

Running Head: A Platform For E-Commerce in Agri-Business in India

A Platform For E-Commerce in Agri-Business in India

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MIT ADT LONI PUNE MAHARASHTRA

21-04-2022

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ABSTRACT

Agriculture is India's economic backbone. According to the FICCI, about 65% of the Indian population is dependent on agriculture and represents about 22% of India's GDP (FICCI 2007). E-commerce (or eCommerce) using Internet technologies helps businesses reduce costs and cycle times, increase efficiencies, and provide more information, choice, and value to consumers. In recent years, eCommerce has found its way into agricultural businesses in India. The Internet continues to be popular with people who deal with farm businesses of all types. As the availability of technology has grown and access has become easier, demographic change is also characterized by a greater willingness to use technology in the agricultural community. Yet, farmers are facing unprecedented challenges, such as unpredictable weather, unavailability of good quality seeds and fertilizers, and unreliable means of selling their crops after harvest. This research article explains the scope of online shopping (or e-commerce) to solve these inherent problems and to help agribusinesses in rural India and describes the opportunities and challenges for online shoppers to tap the rural agriculture market in India. It also addresses the scope, opportunities, challenges, benefits, and uptake of online shopping in the agri-food sector in India.

Keywords: Agriculture, Agri-business, E-Commerce, Agri-tech, Online Shopping, Internet Technology.

INTRODUCTION

The Internet brings new open doors and challenges to organizations around the world. Internet Business (EC) has brought new business connections and empowered new business areas, new business, and ideal new presentation models. Internet commerce integrates all trade that uses information technology in its broadest sense. It covers everything that allows us to accumulate, create, store, investigate, circulate, or at least use data. Entering agribusiness towards the end of the twentieth century, Ecommerce provides existing customers with one more way to disseminate article data and connect to another customer base. It is comparable to various organizations that agribusiness faces the challenge of changing their action plan essentially and repetition to join Internet exercises. Many agribusiness companies have taken advantage of the advantages of eCommerce to work on the presentation and exchange of their articles. There are still many benefits to the anticipated realization of online business' in agribusiness. Normal farm businesses such as buying, selling, exchanging, shipping, and contracting to appear to be

regular priorities for changing an online business. There has been a huge surge in global web use and for an agricultural nation like India,

The evolution has been incredible. On the planet, India is the third-largest base with an estimated 120 million web customers. By 2015, India is reliable to have an increased development with 320-360 million web clients, making it the second-largest client base on the planet. With the Internet's expected double monetary commitment in the next three years, India's GDP will grow from 1.6 percent to 2.8 to 3.3 percent by 2015. India can accomplish a wide-based Internet sway by focusing on the computerized consideration of almost 40% of its populace, to arrive at a client base of 500 million by 2015, rather than the possible objective of 330 million to 370 million. The Indian economy has an important engagement for the agrarian region. Examination, expansion, and rancher's endeavors generally contributed fundamentally to expanding the food grain creation from 50 million tons in 1950-51 to the landmark accomplishment of an expected creation of 275 million tons of food creation in 2017-18. The entire need for foodgrains is proposed to contact 300 million tons continuously in 2020-21. To satisfy this significant need a corresponding development pace of almost 2% per annum is needed in food grain creation and a 4 percent for every annum development rate is needed in farming. There is therefore a pressing need for pulses, a dynamic and innovative methodology.

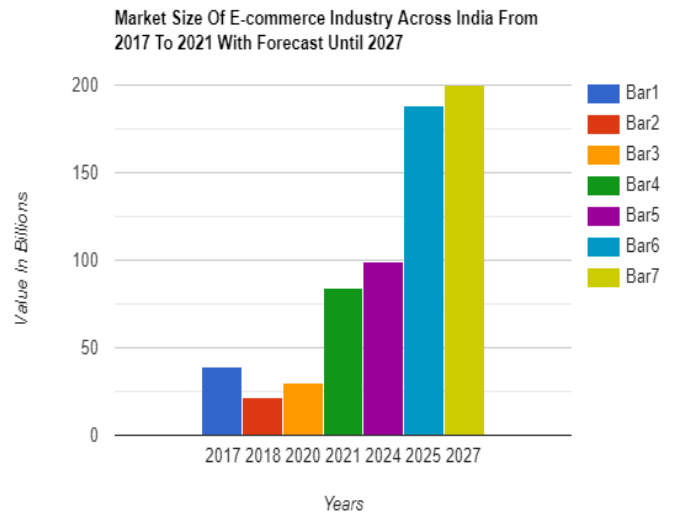


Figure 1

that needs to take on to accomplish a development rate in horticulture and this manner, the ranchers are served better. Public strategy on ICT in agrarian augmentation set up by the public authority has anticipated change agribusiness into the main impetus for working on monetary development inside a market-situated arrangement system by advancing farming commercialization and expansion.

Benefits of E-commerce adoption in agriculture

E-commerce can provide greater transparency in the purchasing process since prices and stock levels are all accessible in an open environment. The trading time constraints under the context of international trade are removed as it is possible to operate on a round-the-clock basis. Some of the potential benefits are summarized below:

Major Advantages of e-Commerce 1. Global Market: e-Commerce provides a virtually global distribution marketplace. Internet is used by millions of people throughout the world and therefore, conducting business through this new system is unlimited and endless.

2. Inventory Costs: e-Commerce helps to minimize inventory costs many times by adopting just-in-time systems. It also enhances the firm's ability to forecast the demand of an industry more accurately. 3. Consumer Service: The cost incurred towards the customer and after-sale services generally account for not less than 10 % of the operating costs under e-Commerce. Many of the services may be put online along with improvement in product/service quality.

4. Distribution Period: Under e-Commerce, the customers place orders immediately on the net, and goods are delivered in the normal way.

5. Easy reach: With the help of the internet small and medium-size companies also get an opportunity to provide information on their products and services to all the potential customers the world over at a minimum cost.

6. Direct link: Through the internet, companies can establish a direct link to customers and critical suppliers or distributors to complete transactions or communicate trade information more easily.

Saving transaction costs The Internet may reduce transaction costs by lowering trading and/or transfer costs when the following scenarios: are facilitated information search, lowered the costs of adjusting posted prices, facilitated negotiations between geographically separate buyers and sellers, and monitored more easily fulfillment. Furthermore, because communication costs on the Internet are largely independent of data volume and distance between sender and receiver, geographic distance is unimportant in search and negotiation. Finally, the Internet has the most profound

impact on trading costs when information is digitization.

Problem Definition

Agriculture has been a prime source of employment in India since ancient times. Presently it contributes to 14.2 percent of India's GDP and employs around 58 percent of the workforce of the country. It is an important sector not only forms part of the economy but also meets the food demand of the huge population of the country. While agriculture was at its prime, another prominent sector stepped in, this was the internet, since its inception in the country. The Internet and IT industry have become major drivers of the Indian economy. Agriculture, though a little late also tried to adopt the internet in as functioning, the aim was knowledge sharing between the agriculture research institutes, access to international best practices, information sharing in the public domain, online trading, and import and export. Though this implementation led to drastic improvements in the way of carrying out certain activities related to the agriculture sector, the scope of implementation and adoption of the internet in Indian agriculture is still a very small fraction of its overall potential. The findings of Mittal, 2006, have revealed that the potential of Information Technology is not fully tapped in the Indian Agriculture sector. While IT opens up possibilities ranging from precision farming at the farm level to support for efficient decision marketing to the policymakers, unfortunately, the current levels of induction of IT in the agriculture front are far from satisfactory. This paper makes an effort to survey the adoption of e-commerce practices among the farmers in Trichy District in Tamil Nadu, India. The objectives of this study are as follows:

1. To study the farmer's profile in the Trichy district.

2. To determine the reliability of the scale developed to capture the perception of farmers regarding the benefits and constraints in the usage of Internet information.

3. To measure the influence of e-commerce usage on farming practices.

4. To identify the impact of constraints in adoption on the benefits of e-commerce applications for farmers.

Latest Literature Survey

The agricultural sector needs to be tailored to the rise of the market to achieve such benefits and requires its development. end. That means you need to use new and technological techniques to build modern agriculture productively. many Each country is researching the techniques used in agriculture and has achieved good results. When Popular technologies, connect agricultural systems between regions will be simplified, the acquired information will be easier to obtain. seek. Modern IT (Information Technology) infrastructure simplifies integration into the network. Can be used A huge amount of information technology in agriculture. From planting seedlings to current harvest In the field of information technology, it helps to open up new automated fields of agriculture. All of this is information technology Very useful in all techniques performed in farm management systems. After the harvest, the main battle begins We will start selling the product. Every farmer wants to sell their products profitably. Analyzing the costs of different markets for IT services is More useful for farmers. Most people are familiar with smartphones and how to use them to help them keep up with the technology. The website we created is simple in design and the interface of the website is easy to understand. Technology

has advanced At a high level, farmers have the opportunity to use mobile phones effectively in rural areas. Publish information from (IFFCO), Indian Multinational Cooperative, our website. Information is exclusively related to agricultural technology Read the blog and it will be sent in the form of voice response. We will implement these services slowly in my multi-languages which make the promotional campaigns easily understandable in various regions. The information from the survey states that China, the USA, Germany, and Norway are the most advanced in agriculture so they are moving to the easy way of farming. The technology will help farmers in various aspects like weather reports, various market prices, information about new techniques, climatic changes, crop suitability, etc., and will help the farmers to grow their agriculture in different ways. We can develop Ecommerce (Electronic commerce) in a way that may increase the sale of crops to every place. Ecommerce is an effective tool that has fundamentally altered the flow of human life. E-commerce is also widely known as buying and selling products over the Internet. However, e-commerce can be divided into three main areas: B2B (business-to-business), B2C (business-to-consumer), and C2C. (Between consumers). These three areas are also known as e-commerce. The website system we are developing will help you with that By tailoring agricultural production to market demand, you can make more informed decisions and increase your potential income. There may be In the future, the use of networks will increase efficiency and the networks available in all rural areas of India will also increase. So It does not affect the network that manages the digital system.

Current Model

Indian Agricultural market is dominated by the existence of unregulated and unorganized agricultural mandies with the presence of a large number of middlemen and widespread prevalence of malpractices. Lack of proper transportation facilities and infrastructures such as rails and good quality all-weather roads, the absence of proper warehousing facilities in the villages, and ignorance about the market prices of their products are some of the important factors for the exploitation of farmers by middlemen. They are forced to sell their products to these middlemen at the farm gate at throwaway prices. The agricultural business activity starts from initial production and goes on until it reaches to hands of end consumers, all the business activities are done in the market, and the performance of these activities is called marketing (Kohls and Downey, 1972). Consumers always want to purchase products at lower costs while farmers are interested in gaining the highest possible returns from their products' sales. All the concerns like shippers, wholesalers, jobbers, and retailers are doing their tasks in the markets for their interests. Farmers grow their products for domestic and commercial purposes. Commercially the farmers sell their products in four ways; to dealers, to retailers, directly to the markets, and to the consumers. Similarly, in the product purchasing model farmers or producers purchase their required goods in three ways; from retailers who purchase from the direct market, from retailers who purchase from the dealer, and from the farmer who purchases from direct markets. As many parties are involved in the selling or purchasing of goods, there may increase in the expenses

because the Middlemen (brokers) also take their marks upon each sale and purchase. In recent years, e-commerce has found its way into the agricultural sector in India. Where technology availability has increased and access has become easier, the demographic transition is also characterized by a greater willingness to use technology among the farming community. Ecommerce is considerable with timely distribution of agriculture information, consultation, and monitoring, a response from experts, training, and education, early forecasting of price, early warning, and improvement measures, information about marketing of various commodities, expansion of the use of e-commerce, and farm business and management. However, the scene of agriculture in developing nations is characterized by the involvement of several mediators, fragile infrastructure; lack the knowledge of ICT among farmers. Even though the country becomes self-sufficient and exports agricultural products, the majority of the farmers remain in poverty. This shows that although there is an

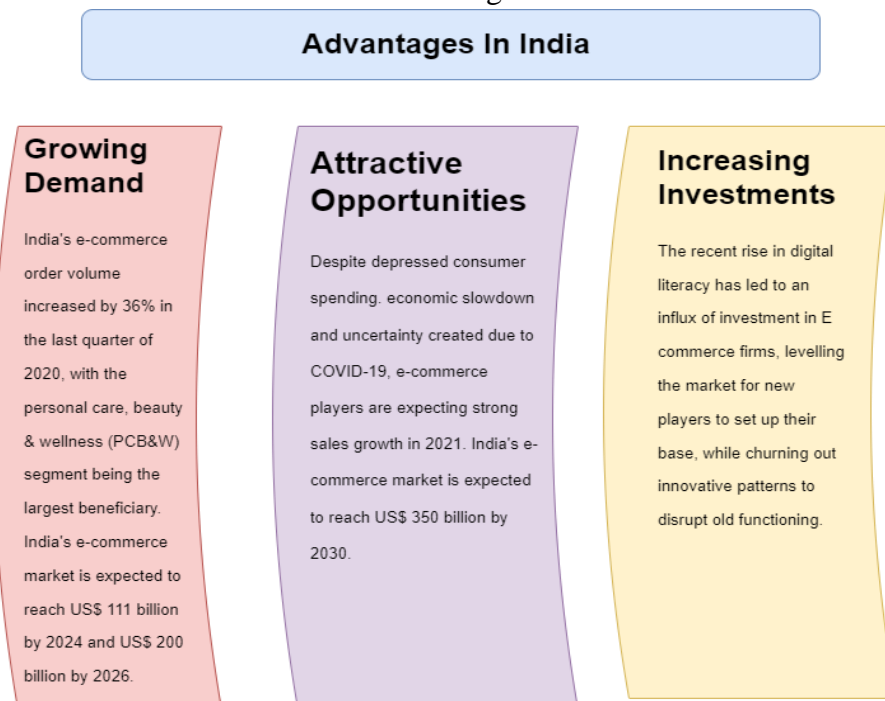


Figure 2

increase in the production of agricultural products, the farmers are not benefiting. Empowering farmers through e-commerce can prove beneficial in aspects such as. Exchange information will reach larger masses despite larger limitations, literacy levels, and local languages. b. Promoting

products reduces the gap between the farmer and the customer. The fact that agricultural products require Accurate, well-timed information and the distribution of the producer (farmer) and buyers (Traders and consumers) over a large geographical area has made the agricultural

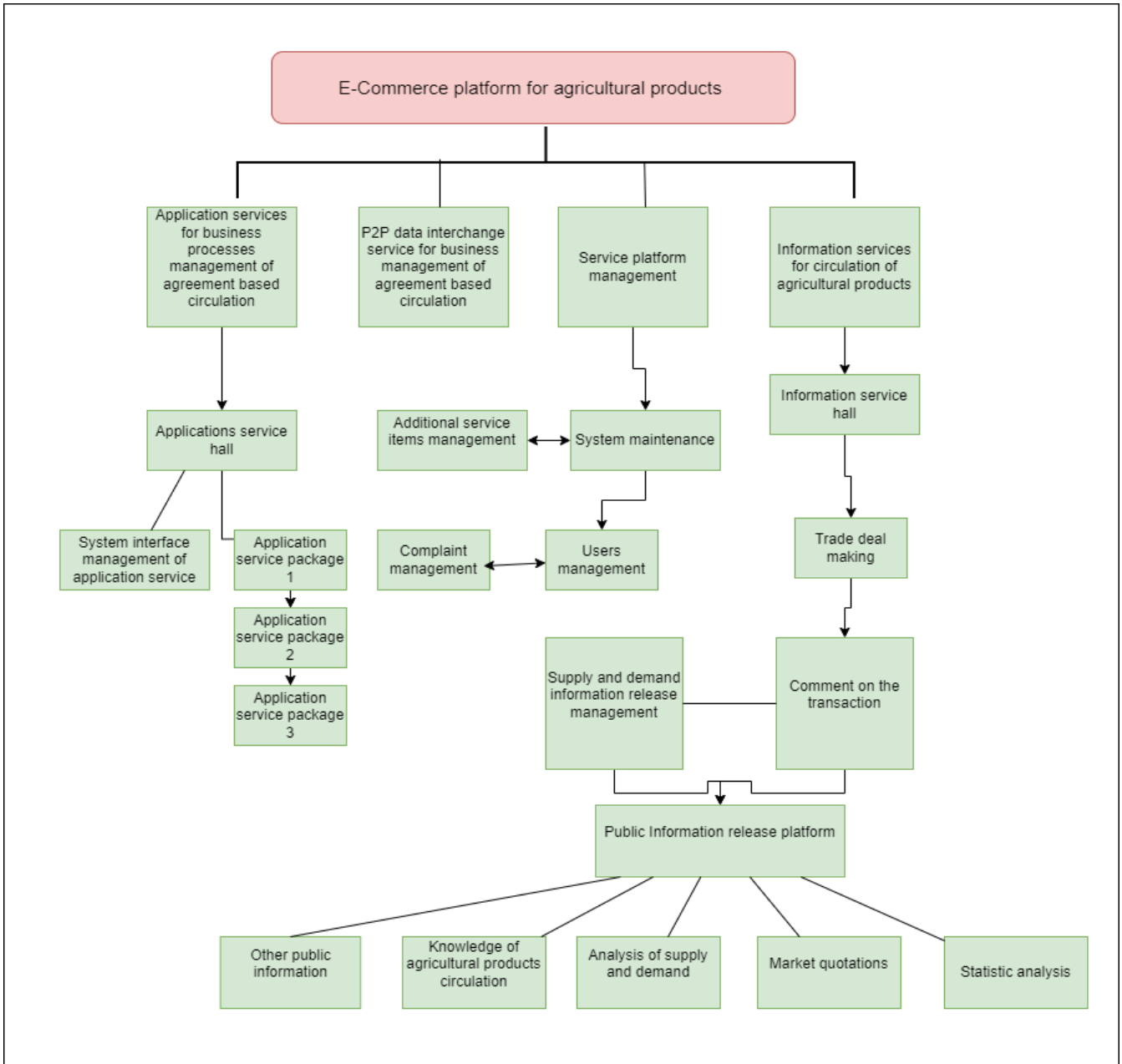


Figure 3

agricultural products to larger masses. c. Improved farming techniques and best practices reduce the cost of inefficiency and enhance the yield. Using e-commerce effectively in promoting agricultural

sector a lucrative field for e-commerce intervention. There is a potential need for developing an e-commerce framework and is well initiated by many organizations

Problems in the Current Model

APMCs were set up in many states of India to help farmers sell their produce. A Minimum Selling Price i.e. MSP was set according to which traders can't buy products from farmers beyond the MSP and a concept of trading licenses was introduced for any trader to show up in these markets. This concept helped farmers to get rid of the various forms of hardships and exploitations.

As time passed, there was the introduction of various issues with APMC mandis, some of which are highlighted as follows:

- The rates of commodities started varying in every region all across India, leading rates to be highly fragmented.
- Fees of trading in APMC went high.
- There is a limited number of APMC mandis, leading to insufficient market options for farmers to sell their produce.
- Even after imposing and collecting high fees, the infrastructure of the APMC was inadequate and lead to a high wastage of harvests.
- As agents/middle man in APMC needed to have a license, there were limited agents with whom farmers can sell their produce which prompted less income for farmers.

Research Gap

Though a handful of works on agriculture and its allied activities regarding marketing, performance, and prospects are found, most of the studies have been done during the pre-reform period. In the post-reform period, tremendous changes have taken place in the Indian market. Hence, there is a call for serious studies on the marketing of agricultural produce during the post-liberalization period and the performance of the agricultural sector in the Indian economy.

Ideation of New Model

The government has issued “The Farmers Produce Trading and Commerce Act 2020” (FPTC) which gives farmers the freedom to sell and buy agricultural commodities at any place in the country as they feel appropriate.

According to the Department for Promotion of Industry and Internal Trade (DPI), the Indian food processing industry has cumulatively attracted a Foreign Direct Investment (FDI) equity inflow of about US\$ 10.43 billion between April 2000 and June 2021.

Some major investments and developments in agriculture are as follows:

- From 2017 to 2020, India received ~US\$ 1 billion in Agri-tech funding. With significant interest from the investors, India ranks third in terms of Agri-tech funding and the number of Agri-tech start-ups. By 2025, Indian Agri-tech companies are likely to witness investments worth US\$ 30-35 billion.
- In March 2020, Fertilizer, the oldest large-scale fertilizer manufacturer in the country, crossed the one million production and sales mark.
- India is expected to achieve the ambitious goal of doubling farm income by 2022. The agriculture sector in India is expected to generate better momentum in the next few years due to increased investment in agricultural infrastructures such as irrigation facilities, warehousing, and cold storage. Furthermore, the growing use of genetically modified crops will likely improve the yield for Indian farmers. India is expected to be self-sufficient in pulses in the

coming few years due to the concerted effort of scientists to get early maturing varieties of pulses and the increase in minimum support price.

- In the next five years, the central government will aim for US\$ 9 billion in investments in the fisheries sector under PM Matsya Sampada Yojana. The government is targeting to raise fish production to 220 lakh tonnes by 2024-25.

Conclusion

This study has contributions and managerial implications to the information system knowledge base as well as the agricultural sector in India. The rate at which technology innovations like internet information are adopted by consumers constitutes an important part of the technology change or integration. There are several studies on the adoption of new technology, but only a handful of studies focus on the agricultural services industry. An understanding of the factors affecting this choice of technology for farming practices is essential both for the creators and producers of such technology. This study suggests that the Technology Acceptance Model, which is the basis of much of the research in Information Technology (IT) diffusion, will be more useful if it is integrated with specific issues like infrastructure, perception, and trust on the customer side and more basic elements of the security aspects of technology and service on the side of the information providers in respect of Agriculture sector in India.

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