



ENRICHMENT OF INDIAN FARMERS' ECONOMIC STATUS: TRADING OF AGRICULTURAL PRODUCES THROUGH ECOMMERCE

Tumpa Banerjee¹

Abstract- When the price hike of food items in India is one major challenge to the government, suicidal rate of farmers is putting the government under pressure due to the economic crisis. Price of essential commodities is getting hike very fast, but the growers of agricultural products are not getting the profit of their production. An unfair large amount of price paid by the consumers goes to the middleman or trader instead of actual growers or farmers. Farmers have been unable to reach consumers directly, and they have been depending upon the middleman to retail their products. Millions of Indian people use different e-commerce website ebay.in, amazon.com, flipkart.com, olx.in etc. to buy and sell the different products at fair prices. Using the application of e-commerce, marketing or selling the agricultural products may also help Indian farmers to get a good percentage of the price paid by consumers and they can also get their sustenance at affordable prices. Agricultural e-commerce platform can assist to connect agri-product growers and consumers directly. This paper analyses the benefit and feasibility of agricultural e-commerce and exhibits that the building of agricultural e-commerce platform is one of the most important steps in the progress of the economic situation of Indian farmers and controlling the excessive price rise of commodities like food items.

Keywords – Agricultural products, eCommerce, Farmers, Suicide, Middleman, Economic status

1. INTRODUCTION

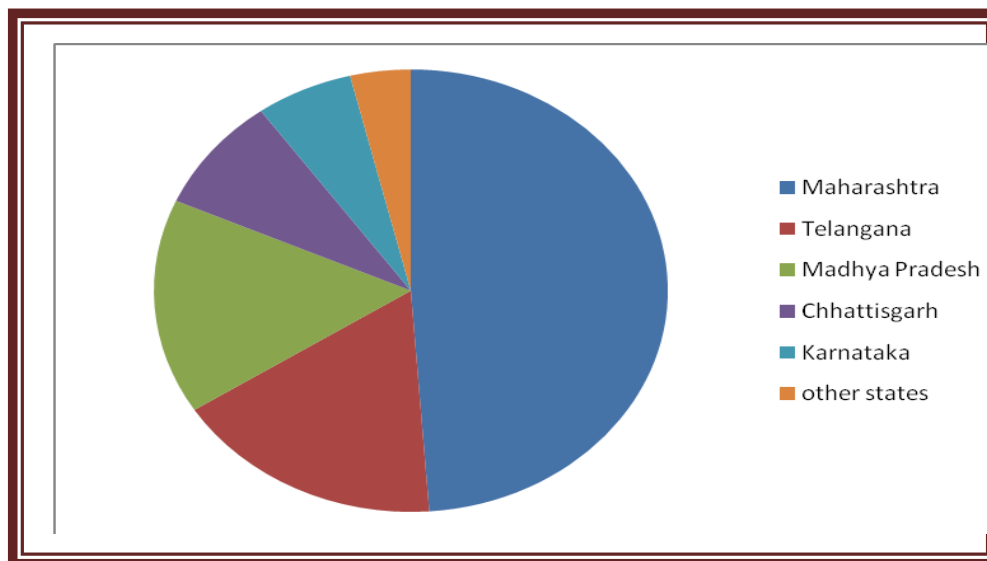
With the rapid prosperity of internet technology, e-commerce is a popular word in twenty first century. Electronic commerce known as e-commerce consists of buying, selling and exchanging of products, service and information via a computer network in a large geographical area. The amount of trade conducted over the internet has been growing extraordinarily with extensive use of IT for last two decades in India. There are various reasons in support of the popularity of e-commerce in India. As people work hard in a whole day to earn more and maintain their job, they do not have time to travel to shops for buying products, so they can buy their necessary items from home or office using e-commerce and save time on marketing. E-commerce application provides users more options and 24x7 customer service. The customer can do transaction for products and inquire about any product at any time and from any location. Users are generally fond of e-commerce to buy non perishable items like books, electronic goods (mobiles, laptops, etc.), fashion items (dress, watch, shoe and ornaments, etc.), gift items (photo frame, showpiece), household products (bed sheet, curtain). Users opt to visit shops to buy perishable items like milk, vegetable, sweet etc. since they don't rely on sellers regarding the shipment of fresh vegetables, fresh fruits and milk to consumers' front door in prime condition.

Indians were not ready to use an ATM card for withdrawing money and doing any online transaction two or three decades ago. First, they started an online transaction based on cash on delivery facility. They had no faith in virtual bank ATM and virtual shops in case of money. Computer networks or internet has proved itself trustworthy to the users for making any type of electronic transaction. Now people use an ATM not only for withdrawing money, but also for various reasons like account transfer, mobile recharge, etc. They also buy products over internet using internet banking, Credit card or debit card. So consumers will not waste their time by visiting shops for buying vegetables, fruits, etc. if eCommerce websites are able to deliver perishable items in right time and in better condition. E-commerce may also acquire the popularity for selling and buying agricultural products.

2. ECONOMIC STATUS OF INDIAN FARMERS

Indian farmers who devote their whole life to cultivate food items for the entire country have been paralyzed by low productivity and lack of post harvest storage facilities of agri-product and also gain no profit of price hike of commodity food product. Farmers also get affected for damaging of crops by several natural disasters and due to sever economic crisis farmer commit suicide. According to [National Crime Records Bureau](#) of India, 5,650 Indian farmers committed suicides in 2014, though there has been a lot of misrepresentation about the farm suicide numbers. Various reasons have been unveiled to explain the reason behind the motivation of farmer's suicide in India, including natural disasters like flood, drought, debt, public health, usage of lower quality seed and pesticides produce a decreased yield and also government policies.

¹ Department of Computer Application, Siliguri Institute of Technology, Siliguri, West Bengal, India



2.1 Farmer suicides as a % of total suicides in 2014

More than 50% of Indian population directly or indirectly depended on agriculture; the government has taken lots of initiative for the empowerment of farmers. Every year in India, a major part of the crop planted by the peasant gets damaged in the field due to natural calamities and investment does not return to the farmers. Most of the cases, farmers borrowed the money from moneylender and they cannot return the money to them at the end of the year and they are in debt for a long time. So government introduces crop insurance scheme which will compensate for the loss incurred by damage crop in disaster. Farmers have to pay premium ranging from 4 to 15 percent of insuring crop. Prime Minister introduces several initiatives to ensure income security to the farmers. It is their vision to double their income.

The government has launched a website “Farmer’s Portal” in two language English and Hindi, and full version in different Indian languages is under development. It is anticipated to make available relevant information and services to the farming community regarding fertilizers, seeds, pesticides, etc. Government also distributes high quality seeds, pesticides, to produce high quality crops through Panchayat. But the main problem of poverty is still there in the Indian farming community. Because of selling their produce through intermediate distributors, they are not getting sufficient profit from their total produce, maximum profit goes to the middleman.

3. BENEFIT OF TRADING AGRICULTURAL PRODUCT USING E-COMMERCE IN INDIA

Agriculture is the heart of live hood of India and the growers of agri-products are unfortunate. In India, more than 50% people are directly or indirectly dependent on agriculture occupation for their daily bread. Agriculture sector contributes 25% of GDP and 10% of export earnings in Indian economy. A clear and well know problem experienced by Indian farmers is that they often do not get a fair price for their produce. Agricultural marketing is a very big problem in rural India. The farmers depend on the local trader for disposal of their farm produce at throw away price due to the crisis of sound marketing facilities. According to an estimate 85 percent of wheat and 75 percent of oil seeds in UP, 90 percent of jute in West Bengal is sold by farmers in the village itself. Such situation arises due to the inability of the poor farmers to sell in the wider market. In the absence of organized marketing structure, private traders and middlemen dominate the marketing and trading of agriculture produce. The remuneration of the service provided by the middle man increase the load on the consumer, although the producer does not derive similar benefit. Many market surveys have revealed that middleman takes away about 48% of the price of rice and 60% of the price of potatoes offered by consumers.

E-commerce is a platform where farmers can sell their products directly to the customer, bypassing intermediate distributors. C2C or customer to customer e-commerce is an online business model that facilitates the transaction of products or services between customers [2]. C2C has a number of benefits for users. There is minimal cost involved with the lack of retailers and wholesalers, keeping the margins higher for sellers and prices lower for buyers. There is also a convenience factor- instead of trying to sell items in person at a brick-and-mortar store, consumers can simply list their products online and wait for the buyers to come to them. Buyers don’t need to drive around and search through stores for an item they want- they just have to search for it on a C2C site. The most common examples of C2C e-commerce is selling any product using website the olx.com. A user who would sell her any belongings (car, furniture, electronic good), she simply put all the details of the product and her contact number on the website. The customer or buyer, who is willing to buy the product, directly reaches to the seller.

The farmer or the grower of the agricultural product may also list their agriproduct online and the customer will contact with the seller. The farmer can directly reach to the customer and involvement of middleman not required for trading, it results the high profit margin of the seller and low cost price for the buyer. These ways farmers will be able to earn more and as a result,

they will automatically get encouraged to do farming and country man can also buy the items at reasonable price. Maximum people of India use to do farming. The Indian economy will flourish while the economic situation of the majority of the people of the state becomes improved.

4. E-COMMERCE IS A VERY POPULAR MEDIA FOR TRADERS AND BUYER IN INDIA

E-Commerce is a very popular platform for the buyers and sellers to sell and buy the products over the internet. According to Google India, there were 35 million online shoppers in India in 2014 and is expected to cross 100 million mark by the end of year 2016. Because of location independence of e-commerce a producer can meet the maximum number of consumers from different geographic area. Producers can sell their product from their home without proceeding to the market. Sellers can directly reach to the huge number of customers and can perceive the actual demand of the product. Sellers have an opportunity to maximize their revenue by putting their high demand products in auctions. The auction mechanism allows dynamic pricing of the product. The product with little demand generally sold by fixed price and price is increased while the demand of a product is huge. Due to their outstanding popularity, E-commerce has apprehended notable user's attention as well as the interest of the researchers.

5. ACCESSIBILITY OF INTERNET IN RURAL AREAS OF INDIA

According to the report of Internet and Mobile Association of India (IAMAI), India will be the second largest internet user base in the world by 2016, and India will have 370 million of internet users by Jun, 2016. In rural India, the mobile internet user base is expected to reach 109 million. The rural India's poor infrastructure of electrical connection and internet connectivity results, lower level of internet use [1]. Maximum people of rural areas belong to low income group and impossible to afford computer system and internet connection. India has 22 official languages and many more local languages, and maximum people complete their education in different languages other than English. So many literate people are not expert in English language.

Rural area is a real and core of India. Development of rural area can actually bring the overall development of our country. So, the government of India has been taken many initiatives for improvement of the villagers in the form of their economic standard and living standard. Smart Power for Rural development has launched at the initiative to provide reliable power supplies throughout the country. Rural India has been given access to the information technology through e-Panchayat, ESEVA, Bhoomi. Millions of villagers are using internet to issue trade license, birth certificate, etc. It is focused on high speed internet service to its citizens and make the service available in real time for both online and mobile platform to successfully implement the Digital India project. Multi-lingual websites can also help people to accustom with the services of internet while the English language is difficult to understand for them.

A website intended for international audience may offer its contents in only one international language (English). While the targeted audience belongs to one particular region or state and maximum population of that state are inefficient in the English language, then the website should be designed in English as well as their regional language. People always feel comfortable to communicate in their regional language. Talking with the customer in the customer's mother language will be more accepting of your product rather than talking in a foreign language. All the features of the product will be more understandable by the customer. E-commerce website of trading agricultural product need to be designed in more than one Indian language (multi-language), because English language may be the beyond of farmer's comprehension who are the first part this new e-commerce.

6. ADOPTION OF INTERENT IN INDIAN AGRICULTURE

Indian farmers are already using the internet for various purposes related to agriculture. Mainly, the farmer uses internet for two different purposes related to farming. First, websites have been using for getting information relevant to agriculture. Second, e-commerce websites already use by many suppliers and buyers to trade an agricultural product or produce.

Information provider websites

The Government has taken very impressive initiative to improve the amount and quality of outcome of agriculture and to encourage peasant to do farming. Government websites provide information regarding soil test. Government has been taking several approaches to provide proper marketing and fair selling price to the growers. With a view to protect the farmer's interest and to encourage increase production, the government fixes the minimum support price (MSP) for some crops like Paddy, Wheat, Jute etc. as government policy instrument. The producer can check the MSP to the government websites for their crops in a particular region at the time of sale. The producer may sell their produce at a high price while the product is in demand in the market. In case of low demand product, if producer unable to sell the product at the rate of MSP or more than that, then government will consume all the produce at the rate of MSP.

E-commerce for trading agricultural product-

This type of e-commerce has been developing very rapidly. For example, www.agricart.com, www.krushikendra.com, www.bighaat.com, www.agroshoponline.com are the online agricultural product shopping stores in India, which help farmers to buy high quality seeds, pesticides, micronutrients, fertilizers etc. at their door steps without traveling longer distance. Farmers are also getting help in choosing the products from knowledgeable customers from different parts of the country.

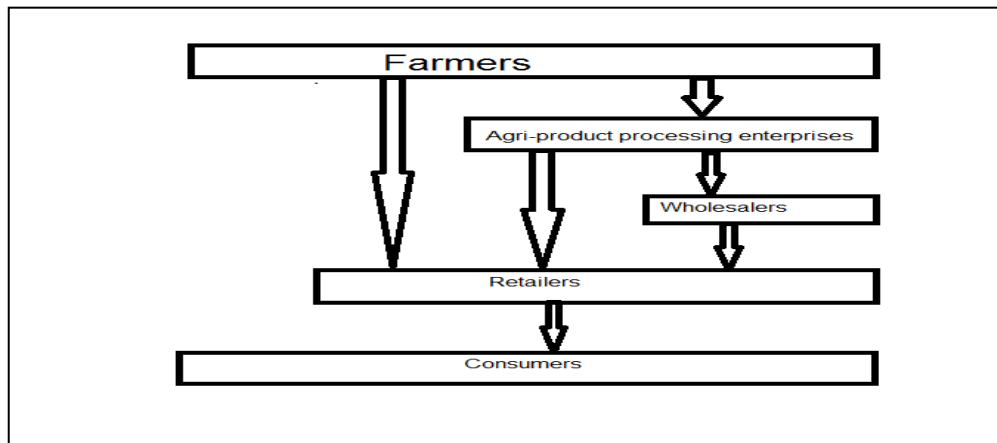
E-commerce for trading agricultural produce

“e-NAM”, an online portal for trading in agricultural produce, has introduced by Indian Prime Minister on 14th April 2016, which seems as a farming revolution to get rid farmers from the palms of middleman and realize fair market value for their yields[4]. National Agriculture Market (NAM) is a pan-India electronic trading portal which networks the existing Agriculture Produce Marketing Committee (APMC) mandies to create a unified national market for agricultural commodities [3]. Using this portal, farmers can sell their yields to the wholesale mandies in the state and they can decide where, when and at what price his produce will be sold.

7. CONSTRUCTION SCHEME OF AGRICULTURAL ECOMMERCE IN INDIA

Online trading of agricultural product is vital to facilitate the farmers or grower of agri-product to have fair price while they are selling their product and consumer can have the same in reasonable price over electronic commerce. Considering the necessity of agri-product processing enterprises, retailers and agricultural e-commerce in India, this paper represents few agricultural eCommerce platform construction plans and analyzes them in details.

There are a few steps between growing the agricultural produce and customer consumes the food product for their daily use. All the agricultural products are not in the position to put for direct cooking after coming from the farm, they required processing to convert it in the form of food.



Steps between growing of agricultural produce and consumer consumes for the use

7.1 Consumer to Consumer E-commerce (C2C)

Consumer-to-Consumer eCommerce involves consumers selling directly to other consumer [8]. In this pattern, individual farmers and consumer make online deals through opening store by some farmers and sell Agri-product over internet [9]. There are many websites about agri-product exists in China supports C2C eCommerce [9]. This pattern of commerce is useful to sell the particular types of Agri-produce like vegetables, which can directly get into the kitchen after coming from the farm, does not require any processing. Web sites may be built by Indian Government where farmers can open their stores in free of cost and can sell the agriculture produce online and save cost about time, manpower, middleman and material in the access to searching market so that agri-product can be sold at a lower price and more benefits for consumers [9].

7.2 Consumer to Business E-commerce (C2B)

Consumer to Business eCommerce involves consumers selling goods to the businesses. In this pattern, individual farmer will sell their agri-product to the various demanding enterprises such as agri-product processing enterprise, wholesaler in area market, wholesaler in terminal market and supermarket. Farmers will upload their information related to selling of the product in the e-commerce websites and attract to some enterprise to trade online with them [9]. Large enterprise may also have websites where they invite farmers to sell their produce. Since the trading will generally happen in large amount of agri-product auction mechanism may be also helpful to provide maximum profit for sellers and buyers also can buy at a marginal price.

7.3 Business to Consumer E-Commerce (B2C)

Business to consumer eCommerce involves retailing product to individual consumers. Agri-product enterprises like supermarket can open an online store for retailing the product to the consumer of a particular area since vegetables are perishable items and delivery time should not exceed the life expectancy of the item. This pattern of agri-product eCommerce has been already running (sabzikart.com, bigbasket.com) in a few cities in India. Though people prefer to touch and feel the product before buying vegetables and fruits, they are ordering all these things online and getting the product at doorstep to find out little bit time for their family and relaxation from their busy life.

8. CHALLENGES TO CONSTRUCTS AGRICULTURAL ECOMMERCE

8.1 Large varieties of agricultural produces

'Agri Products' comprises a wide all-inclusive category of products related to AGRICULTURE [5]. It includes an extensive range of raw and finished goods under the alignment of plants, animals and other life forms [5]. Categories of agricultural produce products include cereals and pulses, seeds, spices, Fruits, Vegetable, Dry fruits and nuts, etc. Based on the type of agri products their post harvesting activities like processing and preserving for intermediate or final consumption is also distinct. It is very inconvenient to trade all categories of food item using one type of eCommerce platform.

8.2 Agricultural produce are perishable items

Agricultural product such as vegetables and fruits are traded in the spot market because their yield and quality is unsteady and unpredictable [6]. The goods which are already perished will not be bought by the customer. The same customer will not visit the same shop who has sold him the perished items. Delivering perished goods to the customer's door through eCommerce platform is not also acceptable. Since life expectancy is different for different type of product, it is not possible to deliver all the items from one part of the country to all over India. Proper packaging of the goods is another significant part of the agricultural eCommerce platform, so that the goods should not be spoiled before delivery.

8.3 Use of regional languages

Though Hindi is the national language of India, there are 22 major languages. Regional languages are used for communication and the first language for their education. Build web sites in the English language may not be understandable to all Indians. There is no single language exist in India, which understand by all people. Multilingual websites may solve the language problem of the countryman.

8.4 Prices of the item may vary in different part of India

Each region in India has a specific soil and climate that is only suitable for certain types of farming [7]. The products which are not cultivated are imported from another part of the country and it results high production cost. The selling price of a certain product may vary in different part of the country due to the different production cost of the item.

Prices of the vegetable may vary in different time of the day

In the spot market, prices of one particular food items like vegetable are not same all over the day. The prices of the vegetables are dynamic in nature. At the opening time of the market, there is high demand of the products and price is also high. The price of the items comes down, while demand becomes less and the goods remain unsold and perishable in nature. Therefore, sellers of perishable agricultural commodities may suffer loss if the trade fails due to the fixed price system.

9. CONCLUSION

It is very crucial to improve the efficiency of circulation of agri-products to promote farmers to increase production and their income. By virtue of the government the online trading of agri-products have already been started in some places, but the participation is very low owing to several reasons like language problem, lack of computers and internet at home and knowledge regarding online trading. Only websites are not enough to increase knowledge and to promote online transaction. Apps are also required to overcome our apprehension. ECommerce will be able to eliminate the role of the middleman for trading agri-production of farmers. They will be able to reach the customer directly and total profit will be obtained. Not only successful implementation of eCommerce in the field of agricultural products can change the economic status of farmers, but common people also will buy their essential commodities at a fair price-rate.

10. REFERENCES

- [1] R Manoov and M Prabu -"Analyzing the impact of Internet in Rural India" ResearchGateDOI: 10.13140/2.1.1623.6162
- [2] www.businessnewsdaily.com/5084-what-is-c2c.html
- [3] www.enam.gov.in
- [4] www.quora.com/Are-there-any-online-platform-or-sites-where-Indian-farmers-can-sell-their-produce-directly-to-customer
- [5] <http://www.agriculturalproductsindia.com/>
- [6] Kazuo Miyashita- "Developing an Online Market Mechanism for Trading Perishable Agricultural Commodities" 2015 Conference, August 9-14, 2015, Milan, Italy 212470, International Association of Agricultural Economists
- [7] <https://en.m.wikipedia.org/wiki/Farming>
- [8] K. P. Ferentinos, K. G. Arvanitis, and N. A. Sigrimis- "Internet Use in Agriculture, Remote Service, and Maintenance:E-Commerce, E-Business, E-Consulting, E-Support" Published by the American Society of Agricultural and Biological Engineers, St. Joseph, Michigan
- [9] Chou Haifeng- "A Comparative Analysis of E-Commerce Patterns of Agricultural Products in China" IEEE Xplore, 2011 International Conference on Business Management and Electronic Information, 10.1109/ICBMEI.2011.5916876