



## Analyzing Attitude of Rural Cooperatives Managers in Khuzestan Province toward Electronic Commerce

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### Abstract

#### Keywords:

Attitude, Rural Cooperatives, Managers, Khuzestan Province

The purpose of this research was analyzing attitude of rural cooperatives managers in Khuzestan province toward electronic commerce, Iran. The research method was correlative descriptive. The population of this study included rural cooperatives managers in Khuzestan province. The total number of members was 101 people. Due to the limited population, census method was used. Questionnaire reliability was estimated by calculating Cronbach's alpha and it was appropriate for this study. There was between 0.771 to 0.842. Data were analyzed using the Statistical Package for the Social Sciences (SPSS). To reach the research objectives, appropriate statistical procedures for description were used. Data analysis was carried out through data description and data inferential analysis. The results of research showed the correlation between level of education, creativity, technical requirements, social requirements, educational requirements, managerial requirements, economical requirements, political requirements, age and attitude toward electronic commerce in rural cooperatives was significant. Also the result of regression analysis by stepwise method indicated level of education, creativity, attitude to technical requirements, social requirements, educational requirements, managerial requirements, economical requirements, political requirements and age may well explain for 61.9% changes ( $R^2 = 0.619$ ) in attitude of managers.

### 1. Introduction

Cooperatives offer small agricultural producers opportunities and a wide range of services, including improved access to markets, natural resources, information, communications, technologies, credit, training and warehouses. They also facilitate smallholder producers' participation in decision-making at all levels, support them in securing land-use rights, and negotiate better terms for engagement in contract farming and lower prices for agricultural inputs such as seeds, fertilizer and equipment. Through this support, smallholder producers can secure their livelihoods and play a greater role in meeting the growing demand for food

on local, national and international markets, thus contributing to poverty alleviation, food security and the eradication of hunger (FAO, 2012).

Agricultural cooperatives in developing regions are being hit from all sides. They are receiving far less support from government than they have in the past, and with the liberalization of agricultural markets, many of them are struggling to survive in an increasingly competitive business environment. Member services are declining and farmers are leaving. The world is changing and these changes tend to favour small, decentralized organizations that are able to respond rapidly to the ever-shifting demands of the market (FAO, 2004). In

large measure, this transformation is being enforced by the liberalization and globalization of markets and the growing use of information and communication technologies (ICTs). If agricultural cooperatives are to survive, they must learn how to compete. One obstacle to achieving this is that information-processing in farmer cooperatives in developing countries is notoriously slow; most large cooperatives still operate with manual or semi-manual accounting systems (FAO, 2004). Such systems are labour-intensive to maintain, leave plenty of occasions for errors and create opportunities for abuse. It is difficult for managers to be competitive when they must work with outdated or inaccurate information (FAO, 2004). In the world today, e-commerce is known as a major comparative advantage for many companies (Alamdarmeibodi et al, 2011). ICT can give a new impetus to the social organizations and productive activity of agriculture which, if nurtured effectively, could become transformational factors. The 'knowledge' itself will become a technology for overall agricultural development. Agricultural extension, in the current scenario of a rapidly changing world, has been recognized as an essential mechanism for delivering knowledge (information) and advice as an input for modern farming (Jones, 1997).

The immediate advantage that computerization brings is the enhanced ability to handle large amounts of information. The introduction of modern information and communications technologies (ICTs) in cooperatives can significantly improve results: they can facilitate the collection, analysis, storage and reporting of information much faster and more accurately than could be accomplished using manual systems. Computerization also can help cooperative managers streamline operations, cut operating costs, enlarge their networks of members and affiliated institutions, increase sales and respond to signals from far away markets. Connecting to the global network of the Internet also has its advantages, allowing faster communication with members, partners and clients at a fraction of the cost (FAO, 2004).

Applications of IT in support of agricultural and rural development fall into five main areas, as outlined by Don Richardson (FAO, 2004): economic development of agricultural producers; community development; research and education; small and medium enterprises development; and media networks. Some agricultural development services that can be provided in the developing world, using ICT, are: online services for information, education and training, monitoring and consultation, diagnosis and monitoring, and transaction and processing; e-commerce for direct linkages between local

producers, traders, retailers and suppliers; the facilitation of interaction among researchers, extension (knowledge) workers, and farmers; question-and-answer services where experts respond to queries on specialized subjects ICT services to block- and district-level developmental officials for greater efficiency in delivering services for overall agricultural development; up-to-date information, supplied to farmers as early as possible, about subjects such as packages of practices, market information, weather forecasting, input supplies, credit availability, etc.; creation of databases with details of the resources of local villages and villagers, site-specific information systems, expert systems, etc.; provision of early warning systems about disease/pest problems, information regarding rural development programmes and crop insurances, postharvest technology, etc.; facilitation of land records and online registration services; improved marketing of milk and milk products; services providing information to farmers regarding farm business and management; increased efficiency and productivity of cooperative societies through the computer communication network and the latest database technology; tele-education for farmers; websites established by agricultural research institutes, making the latest information available to extension (knowledge) workers and obtaining their feedback (Meera et al, 2004).

In developed countries agricultural e-commerce is well developed and farmers benefit greatly from easy access to market information and vertical market integration. Information and Communication Technology (ICT) is widely used and the knowledge of ICT in farmers is considerable with timely distribution of agriculture information, consultation and monitoring, training and education, response from experts, early forecasting of price, early warning and improvement measures, information about marketing of various commodities, farm business and management, and expansion of the use of e-commerce (Nadarajan and Ismail, 2011).

E-commerce can help boost the sale of agricultural products to larger masses. E-commerce has a reach to a large audience as the number of netizens is increasing at a fast phase. Using e-commerce effectively in promoting agriculture related products, the gap between the farmer and the customer is greatly reduced. Supply chain of agriculture related products can be strengthened and one can also keep track of this. Expansion in agricultural product channels, reduction in transaction links and increase agricultural efficiency with the establishment of agricultural e-commerce sites along with the online trading platform, there will be a well organized circulation of agricultural products on a

larger scale. This will be helpful in regaining information for both the parties and avoid any loss in profits due to asymmetry in information. This in turn will help both supply and demand sides trade at a maximum profitability and at minimum risk and also greatly reducing transaction costs and transaction links (Yan et al, 2010). The application of e-commerce improves the efficiency of agriculture product circulation by (Nadarajan and Ismail, 2011): strengthening the directness of agriculture products, regulated by international standards, limit the price fluctuations, participation of authorities. Strengthening smallholders' access to quality market information - especially price information - is an area where ICT has great potential and already some success in developing country agriculture. Despite multiple public and private investments in agriculture, there are very few countries that have good basic price information services. Yet this is changing with increases in connectivity and affordability of ICT tools. Market information can be provided through a diverse set of mediums including mobile phones, Internet, and radio. Using ICT, especially mobile phones, farmers can (E-agriculture.org, 2011):

Make more informed decisions on where and when to sell the farm output,

Bypass or bargain with middlemen (empowering their negotiation prospects),

Make better risk mitigation decisions based on localized weather, and

Be more aware of more demanded products, scarce agri-inputs, and availing subsidies.

## 2. Materials and methods

The research method was correlative descriptive. The population of this study included rural cooperatives managers in Khuzestan province. The total number of managers was 101 people. Due to the limited population, census method was used. Questionnaire reliability was estimated by calculating Cronbach's alpha and it was appropriate for this study. There was between 0.771 to 0.842. Data were analyzed using the Statistical Package for the Social Sciences (SPSS). To reach the research objectives, appropriate statistical procedures for description were used. Data analysis was carried out through data description and data inferential analysis. A five-point Likert-type scale was used as the instrument to gather data in order to measure attitude of rural cooperatives managers toward electronic commerce.

## 3. Results and discussion

### 3.1 Demographic profile

Table 1 shows the demographic profile and the descriptive statistics for some characteristics of

the rural cooperatives managers. The results of the demographic information of the participant rural cooperatives managers indicated that the age of 44.6% of managers was between 30-40 years. The minimum age of participant was 22 years and the maximum age was 59 years. Based on educational levels, a greater proportion (62.4%) of them had BSc educational level. Based on the participation on extension classes about e-commerce in cooperatives, 55.4% of them had not participated.

### 3.2 Attitude of rural cooperatives managers toward electronic commerce

In this study, for analyzing attitude of rural cooperatives managers toward electronic commerce, the Likert scale was used. The ratings on the Likert scale were from one to five (1. Strongly Disagree, 2. Disagree, 3. No opinion, 4. Agree, 5. Strongly agree). The final computed score represented the overall level of attitude. The Table 2 revealed the answer of managers to each item of attitude toward electronic commerce and Table 3 identified the level of overall attitude toward electronic commerce after computing 8 items of attitude. Based on the results 94% of managers had high and very high attitude toward electronic commerce in rural cooperatives.

### 3.3 Correlation study

Spearman correlation coefficients to test hypotheses was used, the results of this test are as follows (Table 4):

The results of table 4 showed the correlation ( $r=0.432$ ) between level of education and attitude toward electronic commerce in rural cooperatives at the level of 0.01 was significant. Therefore, the null hypothesis is rejected. It means that with 99% of confidence, we can conclude that managers with high education level had high attitude.

Also the results of table 4 showed, the correlation ( $r=0.233$ ) between creativity and attitude toward electronic commerce in rural cooperatives at 0.01 was significant. Therefore, the null hypothesis is rejected. It means that with 99% of confidence, we can conclude that managers with high creativity level had high attitude. The results of table 4 showed, the correlation ( $r=0.223$ ) between technical requirements and attitude toward electronic commerce in rural cooperatives at 0.01 was significant. Therefore, the null hypothesis is rejected. It means that with 99% of confidence, we can conclude that managers with high technical requirements had high attitude. In addition the results of table 4 showed, the correlation ( $r=0.346$ ) between social requirements and attitude toward electronic commerce in rural cooperatives at 0.01 was significant. Therefore, the null hypothesis is rejected. It means that with 99% of confidence, we

can conclude that managers with high social requirements had high attitude. Also the results of table 4 showed, the correlation ( $r=0.229$ ) between educational requirements and attitude toward electronic commerce in rural cooperatives at 0.01 was significant. Therefore, the null hypothesis is rejected. It means that with 99% of confidence, we can conclude that managers with high educational requirements had high attitude. As well as the results of table 4 showed, the correlation ( $r=0.441$ ) between managerial requirements and attitude toward electronic commerce in rural cooperatives at 0.01 was significant. Therefore, the null hypothesis is rejected. It means that with 99% of confidence, we can conclude that managers with high managerial requirements had high attitude. Also the results of table 4 showed, the correlation ( $r=0.509$ ) between economical requirements and attitude toward electronic commerce in rural cooperatives at 0.01 was

significant. Therefore, the null hypothesis is rejected. It means that with 99% of confidence, we can conclude that managers with high educational requirements had high attitude. Also the results of table 4 showed, the correlation ( $r=0.319$ ) between political requirements and attitude toward electronic commerce in rural cooperatives at 0.01 was significant. Therefore, the null hypothesis is rejected. It means that with 99% of confidence, we can conclude that managers with high political requirements had high attitude.

In addition the results of table 4 showed, the correlation ( $r=-0.439$ ) between age and attitude toward electronic commerce in rural cooperatives at 0.01 was significant. Therefore, the null hypothesis is rejected. It means that with 99% of confidence, we can conclude that managers with high age had low attitude.

Table 1. Demographic profile of rural cooperatives managers.

variables	Frequency	Percentage	Cumulative Percentage	
Age				
22-30	9	8.9	8.9	Mean=39.87
30-40	45	44.6	53.5	Sd= 7.436
40-50	40	39.6	93.1	Min=22
50-59	7	6.9	100	Max=59
Educational level				
Diploma and lower	12	11.9	11.9	
Technician	10	9.9	21.8	
BSc	63	62.4	84.2	
MSc and upper	16	15.8	100	
E-commerce class				
yes	45	44.6	44.6	
no	56	55.4	100	

Table 2. Frequency of managers to each item of attitude toward electronic commerce in rural cooperatives.

Items	Mean*	SD	CV	Rank
With the implementation of e-commerce, resources are preserved for future.	4.27	0.630	0.148	3
The aim of e-commerce is profitable, not to protect the economy	3.44	0.984	0.286	8
Implementation of e-commerce, increase farmers' income in the long term.	4.10	0.574	0.140	1
Man must inevitably move towards e-commerce.	4.32	0.8	0.185	6
E-commerce helps the health of the economy and trade.	4.22	0.701	0.166	4
E-commerce economically affordable.	4.21	0.725	0.172	5
E-commerce is socially acceptable	3.94	0.869	0.221	7
E-commerce with due to the spread the use of modern technologies, it is possible.	4.34	0.620	0.143	2

\*1. Strongly Disagree, 2. Disagree, 3. No opinion, 4. Agree, 5. Strongly agree

Table 3. Level of overall attitude toward electronic commerce in rural cooperatives.

Attitude	Frequency	Percent	Cumulative percent
Very low	0	0	0
Low	0	0	0
Moderate	6	5.9	5.9
High	59	58.4	64.3
Very high	36	35.7	100.00
Total	101	100.00	

Table 4. Relationship between attitude toward electronic commerce in rural cooperatives and independent variables.

Independent variable	Dependent variable	r	p
Level of education	Attitude toward electronic commerce in rural cooperatives	0.432	0.000
Creativity		0.233	0.000
Technical Requirements		0.223	0.000
Social Requirements		0.346	0.000
Educational Requirements		0.229	0.000
Managerial Requirements		0.441	0.000
Economical Requirements		0.509	0.000
Political Requirements		0.319	0.000
Age		-0.439	0.000

Table 5. Multivariate regression analysis

Independent variable	B	Beta	T	Sig
Level of education	0.324	0.531	2.612	0.000
Creativity	0.633	0.269	4.891	0.000
Technical Requirements	0.257	0.145	2.653	0.000
Social Requirements	0.565	0.465	3.755	0.000
Educational Requirements	0.512	0.424	2.679	0.000
Managerial Requirements	0.613	0.343	2.355	0.000
Economical Requirements	0.391	0.510	2.099	0.000
Political Requirements	0.586	0.464	2.746	0.000
Age	-0.261	0.232	3.705	0.000
Constant	8.981	----	4.831	0.000

$R^2=0.691$   $F=5.819$ , Sig= 0.000

### 3.4 Regression analysis

Table 5 shows the result for regression analysis by stepwise method. Linear regression was used to predict changes in attitude by different variables. Level of education, creativity, technical requirements, social requirements, educational requirements, managerial requirements, economical requirements, political requirements and age may well explain for 61.9% changes ( $R^2 = 0.619$ ) in attitude of managers.

### 4. Conclusion and recommendations

The results of research showed the correlation between level of education, creativity, technical requirements, social requirements, educational requirements, managerial requirements, economical requirements, political requirements, age and attitude toward electronic commerce in rural cooperatives was significant. Therefore, we can conclude that managers with high level of education, creativity, attitude to technical requirements, social requirements, educational requirements, managerial requirements, economical requirements, and political requirements had high attitude toward electronic commerce in rural cooperatives. The result of regression analysis by stepwise method indicated level of education, creativity, attitude to technical requirements, social requirements, educational

requirements, managerial requirements, economical requirements, political requirements and age may well explain for 61.9% changes ( $R^2 = 0.619$ ) in attitude of managers.

Therefore, to development of the attitude of managers toward electronic commerce in rural cooperatives, considering variables of level of education, creativity, technical requirements, social requirements, educational requirements, managerial requirements, economical requirements, political requirements, age essential. This should be considered by policy makers and planners.

**Acknowledgments:** This paper is part of MSc thesis of Elahe Kiani graduate student of agricultural extension department, Shoushtar branch, Islamic Azad University. Thus, appreciate of professors and lectures of agricultural extension department.

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مجله بین‌المللی علوم، تحقیقات و فناوری کشاورزی در نظام‌های آموزش و ترویج  
قابل دستیابی در: <http://ijasrt.iau-shoushtar.ac.ir>

شاپا نسخه چاپی: ۲۲۵۱-۷۵۸۸

شاپا نسخه برخط: ۲۲۵۱-۷۵۹۶

۲۰۱۵: ۵(۳): ۱۷۹-۱۸۵

۱۰ فروردین ۱۳۹۵: دریافت نسخه اولیه  
۵ خرداد ۱۳۹۵: ارسال پاسخ داوری  
۲۰ خرداد ۱۳۹۵: دریافت نسخه اصلاحی  
۴ مرداد ۱۳۹۵: پذیرش

## تحلیل نگرش مدیران تعاونی‌های روستایی استان خوزستان در زمینه تجارت الکترونیک

الهه کیانی و آزاده نوراله نوری‌وندی

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هدف از این تحقیق تحلیل نگرش مدیران تعاونی‌های روستایی استان خوزستان در زمینه تجارت الکترونیک و روش تحقیق توصیفی و همبستگی بود. جامعه آماری تحقیق مدیران تعاونی‌های روستایی استان خوزستان به تعداد ۱۰۱ نفر بود که به دلیل محدود بودن جامعه آماری کلیه افراد از طریق سرشماری مورد مطالعه قرار گرفتند. پایایی ابزار تحقیق از طریق ضریب کرونباخ آلفا ارزیابی شد. ضرایب حاصل بین ۰/۷۷۱ تا ۰/۸۴۲ بود. بر اساس نتایج حاصل بین سطح تحصیلات، خلاقیت، الزامات فنی، اجتماعی، آموزشی، مدیریتی، اقتصادی، سیاسی، سن و نگرش مدیران تعاونی‌های روستایی استان خوزستان در زمینه تجارت الکترونیک رابطه معنی‌داری به دست آمد. همچنین نتایج آزمون رگرسیون نشان داد که متغیرهای مذکور ۶۱/۹ درصد تغییرات متغیر نگرش را تبیین می‌کنند.

کلیده

کلمات کلیدی: نگرش، تعاونی روستایی، مدیران، استان خوزستان