

Going Direct to the Farmer: ITC's e-choupal initiative

Ravi Anupindi

Michigan Business School, University of Michigan

ITC Group is a large diversified company with interests in tobacco, hospitality industry, and more recently in consumer goods. The International Business Division (IBD) of the ITC Group is responsible for procurement, processing, and export of agricultural commodities including soybean, wheat, shrimp and coffee.

Over the past few years ITC-IBD has created an IT-enabled rural channel (called *e-choupal*) that today touches 2500 villages. Until now this channel has primarily been used to drive enormous efficiency in the procurement of commodities resulting in value creation for both the company and the farmer. In addition the channel has created enormous social value by making Internet penetration and global commercial engagement possible in a part of the world where infrastructural, economic and social limitations had made these impossible

Last year a team of Michigan MBA students worked on a project w/ Prof. C.K. Prahalad to understand and document this network. A brief write-up based on this report is attached¹. This year, ITC approached us with a project to assist them in the next stage in the evolution of the network which will attempt to leverage the procurement infrastructure towards rural distribution of consumer products. Distribution is currently limited to a few agri-inputs. ITC-IBD, however, is now exploring expansion of distribution capabilities to include a broader range of products tailored to rural Indian conditions. The objective is to reach rural markets with populations of approximately 5000.

The attached document gives a brief overview of the *e-choupal* system. I have also enclosed an article that appeared in *NY Times*. Since most of the audience may not be familiar with the *e-choupal* system, I will focus on presenting the highlights of this innovative IT-enabled channel. The following questions will allow you to focus your thoughts on the *e-choupal* system and how we could use to for teaching / research.

1. What are the most critical elements of the *e-choupal* system? What are some challenges in implementing this model?
2. Is the model sustainable? Can you think of alternative methods to achieve similar objectives?
3. How would you leverage the channel for distribution / retail?
4. What are potential research issues for the supply chain community?

¹ A detailed version of the report is also available. Please email me. HBS also recently wrote a case on this topic; see HBS 6-604-016.



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ITC's E-Choupal and Profitable Rural Transformation

Placing computers with internet access in rural villages in India.

Agriculture is vital to India. It produces 23% of GDP, feeds a billion people, and employs 66% of the workforce. Because of the Green Revolution, India's agricultural productivity has improved to the point that it is both self-sufficient and a net exporter of a variety of food grains. Yet most Indian farmers have remained quite poor. The causes include remnants of scarcity-era regulation and an agricultural system based on small, inefficient landholdings. The agricultural system has traditionally been unfair to primary producers. Soybeans, for example, are an important oilseed crop that has been exempted from India's Small Scale Industries Act to allow for processing in large, modern facilities. Yet 90% of the soybean crop is sold by farmers with small holdings to traders, who act as purchasing agents for buyers at a local, government-mandated marketplace, called a mandi. Farmers have only an approximate idea of price trends and have to accept the price offered them at auctions on the day that they bring their grain to the mandi. As a result, traders are well positioned to exploit both farmers and buyers through practices that sustain system-wide inefficiencies.



ITC is one of India's leading private companies, with annual revenues of US\$2 billion. Its International Business Division was created in 1990 as an agricultural trading company; it now generates US\$150 million in revenues annually. The company has initiated an e-Choupal effort that places computers with Internet access in rural farming villages; the e-Choupals serve as both a social gathering place for exchange of information (choupal means gathering place in Hindi) and an e-commerce hub. What began as an effort to re-engineer the procurement process for soy, tobacco, wheat, shrimp, and other cropping systems in rural India has also created a highly profitable distribution and product design channel for the company—an e-commerce platform that is also a low-cost fulfillment system focused on the needs of rural India. The e-Choupal system has also catalyzed rural transformation that is helping to alleviate rural isolation, create more transparency for farmers, and improve their productivity and incomes. This case analyzes the e-Choupal initiative for soy; efforts in other cropping systems (coffee, wheat, and shrimp aquaculture), while different in detail, reflect the same general approach.

Business Model

A pure trading model does not require much capital investment. The e-Choupal model, in contrast, has required that ITC make significant investments to create and maintain its own IT network in rural India and to identify and train a local farmer to manage each e-Choupal. The computer, typically housed in the farmer's house, is linked to the Internet via phone lines or, increasingly, by a VSAT connection, and serves an average of 600 farmers in 10 surrounding villages within about a five kilometer radius. Each e-Choupal costs between US\$3,000 and US\$6,000 to set up and about US\$100 per year to maintain. Using the system costs farmers

nothing, but the host farmer, called a sanchalak, incurs some operating costs and is obligated by a public oath to serve the entire community; the sanchalak benefits from increased prestige and a commission paid him for all e-Choupal transactions. The farmers can use the computer to access daily closing prices on local mandis, as well as to track global price trends or find information about new farming techniques—either directly or, because many farmers are illiterate, via the sanchalak. They also use the e-Choupal to order seed, fertilizer, and other products such as consumer goods from ITC or its partners, at prices lower than those available from village traders; the sanchalak typically aggregates the village demand for these products and transmits the order to an ITC representative. At harvest time, ITC offers to buy the crop directly from any farmer at the previous day's closing price; the farmer then transports his crop to an ITC processing center, where the crop is weighed electronically and assessed for quality. The farmer is then paid for the crop and a transport fee. "Bonus points," which are exchangeable for products that ITC sells, are given for crops with quality above the norm. In this way, the e-Choupal system bypasses the government-mandated trading mandis.

The e-Choupal model demonstrates that a large corporation can play a major role in recognizing markets and increasing the efficiency of an agricultural system, while doing so in ways that benefit farmers and rural communities as well as shareholders.

Farmers benefit from more accurate weighing, faster processing time, and prompt payment, and from access to a wide range of information, including accurate market price knowledge, and market trends, which help them decide when, where, and at what price to sell. Farmers selling directly to ITC through an e-Choupal typically receive a higher price for their crops than they would receive through the mandi system, on average about 2.5% higher (about US\$6 per ton). The total benefit to farmers includes lower prices for inputs and other goods, higher yields, and a sense of empowerment. The e-Choupal system has had a measurable impact on what farmers chose to do: in areas covered by e-Choupals, the percentage of farmers planting soy has increased dramatically, from 50 to 90% in some regions, while the volume of soy marketed through mandis has dropped as much as half. At the same time, ITC benefits from net procurement costs that are about

2.5% lower (it saves the commission fee and part of the transport costs it would otherwise pay to traders who serve as its buying agents at the mandi) and it has more direct control over the quality of what it buys. The system also provides direct access to the farmer and to information about conditions on the ground, improving planning and building relationships that increase its security of supply. The company reports that it recovers its equipment costs from an e-Choupal in the first year of operation and that the venture as a whole is profitable.

In mid-2003, e-Choupal services reached more than 1 million farmers in nearly 11,000 villages, and the system is expanding rapidly. ITC gains additional benefits from using this network as a distribution channel for its products (and those of its partners) and a source of innovation for new products. For example, farmers can buy seeds, fertilizer, and some consumer goods at the ITC processing center, when they bring in their grain. Sanchalaks often aggregate village demand for some products and place a single order, lowering ITC's logistic costs. The system is also a channel for soil testing services and for educational efforts to help farmers improve crop quality. ITC is also exploring partnering with banks to offer farmers access to credit, insurance, and other services that are not currently offered or are prohibitively expensive. Moreover, farmers are beginning to suggest—and in some cases, demand—that ITC supply new products or services or expand into additional crops, such as onions and potatoes. Thus farmers are becoming a source of product innovation for ITC.

Development Benefit

The e-Choupal system gives farmers more control over their choices, a higher profit margin on their crops, and access to information that improves their productivity. By providing a more transparent process and empowering local people as key nodes in the system, ITC increases trust and fairness. The increased efficiencies and potential for improving crop quality contribute to making Indian agriculture more competitive. Despite difficulties from undependable phone and electric power infrastructure that sometimes limit hours of use, the

system also links farmers and their families to the world. Some sanchalaks track futures prices on the Chicago Board of Trade as well as local mandi prices, and village children have used the computers for schoolwork, games, and to obtain and print out their academic test results. The result is a significant step toward rural development.

Key Lessons

The e-Choupal model demonstrates that a large corporation can play a major role in recognizing markets and increasing the efficiency of an agricultural system, while doing so in ways that benefit farmers and rural communities as well as shareholders. The case also shows the key role of information technology—in this case provided and maintained by a corporation, but used by local farmers—in helping bring about transparency, increased access to information, and rural transformation. Critical factors in the apparent success of the venture are ITC's extensive knowledge of agriculture, the effort ITC has made to retain many aspects of the existing production system, including maintenance of local partners, the company's commitment to transparency, and the respect and fairness with which both farmers and local partners are treated.

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To read another Global Envision article about technology in India, see [Simputer: Computers for the Poor or an Idealistic Dream?](#)

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Indian Soybean Farmers Join the Global Village

By AMY WALDMAN

TIHI, India — At least once a day in this village of 2,500 people, Ravi Sham Choudhry turns on the computer in his front room and logs in to the Web site of the Chicago Board of Trade.

He has the dirt of a farmer under his fingernails and pecks slowly at the keys. But he knows what he wants: the prices for soybean commodity futures.

A drop in prices on the Chicago Board, shown in red, could augur a drop in prices here, meaning that he and fellow soybean farmers should sell their crop now. An increase there argues that the farmers should wait for prices to rise.

"If it goes up there, it goes up here," Mr. Choudhry said. The correlation is rough but real. Real, too, is the link between farmers in rural central India and around the globe, thanks to a company's innovation.

The concept is the e-choupal, taken from the Hindi word for village square, or gathering place. The twist is the "e": providing a computer and Internet connections for farmers to gather around. Mr. Choudhry supervises the project for Tihi and several nearby villages.

E-choupal allows the farmers to check both futures prices across the globe and local prices before going to market. It gives them access to local weather conditions, soil-testing techniques and other expert knowledge that will increase their productivity.

Nonprofit organizations have tried similar initiatives but none have achieved anywhere near the scale that e-choupals have. There are now 1,700 in this state, Madhya Pradesh, and 3,000 total in India. They are serving 18,000 villages, reaching up to 1.8 million farmers.

As a result, say those who have studied the concept, the company behind e-choupals, ITC Ltd., has done as much as anyone to bridge India's vast digital divide: most of its one billion people have no access to the technology developed by some of their fellow Indians, whether in Bangalore or Silicon Valley.

E-choupals may offer a model for all developing countries.

"It is a new form of liberation," C. K. Prahalad, who led a case study on e-choupals for the University of Michigan Business School, said of the transparency and access to information they give farmers.

More than two-thirds of India's people still depend on agriculture for their livelihoods. With little chance of the huge manufacturing boom that has employed many rural poor in China, the challenge is to increase farmers' productivity.

Even more tantalizing, ITC now has the means to reach into some of India's 600,000 villages, where 72 percent of the people live and where the greatest potential markets lie. Most businesses never venture to an area with fewer than 5,000 people, said ITC's chairman, Y. C. Deveshwar.

Eventually the company expects to sell everything from microcredit to tractors via e-choupals — and hopes to use them to become the Wal-Mart of India, Mr. Deveshwar told shareholders this year.

"We are laying infrastructure in a sense," Mr. Deveshwar said. Sixty companies have already taken part in a pilot project to

sell services and goods, from insurance to seeds to motorbikes to biscuits, through ITC.

By overcoming the infrastructure problems that have hampered progress in India's villages in the past — ITC decided to use satellites and solar panels, for instance, to sidestep the state's shaky power supply and lack of phone lines — and by offering full Internet service on the computers, the company has instantly broadened villagers' horizons.

"We never dreamed of this, that our village would be connected to the world," said Mulchin Sath, Mr. Choudhry's father and also a farmer.

E-choupals were born in 2000 from ITC's determination to capture more of the soybean crop, which it turns into oil to sell in India and into animal feed to export. In purchasing soya, it has long been dependent on a static, archaic system: Farmers sold to village traders or went to government markets, settling for whatever price was offered. ITC then had to buy from the traders or markets, with little quality control and high transaction costs.

The idea of the e-choupals was to allow the company to buy more directly from farmers; e-choupals allow farmers to check prices the night before, and then decide whether they want to sell directly to the company the next day.

The company weighed trying to deliver information through television or radio, but given the variety of Indian farms and farmers — knowledge, soil conditions and weather all vary immensely — it thought an Internet channel would allow for more tailored information.

E-choupals also provide information that will increase farmers' productivity and income. An Indian soybean farmer is one-third as productive as an American one, said David Upton, co-author of a case study of e-choupals for Harvard Business School.

Raising farmer incomes was an important goal. S. Shivakumar, 43, the head of the company's international business division and the originator of e-choupals, said he had long been frustrated by how a lack of opportunity limited the ambitions and achievements of Indian farmers.

"This has been a clear commercial initiative with social good in mind," he said.

Mr. Deveshwar agreed, saying he found it hard to become enthusiastic about making a rich man richer, but felt very motivated to make a poor farmer less so.

Besides computers, ITC introduced other efficiencies, like electronic weighing, which is more precise than the manual weighing at government markets. Eventually farmers, heavily dependent on the monsoon, may be able to sell futures on their own crops online, thus spreading their risk.

E-choupals have already reduced ITC's transaction costs and the quality of the soybeans it buys is better. As e-choupals continue expanding to other crops like wheat, the returns will be greater.

E-choupals show that "in an emerging economy, a profitable enterprise can deliver social good without an unnecessary trade-off between the two," Mr. Upton said.

The company has also shown that technology can be deployed even in areas with substantial illiteracy. ITC selects a lead farmer, or sanchalak, to run each e-choupal, which serves three to four villages. He is meant to be literate, progressive, young, with an entrepreneurial spark and a good reputation.

Mr. Choudhry, the lead farmer here, said he took an oath in front of the whole village to "work for the welfare of farmers with honesty and integrity." Farmers from his and nearby villages call or stop by to check prices or exchange information. For his efforts, he gets one-half of 1 percent commission on whatever farmers in his area sell to ITC.

Last year, Mr. Choudhry earned 14,000 rupees, about \$300, in commission. This year, he has earned that much in one month.

"Our underlying assumption that farmers are entrepreneurial has proved true," Mr. Shivakumar said.

Mr. Choudhry has only a middle-school education, and says working with the computer was difficult at first. His 16-year-old son handles most of the e-mail, sending messages about crop diseases and communicating with other sanchalaks.

The venture has not been without challenges. The company had to convince states to waive laws, born of India's protectionist socialist past, that require farmers to sell their produce to government markets.

It has also run up against India's still entrenched caste system, with some communities demanding two computers so castes would not have to mix. ITC refused to yield.

But most of its sanchalaks are from the dominant caste in a village, which is rarely a lower caste, because they must command respect. Mr. Shivakumar said in some cases, low-caste farmers still did not have access to e-choupals, buttressing some critics' concern that technology may just reinforce existing inequalities.

For now, however, e-choupals seem to be reducing inequality of access to information between some rural poor and the urban middle class. Monitoring data show that 70 percent of the activity on the ITC computers does not involve the choupal, Mr. Shivakumar said, and exploration of the Internet has just begun.

In this village, schoolchildren have already discovered they can check examination results online, and Mr. Choudhry's father and son have found Web versions of Hindi newspapers. In Karnataka State, ITC will soon try allowing farmers to gain access to government land records through e-choupals.

In Chapra village, Atul Singh, 17, the son of the sanchalak, has learned how to download music from indiafm.com and to chat on Yahoo.

"How r u?" he typed, as his screen informed him that "asian-honey pie has joined the room." A flood of obscenities from a hacker then filled the screen, as the mellifluous cooing of a Hindi song, "How Unfaithful You Are, My Dear Friend," filled the room.