

PERCEIVED BENEFITS OF E-RETAILING OF AGRICULTURAL INPUTS BY FARMERS

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ABSTRACT

In an agrarian economy like India, wherein nearly 70 per cent of population is dependent on agriculture for their livelihood; farmers' concerns need to be at the centre stage. Easy and timely availability of high quality agri inputs at reasonable price is one of the prominent concerns of the farmers, as several agri inputs are indispensable to high yield agriculture practices. Earlier, farmers used to purchase agri-inputs from an agro retail shop or cooperative societies. In the Hi-tech digital age, some agri-input companies have started electronic retailing of Agri-inputs, wherein farmer can order from the website or by phone call and agri-inputs are delivered to their doorstep. Although e-retailing of agri inputs seem to be in infant stage with only few companies engaged in it, this trend is sure to pick up momentum in times to come. Considering this, this present empirical research paper, highlights the benefits perceived by the farmers while doing e-Retailing of Agri inputs. The research was conducted in three randomly selected districts of Gujarat. 300 farmers were selected purposively by adopting multistage sampling technique. Required data were collected by using pre-coded interview schedule and analyzed considering the objectives of the study. The result of the study indicates that the benefits like shopping convenience, ease/comfort of shopping, product selection and hedonic motivation/enjoyment were perceived by the farmers from e-Retailing of agri inputs; and they serve as the major 'pull factors' for farmers to continue e-Retailing of agri inputs. .

Keywords: agrarian economy, agri inputs, e-commerce, e-retailing, hedonic motivation, perceived benefits

INTRODUCTION

India is an agricultural country and nearly 70 percent of people are dependent on agriculture. Agricultural productivity highly depends on agricultural inputs like seeds, fertilizers, pesticides, farm equipment and machinery. The backbone of any agricultural revolution is the access of farmers to modern agricultural inputs (Ganesan & Pushpavalli, 2017; Madhu et al., 2022). The timely availability of farm inputs and service is very much required for higher agricultural growth and the welfare of the farming community (Senapati, 2014).

In this study, the researchers have identified the factors that influencing adoption of e-Retailing of agri inputs by the farmers. The marketing of Agri-inputs is changing with changing needs of the farmers and their changing perception and buying behaviour. Farmers usually purchase Agri-inputs from various sources like an agro retail shop,

cooperative societies and company layout. Agri-input firms are trying hard to fulfill farmers' requirements effectively and efficiently.

Nowadays, the use of digital technology in the agriculture sector is increasing as farmers are adopting various digital technologies for agricultural purposes. Consequently, the marketing has become more advanced and customer friendly due to emergence of this new age digital technologies. Some Agri-input companies have started electronic retailing of agri-inputs, wherein farmer can order from the website or by phone call and agri-inputs are delivered to their doorstep. E-Retailing of agri-inputs is trying to address the farmers' need for quality agri-inputs with better price, shopping access and delivery convenience. Farmers generally suffer from a time crunch due to their routine farm work. Sometimes they don't find time for purchasing agri-inputs easily. E-Retailing of agri-inputs helps them to save a lot of time. They can

purchase Agri-inputs through e-Retailing and can receive required Agri-inputs at their doorstep.

LITERATURE REVIEW

The review of literature is a summary of all the reviews from various research literature related to this study. It helps to discover what is already known about the research problem and what more has to be done. Some of major relevant researches has been summarized here.

Forsythe *et al.* (2006) concluded that the four dimensions emerging for perceived benefits of online shopping included shopping convenience, product selection, ease/comfort of shopping and hedonic motivation/enjoyment. Khatibi *et al.* (2006) stated that customers use the internet for their shopping due to the benefits and advantages they get, which center on the concept that Internet shopping is more convenient. Atcharyachanvanich *et al.* (2008) revealed that intrinsic benefits have the most significant effect on intention to continue shopping online shopping. Tanadi *et al.* (2015) stated that all the dimensions of perceived risk and perceived benefit have played an important role in improving the intention of consumers to shop online. Shrivani (2017) concluded that farmers were realizing that the digital platform is an important source of information on agriculture. It was revealed that direct access to information emerged as important benefits for farmers. Sinha and Singh (2017) found that consumers' purchase intentions were jointly determined by their attitude towards online purchases and the subjective norm. Their attitude was determined by the sub-dimensions of perceived benefits like hedonic benefit, convenience benefit, economic benefit and variety. Rudresha *et al.* (2018) found that respondents prefer e-Shopping as it saves time, money and there were variety of choices. Most of the respondents said that online shopping helped them for quick accessibility of wide variety of products. Ghai and Tripathi (2019) conducted study on "Perceived benefits & risks of online grocery shopping: Role of cognitive influences". The results showed differences in opinion of consumers which were strongly influenced by convenience, ease of purchase and past experience and economic benefits. Aggarwal and Dimple (2020) reported that customers get benefits like better customer care, more discount and easy navigation while online shopping. Anwar *et al.* (2021) revealed that shopping convenience, product selection, and ease of buying positively affect the buying behavior of the customers. Thang *et al.* (2021) concluded that the benefits of online shopping were highlighted as time-saving, cheaper prices, easier product comparison and the removal of geographical barriers.

OBJECTIVES

- (1) To study the socio-economic characteristics of farmers
- (2) To identify the benefits perceived by the farmers while e-Retailing of Agri inputs
- (3) To suggest actions steps / recommendations to improve adoption of e-Retailing of Agri-inputs by farmers

METHODOLOGY

The present study attempts to identify the benefits perceived by the farmers from e-Retailing of Agri inputs and suggest measures to foster increased use of e-Retailing for mutual benefits of farmers and e-Retailers. Here, the operational definitions of various constructs are as follows:

- **Benefits perceived:** An individual's belief that specific positive outcomes result from a specific thing. Here, benefits perceived by farmers while doing e-Retailing of agri inputs are considered.
- **Farmers:** This refers to the full-time farmers who are doing farming on their own land in the study area.
- **E-Retailing:** The act of selling products or services to customers by the digital way is called e-Retailing. In this study, the focus of investigation is on e-Retailing of Agri-inputs.
- **Agri-inputs:** Agri-inputs refer to any external source put into farm that can help a farmer's upcoming yield. Here, in this study, the term refers to consumable agri-inputs purchased by farmers through e-Retailing.

Research design

Descriptive-Cross Sectional Research Design was used in this study identify the factors influencing adoption of e-Retailing of Agri-inputs by the farmers (Descriptive) at a specific point of time (Cross Sectional). Primary data were collected from the farmers only once, that's why it is a cross sectional study.

Data collection

- (i) **Primary data:** The study is mainly based on primary data collected from the farmers of randomly selected districts of Gujarat using a pre-coded interview schedule; framed in English as well as in Gujarati (the local vernacular language).
- (ii) **Secondary data:** Secondary data have been collected from books, reports, journals, periodicals, and electronic

databases.

Sampling design: Multistage sampling technique was used. In the first stage, three districts of Gujarat were selected randomly. At the second stage, two talukas from each district were selected randomly. At the third stage,

ten villages from each taluka were selected randomly and at the last stage, 5 farmers from each village were selected purposively who are doing e- Retailing for Agri-inputs.

Sample size: 300 Farmers from randomly selected three districts of Gujarat have been surveyed in this study.

RESULTS AND DISCUSSION

Socio-economic characteristics of the farmers

Table 1: Socio-economic characteristics of the farmers

(n=300)

Variables	Categories	Frequency	Percentage
Gender	Male	291	97
	Female	09	03
Age	20-30 years	03	01
	31- 40 years	18	06
	41-50 years	120	40
	51- 60 years	123	41
	Above 60 years	36	12
Education	Illiterate	12	04
	Below SSC	54	18
	SSC/Diploma	81	27
	HSC	78	26
	Graduate	57	19
	Post Graduate	18	06
Annual family income (₹)	Below ₹1 lakh	03	01
	₹1-3 lakh	99	33
	₹ 3.1-5 lakh	156	52
	₹ 5.1-7 lakh	39	13
	Above ₹ 7 lakh	03	01

Based on the frequency analysis of the responses of 300 respondents, as shown in Table 1, socio-economic characteristics of respondents – farmers - were classified according to their gender, age, education, occupation and annual income. Out of 300 respondents, 97% were male and 3% were female. This further proves the fact that despite all efforts, real participation of women in farming activities is very less. The highest number of respondents belonged to age group of 51-60years (41%) followed by 41-50years (40%) age group.

27% of the respondents have education up to SSC/ Diploma, followed by 26% having education up to HSC, 19% are graduates, and 6% of them are even post graduates. 18% of them have studied less than SSC, while 4% are found to be illiterate. In and all, 25% of them have studied Graduation and above, which is certainly a welcome sign. As these are well qualified farmers, we can certainly expect them to be tech-savvy and progressive in terms of adopting new techniques for boosting agricultural productivity.

Only 1% farmers have annual income of more than

7 lakhs, 13% have annual income between 5-7 lakhs, while 52% of them have annual income of 3 to 5 lakhs. As could be seen from pathetic situation of farmers in our country, 33% of these farmers have annual income between 3 to 5 lakhs and 1% even have annual income of less than 1 lakh. This means despite tall claims of doubling farmers’ income, the farmers are earning very less from their farms, leading to disinterest of new generation in farming.

Benefits perceived by the farmers from e-Retailing of agri inputs

In order to study the benefits perceived in e-Retailing of Agri inputs by farmers, the weighted mean method has been used.

There were total four categories of benefits viz; Shopping Convenience, Product Selection, Ease/Comfort of Shopping and Hedonic/Enjoyment, as highlighted from the extensive literature review. Each category of benefits is considered as individual module and, in each module, few statements were included related to that particular category. Based on cumulative score and mean value, rank was given

to each statement in every module. After analysing module wise benefits perceived, comparative analysis of all four modules was performed based on summative mean value of all four modules.

As per the table 2, Module-I is about shopping convenience and this module consists of three statements. Out of these three perceived benefits related to shopping convenience, first ranked perceived benefit was “e-Retailing of Agri Inputs save the effort of visiting agro shop” with a mean value of 4.32; followed by “e-Retailing provide service of home delivery of Agri Inputs” with a mean value of 4.19 and “I can shop Agri Inputs whenever I want” with a mean value of 3.79 as the second and third rank respectively.

Module-II is about product selection. This module consists of five statements related to perceived benefits while product selection on e-Retail platform. Out of these five perceived benefits, first ranked perceived benefit was “Product selection is very easy on e-Retail platform” with a mean value of 3.49; followed by “Can get good information related to Agri Input products on e-Retail platform” with a mean value of 3.32, “Broad range of Agri Input product is available on e-Retail platform” with a mean value of 2.66, “Access to many brands and retailers of Agri Input products is possible” with a mean value of 2.55 and “Different size

of packaging is available in broad category on e-Retail platform” with a mean value of 2.50 as the second, third, fourth and fifth rank respectively.

Module-III is about ease/comfort of shopping with five statements. In this module, the most important and first ranked perceived benefit was “Process of ordering is very easy on e-Retail platform” with a mean value of 3.94. The other perceived benefits in this category were “Not embarrassed if don’t buy product” with a mean value of 3.67, “No hassles while e-Retailing” with a mean value of 3.64, “No busy signal while e-Retailing” with a mean value of 3.63 and “Don’t have to wait to be served” with a mean value of 3.59 as the second, third, fourth and fifth rank respectively.

Module-IV is about hedonic/enjoyment and it consists of four statements. In this module, the most important and first ranked perceived benefit was “Enjoying discounts on Agri Input products though e-Retailing” with a mean value of 2.91; followed by “e-Retailing of Agri Inputs provides new experience” with a mean value of 2.58, “Can buy on impulse in response to advertisements” with a mean value of 2.27 and “Exciting to receive Agri Inputs at doorstep” with a mean value of 2.17 as the second, third, fourth and fifth rank respectively.

Table 2: Benefits perceived by the farmers from e-Retailing of agri inputs

(n = 300)

Dimension	Particulars	SA	A	N	DA	SDA	Cumulative score	Mean	Rank
Shopping Convenience	I can shop Agri Inputs whenever I want	72 (360)	156 (624)	21 (63)	39 (78)	12 (12)	1137	3.79	3
	e-Retailing of Agri Inputs save the effort of visiting agro shop	141 (705)	120 (480)	33 (99)	06 (12)	0 (0)	1296	4.32	1
	e-Retailing provide service of home delivery of Agri Inputs	105 (525)	159 (636)	27 (81)	06 (12)	03 (3)	1257	4.19	2
Product Selection	Broad range of Agri Input product is available on e-Retail platform	68 (340)	39 (156)	70 (210)	105 (210)	18 (18)	934	3.11	3
	Can get good information related to Agri Input products on e-Retail platform	15 (75)	117 (468)	123 (369)	39 (78)	06 (6)	996	3.32	2
	Access to many brands and retailers of Agri Input products is possible	18 (90)	30 (120)	93 (279)	117 (234)	42 (42)	765	2.55	4
	Product selection is very easy on e-Retail platform	85 (425)	153 (612)	32 (96)	24 (48)	06 (6)	1187	3.95	1
	Different size of packaging is available in broad category on e-Retail platform	12 (60)	39 (156)	81 (243)	123 (246)	45 (45)	750	2.50	5
Ease/ Comfort of Shopping	Don’t have to wait to be served	30 (150)	141 (564)	108 (324)	18 (36)	03 (3)	1077	3.59	5
	No hassles while e-Retailing	63 (315)	102 (408)	105 (315)	24 (48)	06 (6)	1092	3.64	3

Dimension	Particulars	SA	A	N	DA	SDA	Cumulative score	Mean	Rank
	Not embarrassed if don't buy product	62 (310)	114 (456)	94 (282)	24 (48)	06 (6)	1102	3.67	2
	No busy signal while e-Retailing	54 (270)	123 (492)	93 (279)	18 (36)	12 (12)	1089	3.63	4
	Process of ordering is very easy on e-Retail platform	117 (585)	90 (360)	60 (180)	24 (48)	09 (9)	1182	3.94	1
Hedonic/ Enjoyment	e-Retailing of Agri Inputs provides new experience	25 (125)	33 (132)	89 (267)	98 (196)	55 (55)	775	2.58	2
	Exciting to receive Agri Inputs at doorstep	11 (55)	24 (96)	80 (240)	77 (154)	108 (108)	653	2.17	4
	Can buy on impulse in response to advertisements	13 (65)	21 (84)	78 (234)	111 (222)	77 (77)	682	2.27	3
	Enjoying discounts on Agri Input products though e-Retailing	43 (215)	70 (280)	59 (177)	75 (150)	53 (53)	875	2.91	1

(SA-Strongly Agree, A-Agree, N-Neutral, DA- Disagree, SDA- Strongly Disagree)

Above discussion provides only module wise ranking of perceived benefits but comparison of all four module is also important to understand the relative importance of all four categories of perceived benefits by farmers while doing e-Retailing of agri-inputs. For comparison of all four modules, the summative mean was calculated by making sum of mean scores of each statement and dividing it by number of statements in that module. The summative mean of all four module and ranked given based on that score is presented in table 3.

Table 3: Module wise benefits perceived (n=300)

Module No.	Module Name	Summative Mean	Rank
I	Shopping Convenience	4.1	1
II	Product Selection	3.0	3
III	Ease/Comfort of Shopping	3.7	2
IV	Hedonic/Enjoyment	2.5	4

As mentioned in Table 3, four modules related to perceived benefits by farmers in e-Retailing of Agri inputs were ranked based on summative mean value. The most important and first ranked category of perceived benefits was found "Shopping convenience" with a summative mean value of 4.1; followed by "Ease/Comfort of Shopping" category with a summative mean value of 3.7, "Product Selection" category with a summative mean value of 3.0 and "Hedonic/Enjoyment" category with a summative mean value of 2.5 of perceived benefits as the second, third and fourth rank respectively.

CONCLUSION

Agri-input firms are adopting innovative marketing strategies for selling Agri-inputs. Some Agri-input companies

have started electronic retailing of Agri-inputs, wherein farmers can order from the website or by phone call and Agri-inputs are delivered to their doorstep. This study identified that the benefits like Shopping Convenience, Ease/Comfort of Shopping, Product Selection and Hedonic/Enjoyment were perceived by the farmers from the e-Retailing of Agri inputs. Its needs to take appropriate step to increase such benefits to increase the adoption of e-Retailing of agri inputs among the farmers. Agri-input firms can easily win the trust of the farmers and can gain lots of profit by implementing the given recommendations of this study.

RECOMMENDATIONS

As this study identified that the benefits like shopping convenience, ease/comfort of shopping, product selection and hedonic/enjoyment were perceived by the farmers from e-Retailing of Agri inputs; it seems that the companies have to prepare appropriate strategies based on these perceived benefits to make e-Retailing of Agri-inputs more popular among the farmers. Some specific recommendations are given below:

- (1) Shopping convenience is reported very important benefit perceived by the farmers. The companies should take maximum advantage from this by making more and more shopping convenience for the farmers.
- (2) Ease and comfort of shopping is important benefit perceived by the farmers, companies should continue and evaluate this benefit more effectively by providing detailed information in the local language, easy reach, easy to excess, easy product selection & order with easy and multiple payment options.
- (3) Product selection on e-Retail platform is very important

for buyers. Agri input e-Retailer companies should focus on this aspect and try to convey excellent product selection facilities to the farmers.

- (4) Farmers feel hedonic while purchase Agri inputs from e-Retail platform. Companies should try to enrich this feel to attract farmers towards e-Retailing of Agri inputs.
- (5) Apart from shopping convenience, ease/comfort of shopping, product selection and hedonic/enjoyment, Companies should try to provide more and more benefits to the farmers to make e-Retailing of Agri inputs more popular among farmers.

CONFLICT OF INTEREST

This is to declare that there is “No conflict of interest” among researcher.

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