

ROLE OF ICT IN AGRICULTURAL MARKETING

DR.P.GNANA SOUNDHARI,
GUEST LECTURER IN ECONOMICS,
ARULMIGU PALANIANDAVAR ARTS COLLEGE FOR WOMEN,
PALANI.

ABSTRACT:

India is one of the major agrarian economies of the world, which is the principal source of livelihood for more than 50% of the population of India. It is demographically the broadest economic sector and plays a significant role in overall socio-economic fabric of India. Agriculture is the backbone of rural households as majority earns their bread from agriculture. But the contribution of agriculture to the economy as well as the economic condition of the farmers is not what they should have been in this era of technology. Indian agricultural system regularly encounters with a number of shortcomings which put significant impact on distribution. Five main trends have been the key drivers of the use of ICT in agriculture, particularly for poor producers: (1) low-cost and pervasive connectivity, (2) adaptable and more affordable tools, (3) advances in data storage and exchange, (4) innovative business models and partnerships, and (5) the democratization of information, including the open access movement and social media. These drivers are expected to continue shaping the prospects for using ICT effectively in developing country agriculture.

Why Mobile Phones?

Mobile phones are but one form of ICT. Personal computers, laptops, the Internet, television, radio, and traditional newspapers are all used to promote improved rural development.

Why Agriculture?

In many countries, agriculture accounts for the overwhelming majority of rural employment. The manifold benefits that accompany improvements in agricultural productivity are well known: Farmers' incomes rise, food prices fall, and labor is freed for additional employment. In some instances productivity improvements have proven elusive, as climate change and uncertain commodity prices have worsened agrarian conditions for many rural communities.

Development practitioners have rightly focused on the difficult situations of many farmers, especially smallholders, who have little room for error and even less protection from social safety nets. Technical innovation, most prominently demonstrated in the Green Revolution, has been to improving agricultural markets in the developing world. Mobile phones, despite their recent entry into agrarian communities, are already helping those communities improve their agricultural activities.

The Virtuous Circle of Mobiles and Agriculture

Advances throughout the mobile phone ecosystem tend to act as a positive feedback loop. This “virtuous circle” of innovation enables a number of benefits, even for smallholder farmers:

- *Access.* Mobile wireless networks are expanding as technical and financial innovations widen coverage to more areas.
- *Affordability.* Prepaid connectivity and inexpensive devices, often available second hand, make mobile phones far cheaper than alternatives.
- *Appliances.* Mobile phones are constantly increasing in sophistication and ease of use. Innovations arrive through traditional trickle-down effects from expensive models but have also been directed at the bottom of the pyramid.
- *Applications.* Applications and services using mobile phones range from simple text messaging services to increasingly advanced software applications that provide both livelihood improvements and real-time public services.

Through this expansion process, formerly costly technologies quickly become everyday tools for the bottom of the pyramid. Additional opportunities for more frequent and reliable information sharing will open as technological advances lead to additional convergence between mobile phones and the Internet, GPS, laptops, software, and other ICTs. The topic notes that follow review numerous ways that private industry, government bodies, and nonprofit organizations are using mobile phones in agriculture. Many of these programs are relatively new, and conclusive results are difficult to ascertain. Most show promise, but there are reasons for caution and the barriers to surmount. A mobile application is a piece of software on a portable device (such as a mobile phone handset, personal digital assistant, or tablet computer) that enables a user to carry out one or more specific tasks that are not directly related to the operation of the device itself. Examples include the ability to access specific information (for instance, via a website); make payments and other transactions; play games, send messages, and so on. The application (app) might come preinstalled but more usually is downloaded (for free or for payment) from a wireless network from an online store and may require a live connection to function effectively. Simple apps may make use of the built-in low-speed data communication facilities of digital mobile phones, such as short message service (SMS) or unstructured supplementary service data (USSD). On many low-cost phones, applications are available through Java software. More complex apps use the Internet protocol-based data communication facilities of higher-speed networks on third- or fourth-generation mobile phone networks.

Objective of the study

- To know the ICTs and Agricultural Innovation Systems
- To study the challenges before application of ICT initiatives in agricultural marketing
- To Study the Strengthening of Agricultural Marketing with ICT

ICTS AND AGRICULTURAL INNOVATION SYSTEMS

ICT developments in the wider innovation and knowledge systems as well as explores drivers of ICT use in research and extension.

1) ICT in the Agricultural Research Process:

Agricultural research process from engaging partners and stakeholders, through data collection and analysis, collaboration and knowledge access, publishing and dissemination, to feedback and interactions with rural and other end-user communities. In each of these areas, ICTs are making agricultural research more effective.

- Advances in ICTs Increase the Utility of African Sites for Testing Varieties
- KAINet Kenya Knowledge Network Anchored in Partnerships and Collaboration

2) Using ICT in Extension and Advisory Services:

This come across ways ICTs are helping transform extension, including the emergence of public and private innovators and startups with business models built around ICTenabled advisory services. It examines how traditional and new ICTs are being used to reach rural communities, enable the creation and sharing of rural communities' own knowledge, and support connections of rural communities to markets, institutions, and other sources of information and advice.

- Farm Radio International Involves Men and Women Farmers
- E-Extension in the USA and Philippines
- TECA Uganda Exchange Group Offers Practical Advice for Smallholders
- Participatory Video and Internet Complement Extension in India

3) E-learning as a Component of Agricultural Innovation Systems:

Learning through ICTs can provide fresh approaches that are learner-centric, which engages producers and their communities in designing and implementing the learning experience. It can also make it easier to maintain quality by supporting feedback mechanisms and ensuring appropriate accreditation and certification processes. Also explores some of the adaptation and strategies required for e-learning to succeed in rural areas of developing countries.

- Lifelong Learning for Farmers in Tamil Nadu
- Innovative E-Learning for Farmers through Collaboration and Multi-Modal Outreach

CHALLENGES BEFORE ICT IN AGRICULTURAL MARKETING

Some of the major challenges faced by ICT initiatives in agricultural marketing can be summarized as below:

- Farmers have limited access to market information.
- Literacy level among farmers is low
- Dependence on local money lenders is high

- Marketing network is confined to urban area
- Transport facilities are very poor in rural area.

STRENGTHENING OF AGRICULTURAL MARKETING WITH ICT

Growing body of evidence suggests that market information services, especially those based on mobile phones, reduce asymmetries of information between traders and producers, reduce transaction costs, enable farmers to purchase inputs, and enhance farmers' ability to fine-tune production strategies to match the accelerating rates of change in consumer demand and marketing channels. The latent utility of the technology is still being discovered, and the scale of its impact is still being understood. It is difficult to anticipate the eventual balance between privately run agricultural information services and government services, but it is very likely that the optimum configuration could involve some kind of public-private arrangement.

1) Mobile Phones as a Marketing Tool:

Farmers use mobile phones to build a network of contacts and draw on this wider experience and expertise to obtain critical information more rapidly. Essentially the mobile phone, its special applications, and the Internet (although to a lesser extent currently) are becoming management tools for farmers, specifically in relation to marketing. Greater access to information seems to help farmers make better decisions around transportation and logistics, price and location, supply and demand, diversification of their product base, and access to inputs.

2) ICTs Improve Logistics, Lower Transaction Costs:

Information communication technologies (ICTs) improve logistics and reduce transaction costs by improving supply chain management. The benefits largely reside with traders, so the key question for development practitioners is how to design ICT interventions that enable producers to improve their returns and/or help urban consumers to buy food at lower prices. Combined investments in roads, telephone communications, and electricity have a greater aggregate benefit compared to separate investments.

3) ICTs Facilitate Market Research:

Market information strengthens farmers' position in their day-to-day trading and, over time, market intelligence enables them to focus on satisfying consumers' and buyers' demands and on developing relationships with stakeholders in the next stage of the value chain. The key development challenge lies in assembling and disseminating this information in a timely manner, not just to traders or larger-scale farmers but also to smallholders.

4) ICTs Facilitate Access to and Delivery of Inputs:

ICTs can enable farmers to make more informed decisions about which inputs are better or cheaper to buy, when and where to best obtain them, and how to use them. ICTs can also ensure that subsidized inputs are sold to the intended beneficiaries.

CONCLUSION

In India, during the last one and half decade, hundreds of small ICT projects have been implemented. However, we are yet to get substantial results in increase of agricultural production because of deployment of ICTs. Much hyped ICT projects are yet to make any breakthrough in agricultural information dissemination. Even though, ICTs are promising to make difference and also accelerating information access by some farmers, but, most of the ICT projects are taken as pilots projects, institutionalising of ICTs need to be given more emphasis. ICTs for agricultural extension projects need to be compared and evaluated objectively. Low cost ICT tools such as mobile phones are having lot of promise for agricultural extension. At the same time, experiences are indicating that ICT are going to play greater role in private sector agribusiness, market information and market intelligence. Further, certain type of farm information (e.g. informing government schemes) and online monitoring of the progress of the governmental schemes are proved successful. As indicated earlier, formulating National and State level e-Agriculture policy, human resource development, strengthening ICT infrastructure is to be taken-up to harvest the benefits of ICTs for agricultural extension services provision and agricultural development.

So with the proper and timely implementation of ICT projects/ initiatives in a right manner, it can bring the much needed revolutionary change in the Indian agricultural sector by bringing a transformation in the life of the farmers and it will definitely boost the agricultural development of our country.

Reference:

1. Chatarjee, S., Kapur, D. (2016). Understanding Price Variation in Agricultural Commodities in India. India Policy Forum.
2. Evergreen Revolution the Way Forward, Says M.S. Swaminathan. (2016, April 16). The Hindu. Retrieved December, 2017 from <http://www.thehindu.com/news/cities/puducherry/evergreen-revolution-the-way-forward-says-ms-swaminathan/article8482084.ece>
3. Goutam, H. (2014). Agricultural Development: The Road Ahead. *Kurukshetra*, 62(8),
4. Meena, MS., Singh, K. (2012). ICT Enabled Extension in Agricultural Sector. Social Science Research Network.
5. Mohammadi, R. (2011). Challenges and Implications of ICT Application for Improving the Marketing of Agricultural Products. *ARCC Journal*, 31, 161-166.
6. Satapathy, S (2015). ICT in Agriculture: An Effective Tool for Agricultural Development. P.G. Dissertation, P.G. Department of Commerce, Utkal University, Bhubaneswar.
7. Jensen, Robert (2007), "The Digital Divide: Information (Technology), Market Performance, and Welfare in the South Indian Fisheries Sector", *Quarterly Journal of Economics*, Vol. 122, No. 3, pp. 879-924.