TESTING A MEASUREMENT SCALE OF ORGANIZATIONAL COMMITMENT USING A CONFIRMATORY FACTOR ANALYSIS

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ABSTRACT

The present study seeks to develop a conceptual framework for measuring organizational commitment among employees in banking institutions by adopting three appropriate dimensions of measurement: affective commitment, continuous commitment and normative commitment. To achieve this goal, we used a confirmatory factor analysis (CFA) through AMOS software. Based on the results, it was found that this model is a valid and reliable model that can be used for measuring organizational commitment among employees in banking institutions in Libya.

Keywords: Affective Commitment, Continuous Commitment, Normative Commitment

INTRODUCTION

Commercial banks are considered as one of the sectors that pay most attention and interests to developing human resources in the light of speedy technological, technical and economic changes. Currently, the various changes in the means of investment, credit, tools and techniques of monetary and commodity exchange all make organizations or institutions focus on improving personnel's and human recourses' behavior. This is because it is regarded as the foundation for any success in such organizations, and it enables them to be in line with the rapid developments in the external environment.

The work environments in the banking sector are almost similar, but they can be differentiated by employees' performance and creativity as well as their distinctiveness. Therefore, banks usually attempt to maintain those employees with expertise and skills necessary for accomplishing their businesses more effectively, thus developing their business that makes such banks distinctive from other banks. This prompts them to pay more attention to and to focus on the individual in order to be committed to and interested in his/her institution, thus contributing to achieving the goals or aims of such organization. Institutions including banks also seek to increase employees' connection to the banks where they work as to be able to achieve the organizational commitment of employees towards their organizations they work for.

Porter (1990) sees that organizational commitment is the employees' continuing or constant tendency to participate in certain activities in a given organization, which is resulted from the individual's investment in this organization and his/her fears of losing it if he/she gives up such commitment.

According to Rebecca (2013), organizational commitment is a close link or connection of the employee to the aims or goals of his/her organization and its values, and acceptance of such goals and values as well as his/her willingness to make an effort on behalf of the organization to survive and continue its membership. As defined by Qaisar et al. (2012) from a psychological perspective, it is a psychological link which connects individuals to their

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organization, which pushes or motivates them to engage in the work and adopt the values of the organization in a way that affects the productivity and effectiveness of the organization.

Some previous studies have confirmed the role of organizational commitment in significantly contributing to achievement of the goals of organizations and accomplishment of the work with the least time, least effort and least cost through employees' active engagement in the work. In addition, the results of such studies indicated that the longer time the employees work in given organizations is, the more experience and higher competence will be, which increases their productivity as well as the organization's productivity (Salleh et al., 2013;Yeh et al., 2012).

There are many studies which have attempted to identify the dimensions of organizational commitment and determine the nature of its impact on the organizational and behavioral variables. The study by Meyer et al. (2006) is one of these previous studies showing that there are three dimensions for organizational commitment. These dimensions adopted by the current study as key dimensions for accurate measurement of organizational commitment are discussed as follows:

Affective Commitment

This dimension is influenced largely by the degree or level of the individual perception of the features characterizing the work including a degree of independence and diversity of skills required, as well as the supervisors' closeness to him/her and the level or degree of support and guidance provided by them to such employee. Affective commitment is also affected by the individual's active participation in the decision-making process in the working environment regardless of whether these decisions are concerned with the work, or with respect to his/her affairs. Moreover, it is influenced by the feedback obtained from supervision (Mayer, 2006).

Continuous Commitment

This dimension means whatever is accomplished and achieved by employees from their continuity and pursuit of working for a given organization versus whatever is lost by them when leaving that organization and joining another one. It is also pointed out that those employees who have a high level of continuous commitment remain in the service not out of their own desire or willingness but because of their need (Mayer, 2006).

Normative Commitment

This dimension is defined as the employee's feeling towards his/her commitment to and remaining in the organization. It enhances the organization's support to its employees and its permission for them to engage in active and positive participation in setting the goals, planning and making policies of the organization as well as contribution to the development of procedures and implementation of the action. This normative commitment makes employees believe that remaining in the organization is something moral which must be done properly (Mayer, 2006).

RESEARCH OBJECTIVES

Generally, the study aims to test the validity of the organizational commitment scale as a latent factor by testing the convergent validity known as the average variance extracted (AVE) for each dimension of the main scale, which are the affective commitment, continuous commitment and normative commitment) as well as the items representing them. It also aimed to test the divergent validity known as shared variance (SV) among the

investigated dimensions in order to be rely upon them in carrying out tests of correlations and effects or impact with other underlying factors.

METHOD

Population and Sample of the Study

The study population consisted of all employees in the main bank of the republic and its branches in the city of Tripoli, totaling (3100) employees. Initially, 450 samples were preliminary determined to conduct our analysis, while the returned questionnaires valid for the analysis were 381 questionnaires, which all conformed to the requirements of the analysis.

Research Instrument

The researchers designed a questionnaire to test the construct validity of the factor of organizational commitment based on some previous studies (Al Qasim, 2011); (Abazid, 2014). The first dimension, affective commitment, comprises 7 items, and the second dimension, continuous commitment, consists of 7 items, while the third dimension, normative commitment, has 4 items, thus totaling a number of 18 items for the questionnaire used for measuring organizational commitment after testing its external validity (expert judgment). This was achieved by giving the questionnaire to experts in this area and by performing Cronbach's alpha test to test its consistency.

Confirmatory Factor Analysis

In order to test the validity constructs and the research hypotheses the Structural Equation Modeling (AMOS) model-fitting program is used. The model fit is evaluated by using four indices of the model goodness-of-fit: (1) the comparative fit index (CFI) (2) the chi-square statistics McDonald and Marsh (1990); (3) (RMSEA) between (0.08) to (0.10) indicates a mediocre fit Browne and Cudeck (1993) and would not employ a model a RMSEA greater than 0.1 (>0.1) (MacCallu um et al., 1996). (4) the minimum value of the discrepancy between the observed data and the hypothesised model divided by degrees of freedom (CMIN/DF) or normed chi-square. Marsh and Hocevar (1985);

Construct Validity

According to Hair, Black, Babin, Anderson and Tatham (2006) the employment of factor loading composite reliability (CR) and average variance extracted (AVE) to determine the convergent validity if it equals to or greater than 0.5 (≥0.5) and the composite reliability equals to or greater than 0.7 (≥0.7) if were recommended by Hair et al.(2006). Also, (AVE) reading values should be greater than 0.5 (≥0.5) (Fornel and Larker,1981).

RESULTS

The Modified Model

From Figure (1) that shows the results of the (CFA) for the proposed model for measuring Organizational Commitment, it is evident that the model is free of the illogical correlation since it reaches or exceeds the integer (1). This also indicates that there is not any problems in the (CFA) used for testing the validity of this model that comprises three factors: The first factor including the Affective Commitment, the second factor including the Continuous Commitment and the third factor containing the Normative Commitment. As seen in Figure (1) and Table (1), the indicators of agreement between the model and the data exceeded the T-value, thus, implying that there is disagreement between Organizational Commitmentand the data of the sample since the value of the Chi-Square was (540.717) and the degree of

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freedom was (132), and the level of significance was (P=0.000). In addition, we can see that the normative Chi-Square (Chi-Square /degrees of freedom) was (4.096) being below than (5), and the value of relative strength index (CFI) was (0.897) less thanthe (0.90). The results also show that the value of the index (Rmsea) error square was (0.090) being higher than (0.080). Due to this contradiction between the model and the data, it was necessary to modify the Organizational Commitment model in this study.

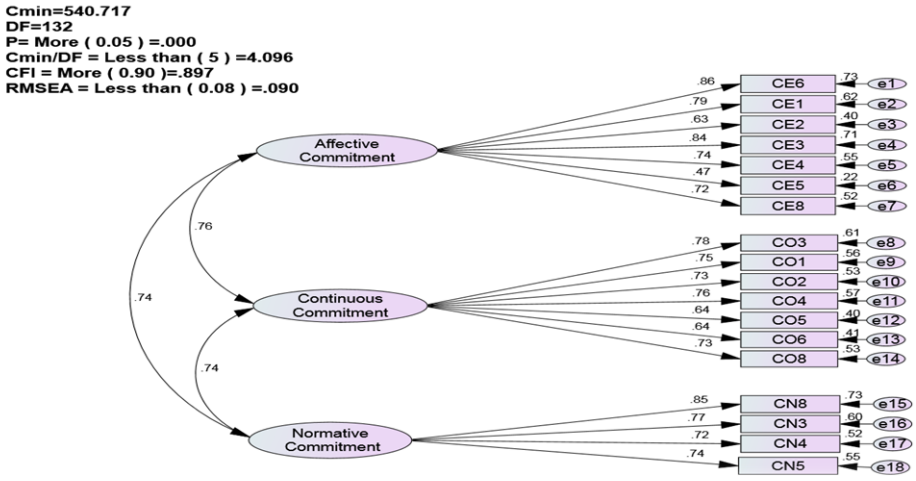

Figure 1:Model Organizational Commitment before the amendment

In order to modify this model, we followed was deleting (CE2), (CE5)of the Affective Commitment. And also linking some of the items according between (CE1) with (CE6). In addition to we followed was deleting (CO2), (CO5) and (CO6)of the Continuous Commitment to what is shown in Figure (2). And to what Amos confirmed by analysis of Amos.

Table 1. Index Value of Organizational Commitment Model before and after Modification

indicators consistency	*index value before modification*	*index value after modification*	*Function value on the quality of conformity*
Cmin	540.717	201.982	---
df	132	61	---
P	0.000	0.000	Non
Cmin/Df	4.096	3.311	Less than (5)
CFI	0.897	0.953	More (0.90)
Rmsea	0.090	0.780	Less than (0.08)

Confirmatory Factor Analysis of the Organizational Commitment Model

The results of the goodness-of-fit of the final revised of the Organizational Commitment model showed that normed chi- square (CMIN/DF) was (3.311), the (CFI) was (0.953) and Rmseawas(0.780). Figure (2) shows the adequacy of the final revised of the Organizational Commitment model.

Construct Validity and Reliability

Affective Commitment

In the present study, lodging for the parameters factor ranged from 0.71 to 0.88, with all parameters were above 0.5 (≥0.5). The reliability was greater than 0.7 (≥0.7), it ranged from 0.945 to 0.946. In addition, the AVE reading was 0.62 where the value was greater than 0.5 (≥0.5). Consequently, all results fulfilled the AVE, and the reliability discriminant validity of the model. In general, The first Dimension of the Organizational Commitment model was fit and fulfilled the construct as depicted in following Table (2).

Table 2. Construct Validity and Reliability of Organizational Commitment Model- Affective Commitment

code	*Items*	*Reliability*	*estimate*	*S. E*	*C. R.*	*P*	*Loading*	*SMC*	*AVE*
`CE3	I feel the desire to make a major effort to achieve the objectives of the bank.	0.945	1.000	-	-	-	0.88	0.78	*0.62*
CE1	There is an emotional attachment to the bank where I work.	0.945	0.895	0.057	15.75	0.00	0.71	0.50	-
CE4	I do not want to work in other banks.	0.946	0.919	0.049	18.65	0.00	0.79	0.62	-
CE6	I feel as if I was working in a family atmosphere at the bank where I work.	0.945	0.974	0.050	19.42	0.00	0.81	0.65	-
CE8	I quite consider that the bank's problems as my own specific problems.	0.946	0.902	0.054	16.73	0.00	0.73	0.54	-

Continuous Commitment

Table 3. Construct Validity and Reliability of Organizational Commitment Model- Continuous Commitment

code	*Items*	*Reliability*	*estimate*	*S. E*	*C. R.*	*P*	*Loading*	*SMC*	*AVE*
`CO3	I strongly care about the future of the bank where I work.	0.946	1.000	-	-	-	0.81	0.66	0.59
CO1	I want to remain/ stay in the bank no matter what other alternative opportunities are available to me	0.946	0.849	0.057	14.95	0.00	0.73	0.54	-
CO4	Leaving my work in this bank causes problems in my life.	0.946	0.939	0.059	16.04	0.00	0.78	0.61	-
CO8	I belong to the place where I work and I have no desire to leave it.	0.946	0.938	0.061	15.35	0.00	0.75	0.56	-

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In the current study, the lodging for the parameters factor ranged from 0.73 to 0.81, with all parameters were above 0.5 (≥0.5). And the reliability was greater than 0.7 (≥0.7), it ranged were 0.946. In addition, the AVE reading was 0.59 where the value was greater than 0.5 (≥0.5). Consequently, all results fulfilled the AVE, and the reliability discriminant validity of the factor. In general, the second Dimension of the Organizational Commitment modelwas fit and fulfilled the construct as depicted in above Table (3).

Normative Commitment

In this study, the lodging for the parameters factor ranged from 0.72 to 0.85, with all parameters were above 0.5 (≥0.5). The reliability was greater than 0.7 (≥0.7), it ranged were 0.946. In addition, the AVE reading was 0.60where the value was greater than 0.5 (≥0.5). Consequently, all results fulfilled the AVE, and the reliability discriminant validity of the Dimension. In general, the third Dimension ofthe Organizational Commitment *model*model was fit and fulfilled the construct as depicted in Table (4).

Table 4. Construct Validity and Reliability of Organizational Commitment Model- Normative Commitment

code	*Items*	*Reliability*	*estimate*	*S. E*	*C. R.*	*P*	*Loading*	*SMC*	*AVE*
`CN8	Continued loyalty is a moral value.	0.946	1.000	-	-	-	0.85	0.73	*0.60*
CN3	I consider moving from one bank to another immoral.	0.946	0.887	0.053	16.74	0.00	0.77	0.59	-
CN4	I consider my commitment to the bank a moral obligation.	0.946	0.822	0.053	15.40	0.00	0.72	0.52	-
CN5	I would feel guilty if I left work in the bank.	0.946	0.838	0.053	15.95	0.00	0.74	0.55	-

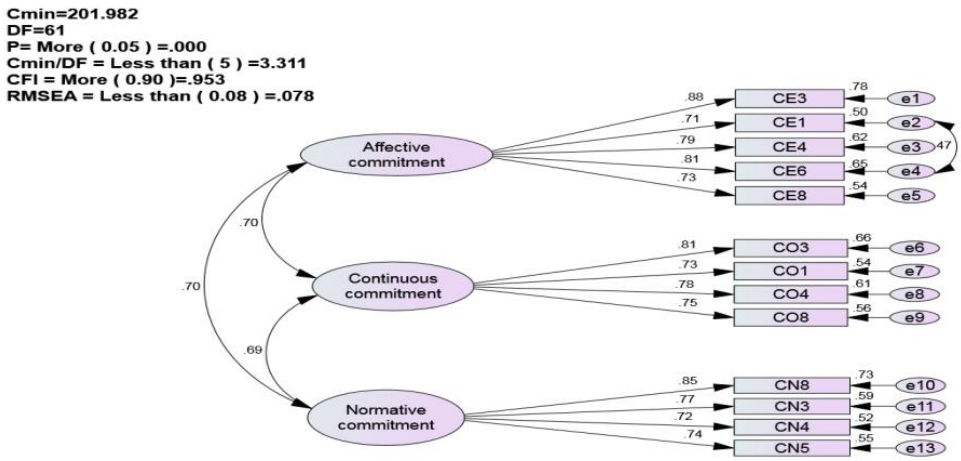

Figure 2: Organizational Commitment model after amendment.

Fornell -Larcker Criterion

In order to test the predictive validity (discrimination) among the dimensions of the organizational commitment scale, the researchers used Fornell -Larcker Criterion, considering that the AVE for each dimension of the main scale would be higher than the SV

of all relations or links. Table (5) shows the results obtained from this test concerning the relations among the three dimensions of the scale of organizational commitment.

Table 5.Correlation Matrix between the Three Dimensions of Organizational Commitment

No	*Latent Variables*	*Affective Commitment*	*Continuous Commitment*	*Normative Commitment*
1	Affective Commitment	**1**	-	-
2	Continuous Commitment	0.70	**1**	-
3	Normative Commitment	0.70	0.69	**1**

As seen in Table (6), the SV among the three dimensions is the result of multiplication of the correlation value by itself, and from the results in the same table regarding the AVE, it is evident that the AVE for every dimension of the organizational commitment scale was higher than the SV among all the dimensions. Such result suggests that organizational commitment model metFornell -Larcker Criterion and achieved the required predictive validity among its three investigated dimensions.

Table 6.Covariance and the Contrast between the Extracted Three-Dimensional Matrix Organizational Commitment Scale

No	*Latent Variables*	*Affective Commitment*	*Continuous Commitment*	*Normative Commitment*
1	Affective Commitment	*0.62*	-	-
2	Continuous Commitment	0.49	*0.59*	-
3	Normative Commitment	0.49	0.47	*0.60*

CONCLUSION

This paper achieved the main goal of the study which was to test the validity of a proposed model for measuring organizational commitment among employees in financial institutions (commercial banks) through the use of a CFA as a means to structural equation modeling (SEM-AMOS). This was proposed and developed based on the identified measurement dimensions of the main factor (organizational commitment) in previous studies (Salleh et al. 2013;Yeh et al., 2012;Meyer et al., 2006). The results obtained in the present study especially regarding the validity of the measurement indicated the constructed model in its three dimensions is a reliable and valid measurement tool that can be used in measuring the staff's commitment within banking institutions. The model achieved the required convergent validity or the AVE, among its three dimensions which even exceeded (0.50). The study also proved that the model achieved the required divergent validity or SV among its three dimensions: affective commitment, where the AVE was higher than the SV for all three dimensions, a result that was in agreement or consistent with Fornell -Larcker Criterion.

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