

ICT4D and farming communities: Success and failure of telecentres in rural Tamil Nadu

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Research question

The research in general seeks answer to ‘whether ICT’s / telecentres are really working for agricultural development in terms of helping the farming communities in a developing country like India?’ and in this paper, particular focus is on ‘what are the critical success and failure factors for different types of telecentres?’

Rationale for the study

1. Global outlook

The recent decade has seen exponential growth in ICTs with computers, digital organizers, mobile phones, Internet and wireless computing spreading all across the globe. These technologies have unleashed a “cultural revolution in the way individuals and organizations interact, in terms of time, cost and distance” (Munyua, 2000). Having understood the potential of ICT, world organisations intertwined the old concept of development with the new ICT motif. As a result major global and regional ICT initiatives² were undertaken by chunk of international and national organisations. The Human Development Report (2001) of United Nations Development Program (UNDP) was also dedicated to the theme of “technology for development” with a special emphasis on ICT.

In this situation, developing countries are driven to utilise ICT initiatives as a tool for addressing the development agenda. At present the widely and mostly upheld ICT initiative for development, proliferating in developing countries is the “*telecentre*”³ movement. However eventually after utilising a new tool for development there may be success and failures. Available literature shows the rates of failures are more than rate of successes, like majority of ICT initiatives in developing countries tends to be failures ranging from total to partial due to design-reality gaps (Heeks, 2002). In addition many researchers have found that there is still critical lack of awareness about use of and benefit from ICT among farmers and wide majority of rural communities in developing countries (Molla, 2000; Pringle and David, 2002; Blattman *et al.*, 2003; Meera *et al.*, 2004).

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² Sustainable Development Networking Programme (SDNP) in 1993, ICT for Development Programme in 1997, Asia-Pacific Development Information Programme (APDIP) in 1996, Internet Initiative for Africa (IIA) in 1996, Pan Asia Networking (PAN) and Acacia initiative.

³ Telecentres are physical spaces that provide public access to ICTs for educational, personal, social, and economic development and are known by different terms in different parts of the world.

2. Indian context

India came out with “Mission 2007: Info kiosks in every village” which was launched in New Delhi in July 2004 by the members of National alliance⁴ to harness the potential of ICTs for development in rural India. The mission is envisaged as a nation-wide movement facilitating the setting up of knowledge centres / info kiosks / telecentres in each of India’s 600,000 villages by the year 2007 (One World South Asia and MSSRF, 2004). The concept of Mission 2007 is “Every Village a knowledge Centre” (telecentre) recommended by National Commission on Farmers (Policypaper, 2005) aimed at bringing about an ICT-lead rural knowledge revolution in India. Thus in the first phase of ‘Mission 2007’ policy paper had noted that 100,000 Village Knowledge Centres (VKC’s) will be set up in the country by 15 August 2007. But well in advance of this ‘Mission 2007’ India is the single largest host of ICT initiatives in Asia with more than 150 projects running across the country. Especially these ICT initiatives play a key role in catering to the information needs of rural community of this agrarian country as it was said that information input plays an imperative role in the context of developing country especially for agricultural development (Rao, 2007). A greater proportion of these initiatives have crossed a period of five years of service. Yet instead of increased agricultural production there are depressing stories of farmer’s suicides. Germane evidence shows that the plummeting percentage of Agriculture to GDP in India has markedly declined from 33.7 in 1985 to 18.3 in 2005 (World Bank, 2007) shows that Agriculture is under threat and needs immediate reprisal.

In this context the premises for this study are

- In the advent of ICT initiatives there are marked declining or devastating development trends among farming communities in India.
- The ICT initiatives may or may not impinge farming communities since there are no favouring substantive evidences available in India.

Research methodology

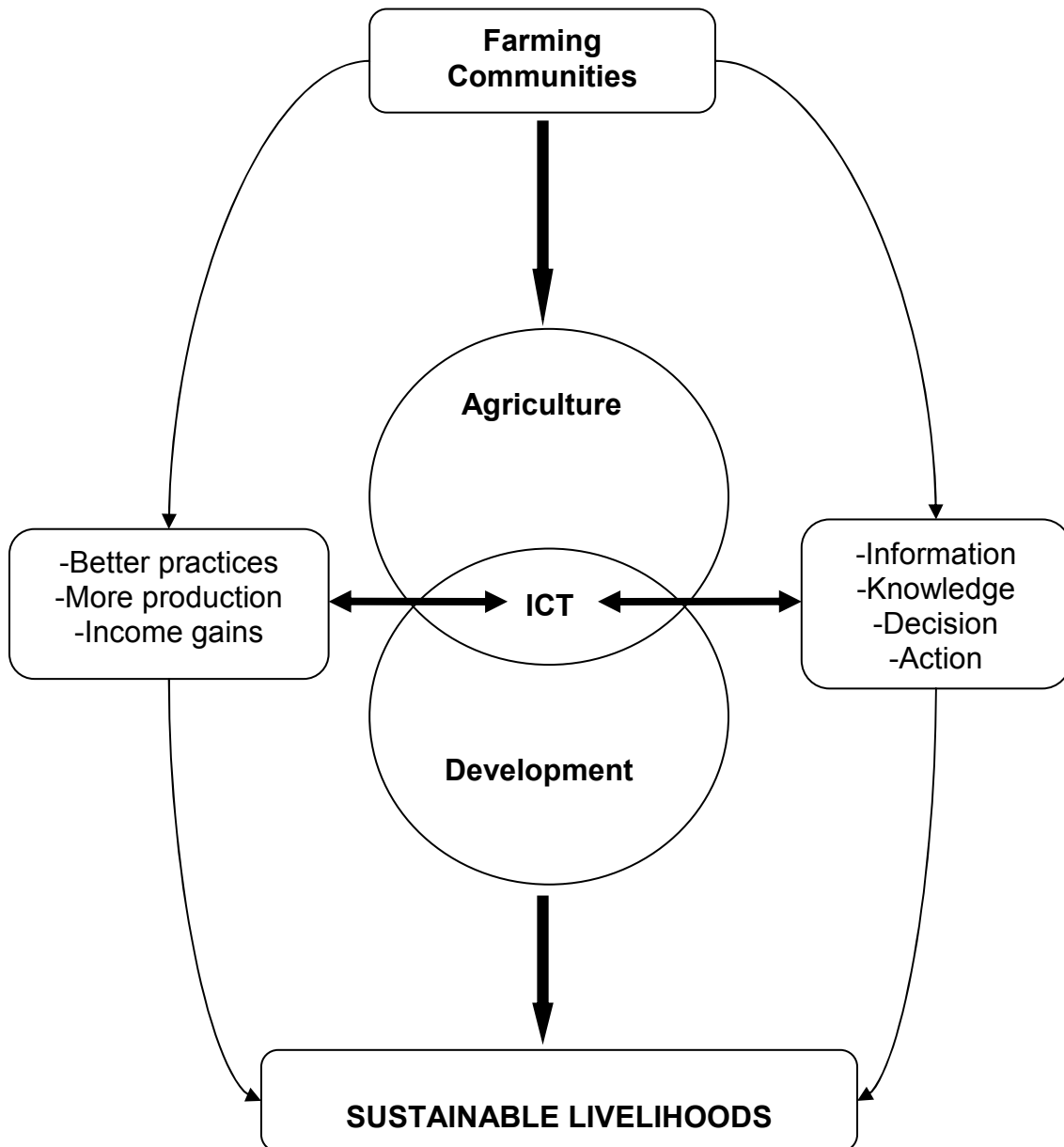
1. Conceptual framework

Chambers and Conway (1992) said that, a livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living and is sustainable when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, while not undermining the natural resource base. Considering the above fact, this study mainly focuses on the status of development of farming communities as a result of ICT intervention in terms of sustainable livelihoods where people are put at the centre of development.

⁴ The alliance comprises of more than 100 organisations including One World South Asia (One World is the civil society network online, supporting people’s media to help build a more just global society), M.S.Swaminathan Research Foundation (MSSRF) and other civil society organisations like National Association of Software and Services Companies (NASSCOM) foundation.

The conceptual framework adopted for the study (Figure 1) shows that farming communities indulged in Agriculture are facilitated by ICT / telecentre for development with the expectation that they will lead to Sustainable livelihoods formation. In nutshell, ICT are seen as an interface between Agriculture and Development there by paving way for better practices, more production, income gains and also for necessary information, knowledge, decision and action among farming communities.

Figure 1 Farming communities and ICT4D



The success and failure of telecentres are evaluated based on the model proposed by Heeks (2002). This involves the rating (like low, medium and high) of seven dimensional (Information, Technology, Processes, Objectives and values, Staffing and skills, Management systems and structures, other resources) gap between design and actuality of Information systems in developing countries.

2. Research methods

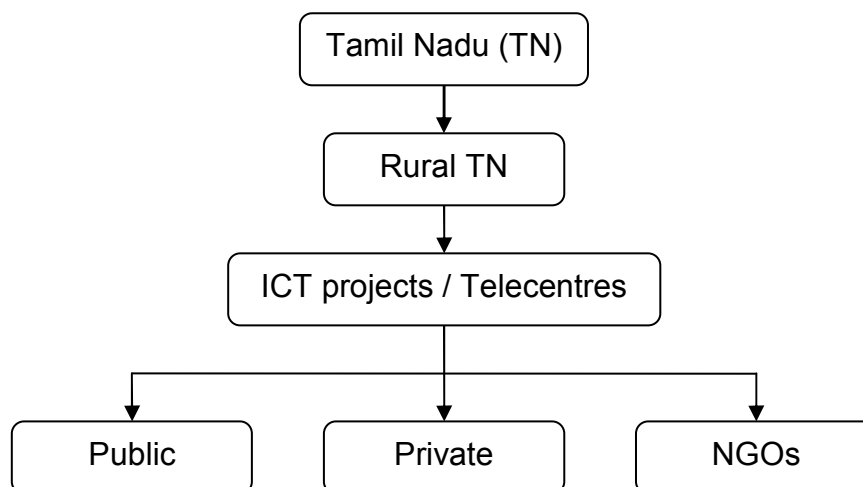
This study follows a '*multi-strategy research*' which integrates quantitative and qualitative research within a single project by combining research methods that cross the two research strategies (Bryman, 2004). The research strategies that are considered for this study are

- Survey research strategy
- Case-study research strategy

The reasons are survey research strategy dominated the information systems research till 1990s and later case-study research strategy gained prominent significance. But in the recent years doubts were raised about the validity of case studies since most general studies of this subject rely heavily on anecdotal evidence from a small number of instances of ICT applications (Souter *et al.*, 2005) or the anecdotal quality of such reports tends to focus on the positive and downplay the negative aspects of technology (Parkinson and Ramirez, 2006).

The sampling procedure followed for this study is 'multi-stage cluster sampling' a type of 'probability sampling'. The reason to follow this method is sampling achieves 'representativeness' of population in probability sampling (Punch, 2005) to generalize the results. Telecentres within rural Tamil Nadu are classified into three categories based on the agencies involved viz: public, private and NGOs (Figure 2) for this study. If any of the telecentres are found to be in public-private or any other partnership mode, then depending upon the key implementing agency they will be grouped into any one of these categories for convenience. The rationale for classification of telecentres lies in the fact that initially NGOs like M.S.Swaminathan Research Foundation (MSSRF) rolled out the concept of telecentres in India with the help of donor funding followed by private companies like India Tobacco Company (ITC) and eventually by the public institutions or organisations for rural development.

Figure 2 Telecentres in Tamil Nadu



Further within these three categories, three different telecentre locations in rural Tamil Nadu were identified based on the below criteria.

- The telecentre must serve a rural village(s) in Tamil Nadu.
- Crop and livestock based agriculture must be one of the services offered by the Telecentre since inception.
- The telecentre should have a maximum period of operation since inception when compared within each category.

Thus farming communities of three different study locations within the state of Tamil Nadu served by telecentres form the 'population' for this study from which two types of respondents were targeted for two different methods (survey and case study). They are,

- I. 'Farmer Individual' – target respondent for survey: The group of respondents within this category are classified as below.
 - Users – are those who access telecentres for farm and non-farm activities on a regular basis.
 - Non-users – are those who have never accessed telecentres since its inception in the village.
- II. 'Farmer household' – target respondent for case study: Three farmer households who individually also act as user category survey respondents forms the target respondents for the case studies in three different locations.

Initial findings

In this paper survey data analysis together with three case studies, one from three different categories of telecentres is discussed. The case studies from public and NGO type telecentres showcased disparate findings when compared with that of the private telecentre. The basic methods employed in case study included semi-structured interviews with the household members, observations and document analysis collected from project implementing agencies.

The findings include,

1. The private and public telecentres fits within 'for-profit' types and NGO telecentres fits in 'not-for-profit' types of telecentres.
2. The private telecentres are more vibrant in action when compared to public and NGO telecentres by periodical updating of the services and timely catering to the needs of users.
3. The public telecentres quoted in success stories during the start of the project has now reached the closure stage with fewer users, due to outdated technology, contents and lack of infrastructure etc.
4. The NGO telecentres are active in operation during the period of external donor agency funding and tend to be passive on later stages.
5. The public and NGO telecentres had more number of female users than male users compared to that of private telecentres, since former types were encouraged in villages among women self help groups.

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