

# THE MOST IMPORTANT AFFECTING ISSUES ON TACIT KNOWLEDGE SHARING IN THE IMPLEMENTING KNOWLEDGE MANAGEMENT FOR SMALL MEDIUM-SIZED ENTERPRISES (SMES) IN INDUSTRY CREATIVE

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## ABSTRACT

*Currently, one popular way for SMEs to be highly competitive is the implementing of Knowledge Management (KM). Sharing culture or knowledge sharing is one of the factors that influence success in the implementation of Knowledge Management in SMEs. This study attempted to analyze which of the predictor variables are Self Efficacy (SE), Norm Subjectif (NS), perceived Behavior Control (BC) and Attitude toward Behaviour (AB), most significant effect factors that can influence an attitude of SMEs (SMEs) in sharing knowledge. The research method used an explanatory research. Collected data were conducted through Surveys. A Structural Equation Model (SEM) was used to analysis the data. The purpose of this research indicate that revealed several significant relationships between the variables of Self Efficacy (SE) has a positive influence on Social Networks (SN), and Intention to Share knowledge (IS), as well as Intention to Share knowledge (IS) has a positive effect on actual knowledge share (AS) on implementing knowledge management for SMEs.*

**Keywords:** SMEs, Knowledge Management, Tacit Knowledge, SEM.

## BACKGROUND

The creative industry is an integral part of the creative economy with renewable resources because it focuses on creating innovation and creativity that is a competitive advantage of a nation and provides a positive social impact. Now dayst, one of the popular ways that SMEs can be highly competitive is the implementation of Knowledge Management (KM). The purpose of Knowledge Management (Dalkir and Kimiz, 2011) attempted to transfer knowledge in the form of tacit to explicit, then from explicit back to tacit knowledge and so on to form the Nonaka's spiral (Nonaka and Takeuchi, 1995). Knowledge consists of tacit and explicit (Nonaka, 1994). Tacit knowledge roots in action and experience, as well as the ideals, values, and include individual emotions (Barbara, 2010). In a principle, the concept of knowledge management can be used to improve the performance of creative industries *via* technology. Knowledge Management refers to the organizational disciplines, processes, and information technologies used to acquire, create, reveal and deliver knowledge that allows an enterprise to accomplish its mission (achieve its strategic or business objectives). However, due to the different characteristics of SMEs with corporations, the implementation of Knowledge Management is not

entirely same. The most important factors affecting of Knowledge Management could be implemented in SMEs are human and cultural factors. The people as main actors of SMEs should be able to receive, realize, understand and implementing Knowledge Management systematically. Whereas, the culture of affecting implementation knowledge management is a sharing knowledge. Implementation of knowledge management do not work properly if it does not supported by both. The assumption required for large costs and limited quality of human power make the mastery of knowledge becomes less.

Sharing is the foundation for the learning process without leaning there will be no innovation and without innovation the organization will not grow and or even survive. Knowledge sharing is an important part of knowledge management. Knowledge management, in order to be able to run properly, it needs effective knowledge sharing (Tiwana, 2002). Knowledge sharing can be done by using socialization (Nonaka, 1994). Socialization is the process of sharing experiences that can create tacit knowledge (Bartol and Srivastava, 1994). This study uses the framework of Reasoned Action Theory/Theory of Reasoned Action (TRA) to test a person's attitude to the behavior of knowledge sharing that will ultimately affect a person's intention to share knowledge. Reasoned Action Theory/Theory of Reasoned Action explains how a person's behavior is influenced by one's intention to dosomething (Ajzen and Fishbein, 1980).

According to the above exposure, the authors are interest to analysis of affecting factors affecting issues on Tacit Knowledge Sharing in the Implementing Knowledge Management for Small Medium-Sized Enterprises (SMEs) in Industry Creative.

## RESEARCH METHOD

Research methodology that the author uses in this paper is explanatory research which aims to investigation how a variable affects other variables. The population of this study are small business owner with a total of 204 samples. Sampling random technique with a purposive sampling were used a selection sample method. Each indicator item is measured using a differential semantic scale. The data collection for this study was obtained through surveys by questionnaires. Statistical analysis inferential using structural equation model (Barbara and Byrne, 2010) was used for data analysis. The location of research was located in the city of Jakarta and West Java in Indonesia.

### Research hypotheses

According to the previously stated objectives this study tested the following hypotheses:

- H1: Self Efficacy (SE) has a positive effect on Social Network (SN).*
- H2: Social Network (SN) has a positive effect on Actual knowledge sharing (AS).*
- H3: Self Efficacy (SE) has a positive effect on Perceived Behavior Control (BC).*
- H4: Perceived Behavior Control (BC) has a positive effect on Actual knowledge sharing (AS).*
- H5: Self Efficacy has a positive effect on Intention to share knowledge (IS).*
- H6: Intention to share knowledge (IS) has a positive effect on Actual knowledge sharing (AS).*

## RELATED WORK

This section aims to discuss some of the research on the analysis of the tacit sharing knowledge: Ryu et al. (2003) examined the factors that determine the knowledge sharing behavior of doctors. The model was empirically examined and compared; surveys were used collected data from 286 doctors in 28 departments at 13 hospitals in Korea. The main goal of this study is to explain the subjective norm's has an influence on the intention to share knowledge. Subjective norms are found to have the strongest total effect on the intention to share knowledge from doctors through direct or indirect pathways.

Chen et al. (2009) demonstrated factors that influence knowledge sharing from the perspective of human behavior. This study empirically empirically correlates the hypothesis by using field surveys of undergraduate and postgraduate MBA students who register for courses conducted in the virtual learning community. The Attitude subjective norm, web-specific self-efficacy and social network ties are good predictors of knowledge sharing intention, which in turn is significantly related to knowledge sharing behavior. The creation of self-efficacy knowledge does not have a significant impact on knowledge sharing intention.

Semeon et al. (2015) investigation a various mechanisms of tacit knowledge elicitation and share in participatory agricultural research proceses and explore how mobile-based applications can improve processes. The result of this study for contribution the development of a mobile application system which enabled communication that can further enhance participatory agricultural innovation through facilitating the articulation, capture, sharing and integration of tacit knowledge from various stakeholders including farmers.

Chena et al. (2011) analyzed the factor extrinsic motivating and intrinsic motivating factors are affected to an explicit knowledge sharing and tacit knowledge sharing respectively. The aims to prediction an attitude toward knowledge sharing will have positive influences on the intention to share knowledge. Attitude toward explicit knowledge sharing and by intrinsic motivation rather than extrinsic motivation.

## RESULTS AND DISCUSSION

### Data Analysis

#### Inferential statistics analysis

Inferential analysis is done using SEM. Structural equation modeling (Siregar, 2017) is a statistical methodology that takes a confirmatory (i.e., hypothesis-testing) approach to the analysis of a structural theory bearing on some phenomenon. Typically, this theory represents “*causal*” processes that generate observations on multiple variables. The term structural equation modeling conveys two important aspects of the procedure: (a) that the causal processes under study are represented by a series of structural (i.e., regression) equations and (b) that these structural relations can be modeled pictorially to enable a clearer conceptualization of the theory under study.

## Univariate and Multivariate Data Normality Test

The data normality test univariate and multivariate are use skewness and kurtosis where both parameters are in each indicator of critical ratio value (c.r). Significant level at 1%, value of c.r between  $(-2.58 \leq c.r \leq 2.58)$ .

<b>Table 1</b> <b>SELF EFFICACY (SE)</b>					
Indicator	Min	Max	Skewness	Kurtosis	c.r
SE1	1	5	- 0.251	-0.404	-1.177
SE2	1	5	-0.321	-0.273	0.795
SE3	1	5	0.251	-0.4031	-1.176

<b>Table 2</b> <b>SOCIAL NETWORK (SN)</b>					
Indicator	Min	Max	Skewness	Kurtosis	c.r
SN1	1	5	0.099	-0.954	0.576
SN2	2	5	0.151	-0.539	-1.573
SN3	1	5	0.178	-0.145	-0.422

<b>Table 3</b> <b>PERCEIVED BEHAVIOR CONTROL (BC)</b>					
Indicator	Min	Max	Skewness	Kurtosis	c.r
BC1	2	5	0.191	-0.307	-0.895
BC2	1	5	0.639	-0.161	-0.468

<b>Table 4</b> <b>INTENTION TO SHARE KNOWLEDGE (IS)</b>					
Indicator	Min	Max	Skewness	Kurtosis	c.r
IS1	1	5	- 0.588	0.681	1.985
IS2	1	5	-0.159	-1.240	-0.927
IS3	1	5	- 0.572	0.477	1.390

<b>Table 5</b> <b>ACTUAL KNOWLEDGE SHARING (AS)</b>					
Indicator	Min	Max	Skewness	Kurtosis	c.r
AS1	1	5	-0.297	-0.029	-0.085
AS2	1	5	0.206	-1.012	1.203

According to Amost output results in the all Tables 1-5 above, Assessment of Normality, the values found in the column c.r are all within a recommended value of between  $-2.58 \leq CR \leq 2.58$  and thus the data is normally distributed to qualify for further data analysis.

## RMSEA (Root Mean Square Error of Approximation)

The index is used to compensate for the chi-squared statistics for large samples. The RMSEA (Rick, 2001) value shows a goodness-of-fit that can be expected when the model is

estimated for the population. The formula is:

$$\text{RMSEA} = \sqrt{\frac{x^2 - df}{(n-1)df}} \quad \chi^2 = \chi^2 \text{ model}; df (\text{degrees of freedom}) = p(p+q)/2 - q \quad (1)$$

### AGFI (Adjusted Goodness of Fit Index)

The recommended rate of acceptance is if AGFI (Rick, 2012) has a value equal to or greater than 0.90. The value of the GFI is adjusted by the degrees of freedom (df). The formula bellow:

$$\text{AGFI} = 1 - \left[ \frac{p(p+1)}{2df} \right] (1 - \text{GFI}) \quad (2)$$

### Goodness-of-Fit Index (GFI)

The GFI (Rick, 2012) is a non-statistical measure that uses the range of values between 0 (poor fit) to 1.0 (perfect fit). A higher score in the index indicates a "better fit".

### Comparative Fit Index (CFI)

The magnitude of this index is in the range of 0-1. A value that is closer to 1 indicates the highest fit and hence, a very good fit. The recommended value is CFI (Rick, 2012)  $\geq 0.95$

### Tucker-Lewis Index (TLI)

The increase of the fit index alternative compares a model and tests it against a baseline model. The recommended value, as a reference for the acceptance of a model, is the acceptance level of  $\geq 0.95$ . A value that is very close to 1 indicates a very good fit.

### Model Conformity Test (MCT)

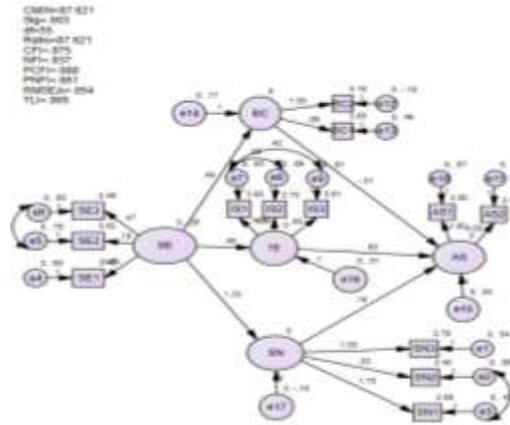
A model evaluation assesses the feasibility of the model obtained against the data. Some measures assess the model feasibility. The formula bellow:

Chi-Squared Test ( $\chi^2$ )

$$x^2 = (n-1)tr(S\Sigma^{-1}) - (p+q) + \ln |\hat{\Sigma}| - \ln |S| k \quad (3)$$

### Model Equation Structural (SEM)

The test results on the model presented in Figure 1 give the following results.



**FIGURE 1**  
**THE STRUCTURAL EQUATION MODEL AFFECTING ISSUES ON TACIT KNOWLEDGE SHARING FOR INPLEMENTING KNOWLEDGE MANAGEMENT FOR SMEs**

According to the proposed hypotheses were tested with Amos software which has a results of the analysis model conformity test are summarized in Figure 1 show, the model has a CMIN/df=1.593, which means that the model is fit because the CMIN/df fit value<2.0. The value of RMSEA is 0.054. Hence, the model is fit because of the RMSEA (Rick, 2012) fit value<0.08. The value of PNFI (Rick, 2012), obtained by 0.661, indicates a fit model. The recommended value is  $\geq 0.60$ , the value of CFI, obtained by 0.975, indicates a fit model. The recommended value is  $\geq 0.90$  as posited the overall SEM model is fit (there is a suitability between the model and the data).

**Model Conformity Test**

Test of Conformity Model In accordance with the objectives of the research will be tested using a model of structural equations was tested with AMOS (Barbara, 2010) Software 18.0, based on the existing theoretical framework. The measurement model test, between the indicators with the construct, will obtain the relationship results. The results of analysis model conformity test are summarized in Table 6 give the following results.

<b>Table 6</b>			
<b>OVERALL FIT INDICES OF THE CFA MODEL</b>			
<b>Conformity Fit Value</b>	<b>Recommended Value</b>	<b>Result</b>	<b>Model</b>
<b>Absolute fit index</b>			
CMIN/x <sup>2</sup>	Near to degree of free	87. 621	Acceptable
	≤ 2, <3 or 5		Acceptable
D.F		55	
CMIN/DF	≤ 2.0	1.593	Acceptable

P-Value (sig)	>0.05	0.003	Marginal
RMSEA	< 0.08	0.049	Acceptable
<b>Incremental Fit Measure</b>			
NFI	>0.90	0.937	Acceptable
CFI	>0.95	0.975	Acceptable
TLI	>0.95	0.965	Acceptable
<b>Parsimonious Fit Measures</b>			
PNFI	>0.60	0.661	Acceptable
PCFI	>0.60	0.688	Acceptable

## Hypothesis Test

The Formula of Variabel laten Exogen  $H_0: \gamma_n=0$ ; No Influence (Accept  $H_0$ )  
 $H_1: \gamma_n \neq 0$ ; Influence (Reject  $H_0$ ).

The Formula of Variabel laten Endogen  $H_0: \beta_n=0$ ; No Influence (Accept  $H_0$ )  
 $H_1: \beta_n \neq 0$ ; Influence (Reject  $H_0$ ).

Hypothesis	P(Sig)	Result
$H1 : (SE-SN)$	0.004	Reject $H_0$
$H2 : (SN-AS)$	0.002	Reject $H_0$
$H3 : (SE-BC)$	0.000	Reject $H_0$
$H4: (BC-AS)$	0.646	Accept $H_0$
$H5 : (SE-IS)$	0.000	Reject $H_0$
$H6: (IS-SE)$	0.000	Reject $H_0$

The results of the hypotheses tests are presented in Table 7 have a Hypothesis value <0.05 that can be clarified that for hypothesis ( $H1$ ) Self Efficacy (SE) has an influence on the Social Network (SN), for hypothesis ( $H2$ ) Social Network (SN) has an influence on the actual knowledge sharing (AS). For Hypothesis ( $H3$ ) self efficacy (SE) has influence to Perceived Behavior Control (BC). For Hypothesis ( $H4$ ), Perceived Behavior Control (BC) does not influence to actual knowledge sharing (AS). ( $H5$ ) Self Efficacy has a positive effect to intention to share knowledge (IS). ( $H6$ ) Intention to share knowledge (IS) has a positive effect to actual knowledge sharing (AS).

## Limitation and Areas of Future Research

The respondents are from Small business owner who were selected as SMEs had not spread to all regions of the Indonesian province it's still limited in urban areas.

For future further research, needed an examining how the influence of factors that inhibit the process of transferring tacit knowledge sharing to SMEs with a greater amount of data providing more accurate results.

## Implication

Through sharing tacit knowledge will be increasing an assets knowledge in SMEs that will provide convenience to every community to use it, thus the process of knowledge utilization in the SMEs will increase, the finally a creativity and innovation process will be encouraged and each small business owners can improve their competence and easily adapt to changes in the business environment that recently.

## CONCLUSION

In this research, the author concluded the following:

Based on hypothesis testing, this investigation revealed several significant relationships between the variables Of Self Efficacy (SE) has a positive influence on Social Networks (SN) and Intention to Share knowledge (IS), as well as Intention to Share knowledge (IS) has a positive effect on Actual knowledge Share (AS). The person who has a higher confidence in owned capability, then it would be more higher opportunity to share knowledge and when one has a very broad social network will have chance to gain a new knowledge more over raise intention to share knowledge hence prompting a behavior actual knowledge sharing.

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## REFERENCE

- Ajzen. I. (1991). Theory of planned behavior organisational behaviour and human decision. *Processes*, 50, 170-211.
- Ajzen, I. & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall.
- Barbara, M. & Byrne. (2010). *Structural equation modeling with AMOS: Basic concepts, applications and Programming*, (2<sup>nd</sup> ed). Routledge Taylor & Francis Group, New York.
- Bartol, K.M. & Srivastava, A. (2002). Encouraging knowledge sharing: The role of organizational reward Systems. *Journal of Leadership and Organizational Studies*, 9(1), 64-76.
- Bock, G.W. & dan Kim, Y.G. (2002). Breaking the myths of rewards: An exploratory study of attitudes about knowledge sharing. *Information Resource Management Journal*, 15(2), 14-21.
- Bock, G.W., Zmud, R.W., Kim, Y.G. & Lee, J.N. (2005). Behavioral intention formation in the knowledge sharing. examining the roles of extrinsic motivators. *Social-Psychological Forces, and Organizational Climate*, 29(1), 87-111.
- Chen, I.Y.L., Chen, N.S. & Kinshuk. (2009). Examining the factors influencing participants knowledge Sharing behavior in virtual learning communities. *Educational Technology and Society*, 12(1), 134-148.
- Chena, G.L., Ling, W.Y., Yang, S.C., Tang, S.M. & Wu, W.C. (2011). Explicit knowledge and tacit knowlegde sharing. *IEEE*, International Conference.
- Dalkir, & Kimiz. (2011). *Knowledge Management in Theory and Practice*. The MIT Press.
- Davenport, T.H. & Laurance, P. (1998). *Working knowledge : How organisation manage what they know*. Harvard Busines School Press, Boston.
- Departemen Perdagangan, RI. (2008). *Creative Industry Development Plan Towards a Creative Economic Vision*.
- Edward, W. (2003). *Knowledge management in the intelligence enterprise* Artech House. United States of America.

- Grant, R.M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management of Journal*, 17, 109-122.
- Kocakaya, S. & Kocakaya, F. (2014). A structural equation modeling on factors of how experienced teachers affect the students. Science and mathematics achievements. *Education Research International*.
- Koskinen, K.U. (2001). Tacit knowledge as a promoter of success in technology firm. Proceedings of the 34<sup>th</sup> Hawaii International Conference on System Sciences, Hawaii, U.S.
- Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organisation Science*, 5, 14-37.
- Nonaka, I. & Takeuchi, H. (1995). *The knowledge creating company: How japanese companies create the dynamic in innovation*. Oxford University Press.
- Rajalakshmi, S. & Banu, R.S.D.W. (2012). *Analysis of tacit knowledge sharing and codification in higher education*. International Conference on Computer Communication and Informatics (ICCCI).
- Rick, H. & Hoyle. (2012). *Handbook of structural equation modeling*. New York: Guilford Press.
- Kline, R.B. (2005). *Principles and practices of structural equation modeling*, (2<sup>nd</sup> ed.). New York: Guilford Press.
- Rick, H. & Hoyle. (2012). *Hand book structure equation modeling*. Guilford Press, New York.
- Ryua, S., Ho, S.H. & Han, I. (2003). Knowledge sharing behavior of physicians in hospitals. *Expert systems with Applications*, 25(1), 113-122.
- Siregar J.J., Aryanti, R.A. & Rahayu, A. (2017). Analysis of affecting factors technology acceptance model in the application of knowledge management for small medium enterprises in industry creative. *Procedia computer Science*, 116, 500-508.
- Semeon, G., Garfield, M., & Meshesha, M. (2015). *Towards enabling tacit knowledge externalization using mobile. Phone: The Case of Participatory Agricultural Innovation in Ethiopia*. IEEE International Conference.
- Tiwana, (2002). *The knowledge management toolkit: Orchestrating IT, strategy and knowledge plaiforms*, (2<sup>nd</sup> Ed.).
- Wei, Y. (2010). *Analysis on influencing factors of tacit knowledge sharing and solutions for high-tech enterprises*. International Conference on Information Management, Innovation Management and Industrial Engineering.