The impact of knowledge management on work performance through the employees' competence: A case study of "MP" Bank

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A R T I C L E   I N F O

A B S T R A C T

Since it was established in 2003 until 2014, the "MP" bank had never provided its human resources development training. As a result, it decreased its employees' performance, which ultimately gave a bad impact on the bank. This was a serious concern for the management in 2015. This study aimed to determine and analyze the impact of knowledge management variables consisting of socialization, externalization, combination, and Internalization on the employees' performance indirectly through their competence. The path analysis was used to determine the indirect impact of knowledge management on the employs' performance, with the samples of 140 people. The data analysis and hypothesis testing proved that knowledge management had significant effect on the employees' performance indirectly through the employees' competence. The R-square of socialization, externalization, combination, and internalization of the employees' competence were 70.5%; and the R-square of competence variable to the performance was 52%. This showed that knowledge management played an important role in improving the employees' performance through their competence. It implies that the bank needs to provide in-house training for its employee's resource development because only relying on the quality the employees get from the college was not enough.

A B S T R A K

Sejak berdiri pada 2003 bank "MP" sampai pada 2014 tidak pernah memberikan pelatihan pengembangan sumber daya manusia, yang mengakibatkan kinerja ka-ryawan mengalami penurunan yang akhirnya berdampak buruk bagi bank. Kondisi ini menjadi serius oleh pihak manajemen pada 2015. Penelitian ini bertujuan untuk mengetahui dan menganalisis pengaruh variabel knowledge management yang terdiri dari socialization, externalization, combination, dan Internalization terhadap kinerja karyawan secara tidak langsung melalui kompetensi. Path analysis digunakan untuk mengetahui pengaruh tidak langsung antara knowledge management dan kinerja karyawan ini, dengan jumlah sampel 140 orang. Analisis data dan pengujian hipotesis membuktikan bahwa knowledge management berpengaruh signifikan terhadap kinerja karyawan secara tidak langsung melalui kompetensi karyawan. R-square socialization, externalization, combination, dan internalization terhadap kompetensi karyawan sebesar 70,5%; dan R-square variabel kompetensi terhadap kinerja sebesar 52%. Hal ini menunjukkan knowledge management sangat berperan dalam menaikkan kinerja karyawan melalui kompetensi. Implikasinya, bank harus memberikan in-house training untuk pengembangan sumberdaya karyawan, hanya mengandalkan kualitas lulusan PT saja tidak cukup.

1. INTRODUCTION

Human resource is one of the important bank's assets that they must own. Considering the important role of the human resources, the bank management needs to give attention to their competence in order to give contribution to the bank optimally. Since it was established in 2003 until 2014, the "MP" bank had never provided its human resources with the activities that could contribute in the human resource development. The bank thought that the competence their employees get from college was sufficient to be applied in their work performance in the bank. After an evaluation was carried out in 2014, the bank found that its employees performance

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had decreased, so the long-term goal of the bank was not reached maximally. This condition awakened the management of the bank to be worse. After undertaking the review in 2015, the bank began to provide activities to improve the ability of its employees.

Hadianto (2014: 21) said that knowledge management does not only improve the efficiency and effectiveness of employees work, but it also improves their achievement and competence. Knowledge of creating organization and knowledge of network are the two most important factors for building competitiveness. They have to see how a bank can transform the data into judgmental information and become context-driven ideas, which eventually become knowledge. This knowledge is the key to the organizational competitiveness. Thus, the goods and services produced by a superior company will always rely on the knowledge-based strategies. In addition, some studies found that knowledge management has a positive impact on competency of individual (Tongsamsi and Tongsamsi 2015; Lustri, Miura, and Takahashi 2007; Berio Harzallah 2005).

Zaim, Yasar, and Unal (2013) indicated a positive effect of competencies on individual and organization performance in Turkey services sector, including bank sector. In addition, other studies explain the relationship between competency and performance of individual job (Ryan, et.al. 2009; Dainty 2004; Liu 2005; Levenson 2006; McClelland 1973). However, there is still a debate on the impact of competencies and performance due to difficulty of assessing the employees' competencies (Currie and Darby 1995).

Based on the description above, it is very important to see whether knowledge management has a contribution in improving employees' competence that would ultimately improve the employees' performance. By knowing which factors that have an important role in improving employees' competence, it is expected to be used in the analysis and evaluation in the application of knowledge management or in creating a conducive environment, so that the desired employees' quality could be achieved. This research aimed to determine the impact of knowledge managements of employees performance through their competencies.

2. THEORETICAL FRAMEWORK AND HYPOTHESES

Packard (2012) said about the implementation of knowledge management in his company that was able to improve the core competence of its products so that it managed to become a very innovative

company in the world. Knowledge management then developed into a science that is widely applied in various companies. Sveiby (2010) defined knowledge management as "the collection of processes that govern the creation, dissemination, and utilization of knowledge". In this case, the understanding of data, information, and knowledge are needed to be distinguished. Data is a number that has no context, for example, 16%, Rp100 million, and so on. Information is a data that has context and certain meaning, for example, 'bank interest rate is 16% per year', 'amount of saving is Rp 100 million', and so on. Knowledge is a collection of information that has certain patterns and implications and has the capacity to predict and act, for example, because the interest rate on the bank loan is too large, which is 16% per year, so I do not borrow money and put off my wish to buy a car'. Knowledge management is an intangible asset. Intangible assets can be grouped as in Figure 1.

In Figure 1, intangible asset is a component used in determining the market value of a company. The knowledge management importance for a company is undeniable. Widiatmoko (2002) stated that knowledge is divided into two types:

Tacit Knowledge
It is a knowledge that exists in a person and relatively difficult to formalize/translate, so there are still obstacles in the communication with other individuals. Tacit knowledge is subjective, intuitive, and closely related to the activities and experiences of individuals and ideals, values, and emotions.

Explicit Knowledge
It is a knowledge that can be put forward in the form of data, formulas, product specifications, manuals, general principles, and so on. This knowledge belongs to the company and is ready to be transferred to all individuals in the company formally and systematically. The interaction between tacit and explicit knowledge is called as the process of knowledge conversion.

In Figure 2, there are four (4) knowledge conversion processes, namely:
1. Socialization is the process of transferring experience to create tacit knowledge through observation, imitation, and practice activities. This process is not enough to be just carried out through listening and thinking.
2. Externalization is the process of expressing and translating tacit knowledge into explicit concepts such as books, manuals, reports, and so on.
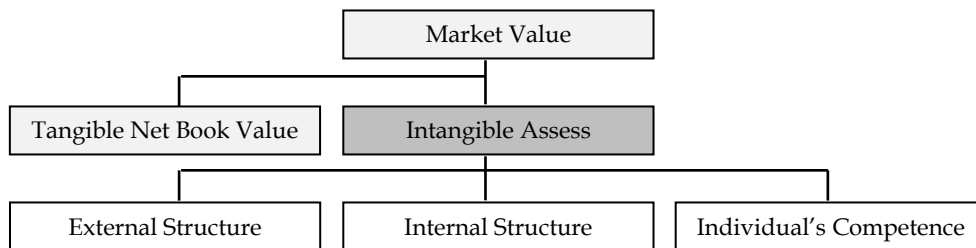3. Combination is the process of combining differ-

Figure 1
Intangible Asset Knowledge Management
Source: Bellinger 2001.

Figure 2
The Process of Knowledge Conversion
Source: Sveiby, Karl Erik (1996), Page 47.

ent explicit knowledge into new explicit knowledge through analysis, grouping, and rearrangement. The tools used to perform this process could be in the form of database and computer network.

4. Internalization is the process of absorbing explicit knowledge into tacit knowledge that is usually done through learning while working or performing simulations.

Jatmiko (2002) said that the application of knowledge management could improve the core competence of a company. This is because the intangible assets managed in knowledge management (external structure, internal structure, and individual's competence) are the source of core competencies. By managing knowledge, the employees will be more creative and innovative. Thus, their ability to produce products or perform the services increase. Their ability of creativity and innovative are the core competences. Therefore, if the knowledge management can be applied properly, then the core competences of the company will surely increase. The definition of core competence is "the collective learning outcomes within the company, especially those are related to the coordination of various expertise in the field of services and the ability to combine various streams of technology, so that the company is able to do something better than its competitors" (Widiatmoko 2002).

Furthermore, the business developed through various management systems, such as TQM, JIT,

reengineering, and so on, will result in greater core competences. If knowledge is the application of information through real experience, then it is the employees' ability to take action. Learning is the process of improving the employees' ability or 'ammunition' to act and produce something. To improve innovation through knowledge, an organizational culture is required not to stop learning. The concept of learning organization or organizational learning method is to form learning organization.

Nurlaila (2015) stated that skills are competences and they reflect the potential abilities of employees to do a job. If the employees have good competences that are marked through their understanding and mastering every task and job well with high ability, then these skills will give a significant influence in improving their performance. Competence is not just a passive knowledge. If an employee has a high degree of intelligence, but the employee does not proficiently transform his skills into effective workplace behavior, his intelligence is useless. Therefore, competence is not only used to understand what to do, but it also used to include proper abilities to do a job in order to achieve the desired performance/outcome of the job.

Performance indicates the level of productivity or work performance of a person. Martoyo (2000: 28) defined performance, as "the level of a person's ability or organization in an organization in achieving the goal effectively and efficiently or the performance is the ability of an organization in using its

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Table 1
The Definition of Operational Variable in the Research

Variable	Indicator	Item
Knowledge Management (X) (Dykeman 2001)	Socialization (X.1)	Observing, imitating, practicing.
	Externalization (X.2)	Revealing, translating.
	Combination (X.3)	Analyzing, grouping, and formatting.
	Internalization (X4)	Learning while working.
Competence (Z) (Widiatmoko 2002)	Ability	Understanding and mastering the tasks and job description.
Performance (Y) (Siagian 2001)	Result	Employees performance appraisal.

Table 2
The First Hypothesis Test

Variable	Standardized Coefficient	R-square	F-score	t-score	Sig
Socialization (X1)	0.132	0.705	167.30	3.351	0.000
Externalization (X2)	0.347			5.949	0.000
Combination (X3)	1.737			10.174	0.000
Internalization (X4)	0.547			3.407	0.000

Source: Processed Primary Data 2017.

Table 3
The Second Hypothesis Test

Variable	Standardized Coefficient	R-square	F-score	Sig
Competency (Z)	0.707	0.520	138.00	0.000

Source: Processed Primary Data 2017.

capital effectively and efficiently in order to achieve maximum results".

There are three things that can be used to measure performance: internal measures, interdependency measures, and environmental measures (Siagian 2001). Internal measures are used to measure all activities and/or related outcomes in the task-performance, which are not covered by the two other measures, such as efficiency, cost, quantity, and quality. Independency measures assess a person's ability to meet the expectations of other individuals associated in performing tasks, for example, the measurement of reliability, cooperation, and confidence. Environmental evaluation measures are obtained from individuals from outside of the organization, for example, in terms of sales tasks, the measurements might include the measurement of market share and consumer satisfaction index.

Hypothesis
Hypothesis is a speculation of the relationship or influence contained in the research variables that are in accordance with the empirical and theoretical studies above. Thus, the concept described is further elaborated in the model of this research hypothesis, as follows:
Hypothesis 1:
It is suspected that socialization, externalization, combination, and Internalization variables have sig-

nificant effect on the employees' competence.
Hypothesis 2:
It is suspected that the employees' competence variables have a significant effect on the employees' performance.

3. RESEARCH METHOD
The samples taken in this research were all 140 employees of "MP" Bank. The Path analysis model was used to analyze the impact of knowledge management variables consisting of socialization, externalization, combination, and internalization on the employees' performance through the employees' competence. Table 1 describes the variables used in this study:

The measurement of the knowledge management and competence variables was done by using Likert scale, while the performance variable was done by using scale ratio. The regression analysis is described as follows.

$$Z = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e. \quad (1)$$
$$Y = \alpha + \beta_5 Z + e. \quad (2)$$

Y = employees performance
Z = employees competence
X1 = socialization
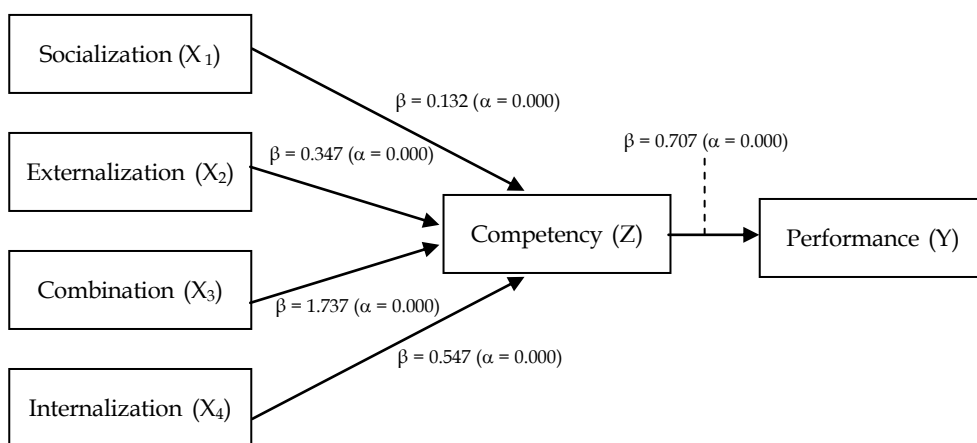X2 = externalization
X3 = combination
X4 = internalization.

Figure 3
Research Model

4. DATA ANALYSIS AND DISCUSSION

The results of the research hypothesis are described in Table 2. As presented on Table 2, all the variables – socialization, externalization, combination, and internalization – showed positive influence on the competence. The R-square was 0.705, which means that the competence was influenced by the above variables by 70.5%; while the rest 29.5% was influenced by variables that were not included in this model. Of the four variables above, combination was the dominant variable.

As in Table 3, all competence variables have positive influence on performance. The next R-square was 0.520, which means that the competence was influenced by the above variables by 52%; while the 48% remaining was influenced by variables that were not included in this model. This research models as a whole is illustrated in Figure 3.

Knowledge management is a system created to create, document, classify, and disseminate knowledge within the organization. Thus, knowledge is easy to utilize whenever it is needed by anyone according to the level of authority and competence. Knowledge management manages all the elements of the system in the form of documents, databases, policies, and complete procedures, along with the information about individual, collective human resources experiences, skills and abilities possessed by the organization with the help of information technology. The management of knowledge management system elements aimed for the company to be always creative, innovative, and efficient. Thus, the company has the competitiveness strategy for a long period of time.

The results of this study were in line with what has proposed by Tobing (2007: 24) that Knowledge management is a key asset for a company to have a sustainable competitive advantage. The competitive advantage is derived from the impact of Knowledge Management implementation on the following fields:

1. Fields of Operation and Service. The 'knowledge worker' can provide faster response, better handling of customer claims, and more proactive services.
2. Field of Personnel Competence Development: the learning process that takes place in a continuous cycle.
3. Field of Maintenance of Knowledge Availability: skill and knowledge owned by employees in a company that are needed to be managed by the company to ensure no loss of knowledge loss.

As based on the results above, it indicates that combination was the dominant variable that affected the employees' competence. To increase the competence of the employees of the "MP" Bank, the most dominant factor was reprocessed through analysis, grouping, and preparing the resolving plans of various problems. The tools to perform the process were database and computer network. Therefore, the bank management needs to make plans to increase the competence of the employees through training that involves the process of analysis, grouping, and problem solving, and refine the infrastructures of the bank to support the process.

On the other hand, the externalization variable is the smallest variable. It is the externalization process of revealing and translating of tacit knowledge into explicit concepts such as books, manuals, reports, and so on. This might be due to a low "reading" or "curiosity" culture. Therefore, the improvement employees' competence programs that involved "self learning" should not be too many.

Basically, improving Knowledge Management aimed to improve the employees' competence and performance in order to improve the field of opera-

tion and service that are marked by faster response, better handling of customer claims, and more proactive services. It was meant to increase the development of personnel competence. Besides, it could be used to ensure that there was no loss knowledge. Loss of knowledge is a condition when a company loses its required knowledge, even though the knowledge has actually been owned and used by the company.

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

Since it was established in 2003 until 2014, the "MP" bank had never provided its human resources development training, resulting in the decreased of its employee's performance that ultimately brought bad impact to the bank. This condition had become a serious concern by the management in 2015. This study aimed to determine and analyze the impact of knowledge management variables consisting of socialization, externalization, combination, and internalization of the employees' performance indirectly through their competence. The path analysis was used to determine the indirect impact of knowledge management with the performance of the employees; with the number of samples taken were 140 people. The data analysis and hypothesis testing proved that knowledge management consisting of socialization, externalization, combination, and internalization had significant effect on the employees' performance indirectly through the employees' competence. The R-square socialization, externalization, combination, and internalization of the employees' competence were 70.5%; and the R-square competence variable to the performance was 52%. This showed that knowledge management played an important role in improving the employees' performance through their competence. The implication was that the bank needed to provide in-house training for its employee's resource development because only relying on the quality the employees get from the college was not enough.

REFERENCES

Bellinger, Gene, 2001, *Knowledge Management, Virtual Library on Knowledge Management*, University of Chicago Press.

Berio, Giuseppe, Mounira Harzallah, 2005, *Knowledge Management for Competence Management*.

Currie, G & Darby, R 1995, 'Competence-based management development: rhetoric and reality', *Journal of European Industrial Training*, 19 (5), 11-18.

Dainty, AR, Cheng, M & Moore, DR 2004, 'A competency-based performance model for construc-tion project managers', *Construction Management and Economics*, 22, 877-886.

Hadianto, Martiono, 2014, *Membangun Kemampuan Bersaing*, Penerbit Bumi Aksara, Jakarta.

Jatmiko, Rahmat, 2002, *Knowledge Management dan Teknologi Informasi dan Komunikasi dalam Perbankan*, PT. Prenhallindo, Jakarta

Levenson, AR, Van der Stede, WA & Cohen, SG 2009, 'Measuring the Relationship between Managerial Competencies and Performance', *Journal of Management*, 32 (3), 360-380.

Liu, X, Ruan, D & Xu, Y 2005, 'A study of enterprise human resource competence appraisement', *Journal of Enterprise Information Management*, 18 (3), 289-315.

Lustri, Denise, Irene Miura and Sergio Takahashi, 2007, *Knowledge management model: practical application for competency development*.

Martoyo, S 2000, *Manajemen Sumber Daya Manusia*, Revised Edition, Jakarta, BPFE.

Mc Clelland, DC 1973, 'Testing for competence rather than for intelligence', *American Psychologist*, 28, 114.

Nurlaila, Indah, 2015, 'Pengaruh Knowledge Management dan E-Learning dalam meningkatkan komitmen dan kinerja karyawan Hotel Savana kota Malang', Thesis, Program Pasca Sarjana Fakultas Ilmu Administrasi Universitas Brawijaya Malang.

Packard, Dykeman, John B 2012, 'Knowledge Management Moves from Theory toward Practice', *Managing Office Technology*, May.

Ryan, G, Emmerling, RJ & Spencer, LM 2009, 'Distinguishing high-performing European executives', *Journal of Management Development*, 28 (9), 859-875.

Siagian, Sondang, P 2001, *Teori Pengembangan Organisasi*, Penerbit Bumi Aksara, Jakarta.

Sveiby, Karl Erik, 1996, *The New Organizational Wealth: Managing and Measuring Knowledge-Based Assets*, San Francisco: Berret-Koehler Publishers, Inc. pp. 47.

Sveiby, Karl Erik, 2010, 'What is Knowledge Management, www Virtual Library on The Knowledge Management'.

Tobing, S Erwin, 2007, 'Strategi Perbankan dalam Perkembangan Tekhnologi Informasi', *Media Bisnis dan Perbankan Indonesia*, Jakarta.

Widiatmoko, 2002, *Pengembangan Pengetahuan Melalui Pendidikan dan Pelatihan*.

Zaim, Halil, Mehmet Fatih Yasar, Omer Faruk Unal, 2013, 'Analyzing The Effects of Individual Competencies on Performance: A Field Study in Services Industries in Turkey'.