

A Study on Adoption of ICT In Farming Practices with Special Reference to E-Commerce in Agriculture

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ABSTRACT: E-Commerce is the application of current and emerging Information and Communication Technologies (ICTs) to conduct business. The various areas where ICT can play an important role are developing farming system research and extension; having location-specific modules of research and extension; and promoting market extension, sustainable agricultural development and participative research. Totally 600 farmers are selected on convenient sampling method from the randomly selected 120 villages of 4 blocks in Perambalur District and Correlation was used in this study. The researcher concluded from the study, adoption of e-commerce is very useful to farming activities of marketing namely customer support, collaboration with supplier, information and etc. to the farmers.

Key words: *Adoption, ICT and E-Commerce*

I. INTRODUCTION

The term Electronic Commerce or e-commerce consists of all business activities carried on with the use of electronic media, that is, computer network. It involves conducting business with the help of electronic media, making use of the Information Technology such as Electronic Data Interchange(EDI). E-commerce involves the sale or purchase of goods and services over computer and networks by businesses, individuals, governments' or other organisations. E-Commerce builds on traditional commerce by adding the flexibility and speed offered by electronic communications. E-Commerce is the application of current and emerging Information and communication technologies (ICTs) to conduct business. These include existing technologies like landline telephones and fax, but the ICTs offering most scope for small businesses are mobile phones, electronic mail and other internet-based services. The various areas where ICT can play an important role are Developing farming system research and extension; having location-specific modules of research and extension; and promoting market extension, sustainable agricultural development and participative research. Agricultural extension systems in most developing countries are under-funded and have had mixed effects. Much of the extension information have found to be out of date, irrelevant and not applicable to small farmers' needs leaving such farmers with very little information or resources to improve their productivity. ICT helps the extension system in re-orienting itself towards the overall agricultural development of small production systems. ICT plays an important role in bringing about sustainable agricultural development when used to document both organic and traditional cultivation process.

II. REVIEW OF LITERATURE

Ehmake et al.,(2001) The open access architecture of internet, declining information technology costs, and high volume have resulted in progressive steps forward for the entire marketing system. Parallel changes in the structure of agriculture have contributed to the current generation of information technology. Chief among the changes is in the need for closer coordination of supply chain both upstream and downstream from the producer and stretching from seeds, fertilizers, machinery suppliers to the food processors and retailers. Thus, Technologies like E-commerce have forced new relationships between and among the buyers of agri-business to form a complex web interaction.

Adebambo Adewale Oduwolw, Chichi Nancy Okorie, (2010) This paper examines provision of agricultural information to rural dwellers /farmers in the meeting the MDG. They are eradicating poverty and hunger in the world. Methods of disseminating information to farmers identified include the use of electronic and print media, village square meetings, church and mosques as well as market places.

Bartholomew Aleke, Udechukwu Ojiako, David W.Wainwright, (2011) in their paper critically examined how social augmented parameters impact on the effective adoption of Information and Communication Technology (ICT) by small-scale agribusinesses operating in South east Nigeria. The outcome of this study highlights important issues of ICT adoption. One particular area that must be take into consideration is the adoption channel. Perceptions of ICT adoption will differ significantly among adopters. For this reason, the need for developing as appropriate adoption channel that ensures successful diffusion of innovation should be recognized.

Aditya R. Khanal and Ashok K. Mishra (2013) in their paper mentions that a study of Briggeman and Whitacre in the year 2010 investigated constraints in wider adoption of Internet among farm households. They point to three main reasons “no computer in the household”, “Internet security concern”, and “inadequate Internet service” to explain lack of Internet use by farm households. Two noticeable limitations of the above studies include: 1) the impact of Internet use on farm household income and farm financial performance; 2) data limitation—most studies have used local or regional data from large farms.

III. PURPOSE OF THE STUDY

To know how farmers have to adopt innovative practices in taking up cultivation.

IV. OBJECTIVES OF THE STUDY

To know whether any relationship between adoption of e-commerce and education.

V. HYPOTHESIS OF THE STUDY:

H1: There is no significant difference in the adoption of e-commerce based on education background of farmers.

H2: There is no significant difference between adoption of e-commerce factors influence to adoption of e-commerce.

VI. PERIOD OF THE STUDY

This study covers a period of three months from August to October 2015.

VII. METHODOLOGY

Sample frame:

The sample chosen for the study covers the farmers of different segments of Perambalur District. Totally 600 farmers are selected on convenient sampling method from the randomly selected 120 villages of 4 blocks in Perambalur District. The list of villages collected from district statistics office in Perambalur. 5 farmers are selected in each village.

Data collection method:

Primary data collected from respondents by administering a structured questionnaire dealing with various aspects of workplace sequences. This study was carried out through a survey method using questionnaires as the main instrument.

Statistical tools:

Primary data were collected, tabulated. A pilot study was carried out to revise the questionnaires and for item analysis. The validity and reliability of the questionnaires were measured. The internal consistencies of scale were assessed through computing Cronbach's Alpha. Correlation was used in this study.

VIII. LIMITATION OF THE STUDY

1)Time constraint have imposed major limitations to the study and forced to restrict the respondents with in a stipulated time.

2)The study concentrated only on the application ICT in agricultural practices.

3)The information provided by the respondents is purely based on their perception only.

IX. STATEMENT OF PROBLEM

Agricultural marketing reform was considered an essential step to improve e-agro farm and e-agricultural marketing in India. A major setback to agriculture industry is its failure to plan production according to market requirements. In fact, it is this difference between other industries and agriculture which puts it in a disadvantages position. Market oriented production will surely benefit the farmers in India. It is to determine the role of e-commerce, combined with the concept of communities of practice can play to improve productivity in farms and knowledge of the farmers.

X. FINDINGS & DISCUSSION

Table No: 1 Distribution of Level of Education and Descriptive Statistics

Level of Education	Frequency	Percent	Mean	Standard Deviation
None	261	43.6	1.66	0.690
School	302	50.3		
Degree	18	3.0		
Masters	19	3.1		
Total	600	100.0		

Source: Primary data

H1: There is no significant difference in the adoption of e-commerce based on education background of farmers.

Table No: 2 Correlation Matrix

		Adoption	Level of Education
Adoption	Pearson Correlation	1	.241**
	Sig. (2-tailed)		.000
	N	600	600
Level of Education	Pearson Correlation	.241**	1
	Sig. (2-tailed)	.000	
	N	600	600

Source: Primary Data

** Significant at 1% level

As shown in the table, there is high degree of correlation between adoption of e-commerce and education. Based on correlation value, since P value less than 0.01, null hypotheses rejected at 1% level. There is a significant difference between education influence to adoption of e-commerce.

H2: There is no significant difference between adoption of e-commerce factors influence to adoption of e-commerce.

Table No: 3 Correlation Analysis and Rank for Adoption

Item	Factors	P-Value	Rank
Adoption	Buying & selling process	0.629**	6
	Information	0.696**	3
	Decision making process	0.625**	7
	Recruitment	0.487**	11
	Labour training	0.518**	10
	Customer support	0.726**	1
	Collaboration with supplier	0.705**	2
	Collaboration with farmer	0.662**	5
	Work co-ordination	0.689**	4
	Advertising	0.619**	8
Logistics	0.580**	9	

Source: Primary Data

** Significant at 1% level

As shown in the above table-3, reveals that the adoption factors associated with adoption of e-commerce practices in rank by using correlation analysis. P - Values are significant at 1% level. Based on the P-value in the above table the customer support is highly influencing in adoption of e-commerce Practices.

XI. CONCLUSION

In the present study, based on the above findings, there is a significant relationship between in the adoption of e-commerce based on education background of farmers. From the rank correlation, adoption factor namely customer support is highly associated with adoption of e-commerce practices of farming. The researcher concluded from the study, adoption of e-commerce is very useful to farming activities of marketing namely customer support, collaboration with supplier, information and etc. to the farmers.

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