

ORGANIZATIONAL COMMITMENT CONSTRUCT: VALIDITY MEASURE USING SEM

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ABSTRACT : *The organizational commitment is recognized as one of the most important determinants of employee attachment. It is define as the desire of employees to attach with organization and hence has a strong connection with employee behaviour and performance. The aim of this study is to establishing the validity and reliability of organizational commitment construct. The social lab for testing the nine items' construct was small and medium scale firms operating in Pakistan. Total 311 respondents were participated in this study. Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were used to measure the construct. The EFA results suggested that all nine items of organizational commitment are valid, hence applicable in context of SMEs. However, the in depth analysis of CFA results identified that three items of organizational commitment have very low factor loadings and hence not appropriate in this context. Therefore, only six items are appropriate to measure the organizational commitment in SMEs. Albeit, these results show that organizational commitment is a valid and reliable scale to measure commitment in SMEs.*

Keywords: *Organizational commitment; validity construct; EFA; CFA; SME.*

1. INTRODUCTION

Organizational commitment is considered to be the intentions of an employee attach with the organization. Several researches have been conducted to measure the level of OC among employees in private and public business establishments and in educational organizations in Pakistan. Mowday's [1] and Meyer's [2] instruments have been widely used to measure the employees commitment, however, these instruments were used with modification by local researchers to matched with the demographics, though some were adopted it as it is. Moreover, some other OC tool was also used, either adopted from different sources or developed locally. Thus far, these instruments have some validity and reliability issues. Hence, validation of an original instrument to measure the organizational commitment in SMEs may help in standardization and address the validity issues in the field. Keeping this in view, this paper aims to validate the OC instrument in small and medium enterprises, since in current turbulent environment SMEs are striving hard to retain their employees, to save their hiring and training cost, by maintaining employee's commitment towards organization.

SMEs have a significant contribution in the economy of Pakistan. SME sector generating significant employment opportunities, and substantially contributes in the GDP of the country. However, a need of an alternative way out for SME success is emerging through contemporary management practices in SMEs of Pakistan. Hence SMEs are focusing on managing employee commitment throughout his working affiliation with them. Therefore a valid instrument is required to measure the OC fit between employee and employer in the context of SMEs.

Mowday posited the matching of commitment between employee and organization. Other scholars such as Meyer and Allen and Sommer [3] reported a relationship between commitment and employee retention and attachment. Tsui [4] also empirically endorse commitment as a significant

management tactic. However, relatively less attention has been paid to examine the validity of organizational commitment in small and medium enterprises.

Most of the studies have also been focusing on organizational commitment [5,6]. However, most of the previous empirical studies on organizational commitment have been carried out in first world countries, which are economically advanced, and the researches have been carried out on large scale firms. Therefore, this paper attempt to fill that gap while validating the organizational commitment in small and medium sized firms.

2. LITERATURE REVIEW

Organizational commitment is considered as the most important construct of employee attachment [3]. Meyer and Allen [2] define organizational commitment as the desire of employees to remain employed with their organization. Organizational commitment has a strong connection with employee behaviour and performance [7]. The definitions of organizational commitment are varying in studies. Meyer and Allen [2] suggested organizational commitment as a multidimensional concept that has been understood in different ways. Organizational commitment appears to be behavioural [8], normative [9], calculative [10,11] and attitudinal [12,13]. Porter [12] attitudinal concept has been widely accepted to measure the employee's commitment, measuring through attitudes and feelings toward his employing organization [14,15] and their Organizational Commitment Questionnaire (OQC) is the most common method assessing the type of organizational commitment [16].

Certainly, the development of organizational commitment is related to the notion of psychological contact between employee and employer [2,3]. This psychological contact emphasizes on the balance of contribution between employee and employer i.e. what employee put into an organisation and what employer give in return [14]. Hence

employees will agree to do many things for the organization [17] shows strong believe, accept the organizational goals and values, show willingness to exert considerable effort on

Table 1: Descriptive Statistics

	Mean	Std. Deviation	N
Most employees feel a sense of belonging in our organization.	3.4566	.86294	219
Most employees will leave for different organization even though the type of work was similar.	2.8858	.99574	219
Often employees find it difficult to agree with our organization's policies on important matters relating to them.	3.3242	.93353	219
Our organization really inspires the very best in employee in the way of job performance.	3.4703	.91511	219
Most employees find that their values and our organization's values are very similar.	3.3196	.91778	219
There is little to be gained by sticking with our organization indefinitely.	3.3014	.88336	219
Most employees are willing to put in a great deal more effort than normally expected to help our organization be successful.	3.2694	.91648	219
Most employees are proud to tell others that they are part of our organization.	3.5205	.97834	219
Most employees really care about the fate of our organization.	3.6027	.84168	219

Table 2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.831
Bartlett's Test of Approx. Chi-Square	796.793
Sphericity df	36
Sig.	.000

Table 3: Communalities

	Initial	Extraction
Most employees feel a sense of belonging in our organization.	1.000	.467
Most employees will leave for different organization even though the type of work was similar.	1.000	.717
Often employees find it difficult to agree with our organization's policies on important matters relating to them.	1.000	.625
Our organization really inspires the very best in employee in the way of job performance.	1.000	.601
Most employees find that their values and our organization's values are very similar.	1.000	.737
There is little to be gained by sticking with our organization indefinitely.	1.000	.555
Most employees are willing to put in a great deal more effort than normally expected to help our organization be successful.	1.000	.650
Most employees are proud to tell others that they are part of our organization.	1.000	.573
Most employees really care about the fate of our organization.	1.000	.498

Extraction Method: Principal Component Analysis.

Table 4: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Total	Sums of	of
	Total	% of Variance	Cumulative	Total	% of Variance	Cumulative			
1	4.275	47.496	47.496	4.275	47.496	47.496	3.410	37.891	37.891
2	1.148	12.754	60.250	1.148	12.754	60.250	2.012	22.359	60.250
3	.944	10.493	70.743						
4	.674	7.486	78.228						
5	.558	6.195	84.424						
6	.437	4.858	89.282						

7	.381	4.235	93.517
8	.332	3.687	97.204
9	.252	2.796	100.000

Extraction Method: Principal Component Analysis.

Table 5: Component Matrix^a

	Component	
	1	2
Most employees feel a sense of belonging in our organization.	.520	.443
Most employees will leave for different organization even though the type of work was similar.	.470	.704
Often employees find it difficult to agree with our organization’s policies on important matters relating to them.	.696	.376
Our organization really inspires the very best in employee in the way of job performance.	.745	
Most employees find that their values and our organization’s values are very similar.	.791	-.333
There is little to be gained by sticking with our organization indefinitely.	.735	
Most employees are willing to put in a great deal more effort than normally expected to help our organization be successful.	.770	
Most employees are proud to tell others that they are part of our organization.	.704	
Most employees really care about the fate of our organization.	.699	

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Table 6: Rotated Component Matrix^a

	Component	
	1	2
Most employees feel a sense of belonging in our organization.		.650
Most employees will leave for different organization even though the type of work was similar.		.846
Often employees find it difficult to agree with our organization’s policies on important matters relating to them.	.394	.686
Our organization really inspires the very best in employee in the way of job performance.	.746	
Most employees find that their values and our organization’s values are very similar.	.848	
There is little to be gained by sticking with our organization indefinitely.	.689	
Most employees are willing to put in a great deal more effort than normally expected to help our organization be successful.	.780	
Most employees are proud to tell others that they are part of our organization.	.745	
Most employees really care about the fate of our organization.	.543	.450

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Table 7: Guideline for identifying Significance factor loadings based on sample size

Factor loading	Sample size needed for significance
.30	350
.35	250
.40	200
.45	150
.50	120
.55	100
.60	85

.65	70
.70	60
.75	50

Source: Hair, Black, Babin & Anderson, 2010.

behalf of organization [18] and intention to remain with the organization [19]. Likewise, organization caring about the worker’s physical and emotional well-being, provides a high level of job satisfaction and employee development, and provides fair and ample compensation [20,21]. Hence the organizational commitment equation will be balanced when employee’s commitment to the organization must be matched by the organization’s commitment to the employee [22].

Indeed organizational commitment considered as a critical success factor. The focus on employee by an organization is demonstrated by the monetary and non-monetary benefits they receive [23] and the service that is devoted to them [24]. Apparently if employee believes that organization is less committed to them then they may respond by feeling less committed to the organization [14]. Over the years, organizational commitment emerged as the most recognized and investigated construct of employee attachment to organization [14].

The factor structure of Mowday [1] organizational commitment construct has been examined in several studies. Studies have provided empirical support to demonstrate that the construct is reliable. However, to date, no empirical effort has been made to test and validate organizational commitment in SME setting, with the special focus on Pakistan. Hence there is a high need to conduct an empirical study to validate the OC construct in context of SMEs.

3. METHOD

3.1 Procedures

In this study the validity of organizational construct has been measured through exploratory factor analysis (EFA) using SPSS and confirmatory factor analysis (CFA) using SEM. The purpose of using EFA with principal component analysis is to derive a linear combination of items such that maximum variance is extracted from the construct. Additionally, the CFA is used to confirming the construct that the factor structure obtained in an EFA is robust and is not simply a consequence of one set of data. Moreover, CFA investigate in a very specific manner that how it is related to underlying construct.

EFA analysis includes the testing of correlations using KMO and Bartlett's test of sphericity. For orthogonal rotation Varimax is used since it maximize the sum of variances of required loading of the factor matrix.

CFA analysis includes the testing of goodness of fit indices consisting on Chi-square, degree of freedom, level of significance, CFI and RMSEA.

Internal consistency reliability of the items is also measured using Cronbach's coefficient alpha. This scale measure indicates the consistency of a multiple item scale.

3.2 Participants

The primary data was collected through field survey. Total 311 SMEs operating in Pakistan were participated in this study. However, after the deletion of outliers, to eliminate the undue influence on calculations, the data of 219 SMEs was used for EFA and CFA analysis. The participants were the owners or senior level managers of the firms. The 47.0 percent respondents were the owners and 52.1 percent respondents were the senior level managers.

3.3 Measures

Chew and Chan [6] organizational commitment construct was measured. This construct is the modified version of Mowday's [1] originally have 15 items, however, due to internal in consistency Chew and Chan [6] dropped six items and come up with the findings that nine items are valid and more meaning full in organizational setting. All nine-items of organizational commitment were scored with five-point scales ranging from (1) strongly disagree to (5) strongly agree.

4. FINDINGS

4.1 Reliability scores

Internal reliability of nine items of organizational commitment was assessed using Cronbach alpha technique. The scale produced an alpha of 0.856, which is highly acceptable for an attitude scale. Moreover, the corrected item- total correlation of each item is well above 0.3 and hence reveals that no items have low correlations with the test or scale as a whole.

4.2 Exploratory factor analysis

The mean score of descriptive statistics, presented in table 1, generally concluded that most employees are almost agreed that they really care about the fate of their organization and most employees are disagreed to leave their organization.

The Kaiser-Meyer-Olkin (KMO) test shows the measure of (.831) and the Bartlett's test is significant at (.000) and therefore satisfactory. This means that the items do have some correlation to each other. The results are summarized in table 2.

The table of communalities (table 3) shows the variance in each variable accounted for the extracted factors. For instance, over 73% of the variance in '*Most employees find that their values and our organization's values are very similar*' is accounted for, while only 46% of the variance in '*Most employees feel a sense of belonging in our organization*' is accounted for.

Table 4 shows all the factors extractable from the analysis. The first factor accounts for 47.49% of the variance, the second 12.75%, with a total of 60.25% of the total variance. All the remaining factors each control only small amounts of variance and are not significant but between them account for the remaining 39.75%.

From the scree plot it can be seen (figure 1) that the curve begins to flatten between factors 2 and 3. Moreover, factor 3 has an eigenvalue of less than 1, so only two factors have been retained.

Table 5 shows the loading of the nine variables on the two factors extracted. The empty spaces on the table represent loadings that are less than 3. This table produces a reasonably clear factor 1 but the second factor is less clear with variables loading on both.

The rotation of factor loadings is presented in table 6. We can see that items 4, 5,6,7,8 are loaded on factor 1 and items

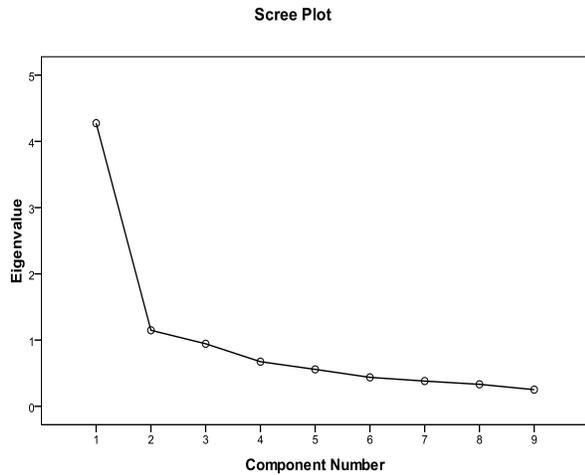


Figure 1: Scree Plot

1 and 2 are loaded on factor 2. However, items 3 and 9 are loading on both.

4.3 Confirmatory factor analysis

Goodness of fit indices of organizational commitment construct, based on nine items, presented in figure 2. The construct validity was tested using confirmatory factor analysis (CFA) computed using AMOS. Analyses were done using maximum likelihood technique. First CFA on nine item form with single structure revealed that *p* is significant at (.000), Ch-square is 163.052, CMIN/DF (6.039/27), which is greater than 5. Hence according to [25] the data obtained from the analysis of the nine items initial form does not supports the single-factor structure. The model fitness indicator indexes of the nine item based on the initial CFA included GFI=.864, AGFI=.774, CFI=.824, NFI=.799, RMSEA=.152, and RMR=.067. Based on the analysis of the modification indices the errors in the 1st and 9th item and in 2nd and 3rd item were found to be correlated. It was also estimated that after the concerning modification was made on the above mentioned items, Ch-square value was reduced to 100.656 parameter value for correlation would be .21. The repeated CFA on nine items after modification in indices designated items revealed that *p* is significant at (.000), CMIN/DF (4.02/25), which is less than 5 [26], hence data obtained from the analysis of the nine item initial form supports the single-factor structure. The model fitness indicator indexes of the nine item based on the repeated CFA included GFI=.913, AGFI=.843, CFI=.902, NFI=.876, which include five sub-sectors of each, hence validity issue cannot be fully address. The findings from this study indicated that the nine item OC construct is a reliable in

terms of psychometric features. Similar studies on the validity and reliability of the scale may be conducted on large scale firms, focusing on specific industry.

RMSEA=.118, and RMR=.050. The repeated CFA results indicated that nine item model achieved minimum statistical standards. However, goodness of fit is not perfectly computed since factor loadings of item 1, 2 and 3 was less than .60 [27].

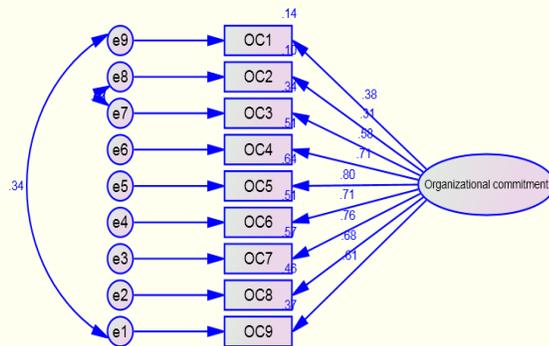
Henceforth to achieve the maximum level of goodness of fit, those three items were deleted from the model, and CFA was computed again, using six items of organizational commitment. Eradication of first three items impact on overall model significantly, no modification indices was reported and results revealed that *p* is significant at (.000), CMIN/DF (4.05/9), Ch-square value was reduced to 36.470.

The model fitness indicator indexes of the six item based on the repeated CFA included GFI=.951, AGFI=.887, CFI=.948, NFI=.933, RMSEA=.118, and RMR=.034. Moreover, all six items factor loadings are also well above the 0.6, hence no further modification in any mean is required (see figure 3). Hence the content analysis of the six items showed that OC is a fit model in theoretical and statistical terms once tested in Pakistan’s SME sector.

5. CONCLUSION & DISCUSSION

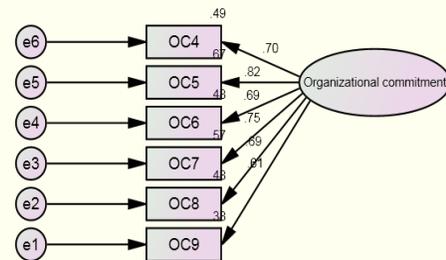
The PCA with subsequent rotation using varimax was conducted on nine items of organizational commitment completed by the owner/managers of small and medium enterprises. KMO and Bartlett’s tests produced criteria supported the application of PCA. Communalities varied from .737 to .467. Applying Kaiser’s rule and the scree test, two factors were deemed important. Following the rotation, factor 1 was loaded on six items that reflected general coping ability and accounted for 37.9% of the variance exemplified by the two highest loading items 4, 5 and 7. Factor 2 was loaded on three items (item no 1, 2 & 3) and accounted for 22.35% of the variance. Beside this, all the factors are loaded above .40, which is considered as significant factor loadings based on the sample size. Since Hair [27] recommended that if the sample size is above 200 than factor loading is significant at (.40). The complete guideline is presented in table 7.

The CFA results showed that nine items organizational commitment construct is not perfectly valid in Pakistan’s SME sector, however, OC goodness of fit is significant using six items construct, where CFI is (.948) which is close to .950 and hence acceptable, moreover, RMSEA is also .118, and close to .10 hence also acceptable. However, validity issues with this construct are still open due to demographic and sectoral changes. Moreover, since data was collected from manufacturing and services sector SMEs,



Goodness of fit indices
 Ch-square=100.656
 Df=25
 P=.000
 CFI=.902
 RMSEA=.118

Figure 2: Goodness of fit indices (9-items)



Goodness of fit indices
 Ch-square=36.470
 Df=9
 P=.000
 CFI=.948
 RMSEA=.118

Fig. 3: Goodness of fit indices (6-items)

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