

Yields and Market Access

ICT for farming and fishing in southern India

Mark West

Northwestern University

June 2008

CENTER FOR INFORMATION & SOCIETY
UNIVERSITY OF WASHINGTON



Evidence Narratives at the Center for Information & Society

This paper is part of a project at the Center for Information and Society to broaden and deepen our understanding of the impact of Information and Communication Technologies and Development (ICTD).

Our intention is to choose examples of ICTD implementations carefully and to write about them in such a way that each one, individually, illustrates important aspects of the featured settings and so that, taken together, the examples describe and reveal larger themes about core aspects of ICTD. It is our hope that by being systematic at every stage in the research process we are able to expedite the accumulation of credible and accessible information about the impact of ICTD on individuals and communities.

The ICTD field is filled with success stories extolling the benefits of access to Information Technology. As these often rhetorically powerful and memorable stories describe what can be achieved under the best of conditions, they may distort our understanding of what is achieved more typically, or may fail to describe aspects of their settings or strategies that were crucial to success.

Each setting in which ICTD projects are implemented is unique, but our experience is that with careful attention to the idiosyncrasies and commonalities across settings, patterns soon emerge which reveal more general themes about the qualities of settings, people, and programs that make a difference.

While tension may exist between an organization's desire to feature certain cases and the critical researcher's commitment to rigor, we believe that a methodology built on intensive questioning and attention to detail can yield stories that uncover and communicate an accumulation of credible evidence about why individual programs and larger strategies succeed and fail.

By crafting exemplary stories, by developing and disseminating useful methodological tools, and by promoting these techniques among NGO managers and grant makers, CIS aims to shape a research framework that can fulfill the needs of NGOs and donors, with stories that accurately represent realities in underserved communities, accumulating evidence that serves the ends of rigorous analysis while publicizing good work.

This paper is an example and an experiment in this methodological landscape. It is supported in large part by a grant from Microsoft Community Affairs. Direction, guidance and leadership has been provided by Andrew Gordon of the Daniel J. Evans School of Public Affairs at the University of Washington. Joe Sullivan, staff researcher at the Center for Information and Society, is the lead editor for this project.

Center for Information & Society
University of Washington
Box 354985
Seattle, WA 98195
+1 206.616.9101

cisinfo@u.washington.edu
www.cis.washington.edu

Sitting amid half a dozen computer workstations, and the schoolchildren pecking at their keyboards and gazing at cartoon images, Indira recalls the first day she stepped into the community technology center near her farm. “I didn’t even know this center was here. But it is next to the veterinary hospital, and one day my cow was sick,” Indira recalled. “I came from the veterinary hospital, and my friend was working here. I needed a phone number for the doctor, and my friend said, ‘why don’t you just look in the computer, we have all the information.’”

Indira’s first visit to the Village Knowledge Center (VKC) years ago was followed by many more. The visits slowly grew into collaborations – not only for information about her cattle, but also for finding new ways of earning income such as making and selling soaps in her community. Eventually Indira was hired at the VKC as a “knowledge worker,” one of hundreds of volunteer staff running scores of VKCs throughout the region of Tamil Nadu in southeast India.

Indira’s encounter with the VKC near her village, Nagapattinam, speaks to the value of ICT as a gateway to information valuable for farmers, but also to the value of the centers themselves as social hubs. The information exchanged at the VKCs can do more than help one sick cow based on a chance encounter. It is envisioned that the network can build up the struggling farming and fishing communities of rural India: large-scale farmers can better access market information and significantly increase their profits, and local fishermen can receive accurate data about fish stocks, making their voyages more profitable.

From Chance Encounters to a Regular Resource

The network of Village Knowledge Centers sprouting up at remote crossroads throughout Tamil Nadu is part of a concerted effort by the M. S. Swaminathan Research Foundation (MSSRF) to ensure that rural communities are not left behind by the knowledge revolution underway in Indian cities. Assisted by a long-term private endowment, support from the Indian government, and grants from partners like the Microsoft Unlimited Potential program, MSSRF has outfitted some one hundred VKCs: with the workstations and the knowledge workers, and also with an array of trainings, workshops, databases, and public address systems aimed at increasing agricultural knowledge and therefore wealth.



At many villages across rural Tamil Nadu, India, the one opportunity for access to a broad set of ICT resources is through local Village Knowledge Centers or VKCs. Here the staff and users of the Kalitheerthalkuppam VKC pose proudly at their center entrance.

According to Indira and three other knowledge workers interviewed at four VKCs visited, these ICT resources converge to offer a variety of significant financial benefits for farmers.

One windfall is learning about the timing of subsidies. The Indian government provides price supports to farmers as a key element of its managed agricultural economy. The price supports are only offered on certain specified days, however, depending on market conditions. Timely communication and access to this information is crucial. Farmers who don’t know about the subsidies, or learn

too late, suffer the consequences of lower payoffs for their labor. MSSRF regional manager Girija spoke with another knowledge worker at a second VKC – this one located in the village of Kalitheerthalkupam, a remote area surrounded by palm trees and rice paddies.

Girija and her colleague discussed the value of the centers as a resource for government information.

In the old days, before the VKCs, farmers would “find by chance that there are extra prices” for crops on certain days, they explained. “That was the case before the center was open, but now they do know that they can come to center and get whatever information they want, so they come. The larger scale farmers, who have a lot to sell, they always rely on the information they get from the center.” The result, explains Girija and her colleague, is a significant increase in farm income. The small farmers who work the land of the larger scale farmers also benefit: “They will get their wages on time,” the knowledge worker explains, and “if they get some profit, subsequently they will give some share to the farmers,” Girija adds.

The VKC-provided crop price information is accompanied by other knowledge of government assistance programs, knowledge otherwise inaccessible to many rural communities. Grants for cottage industries such as weaving, educational financial assistance, and support for new crop rotations are a few other government subsidies for farmer families. A sugar cane farmer near Pondicherry, Chinna Thambi, learned at his local VKC that beans were being subsidized by the state. The subsidies are a way to break out of the depressed market of sugar cane and rice which were being overproduced in the region. Chinna added the new crop to his rotation – green beans – and, according to Girija, three benefits emerged: the financial assistance for the crop itself, the improved fertility of his soil due to the rotation, and “he shared the information with his VKC, providing a model” for other farmers also burdened by the depressed market.

Fishing Industry Benefits?

The VKCs also target the fishing industry, a second major economic sector of rural Tamil Nadu. In addition to the database of relevant fishing information – assembled by researchers, theoretically augmented by VKC knowledge workers, and accessible at the VKC computer terminals – MSSRF has installed electronic sign boards with data useful for some fishermen. The sign boards report the latitude, longitude, and depth of fish stocks, and are updated every three days. The information is supplied by satellite links from a government ministry.



Local village governments provide the Indian NGO MSSRF with space to set up their Village Knowledge Centers (VKCs). This VKC is located inside the local Hindu temple dedicated to the god Ganesh.



Knowledge worker Indira first encountered her Village Knowledge Center when looking for medical assistance for a sick cow. Now, years later, she works at the VKC helping fellow villagers use ICT as a gateway to broader agricultural markets.

While the information is said to help factory trawlers who have the ability to sail far from shore in search of the fish stocks, there are difficulties with the sign boards according to MSSRF staff. First, the information doesn't differentiate the types of fish located, favoring the factory trawlers which simply scoop up whatever the nets come across. Second, smaller boats (those most in need) benefit less from the data because they can't reach the distances

reported by the information boards. And third, if the phone lines are down or the weather is cloudy, the signboards are useless. Despite these difficulties, some knowledge workers – such as Vanvidim of the VKC in the fishing village of Veerampattinam – maintain that the fishermen do come, and do get valuable information.

A Community Hub for Income Generation

Saroja, a knowledge worker at the VKC in Pillaiyakuppam, reports plenty of traffic through her center: “farmers come very often, for weather information, rice prices” and as representatives of their families to get other information. “Exam results, educational addresses, and job applications” are other main reasons for stopping in the VKCs, says Saroja.

A significant draw is the ICT training programs offered to thousands of young people across Tamil Nadu through Microsoft UP-supported programs. The trainings are tough, with a high attrition rate – about thirty percent of those who start make it all the way through, and pass the final exam. The program stretches over many months as students fit class work into daily work and chores. Saroja herself is a graduate of one of these intensive, 120 hour training programs. She was so enthusiastic about attending that she managed to make nearly every class, despite having an infant at home. The only days Saroja missed were for a pretty valid excuse: “I had to give the baby to my mother, and one day she drank gasoline and I had to miss three days while at the hospital.” Together, the MSSRF databases, training programs, and timely crop and fishing information (when functioning), have created connections and opportunities otherwise unavailable to these rural communities.

The weaving subsidies discovered through Indira's VKC near Nagapattinam were applied for by fifty local women, women who now have a new career opportunity. Indira's own small business making and selling soaps – based on resources discovered through the VKC – has brought substantial income to herself and others in the village. And the benefits of a thriving social hub, equipped with information resources, continue to accrue. Girija and the knowledge worker at the Kalitheerthakupam VKC recall a pair of farmers who met at the center. One was using the database to search for remedies for a problem afflicting his mango plantation: the flowers were dropping early, risking the entire harvest. The

other VKC user was a coconut farmer who comes to the center often, had taken a course in Microsoft Word, and who “normally comes into the center to give trading information, and advice on agricultural banking,” recalled the knowledge worker.

The knowledge worker went on to explain: “the person who was looking for a solution to the mango flower problem thought that another farmer might know some information, so while he was browsing looking for information he asked another farmer for advice.” The coconut farmer had experienced the problem before, and passed on his solution. “He asked the man to take ten liters of water and three liters of buttermilk and dilute it in the water, and it has to be sprayed very early in the morning on the flower bunches so this problem can be fixed,” she said.

While some impacts such as the pricing dates for large farmers have large scale impacts, seemingly smaller-scale encounters can also bear fruit. According to the Kalitheerthalkupam knowledge worker, the mango flower loss affects “the whole harvesting process, so the yield is going to be less.” For a family dependent on such yields – and with the price of rice tripling from 20 rupees per kilo to 60 rupees in 2008 – any disruption of the harvest can be a great strain for rural Indian families. The VKCs, though still finding their way, seem to be a place where many farming families of Tamil Nadu can turn for help.

AUTHOR

Mark West is an ethnographer whose international research and work in the development field is based in South Asia and in Central and Eastern Europe. Mark's fieldwork has centered on the use of critical ethnography to bring a more participatory connection between local communities and international development projects.

In South Asia, Mark's research and work focus on the resistance networks of rural Dalits, or "untouchables," with a particular interest in the grassroots campaigns of barefoot lawyers. In Central and Eastern Europe he has worked to improve the transparency and communications of newly developing court systems. Since 2007, Mark has begun conducting fieldwork with the CIS on the economic and social impact of ICT programs in marginalized communities around the world.

Mark has served as a rule of law consultant with the United States Agency for International Development in Eastern Europe, and as a Human Rights Field Mentor with Stanford LawSchool. He holds a J.D. from the University of Washington, and is a Ph.D. Candidate in the School of Communication and Department of Anthropology at Northwestern University.