



Information and Communications Technology Resources of Credit Cooperatives in a Highly Urbanized City



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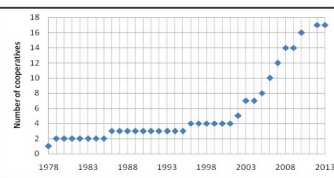
Abstract

The use of Information and Communications Technology (ICT) in business processes enhances the delivery of services among credit institutions. Like any credit institution, cooperatives handle huge volume of information ranging from members' profile, business processes, and those which are financial in nature. Questions arise whether the profile of the cooperatives affect their procurement and use of ICT resources. This study conducted in Iligan City attempted to create a business profile of its 30 credit cooperatives and investigate their use of ICT. Using spearman correlation coefficient in investigating the significant relationships of the cooperative profile and ICT resources, it was found that the level of hardware devices and network technologies is dependent on the cooperative's profile. On the other hand, it was found that cooperatives make strategic decisions involving its software applications and ICT human resources despite the cooperative's age, its number of members, and its total assets as manifested by the software applications and ICT human resources being negatively correlated with any of the cooperative's characteristics.

Keywords: ICT Resources, Cooperatives, Information and Communications Technology Use

Introduction

A credit cooperative is considered as an ideal model in promoting economic development especially among developing countries since it pools together shared resources in order to raise income at a very low cost. The National Confederation of Cooperatives (NATCCO) - Philippines, reported that Information and Communications Technology (ICT) enables cooperatives to achieve their optimum performance and competitive advantage since ICT, if utilized properly can improve management practices, financial information and reporting and records management as well as create an online presence which would in turn increase efficiency and lower operating costs. However, despite the potentials of ICT solutions to improve business processes, cooperatives in the Philippines still refuse to change their existing processes and only a few number of cooperatives have incorporated ICT solutions in their operations. In Iligan City, the number of cooperatives is growing as well as the volume of information that these cooperatives can process. This study aims to (1) create a business profile of all credit cooperatives in Iligan City along with a profile of their ICT resources and (2) investigate the significant relationships of the cooperative profile and their ICT resources. The cooperatives were profiled in terms of number of years of operation, number of registered members, number of employees, total assets, and the credit services that they offer. A survey questionnaire was distributed to the General Managers and Information Technology Managers of these cooperatives inquiring on their ICT resources in terms of hardware devices, software applications, network technologies and ICT human resources.

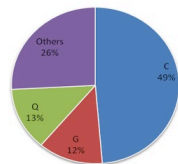


Methodology

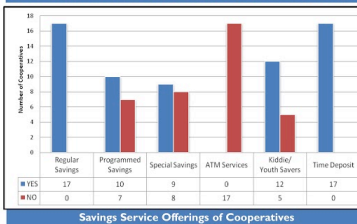


Results & Findings

A. Business Profile. As of 2013, there were 30 credit cooperatives in Iligan City but only 25 were allowed by their administrators to participate. Out of the 25, 8 were rejected since 6 of these cooperatives were not using computers in their business operations and 2 of these cooperatives were closed cooperatives. Cooperatives in Iligan City has a total of 42, 624 members with close to half or 19,740 (47%) members belonging only to the top three largest cooperatives who are situated in the most populous business centers of the city and have been constantly advertising on major city events and intentional recruitment for new members. Short-term and long-term loans are offered by all the cooperatives.



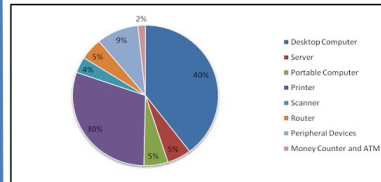
Note: Others include Coops A, B, D, E, F, H, I, J, K, L, M, N, O, and P



B. ICT Resources Scoring and Survey. A scoring system was formulated in order to give weights on the different ICT resources. 14 respondents which included 7 cooperative experts and 7 IT experts gave weights according to the importance of the different ICT resources and skills if they will be utilized by cooperatives with consideration on their usefulness and cost. A coefficient for the cooperative's hardware devices, software applications and network technologies was formulated by multiplying the weight of each ICT solution to the available units possessed by the cooperative then the sum of these weighted scores. The ICT human resource coefficient was formulated by getting the sum of the cooperative's score in the availability of the cooperative's IT department, IT policy, IT training program and ICT skills.

ICT solutions and their weight of importance in cooperative operations

HARDWARE DEVICES	WEIGHT	NETWORK TECHNOLOGIES	WEIGHT
Desktop Computer	9.36	Internet Connection	9.21
Server	9.21	Local Area Network	9.43
Portable Computer	6.79	Virtual Private Network	7.57
Printer	8.64	Intranet	8.14
Router	9.07	Extranet	6.21
Network Peripheral	8.93	Official website	8.00
Automated Teller Machine	8.14	Internet advertisement	7.57
SOFTWARE APPLICATIONS	WEIGHT	ICT HUMAN RESOURCE	WEIGHT
MS Excel	2.93	IT Department / Policy / Training Program	10
Stand-alone IS	7.50	Spreadsheet processing skills	9.29
Web-based IS	9.50	Social media skills	7.36



Software applications used by cooperatives							
Coop	Stand-alone IS	Web-based IS	MS Excel	Coop	Stand-alone IS	Web-based IS	MS Excel
A	✓			G	✓		
B			✓	H	✓		✓
C	✓			I	✓		✓
D		✓		J	✓		
E	✓			K	✓	✓	
F	✓	✓		L		✓	
Total				15			

C. Relationship of Business Profile and ICT Resources. In investigating the significant relationships of the cooperative's business profile and ICT resources, it was found that the level of hardware devices and network technologies is dependent on the cooperative's profile. On the other hand, it was found that the level of software applications and ICT human resources was negatively correlated with any of the cooperative's characteristics.

ICT Resources	Spearman Correlation Coefficient	p value	Remarks
Years of operation			
Hardware devices	0.725	0.001*	Significant
Network technologies	0.786	0.000*	Significant
Registered members			
Hardware devices	0.576	0.016*	Significant
Network technologies	0.584	0.014*	Significant
Number of employees			
Network technologies	0.531	0.028*	Significant
Total assets			
Hardware devices	0.745	0.001*	Significant
Service offerings			
Hardware devices	0.504	0.039*	Significant
Network technologies	0.929	0.000*	Significant

*Correlation is significant at the 0.05 level

Conclusion and Recommendation

This study successfully created a business profile of the cooperatives along with their ICT resources and its relationships. The growth in the level of hardware devices in the cooperatives was positively correlated with the cooperative's years of operation, registered members, total assets and services offered. Cooperatives make strategic decisions involving its software applications and ICT human resources regardless of the cooperative's age, its number of members, and its total assets. Conducting the same study on a different locale or a study using another set of quantitative and qualitative dimensions might shed light and contribute to the existing body of knowledge regarding how cooperatives use ICT resources.