

Chapter 1

Introduction

1.1 Background

Agriculture plays an important role in the economic development of any country. In developing countries it is more so because a higher percentage of population depends on Agriculture for their livelihood. In India 54.7% of the population is engaged in agriculture and allied activities (census 2011). The sector also contributes 17% to the country's GDP.

United Nations adopted a set of Goals in 2015 to end poverty, protect the planet and ensure prosperity for all as a part of a new sustainable development agenda. This agenda calls for actions from all stakeholders to improve the lives of people. Recognizing the importance alleviation of hunger in sustainable development, United Nations has included "End hunger, achieve food security and improved nutrition and promote sustainable agriculture" as one of 17 Sustainable Development Goals(SDGs). The essential element in achieving this goal is the production of sufficient quantity of food to feed the world. This places an enormous burden on agriculture sector which is reeling under several issues including climate change. The need of the hour is to increase the efficiency and productivity so that more food can be produced with the limited resources available to the human race. It is important to note that technologies required for increasing the efficiency and productivity of the sector are available with scientific community.

India can boast of a powerful public research and development network under Indian Council of Agriculture Research(ICAR) spread over the length and breadth of the country. What is needed is the adoption of the new technologies by the farmers. In addition, the farmers have a variety of information needs, which is supposed to be

fulfilled by the conventional extension mechanisms existing in the country. Physical outreach by extension workers, peer learning among farmers (Farmer friend), group approach (Farm Schools) and public-private partnership are being explored under public extension system.

It is to be noted that as per the report of working group on agriculture for 12th plan, only 1 extension worker for about 1200 farmers is envisaged during plan period. (Planning Commission, 2011) Even with this planning, one subject matter specialist who is the cutting edge functionary of public extension service, need to cover around 10-11 villages. This limits the effectiveness of conventional extension system which is based on the concept of physical outreach. This has been recognized way back in 2007 while National policy for farmer was formulated. Harnessing the potential of Information and Communication Technology, was stressed for revitalizing the extension system in the country.

In 2004 itself, Ministry of Agriculture had introduced the scheme of Kisan Call Centre. Under this scheme call centres were set up in each state of the country for answering the queries of farmers. These call centres were accessed by dialing 1800-180-1551erstwhile the number was 1551. Later when government of India has approved the National e-Governance plan(NeGP) during 2006, Agriculture was one of the twenty seven Mission mode projects. (Ministry of Electronics & Information Technology, 2011). The Business Architecture indicates that SMS and KCC are considered as the channels of delivering twelve services which was envisaged in the NeGP-A .

The mobile phone penetration has been rising phenomenally during last ten years. As per statistics released by Telecom Regulatory Authority of India, the mobile phone connections in India has witnessed a historical growth from 2007 to 2017. The annual growth is depicted in the timeline graph below. In the 2016 household survey on India's Citizen Environment & Consumer Economy by People Research on India's Consumer Economy (PRICE), It is indicated that 88% of house holds own a mobile telephone. Interestingly even in the first quintile (bottom 20%) more than 75% of the houses owns a telephone.

As can be seen from the graph below, even in rural areas, effect is visible. This prompted government to use mobile phones as a tool to reach its citizen who were unreached otherwise. As a part of the NeGP-Agriculture policy, a portal for disseminating information to farmers through SMS has been inaugurated on July 16, 2013. Using this portal officers can sent SMS to the farmers who are registered in this network.

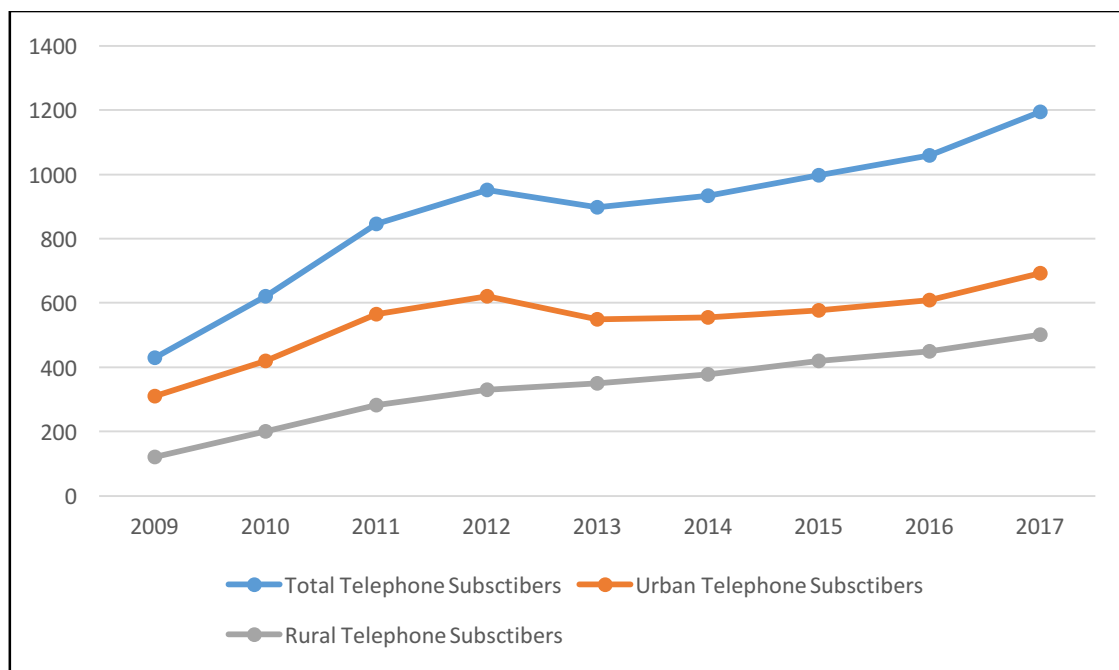


Figure 1-1 Telecom Subscribers in India (in millions) (Based on the Indian Telecom Services Performance Indicator reports from TRAI)

The content may include information about the schemes, advisories from experts, market prices, weather reports, soil test reports etc. The farmers can register for this service by calling Kisan Call Centre or through the Web Portal/SMS. In addition, several mobile applications were also launched by Ministry of Agriculture. States were also contributing to this effort by initiating their own projects. From the literature, it is seen that the two projects, which was rolled out on a pan-India basis using telecom networks, are Kisan Call Center and mKisan.

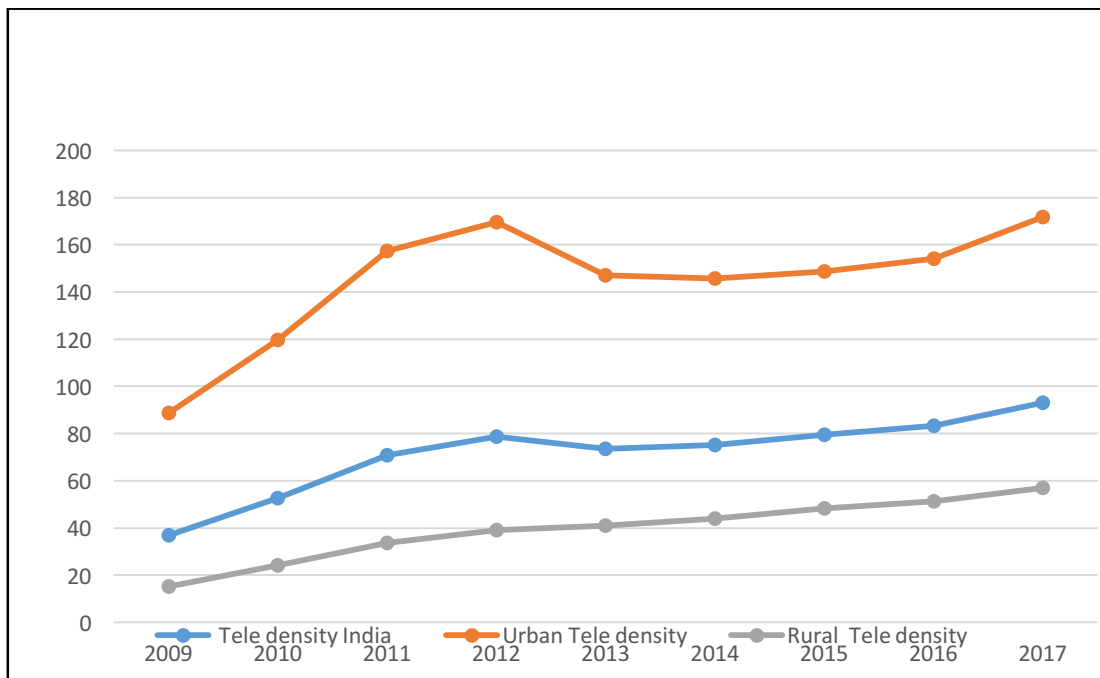


Figure 1-2 Telecom density in India (telephone per 100 population) (Based on the Indian Telecom Services Performance Indicator reports from TRAI)

1.2 Statement of the Problem

A large number of projects were rolled out in Agricultural Extension using telecom Networks. These projects are aimed to reach out to the farmers directly for the delivery of information. Important among them are Kisan Call Centre (KCC) and mKisan portal. 57,13,94,113 SMSes has been sent to the farmers using mKisan during 2016-17 and 45,87,882 calls has been landed in Kisan Call centers during the same period. While the total numbers of messages and calls are quite encouraging, there are lot of differences among the states in using these platforms. The success of these projects will be based on the pan India usage of these platforms especially in states where agriculture is an important activity. Literature indicates that the farmers consider mobiles as one of the important mediums of information but expect more localized information when receiving the information through SMSes. For localized information, better involvement of district officers are required. Corrective action need to be initiated in states where the platforms are not fully utilized and where district officers are not involved in the operationalization of these platforms. In the absence of such corrective actions, farmers will lose faith in these innovative initiatives

resulting in the loss of a golden opportunity in revitalizing the agricultural extension initiatives.

1.3 Objectives

The objective of the study is

- To examine to what extent each states are utilizing KCC and mKisan platforms.
- To analysis participation of district officers in mKisan.
- To analyse the localization of messages sent out by the district officers.
- To find both national and international best practices of using telecom networks and suggest practices which may be integrated with the existing platforms

1.4 Justification of the Research

A state wise cross sectional analysis will help policy makers to identify states or sectors which do not utilize the platforms fully and initiate a close monitoring of these states/sectors. It can also give an idea of localized content presently available in these messages. This will help the stakeholders to look at the operating procedures more closely, so that modification can be thought of wherever required. The present literature mostly concentrates on individual states and a cross sectional view is not available to the stakeholders.

The analysis on the Kisan Call Centre will help policy makers to evaluate the effect of structural changes made in the Kisan Call Centre during 2013 and also to find out whether any locations are underperforming compared to other state centres. It would also help in better analysis of the problems faced by farmers and also some success stories may also be prototyped.

1.5 Research Questions

- How is the performance of Kisan Call Centre and mkisan platform varied across the different states in the country?
- What is the perception of the farmers about these ICT platforms ? What are the constraints faced by the farmers in using these systems ?

- To what level district officers are involved in the SMSes delivery and how much contents of SMSes sent by them are localized in nature?
- What changes are required in the SMS policy of mKisan for improving the service ?
- What are best practices available internationally or with private Indian players and whether these can be integrated easily with current platforms of KCC and mKisan?

1.6 Limitation/Delimitation

1. The research is based on the secondary data. Farmer's opinions and feedbacks were collected from secondary data only. (From already published research results)
2. The analysis of contents of messages from Hindi speaking states only will be carried out.
3. The research will be carried out within the limited time available.

1.7 Research Gaps

1. There is no analysis on the State wise differences in implementation.
2. The analysis were purely on the farmer's perspective on the project. No analysis was carried out about the processes followed by the government side.
3. No analysis was carried out on localized message contents and involvement of local officers in the system.

1.8 Chapterisation Scheme

Chapter 1. Introduction

Chapter 2. Research Methodology

Chapter 3. Literature Review

Chapter 4. Use of ICT in Public Agriculture Extension

Chapter 5. mKisan

Chapter 6. Kisan call Centre

Chapter 7. Use of ICT in Private Agriculture Extension

Chapter 8. International Best Practices

Chapter 9. Findings

Chapter 10. Recommendation and Conclusion and way Forward