Full paper

Relationship Between Organizational Antecedent And Knowledge Sharing Practices Among Academician At Malaysia Research Universities.

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Abstract

The purpose of this study is to determine relationship between organizational antecedent and knowledge sharing practices among academician at Malaysia Research Universities. The hypothesis for this research are organizational antecedent has relationship with knowledge sharing practices. The variables in this study are organizational antecedent which consist of people, organization and technology, well for knowledge sharing practices consist of socialization, externalization, combination and internalization. Applying the theory of multiple perseptive for organizational antecedent and SECI for knowledge sharing practices. The data analysis measured this research were using software of statistical package for social science (SPSS) version 22 and measuring for structural equation modelling (SEM) software of analysis of moment structures (AMOS) version 22. The findings of this study largely support the hypothesized relationship proposed in the theoretical model. Specifically, the results the relationship of organizational antecedents and knowledge sharing practice. This research make several theoretical contributions and provides further insight on knowledge sharing practice among academician in research universities. Methodological and practical implications were discussed. This research helped to produce a segment in a more inclusive global picture of independent variable that organizational antecedents and dependent variable that knowledge sharing practice.

Keywords : Knowledge sharing practice, organizational antecedents, SECI

■1.0 INTRODUCTION

An organization that remains competitive and innovative is viewed in knowledge sharing (KS) as an important platform. From the knowledge sharing (KS) researcher believed that the participant who practices sharing of knowledge would increase goodwill in human resource development. In other words, the unwillingness to share knowledge becomes an issue as well as to manage it. This research is to explore on developing a framework for human resource development (HRD) that is organizational antecedent (OA) towards knowledge sharing practice (KSP) among academician within the content of Research Universities (RU) from Malaysia higher education institution (MHEI).

Knowledge-sharing is an important activity for an organization whether it lies in the public, private or in the civil society to enhance learning, to improve efficiencies and to build better organizations (Information Policy, 2005). Sharing of knowledge has been a long practice in many disciplines, ranging from social sciences, to research development, to governments informing the public on a range of subject matters. (Information Policy, 2005). In relation to this, the researcher does not deny that the research on knowledge-sharing practice (KSP) would be meaningful to academicians in higher education institutions, in order for them to be able to explore any problems pertinent to the issue such as the extent to which sharing of knowledge is adopted among the academicians themselves. This research paper will also look at the knowledge-sharing practice in depth, and its significance to academician in institutions of higher learning. Mentioned by Ipe, M. (2003), knowledge-sharing is vital, to ensure that knowledge grows and Nonaka and Takeuchi (1995) have added to this that knowledge increases when it is shared.

■2.0 RESEARCH OBJECTIVE

Here the main objective of this study is to fill the gap by providing empirical evidence on the organizational antecedent and knowledge sharing practices in the context of research universities. In this regard, investigation is carried out on the organizational antecedent and knowledge sharing practice of the respondents and whether there are significant in organizational antecedents that are human, organization and technology. The relationship between knowledge sharing practices are investigate.The specific research objective of this study is to determine any relationship between organizational antecedent and knowledge sharing practice.

■3.0 KNOWLEDGE SHARING PRACTICES

This is related to how knowledge sharing practices is going to be institutionalized and become a culture in an organization (Shafiq and Qureshi, 2014). This research examines how knowledge is being shared within an organization such as, between individuals, colleagues,

departments, as well as between head of departments to academics staff and with other institutions. To make knowledge sharing practices as a culture, knowledge must be effectively shared and an organization must facilitate the process.

3.1 Socialization

This dimension explains Social interaction as tacit to tacit knowledge transfer,sharing tacit knowledge through face-to-face or share knowledge through experiences. For example, meetings and brainstorm can support this kind of interaction. Since tacit knowledge is difficult to formalize and often time and space specific, tacit knowledge can be acquired only through shared experience, such as spending time together or living in the same environment. Socialization typically occurs in a traditional apprenticeship, where apprentices learn the tacit knowledge needed in their craft through hands-on experience, rather than from written manuals or textbooks. (Nonaka & Takeuchi 1995)

3.2 Externalization

Between tacit and explicit knowledge by Externalization (publishing, articulating knowledge), developing factors, which embed the combined tacit knowledge which enable its communication. For example, concepts, images, and written documents can support this kind of interaction. When tacit knowledge is made explicit, knowledge is crystallized, thus allowing it to be shared by others, and it becomes the basis of new knowledge. Concept creation in new product development is an example of this conversion process. (Nonaka & Takeuchi 1995)

3.3 Combination

Explicit to explicit by Combination (organizing, integrating knowledge), combining different types of explicit knowledge, for example building prototypes. The creative use of computerized communication networks and large-scale databases can support this mode of knowledge conversion. Explicit knowledge is collected from inside or outside the organisation and then combined, edited or processed to form new knowledge. The new explicit knowledge is then disseminated among the members of the organization. (Nonaka & Takeuchi 1995)

3.4 Internalization

Explicit to tacit by Internalization (knowledge receiving and application by an individual), enclosed by learning by doing; on the other hand, explicit knowledge becomes part of an individual's knowledge and will be assets for an organization. Internalization is also a process of continuous individual and collective reflection and the ability to see connections and recognize patterns and the capacity to make sense between fields, ideas, and concepts. (Nonaka & Takeuchi 1995)

■4.0 CONCEPTUAL FRAMEWORK

In Figure 1.1 show the concenptual framework of this study. Independent variables from organizational antecedent are human, organization and technology while for dependent variables of knowledge sharing practices are socialization, externalization, combination and internalization.
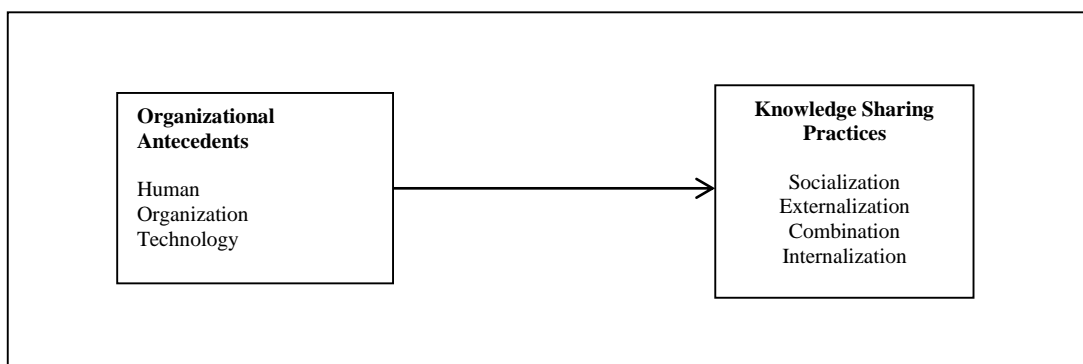

Figure 1.1 Conceptual framework of organizational antecedent and knowledge sharing practices

■5.0 METHODOLOGY

5.1 Research Design

This section discuss the research approach used, strategy of inquiry and research method. In the past, reseach approaches have multiplied to a point at which investigation or inquires have many choices. For those designing a proposal or plan, researcher suggested that a general framework be adopted to provide guidance about all facets of the study, from assessing the general philosophical. This research methodology

is a quantitative approach. A survey research design which adapted from the past research were applied. An online survey questionnaire were use to collect data from the academician at MRU.

Structural Equation Modeling (SEM) analysis was used in order to identify that organizational antecedent that influence the knowledge sharing practice among academician at Malaysia Research Universities (MRU). The analysis that used to identify were using Analysis of Moment Structures (AMOS) version 22. The data analysis consists of two phases that are phase one preliminary analysis and phrase two consist of two stages that are stage one and stage two of structural equation modelling. The first phase deals with data screening procedures in order to ensure that data have been correctly enter and meet the normality assumption. The second phase is the application of a two stages structural equation modelling process (Anderson and Gerbing 1988).

The two stages approach to SEM analysis is popular in existing research (Anderson and Gerbing 1988; Gerbing and Hamilton 1996; Kaplan 2000). The first stage is to assess the measurement properties of SEM, which involve assessment of uni-dimensionality of each latent variables, model re-specification or modification and test of reliability and validity of measurement properties. The second stage involves specification of the paths relationship between the underlying theoretical latent constructs. Once a good fitting structural model is identify, the structural model is then use for hypotheses testing.

5.2 Research Instrument and Participants

5.2.1 Instrument

The instrument is chose and modify for this study. All items were measured on seven-points Likert-type scale where 1 is strongly disagree and 7 strongly agree. There are participants' demographic variables, the organizational antecedents (OA) as independent variables and knowledge sharing practices (KSP) as dependent variables.

A survey instrument shall be distribute to participant. The participants shall receive their survey online that are by person from the researcher along with a brief oral explanation about the study and the direction on how to complete the survey, by electronic-mail and by stamped mail. The others participant shall receive their survey via email with instructions similar to those participant in person. All survey instruments were online.

5.2.2 Participants

As of the year 2013, Malaysia had twenty universities in the public domain (source from : http://www.moe.gov.my/v/ipta) which was categoriesed in to three groups. The first categorise research universities that consists of five universities, focus universities that consists of 4 universities and comphrensive universities consists of eleven universities. As this study are for research universities there are 5 universities, Table 1.1 shows the numbers of academicians in research universities.

Table 1.1 Total academic staff at research universities
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No.	Research Universities	Overall Total
1.	A	2,756
2.	B	1,907
3.	C	2,175
4.	D	1,934
5.	E	2,074
		10,845

Source : http://www.moe.gov.my/v/ipta

■6.0 RESULTS AND DISCUSSION

6.1 Profile of Respondents

Table 1.2 presents a profile of respondents. All information is presented in actual figures and percentages to facilitate interpretation. The sample consists of a total of 369 respondents from the five research universities. The majority of the respondents are Malay (82.9%), followed by Chinese (7.3%), Indian (3%) and, Others (6.8%). The respondents are male (51.5%) and the remaining (48.5%) are female. Almost all of the respondents (95.7%) are Malaysian citizen and (4.3%) are non-citizen. As for age, the majority of the respondents are below 40 years old (49.9%) and between age 41 till 50 years old (28.7%). The respondents mostly have Doctorate qualification (65.9%) and follow with master qualification (32.8%) . Finally, 44.2 percent of the respondents have work experience of 10 years and above 10 years till 20 years (34.4%), well above 20 years (18.2%).

Table 1.2 Profile of respondents

Demographic profile	Number of respondents (N = 369)	Valid percentage (%)
Gender :		
Male	190	51.5
Female	179	48.5
Race :		
Malay	306	82.9
Chinese	27	7.3
Indian	11	3.0
Others	25	6.8
Research Universities :		
A/1	73	19.8
B/2	74	20.1
C/3	75	20.3
D/4	74	20.1
E/5	73	19.8
Citizen :		
Malaysian	353	95.7
Non-Citizen	16	4.3
Age :		
21-30yrs	24	6.5
31-40yrs	160	43.4
41-50yrs	106	28.7
51-55yrs	54	14.6
Above 56yrs	25	6.8
Marital Status :		
Single	54	14.6
Married	308	83.5
Divorce	7	1.90
Qualification :		
Doctorate	243	65.9
Master	121	32.8
Degree	2	.5
Professional	3	.8
Working Experience :		
Below 1 yr	12	3.3
1-10yrs	163	44.2
11-20yrs	127	34.4
21-30yrs	49	13.3
Above 30 yrs	18	4.9

Note: Table in parentheses indicate percentage of N

% = percentage

6.2 Validity

Validity is define as 'the ability of a scale to measure what intended to be measure' (Zikmund 2003, p.331). Three types of validity namely, content, construct (convergent and discriminant validity) and criterion validity are measured in this research. Content validity is the assessment of the extent content of a scale measures a construct (Malhotra, Agarwal, and Peterson 1996). In order to obtain content validity, careful attention was given in the process of developing the questionnaires. For instance, only validated measurements derived from literature are used in this study. Further, the questionnaires went through a back translation process. During this process, comments from experts (practitioners in the industry) on the wording of the items in the questionnaires were analyzed. Any ambiguous words or sentences were corrected. Detail of the process involved has been explained in Chapter 3. However, realizing the subjective nature of content validity (Zikmund 2003) other validity assessment (construct and criterion) are also apply to validate the constructs in this research. Construct validity is concerned with what the instrument is actually measuring (Churchill 1995). In other words, construct validity is the extent to which a set of measured items actually reflects the latent construct those items are designed to measure (Hair et al. 1998). Construct validity is examined by analyzing both convergent and discriminant validity. According to Sekaran (2003), convergent validity examines whether the measures of the same construct are highly correlated, whereas discriminant validity determines the measures of a construct have not been correlated too highly with other constructs.

In this research, convergent and discriminant validity were analyzed by conducting confirmatory factor analysis (CFA). To establish convergent validity, at a minimum, all factor loadings should be statistically significant and standardized loading estimate should be 0.50 or higher (Hair et al. 1998). In addition, average variance extracted (AVE) is use as an indicator for supporting for having convergent validity (Fornell and Larcker 1981). On the other hand, discriminant validity is established when the estimated correlations between the factors do not exceed 0.85 (Kline 2005). Finally, construct validity is enhanced by assuring that the model goodness-of-fit results obtained from CFA fit to the data adequately. Refer to table 1.3: Summary of Validity Table.

Criterion validity refers to the ability of measures to correlate with other standard measures of the same construct (Zikmund 2003). Criterion validity is synonymous with convergent validity. As such, assessment of convergent validity indirectly indicates that criterion validity is satisfied (Zikmund 1994). In this research, therefore, criterion validity was assumed to be accounted for now convergent validity is satisfied.

Table 1.3 Summary of validity table

1. Convergent Validity:	AVE > 0.50
2. Construct Validity:	All fitness indexes for the models meet the required level
3. Discriminant Validity:	The redundant items are either deleted or constrained as "free parameter", also the correlation between exogenous construct X1 and X2 is lower than 0.85

Source : Hair, 2013

6.3 Reliability

Reliability is defined as 'the degree to which measures are free from random error and therefore yield consistent results' (Zikmund 2003,p.330). The objective of reliability is to minimize the errors and biases in research (Yin 1994). This research employs three methods to assess reliability of the constructs: i) Cronbach's alpha; ii) construct reliability (CR) and iii) average variance extracted (AVE).
Cronbach's alpha is the most common method used to assess reliability (Nunnally 1978; Sekaran 2003). In fact, it has been considered as the first method one should use to assess reliability of a measurement scale (Churchill 1979; Nunnally 1978). Different levels of acceptance have been suggested in the literature. For instance, Nunnally (1978) suggests that alpha should exceed 0.70 to indicate internal consistency. On the other hand, Carmines and Zeller (1979) suggest a level of acceptance of 0.80 for internal consistency. As for new scales, level of 0.60 is consider acceptable (Nunnally and Bernstein 1994). Despite the various views on the level of acceptance, it is generally agreed that an alpha of 0.70 and over is acceptable to indicate internal consistency. Therefore, this research uses 0.60 as the minimum level to indicate the internal consistency of the constructs. Refer to Table 1.4: Summary of Reliability Table.
The internal consistency in this research was also assessed using confirmatory factor analysis (CFA). This is important to ensure that all measures used in this study are reliable and at the same time provides greater confidence to the researcher that the individual items are consistent in their measurements (Hair et al. 1998). The two methods used are construct reliability (CR) and average variance extracted (AVE) as suggested by Fornell and Larcker (1981). Construct reliability (CR) equal to or greater than 0.60 and average variance extracted (AVE) equal to or greater than 0.50 is considered acceptable (Bagozzi and Yi 1988).

Table 1.4 Summary of reliability table

1. Internal Reliability:	Cronbach Alpha > 0.70
2. Composite Reliability:	CR > 0.60
3. Average Variance Extracted:	AVE > 0.50

Source : Hair, 2013

6.4 Goodness-of-Fit Assessment

There are various goodness-of-fit indices to determine the fit of the model. Based on published research, usually there are between four to six fit indices that were used to assess how well models fit the data structure (Medsker, Williams, and Holahan 1994). Wheaton (1987) stresses the importance of using multiple fit indices to assess model fit. Accordingly, Hair (1998) recommended the use of at least three fit indices: 1) absolute fit indices, 2) incremental fit indices and 3) parsimonious fit indices.
An absolute fit index includes chi-square ($\chi 2$), goodness-of–fit (GFI) and root mean square error (RMSEA). Absolute fit indices measures how well the model accounts for observed covariance in the data (Hu and Bentler 1995). The incremental fit indices include comparative fit index (CFI) and normed fit index (NFI). Incremental fit indices compare how well the proposed model fits the data in relation to a baseline model that assumes independence among all of the variables (Bentler 1990). Lastly, parsimonious fit indices can be measure by normed chi-square ($\chi 2/df$). The following table (Table 1.7) summarizes goodness of fit indices utilized in this study.

6.5 Measurement Model for Organizational Antecedent

The following Table 1.5 is the measurement model evaluation for organizational antecedent.

Table 1.5 Measurement model evaluation

Construct	Items	Standardised Loading	Cronbach's Alpha	Construct Reliability (CR)	Average Variance Extracted (AVE)
OA	BOA3H	0.650	0.793	0.805	0.581
	BOA4H	0.852			
	BOA5H	0.772			
	BOA1O	0.779	0.873	0.860	0.501
	BOA2O	0.796			
	BOA3O	0.694			
	BOA4O	0.763			
	BOA5O	0.648			
	BOA6O	0.554			
	BOA7O	0.524			
	BOA1T	0.589	0.767	0.784	0.492
	BOA2T	0.716			
	BOA3T	0.635			
	BOA4T	0.603			
	BOA5T	0.694			

6.6 Initial Model for Organizational Antecedent

The three selected organizational antecedent constructs in this study are human, organization and technology. Each of these constructs was measured for human has 5 items, organization has 7 items and technology has 5 items. The measurement models provides the fit for three factors with seventeen items. The chi-square is significant (x – 656.729, df = 113, p=.000). Further, the GFI is .823, AGFI is .766, NFI = .782, CFI = .812, TLI = .779 and RMSEA = .113.
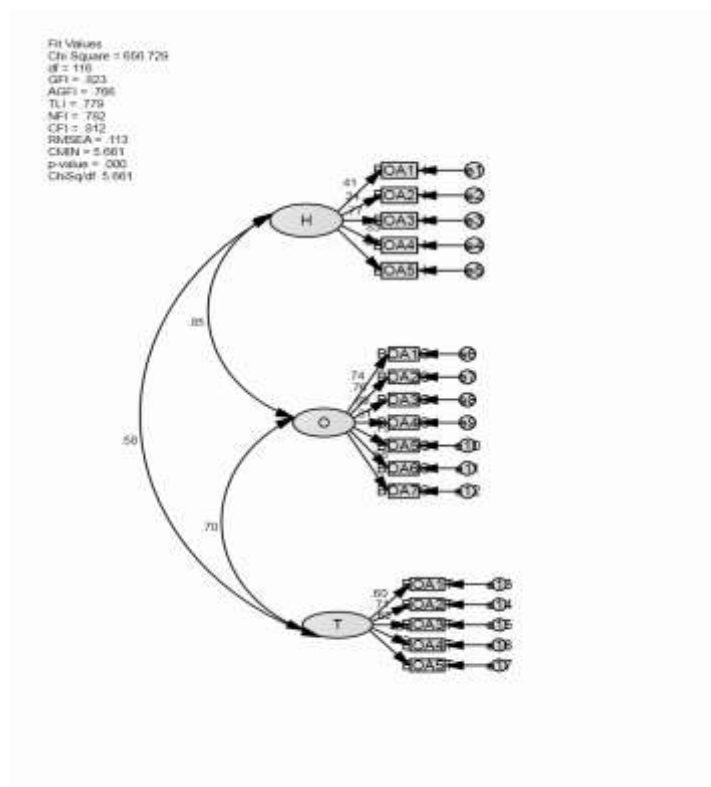

Figure 1.2 Initial model for organizational antecedent

6.7 Modified Model for Organizational Antecedent

Examination of standardized residual covariance indicates that items are BOA1H, BOA2H, BOA3O, BOA5O, BOA7O and BOA1T have low values. The decision was to remove these items iteratively. The final modified CFA model of organizational antecedents consists of three items for trait of human, four items for trait of organization and four items for trait of technology. The final CFA model shows a better fit to the data.

The three selected organizational antecedent constructs in this study are human, organization and technology. Each of these constructs was measured for human has 3 items, organization has 4 items and technology has 4 items. The measurement models provides the fit for three factors with eleven items. The chi-square is significant (x – 156.412, df = 41, p=.000). Further, the GFI is .925, AGFI is .880, NFI = .896, CFI = .911, TLI = .909 and RMSEA = .087.
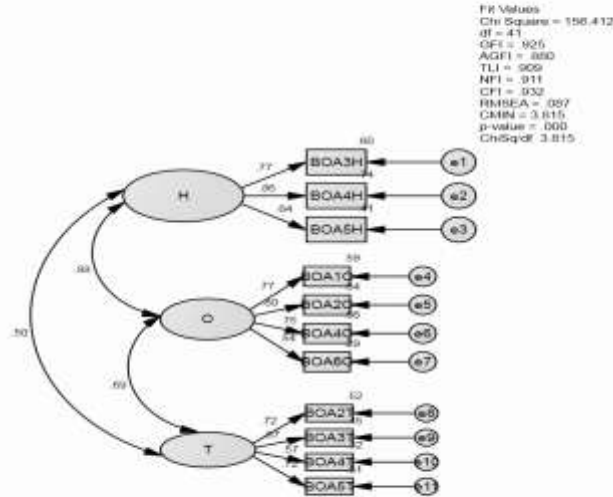

Figure 1.3 Modified model for organizational antecedent

6.8 Measurement Model for Knowledge Sharing Practices

The following Table 1.6 is the measurement model evaluation for knowledge sharing practices. For each constructs with their items showed in the table standardized loading, Cronbach's Alpha, construct reliability (CR) and average varian extracted (AVE).

Table 1.6 Measurement model evaluation – knowledge sharing practices

Construct	Items	Standardised Loading	Cronbach's Alpha	Construct Reliability (CR)	Average Variance Extracted (AVE)
KSP	EKSP1S	0.626	0.856	0.856	0.499
	EKSP2S	0.735			
	EKPS3S	0.685			
	EKSP4S	0.708			
	EKSP5S	0.767			
	EKSP6S	0.708			
	EKSP1E	0.795	0.893	0.868	0.622
	EKSP2E	0.771			
	EKSP3E	0.865			
	EKSP4E	0.716			
	EKSP1C	0.785	0.868	0.869	0.624
	EKSP2C	0.862			
	EKSP3C	0.725			
	EKSP4C	0.783			
	EKSP1I	0.784	0.854	0.854	0.595
	EKSP2I	0.814			
	EKSP3I	0.797			
	EKSP4I	0.718			

6.9 Initial Model for Knowledge Sharing Practices

The four constructs and each constructs consist of socialization of 6 items, externalization 4 items, combination 4 items and internalization 4 items . Each of these constructs was measured for. The measurement models provides the fit for four factors with eighteen items. The chi-

square is significant (x −529.320, df =146, p=.000). Further, the GFI is .874, AGFI is.836, NFI = .893, CFI = .920, TLI = .906 and RMSEA = .084. There are no items deleted.
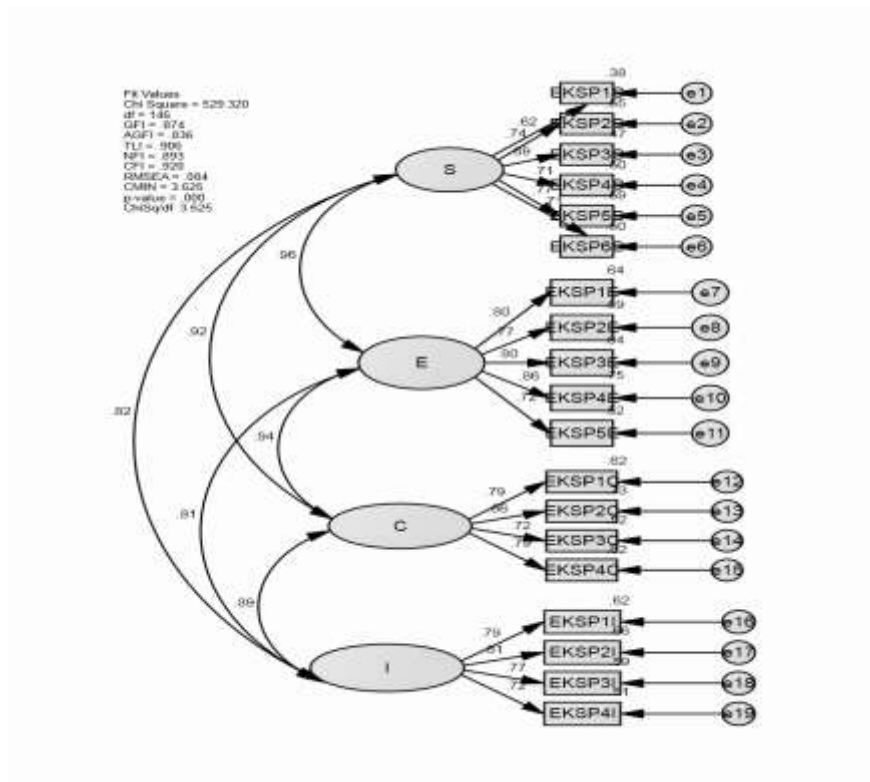

Figure 1.4 Initial model for knowledge sharing practices

The Table 1.7 show the summary of goodness-of-fit indice of measurement model for organizational antecedent and knowledge sharing practices.

Table 1.7 Summary of goodness-of-fit indices of measurement model (CFA)

Measurement Models (CFA)	x^2	df	p	GFI	AGFI	NFI	CFI	TLI	RMSEA
Organizational Antecedents	656.729	116	.000	.823	.766	.782	.812	.779	.113
Knowledge Sharing Practices	529.320	199	.000	.874	.836	.893	.920	.906	.084

6.10 Structural Model for Knowledge Sharing Practices

The analysis of the structural model is conducted and displayed in Figure 1.5. The chi-square is significant (x −74.402, df =13, p=.000). Further, the GFI is .945, AGFI is.882, NFI = .960, CFI = .967, TLI = .946 and RMSEA = .113.
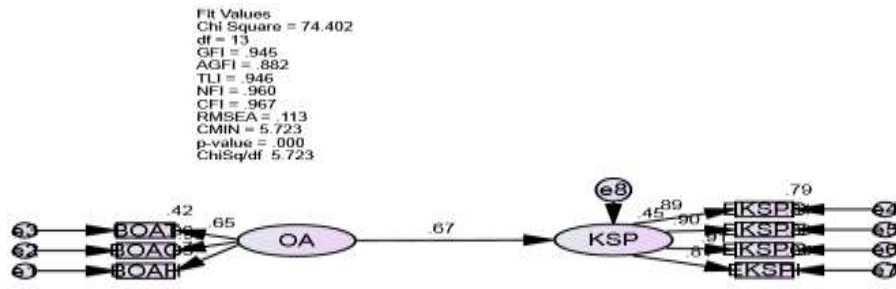
Figure 1.5 Structural model for knowledge sharing practices

6.11 Testing Hypotheses of Organizational Antecedent and Knowledge Sharing Practices

The Table 1.8 show the testing hypotheses of organizational antecedent and knowledge sharing practices using standardised estimates which of value 0.0403, z-value = 11.995 and p=0.000, therefore organizational antecedent is positively associated with knowledge sharing practices. Hence, the test fail to reject hypotheses null.

Table 1.8 Testing hypotheses using standardised estimates (OA and KSP)

Hypothesized Path	Standardised Estimate	z-value	P	Support
H1: OA → KSP	0.0403	11.995	0.000	Yes

Note: **p<0.01, ***p<0.001; N=369; OA=Organizational Antecedent, KSP=Knowledge Sharing Practice

■7.0 CONCLUSION

In this study, as result of organizational antecedent has positively associated with knowledge sharing practices. Therefore, it's suggest that it is important for organizational antecedent and knowledge sharing practices. Roziana, (2009) in her finding suggested that, knowledge sharing is not a natural act, it is all about people-related issues and must be facilitated through people management practices which is the human resource development. Human resource development practices must be tailored into managing environment that can encourage knowledge sharing culture. Knowledge sharing practice is likely to happen informally, therefore the supportive organizational antecedent for knowledge sharing practice is essential.

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