



ITC's Sustainability Initiatives in Agriculture Through E-Choupal

Shivam Singh¹, Ketan Verma² and Dr. Vijay Kulkarni*

Abstract

The following case study gives an insight into the E-Choupal initiative of ITC. ITC used Digital technology for the betterment of agriculture in villages in India. This initiative was launched in 2000 and makes farmers' lives easier by guiding them about the weather, different farming methods, and market costs, thus enabling them to make well-informed decisions. In addition to this, it increases farmers' incomes by supporting sustainability in farming practices and increasing productivity by permitting them to sell to markets without the use of middlemen. E-Choupal has emerged as a vital platform for the enhancement of rural development. It has more than 6100 kiosks in 10 states, catering to over 4 million farmers. ITC's business goals merge with its social responsibility enterprise by strengthening supply chain efficiency, thereby aligning with its Sustainability aims.

Keywords: ITC, E-Choupal, Agriculture, Digital Technology, Farmers, Rural Development.

Introduction

ITC Limited is an Indian, well-diversified company. The headquarters is in Kolkata. It has six business segments: FMGC, hotels, agribusiness, IT, paper products, and packaging. ITC is the second largest FMGC company in India and the third biggest company in the world. ITC has a workforce of 36,500 across more than 60 sites in India. Its products are available in 6 million retail outlets throughout the country and are exported to 90 countries globally. ITC leads the Indian paperboard and packaging industry and is globally recognized for its efforts in empowering farmers through its agribusiness initiatives. As a major hotelier, ITC is celebrated for its 'Responsible Luxury' hotel chain. Its wholly-owned subsidiary, ITC Infotech, focuses on delivering specialized global digital solutions. In the last decade, ITC's newer consumer goods divisions have built a robust portfolio of world-class Indian brands that create substantial value. Prominent FMCG brands

¹ Student, MBA- Ajeenkya DY Patil University, Pune, India, Email: shivam9824singh@gmail.com

² Student, MBA- Ajeenkya DY Patil University, Pune, India, Email: shivam9824singh@gmail.com

*Corresponding Author: Dean, Student Affairs, Student Services Division, Ajeenkya DY Patil University, D Y Patil Knowledge City, Charholi Bk. Via Lohegaon, Pune – 411081, Maharashtra, India. Email: profvijayra2@gmail.com, <https://orcid.org/0000-0002-4253-3791>.

like Aashirvaad, Sunfeast, Yippee, Bingo, B Natural, ITC Master Chef, Fabelle, Sunbean, Fiamsa, Engage, Vivel, Savlon, Classmate, Paperkraft, and Mangaldeep have quickly developed a strong consumer following.

What is e-Choupal?

ITC E-Choupal was introduced in India in 2000. They provided computers and internet access in rural areas across several agricultural regions. With the help of this setup, farmers can directly sell their products to ITC Limited. E-choupal helped farmers obtain mandi prices, good farming practices, and to place orders for agricultural inputs like seeds and fertilisers. ITC's e-choupal excess in rural areas is run by Sanchalak, who is a trained farmer. The computers in Sanchalak's house are linked to the internet. Each computer serves around 600 farmers across 10 villages; while performing this process, they earn a service fee for the transactions. The work of Samyojak is to manage the warehouse. With E-choupal, farmers' income increased, resulting in a rise in productivity as well as the quality of the yield. ITC compensated for the transportation to the farmer, which led to an increase in marginal profit. The main aim is to empower farmers to compete in a better manner in the market, which will also support the future exchanges. (<https://en.wikipedia.org/wiki/E-Choupal>, n.d.)

Historic Background

ITC Limited is a diversified firm with businesses spanning FMCG, Personal Care, Food, Education & Stationery, Branded Apparel, Incense Sticks, Cigarettes & Cigars, Safety Matches, Hotels, Paperboard & Packaging, Information Technology, and Agriculture Businesses. Founded on August 24, 1910, as the Imperial Tobacco Company of India Limited, the company transformed as its ownership became increasingly Indian. In 1970, it rebranded to India Tobacco Company Limited and, in 1974, adopted the name ITC Limited. In the 1970s, the company branched out into the hotel and packaging sectors, and in the 1990s, During the 1980s and 1990s, ITC continued its diversification efforts and entered the FMGC sector.

In the 2000s, ITC strengthened its position in the FMCG sector, with brands such as Sunfeast, Aashirvaad, and Bingo becoming household names. The company further expanded into agribusiness, hospitality, and packaging while maintaining a strong emphasis on sustainability and environmental responsibility. ITC launched its "Mission Sustainability" initiative, highlighting its commitment to environmentally friendly practices, including water conservation and the use of renewable energy. (https://en.wikipedia.org/wiki/ITC_Limited, n.d.)

Objectives of ITC's e-Choupal Initiative

1. Empower Farmers:

E-Choupal is designed to equip farmers with essential information about farming techniques, weather updates, and market prices. By providing this knowledge, the initiative helps farmers make informed choices regarding crop management and resource use, optimizing their farming practices for better yields and efficiency.

2. Increase Income and Productivity:

A primary goal of e-Choupal is to boost both the income and productivity of farmers. By introducing them to improved agricultural methods and timely information, the initiative encourages the adoption of more effective practices. This transition allows farmers to move beyond subsistence farming, increasing their profitability and financial stability.

3. Enhance Market Access:

Many farmers struggle to sell their produce due to reliance on intermediaries, which can lead to lower prices. e-Choupal addresses this issue by providing direct access to market information, enabling farmers to understand current prices and demand. This transparency allows them to negotiate better sales terms, ensuring they receive fair compensation for their efforts.

4. Promote Sustainable Practices:

Sustainability is a key focus of e-Choupal. The initiative encourages farmers to adopt environmentally friendly farming practices, such as organic methods and efficient water usage. By educating farmers on sustainable techniques, e-Choupal aims to protect natural resources and promote ecological balance, ensuring that farming remains viable for future generations.

5. Improve Supply Chains:

E-Choupal seeks to enhance the efficiency and transparency of agricultural supply chains. By streamlining operations and establishing reliable communication, the initiative ensures that high-quality produce is consistently available for ITC's various businesses. This improvement benefits farmers by creating a more dependable market while ensuring consumers receive quality products.

6. Support Rural Development:

The initiative also plays a crucial role in rural development by investing in local infrastructure and services. This includes improving access to roads, storage facilities, and credit options. By enhancing the quality of life in rural communities, e-Choupal fosters economic growth and strengthens local economies.

7. Encourage Digital Access:

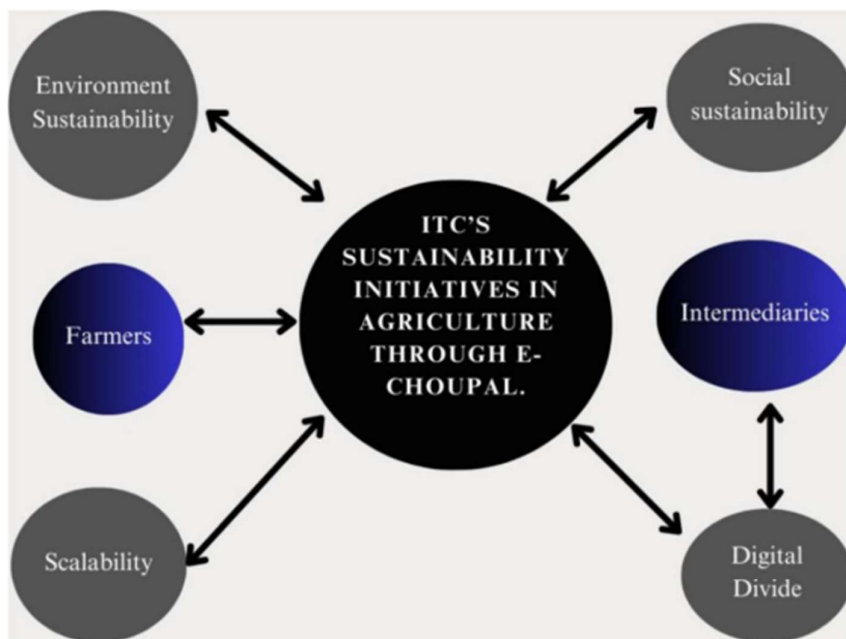
A significant focus of e-Choupal is to bridge the digital divide in rural areas. By providing access to technology, such as computers and the internet, the initiative promotes digital literacy among farmers. This access helps them stay informed about market trends and agricultural innovations, empowering them to make data-driven decisions.

8. Foster Community Engagement:

E-Choupal emphasizes the importance of community involvement by encouraging farmers to collaborate and share knowledge. This approach fosters a supportive environment where farmers can learn from each other's experiences and challenges. Strengthening these social ties enhances collective problem-solving and drives overall progress in rural areas

Research Objectives

- Service delivered under the ITC's E-Choupal initiative to the farmers is measured as access to markets. It fortifies the decision-making mechanism, as well as the income, of the farmers.
- To comprehend the contribution of E-Choupal in the process of empowering small- scale farmers in rural India through the use of sustainable agriculture practices and optimizing the supply chain.
- In this paper, the contribution of E-Choupal to rural development is analyzed based on social empowerment, digital inclusion, and community involvement.

**Figure no: 1**

Research Methodology

It is a secondary research study that attempts to review and combine the existing literature. Scholarly articles, peer-reviewed journals, expert books, industry reports, credible websites, blogs, and other valuable published materials will be used as the primary sources of information. They are a plausible academic role chosen on long-term agricultural practices, Internet-based support to farmers and rural development projects, i.e., the E-Choupal program of ICT.

The methodology employed in this study was the search and critical review of secondary literature to learn about the impact of E-Choupal on agricultural sustainability, farmer income, and rural socio-economic development. Numerous research papers and case studies provided information regarding the chance to utilize digital technology to eradicate the information gap between farmers, to gain better access to the market, and to simplify the process of environmental preservation. Articles and reports on the subject of rural digital inclusion were analyzed in a bid to investigate social themes such as enhancing digital literacy levels and women's empowerment in the villages where E-Choupal has been implemented.

This study also incorporated a systematic review of the findings of other sources to provide a general overview of the accomplishments and failures of the E-Choupal model. It will not have any restrictions concerning the cost to be employed and no restriction on the scope of the data collection since the study will be founded on the believable secondary data and the analysis will rest on the prior knowledge and the written experience.

Environmental Sustainability: Sustainable farming

A.] Awareness, education, and source optimisation:

Farmer Field School (FFS):

FFS is a group-based learning process: Farmers carried out experimental learning activities that helped them understand the ecology of their crops. (theme Sustainable Agriculture Title Adoption of Sustainable Agricultural Practices in Farmer Field School Villages, n.d.) ITC introduced FFS in Bihar, MP, Uttar Pradesh, Rajasthan, and West Bengal.

Bihar (Munger): In this region, the System of Rice Intensification (SRI) for paddy was highest compared to the traditional method. SRI was adopted mostly by small farmers and marginal.

Madhya Pradesh (Sehore and Vidisha): In this region, 66% of farmers in the farmer field school used the Broad bed burrow (BBF) method for sowing soya seeds. Awareness about different practices was maximum among marginal farmers as compared to any other class of farmers.

Rajasthan (Bundi): In this region, 73% users of the line sowing method with reduced seed rate was higher than other traditional practices. Uttar Pradesh (Allahabad): In this region, the adoption of paddy was similar in both small and medium farmers. For wheat, 89% of the farmer field school farmers had adopted zero tillage, which is higher than any other study location.

West Bengal (Murshidabad): Among all categories of farmers, the level of awareness (FFS-92% & non-FFS- 90%) and adoption (FFS- 60% & non-FFS- 55%) of varietal introduction was high.

Different practices promoted the yield of major crops:

Paddy: Spending on fertilizer decreased as compared to traditional practices, to Rs. 1451/acre from Rs. 1881/acre. Similarly, the labour cost decreased from Rs. 4305/acre to Rs. 4029/acre. Productivity increased by 6 quintals and income by 8,369 per acre

Soya bean: The productivity in soya bean increased marginally from 2.5 quintals to 6 quintals. However, net income witnessed an increase from Rs. 4,916/acre to Rs. 7,667/acre.

Wheat: Cost on seed witnessed a decline from Rs. 1938/acre to Rs. 1781/acre after adopting sustainable agricultural practices. Productivity (per care) saw an increase from 12 quintals to 14 quintals. The resultant increase in income was from Rs. 7,831 to Rs. 10,341. (iKOnet Research & Consultants Private Limited).

Modern Techniques:

- Using Mechanical Transplanting Technology (MPT) and Direct Seeded Rice (DSR), the crop yield of Paddy is almost twice the yield of conventional transplantation.
- In districts of Bihar and Eastern Uttar Pradesh, using the DSR method yields an increase of 21.75 quintal/acre as against 11.71quintal/acre in conventional transplanting, and profit is 5.25 times that of conventional transplanting.
- The average yield of wheat using the Zero Tillage (ZT) method of sowing is 23.85 and 22.70 quintal/acre in Eastern UP & Bihar, as against the broadcasting method of sowing of 15.71 and 13.90 quintal/acre, respectively, and the profit is 2.4 times more than the conventional technique.(State Bihar & Uttar Pradesh District Lakhisarai, 2018) Speaking collectively, the profit earned while employing DSR, ZT & Summer crop is 311% more than conventional techniques, whereas profit from deploying MPT, ZT & Summer crop is 287% more than that of traditional techniques.

Organic Practices:

Mulching: By not ploughing after harvest and leaving crop residue as mulch cover. Mulching increases soil carbon content. By using this method, it reduces greenhouse gas emissions in the atmosphere as the crop is not burnt. Make soil less vulnerable to water and wind erosion.

Fertilisers and Pesticides: Making and using fertilisers and pesticides from farmyard wastes and cattle manure to protect and enrich soil nutrients naturally. (Portal, n.d.)

Water Management: Micro-irrigation: Promoting water-saving technologies i.e., Drip and sprinkler systems. Construction of group irrigation wells.

Social sustainability by ITC

It utilises digital technology to empower farmers and improve the agricultural industry ITC is well known for its commitment to social sustainability its primary areas of attention are :

1. Sustainable agriculture:-

ITC encourages sustainable farming techniques through its E- choupal program which provides farmers with resources information and enhance of market access the each of our initiative is a digital platform that connects farmers directly with marketplace is eliminating the need for a middleman commission it provides data on market prices whether forecast and best practices in India ITC has established over 6000 E-choupal farmers who engage in this program gain from increase the income reduced dependency on middleman and the adoption of sustainable agriculture practices (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2526061, n.d.).

2. Health and nutrition:

To enhance public health and nutrition ITC primarily operates in rural areas among its components are alliances and campaigns to increase awareness the company organisation free medical services and health education health camp in rural areas in collaboration with local healthcare providers it also introduced fortified food products in low income areas to combat malnutrition they also conducted community workshops on hygiene maternity health and nutrition this initiative has improved the health and nutrition rates of children.

2. Engagement with stakeholders:

ITC engages with local community is Government and nongovernmental organisations among others do ensure that there initiative are relevant and successful it is take holder engagement papers to the methods and strategies used to communicate and work together with other parties involved in trade and economic development when stakeholders are effectively engaged it becomes more effective for ITC to promote sustainable trade practices it also improve the way in which business is Government and stakeholders collaborated to create policies it's strengthens alliances leading to joint ventures and increase the capital of Trade promotion (Sebastian Planck)

3. Community development:

ITC overseas program that prioritises this health education and means of subsistence there objective is to provide access to essential services one of ITC main goals is to equip community with the knowledge and skills they need to participate in global markets promoting environmentally friendly production and trader methods to ensure the resources long term availability ITC community development sustainability initiative have the potential to enhance market accessibility and skill sets their augmenting local community earnings and bolstering overall economic growth.

4. Women empowerment:

ITC works to promote gender equality by assisting women in starting cell help groups providing skill development training and helping them achieve financial independence it promotes the formation of self-help groups or shgs which provide women with financial independent and skill training this programs objective is to help women become economically independent by supporting them in a range of traits from handicrafts to entrepreneurship many women have started small businesses which has increased the families income and decision making power in the home for example the income of household headed by women in Bihar who got ITC training in handicraft increased by 50% (Title: Corporate Social Responsibility: A Way Towards Women Empowerment Title: Corporate Social Responsibility: A Way Towards Women Empowerment Title: Corporate Social Responsibility: A Way towards Women Empowerment, n.d.).(Chaudhary, n.d.)

5. Sustainability in education:

ITC supports educational programs that give young people better opportunities for empowerment and training ITC priority this education sustainability to enhance trade related skills promote sustainable development and foster inclusive economic growth a component of this strategy is providing training programs to increase trade knowledge by helping people and SMEs acquire skills that improve employment and entrepreneurial success ITC helps to create jobs businesses are also encouraged to operate sustainably by the promotion of sustainability in education. (ITALIAN JOURNAL OF SOCIOLOGY OF EDUCATION).

6. Social sustainability by ITC:

If social considerations take precedence ITC is dedication to environmental sustainability is comparable to that of afforestation and water conservation since it upwards a robust ecosystem for the community ICC restores degraded lands through massive forest station in an effort to increase I would diversity and slow down climate change the company promotes water conservation agriculture community two improve water availability on rainfall ITC recognise the importance of sustainability in the production process and supply chain and encourages business to Adobe environment of sustainable product and help business is connect with environment conscious consumer ITC programs generally contribute to the development of an international trade environment that is more sustainable which benefits the environment Reference:

Scalability: Scalability is the ability to grow and handle more users or services smoothly. In ITC's E- The Choupal program, at its start, it was a one-way, simple platform where farmers only got information. But now, it has grown into a two-way platform, where farmers can both receive information and share their feedback by interacting and making it more useful. (WWW.google.com, n.d.)

Features of scalability:

1. Regional growth: E-Choupal was started in June 2000 and is the largest internet-based program in rural India. It currently helps over 4 million farmers who grow various crops like soybean, coffee, wheat, rice, pulses, and shrimp in more than 35,000 villages. The program operates through 6,100 kiosks located in 10 states: Madhya Pradesh, Haryana, Uttarakhand, Uttar Pradesh, Rajasthan, Karnataka, Kerala, Maharashtra, Andhra Pradesh, and Tamil Nadu. ITC's Agri Business Division, which exports agricultural products from India, created E-Choupal to improve the supply chain and provide better services to its global customers. (<https://www.itcportal.com/businesses/agri-business/e-choupal.aspx>, n.d.)

2. Technological Foundation and Service Extension: The initiative aims to bring agricultural support services directly to farmers using the Internet. E-Choupal is a digital marketplace where farmers can sell their products directly to buyers, helping them get better prices. These village Internet kiosks provide farmers with valuable information about weather, market prices, and effective farming methods. The company supplies the necessary equipment, like computers and solar panels, and each kiosk is operated by a local farmer trained to assist others. The program also includes demonstration plots to teach farmers best practices, leading to significant income increases for many participants. (<https://www.itcportal.com/businesses/agri-business/e-choupal.aspx>, n.d.).

3. Human resource scaling: Human resource scaling refers to the process of effectively expanding and optimizing the workforce within an organization to meet growing business demands. A prime example of this can be seen in ITC, a leading Indian company engaged in various sectors, including fast-moving consumer goods (FMCG), paper, packaging, agribusiness, hotels, and information technology. Known globally for its commitment to sustainability, ITC generated nearly \$7 billion in revenue in 2010. In 1990, ITC established its International Business Division, focusing on trading agricultural commodities. One of its key initiatives, e-Choupal, launched in June 2000, was designed to enhance the supply chain by directly connecting with farmers. This innovative platform serves as a hub for farmers to share information and engage in e-commerce transactions, thereby creating a broader network of resources and support. E-Choupal has evolved into a successful model for distributing products and developing new offerings, particularly for crops like soy and wheat. Each E-Choupal is managed by a local farmer, known as a sanchalak, who acts as both an ITC salesperson and a community resource. Farmers can bring their produce to these kiosks, present samples to the sanchalak, and receive a price quote. If they accept the offer, they can deliver their crops to an ITC collection centre and receive payment within two hours. Additionally, E-Choupals provide farmers with critical information on crop prices, weather forecasts, and modern farming techniques, thereby empowering them to make informed decisions and increase their productivity. This holistic approach exemplifies how

human resource scaling not only enhances operational efficiency but also fosters community engagement and economic development. (<https://www.itcportal.com/businesses/agri-business/e-choupal.aspx>, n.d.).

4. Economic efficiency:

Economic efficiency means using resources in the best way possible to get the best results while wasting as little as possible. The E-Choupal initiative is a great example of this because it focuses on lowering costs and making the supply chain more effective. This initiative benefits both farmers and consumers. Farmers are earning more money because they are producing more crops, improving the quality of their products, and facing lower costs when selling. E-Choupals provide farmers with up-to-date information, helping them make better decisions and saving money for ITC Limited. Because of these improvements, farmers' incomes have increased significantly, thanks to better prices and fewer losses after harvest. This boost in income helps raise the standard of living in rural areas, showing how economic efficiency can lead to sustainable growth and better living conditions in communities. (<https://testbook.com/amp/ias-preparation/e-choupal>, n.d.).

• **Scalability obstacles:** The e-Choupal program aims to help farmers by cutting out middlemen and giving them better access to farming information. However, it faces several big challenges that make it hard to grow. Here are the main issues:

Small Farms: The program doesn't solve the problem of small, unproductive farms, which limits how much food farmers can grow.

Infrastructure Problems: Many rural areas lack reliable electricity and good internet service, making it hard for farmers to use e-Choupal.

Dependable Local Leaders: The success of e-Choupal depends on local coordinators, known as sanchalak. Choosing the right person for this role is very important.

Tech Skills: Many farmers have low computer skills and may not trust electronic systems, which makes them hesitant to use e-Choupal.

Understanding the Market: Farmers often don't know enough about market prices and trends, which can prevent them from using e-Choupal to their advantage.

Middlemen Influence: Brokers and other middlemen still play a big role, making it hard for farmers to benefit fully from the e-Choupal system.

Complicated System: If the e-Choupal platform is hard to use, farmers may not want to engage with it.

Lack of Rules: Without clear guidelines for how e-Choupal should operate, farmers may be unsure about trusting the system.

Transparency Concerns: Farmers might worry about how their produce is inspected and weighed at e-Choupal centers, which can make them hesitant to use the services.

If these challenges aren't fixed, e-Choupal might struggle to really improve farming and the lives of farmers in India. (https://www.academia.edu/41735331/ITC_e_Choupal_Weakness_of_e_choupal, n.d.).

Digital Divide:

ITC E-Choupal precisely came into the picture in August 2019, action shifts away from physically enlarging the E-Choupal matrix to now accumulating all its services onto a digital platform and creating a digital platform. Building on networks created with farm-level groups and external groups for high-tech services for the previous phases, but now ITC has made a huge revolution in E-Choupal by creating all its existing services and a host for its new ones, so it will be available to all farm-level supporters in different languages other than English to accelerate farmer benefits. These services could give a personal touch on the basis of facts collected by farmers. This will have a huge impact on the ITC app Metamarket for Advanced Agriculture and Rural Services (MAARS). (Das, sandip ,2023).

Sustainability Initiatives through E-Choupal:

The E-Choupal model is a very robust technology and has a grassroots-level outreach. We have studied how it works

a) Information Access: - E-Choupal hub helps farmers to access information regarding Climate, crop management, price in the market, and the best part, which we liked, is that they provide training through internet-enabled computers.

b) Market Coordination: - Through ITC, the farmers can sell their products like wheat, sugar, millet, sorghum, etc, whatever they produce through farming, to the broker or intermediaries. This ensures a good margin and makes less in post-harvest.

c) Community Engagement: - By creating different platforms for farmers to engage, interact, learn, develop skills, and share experiences. (<https://testbook.com/ias-preparation/e-choupal>).

Addressing the Digital Divide:

a) Building an accessible, multilingual digital platform: - As we went through the articles, we found that the farm-level stakeholders or any services benefit if they are personalised to their content available in their languages. Keeping this in mind, they started offering a host of services on their digital platform, like crop monitoring, crop advisory, an electronic trade place for farmers, and a quick quality check. As these mechanisms were improved and spread entirely, testing of this technology started with climate-smart agriculture compounds and made them available for farmers. By this method, they make 900 villages “climate-smart” in the sector of rain-fed areas of Madhya Pradesh, Maharashtra, and Rajasthan using precise data. (Das, sandip ,2023). Meanwhile, another experiment took place in East and West Godavari in Andhra Pradesh to map soil moisture and also understand how to make the mechanisms cheaper and affordable to farmers (sharma, 2019).

b) Building a network of Farmers Producer Organisation (FPOs): - We have seen that the developers generated a strong network for farmers' producer organisations (FPOs) throughout the villages where they were present. This step adds on to their physical presence, and FPOs in villages. As per our study, we have found that they also had a choice to sell their production to the FPOs centres or to ITC. These FPOs were eventually interlinked by a super-app called ITC MAARS to provide a better market to stakeholders for agricultural and rural services. (Das, sandip ,2023)

c) The Core Solutions: ITC further developed their services by co-creating the solutions with the group's members, and they regularly applied systems to understand the problems rooted in ground reality. The programmes have had a huge impact on agriculture, and they were evolving the solutions as per the group or community needs.

Conclusion

ITC's e-Choupal is a good example of how technology and sustainable practices can help farmers and improve life in rural areas. It helps farmers deal with problems like low crop yields, limited access to markets, unfair prices, and environmental challenges. By connecting farmers directly with markets it provides real-time information, better farming tools, and fairer prices, leading to higher incomes and more stable livelihoods.

1) Environmentally- e-Choupal promotes eco-friendly farming by encouraging water- saving crops and smart pest control methods. ITC also reduces pollution by supporting sustainable practices across its entire supply chain.

2) Economically- the program shows how businesses can work directly with farmers and bring them into larger markets without middlemen. Farmers benefit from fair prices, and tools like weather updates, soil testing, and online platforms help them make better decisions and grow higher-quality crops with less risk.

3) Socially- e-Choupal empowers rural communities by providing education, training, and business opportunities. It promotes entrepreneurship and encourages young people to explore careers in agriculture, making villages more self-sufficient. ITC focuses on balancing profit, environmental care, and social well-being to ensure long-term benefits.

In Short, e-Choupal is a powerful model that promotes growth for both farmers and businesses in a sustainable way. It shows how companies can help tackle big challenges like rural poverty, food insecurity, and climate change. This initiative offers a scalable solution that other countries can follow to create stronger, more sustainable farming systems.

Reference

- Chaudhary, B. (n.d.). International Journal of Development in Social Sciences and Humanities
INTERNATIONAL JOURNAL OF DEVELOPMENT IN SOCIAL SCIENCES AND
HUMANITIES THE ROLE OF SKILL DEVELOPMENT IN WOMEN EMPOWERMENT. 3, 2017.
<http://www.ijdssh.com>
- State Bihar, P., & Uttar Pradesh District Lakhisarai, E. (2018). Theme Climate Smart Agriculture Title
Assessment of Sustainable Agriculture Practices in Bihar and Eastern Uttar.
Theme: Sustainable Agriculture, Title: Adoption of Sustainable Agricultural Practices in Farmer
Field School Villages. (n.d.).