



Perceived usefulness and Perceived Ease of Use for Adoption Technology LCC Card: Case Study Paddy Farmers Northern Iran

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ABSTRACT: This study examined the Paddy Farmer perceived usefulness and ease of use of the technology LCC cards of villages Roudsar city in northern Iran, was conducted in 2013. Statistical population of all rice farmers were living in the city Roudsar province (15693 people). Sample size for this study comprised 400 patients who were randomly selected. The main tool for data collection was a questionnaire containing closed questions. Content validity of (apparent) questionnaire was determined by university faculty experts and Agricultural Organization. Validity of the questionnaire, 30 questionnaires was distributed among the study sample, Cronbach's alpha value of 0.91 respectively. Data were analyzed using SPSSwin16. Statistical methods were used. Results showed that the highest perceived usefulness of LCC card technology for optimal use of fertilizer was the best and the least necessity for rice fields paddy fields in the LCC cards. Understanding cards LCC technology easier to use in paddy fields were raised.

Keywords: Technology, Card LCC, Perceived Usefulness, Perceived Ease of Use.

INTRODUCTION

Agricultural sector certain features of that in relation to employment and particularly income distribution has always been considered. This section not only for food security is of the country utmost importance, but the supply of raw materials needed for production growth in other sectors related industries can also be effective. In addition, the growth of this sector, the improvement of welfare, income and food security of rural people, who are lower income deciles in the following components and prevent them from migrating to towns and cities are spread marginalization (Mariano *et al.*, 2012). Technological gap in the agricultural sector is one of main problems in the agricultural sector. However, in today's domestic and foreign scientific centers in the field of agriculture created Valuable technologies, but many of these technologies by farmers are not used. These issue irreparable problems for the sector and society has created such that it can lower the quality and quantity of the products mentioned (Keshavarz *et al.*, 2010).

Today, technology is being introduced in all areas of science, in agriculture the attention of many scholars, policy makers and farmers are located. Also, an side increasing population and on the other limits the increase in the cultivated area, one of the most effective ways to achieve agricultural development and food security is to increase yields per unit area. One way of increasing the yield per unit area, the use of new technologies by farmers (Din panah *et al.*, 2009). In addition to the use of appropriate technologies to create substantial growth in agricultural production, reduce production costs and economies may have sought

(Musser, & Shortle, 1995). In the agricultural sector, it is rare that all farmers are able and willing to adopt new technologies because of the deterrents to adoption imposed by various socioeconomic, institutional and environmental factors (Mariano *et al.*, 2012).

Among the various models that explain or predict the motivational factors that are applicable to technology adoption, technology acceptance model can be Davis *et al.*, Which is perhaps one of the most widely used models in this area is noted. Under this model based on the idea that people's perceptions of technology on their attitudes toward of the influences technology (Lee & Kim, 2009). This model suggests that the desire to act (desire to use) determines the behavioral intention to use a technology is determined by two beliefs: Perception of usefulness (PU): The degree to which a person believes that using a particular technology, will improve the performance and Perception ease of use (PEU): The degree to which a person believes that using a technology will be easy for him (Yi *et al.*, 2006 and Walter & Lopez, 2006). Technology acceptance model that based on the willingness of stipulates that inclined towards accepting a good predictor of actual use of the technology is that technology (Hong *et al.*, 2006) and it can be to predict the behavior of users before the used technology can also be used. Willing to accept as the subjective probability that an individual of a particular behavior is an important factor in the performance of its actual behavior (Kuo & Yen, 2009). In Technology Acceptance Model, perceived ease of use directly affects on perception of usefulness, both of these are effective in technology adoption.

Furthermore, exogenous variables that directly affect the perceived usefulness and ease of use, it may be important factors in Technology Acceptance Model, which includes technology characteristics, individual characteristics and environmental variables include (Kuo & Yen, 2009 and Pituch & Lee, 2004). Technology acceptance model for explaining technology acceptance behavior by people both in the short and in the long term may be used (Venkatesh & Morris, 2000).

A the study in Nigeria found that the decision adoption technology by farmers to increase their contacts with promoters, their education level, land Ownership is traditionally the duration of the rental, membership and participation in the activities of associations of farmers and farm size increased (Onu, 2006). Results the study Zhang *et al.*, (2010) showed that between income, attitude, risk taking, perceived usefulness, seeking and the accepting the experience of agricultural information by farmers, there is a direct relationship. Park *et al.*, (2009), in other research, the study of factors affecting the adoption of digital libraries using Technology Acceptance Model to perform. Results of their study showed that perceived ease of use of digital library systems have a considerable impact on the perceived usefulness, which ultimately led to the decision to use technology is used. Timothy *et al.*, (2009) in a study of desire and intention to use IT among 495 teachers in Singapore and Malaysia, the IT acceptance models were compared. The results showed that the perceived ease of use of information technology on attitudes to the use of information technology in both cases, the effect is positive and significant. However, other studies have confirmed this relationship (Timothy, 2009; Paul *et al.*, 2003), because when a person, using information technology makes it easy and simple to understand, it will affect his attitude to use it. Yu *et al.*, (2008) showed that perceived usefulness and the perceived ease of use and the significant positive effect on mental images has a negative impact on the health care providers to use technology. Heysung (2004) in their the study concluded that application of technology directly affected by personal factors and perceived usefulness of the technology and the perceived ease of use correlated with perception of usefulness and the ease of use of the technology.

This study also aimed to assess the Paddy Farmer perceived usefulness and perceived ease of use LCC card technology was in northern Iran.

MATERIALS AND METHODS

The study was conducted in Year 2013 a villages Roudsar city in northern Iran. The population of the study area is comprised of all Paddy Farmer. To determine the necessary sample size for this study to determine the minimum required sample table by Bartlett *et al.* (2001) was used have been prepared. Since the statistical population is 15,693 people, the sample for this study is 370.

Due to the statistics provided by the management of agricultural province in 2012 is based on farmers, to ensure this decision is up to 400 samples to be collected for this study. After a comprehensive literature review, a questionnaire survey was developed as the main tool. Content validity of (apparent) questionnaire survey has been determined by university teachers and agricultural experts. Validity of the questionnaire, a preliminary test was done, so that a total of 30 questionnaires were distributed among the study sample. After completing the questionnaire collected data were analyzed by the software SPSSwin16 and validity of the questionnaire was assessed using Cronbach's alpha coefficient. Cronbach's alpha value of 0.91 was obtained for this study, which represents the reliability of the research instrument. In order to test this hypothesis and to infer the existence of significant relationships between the independent and dependent variables, SPSSwin16 software and in two parts descriptive and inferential was conducted. In the descriptive statistics of frequency distribution and calculate the frequency, percentage, cumulative percentage and actual percentage measured using indicators such as Mean central tendency and dispersion statistics from the Center, including standard deviation, range and coefficient of variation described Personal characteristics of the respondents, the dependent and independent the variable were investigated.

RESULTS AND DISCUSSION

The results showed that the frequency and rate means of that the highest perceived usefulness of LCC card technology for optimal use of fertilizer was the best and the least necessity for rice fields paddy fields in the LCC cards. Understanding cards LCC technologies easier to use in paddy fields were raised (Table 1).

Findings regarding the relationship between innovation adoption and ease of use and usefulness of the results of Davis (1989) are consistent. Results the study Paul *et al.*, (2003) showed that perception ease of use on perception usefulness, the effect is positive and significant. Many other studies have reported a significant positive relationship (Venkatesh & Morris, 2000; Chau, 1996). Although some studies, perception ease of use on perception usefulness, the effect is not significant (Bajaj and Nidumolu, 1998; Jackson *et al.*, 1997; Hu *et al.*, 1999).

Thus, when students use information technology simpler and easy to understand, the more likely it is supposed to work and useful career unless other things may be more useful to do his job. Results Ramayah *et al.*, (2007) showed that teachers' perception of the usefulness of information technology can directly affect the decision to use information technology has a significant positive effect. However, other studies also positive and significant effect of the variable perception of the usefulness of information technology on their decision to approve the use of information technology (Davis *et al.*, 1998; Paul *et al.*, 2003; Timothy *et al.*, 2009).

Table 1: Frequency distribution of Paddy Farmer Perceived Usefulness and Perceived Ease of Use of technology LCC cards.

V	Frequency (frequency percentage)					Mean	Sd.
	Very disagree	Disagree	No comment	Agree	Very agree		
Perceived Usefulness (PU) of using cards LCC							
LCC card for the rice fields paddy fields are required	38(9.5)	26(6.5)	252(63)	84(21)	0	2.96	0.809
LCC cards in rice fields best technology that makes optimal use of fertilizer	30(7.5)	15(3.8)	245(61.2)	110(27.5)	0	3.09	0.779
LCC cards in rice fields farming incomes will increase	35(8.8)	24(6)	203(50.8)	126(32.5)	12(3)	3.14	0.910
LCC cards in the rice fields farmers to reduce costs and increase farm profits	22(5.5)	50(12.5)	231(57.8)	88(22)	9(2.2)	3.03	0.810
LCC cards increases rice production in paddy fields	33(8.2)	31(7.8)	224(56)	112(28)	0	3.04	0.829
LCC cards in paddy fields makes saving time	20(5)	42(10.5)	239(59.8)	99(34.8)	0	3.04	0.743
Total						3.05	0.813
Perceived Ease of Use (PEU) cards LCC							
LCC cards in rice fields is easy to understand manner	16(4)	72(18)	229(57.2)	83(20.8)	0	2.95	0.739
LCC cards are easy to use in paddy fields	16(4)	96(24)	315(53.8)	73(18.2)	0	2.86	0.752
Total						2.90	0.745

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