Understanding the Situation and Factors of ICT Adoption in Agricultural Cooperatives

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ABSTRACT

The phenomenon of the information and communication technologies (ICT) in general and Internet in particular has forced businesses and organizations to examine their existing business practices and adopt new methods of working, both for existing and potential customers. This paper presents an analysis of a study of 49 agri-food cooperatives in the province of Lleida, Spain, which seeks to analyse the current situation of Internet usage and electronic commerce in agrarian cooperatives and obtain the different factors of employing ICTs and the level of sophistication of use. The results are focused in the questionnaire that was completed by olive oil and sweet fruit cooperatives in 2010 that addressed the following aspects: computer equipment, Internet connection and presence, and finally, the level of electronic commerce. The discussion, based on the initial findings, examines the circumstances for ICT success and strategic effects resulting from implementation and use of such technologies. Afterwards, a logistic regression was carried out for determining the relevant factors in ICT adoption. The findings highlight that main activity and own website, including the variable training under particular circumstances are clearly significant to the extent of adoption and exploitation of ICTs by cooperatives.

Keywords: Agrarian Sector, Cooperatives, e-Commerce, Information and Communication Technologies (ICT), Internet, Logistic Regression, Social Economy

INTRODUCTION

The emergence of the Internet and the development of new information and communication technologies have resulted in considerable changes in society in general and in business, which has led to the so-called Information Society. The Information Society is regarded as a new social paradigm that offers a great opportunity, as most people are connected through an electronic device to telecommunications systems, and more specifically to the Internet (Banegas, 2001; Laudon & Traver, 2001; Molla & Heeks, 2007).

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This situation empowers an almost unlimited availability of information, and even more importantly, knowledge sharing. This possibility affects all fields, both socially and economically, thus becoming the expression of globalisation, modernity and progress (Avgerou, 2008; Suárez, 2001). Although information and communication technology are present today in all production sectors and society in general, we have focused the study of ICT on a very specific sector such as cooperatives for two reasons.

First and foremost due to the weight cooperatives have in Spain. According to the Confederation of Agricultural Cooperatives of Spain, agricultural cooperatives are an important part of economic activity in the Spanish agri-food sector with a billing of 18,322 millions of euros for 2010 (Sagarna, 2010). Agri-food cooperatives group together some 2,849 companies and 1,012,265 members around the country. These cooperatives provide employment to more than 79,567 workers, mostly in rural areas, making these companies a real economic, social and cultural engine in rural and less populated areas in the country. It represents 10% of GDP in Spanish economy (Monzón, 2010). On the other hand, of the 2,849 agri-food cooperatives, 683 are located in Andalusia, 480 in Castile-La Mancha, 244 in Catalonia and the rest are divided among the rest of the regions. To that effect, Catalonia ranks third in importance with an annual turnover of 10.4%. Within Catalonia, Lleida stands out as being the main province in the agri-food sector. Finally, we would like to point out that cooperatives are the most common form of social organization in Spain, accounting for a bit more than 60. Around 2,350,000 individuals are linked to the social organizations, although only the 33.4% are partners and direct employees of the organizations. Farmers and stock breeders associated to agricultural cooperatives account for the 48.8%, whereas the remaining are self-employed linked to social organizations (Estapé & Torreguitart, 2013).

Secondly, the importance of these companies as a means to contribute to economic, social and environmental development in a sustainable and responsible way, to the extent that their activity is based on the use of endogenous resources from the area, to create stable employment, constitute a factor of progress in rural areas, achieve a better redistribution of resources and more effectively provide services of a social nature.

Furthermore, we can find several researches that affirm that farmers who are members of any cooperative have higher probability of adopting ICT- based market information than others (Kiiza & Pederson, 2012). The use of ICT is one of the key factors for improving the competitiveness and productivity in companies. This was revealed by data from the last report by AMETIC (2011) on “Information and Communication Technology in the Spanish company.” According to the report, the increasing use of ICT has meant a “lever of modernization” for company development.

Cooperatives as companies operating in markets cannot be left behind. If these companies want to retain a place in the market and compete successfully with other economic sectors, they must be at the forefront of this technological revolution. The speed of communication is essential in today’s markets and a growing number of business activities are conducted through the Internet. Cooperatives must become “learning organisations” given that the acquisition of knowledge is considered essential for improving competitiveness and maintaining quality employment (Montegut et al., 2013).

Therefore, cooperatives need to constantly update to integrate with the global pace in which they operate, in such a way that they can adapt accordingly. One way to achieve this is with technologies that are suitable for optimisation and that perform well.

BACKGROUND

There is a degree of consensus on the existence of a positive relationship between the implementation of technologies and improvement
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