

Measuring Employee Readiness for Knowledge Management in PT. Mineral Indonesia

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ABSTRACT

This research aims to measure the readiness of employees for the implementation of knowledge management in order to achieve the support and readiness stage of employees of PT. Mineral head office. This research is a descriptive study using quantitative data analysis. The authors distributed questionnaires to all employees at PT. Mineral's head office; 183 questionnaires were returned from the respondents for analysis. The analytical technique of the Structural Equation Model (SEM) is used to determine whether models and indicators are correct and to enable the measurement of the readiness of the employees. Confirmatory Factor Analysis (CFA) first order and second order were constructed using the statistical software, SPSS and AMOS. The variable of employee readiness comprised socialisation, externalisation, combination and internalisation (SECI process, in short). The result shows that PT. Mineral employees are highly ready to implement knowledge management. This means that employees of PT. Mineral are willing to encourage knowledge management activities. Based on the results of the study, to achieve the readiness stage, PT. Mineral should consider reviewing their programmes based on the SECI model.

Keywords: Employee readiness, knowledge management, SECI model

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INTRODUCTION

The business environment is growing rapidly. This is caused by economic growth, technological advancements of the digital age and the development of science. For many companies, the rapid advancement of technology has resulted in the incessant struggle to maintain a competitive advantage

(Rasula et al., 2012). Thus, businesses need to move, work and adapt quickly in order to manage the intangible assets that generate competitive advantage (Rai, 2011; Lai & Lin, 2012). Knowledge as a competitive advantage of a company cannot be seen and quantified. Knowledge is notional, intangible, inferred and to some extent, subjective (Dearnaley, 2013). One of the most strategic measures to sustain competitive advantage is knowledge. Knowledge is widely recognised as a strategic asset in improving organisational performance. Even though some intellectual capital are transferable, internal knowledge is not easily copied because knowledge is anchored in peoples' (employees') mind. It is obvious that knowledge is slowly becoming the most important factor of production, next to labor, land and capital (Rasula et al., 2012).

Knowledge is neither data nor information, though it is related to both, and the difference between these terms is often a matter of degree (Davenport & Prusak, 1999). We will start with these terms because they are more familiar. Knowing the difference between data, information and knowledge can also help us better understand knowledge. Karadsheh et al. (2009) described data as a set of facts, while information they represented as categorised, reviewed and scrutinised data. Knowledge is the result of merging information with practice, perspective and expression, resulting in insinuation and plans for decision-making. Knowledge is what employees know about one another, their

customers, products, processes, mistakes and successes whether the knowledge is tacit or explicit (O'Dell & Hubert, 2011). According to Rai (2011), knowledge is contained in the minds of organisational members, and they are the greatest organisational resources. Many practitioners and researchers in the field of knowledge management argue that there are two forms of knowledge: explicit knowledge and tacit (implicit) knowledge. Ikujiro Nonaka and Hirotaka Takeuchi agreed with Michael Polanyi that knowledge consists of tacit and explicit knowledge (Mooradian, 2005). The concept of tacit knowledge as it appears in the literature is vague and ambiguous because it is active in the mind but not consciously accessed in the moment of knowing (Mooradian, 2005). Tacit knowledge is embedded in people, meaning that the concept of tacit knowledge is at the centre of knowledge management (Mooradian, 2005). Tacit knowledge is like an iceberg; only 10% of it is visible above water, while the other 90% remains hidden under the water (Bhardwaj & Monin, 2006). Researchers Bhardwaj and Monin (2006) found that tacit knowledge seemed to be a major concern for human resource professionals in knowledge-intensive organisations as it has a significant role in shaping the knowledge base of an organisation by providing a means of interaction between the important subsystems of the organisation. Explicit knowledge is tangible knowledge, usually available in written form, and easily accessible to anyone who needs it. Explicit knowledge enables, causes

or somehow brings about focal knowing (Mooradian, 2005). The difference between tacit and explicit knowledge is that tacit knowledge is harder to formalise, codify or communicate, whereas explicit knowledge is codified, systematic knowledge that can be transmitted in formal language.

Change is a transformational process from the current situation to the next situation. In order for change to become accepted by people, an organisation should manage the change itself. Change has become both pervasive and persistent (Bouckenooghe & Devos, 2009). There are several key barriers to change: changing mindsets and attitudes (58%), corporate culture (49%) and underestimating project complexity (35%) (Jorgensen et al., 2009). Bouckenooghe and Devos (2009) found a strong consensus between the salient role of internal circumstances under which change occurs, the process of how change is dealt with and the level of readiness for change in understanding the processes that lead to successful change implementation. Managing change allows for employee readiness for change. When readiness for change exists, the organisation is primed to embrace change and resistance is reduced (Bouckenooghe & Devos, 2009). Megani (2012) described three dimensions of employee readiness for change: 'Participating' as involved members in the implementation of the process of change; 'Promoting' change as members of the organisation to colleagues; and resisting rejection of change. Readiness for the implementation of knowledge management

can be seen from the open attitude and high enthusiasm of employees to be involved in the process of knowledge management (Karim et al., 2012). In other words, a person who indicates his/her intention to be involved in knowledge management processes is likely to perform the actual activities involving the socialisation, externalisation, combination and internalisation processes (Karim et al., 2012).

In order to create awareness, knowledge sharing and continuous learning, which is the required standards competency, in 2013 PT. Mineral took various efforts to improve their programme and knowledge management system. To realise the vision of their human resources in 2015, the human resources director of PT. Mineral, Achmad Ardianto, explained that one of the strategic activities of the Directorate of Human Resources in 2013 was focussed on creating a culture of knowledge management in the readiness stage. Based on PT. Mineral's traffic data portal, the readiness stage in terms of human resources has not been realised. In order to realise the target (knowledge management in readiness stage in the year 2013) that was delayed, evaluation of the readiness of employees for the implementation of knowledge management based on socialisation, externalisation, combination and internalisation processes was required.

METHODOLOGY

This research adopted theory that was used in previous research. The objective of this research was focussed on evaluating employee readiness of employees at the

head office of PT. Minerals through the process of knowledge management. High intensity involvement of employees in the process of socialisation, externalisation, combination and internalisation indicated that the employees were ready for the implementation of knowledge management (Karim et al., 2012).

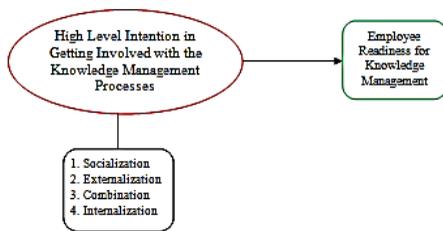


Figure 1: The research model

Based on the research model and relevant theory, the authors formulated two research questions, as given below:

1. What is the state of employee readiness of employees at the head office of PT. Mineral for the implementation of knowledge management?
2. Are the processes of socialisation, externalisation, combination and internalisation able to measure employee readiness of employees at the head office of PT. Mineral for implementation of knowledge management?

This research was conducted in the head office of PT. Mineral, involving a total number of 241 employees (all the employees at the head office was included in the research population). The authors distributed

questionnaires to all the employees. The questionnaire consisted of 24 questions from four sub-variables, with questions on socialisation (7 questions), externalisation (5 questions), combination (6 questions) and internalisation (6 questions). Some 183 questionnaires were processed. This research required data related to the topic of discussion, that is, readiness of employees to change and knowledge management. The data used in this study were primary data and secondary data. The authors obtained primary data through interviews and the questionnaire, while secondary data were obtained from the literature on the topic, previous research findings and the company's internal data.

Two methods of analysis were used in this research, namely, the descriptive and structural equation models. In this research, the author used descriptive analysis to transform data into concise information for convenience. Measurements were taken using a questionnaire to determine the readiness of employees for the implementation of knowledge management.

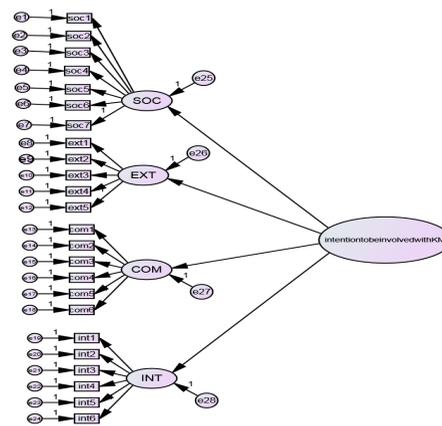


Figure 2: The research model

Each questionnaire was ranked by a 4-point Likert scale (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree). The authors eliminated the 'neutral' option to prevent the accumulation of data centred on the 'neutral' answer. The authors used the AMOS software to analyse the structural equation models. The results showed that the models, based on the eight criteria of goodness-of-fit, were fit models, meaning that the indicators could be used to measure the variables.

RESULTS

Based on the results of the factor analysis of the first-order construct, where 24 items were used as indicators, only nine items were considered to be the most representative indicators; these measured the socialisation, externalisation, combination and internalisation processes.

Structural Equation Model Analysis Result

Figure 3 is a summary of the second-order factor analysis model. Table 1 summarises the goodness-of-fit criteria used in this study. It can be concluded that the socialisation, externalisation, combination and internalisation processes are proper dimensions to measure the readiness of employees for the implementation of knowledge management at PT. Mineral. Karim et al. (2012) argued that the model is considered to have discriminant validity if the factor loading indicates a value of at least 0.6. The figure shows that factor loading on each sub-variable indicates a value >0.6 (socialisation 1.0; externalisation 1.2; combination 0.9; internalisation 0.64).

Based on the factor loading that indicated the value >0.6, the processes of socialisation, externalisation, combination

Table 1
The Result of Goodness of Fit

No	Statistic	Criteria of 'fit'	Value	Category
1	CMIN	Among CMIN saturated model and CMIN independence model	9.031	Fit
2	GFI	> 0.9	0.988	Fit
3	AGFI	> 0.9	0.968	Fit
4	RMR	It is better when the result approaches 0	0.001	Fit
5	NFI	> 0.9	0.981	Fit
6	CFI	> 0.9	1	Fit
7	IFI	> 0.9	1.017	Fit
8	RFI	> 0.9	0.961	Fit
9	RSMEA	<0.08	0	Fit

and internalisation can be said to have contributed to the readiness of employees for the implementation of knowledge management. The factor-loading value shows that the externalisation process had the highest score, at 1.2. The process of externalisation represented by item 8 as ‘willing to engage in discussions with co-workers’, item 11 as ‘willing to exchange ideas with colleagues’ and item 12 as ‘willing to give a personal opinion when in dialogue’ are rated as sub-variables that contributed the highest to the readiness of employees for the implementation of knowledge management.

DISCUSSION AND CONCLUSION

Employees based in PT. Mineral’s head office had high readiness in the implementation of knowledge management as measured from the processes of socialisation, externalisation, combination and internalisation. This argument, proved by descriptive analysis, showed an average value of 3.20, in the high category, while the results of the structural equation model

analysis revealed that there were nine items considered the most representative dimensions in the SECI process. This means that employees based in the head office PT. Mineral were willing to engage in knowledge management activities.

The processes of socialisation, externalisation, combination and internalisation are dimensions that can be used to measure the readiness of employees based in the PT. Mineral head office for the implementation of knowledge management. This is concluded by the results of the structural equation model analysis on the second-order construct or goodness-of-fit test. Moreover, the factor-loading value of each dimension showed a score of >0.6, meaning that all the criteria of the goodness-of-fit models tested were qualified criteria (Sugiyono, 2013b).

In order to facilitate the achievement of the readiness stage, the authors suggest that PT. Mineral should focus on activities that are considered the most representative of the socialisation, externalisation, combination and internalisation processes, such as:

1. Conducting the process of socialisation through coffee-break activities, for example, in the middle of the working day every week for each division, with varying discussion topics
2. Conducting the externalisation process through the establishment of activities such as providing brief information on a bulletin board in the lifts.

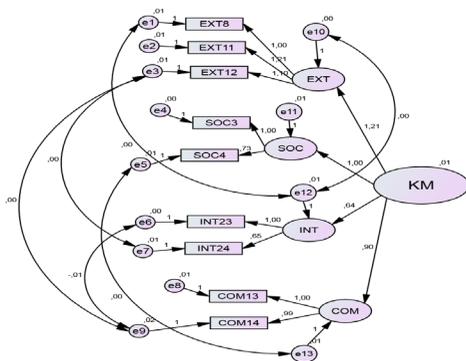


Figure 3: Second order factor analysis model

3. Conducting the combination process such as providing extracts of reports on a bulletin board in each workspace.
4. Conducting the internalisation process such as providing a bulletin board in suitable places (such as lifts and the workspace of each division) in order to create awareness among employees of the implementation of knowledge management.

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