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STRUCTURAL MODEL ON CREATIVE CLIMATE AND ORGANIZATIONAL SUSTAINABILITY

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Abstract
With the advent of industrial breakthroughs, organizations are faced with the dilemma of choosing between extinction and sustainability right from the planning stages of their business activities. More so, profit-generating activities are enveloped in a highly competitive environment. The cooperative industry is a powerful key to alleviating the members' living conditions while sustaining economic growth. The purpose of this study is to come up with a best-fit structural equation model that best fits the Climate for Creativity and Innovation: Resources, Motivation, and Exploration as well as the Economic, Social, and Environmental Sustainability of the Multi-purpose Cooperatives. This study utilized structural equation modeling. The survey sampled 641 cooperative officers among cooperatives in Bukidnon, Philippines. The best-fit model reveals that economic sustainability can be best predicted by resources and exploration. This concludes that if cooperatives create a climate for creativity and innovation, sustainability will follow. Specifically, multi-purpose cooperatives should provide officers with sufficient resources such as idea time, idea support, and dynamism and a supportive mechanism for exploration such as freedom and risk-taking.

Keywords: Cooperative, Creativity, Innovation, Sustainability, Structural Equation Model

INTRODUCTION

Cooperatives are organizations set up to meet their members' needs. In principle, they are owned and democratically controlled by their members, but in practice, many have been controlled by the government (Department for International Development, 2010). They serve as watering holes to individuals, more dominantly in places where the absence of enormous spending power does not attract private investment to harness local skills and resources that can uplift the local economy. Furthermore, cooperatives serve as significant economic players that contribute to sustained economic growth. In highly developed countries, governments recognized the social and economic benefits of cooperatives and encouraged cooperative development with access to low-cost capital markets (Mellor, 2009). Cooperatives often have risen from the grassroots and spread nationally. In the United States, the rural electric distribution and farm credit systems are dominated by cooperatives with the support of the government (Haggblade et al., 2007).

However, given these entire positive outlooks, cooperatives continue to face currently numerous challenges arising from sustainability issues. The European Association of Cooperative Banks (2010) noted that the global financial crisis of recent years had resulted in interest towards sustainable alternatives. Among the challenges is to combine cooperative specificities with external guidelines to preserve their contribution to more sustainable development. Another challenge many cooperatives face is over-regulation by the government compared to other private sector players, where supposedly, a legal environment with sensible regulation is needed to protect democratic member control, autonomy, and voluntary membership (Alldred, 2013).

The cooperative sector in the Philippines, given its past performance, has proven to contribute immensely towards the realization of the national goals, according to the report of the Cooperative Development Authority (2011). In the country, however, although cooperatives continue to enjoy the trust and confidence of their members, many face credit crunches.

Cooperative movements encountered common problems such as lack of education and training,lack of capital, inadequate business, lack of loyal membership support, vested interest and graft and corruption among leaders, mismanagement, and lack of government support (Sibal, 2011).

The organizations see climate on creativity as a crucial factor to immensely contribute to sustainability. In searching for sustainable ways of doing business, creativity and innovation plays a vital role (Winn et al., 2011; Hall and Wagner, 2012). Proposed common theoretical and practical approaches to sustainability often imply change, innovation, or adjustment of an entity about its supporting environment (Faber et al., 2005). This study hopes to contribute to the dearth of studies on cooperative sustainability, having known that they have the potential to alleviate the living conditions of their members and sustain economic growth.

RESEARCH METHOD

Research Setting and Design

This study utilized a quantitative research design utilizing Structural Equation Modeling (SEM) to examine the causal relationships of the climate for creativity and innovation and sustainability. This model build-up statistical technique allows testing of complex relationships among multiple variables, specifically, a causal-comparative research design. This type of research attempts to determine the cause that already exists between or among groups of individuals or attempts to identify a causative relationship between an independent variable and a dependent variable (Kravitz, 1994; Salkind, 2010).

The setting of the study was in Bukidnon, a province in Northern Mindanao, Philippines. The province has 382 registered cooperatives; however, as of December 2016, only 256 are active, and 126 were either dissolved, in the process of dissolution, or bound for dissolution. This research design aims to identify the best-fit structural equation model among the variables comprising the Climate for Creativity and Innovation: Resources, Motivation, and Exploration as well as the Economic, Social, and Environmental Sustainability of the Cooperatives. The researcher draw information for variables of interest through descriptive and inferential statistics. This study explored structural modeling or model build-up to assess the best fit model among multiple variables in study.

Respondents and Sampling Procedure

A total of 641 cooperative officers from the four districts of Bukidnon served as respondents in the data gathering of this study. This study used the technical definition of cooperative officers as cited in RA 9520 (Cooperative Code of the Philippines) in identifying the respondents. As detailed, this includes the board of directors, committee members created by the general assembly, manager or chief executive officer, secretary, treasurer, and members holding other positions as provided by their bylaws. These groups serve as the most relevant source of information as they regularly meet on a monthly basis or as the need arises to generate and discuss ideas, solutions, and strategies for the betterment of the cooperative.

The sample size was determined using two (2) stage proportional sampling. Eighteen (18%) of the total population, or 623, was the sample size, and 18% of the population in every district was targeted to come up with the total sample size. This resulted to 641 survey instruments being subjected to analysis from the 75 multi-purpose cooperatives of Bukidnon.

Research Instruments

The survey instrument was composed of 61 questions categorized into two parts. The first part contains 32 questions that assessed the climate for creativity and innovation, particularly evaluating the extent of Resources, Motivation, and Exploration of multi-purpose cooperatives in Bukidnon. The second part contains 29 questions that assessed their Economic, Social, and Environmental Sustainability.

The climate for creativity and innovation of the cooperatives was assessed using a questionnaire containing variables influenced by Ekvall's (1996) dimensions of organizational climate that help, stimulate, or block creativity and innovation. The climate includes variables and subvariables; Resources - Idea Time, Idea Support, Challenge, and Dynamism; Motivation–Trust and Openness, Playfulness and Humor, and Interpersonal Relations and Conflict management; Exploration - Risk-taking, Freedom, and Reward. Sustainability, on the other hand, is assessed in the economic, sociability, and environmental aspects. The Sustainability questionnaire is influenced by the Questionnaire for Apex Cooperative Organizations by the United Nations Organization, Social Policy, and Development Division (2009) in the social sustainability aspect of the multi-purpose cooperatives.

Statistical Technique

The researcher sought the aid of a statistics expert using statistical software for organizing the data all-throughout the data analysis. Descriptive statistics determining the mean, standard deviation, and frequency were used to describe and determine the levels of climate for creativity and innovation in terms of Resources, Motivation, and Exploration as well as Sustainability among the Cooperatives. Moreover, to examine the comparative magnitude and strengths of effects within the hypothesized model of the study, the maximum likelihood of SEM was employed to evaluate the goodness of fit; the following indices were computed: Chi-square degrees of freedom (X/df), Goodness of Fit Index (GFI) Normal Fit Index (NFI), Tucker Lewis Index (TLI), Comparative Fit Index (CFI), and the Root Mean Error of Approximation (RMSEA).

RESULTS AND DISCUSSION

Structural Model Testing

This part presents the discussion of the five models being hypothesized. The theorized models are represented by three exogenous variables namely, resources, motivation, and exploration and an endogenous which is sustainability. Resources are measured by challenge, idea time, idea support, and dynamism. Motivation is measured by trust and openness, playfulness and humor, and interpersonal relations and conflict management. Exploration is measured by freedom, risk-taking, and reward. On the other hand, sustainability is measured in three aspects: economic, social, and environmental.

Tests of the Best Fit Model

The fifth theorized model is the Best Fit model. This presents the correlations of resources with four measures: challenge, idea support, idea time, dynamism, and Exploration with three measures: freedom, risk-taking, and reward. All these variables were examined to test the validity of the model in relation to sustainability however in the economic aspect only.

Different from four prior theorized structural models, this model may have retained variables in the climate for creativity and innovation which are exploration and resources that can produce a good and significant relationship towards sustainability however this dependent

variable is assessed in economic aspect only hence, social and environmental aspects are disregarded.

The standardized estimates of direct, indirect and total effects of exploration and resources relative to sustainability are presented in Table 1. This table provides an overview of the total effects between the latent variable, combining direct and indirect effects that have been mediated by another variable. Exploration gained a direct effect of .61 while motivation gained .37. This implies that exploration exhibited best effects compared to resources.

Table 1. Standardized direct, indirect and total effect on sustainability in structural model.

LATENT VARIABLES	Direct Effect	Indirect Effect	TOTAL EFFECT
Resources	.37	0.00	.37
Exploration	.61	0.00	.61

Table 2 presents the goodness of fit model. The criterion for each index indicated a good fit relative to the data as reflected by CMIN/DF (1.795) with corresponding p-value of (0.058). On the other hand, other indices like NFI (0.995), TLI (0.992), CFI (0.997), GFI (0.994), and RMSEA (0.042) likewise meet the criteria set for a good fit model of the data

Table 2. Goodness-of-fit measures of sustainability structural model

INDEX	CRITERION	MODEL 1 FIT VALUE
CMIN/DF	0< CMIN/DF <5	1.795
P - value	>.05	0.058
NFI	>.95	0.995
TLI	>.95	0.992
CFI	>.95	0.997
GFI	>.95	0.994

This implies that if the multi-purpose cooperatives adopt a climate for creativity and innovation by providing the officers with sufficient resources in the forms of idea time, idea support, and dynamism, as well as granting them an authority on exploration, specifically in terms of freedom and risk-taking, this can best predict their organizational sustainability specifically in economic aspect.

Sustainability and Resources. In organizations, having the right resources in quantity and quality must be ensured to support its activities. Furthermore, resources play significant roles in innovation, productivity, competitiveness, and sustainability. A sufficient supply of these will promote and sustain innovative activities at all organizational levels (Alves et al., 2007; Quiloy,2015).

Sustainability and Exploration. Ideas for sustaining corporate growth and profits are not discovered overnight, more so in a closed room. Exploring new markets and competitions form these ideas. A company culture that allows employees to explore indicates courage to fight challenges, contributing to organizational performance and sustainability (Clinton and March 2015; March 2016; Neves & Eisenberger, 2014).

Significantly, as mentioned, creativity and innovation serve as effective solutions to economic

activities. Another essential revelation is the fact that economic privilege is the primary reason of members in joining cooperatives. Thus, if members will continue to enjoy economic advantages through innovative businesses, then membership is most likely preserved; moreover, cooperatives may be sustainable or may continue for a long time.

CONCLUSION

The best fit Structural Model reveals that the economic sustainability of the multi-purpose cooperatives can be best predicted by providing the officers with sufficient resources in the exploration specifically in terms of freedom and risk-taking. forms of idea time, idea support, and dynamism as well as with supportive mechanism on

Climate for creativity and innovation composed of resources, motivation, and exploration has a significant impact on sustainability. The majority of the sub-variable sunder Resources, Motivation, and exploration made was analyzed to be predictors.

The best-fit model specifically implies that when multi-purpose cooperatives strategize efforts to assure cooperative officers are provided with resources and authority to explore their cooperatives has a strong potential to be economically sustainable despite unforeseen changes and challenges. Provision of resources includes supporting their ideas in terms of finances, materials, manpower, and policies, as well as being open to change, thus successfully implementing it in the organization. Support to exploration includes encouraging them to try new ways and not blaming them in case of failure.

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