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THE VALIDATION OF THE ORGANIZATIONAL COMMITMENT MEASUREMENT SCALE: A CROSS CULTUREAL APPLICATION IN THE AVIATION SECTOR IN THAILAND

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Abstract

The organizational commitment measurement scale of Allen and Meyer (1990) has been widely used in organizational studies. This study aims to evaluate the psychometric properties of a Thai version of the Organizational Commitment Measurement Scale (OC-T). Two research questions form the basis of the study: (a) Are the three components of OC-T distinguishable from each other when applied in the aviation sector in Thailand?; and (b) Are the three components of OC-T reliable and valid in the aviation sector in Thailand? Data were collected from a questionnaire administered to 170 employees in the aviation sector in Thailand. Exploratory factor analysis (EFA) was applied to the findings. Based on internal reliability analysis, the three components of OC-T were distinguishable from each other indicating that the Thai version of Allen and Meyer's

Organizational Commitment Measurement Scale can be applied in aviation organizations in Thailand.

Keywords

International Trade, Organizational Commitment, Organizational Commitment Measurement Scales, Construct Reliability, Construct Validity

1. Introduction

The psychometrics measurement has been playing a role in applied sciences since the seventeenth century (Wright, 2005). A critical event in the history of measurement was "the application of Jacob Bernoulli's 1713" (p. 34). A number was used to interpret what was observed. Later, the term "psychometrics" was used to represent what it takes to construct useful measures. Psychometrics is the science that studies the design, delivery and interpretation of tests that measure participants' responses. Typically, tests aim to measure respondents' knowledge, abilities, personality, behavior or attitudes and beliefs. For example, Scarr and Weinberg (1976) tested the IQ of adopted children from the different families; Witkin et al (1954) studied a variety of personality test measures in a group of 52 men and 51 women college students in the US, and Grube et al (1986) studied the prediction of smoking intentions and behaviors from participant's attitudes and beliefs. From the existing evidence, the psychometrics measurement method is playing an increasingly important role in applied science research as a testing and assessment instrument.

Applied science is the study and practice of real works functioning e.g. management, organizational development, public administration, marketing, highway engineering, leadership, and nursing. Swanson & Chermack (2013) proposed that applied sciences are facing "varied application setting, cultures, resource pools, and individuals" (p. 7). Psychometric measurements are vital in applied sciences (DeVellis, 2017), and are developed to test and assess human perception which may affect organizational outcomes e.g. organizational commitment (Allen & Meyer, 1990), organizational citizenship behaviors (Smith et al, 1983), and work engagement (Kahn, 1990). These psychometric measurements aim to measure the magnitude of employee perception toward an organization. The majority of instruments have been developed in English. Thus, applying them in different cultures and different business settings needs to be investigated (van Widenfelt et al., 2005).

2. Significance of the Study

Side-bet theory proposed that an employee will make a contribution to any activity when he or she can see any interests of the consequences (Meyer & Allen, 1984). Organizations require employees that have a positive attitude toward the organization and are able to contribute to the achievement of organizational goals. Organizational commitment (OC) is one of the most examined perceptions of attitudes and psychological attachment (Ng, 2015). Devece et al (2016) defined OC as the level of employee involvement and identification with his or her organization. With increasing disruptive changes in business and diversity within the organizations, there has been an increased interest in cultural differences in employee organizational commitment (Meyer et al., 2012). OC measurement scales have been developed in English (Allen & Meyer, 1990); and validated in several contexts e.g., Devece et al (2012) which examined OC and its effects in Spain; Kanning and Hill (2013) which validated the OC measurement scale in six languages including German, Polish, English, Hungarian, Spanish, and Malaysian. For researchers working with populations in non-English speaking countries or cultural groups that differ greatly from the population used to develop the instrument, translating and adapting an established English language measure is an efficient solution to the lack of available instruments. Furthermore, using established measures further allows for cross-cultural comparison of findings as well as use in international trials. Thus, validating a Thai version of the OC provides an effective tool and adds to the body of knowledge on human resource development (HRD) in organizations that need to assess the OC of their employees.

3. Research Questions

The research questions of this study are: (1) Are the three components of the OC measurement scale distinguishable from each other in the aviation sector in Thailand?, (2) Are the three components of OC measurement scales reliable and valid in the aviation sector in Thailand?

4. Literature Review

4.1 Organizational Commitment (OC)

Organizational commitment (OC) refers to the attitude, willingness, or relative strength of an individual's identification with, and involvement in, an organization (Allen & Meyer, 2012; van der Voet & Vermeeren, 2017). OC originated from the Side-bet theory developed by

Becker (1960) which proposes that commitment occurs when a person links his or her external interests with a "consistent line of activity" (p. 33). According to the Side-bet theory, benefits would be lost when activities are discontinued. The development of OC moved from the Side-bet approach to the psychological attachment approach which focused on the combination of attitude and interest in economic gains from associating with the organization. The development of the OC approach was an advancement on the Side-bet theory.

OC has been conceptualized and measured in various ways. Porter and Smith (1970) developed the organizational commitment questionnaire (OCQ). Later, Allen and Meyer (1990) proposed a three-dimensional model of OC which has been widely used in OC studies. It includes (a) an affective component which refers to employees' emotional attachment to, identification with, and involvement in, his or her organization; (b) a continuance component which refers to commitment based on the costs that employees associated with leaving the organization, and (c) a normative component which refers to employees' feelings of obligation to remain with the organization. It reflects his or her general morale derived from working with the organization. Moreover, from the existing theory of OC, the multi dimensions of OC can be adopted. Ghosh and Seamy (2014) commented that OC is multi-faceted and consists of both attitudinal and behavioral implications. Thus, to validate the OC measurement scale in the Thai version, the following hypothesis has been created.

Hypothesis 1: The affective, continuance, and normative components of OC are distinguishable, and are the key constructs of OC.

5. Methods

5.1 Sampling and Procedure

The context of this survey-based study is the aviation industry in Thailand. To test the hypothesis, data was collected from 170 participants which are appropriate for exploratory factor analysis (Hair et al, 2010, p. 643) from four aviation organizations in Thailand by pen-and-pencil questionnaires. From the total number of respondents, 55.2% were female and 43.6% male. Most respondents were aged between 21-40 years old (79.4%). Almost 90% of respondents were performing operational functions in their organization. The majority had 2-4 years of working experience (43%).

The organizational commitment scale is translated from English into Thai by three professors who are fluent in English. Then, the English experts committee who are conducting

classes in English in the academic institutes in Thailand, check the same set of statement in order to clarify the similarity of the meaning of both versions. This process enhances the equivalent of translation in the semantic, content and normative equivalent of the questionnaire (Harkness & Schoua-Glusberg, 1998).

5.2 Measures

Participants were asked to rate each statement according to a 6-point Likert scale ranging from 'strongly disagree' to 'strongly agree'. Additionally, multiple-choice responses were used for control variables, including gender, age, tenure, and income.

Organizational commitment (OC). The 15-items of the OC measurement scale developed by Allen and Meyer (1990) were used (α = .82). Examples of these items include "I would be very happy to spend the rest of my career with this organization", "I am not afraid of what might happen if I quit my job without having another one lined up I", and "I think that people these days move from company to company too often."

6. Results

The results were analyzed using (a) exploratory factor analysis (EFA) and (b) descriptive statistics, reliability, average variance extract (AVE) and correlation coefficients.

Exploratory factor analysis (EFA) was performed to analyze the underlying constructs of the OC-T. Hair et al (2010) suggested that factor loadings in the range of .3 to .4 are considered to meet the minimal level for interpretation of structure. In order to make a better interpretation of structure, items which had factor loadings less than .4 were deleted. After revision, there were 4 items of aoc, 6 items of coc, and 5 items of noc as displayed in Table 1.

Table 1: *Exploratory Factor Analysis of Organizational Commitment Thai version (OC-T)*

Item	Factor Loadings
Affective Organizational Commitment (aoc)	
aoc_1 I would be very happy to spend the rest of my career with this organization.	.83
aoc_2 I enjoy discussing about my organization with people outside it.	.69
aoc_3 I really feel as if this organization's problems are my own.	.64
aoc_4 This organization has a great deal of personal meaning for me	.77

Continuance Organizational Commitment (coc)	
coc_5 It would be very hard for me to leave my organization right now, even if I wanted to.	.63
coc_6 Too much in my life would be disrupted if I decided to leave my organization now.	.72
coc_7 Right now, staying with my organization is a matter of necessity as much as desire.	.71
coc_8 I feel that I have very few options to consider leaving this organization.	.75
coc_9 One of the few serious consequences of leaving this organization would be the scarcity of available alternatives	.66
coc_10 One of the major reasons I continue to work for this organization is that leaving would require considerable personal sacrifice—another organization may not match the overall benefits I have here.	.64
Normative Organizational Commitment (noc)	
noc_11 I think that people these days move from company to company too often.	.44
noc_12 One of the major reasons I continue to work in this organization is that I believe loyalty is important and therefore feel a sense of moral obligation to remain.	.83
noc_13 If I got another offer for a better job elsewhere, I would not feel it was right to leave my organization	.68
noc_14 I was taught to believe in the value of remaining loyal to one organization.	.84
noc_15 Things were better in the days when people stayed in one organization for most of their careers	.78

Note: n = 170, All are significant at $p < .01$

Descriptive statistics, reliabilities, AVE and correlation coefficients of and among OC are displayed in Figure 1. The value of each criterion passes the cut off value. AVE is .5 and reliability (Cronbach's alpha) is above .7. The correlation coefficients of OC's components show how statistically similar all pairs of variables are embedded in the same variable.

Table 2: *Descriptive Statistics, Reliabilities, AVE and Correlation Coefficients of and among OC*

Component	Mean	Std. Deviation	AVE	Cronbach's alpha	1	2	3
1. Affective commitment	3.91	3.36	.5	.72			
2. Continuance commitment	3.90	5.40	.4	.77	.24**		
3. Normative commitment	3.56	4.57	.6	.77	.64**	.20**	

Note: n = 170; ** $p < .01$

7. Discussion and Implications

This study aims to validate Allen and Meyer's Organizational Commitment scale in the aviation context in Thailand. The three components of this measure are affective, continuance, and normative commitment. The three components show a validity with the value of AVE and Cronbach's alpha equal and above the cut off value (AVE ≧ .5; Cronbach' alpha is above .7). The intercorrelation coefficient showed that the three components are significantly related to each other ($p < .01$). This indicates that the three components measure the same variable.

Implications drawn from measurement scales in social science must be handled with care. The measurement scales are developed and aim to generalize the tool. Thus, validation of the scale is necessary with both accuracy and reliability. Several values are commonly assigned to assess the quality of such measurements. This study adds to the value of the organizational commitment measurement scale in the aviation organization in Thailand. The result shows that this measurement can be used to effectively assess employee's perceptions of his / her organizational commitment.

8. Limitations and Future Research

Several limitations should be noted. Firstly, the sampling size of the study and secondly, the cross-sectional design of the study i.e., the period of data collection. These limitations should be taken into account in future research. Future studies should be longitudinal studies and in a different context which compare the different phases of data collection. This may help to validate the measurement scale more effectively. Importantly, the number of participants need to be considered as this may affect the process of data analysis.

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