ITC e-Choupal



Innovation for Large Scale Rural Transformation

A Success Story



Asia-Pacific Association of Agricultural Research Institutions

c/o FAO Regional Office for Asia and the Pacific Bangkok, Thailand

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Foreword

India's agriculture sector has made great strides since the country's independence. Over 70 per cent of India's population is rural and majority of this population demands on agriculture and related activities for their livelihood. Vast majority of Indian farmers are small and marginal and continue to have a subsistence existence facing several constraints such as small farm holdings, increasing input costs, low risk taking ability, poor knowledge levels, adverse soil and rainfall conditions, depleting water resources, poor access to credit and banking, limited access to technology, poor marketing and storage infrastructure, changing climate, and volatility in food prices and international markets. In addition, the farmers are generally compelled to sell their produce through mandis - a market channel which lacks transparency and the farmers have no direct access to market information and are unable to get the optimum price of their produce and the premium offered on quality.

ITC has spearheaded and integrated Rural Development Program to empower farmers and raise their incomes. The strategy of this intervention is broadly centred around four distinct dimensions, which together enable a comprehensive development of the rural ecosystems. These dimensions include information and knowledge dissemination, access to quality inputs and markets, generating supplementary incomes, and natural resource augmentation. Farmers are provided with critical information and relevant knowledge of farm productivity, prices and markets through ITC e-Choupal. This platform also enables access to quality inputs for better productivity besides expanding their reach to markets. Initiatives such as livestock development and women's economic empowerment create avenues for supplementary

non-farm incomes to protect against agri-income volatility as well as build capacities for investment. Watershed Development and Afforestation Programs augment natural resources to enable higher productivity, create green cover and restore soil health. Taken together, the ITC Choupal programs adequately address the needs and concerns of communities engaged in agriculture and have a transformational impact in many areas of rural India.

The publication on "ITC e-Choupal: Innovation for Large Scale Rural Transformation: A Success Story" embraces useful information on several important aspects of ITC's initiative on e-Choupal: (i) a farmer's experience on benefits of e-Choupal, (ii) challenges of Indian Agriculture, (iii) ITC's strategy for sustainable and inclusive growth, (iv) ITC Choupal integrated rural development strategy, (v) ITC e-Choupal providing information, knowledge and quality inputs and expanding market access, (vi) supplementary income generation through livestock development, women's empowerment, and vocational training, and (vii) augmenting natural resources through watershed development and social and farm forestry.

I am sure, this publication will be immensely useful to the policy makers, planners, researchers, extension officials, farmers and farming communities and other stakeholders. I greatly appreciate the sincere efforts made by Ms. Joyoti Chaliha and Ms. Shoma Bhattacharya of Shape, Kolkota in preparing this Success Story on a very relevant and important aspect for the benefit of all stakeholders in different countries in the Asia-Pacific region. The efforts made by Dr Bhag Mal, Senior Consultant, APAARI in editing the publication are also much appreciated.

Raj Paroda Executive Secretary

APAARI

Acronyms and Abbreviations

APMC Agriculture Produce Marketing Committee

BAIF Bhartiya Agro-Industries Foundation

CA Commission Agent

CDC Cattle Development Center

CDM Clean Development Mechanism

FMCG Fast Moving Consumer Goods

FSC Forest Stewardship Council

GDP Gross Domestic Product

ICT Information and Communication Technology

IQF Individually Quick Frozen

ITC ABD ITC Agri-Business Division

IWDP Integrated Watershed Development Program

MGNREGA Mahatma Gandhi National Rural Employment

Guarantee Act

MT Metric Ton

NABARD National Bank for Agriculture and Rural Development

NGO Non-Governmental Organization

PDS Public Distribution System

R&D Research and Development

SHG Self-Help Group

UNFCCC United Nations Framework Convention on Climate

Change

USAID United States Agency for International Development

VSAT Very Small Aperture Terminal

WWF-GFTN World Wildlife Fund - Global Forest & Trade Network

1 Introduction

Using information technology to reach out to even small and marginal farmers across India, ITC's e-Choupal initiative exemplifies the Company's innovative approach to rural development and its corporate strategy of linking business purpose to social goals. ITC e-Choupal empowers farmers with relevant, up-to-date information on weather forecasts, best practices, and most importantly, on prices - knowledge that expands choice, enables them to make informed decisions and improves risk management. This information is available right at the village level, through ITC's custom-designed website accessible via computers placed in the homes of selected farmers. There are currently 6,500 such 'internet kiosks' – a digital network used by four million farmers across the country that is helping them to raise quality, productivity and incomes. As a platform that enables ITC to engage more directly with farmers, it supports a more reliable and efficient supply chain critical to the Company's competitive edge as one of India's largest agribusiness entities. ITC's Branded Packaged Foods Business – one of the fastest growing in the country – also gains significantly from this unique sourcing capability.

"It is axiomatic that high rates of economic growth cannot be sustained without putting in place an effective growth strategy for rural India. Growth in rural incomes is both a means and an end of India's economic development. Growth must be inclusive and sustainable to free millions of disadvantaged citizens from the indignity of poverty."

Y C Deveshwar, Chairman, ITC Limited

ITC e-Choupal is a continuously evolving platform, embracing new products, technologies and services in tune with the changing needs of rural India, serving agricultural communities as both producers and consumers. From agri-related products and solutions to consumer goods and now moving into new areas like healthcare, the e-Choupal channel is enabling ITC and other players to co-create markets with rural communities. ITC e-Choupal is part of the multi- dimensional interventions put in place by the ITC Choupal Rural Development Program. Aiming to create stable agricultural regimes, support sustainable off-farm livelihoods and improve social infrastructure, the Program's other components include watershed development, afforestation, livestock development, women's economic empowerment as well as support for primary education and vocational training. Reaching out to thousands of communities across India, the ITC Choupal Rural Development initiatives are working together to transform rural ecosystems into vibrant economic organizations.

2 A Farmer's Experience

Kishore Singh is a farmer in Narsingkheda village in Madhya Pradesh, a state known as 'the heart of India' due to its central location. In many ways, Kishore is much like millions of farmers across the country – forging a livelihood from the soil like most of his family has done before him, a livelihood largely dependent on the clemency of natural elements – the soil, the sun, and perhaps most critically of all, the rain, with little or only intermittent support from the government or anyone else. Yet, it would be true to say that Kishore is set apart somewhat – one among the growing number of Indian farmers who have seized available opportunities and reaped the benefits to bring greater security to their livelihood, farmers whose hallmark could be said to be their progressiveness, their willingness to engage with the new innovations. Kishore got a good opportunity in 2006, when the ITC e-Choupal was opened in his village, Narsinghkheda in Madhya Pradesh (Fig. 1).

In Hindi, 'choupal' means meeting or gathering place, and is a common term to describe an age-old institution in Indian villages – an informal gathering, most likely in the evening, a place to catch up on news, share experiences, discuss events in the village and the world beyond. The ITC e-Choupal is essentially a space in the home of a fellow villager in which a computer with internet connectivity is placed (Fig. 2). This farmer, an educated person, is trained by ITC to assist other farmers to make use of the Company's specially designed agricultural website. Although the majority of Kishore's fellow villagers were familiar with the idea of computers, it was the first time they considered the possibility that they could use it to their advantage as farmers.



Fig. 1. Kishore Singh, e-Choupal Farmer, Narsinghkheda village, Sehore district, Madhya Pradesh

The e-Choupal is an important component of ITC's multidimensional Integrated Rural Development Program that has evolved from its deep understanding of the challenges and opportunities inherent in the farm sector. Kishore and his community of farmers are empowered in a variety of ways through the comprehensive ITC Choupal Programs. Critical information on prices, weather and markets enables them to make better choices whilst knowledge provided on better farming practices and access to quality inputs helps them increase yields. The ITC e-Choupal (Fig. 2) also expands their reach to a larger number of markets in the region thereby broadening the choices available to them. Recognizing that Kishore and his fraternity have to face tremendous volatility in incomes due to the inherent risks associated with agriculture, ITC has also spearheaded initiatives to diversify income streams and create supplementary farm incomes through its Livestock Development and Women's



Fig. 2. Farmers at the ITC e-Choupal kiosk in Narsingkheda village, Sehore district, Madhya Pradesh

Economic Empowerment Programs. This improves farmers' capacity to make further investments in agriculture and to take advantage of the knowledge gained on improved agri-practices. In addition, ITC also assists local communities to create common assets which work towards improving farm productivity through its Integrated Watershed Development Program. The Program helps to augment natural resources and enables farmers to sustainably manage the local natural resource base.

Kishore admits that he and several of his fellow villagers were less sceptical than they might have been of the ITC e-Choupal system as they had already interacted with ITC a few years ago, forming a group to build a stop dam with the Company's support. The dam was instrumental in enabling them to raise two crops in a year. But, it is e-Choupal that has really put them firmly on an upward trajectory. Kishore is a regular user, utilizing the gamut of services

provided through the platform. He accesses the website for information on weather, on best practices, and most crucially, on daily prices those offered at the nearby mandis (government regulated wholesale markets) and those offered by ITC. Usually, Kishore prefers to sell to ITC, at the Choupal Saagar not too far from his village - a hub that functions as ITC's procurement-cumwarehousing center and also offers a number of other facilities under one roof, such as a shopping center. Here, electronic weighing and scientific quality testing ensure that he gets full value for his produce. The journey and transaction take the better part



Fig. 3. A farmer receiving payment at the Choupal Saagar procurement hub

of the day – they leave around 10 AM in the morning and are back home by about 5 PM, but they return with full payment (Fig. 3) – a radical departure from standard practice at the *mandis*.

Output from Kishore's farm has almost doubled over the last 10 years – from 5-6 quintals¹ of wheat and soya per acre to about 10-12 quintals of wheat and 8-9 quintals of soya, a productivity increase that he credits to the better seeds, higher inputs and improved farming methods he has been able to adopt with access to e-Choupal information and services. He also grows sugarcane that he converts to molasses. He has switched over to organic fertilizer – NADEP² and vermicompost – which he produces on his farm. In his

 $[\]frac{1}{1}$ 1 quintal = 100 kilograms

² NADEP is a method of composting organic materials developed by N D Pandharipande, a farmer from Maharashtra. It is a method widely used throughout India.

opinion, this results in both healthier crops and also higher yields. With his growing income, he has steadily invested in mechanization, and owns his own tractor, a mechanized plough, seed drill and two threshing machines, one of which he hires out on lease. He has also invested in cross-bred livestock, utilizing the services of the local ITC- supported Cattle Development Center that opened a few years ago. His herd of about 10 Holstein-Friesian cows and Murrah buffaloes provide a steady income from milk sales which means he is able to hold his produce and can sell only when the time is right, to fetch higher price.

The farmers are provided necessary training in well organized field training sessions (Fig. 4). Kishore is determined to keep up the momentum. He attends classes offered through Choupal Pradarshan Khet – e-Choupal's Training and Extension Services Program – to learn about the latest agricultural techniques, and has hosted



Fig. 4. A field training session in progress

demonstration plots on his farm. Kishore's hard- earned prosperity has put him on a relatively firm footing. But, his succinct prescription for India's future echoes that of experts and leaders: "Until the lot of farmers improves, until rural India's progress is ensured, and the needs of the marginalized are met, Bharat or India cannot make progress. For India to move forward, the progress on both sides must match." This could in a way be considered as the core objective of e-Choupal itself – an initiative founded on the idea that more equality, more choice and more partnership lead to a more level playing field that ultimately translates to better economics and sharper competitiveness, equipping all players in the agricultural value chain to respond more effectively to a highly demanding, fast-changing and heterogeneous market.

3 Challenges of Indian Agriculture

To understand ITC's compunctions in designing e-Choupal, it is necessary to assess what has and has not changed in the Indian agricultural context. While India's agriculture sector has made great strides since the country became independent in 1947, it continues to be beset with paradoxes. On one hand, there is the spectacular turnaround post-independence - moving from an era of crippling food shortages and dependence on food imports, to the 'Green Revolution' in the mid-1960s and achieving self-sufficiency in foodgrain production, to becoming a leading net exporter of major foodgrains by the mid-1970s. India is today a global agricultural powerhouse - the world's largest producer of pulses, spices and milk, and the second largest producer of rice, wheat, cotton, sugarcane, farmed fish, sheep and goat meat, vegetables and tea. The government views current levels of agricultural production and foodgrain availability as being satisfactory especially in view of the fact that its foodgrain stock is almost double the amount required for the country's Public Distribution System (PDS).

On the other hand is the fact that Indian farmers – the vast majority of whom are small and marginal – have remained poor and continue to eke out a subsistence existence. Over 70 per cent of India's 1.27 billion population is rural and the overwhelming majority of this population depends on agriculture and related activities for their livelihood. Agriculture's contribution to national gross domestic product (GDP) has shown a steady downward trend – from around 50 per cent in the 1950s to current level of about 14 per cent³. This

³ Agricultural Outlook and Situation Analysis Reports, Quarterly Agricultural Outlook Report, October–December 2013, Preface

is attributed to being a consequence of the country's transition from an agrarian to a manufacturing and service economy. At the same time, the agriculture sector remains critical to the nation's continued economic progress. The principal income source for about half of India's 1.27 billion population, an essential link in the supply chain of a number of industries, it is the engine of India's rural economy.

Considering India's agricultural landscape, geographical dispersion, fragmentation and heterogeneity continue to be its three fundamental characteristics. With over 6,00,000 villages and a population density of around 300 persons per square kilometre, connectivity, both physical and informational, between farmers and markets is adversely impacted. India's cultivated acreage has plateaued at around 140 million hectares⁴ for the past 40 years. Yet the number of farmers has increased from about 70 million to 140 million⁵. Though figures vary from state to state, farm sizes have shrunk from approximately 2.6 hectares in the early 1970s to 1.6 hectares⁶ currently. This fragmentation has pushed up farm production and management costs, jeopardizing the future of these landholdings as viable farm units. Simultaneously, per unit cost of cultivation continues to rise as farmers attempt to coax higher yields from lands exhausted with years of overuse. Heterogeneity in terms of farmers covers a gamut of variables - landholding size, investment and risk taking abilities, knowledge levels, soil and rainfall conditions, cash flow requirements, etc.

More than half of India's net sown area is under rainfed agriculture, practiced by marginal smallholders in areas where the natural resource base is already fragile and under increasing stress, in particular

 $[\]overline{\ }^4$ http://articles.economictimes.indiatimes.com/2013-08-24/news/41444004_1_indianagriculture-one-crore-farmers-farmers- capacity

⁵ http://articles.economictimes.indiatimes.com/2013-08-24/news/41444004_1_indian-agriculture-one-crore-farmers-farmers- capacity

⁶ http://www.thehindubusinessline.com/opinion/root-causes-of-farm-distress/article4746830.ece

water resources as the most immediate requirement for successful harvests. Adding to these negatives is a host of other exacerbating factors: the woeful lack of rural infrastructure – be it physical (road connectivity, electricity, teledensity), social (health, education) or institutional (access to formal credit and banking), limited access to technology, underdeveloped and inefficient extension services, inadequate marketing and storage infrastructure, increasing input costs, real concerns about climate change, uncertainties associated with volatility in food prices and international markets, and low public investment in the sector. Then there is the continuance of stereotyped policies that are unable to address rapidly changing domestic and global scenarios. Together they create an asymmetry of opportunity and work against the Indian farmer who continues to stay disconnected from the wider value chain of which he is a vital part.

Even after contending with all these factors, farmers are generally compelled to sell their produce through *mandis* – a market channel which lacks transparency and is heavily loaded in favour of traders who are licensed to operate there as buyers. Farmers have no direct access to market information and are unable to exploit price trends. As a result, they find it difficult to time sales so as to receive optimum prices for their crop. Since no premiums are offered on quality, they have little incentive to upgrade. Facing severe constraints in both production and marketing systems, farmers end up trapped in a vicious cycle of low yields–low returns–low investments–low risk taking ability, intensified by fragmented landholdings, population pressure, weak infrastructure, lack of access to knowledge, technology, inputs and credit, all of which plays its part in perpetuating unacceptable levels of endemic poverty.

The country's present position as the world's fourth largest economy and its significant progress in reducing absolute poverty notwithstanding, India still accounts for a third of the world's poor.

The majority of this number is rural, depends on agriculture and allied activities for their livelihood. Given India's continuing rise in population, rapid shift in food consumption patterns and the Government's goals of ensuring food security, inclusive growth, alleviating poverty and bridging the rural-urban divide, the continued low growth in the sector (currently around 3 per cent) is a matter of serious concern.

4 ITC's Strategy for Sustainable and Inclusive Growth

Nearly a decade and half ago, ITC redefined its corporate vision – putting sustainability and inclusive growth at the top of its agenda whilst committing itself to measuring performance along triple bottom line dimensions. It is ITC's belief that businesses must proactively promote strategies for inclusive and equitable growth, especially in India, where enormous global challenges like social inequity and environmental degradation assume even more complex dimensions. ITC places equal emphasis on building economic, environmental and social value, and it has crafted innovative models that simultaneously generate sustainable livelihood opportunities and renew ecological resources, supported by the bedrock of solid financial performance.

This abiding vision to create enduring value for all stakeholders and subserve national priorities has powered a multi-pronged strategy to enhance economic contribution through the creation of multiple drivers of growth and world-class Indian brands, to enable benchmarked environmental practices within its units for climate change mitigation and adaptation, as well as to contribute to large scale livelihood creation and natural resource augmentation through its integrated rural development programs.

ITC's commitment to being an engine of growth for the Indian economy and generating larger societal value is manifest in the creation of multiple drivers of growth, carefully selecting business areas in line with emerging opportunities in the evolving Indian market and in which it can leverage expertise, competencies and domain knowledge from its range of businesses. This strategy has fuelled ITC's entry into

the consumer goods sector in several new categories – branded packaged foods, personal care, branded apparel and lifestyle retailing, education & stationery products, safety matches and incense sticks. Since entering these businesses in and around 2000, ITC has rapidly moved into a leadership position in these sectors of the Indian market and created several top national brands across categories. By investing in building these world-class Indian brands, ITC contributes to national development by creating, capturing and retaining value in the country.

To address the challenges of environmental degradation, ITC constantly strives to minimize its environmental impact – from leading-edge manufacturing processes in its factories to building the largest, greenest hotels in India, and making it a priority to clean up the eco-footprint of all aspects of its operations as far as possible as well as expanding its renewable energy portfolio. To foster sustainable and inclusive growth, ITC has spearheaded an Integrated Rural Development Program (Fig. 5) to empower farmers and raise rural incomes. The strategy of this intervention is broadly centred around four distinct dimensions, which together enable a comprehensive development of the rural ecosystem. These dimensions are in the



Fig. 5. ITC Choupal Integrated Rural Development Program: a) primary education support, b) watershed development, c) afforestation, d) livestock development, e) women's economic empowerment

areas of (i) information and knowledge dissemination (ii) access to quality inputs and markets (iii) generating supplementary incomes, and (iv) natural resource augmentation.

Farmers are provided with critical information and relevant knowledge on farm productivity, prices and markets through ITC e-Choupal. This platform also enables access to quality inputs for better productivity besides expanding their reach to markets. Initiatives such as Livestock Development and Women's Economic Empowerment create avenues for supplementary non-farm incomes to protect against agri-income volatility as well as build capacities for investment. Watershed Development and Afforestation Programs augment natural resources to enable higher productivity, create green cover and restore soil health. Taken together, the ITC e-Choupal programs address the needs and concerns of communities engaged in agriculture and have had a transformational impact in many areas of rural India.

For ITC, the state of agriculture and agricultural communities is an area of direct concern. Its agri-business is among the country's largest, and several of its other businesses, which span consumer goods, hotels, paperboards & specialty papers, packaging and information technology, are critically dependant on agri-inputs for raw materials. Its branded packaged foods business, for example, one of its consumer goods categories, is among the fastest growing in India, with a number of top food brands in its stable. This puts thousands of agricultural communities across the country squarely at the heart of ITC's multiple value chains (Fig. 6).

ITC's Agri Business Division (ITC ABD) is a top player in the national sector and India's second largest exporter of agri-products. Set up in 1988, the Division underwent several evolutions of product lines and strategies, but more or less consolidated its structure and portfolio around 2000 – the year e-Choupal was launched. It currently focuses on export and domestic trading of feed ingredients (soyameal), food



Fig. 6. ITC's farm to food product value chain catalysed by e-Choupal: a) varietal demonstration at a Choupal Pradarshan Khet demonstration plot; b) moisture testing at the ITC procurement hub; c) a selection of ITC's branded packaged foods offerings – aashirvaad atta (refined wheat flour) and sunfeast biscuits

grains (wheat), marine products (shrimps and prawns), processed fruits (fruit purees/concentrates, IQF/frozen fruits, organic fruit products) and coffee. Over time, it has established extensive linkages with farmers and its position as one of India's leading corporates in the agricultural sector and the food industry stems from its integrated and holistic approach that aims to add value and raise quality at every stage of the agricultural value chain.

5 ITC Choupal Integrated Rural Development Strategy

The objective of the ITC Choupal Integrated Rural Development Program is to raise the economic and competitive capacity of farmers and agricultural communities, driven by a multi- dimensional strategy that aims to provide end-to-end solutions which work towards transforming rural ecosystems. This Program is an integral part of ITC's triple bottom line strategy of contributing to sustainable and inclusive growth. The overall objective of the mutually reinforcing components of the Program is to create economic, environmental

"Given the complexity of challenges in Indian agriculture, the integrated initiatives under the ITC Choupal Rural Development Program provide a 360-degree intervention to empower farmers and raise rural incomes. Farmers are provided with critical information and relevant knowledge on farm productivity, prices and markets through ITC e-Choupal to enlarge their choices. This platform also enables access to quality inputs for better productivity besides expanding the reach to markets. Initiatives such as Livestock Development and Women's Empowerment create avenues for supplementary non-farm incomes to protect against agri-income volatility as well as build capacities for investment. Watershed Development as well as Afforestation Programs augment natural resources to enable higher productivity, create green cover and restore soil health. Taken together, the ITC Choupal Programs have had a transformational impact in many areas of rural India."

- S Sivakumar, Divisional Chief Executive, Agri Business, ITC Ltd

and social value for rural communities. Operating mostly in areas where ITC has a strategic presence, the focus is on designing win-win models for each component to ensure scalability as well as long-term sustainability and impact. Rooted in empowering communities by providing them with choice along with access to knowledge, the models are highly flexible and replicable, enabling thousands of communities across widely disparate geographies in 11 Indian states to optimize resources so that they can act both individually and collectively for their economic advantage. ITC's Integrated Rural Development approach is depicted in (Fig. 7)



Fig. 7. ITC's Integrated Rural Development Approach

6 ITC e-CHOUPAL: Providing Information, Knowledge & Quality Inputs and Expanding Market Access

6.1. Background

Recognizing the various challenges faced by the farmer and leveraging ITC's consumer-facing businesses, ITC e-Choupal was designed to provide a 360-degree intervention to trigger a virtuous cycle of higher farm productivity, higher income, enlarged capacity for farmer risk management, and thereby larger investments to enable higher quality and productivity. ITC e-Choupal is perhaps the most dramatic manifestation of ITC's inclusive approach, which in turn demonstrates a significant realignment – not only of ITC's agri-business strategy, but more fundamentally of its entire corporate vision and philosophy. Putting computers in villages with free access to agricultural information for all farmers was a groundbreaking move – the first time an Indian corporate had taken such a step. In a pioneering move, the power of and the internet was utilized to empower small and marginal farmers by setting up internet kiosks, which made available a host of services related to know-how, best practices, timely and relevant weather information, transparent discovery of prices and others. The kiosks are managed by farmers themselves - a selected lead farmer (sanchalak) is trained to help his community access ready information in their local language (Fig. 8).

By providing know-how and connecting farmers to markets, e-Choupal enables a virtual integration of the supply chain and eliminates wasteful intermediation and multiple handling, which leads



Fig. 8. An e-Choupal kiosk in a village in Madhya Pradesh

to significant reductions in transaction costs apart from expanding markets and enhancing rural incomes.

The e-Choupal journey is described in the pages that follow. However, it is important to first examine the market structure that existed prior to the introduction of e-Choupals to be able to understand the scale and scope of transformation.

6.2. Market Channels as a Key Source of Inefficiency & Inequity

One of the vital factors perpetuating the disconnection of agricultural communities is the fact that the farm-to-market supply chain and agricultural commodity marketing in the country, primarily through the *mandi* system, is driven by layers of intermediaries. While these intermediaries play a role in compensating for physical and

institutional gaps, they come at a high price that perpetuates a cycle of low equilibrium for the farmer. For ITC, in the context of changing consumer needs, demand for choice and convenience, this disconnect in the supply chain and procurement through intermediaries at the *mandi* makes it a far from optimal procurement channel. Apart from distortions in price and quality, it allows no interaction with farmers, limiting ITC's knowledge of its crops, suppliers and supply risks, as well as its ability to improve crop quality and quantity by bringing modern agricultural practices to farmers.

6.3. The Mandi System - A Brief Context

The way in which the average Indian farmer sells his produce has not really changed radically over the past five decades or so. For all practical purposes, the only marketing channel available to him is the mandi (market place) which specifically refers to government regulated wholesale agricultural markets, created through legislation under the Agriculture Produce Marketing Committees (APMC) Act, passed in different states from the mid- 1950s onwards. This Act and these regulated markets were intended to put in place a more equitable and organized system for the distribution of agricultural produce from the producer to the trader to the consumer. The idea was that the open auction system at the mandis would be the surest way for farmers to realize the greatest benefits, and in fact, transactions outside the mandi are officially prohibited. There are more than 7,500 mandis across India - a network that should have supported the free flow of agricultural products throughout the country, promoted fair prices for farmers and protected their interests, while also ensuring best value for consumers and checking food inflation by encouraging competitive pricing and efficient market practices. Unfortunately, over time, the mandi system became restrictive and monopolistic, riddled with opaque practices and almost symbolic of the inefficiency and inequity that characterizes Indian agriculture.

All buying at *mandis* is conducted by licensed traders, often known as commission agents (CAs). They are mostly intermediaries who buy on behalf of others. CAs are generally from the same close-knit communities, and buying and selling is based on oral agreements, mutual understanding and interest, community norms and trust. Constituting a social and economic class quite distinct from the average farmer, they exert a formidable stranglehold – dominating and controlling trading practices at the *mandis* so as to enhance their considerable financial clout to the disadvantage of farmers.

The urgent need for change and reform has long been widely acknowledged. The e-Choupal was able to overcome the restrictions on trading outside the *mandi* as there was an enabling environment at the time and reforms to the APMC Act were underway which would allow contract farming, direct marketing and private mandis among other provisions to create multiple and competitive marketing channels for farmers and in turn ensure better value for consumers. Although the Model APMC Act has been in existence since 2003, reforms have not been consistently pursued and in many instances have been rolled back, for a variety of reasons mainly related to measures intended to control high rates of food inflation. This lack of consistency also holds true for tax structure reforms meant to streamline the country's multiple tax jurisdictions and various interstate barriers that have contributed significantly to the fragmentation of India's agricultural markets. Since agriculture is a state subject, there are wide divergences – some states have made partial reforms, some have not yet introduced Amendment Bills.

The general consensus may be in favour of deep-reaching and wide-ranging changes but the massive political will that would be required to drive real reform and put in place comprehensive measures for harmonizing the implementation of the Model Act's recommendations across all states is not yet discernible.

6.4. The Typical Farmer's Experience at the Mandi

The farmer transports his produce to a nearby *mandi*, generally in a trolley drawn either by animals or by tractors. *Mandis* are generally between 30-50 km away and the farmer has no way of knowing for sure what the prices on offer are; word-of-mouth serves as his only indicator. Since his information on prices is often outdated and unreliable, his decision on which *mandi* to sell at may not be geographically efficient. He may well choose the nearest *mandi* simply to save on transport costs, or travel further only to find that the prices are far below what he expected.

Mandis are often crowded and chaotic, and in the selling season, farmers may have to queue, may be even for 2-3 days just to enter the mandi to make their sale. But, he barely has a choice. Once the crop is harvested, it must be sold as soon as possible. Farmers rarely have access to adequate storage facilities. If they have, they would be able to sell before or after the peak selling season when the mandis are packed with farmers under compulsion to sell, and without the time pressures associated with a perishable crop. Small farmers are also dependent on timely cash flow for subsistence. Having transported the crop all the way to the mandi, it is not economically feasible to take it back again since it requires time and money that he does not have.

Once in the *mandi*, farmers display their crops in the open areas for inspection by the CAs. The inspection is by sight – unscientific and arbitrary to say the least. At the most, rudimentary equipment, like a moisture meter may be used where relevant. There is no formal grading system. After CAs have inspected the produce, the auction is conducted by a *mandi* employee. These are open oral auctions, where CAs bid upwards until a sale is declared.

The auction highlights the dramatically opposing viewpoints of the different players. For farmers, it represents an evaluation of his hard labour over half a year or more. For small farmers, this payday comes once or twice a year at the most. The final price of his crop determines the course for his household and family, possibly till the next harvest. With practically no control over any aspect of the sale, and virtually no option of refusing the sale, farmers find the whole auction process demeaning; an often cited and telling example is the extremely small increments by which the price is raised during the auction. For CAs, their margin is assured, no matter what the price. Their attitude is naturally much more casual.

After the sale is finalized, farmers transport their produce to the CAs shop, which may be within the *mandi* premises or nearby. Here it is bagged and weighed, invariably using a manually operated balance scale. Bagging may take place before or after weighing – in either case, farmers bear the cost. It is carried out by *mandi* labourers, who will ensure a certain quantum of spillage as this spilled produce – gathered and sold at the end of the day – is traditional compensation for them. The manually operated balance scales are prone to inaccuracy and easily manipulated for systematic under-weighing. Taking the soya example, losses to farmers can vary between 0.5 kg-3.0 kg per quintal.

Finally, it is time for payment. Although CAs are supposed to pay in full, there and then, this is exceptionally rare in practice. Payments are stretched out, which translates into multiple trips, all of which cost time and money. There is no provision for interest on delayed payment, and as the delivery has already been made, as usual, farmers have no leverage and are in no position to make any choices.

6.5. The Mandi as a Procurement Channel for Agri-Business / Food Processing Companies

ITC is contracted to a specific CA at each *mandi* who bids on behalf of the Company. Once the *mandi* transaction is complete, the CA transports the lot to an ITC processing facility, where he receives his payment which is in effect, a reimbursement, as he uses his own resources to pay the farmer.

Price and quality distortions inherent in the *mandi* system take many forms, and as a rule, benefit the CAs – not ITC and certainly not farmers. For example, there is nothing to prevent CAs from bidding lower than the Company's set price, buying the crop at this lesser price from the farmer, and pocketing the difference. CAs also do not often have adequate storage facilities so different qualities and grades are all mixed together. He also has no real incentive for ensuring proper grading – his margin is assured and wholly independent on the use of the crop before sale to the end-user or consumer. The CA may buy different grades of produce at different correlated prices and mix all the grades and sell them to ITC at a price at the higher end of the spectrum.

These price and quality distortions constitute to the largest sources of inefficiency in the *mandi* as a procurement channel. This is closely related to the fact that companies like ITC have no direct interaction with the farmer, as procurement is carried out through the CAs – a distance that diminishes ITC's competitiveness as it has no firsthand knowledge of its suppliers or their crops and is unable to offer them services that could support productivity and quality enhancement which would result in better risk management for both parties.

6.6. The e-Choupal Platform

ITC e-Choupal germinated as a means of establishing a business platform that could connect farmers to national and global markets – a common structure that would serve them both as producers and consumers by creating an efficient channel for procuring and providing both goods and services over a number of locations.

6.7. ITC e-Choupal Processes Compared to Mandi Processes

ITC e-Choupal brings the first step of the selling process right into the village, since the kiosks may be located either in the farmer's own village or within walking distance, generally within a radius of 5 km. The farmer takes a sample of his produce to the kiosk where it is inspected by the *sanchalak*. There is a visual inspection for foreign

matter and sanchalaks use moisture meters to determine moisture content. These quality tests are performed in front of the farmer and the sanchalak gives the farmer a conditional quote. The farmer can see ITC's price for himself on the e-Choupal website as well as the previous day's prices at nearby mandis. ITC's price is based on mandi closing prices and is valid for the given day. If the sanchalak makes any deductions from ITC's price, he has to rationalize the deduction to the farmer. The farmer immediately gets an accurate idea of what he stands to make from the sale and can, therefore, make a right decision on when and where he wishes to sell.

If he decides to sell at the ITC procurement hub, the *sanchalak* gives him a note which includes his name, village, particulars of the quality assessment, approximate quantity and conditional price. The farmer takes the note along with his produce to the nearest ITC procurement hub (Fig. 9). Some procurement hubs are simply ITC factories that act



Fig. 9. An ITC procurement hub

as collection points, some are purely warehousing operations, others are Choupal Saagars which offer many other services under a single roof. Hubs are generally within tractorable distance – within 30 km, about the same as the distance to the *mandi*.

When the farmer arrives at the ITC hub, his produce is again quality tested on-site and a portion set aside for laboratory tests. The initial quality assessment by the scientist is similar to that carried out by the sanchalak and is more of a verification. These tests are performed in front of the farmer and are the ones that he is accustomed to and can readily understand. The more detailed laboratory testing does not affect the price. The results of the laboratory tests are used in many areas to allot bonus points to farmers for high quality; accumulated points can be redeemed later for purchases through e-Choupal, for example, of agri-inputs. This is helping to build awareness of quality issues and appreciation for better quality.

The farmer's produce is then weighed in its entirety on the computerized electronic weighbridge. He then collects his payment in full at the cash counter. Added to his payment is the reimbursement ITC provides for his freight expenses, a fixed rate according to the distance between his farm and the hub. Each stage is accompanied by appropriate documentation which is provided to the farmer. The duration of the transaction is usually a few hours.

Apart from the immediate tangible gains – accurate weighing, full value, on-the-spot payment, compensation for cost of transport – there are other pluses. Hubs are run in a professional manner and farmers are treated with courtesy and serviced as customers. Simple amenities – a shaded area for them to sit while they wait for paperwork, restroom facilities – reinforce the feeling of dignity that farmers gain from this professional approach. In some soya areas, pure soyabean oil is available at the hubs. Unadulterated as it comes straight from the ITC factory, it also costs the farmers less as it comes to them having skipped several links in that particular supply chain. A point

is made of the fact that it is their oil, made with their crops – a way of encouraging a sense of ownership and connection by according value to their hard work.

Hubs have a soil testing laboratory on their premises where scientists offer recommendations for fertilizers and additives based on farmers' individual soil samples. This usually takes three days, much less than it would take in a government laboratory. Also, it is important that recommendations are solely related to the requirements of the farmer's individual soil, not on any specific brands – knowledge of options and freedom of choice being key elements of e-Choupal.

If the farmer's hub happens to be a Choupal Saagar, there is an even wider range of options. These multi-service hubs also offer retail centers with an ambience and product choice comparable to urban levels. They also offer other facilities, e.g. farm-related services – soil testing, product quality certification, training, etc. as well other services like cafeteria, fuel station, and in some instances, health services.

6.8. The e-Choupal Model – Objectives and Design

ITC e-Choupal provides free access to information and services – to all farmers including the smallest and most marginal, information which improves their decision-making abilities and services that help to build competencies, with the freedom of choice – farmers are free to transact at will and to sell to whom they choose.

The essential objectives are:

- Improving price realization for farm produce by providing:
 - Real-time information on market prices in nearby mandis and international markets
 - Data and information on supply and demand trends
 - Expert opinion on expected future price movements

- Enhancing farm productivity by providing:
 - Real-time weather information, including the latest district-wise short and medium-term forecasts
 - Know-how on best farming practices, both generic and specific, and specialized knowledge to enable farmers to customise their produce to match different consumer segments
 - Supply of quality agri-inputs like seeds, herbicides, fertilizers, pesticides, etc. through a single channel right in the village
- Minimizing transaction costs by enabling:
 - ITC to buy directly from farmers, eliminating wasteful intermediaries and multiple handling
 - Transparent pricing and weighment practices as well as rationalized transportation costs
 - Farmers to aggregate demand, and bargain as virtual producers' cooperatives to access higher quality farm inputs at lower costs

The introduction of ICT for farmers was a first and intended to be the key empowerment driver, but the other facets of the platform were designed within the confines of the existing rural social structure and daily activities of the farmers. A 3×3 infrastructure, made up of three layers, each with three elements. These three elements are: i) the transactional infrastructure which is either physical or organizational, ii) the entity orchestrating the transaction – a person or an organization, and iii) the geographical coverage of the layer.

Layers in the Design

There are three layers in the design which are as follows:

Layer 1 – e-Choupal: A village-level ITC kiosk with internet access is placed in the house of a lead farmer – the sanchalak. Located within walking distance (1-5 km), it serves a cluster of 5 villages (estimated at about 600 farmers, given India's relatively sparse

population density). Operated by the *sanchalak* who receives training from ITC, farmers can track price trends at nearby *mandis* as prices are uploaded daily on the e-Choupal website along with ITC's prices (usually the previous day's closing price) as well as other agri-related information. The service is free and farmers are under no obligation to sell to ITC. Currently, there are 6,500 e-Choupals serving 4 million farmers across 40,000 villages in 11 states.

- Layer 2 Hubs: A brick-and-mortar infrastructure the procurement center located within tractorable distance (25-30 km), a similar distance to other procurement channels used by target farmers in the area. Managed by a CA now called the samyojak these hubs provide an entirely different transactional environment in comparison to the mandi. Choupal Saagar procurement-cum-rural business hubs were established in 2004 (Fig. 10). Currently, there are 24 Choupal Saagars operational in 3 states.
- Layer 3 A Network of Companies: The Network includes both those which are consumers of farmers' products and those which are providers of products and services to farmers. Orchestrated by ITC and providing a pan-Indian presence, it turns the e-Choupal Network into a two-way channel for goods and services in and out of rural India. Another area of partnership and collaboration, both with other private sector companies and also with public sector organizations is the Choupal Pradarshan Khet Program. Launched by ITC in 2006 to improve farm competencies, it provides a range of farm extension services at heavily subsidized rates. These include technical training, both classroom and on-site, consultation and supervision, soil testing, balanced fertilization, foundation seeds and seed treatment as well as water, weed, pest and post-harvest management. It also propagates best farm practices through demonstration plots. By bringing together a broad range of multiple partners, ITC e-Choupal becomes a facilitating platform which





Fig. 10. An ITC Choupal Saagar procurement-cum-rural business hub: a) exterior view, b) interior view

addresses critical gaps by enabling farmers to more easily access expert advice from agricultural professionals, weather insurance, banks for credit, etc.

The three layers work together in making ITC e-Choupal an end-toend solution that works towards satisfying the needs of both farmers and consumers at various levels – village, national and global. In the process, it creates opportunities for farmers to become direct links in the agri-supply chain and paves the way for them to gain more from consumer spends.

6.9. Implementation Challenges and Solutions

ITC e-Choupal attempted to create a virtual agricultural trading platform for the first time in India by leveraging information technology and extending low-cost connectivity to farmers across the country through a network of rural internet 'kiosks'. Without any precedent, ITC had to build on its knowledge of the agricultural sector to develop a model that would provide immediate gains to farmers to ensure their buy-in, and eventually allow for scalability and distributed operations. Instead of attempting the impossible task of creating a whole new system, ITC's starting point was the fact that sales at the *mandi* bundled several transactions together – transport, pricing, sale, delivery, payment. Once the farmer took his produce to the *mandi*, he became a price taker, as it was economically unviable to transport it back again if the price was not right.

This was the crux of multiple problems – there is no formal or scientific grading system meaning thereby that farmers are not rewarded for better quality unless there is a very wide difference, the auction system is considered by farmers to belittle them - one that does not accord them personal dignity, manual weighing and bagging translates to fairly significant losses - through spillage and systematic under-weighing, payment is almost inevitably never in full - stretched out in time and thus involving several trips, each of which costs the farmer time and money. By unbundling the transaction and enabling independent price discovery right in the village itself by using the internet, farmers were empowered with the ability to make an informed choice. For ITC, this single unbundling supported, among other things, a reduction in transactions costs as well as identity preservation as produce was transported directly to its procurement centers with their superior infrastructure (quality testing, electronic weighing, warehousing, etc).

For the e-Choupal model to achieve its full potential and facilitate a sustainable working relationship between ITC and participating

farmers, it is essential that farming communities are key collaborators in its development and implementation. ITC e-Choupal brings together the familiarity of the *choupal* – an informal place to share experiences and gain knowledge with a sense of connect to the larger world, symbolized by the 'e'. While starting off as a top-down approach with the basic model being conceptualised by ITC, its success and spread has been a result of fine-tuning through bottom-up participation to meet the specific needs of farming communities and new ideas being generated by field-level personnel. Continuous interaction and engagement has propelled a dynamic top-down bottom-up synergy through which new solutions and dimensions continue to be evolved.

The initial implementation challenges included the inadequacies of rural telecom connectivity, the fact that farmers are largely illiterate, and the necessity of creating a website that would be user-friendly for farmers and could be customized to the needs of heterogeneous farmer groups. Some important solutions to address the challenges are as follows:

Power / Connectivity / Hardware: The primary problem of infrastructural inadequacies has been addressed through solutions like solar powered battery back-up, connectivity through VSAT rather than public telecom infrastructure, and other localized solutions tailored to specific problems.

Website Design: The e-Choupal website has a simple user interface that is largely iconic and intuitive – the layout and content was designed in accordance with feedback gathered from extensive focus group discussions. ITC accumulates information regarding weather, best farming practices, and market prices from sources like the Meteorological Department, State Agricultural Universities, *mandis*, etc., and uploads it on to the website. All information is customized to local requirements and provided in the local language. To enable farmers to access and use the site, ITC created the position of *sanchalak* – an

educated local farmer selected to act as the human interface between them and the Company, the facilitator who assists farmers to use the services provided through the website.

Sanchalak: The selection of the sanchalak is critical to the efficient functioning of the model. Identified from within the village, the sanchalak must belong to medium wealth category, educated (atleast matriculate) and must be engaged in farming. To help ensure that they uphold the interests of their communities, ITC projects the sanchalak's role as a public office and a public ceremony is held where he takes an oath to serve his community through the e-Choupal. The sanchalak's role is unique – he is equidistant from both the farmers and the Company, his role as lead farmer has no political or religious affiliation. Sanchalaks undergo training at the nearest ITC center on basic computer usage, the functions of the e-Choupal website, basic business skills and quality inspection of crops. Sanchalaks benefit financially by earning a commission on all transactions processed through the site and also from their enhanced social status. They are also motivated as they see e-Choupal as an opportunity for the local economy to grow.

Samyojak: Another effective illustration of ITC's strategy of reengineering rather than reinventing is the new role created for cooperating CAs who have been co-opted into the e-Choupal channel as *samyojaks*. While these intermediaries in the *mandi* system add value at a low cost especially in a system so lacking in infrastructure, their monopoly on information enables them to exploit the system for financial advantage, ultimately rendering the chain uncompetitive. ITC has brought them on to the e-Choupal platform as service providers – they earn incomes through providing logistical services at ITC procurement hubs and as licensed principals of retail transactions. By creating a collaborative and transparent relationship with *samyojaks* and enabling revenue streams for them, ITC is also able to leverage their intimate knowledge of local dynamics and village markets – valuable information hard to come by in rural India.

6.10. Strategies for Promotion

Communication, engagement and interaction with farmers were and continue to be the key elements in promoting ITC e-Choupal. A variety of village meetings and group discussions with different cross-sections of farmers constitute the primary means of awareness building and motivation to avail of the benefits offered by the platform. Meetings, either structured or free-wheeling, are attended by groups of sanchalaks, groups of farmers or mixed groups of both. In some areas, mobile vans showing short promotional videos are used to kick off the meetings. Meetings may be organized by the sanchalak, and apart from ITC representatives may also include other appropriate speakers, e.g. agricultural experts, companies offering agri-related services, etc. These form the basis for setting initial objectives, getting feedback on successes/failures of processes, products and services as well as identifying ways to address/ improve these. Suggestions for new products and services are also generated through these interactions.

These meetings/discussions/interactions were especially vital during the initial years while the e-Choupal model was being developed and fine-tuned. As mentioned in the previous section on "Implementation Challenges and Solutions", this dynamic top-down bottom-up synergy and collaboration was instrumental in developing the e-Choupal website (content creation, layout, services, etc.) and identifying appropriate services, e.g. insurance, credit and area-specific agri-extension services offered through Choupal Pradarshan Khet.

Apart from these organized engagements, the other equally important mechanism in spreading awareness among farmers has been word-of-mouth and the visible benefits experienced by peers who are using the platform. These benefits have been mentioned throughout and are discussed in the following section on "Multiple Value Propositions – Benefits for all Players". While the sanchalak, as the main point of communication between ITC and farmers, takes on a large role in motivating farmers to use e-Choupal by

communicating its benefits, peer recommendation serves as one of the most powerful incentives to bring more and more farmers into the ITC e-Choupal system.

6.11. Multiple Value Propositions: Benefits for all Players

By re-engineering the procurement process and through disintermediation of CAs from the flow of market information, ITC e-Choupal creates a more transparent and equitable trading platform that delivers multiple value propositions and brings the following benefits to all players in the system:

- For farmers, the most critical benefit is that they receive a fair and remunerative price for their crops. With access to price trends through ITC e-Choupal, they can take more informed decisions and optimize the timing of sales. They also do not have to bear transportation, weighing and bagging costs. Not only are the electronic weighbridges at ITC's Choupal Saagars/procurement hubs more accurate and less susceptible to manipulation, but they also do not require the produce to be bagged, avoiding loss through spillage. Payment is prompt and the entire transaction time is far less, reducing the farmer's debt burden. With ITC e-Choupal providing an alternative market channel, farmers have a choice and are in a better position to command better prices at other channels.
- Equally important is the respect and dignity accorded to farmers in the ITC e-Choupal system which treats them as valued customers.
 The degree of professionalism and the power of choice offered by this system encourage self-confidence and is changing the way farmers conduct their business.
- Another key benefit is that ITC e-Choupal is bridging the information and service gap in rural India by providing an affordable system for large-scale dissemination of agricultural know-how and best practices to raise quality and productivity.

Sanchalaks, who are themselves farmers, help to ensure that this knowledge is practically applied by the farming community. Supporting services – at the ITC procurement center or Choupal Saagar if available, and through Choupal Pradarshan Khet – address the whole spectrum of agricultural needs, from soil testing and seed treatments to supply of quality inputs as well as crop and fertilizer advisories from agricultural experts, etc. Farmers are given customized feedback on improving crop quality and yield based on laboratory tests performed after sale.

- Apart from agricultural needs, farmers also benefit as retail consumers with better availability, variety, pricing, quality and convenience. For example, farmers and their families can access a superior range of products right in the village by purchasing though the sanchalak. They can access an even greater range if there is a Choupal Saagar nearby or at the regular Choupal Haats and Mahotsavs, discussed in a later section, "The Way Forward A Continuously Evolving Platform".
- For sanchalaks and samyojaks, the key benefits lie in the economic gains they make through services they provide. Sanchalaks in particular also gain considerable prestige as the lead farmer in what is seen as not only as a trustworthy platform, but also one linked to the rest of the world and to a new, more equitable future.
- ITC benefits through reduced transaction costs, improved quality of procurement and reliability of supply. ITC's costs in the mark up from the farm to the factory gate have remained competitive, even though the Company pays farmers fair prices based on the previous day's closing price at local mandis, reimburses them for transport costs and pays commissions to sanchalaks and samyojaks. Through the platform ITC is developing long- term relationships with farmers to ensure a degree of supply security and access to quality as per market demands. ITC e-Choupal is

also facilitating the procurement of identity- preserved produce and product traceability, enabling ITC to capture higher value in niche markets. The robust information infrastructure, especially as provided by the *sanchalaks* and *samyojaks*, supports improved risk management and also allows ITC to better plan future operations

- The direct engagement and long-term relationships being built through e-Choupal gives ITC the benefit of being able to build a core asset in terms of its in-depth knowledge of rural consumers. Transactional data, data mining and data warehousing also add to this knowledge base which will enable ITC to anticipate needs and develop differentiated products and services to serve customers more efficiently.
- Providers of agri-input and other products/services who use the e-Choupal channel benefit from being able to penetrate rural markets at significantly lower costs, especially in a scenario where the majority of such markets have fragmented or nonexistent distribution channels. ITC e-Choupal also enables the unique advantage of allowing providers to gather detailed information about their customers which means they are able to develop targeted products and services, helping them to break into new markets, increase market share and optimize development costs.

6.12. Key Success Factors

The key factor contributing to the success of the ITC e-Choupal platform is that it is designed to bring multiple benefits for all players, as described in the previous section. A few of the other most important success factors are highlighted below:

 The cornerstone of the ITC e-Choupal platform is that it offers all farmers, including those who are small and marginal, the power of knowledge and freedom of choice. All farmers are entitled to freely access information and services provided by the e-Choupal Network. There is no form of payment in terms of membership or subscription fee. Farmers are also free to transact as they decide without any obligation to sell to ITC. The fact that the offerings are free of cost has encouraged widespread participation, while transactional freedom and choice empowers farmers with a sense of dignity and respect for them as individuals. The latter may not be quantifiable, but has been vital in motivating buy-in and building the perception of the platform as the one that is trustworthy. This transparency has built e-Choupal's credibility not just with farmers, but with other stakeholders, including the government.

- When designing the e-Choupal model, ITC focused on reengineering existing inefficient components of the system and transforming them into efficient service providers within the ambit of the platform. The chief source of inefficiency in the mandi system is the CA who intermediates and blocks or distorts engagement between farmers and buyers. Having developed a mechanism to engage with farmers directly, ITC found a new productive role for the CAs as samyojaks, which brought them into the system and compensated them for their loss of revenue preventing hindrances that might have arisen from alienating them or cutting them out completely. This also gave ITC access to their knowledge and information which provides invaluable insight into village dynamics and rural realities.
- Ways and means to compensate for revenue loss were consciously designed into the model. ITC continues to procure a certain quantum through the *mandis*, ensuring that some degree of commission earnings is retained. Revenue streams in the ITC e-Choupal system range from the fee for providing services like cash management, bagging and labour at ITC hubs to commissions earned as licensed principals on retail transactions made through

- the system. In fact, e-Choupal provides income opportunities that were simply not available in the *mandi* system and as a retail channel, the potential for revenue is all year round rather than being confined to harvest seasons.
- The transparency inherent in e-Choupal is carried through in the relationship with *samyojaks*, which, like all engagement on the platform, is built on trust. *Samyojaks* were involved right from the beginning collaborating in the selection of *sanchalaks*, helping villagers understand the potential benefits of the system, etc. Most communication with *sanchalaks* takes place in the presence of *samyojaks* reinforcing the fact that they are seen as enablers of the platform. While the compensatory revenue streams have helped to persuade CAs to be co-opted as *samyojaks*, many see their participation as an opportunity to develop wider networks and goodwill. They also feel that co-operating with a large conglomerate will serve their interests in the long-term, especially in view of increasingly globalised markets.
- By bringing the 'one stop shop' feature into the e-Choupal system, ITC introduced levels of convenience and choice in accessing a range of products and services hitherto unavailable to farmers and rural communities right in the village. As producers, they can avail of tailored agri-extension services, make informed decisions on quality agri inputs, credit and insurance services among others. As consumers, the array of offerings is rapidly expanding and creating greater sophistication among rural consumers from stocks at the sanchalak's home to opportunities to try out items prior to purchase at Choupal Haats, to the experience of shopping in the hypermart ambience of Choupal Saagars. As the platform responds to evolving needs, it is growing into an all-weather multi-dimensional rural marketing channel that is bridging the gap with urban India and has the potential to bring transformational change.

6.13. Impact Indicators

The spread and reach achieved by e-Choupal since inception in 2000 serves as clear indicator of its impact and scalability across different geographies. While the platform offers wide-ranging benefits, the most fundamental of these are the economic gains experienced by virtually all the players. The significant savings that make e-Choupal a cost-effective channel are perhaps the most critical motivating factor that spurs target communities to buy-in and converts them into active participants in the platform.

Indicators of Scale

- Launched in 2000 with 4 e-Choupal kiosks in Madhya Pradesh dealing only in soya, in 2002, ITC began to expand e-Choupal, both in terms of commodities and geographies. Today, the e-Choupal commodity basket includes wheat, rice, maize, potato, coffee and shrimps as well as soya. There are 6,500 e-Choupal kiosks serving around 4 million farmers in over 40,000 villages across 11 states (Madhya Pradesh, Haryana, Uttarakhand, Karnataka, Andhra Pradesh, Telangana, Uttar Pradesh, Rajasthan, Maharashtra, Kerala and Tamil Nadu).
- The Choupal Saagar physical infrastructure procurement cum

 rural business hubs supporting the digital capability was initiated in 2004. There are now 24 Choupal Saagars in 3 states (Madhya Pradesh, Maharashtra and Uttar Pradesh), providing rural communities with products, services and a retail ambience earlier not available to them.
- The Choupal Pradarshan Khet initiative aims to improve crop productivity and quality by promoting better seed varieties, and bringing modern farm technologies and best practices to farmers. It partners with a wide range of government and private organizations, creating a collaborative platform for deepening engagement with agricultural communities that currently reaches out to 1.6 million farmers. During 2013-14, field demonstrations were conducted in more than 1,000 villages covering about 23,000

acres and over 25,000 farmers. These propagated new technology related to seed varieties and production practices for increasing quality and yield in soya, wheat, barley and horticultural crops.

Economic Benefits

For Farmers

- With the efficiencies built into the e-Choupal procurement process at virtually every stage of the transactions, farmers make significant savings, for example, soya farmers in Maharashtra save about ₹815 per metric ton (see Table 1)⁷.
- To illustrate the profit and productivity impacts of e-Choupal, a few examples from soya farmers in Madhya Pradesh are provided. Prior to the initiation of e-Choupal, farmers had no access to scientific farming practices and tended to use 40-45 kg of seeds per acre. However, with knowledge on best practices available through the website as well as access to on-the-ground advice through Choupal Pradarshan Khet, this came down to 30-35 kg per acre translating into a saving of ₹3508 per acre.

Table 1. The e-Choupal procurement advantage for soya farmers in Maharashtra

Transaction	Expenditure (₹/ton)		
	Mandi	e-Choupal	
Freight	300	300	
Labour/handling	150	0	
Commission (0.5% – 3%)	570 (195 – 1,167)	0	
Handling loss	95	0	
Total	1,115	300	

⁷ Source: ITC e-Choupal internal data

⁸ Source: ITC e-Choupal internal data

Data pertaining to acreage and yield from 2000 to 2012 shows that profits of farmers accessing the e-Choupal platform have almost tripled – from ₹5,753 to ₹19,329 per hectare (see Table 2).9

For Sanchalaks and Samyojaks

While sanchalaks and samyojaks play quite different roles in the e-Choupal system, for both, earning opportunities and income potential through the channel are actually greater than in the mandi system. The platform has effectively turned both, sanchalaks and samyojaks into entrepreneurs working through a trusted channel.

• Sanchalaks earn commissions on transactions through the e-Choupals. For example, a commission of ₹5 per bag for their involvement in crop transactions and around 1 per cent¹o on facilitating marketing activities of convergence and FMCG.

Table 2. Acreage, yield and income improvements for soya farmers in Madhya Pradesh

Variable	2000	2012
Area under cultivation (ha)	4,439,000	5,812,800
Production (tons)	4,743,000	6,685,000
Productivity (tons/ha)	1.07	1.15
Market rate (₹/ha)	11,000	33,250
Income (₹/ha)	11,753	38,239
Cost of cultivation (₹/ha)	6,000	19,000
Net profit (₹)	5,753	19,239

⁹ Source: SOPA (Soya Processors Association of India) website for production and area under cultivation. Market rates are average spot rates from Oct 12 – Mar 13 and the cost of cultivation is from ITC e-Choupal internal data

¹⁰ Source: ITC e-Choupal internal data

Samyojaks also earn commissions on the services they provide as the logistics and distribution providers for e-Choupal, and as licensed principals on retail transactions through the system. Ranging from 1-5 per cent¹¹ depending on the service or product, these earnings are potentially more than the 1 per cent they earn on crop transactions at the mandis. In addition, the retail transactions provide year-round opportunities, as opposed to mandi sales which are clustered around harvest seasons.

For ITC

ITC benefits directly through reduced transaction costs. Cost savings also arise from improved quality, supply reliability, product traceability and the ability to procure identity-preserved produce. Coupled with better risk management and long-term planning capability, these factors all work together to give ITC a distinct competitive edge.

- Taking the example of soya prices, ITC saves about ₹600 per metric ton (Table 3)¹². In the mandi system, there was a mark up of 7-8 per cent¹³ from the farm to the factory gate. While 2.5 per cent of this mark up was borne by the farmer, for ITC it worked out to 5 per cent. Procurement through e-Choupal has brought down ITC's costs by 2.5 per cent on an average despite the fact that it pays farmers fair prices based on the previous day's closing price at local mandis, reimburses them for transport costs and pays commissions to sanchalaks and samyojaks.
- Taking the wheat procurement example, the platform has enabled ITC to differentiate itself by competing on variety, increasing its

¹¹ Source: D M Upton and V A Fuller, The e-Choupal Initiative, Harvard Business School Case Study, Rev: January 2004, pp 11-12.

¹² Source: ITC e-Choupal internal data

¹³ Source: ITC e-Choupal internal data

Transaction	Expenditure (₹/ton)		
	Mandi	e-Choupal	
Commission	285	50	
Handling and transit losses	114	0	
Labour costs	150	200	
Bagging and weighing	100	0	
Transportation	200	0	
Total	849	250	

Table 3. The e-Choupal procurement advantage for ITC

market share to about 10 per cent of the volume available for private trade. This sourcing capability has allowed ITC's Branded Packaged Foods Business to achieve and sustain market leadership status with its Aashirvaad brand of wheat flour within two years of its launch in 2002.

In 2005, ITC was also able to launch ready-to-cook instant pasta produced from identity- preserved durum wheat at a price point of ₹15 for an 83 g packet at a time when the only other similar products available in the Indian market were imported and priced at ₹85.

 Over the years, the quantum of commodities traded through ITC e-Choupal has risen from 62,000 tons in 2001 to 13,00,000 tons in 2013-14 through multiple purchase models, representing a value of approximately ₹2,693 crores.

6.14. Slow Pace of Reforms in India's Agricultural Sector: A Key Constraint

ITC e-Choupal successfully demonstrates the widely held view that the private sector, with its presence across the agri-value chain,

is in a position to play a pivotal role in reviving the agricultural sector by complementing the government's efforts. However, this role can only be effective if supported by much-needed, comprehensive agricultural policy reforms, as discussed briefly in the earlier section on "The Mandi System: A Brief Context". Reforms have been characterized not just by their slow pace in implementation, but by a lack of clarity and frequent roll-backs. This insufficiency of will to push for wide-ranging change has been and continues to be the single largest constraint that has inhibited e-Choupal from achieving its potential scale.

Facilitating the private sector to play a larger and more effective role will depend on reforms in several key areas, for example:

- Implementation of the Model Agriculture Produce Marketing Committee (APMC) Act to enable a direct interface between farmers and agri-businesses and expand the scope for value creation
- Removal of restrictions under the Essential Commodities Act which restricts volumes that agri-businesses can buy or stock
- Reducing or removing limitations imposed by the Forward Contracts (Regulation) Act. While it is true that strong regulation is required to curb excessive speculation, the Act does not allow for distinguishing between genuine businesses and hoarders.
- Rethinking social subsidies which pose another serious hurdle. Successive governments have resorted to subsidies in tackling the conflicting demands of simultaneously ensuring higher farm gate prices and lower food prices – a strategy that tends to distort the markets making it difficult for the private sector to operate.

While this non-enabling climate has posed severe limitations on ITC e-Choupal's operations as a direct agri-procurement channel, it has put the process of constant innovation inherent in the model on the fast track to insulate it from market distortions arising out of

variations in government policy. The constantly shifting regulatory environment has compelled a concentrated focus on de-risking strategies that are under exploration which are discussed in the following section.

6.15. The Way Forward: A Continuously Evolving Platform

Conceptualised as a model with potential to grow beyond agricultural servicing, ITC e-Choupal rapidly developed into a distribution channel that extended from farm requirements into consumer goods and other services. The digital-physical nature of the network offers a low-cost system that is also highly versatile and scalable, a two-way channel taking farmers' goods out and bringing in a range of products that meet their growing demands and sophistication as consumers. This is an actively evolving area as ITC e-Choupal moves to stabilize as an all- weather platform.

Given the colossal inadequacies in rural India, healthcare services are a key driver in building the vibrancy of the e-Choupal platform and in evolving a holistic spectrum of services for communities in the catchment. With the objective of enabling access to reproductive health, maternal and child health, menstrual hygiene and diarrhoearelated products and services, the ITC e-Choupal Rural Health Initiative focuses on enabling rural women from economically-weak households to become entrepreneurs by training them to provide services in these areas. The pilot project, in collaboration with United States Agency for International Development (USAID)¹⁴, demonstrated increased adoption of family planning products as well as potential monthly incomes of ₹1,000 for these women. It also attested to their growing emergence as opinion leaders in their communities. Based on this success, the initiative has been scaled up in partnership with USAID. In 2013-14, it was launched in 7 districts in Uttar Pradesh. A network of over 200 village-level healthcare micro-entrepreneurs

¹⁴ US Agency for International Development

was established, reaching out to over 700 villages through group meetings, door-to-door visits and focus group discussions to spread awareness about healthcare issues and influence behavioural change through adoption of healthcare products and services. In 2014-15, the Program will be scaled up to 8 districts in Madhya Pradesh reaching out to over 3.5 million people in 2,500 villages.

Low market orientation and technology adoption continues to be a general defining characteristic of Indian farming. Building on the Choupal Pradarshan Khet initiative and taking agricultural services to the next level, ITC e-Choupal is focusing on technology adoption to increase farm efficiency, crop quality and agricultural competencies. Initiatives towards this end include:

Seed Entrepreneur Model – crashing innovation adoption time from lab to field. Enabling farmers to become seed entrepreneurs by providing them with the latest seed technology – seeds with specific market-aligned physical and chemical attributes along with a package of standard practices so that they can produce large quantities of quality seeds that can be distributed through this informal channel. During 2013-14, this initiative was successfully rolled out over more than 8,000 hectares, benefiting more than 7,000 farmers.

Taxi Model in Farm Mechanization – extending mechanization benefits to small farmers. By introducing custom hiring centers, even small farmers can avail the facilities of mechanized farm equipments which helps to enhance productivity and farm incomes by improving input use efficiency and, therefore, rationalizing operating costs. Aligning diverse stakeholders such as equipment manufacturers and service providers and utilizing the hub and spoke model for greater spread, in 2014-15, pilot projects are leveraging the e-Choupal platform in Uttar Pradesh and Madhya Pradesh to improve equipment access and awareness within farming communities and increase value for all partners.

Taking off from the idea of village fairs and markets, Choupal haats and Mahotsavs offer arenas for greater consumer engagement as well as avenues that expand choice and awareness. Haat means market in Hindi, and the Choupal haats create a forum for ITC and other companies to communicate the value and benefits of their brands and services through stalls, interactive games and competitions, product sampling, etc. For example, a shampoo brand may offer a free hair wash – a novel concept for rural consumers. Choupal haats host round-the-year activities at the village level. Mahostsav, meaning grand festival in Hindi, is a similar event but with a larger format, involving three days of festivities coinciding with the harvest seasons. Building on the trust created through e-Choupal, the Choupal haats and Mahotsavs are vital planks in promoting the ITC Choupal brand as an expansive platform that offers much more than agricultural products and services.

In terms of agri-services, the way forward is envisaged in view of accelerating web access and proliferating mobile phone usage. The e-Choupal Version 3.0 aims to provide personalised advice and services to individual farmers by leveraging mobile telephony. While currently confined to farm and agri-related issues, the potential for extending this direct means of communication into other areas will take the ITC Choupal platform into a whole new future of customization and choice. The roadmap also includes plans for improving logistical efficiencies by integrating bulk storage handling and transportation facilities.

Supplementary Income Generation through Livestock Development, Women's Empowerment and Vocational Training

7.1. ITC Choupal Livestock Development Program

The vast majority of rural Indian households own cattle and animal husbandry plays a significant role in the rural economy. For the most impoverished, it is often their only source of sustained livelihood. However, milk yields from indigenous cattle are abysmally low, largely as a result of poor quality stock and fodder compounded by lack of access to quality animal husbandry and breed improvement services. Recognizing the potential of dairying as a sustainable livelihood opportunity, the ITC Choupal Livestock Development Program aims to genetically upgrade low-yielding indigenous stock through artificial insemination to produce cross-bred progeny with much higher milk yields (Fig. 11). Targeting the most marginalized – smallholders, the landless, women-headed households and migrant groups – it enables them to convert an existing asset into a substantial supplementary income with the potential of growing into a profitable new livelihood.

In partnership with Bhartiya Agro-Industries Foundation (BAIF)¹⁵, ITC sets up Cattle Development Centers (CDCs) which are manned by

¹⁵ BAIF Development Research Foundation is a professionally managed not-for-profit Public Trust which promotes sustainable livelihoods in rural India. It is among the country's most highly reputed in delivering livestock development services.





Fig. 11. ITC Choupal Livestock Development Program: a) the beneficiary shows off his cross-bred calf, b) quality testing at a local collection point where beneficiaries take their milk surpluses for sale

local youth trained as technicians and equipped to provide a complete package of services right at the cattle owner's doorstep. Apart from artificial insemination, this includes healthcare vaccination, nutrition, pre- and post-natal care, as well as fodder resource development and other best practices. Cross-bred progeny are 6-9 times more productive than their indigenous mothers, providing significant milk surpluses for sale. They also have a fairly high wealth creation potential, since cross-bred progeny command a very high premium in comparison to indigenous cattle. The CDCs bridge critical local service and technology gaps and also create a viable employment opportunity by training local community members to provide services and eventually take over the Center on a franchise model.

The Program is highly scalable as poor cattle owners are able to earn a reasonably attractive return through a comparatively small investment in an existing asset. It also paves the way for dairying to emerge as a viable livelihood option – a key measure in deflecting pressure off arable land and as a buffer in times of drought and crop failure. It also has potential for scalable linkages to emerging opportunities in ITC's expanding branded packaged foods portfolio. ITC

also encourages cattle owners to join together to form Milk Producer Groups to efficiently channelize their production to formal milk markets.

ITC initiated this Program in 2003. Currently, there are 261 CDCs spread across 7 states. Vaccination and nutrition services have been provided to over 10,00,000 breedable cattle and more than 13,00,000 artificial inseminations have been performed. Nearly 3,80,000 cattleowners have been benefited so far in over 10,000 villages.

To achieve greater scale, ITC entered into its first livestock development public-private partnership in 2012 with NABARD¹⁶. The 4-year project will establish 10 CDCs in Madhya Pradesh which will provide services to approximately 150 villages. Taking the next step in developing a viable livestock economy, ITC launched Project Gomukh in Bihar at the end of 2012. Apart from providing veterinary services and comprehensive techno-management support to dairy farmers, a state-of-the-art milk processing plant is being constructed which will process 2,00,000 litres of milk per day. The project will benefit about 30,000 farmers, creating direct and indirect employment opportunities which will help to boost the local economy. Dairy development has also been initiated in two hubs in Uttar Pradesh and comprehensive milk mapping studies completed in several locations to enable planning and expansion.

7.2. ITC Choupal Women's Economic Empowerment Program

Poor women, especially in rural communities, are generally among the most disadvantaged sections of their communities – constrained by poor nutrition and health, low education levels and lack of opportunities. Yet, they represent a potent latent resource for improving the quality of life of their communities, as income in the hands of women usually goes towards ensuring their family's well-being, especially for the nutrition, health and education of their children.

¹⁶ NABARD – National Bank for Agriculture and Rural Development

ITC Choupal Women's Economic Empowerment Program is targeted towards communities in areas where the Company has manufacturing units and large agri-procurement centers. The Program aims to enable women to earn independent incomes from non-agricultural activities, since the vast majority of the target group is rural. The focus is on mobilizing women to join together to form micro-credit self-help groups (SHGs) (Fig. 12) so that they can build up a corpus fund through compulsory monthly contributions and seed money from ITC. Group members are trained to create and manage common funds as well as handle bank accounts and maintain documentation. They are also facilitated to access government development schemes and bank loans once they are sufficiently mature.



Fig. 12. A micro-credit self-help group supported by ITC Choupal Women's Economic Empowerment Program

The corpus fund is used to finance loans to members for selfemployment activities or to set up micro-enterprises. It is also used for emergency loans, reducing dependency on money lenders. Skills training and entrepreneurship development programs help to enhance employability and equip women to establish micro-enterprises. SHGs are engaged in a variety of income generating activities, e.g. the making and marketing of a range of cottage products such as pickles, dried fish, incense sticks, spices, organic compost, etc.

Incense stick rolling has emerged as a profitable micro-enterprise, largely due to the market linkage with ITC which has a significant presence in the national incense stick market. Incense stick rolling groups in Munger, Bihar have evolved from an informal network to a sustainable and scalaable enterprise, assisted with strategic business development services from ITC. The women beneficiaries first set up a cooperative to manage production of unperfumed sticks followed by a producers' company to run a scenting-cum-packaging unit set up with ITC's support. Entirely manned and managed by these women, the unit supplies to ITC's Mangaldeep brand, the second largest in the national market. In 2013-14, it supplied a total of 319 million sticks with a turnover of ₹4.17 crores. While previously the activity was confined to hand rolling, pedal rolling was introduced in Bihar and Uttar Pradesh in the end of 2011. An Incense Stick Pedal Production Center was set-up in Munger, Bihar under ITC Choupal Women's Economic Empowerment Program (Fig. 13). Using a simple manually operated machine, pedal rolling has added a new dimension in terms of higher production and income levels.

While pedal rolling is largely a center-based activity, ITC Agri-Business Division (ABD) went a step further in 2013 by setting up pedal machines in women's homes. Managed by the *samyojak* and *sanchalak*, this has opened up an entrepreneurial avenue for rural women that has the advantage of assured market linkages to ITC's incense stick business.



Fig. 13. Incense Stick Pedal Production Center in Munger, Bihar

SHGs in a number of project areas are also leading a drive to build family-owned sanitary units. ITC subsidises the cost of building materials for the units while the user family provides the remainder, usually taken as a loan from the SHG.

Initiated in 2000, ITC Choupal Women's Economic Empowerment Program has benefited about 42,000 women so far through microenterprises or assistance with loans to pursue income generating activities. Currently, there are 1,682 micro-credit SHGs with over 20,000 members and cumulative savings over ₹3.5 crores.

7.3. ITC Choupal Primary Education, Skill Development and Vocational Training Program

A strong foundation in primary education and skill building for the children in the community is a major step towards ensuring improvements in the human development indices for the community as a whole. However, the inability of economically weak rural families to access quality education and training is a major obstacle to overall development.

The ITC Choupal Primary Education, Skill Development and Vocational Training Program seeks to address these challenges through a range of far-reaching solutions. The focus of the Program is to increase enrolments and minimize drop-outs, as well as to expand vocational livelihood opportunities. The Program also enhances the learning environment by providing infrastructural support to government schools (Fig. 14). Assistance provided to government primary schools includes drinking water tanks, toilets, lights and fans, desks and chairs, structural additions and improvements, along with training for teachers and support for recreation and cultural activities.



Fig. 14. Students at a government school in Mysore district, Karnataka that has received infrastructural support under the ITC Choupal Primary Education Support Program

Over 6,000 youth have so far been benefited from vocational and modern skill enhancement training. In addition, over 3,30,000 students have been covered to date through Supplementary Learning Centers and Anganwadis¹⁷. Of these, more than 1,000 first generation learners have also been mainstreamed into formal schools.

¹⁷ Anganwadi, which means a courtyard shelter in Hindi, is a center for pre-schoolers set up under the Indian Government's Integrated Child Development Services Program.

8 Augmenting Natural Resources through Watershed Development and Social & Farm Forestry

8.1. ITC Choupal Integrated Watershed Development Program

While it may be argued that in the recent past, efforts to increase productivity have led to significant increases in foodgrain production and agri-produce, the bulk of this increased production has come from the Green Revolution areas which generally have assured irrigation. Ironically, approximately 67 per cent¹⁸ of the net sown area is under rainfed agriculture, practiced mainly by marginal smallholders in areas with fast-depleting natural resources. Complex, under-invested, risk and distress-prone, these low yield areas play a substantial role in securing India's food security by supporting over 80 per cent of the country's pulses and horticulture, around 77 per cent of oilseeds and 50 per cent of cereals and 66 per cent of its livestock. They are also the mainstay of the bulk of India's farmers. A large part of ITC agri-procurement operations are from these insecure areas.

ITC's focus has been to evolve a watershed development model which is highly replicable as it is flexible enough to be tailored to local needs and, therefore, to be scaled up across diverse geographies. This flexibility stems largely from its bottom-up participatory approach anchored in the formation of empowered community-based

¹⁸ http://planningcommission.gov.in/plans/mta/index.php?state=midch2.htm

organizations. Targeting the most disadvantaged community members, the Program addresses their most basic livelihood need by enabling them to pool resources and employ simple technologies to harvest and conserve water, and thus recharge groundwater.

Communities are mobilized to form Water User Groups, which are trained to carry out all activities – from planning to implementation and maintenance. The focus is on implementing soil and moisture conservation measures and building, reviving and maintaining water harvesting structures to reverse land degradation, extend critical irrigation and raise agricultural productivity (Fig. 15). Groups are also trained to formulate regulations and fix water user charges which go towards creating a Maintenance Fund used to maintain existing structures and build new ones. Civil works on structures and an increase in farming activities also generate employment within



Fig. 15. Beneficiaries of the ITC Choupal Integrated Watershed Development Program at a check dam in Sehore district, Madhya Pradesh constructed under the initiative

villages, benefiting the marginal/landless – a key factor in reducing seasonal out-migration.

While the focus is on physical watershed interventions, these are only one component of a combination of responses that aim to promote an optimum land use plan to maximize agricultural gains for farmers with the overall objective of creating sustainable farm and off-farm livelihoods. Wherever possible, this intervention is integrated with ITC Choupal's Sustainable Agricultural Practices, Livestock Development and Women's Economic Empowerment Programs. The former promotes water saving technologies and efficient irrigation devices, crop diversification, best practices, organic composting and other measures to raise productivity and quality through farm extension services and demonstration plots; the latter two, which create sustainable off-farm income sources, have been described earlier.

Initiated in 2001, the ITC Choupal Watershed Development Program currently covers 1,49,000 hectares across 7 states, benefiting over 1,27,000 households. More than 1,200 Water User Groups have been formed, who have constructed 4,974 water harvesting structures. Civil work on structures has generated 4.02 million person-days of employment, particularly benefiting the landless. The Program has made the most significant contribution in ITC maintaining its water positive footprint for 12 consecutive years.

The majority of ITC's watershed development projects are located in areas where it has an agri- business presence and where its e-Choupal initiative operates. This supports backward and forward linkages and enables beneficiaries to gain from being able to access e-Choupal services. The creation of a more stable agricultural regime secures the long-term competitiveness of both farmers and ITC, which also gains by being able to source better quality products for its agri-business which in turn provides sourcing support to its branded packaged foods business

The geographical spread achieved by ITC's Program demonstrates the inherent replicability of its watershed development model which has required no major realignment in order to be scaled up. Instead the Program has moved into forming public-private partnerships to further multiply scale and impact by leveraging the government's reach and resources. Beginning with its first partnership with the Rajasthan Government in 2007, ITC is actively collaborating with State Governments and NABARD in jointly implementing 25 watershed development projects across 4 states with a target area of nearly 1,60,000 hectares.

By converging government employment schemes, primarily IWDP¹⁹/MGNREGA²⁰, with ITC's experience in watershed development and its managerial expertise, these projects are in a better position to efficiently deliver services even to remote rural communities, leading to a significant scaling up of benefits, in particular for the most disadvantaged among the target beneficiaries. Apart from the direct benefits of watershed interventions, ITC's capability as one India's largest agri-businesses to bring substantial advantages, in particular R&D and robust market linkages.

While IWDP/MGNREGA are leveraged to provide direct employment through civil works for watershed interventions, the focus, like in ITC's own program, is on creating a stable agricultural regime and expanding rural livelihood opportunities. Training and capacity building towards this end (e.g. promotion of modern agronomic techniques, animal husbandry and dairying, bio-gas, women's micro-credit schemes, etc.) are amplified through convergence with government schemes for supporting these activities.

¹⁹ Integrated Watershed Management Program under the Ministry of Rural Development, Government of India

²⁰ Mahatma Gandhi National Rural Employment Guarantee Act

8.2. ITC Choupal Social and Farm Forestry Program

While operating in a more specific context than e-Choupal and ITC's other rural development initiatives, the ITC Choupal Social & Farm Forestry initiative deserves mention as a good example of ITC's adherence to triple bottom line objectives and sustainability-centric strategy. This Program brings multi-dimensional benefits. Wasteland owners are enabled to convert idle lands into commercial pulpwood plantations that provide significant incomes. They are under no obligation to sell the produce to ITC. However, if they choose to do so, the Company benefits from a cost-effective, renewable raw material base for its paperboards and specialty papers business. The creation of extensive green cover as well as improvement of soil health also positively impacts the environment.

ITC's pulp mill is located in Bhadrachalam in Khammam district, Andhra Pradesh – a backward region characterized by large tracts of wastelands unsuitable for agriculture. Linking business needs to local socioeconomic needs, Farm Forestry Program is aimed at well-off farmers who own wastelands while Social Forestry Program is targeted towards marginal/tribal smallholders who constitute a significant percentage of the local population. Not considered creditworthy by formal lenders, these resource-poor smallholders do not have the means to invest in their lands. They are mostly restricted to subsistence farming and compelled to depend on wage labour to earn a livelihood.

Working in partnership with NGOs, ITC organizes these marginal wasteland owners into Social Forestry Groups that function as Wood Producers' Associations. Group members are provided with long-term, interest-free loans and ITC's clonal stock at subsidised rates through the Association. They are also supported with training and a comprehensive package of extension services. ITC's clonal stock, developed through in-house R&D, is a key factor in the commercial viability of the plantations. Site-specific, disease-resistant and high-

yielding (3-6 times more than standard saplings), they mature in 4 years instead of the standard 7 years. ITC provides a buy-back guarantee at prevailing market prices but plantation owners are free to sell to any buyer of their choice.

The plantations generate average net incomes of ₹25,000-40,000 per hectare per year – a substantial increase for farm forestry beneficiaries but a life-changing proposition for social forestry beneficiaries, sufficient to pull them out of the poverty trap. The economic benefits of the plantations have also pushed up land prices and lease rates, adding value to a previously unproductive asset. Plantation activities generate employment within the village, helping to stem high seasonal out-migration rates. Fig. 16 shows the beneficiaries of ITC Choupal Social & Farm Forestry Program planting saplings to grow pulpwood plantations on their unproductive land holdings in Bhadrachalam, Khamman district, Telengana.



Fig. 16. Beneficiaries of the ITC Choupal Social & Farm Forestry Program planting saplings in Bhadrachalam, Khamman district, Telengana

Social Forestry Group members are required to re-pay their loans to their Group after the first harvest to build up a Village Development Fund, used to extend loans for further plantations, internal lending and to invest in community assets. Capacity building initiatives are a top priority as the ultimate aim is that the Groups should function autonomously and eventually be federated into *mandal*²¹ and district level organizations that can serve as active vehicles of local development.

The plantations act as carbon sinks while the conversion of wastelands into green cover on this scale renews the ecological base – improving soil and *in situ* moisture conservation, augmenting groundwater recharge, decreasing soil erosion and nurturing depleted soil through leaf litter and leguminous intercrops. One of ITC's social forestry projects was the first of its kind in India to receive UNFCCC²² registration as a CDM²³ project in 2009. Proceeds from the sale of carbon credits will be shared among the 3,398 tribal project participants, enabling them to benefit from an international carbon market mechanism.

ITC commenced with farm forestry in 1999 and initiated the social forestry component in 2001. Currently, the program covers 1,63,000 hectares, mostly in Andhra Pradesh and Karnataka. It has generated 73 million person-days of employment so far. Social forestry has benefited over 52,000 households in more than 2,430 villages. The plantations had sequestered 4,529 kilotonnes of carbon dioxide, contributing substantially to maintaining ITC's carbon positive status over the previous 9 consecutive years. In 2013-14, these renewable plantations provided approximately 72 per cent of the pulpwood requirements of ITC's Bhadrachalam mill, India's largest integrated pulp and paper mill.

²¹ An administrative unit below the district level.

²² United Nations Framework Convention on Climate Change

²³ Clean Development Mechanism

The Program has enabled ITC to move towards credible certification of its environmentally responsible products. It became the first Indian company to gain membership of the WWF GFTN²⁴ for responsible forestry practices and since then all four of its paper and paperboards manufacturing units have received FSC²⁵ Chain of Custody certification, regarded as the highest international standard for responsible wood sourcing. In 2012, FSC Forest Management certification was completed for a social forestry project with 255 village committees signing an agreement with ITC's Paperboards & Specialty Papers Business to follow FSC guidelines.

²⁴ World Wildlife Fund – Global Forest & Trade Network

²⁵ Forest Stewardship Council

9 Conclusion

The ITC e-Choupal system, a critical component of ITC's rural development programs, under the 'Choupal' umbrella, is a pioneering milestone in India's rural economy. Driven by corporate innovation and ITC's commitment to contribute to larger national purpose, ITC e-Choupal has improved the quality of lives in rural India, enabling a larger mainstreaming of farmers to the opportunities offered in the national economic growth process. Recipient of a number of global awards, ITC e-Choupal has not only brought the benefits of digital technology to farmers, but has created a larger rural ecosystem, which together have ensured that fortune was created 'FOR' the bottom of the pyramid, rather than merely seeking a fortune 'AT' the bottom of the pyramid. This fundamental approach of enlarging rural purchasing power as well as creating sustainable livelihoods will certainly continue to be the cornerstone of ITC's transformational impact in rural India.



Asia-Pacific Association of Agricultural Research Institutions

Asia-Pacific Association of Agricultural Research Institutions (APAARI) was established in 1990 at the initiative of Food and Agriculture Organization of the United Nations and most of the National Agricultural Research Systems (NARS) of the Asia-Pacific region. Its mission is to promote the development of National Agricultural Research Systems in Asia-Pacific region through facilitation of inter-regional, inter-institutional and international partnerships.

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The overall objectives of APAARI are to foster the development of agricultural research in the Asia-Pacific region so as to:

- Promote the exchange of scientific and technical information
- Encourage collaborative research
- Promote human resource development and capacity building
- Build up organizational and management capabilities of member institutions
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- Workshop on Climate-Smart Agriculture in Asia: Research and Development Priorities: Proceedings and Recommendations (2012)
- First Global Conference on Women in Agriculture (GCWA): Proceedings (2012)
- Regional Workshop on Implementation of Suwon Agrobiodiversity Framework: Proceedings (2012)
- Regional Dialogue on Conservation Agriculture in South Asia: Proceedings and Recommendations (2012)
- Expert Consultation on Agricultural Biotechnology, Biosafety and Biosecurity: Proceedings and Recommendations (2012)
- Workshop on Moving Beyond Strategy to Improve Information and Knowledge Management for Agricultural Development in the Pacific Islands Countries and Territories: Proceedings (2012)
- Stakeholders' Interface on GM Food Crops: Proceedings and Recommendations (2011)

- Expert Consultation Meeting on Postharvest and Value Addition of Horticultural Produce – Strengthening Technologies for Linking Farmers to Market: Proceedings and Recommendations (2011)
- International Symposium on Sustainable Agricultural Development and Use of Agrobiodiversity in the Asia-Pacific Region (2010)
- APAARI-ADB Asia-Pacific Consultation on Agricultural Research for Development (AR4D) in Asia and the Pacific-The Way Ahead (2009)
- Expert Consultation on Biopesticides and Biofertilizers for Sustainable Agriculture (2009)
- Symposium on Global Climate Change : Imperatives for Agricultural Research in Asia-Pacific (2008)
- Expert Consultation on Agricultural Biotechnology for Promoting Food Security in Developing Countries (2008)
- Workshop on Development and Management of ARD Information Resources (2008)
- Asia-Pacific Regional Workshop on Agricultural Research for Development (2008)
 (for establishment of NGO Consortium-NAARAP)
- Expert Consultation to Review Progress of Agricultural Research Networks and Consortia in Asia-Pacific (2007)
- ICT/ICM Sensitization and Awareness Building Workshop for NARS Leaders and Senior Managers (2007)

Success Stories

- Wax Apple Industry in Taiwan: A Success Story (2014)
- Agricultural Information and Knowledge for All: Success Stories on ICT/ICM in AR4D in Asia and the Pacific Region (2013)
- Linking Farmers to Market: A Success Story of Lettuce Export from Chinese Taipei (2012), Min-Chi Hsu *et al*.
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