability of service like photocopy, digital literacy centre and vocational centre and 97% of the respondents in the village have 24 hours supply of electricity. Thus regular supply and availability of electricity and other services would further anchor the spoke centres.
- The desirability in livelihood skills training for financial literacy is at 43%, leadership and life skills at 31%, vocational skills at 14%, entrepreneurship skills at 11% and lastly ICT skills at 9%.
- Training in ICT skills rank the lowest within rural capability development, with only 7% respondents having received training and 9% desire for training in ICT skills. This highlights a possibility that ICT skills are not viewed as an important livelihood skill.

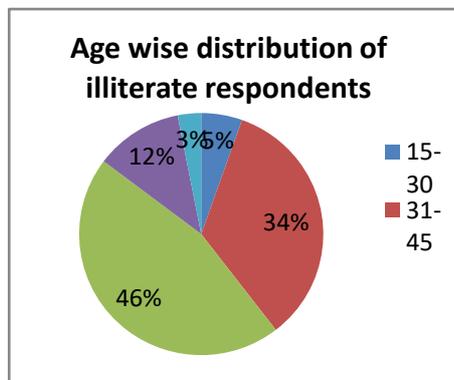
- The awareness about the availability of digital literacy centres remains very low, in villages that have the infrastructure, for example in villages like Dommanagadde, Hosadoddi, Manchapura and Puduramapura where just one person responded when asked if their village has a digital literacy centres. Robust engagement with community is required in creating awareness regarding the facilities available in village.

**Socio-economic and infrastructural context**

The survey was done in 9 villages of Kollegal block in the Chamarajanagar district of Karnataka. 338 respondents were surveyed out of which 161 were female (48%) and 177 were male (52%). 42% of the respondents are in the age group of 31-45 years, followed by 30% belong in the category of 46-60 years, 19% who are in the age group of 15-30 years and lastly 8% of the total respondents were in the age group of 61-75 years of age.



38% of the total respondents were without basic primary education. OBCs formed 50% of the total respondents without basic primary education. Out of 64 OBC respondents who are without any basic primary education, 72% were comprised by OBC women, highlighting the high degree of intersectional marginalization in getting primary education. Moreover 95% of those without even basic formal primary education are over the age of 30, indicating high levels of adult illiteracy. The monthly income of those being illiterate or having primary education is equal to and below Rs. 10,000<sup>1</sup>.

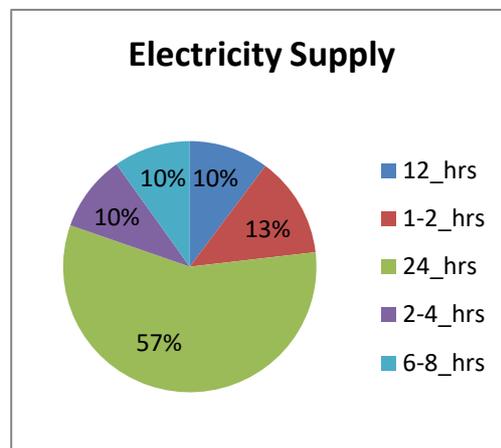


<sup>1</sup> The minimum wages for Karnataka in the category of Agricultural and related works is INR 8780 per month (Basic+VDA) <http://labour.kar.nic.in/labour/1.%20Employment%20in%20Agriculture%20and%20Related%20work.pdf>

With regards to the patterns of usage of water, 197 of 388 respondents are using bore wells, 154 are using tube well, 36 responded using tap water and 14 respondents use well. With respect to toilet usage, only 39% of respondents are using private toilets, while 45% still defecate in open and 16% use community toilets. Out of 34 respondents who are practicing open defecation, 79 (52%) respondents use tube wells, 82 (54%) use bore wells, 9 (6%) use wells and only 14 (9%) respondents have tap – water supply.

A total of 84% responded to having electricity. Of those having access to electricity 13% respondents has its supply for 1-2 hours, 10% have the supply for 2-4 hours, 6-8 hours, and 12 hours each respectively and lastly 57% of the respondents have the supply for 24 hours. However out of 57% of respondents who replied of receiving 24 hours supply of electricity, 23% (37) are from Ajjipura village, 21% (34) are from Dommanagadde, 14% (23) from Puduramapura, 2% (3) from Kuratti Hosur and lastly 20% each from Kempaianahatti and the Hub centre, Hosadoddi village (33). 16% (53) respondents in total do not have electricity, 39 of these respondents not receiving electricity are from Manchapura village (74%), 13% are from Puduramapura, 7% from Dommanagadde, 4% from Kuratti Hosur and 2% from Gangandoddi. 43% of the respondents not receiving electricity have monthly family income equal to and below Rs. 10,000 which is approximately the minimum wage for Andhra Pradesh.

In the hub centre, all the 34 respondents have electricity supply, 33 out of 34 respondents have 24 hours supply (97%) and 1 respondent receives 12 hour supply (3%). Thus the regular supply and availability of electricity in the hub centre would further help in anchoring the spoke centres.



### ICT Uses and Practices

Digital media (smartphone/computer/laptop) penetration stands at 27%. Out of respondents owning digital media, 83 (90%) respondents also own a basic phone. Out of 83 respondents owning digital media device along with a basic phone, 51% (42) have their monthly income equal to and below Rs.10, 000.

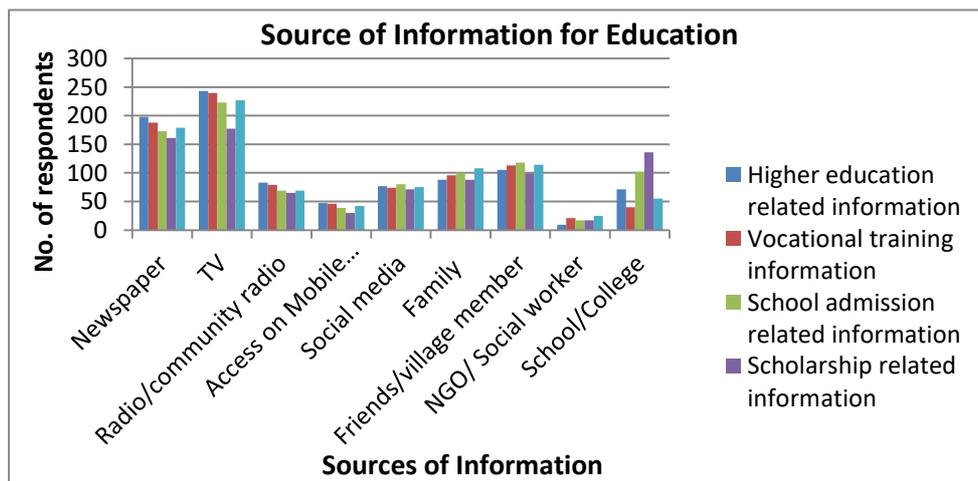
Ajjipura has the highest digital media penetration standing at 24% followed by Manchapura at 22%, Kanchalli at 16% and Puduramapura at 15%. Hosadoddi being the hub centre has a digital media penetration at just 7%.

Calling remains the primary function for which mobile phones are used followed by Text/ SMS and communication (Email & WhatsApp). 62% of the total respondents own a memory card; which were primarily used for storing entertainment content like songs, movies/ videos, and photos. 30% of the total 338 respondents have an internet connection. Among those having internet connectivity, the most preferred network is Airtel, followed by Jio and Vodafone. Out of 101 respondents who have an internet connection, 60% of the respondents found the connection quality good, 35% found it satisfactory and 5% found the quality of the connection bad.

With regard to the availability of photocopying facility, about 68% of the respondents avail this service within 1 -2km, 17% get this facility in the range of 2-5 km and 15% travel more than 5km to avail the service. Among those availing this service within 1-2km, 18% belong to Manchapura, and 14% belong to Hosadoddi which is the hub centre. 73% responded paying Rs. 2 as Xerox charges and 44% pay Rs 10 for printing. Thus most of the respondents are able to avail the facility in a reachable range of 1-2 km, making service of photocopying accessible and saving the loss of wages of the respondents.

### Access to information

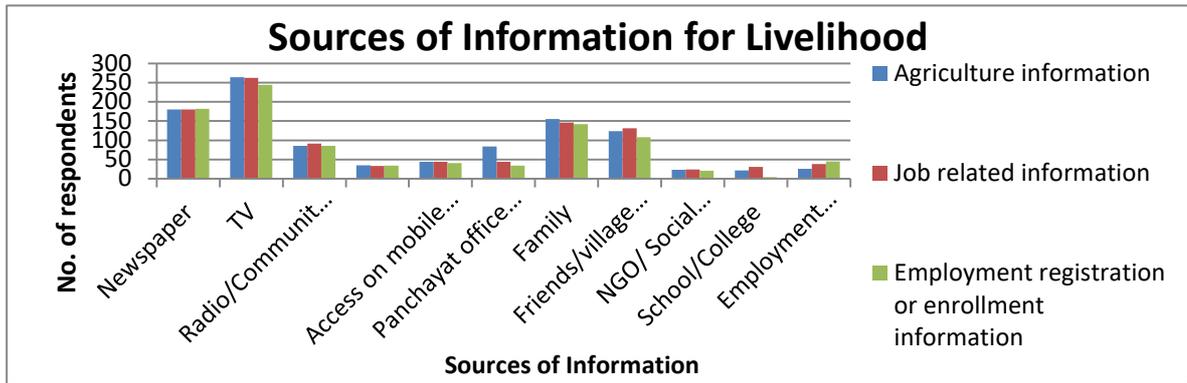
#### *Education:*



Televisions ranks as the highest source of information across all information categories. Overall, television and newspapers rank as the first and second sources of information respectively. Comparing across information categories both television and newspaper is more likely to be the source of information for higher education as well as vocational training than scholarship related information. The bottom four sources of information are NGO/social worker, mobile phone by SMS and internet, and radio. Among the bottom four sources, access to information on mobile phone through SMS ranks as second from the bottom.

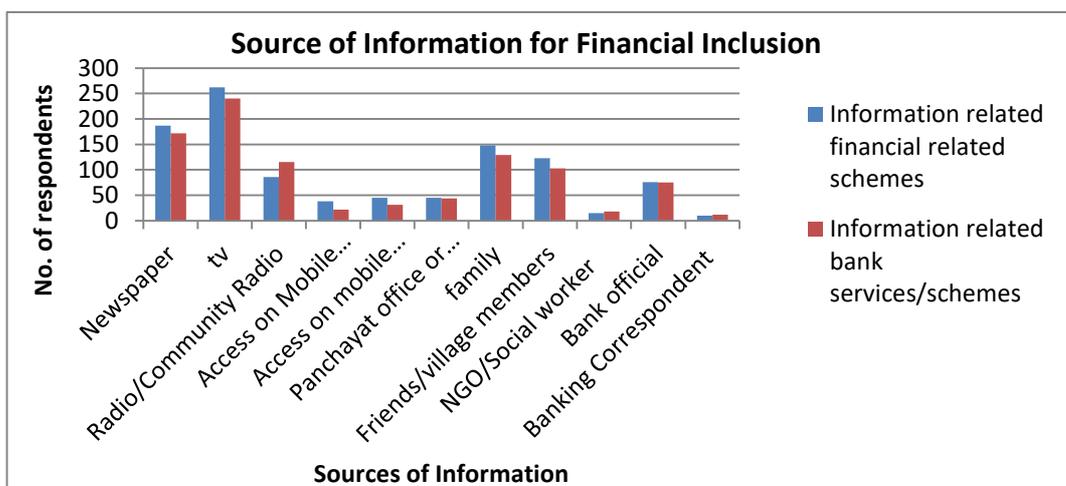
However among information through mobile by SMS and mobile by social media, mobile phone by social media ranks higher. Mobile phone by social media ranks higher and is more likely to be the source of information about higher education, vocational training, and school admission scholarship related information and career guidance information. NGO/Social worker ranks the lowest across all information categories.

*Livelihoods:*



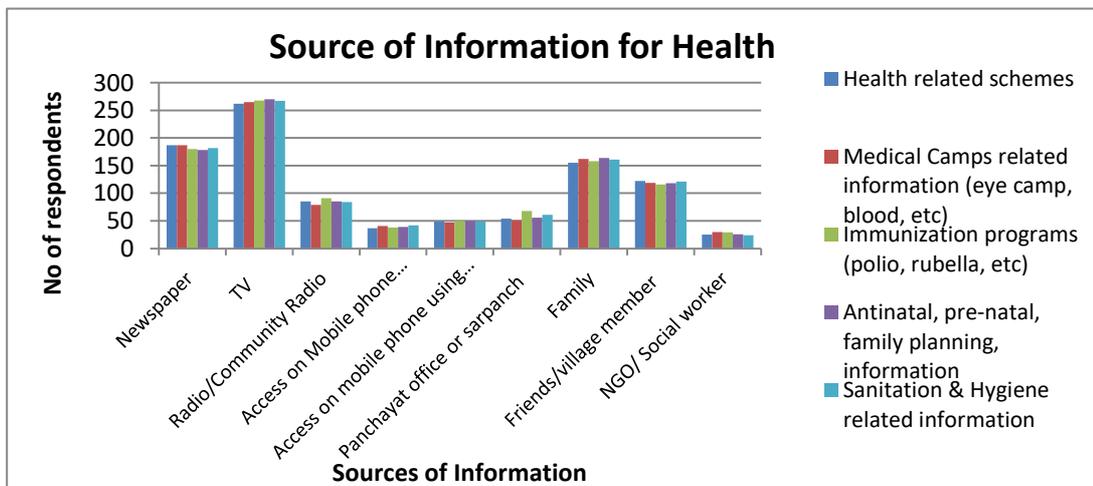
TV, newspapers, family and friends and village community members rank among the top sources of access to livelihood related information. Amongst them, TV rank the highest across all information categories and remains the widely used medium to access information regarding agriculture, jobs and employments although it is more likely to be the source of both agriculture and job related information. Newspaper is more likely to be the source of job related information, agriculture and employment registration. Between mobile by SMS and mobile by internet, mobile by internet 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 and job related information followed by information related to employment registration and enrolment. Radio is preferred over mobile phone and is used for availing job related information followed by agriculture related and employment registration related information. Friends and village community members are more likely to be the source of job related information over other information categories, while family is more likely to provide both agriculture and job related information. Panchayat office is more likely to provide agriculture related information while employment office is more likely to provide employment related information. NGOs and social workers rank the lowest across all the information categories.

*Financial Inclusion:*



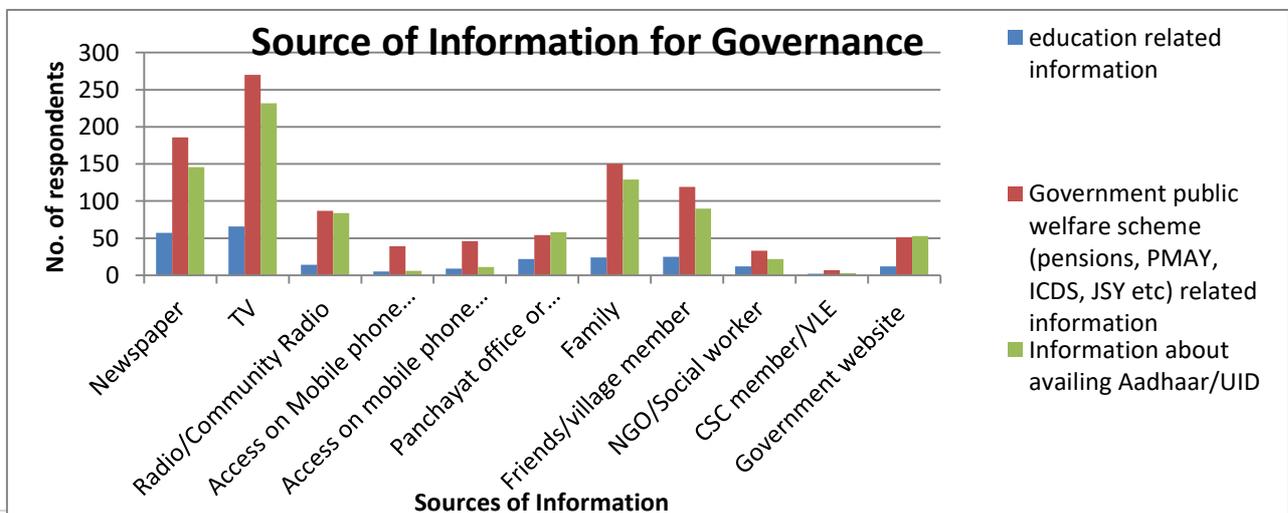
Television ranks high among all sources of information on financial inclusion, while newspaper ranks the second highest. Both television and newspaper are more likely to be the source of financial schemes rather than bank services/schemes. Family ranks thirds and is more likely to provide finance related information rather than information related to bank schemes. Mobile phone by internet and mobile phone by SMS are likely to provide information related to financial schemes. Mobile phone by internet ranks higher than mobile phone by SMS for providing financial related schemes and bank schemes. Banking correspondent and Panchayat office, both ranks lower on finance related schemes and bank service/schemes than bank official. Among bottom five sources, access to information via banking correspondent ranks lowest and panchayat office ranks the highest.

*Health:*



With regard to access to health related information, television ranks as the highest source of information followed by newspapers. There are limited intra-category variation within given sources of access to health information. Family ranks higher than friends and village community members as a source of information across all information categories. Among bottom four sources, access to information via NGO/social worker ranks lowest and panchayat office ranks the highest. However among information through mobile by SMS and mobile by internet, mobile phone by internet ranks higher. Mobile phone by internet ranks higher and is more likely to be the source of information for all the health categories.

*Governance:*





Out of 338 people only 24% people are aware of any social protection schemes. Out of the 79 respondents who are aware of government schemes, majority get the information from TV and newspaper. Both TV and newspaper are more likely to provide information related to government public welfare schemes. Family ranks third in providing information related to Aadhar/UID and government public welfare schemes (like pensions, PMAY, JSY etc.). Access to information of government schemes related to education remains low overall. Mobile phone by internet and mobile phone by SMS are more likely to provide information related to government public welfare scheme. Among access to information through mobile by SMS and mobile by internet, mobile by internet ranks higher across all the information categories. Among bottom five source of information, CSC ranks the lowest and government website ranks the highest for providing information across all information categories.

### Access to services

#### *Education:*

60 out of 338 (18%) respondents reported having a digital literacy centre in their village. Of all the 60 who reported having a digital literacy centre 35 (58%) were from Ajjipura village, 17 (28%) from Kempaianahatti, 4 (6%) from Kanchalli and 1 (2%) respondent each from Dommanagadde, Hosadoddi, Manchapura and Puduramapura respectively. These 35 respondents from Ajjipura represent 85% of the total number of respondents from Ajjipura i.e 41. Out of 6 respondents from Ajjipura who did not report of having a digital literacy centre, 4 were females and 2 were male.

Further, out of 60 respondents who reported having a digital literacy centre, 48% (29) have taken up a digital literacy course. Out of these 29 respondents who responded of taking digital literacy course, 12 are from Kempaianahatti, 10 from Ajjipura, 4 from Kanchalli and 1 each from Dommanagadde, Manchapura and Puduramapura respectively, thus indicating that though significant proportions of the population might be aware of the digital literacy centre, but not all might be availing it. 71% (43) of the 60 respondents have an active internet connection and reported having a digital literacy centre in their village. Given the increasing importance of the internet in full digital participation, 26 out of the 43 respondents who reported having a digital literacy centre along with an active internet connection are availing the digital literacy course.

Only 9% (i.e. 31) of the total 338 respondents reported having a vocational centre in their village. Out of 31 respondents, 22 respondents are from Kempaianahatti, 5 belong to Kanchalli village, 2 from Ajjipura and 1 each from Dommanagadde and Manchapura respectively.

53 out of 338 respondents reported having a career guidance centre in their villages. Out of 53 respondents, 28 respondents who have a career guidance centre belong to Kanchalli village, 18 are from Kempaianahatti, 2 each from Ajjipura and Kuratti Hosur, and 1 respondent each from Manchapura, Puduramapura and Dommanagadde respectively. This indicates that even if the career guidance centres in present in the village it might not be functional or operating, which is why a significant proportion of the population is not aware of its presence.

#### *Livelihoods:*

60 respondents reported that women from their families go for vocational training and they have to travel 1-8 kilometres to attend it. Out of 60 respondents, 33 are from Kanchalli village and 16 from Kempaianahatti village, 4 from Hosadoddi, 2 each from Ajjipura, Dommanagadde and Puduramapura and 1 respondent from



Manchapura. Distance of vocational training centers is potentially a significant barrier to women's capability development and barrier to low levels of women's participation in vocational and skills training. 71% of the respondents said that they would like to attend skills training in their panchayat. Only 19% respondents have received any agriculture related training or support over last one year through micro finance institution thus indicating that training and support related to agriculture is overwhelmingly low.

When the respondents were asked about the skill area in which they have received support or training, 57% (8) respondents had received training in Leadership and life skill, 29% (4) in Entrepreneurship skills, 21% (3) each in Financial literacy and Vocational skills respectively and lastly 7% (1) respondent in ICT skills. Although when asked about the skill areas in which the respondents require training, 43% (146) of total respondents wanted in Financial literacy, 31% (105) wanted in Leadership and life skill, 14% (47) in Vocational skills, followed by 11% (37) in Entrepreneurship skills and lastly 9% (31) require training in ICT skills. The training requirement in ICT skills ranks the lowest; this highlights a possibility that ICT skills are not viewed as important livelihood skills despite technology assuming centre-stage within economy, governance, and society. There's a gap of 22% that can be seen in terms of availability and deliverability of training specifically for financial literacy and 2% for ICT skills.

#### *Financial Inclusion:*

Out of 338 respondents only 41 said that they have Point of Sale (POS) access centre in their area. The villages that reported POS availability are Puduramapura, Ajjipura, Dommanagadde, Kanchalli, Kempaianahatti and Manchapura. 65 and 18 people have access to banking correspondent and banking kiosk respectively. 47% people know how to use an ATM machine and 43% people have access to debit or credit cards. 65% of the people are not aware of different types of banking available. Out of 118 (35%) people who are aware of the different types of banking, 82% (97) prefer direct banking, 12% (14) prefer phone banking and 6% (7) prefer online banking. This is because in the absence of access to information and infrastructure relating to alternatives like internet/ mobile/ online banking it is the only form of interface they have had with banks.

#### *Governance:*

87% of the total respondents have not availed any schemes and entitlements. This can be as a result of low levels capability with regard to interfacing with e-governance as indicated by 90% who were unable to apply for certificates online. 6% 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 36 out of 338 people know about RTI. Among the respondents who availed the schemes and entitlements, NREGA helped 53% (24), followed by PMAY 31% (14) and lastly 20% (9) benefitted from social security pensions. 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.

#### *Health:*

35 respondents reported having a diagnostic lab in their village. These include 33 from Kanchalli and 1 each from Ajjipura and Dommanagadde respectively. These 33 represent 8% of the respondents from



Kanchalli, 2% of Ajjipura and Dommanagadde. 57% of the respondents reported visiting hospital at least once a month and 15% reported having visited a hospital once in a quarter. 251 out of 338 i.e. 74% of the respondents do not have a telemedicine facility in their villages while 36 (11%) people did not know what telemedicine was. Out of 51 (15%) people who reported as having a telemedicine facility in their villages, 31 belonged to the village of Kanchalli, 17 from Kempaianahatti, 2 from Dommanagadde and 1 from Ajjipura. Given that only 2% and 4% of the total respondents from Dommanagadde and Ajjipura reported to having a telemedicine facility in the village shows extremely low penetration of telemedicine facility in their villages. There is lack of coverage by the available facility and lack of information on the same in Dommanagadde and Ajjipura villages particularly.

#### *Entertainment:*

When it comes to availing the local options for entertainment, 52% of respondents prefer going to movie theatre (145), followed by 26% to cinema hall (72) and lastly 13% to community hall (35). 5 (3%) people prefer going to both cinema and movie hall.

#### Patterns of online usage

#### *Education:*

Out of the 60 respondents who reported having a computer/ digital literacy centre in their village, 31 have not availed a digital literacy course. Out of 31 who have not availed the digital literacy course, 25 (81%) of them belong to Ajjipura, 5 (16%) from Kempaianahatti and 1(3%) from the Hub centre Hosadoddi. Out of the remaining 29 people who reported as having a digital literacy centre in their village and availed a digital literacy course, 12 (41%) belong to Kempaianahatti, 10 (34%) to Ajjipura, 4 (14%) to Kanchalli and 1(3%) each are from Dommanagadde, Manchapura and Puduramapura respectively. This underscores a greater need for engagement with the local community with regard to availing digital literacy. 41% of the respondents have registered for higher education course online. However, among the 103 people who register online, 40 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 or shared connections.

#### *Livelihoods:*

64 (19%) out of 338 people registered themselves on job portals. Out of these 64 respondents, 35 (55%) were from Kanchalli, 16 (25%) from Kempaianahatti, 2 (3%) respondents each from Kuratti Hosur and Hub centre Hosadoddi, 4 (6%) each from Ajjipura and Dommanagadde respectively and lastly 1 (2%) respondent from Puduramapura. Out of 64 respondents who registered themselves on job portal, 21 respondents own digital media device and have internet connectivity. 51 (15%) people out of total respondents reported 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.

### *Health:*

Only 16% of the total 338 respondents are able to book appointment online, while 84% are not able to book an appointment online. Out of the 52 respondents who reported being able to book appointment online, 33 (63%) respondents are from Kanchalli, 15 (29%) from Kempaianahatti, 2 (4%) from Ajjipura and 1(2%) respondent each from Dommanagadde and Puduramapura respectively. Cash remains majorly the mode of payment for hospital bills with 98% (331) of the respondents preferring it. Only 4% (15) opt for card payment and 3% (13) use the online mode of payment. Out of the total 338 respondents, 27% (92) are owners of a digital media device. Out of the 92 digital media device owners, 68% (63) have an active internet connection, but only 2% (1) of the respondents pays their hospital bills online. This signifies that there are different patterns of online use and engagement.

Only 16% of the total respondents purchase health related items online whereas an overwhelming 84% do not. Out of the 59 respondents who have health insurance, 21 responded of owning a digital media device along with internet. Out 21 respondents who have a health insurance and have reported owning digital devices with internet, 16 renew health insurance online. 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.

### *Governance:*

20 (6%) out of 338 respondents reported grievances related to government schemes, 13 (65%) respondents preferred the online method. Out of 338 people, 36 (11%) know about RTI and 28 (76%) out of 36 people filed an RTI. Out of 28 people who filed RTI, 82% (23) filed it online. Around 90% respondents were not able to apply for the certificates like birth/death certificate, Aadhaar card, and voter ID etc. online. Out of the 34 respondents who were able to apply for certificates online, 20 were from Kempaianahatti, 7 from Kanchalli, 3 each from Ajjipura and Puduramapura respectively and 1 from Dommanagadde village. Out of these 34 respondents who were able to apply for certificates online, 15 (44%) owned a digital media device along with an active internet connection.

### *Financial inclusion:*

Only 35% of the total respondents are aware about different types of banking. Out of 118 respondents who are aware about different type of banking, direct banking (82%) ranks the highest in terms of preferred mode of banking followed by phone banking (12%) and online banking (6%). Out of 338 respondents, only 19 (5%) prefer online mode of money transfer, whereas majority of the people i.e. 311 (92%) still prefer direct banking for financial transactions.

Out of 338 respondents, 92 own a digital media device. Out of 92 owning digital media device, 63 respondents access internet. Out of the 63 respondents that have digital media device along with an active internet connection, 18 (29%) respondents have activated internet banking, 6 (10%) are using online banking and 21 (33%) do financial transaction online. Out of 338 respondents, 55 (16%) have activated internet banking and out of 55 who have activated internet banking, 21 (38%) respondents pay their utility bills online. With 68% of the total respondents owning a digital media device with internet, more awareness on digital financial literacy and different types of banking methods and safety protocols can be generated.

### *Entertainment:*

Keeping in line with the patterns of online usages and practices mentioned above, only close to 13% (45) pay for entertainment online. Out of these 45 people who pay for online entertainment, 12 people use apps



for online transaction and have activated internet banking. 92 (27%) respondents in total responded to using online entertainment. When asked about the type of online entertainment used, 82 respondents (89%)

answered online games. Out of 82 respondents who responded to playing online games, 44 have digital media devices, 61 have memory cards, and 58 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 driving higher digital literacy and engagement in Kempaianahatti, Ajjipura and Kanchalli
- Generating more awareness amongst villagers regarding available services like digital literacy centres and vocational centres in their villages, its benefits and outcomes.
- Providing training to villagers owning smartphones about the various uses of internet for educational purposes
- Promoting use of digital media for accessing information related to education

### *Health:*

- Recognise the importance of local area camps and drives and the significant awareness component that it holds
- More emphasis can be given in terms of access to information related to healthcare through mobiles and internet facility, along with availing the services of healthcare which are online.



- Increasing awareness regarding telemedicine and diagnostic lab facility in village and encouraging villagers to utilize the same whenever required.
- Understand the multi-faceted issues in health delivery including but not limited to information, infrastructure, access, and governance

*Governance:*

- Raising awareness about government welfare schemes, and promoting the use of digital media for accessing information about welfare schemes and services.
- 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:*

- Making people aware about the banking facilities over digital media and strengthening the capacities of banking correspondent for providing information related to financial services and banking schemes.
- Conducting awareness sessions regarding different types of digital banking available, in the community along with safe practices of using online banking

*Entertainment:*

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