

Knowledge Management Application Analysis on SME (Study on Tofu SMEs)

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Abstract: - Companies currently apply knowledge management at various levels to improve competitive advantage, company performance, and business sustainability. At the small and medium enterprise (SME) level, knowledge management serves as one strategy to sustain the business and address the issue of potential knowledge loss, which could impact the sustainability of the SME business. Additionally, the purpose of knowledge management is to ensure that the next generation can carry on the business and understand the business process. In this paper, the focus is to analyze the knowledge management in one of the tofu SMEs that is still operating after transferring to the second generation with qualitative methods. This paper will use the concept of knowledge management from Fernandez and Sabherwal, which consists of four processes: knowledge discovery, knowledge capture, knowledge sharing, and knowledge application.

Key-Words: - Knowledge Management, SMES, Knowledge Discovery, Knowledge Capture, Knowledge-sharing, Knowledge Application

Received: April 3, 2024. Revised: August 26, 2024. Accepted: September 26, 2024. Published: October 18, 2024.

1. Introduction

The company implements knowledge management as a step to effectively manage the knowledge it owns, ensuring its continued development and sustainability. Some experts argue that the implementation of effective knowledge management can contribute to the company's development and sustainability by maintaining and developing existing knowledge, thereby enabling the achievement of the company's goals. Knowledge management's application aims to manage tacit and explicit knowledge owned by individuals and companies. Previous research indicates that companies can generate competitive advantages, enhance business sustainability, and boost performance through the application of knowledge management. Currently, the application of knowledge management needs to be carried out at various levels of the company, including the SME company level. In the process, SME owners will absorb knowledge from outside and apply the knowledge gained by adjusting the abilities of SMEs. (Fernandez & Sabherwal, 2010a; Greiner et al., 2007; Niu & Li, 2010; Wiig, 1997; Wong et al., 2014) (Teng & Song, 2011)

Indonesia has considerable potential for SME development. Given the diverse types and business processes of SMEs in Indonesia, the application of knowledge management to these SMEs presents

significant development potential, enabling them to become significant contributors to the country's economy. The application of knowledge management in SMEs adjusts the capabilities of the SMEs themselves, which tend to be simpler and managed directly by the SME owners, so that the majority of the implementation process comes from the ability of the SME owners to produce and disseminate their knowledge with the support of the awareness of the SME employees (Jayani, 2020).

Small and medium-sized enterprises (SMEs) frequently encounter the risk of losing individual knowledge as they transition both their owners and employees. This issue is particularly prevalent in SMEs that rely on traditional methods for conducting business operations, making each individual's skills a crucial asset for the company. Tofu SMEs are one of the SMEs that use semi-traditional ways to run business processes.

Since 1960, Matraman has become one of the centers of tofu production, where the majority of the production process uses traditional methods. The traditional methods used in the production process make each employee's ability an important factor in producing suitable and consistent tofu products. However, according to data from the Tofu Matraman SME Association, the number of Tofu factories that are still producing has decreased from year to year.

According to information from the Matraman Tofu SMES Association, the closure of Tofu SMEs resulted in a decrease in the number of Tofu SMEs operating. This decline was attributed to the successor of the Tofu factory's inability to continue the Tofu SMEs. This inability stemmed from a lack of established guidelines for operating the Tofu factory, which had a significant impact on the activities of the Tofu factory itself. Tofu Putra Soma SME, one of the Tofu factories still in operation and run by the second generation, owes its sustainability to the successful transfer of knowledge from the first generation to the second generation in Tofu SME business management.

2. Literature Review

Knowledge Management

Knowledge management has been defined by various experts. According to Niu and Li (2010), knowledge management is management that focuses on knowledge and a series of management processes that collect, manage, and develop knowledge within the company. Knowledge management is also defined as all actions that lead to access to knowledge for all members of the organization, so that it is useful in the decision-making process (Trisninawati & Mellita, 2020). Another opinion is that knowledge management is defined as the management of knowledge resources owned by an organization and the process of forming knowledge that will provide a competitive advantage for the company (Wong et al., 2014). Greiner et al. (2007) and Tung (2018) argue that knowledge management is the management and utilization of knowledge possessed by each individual in the company through a series of activities so that it can become an intellectual asset, add value to the company, and achieve the company's goals to remain competitive in the market. Expert opinions suggest that companies engage in a series of processes to manage knowledge as a company asset, aiming to achieve various company goals. Nonaka & Lewin (1994) categorize managed knowledge into two distinct categories: tacit knowledge and explicit knowledge. Tacit knowledge is insight that an individual possesses that is difficult to share, whereas tacit knowledge is an individual skill that comes from experience, and explicit knowledge is knowledge that has been documented so that it is easier to understand and share with other individuals (Bratianu, 2010; Fernandez & Sabherwal, 2010).

Proses Knowledge Management

Fernandez and Sabherwal (2010) proposed the concept of the knowledge management process, which consists of four processes: knowledge discovery, knowledge capture, knowledge sharing, and knowledge application. Each process has two subprocesses to explain every knowledge management process.

Knowledge Discovery

Knowledge discovery is a process for developing previously existing knowledge, both tacit and explicit. The goal of knowledge discovery is to uncover new knowledge by reprocessing existing knowledge within the company (Fernandez & Sabherwal, 2010). Fernandez and Sabherwal (2010) explain that there are two sub-processes, socialization and combination, and that both sub-processes are the SECI method proposed by Nonaka et al. (2000). Socialization is interaction between individuals that produces tacit knowledge interactions in the form of discussion processes or sharing experiences (Baldé et al., 2018; Nonaka et al., 2000; Nurcahyo & Sensuse, 2019) while combination is the process of creating explicit knowledge from various explicit knowledge to produce new knowledge (Fernandez & Sabherwal, 2010; Nonaka et al., 2000).

Knowledge Capture

The process of obtaining knowledge from various other objects for reuse within the company is known as knowledge capture. The aim of knowledge capture is to obtain knowledge from a wider variety of sources so that it can become new knowledge for the company (Fernandez & Sabherwal, 2010). As for the process, Fernandez and Sabherwal (2010) said that there are two sub-processes, namely internalization and externalization, which are also included in the SECI method proposed by Nonaka et al. (2000). Internalization is the process of converting explicit knowledge into tacit knowledge, which is carried out through each individual's learning process (Baldé et al., 2018; Nurcahyo & Sensuse, 2019) while externalization is the process of translating tacit knowledge into explicit knowledge in the form of documentation (Nurcahyo & Sensuse, 2019) where the resulting documentation aims to make it easier for other people to understand this knowledge (Baldé et al., 2018). In the knowledge capture process, according to Fernandez and Sabherwal (2010), there are two sub-processes, namely internalization and externalization. The internalization sub-process involves transforming explicit knowledge into tacit knowledge, while the externalization sub-process

transforms each individual's tacit knowledge into explicit knowledge.

Knowledge-sharing

Knowledge sharing is the process of transferring knowledge between individuals within a company. The goal of this process is to facilitate the transfer of knowledge among individuals, ensuring its preservation within the company (Fernandez & Sabherwal, 2010). As for the process, Fernandez and Sabherwal (2010) explain that there are two sub-processes, namely socialization and exchange. Socialization is an interaction between individuals that produces tacit knowledge interactions in the form of a discussion process or sharing experiences (Baldé et al., 2018; Nonaka et al., 2000; Nurcahyo & Sensuse, 2019) while exchange is a process that focuses on sharing explicit knowledge between individuals or groups (Fernandez & Sabherwal, 2010).

Knowledge Application

Knowledge application is the process of applying knowledge that is already possessed in the form of company activities. Applications can take the form of products or policies within the company (Fernandez & Sabherwal, 2010). As for the process, Fernandez and Sabherwal (2010) argue that there are two sub-processes, namely direction and routines. Direction is a process of directing individuals who have knowledge to other individuals to carry out a job without transferring that knowledge (Fernandez & Sabherwal, 2010) while routines are a process that is the opposite of direction, where this process involves explicit knowledge in the form of procedures or rules that can guide the behavior of each individual in the company (Fernandez & Sabherwal, 2010). In the knowledge application process, according to Fernandez and Sabherwal (2010), there are two sub-processes, namely direction and routines. The direction sub-process involves verbally guiding individuals to carry out a work process, whereas the routines sub-process involves providing explicit knowledge to guide processes within the company.

3. Method

This paper employed qualitative research, using a case study at Putra Soma SMEs as its subject, to conduct an in-depth examination of individuals or groups over a specific period. We collected data by conducting interviews with both the owners and employees of SMEs, as well as by observing the production environment at Putra Soma SMEs.

4. Result

Knowledge Management in SMEs

Knowledge Discovery

According to the findings of interviews with SME owners, SME implements knowledge discovery through communication and discussions that occur during the business process. In addition, online media plays a role in the process of discovering new knowledge. According to SME owners, employee involvement in discovering new knowledge is carried out by employees regarding this new knowledge, which is usually related to better business processes.

The SME owner reprocesses the knowledge that employees and SME owners acquire before applying or storing it. During the discussion process, both SME owners and SME employees can accept and understand new points of view, as well as differences in viewpoints, so that, according to SME owners, there has been no historical rejection of opinions within SME. Beyond discussions, an employee task exchange process also supports the knowledge discovery process. Routine task exchanges in SMEs facilitate knowledge acquisition and guarantee each employee's ability to execute each production process, thereby reducing the impact of an employee's absence on the production process.

The knowledge gained by SME owners and employees will then be documented by UKM owners for knowledge that can potentially improve or answer problems at SME.

Knowledge Capture

The interviews with SME owners revealed that SME owners implemented knowledge capture by interacting with other UKM employees, leveraging their existing knowledge within the company. Employees execute this process primarily as a preliminary step before initiating a business process. The learning-by-doing method is another process that supports the knowledge capture process. The majority of new employees at UKM will gain an understanding of business and how the production process at SME works in theory, which will provide an overview for new employees. To reinforce this comprehension, the new employee undertakes the learning-by-doing process. SME owners and senior SME employees guide new employees through the majority of the learning-by-doing process, which can take anywhere from 1 to 4 weeks, depending on the employee's understanding speed. This learning-by-doing process is designed with the expectation that employees can accelerate their own understanding of each process. First, the employee begins by learning

the simplest process, such as washing and grinding soybeans, and as they progress, they receive mentoring until they fully comprehend the process. Senior employees will initially explain and practice the learning process orally, and then provide new employees with the opportunity to try it.

Knowledge-sharing

The implementation of knowledge sharing in SME involves enhancing communication and discussion among SME individuals, as revealed by the results of interviews with SME owners. The discussions held can not only help gain new knowledge, but also serve as a medium for sharing information held both externally and internally to support finding solutions for SME owners. SME owners typically engage in informal discussions that can happen in any situation. These informal discussions can occur either after or during the production process. This is considered important by SME owners because a more relaxed process can facilitate the knowledge sharing process and help SME owners obtain the information needed for SMEs. In addition to discussions and communication, SME owners said that their employees are willing to share their knowledge with both fellow SME employees and those at other UKMs. However, according to SME owners, not every employee is able to convey this knowledge well and easily due to the fact that the majority of interaction processes use regional languages. SME employees assert that SME owners possess the necessary skills to effectively communicate information, thereby ensuring employee understanding. During the discussion process, the SME owner stated that both the SME owner and the SME employees were capable of embracing diverse viewpoints and understandings. If there were discrepancies in interpretation, the SME owner's responsibility was to offer explanations and clarifications, thereby resolving these understanding gaps and preventing them from impeding the knowledge sharing process. However, because not all SMEs have interchangeable forms of documentation, the verbal exchange of knowledge in this SME precludes any explicit knowledge exchange.

Knowledge Application

Interviews with UKM owners reveal that the knowledge they apply to UKM solves their problems. For example, adding a steam engine to the tofu production process aims to speed up the hot water cooking process, whereas previously, cooking soybean juice using a cauldron and burning firewood took production time and was more expensive. The

owner decided to apply this machine after gathering information from other SME owners and various online media sources. Following discussions with employees and stakeholders, the steam engine is now ready for application to SMEs. Regarding the changes resulting from the application of new knowledge, UKM employees are able to accept these changes because the UKM owner involved them in the initial discussion process before applying the knowledge to the UKM business.

When applying new knowledge to SMEs, SME employees report that SME owners have been able to provide direction and explain in detail the changes and expectations of SME owners regarding these changes in the production process. After putting this knowledge into practice one or two times, each employee can apply it, depending on the complexity of the changes. Apart from explaining it directly, UKM owners also provide written guidance as a form of documentation for UKM. During the guide's preparation, the UKM owner engaged senior employees to clarify the specifics of the factory work, ensuring the guide aligned with the factory's real processes. When new knowledge emerges, the owner of the SMEs, with the assistance of his child, documents it. The aim of UKM owners is to create documentation of this knowledge as a form of guidance that can make it easier for new UKM employees and subsequent UKM successors to learn existing business processes.

5. Discussion

Many experts, including Fernandez and Sabherwal (2010), have proposed the concept of the knowledge management process. Fernandez and Sabherwal (2010), assert that the knowledge management process encompasses the steps of knowledge discovery and capture, which represent the knowledge creation phase; knowledge sharing, which is the exchange of knowledge among individuals; and knowledge application, which is the utilization of the company's acquired knowledge to address issues in small and medium enterprises.

The knowledge discovery process at SMEs Putra Soma has been implemented, where the process of discovering knowledge related to new processes in business is carried out unscheduled and occurs naturally during the business process. As an example of the application of knowledge discovery at SMEs, consider the process of replacing the traditional cooking method in the tofu production process with a steam machine. The knowledge discovery process is carried out by SMEs owners, where SMEs owners get information from other tofu SMEs owners regarding how to speed up the soybean porridge

cooking process in the tofu production process. The majority of knowledge discovery applications are facilitated by integrating each individual's tacit knowledge within Putra Soma SMEs. As evidenced by its implementation, the owners and employees of Putra Soma are capable of accepting and comprehending new perspectives, as well as recognizing differences in these perspectives, thereby facilitating the socialization process within SMEs. SME owners primarily carry out the combination process, leveraging new insights from online media to enhance existing business processes. In the process of knowledge discovery, SME owners play a crucial role in updating the existing knowledge of the SME since they are the ones who have access to the SME documentation.

Putra Soma SMEs have implemented the knowledge capture process, as evidenced by their acquisition of knowledge from other Tofu SMEs, which they can replicate and re-use. For example, SME employees gain knowledge regarding how employees at other tofu SMEs make filtering soybean juice easier and faster. SME employees learned about this through conversations and firsthand observations with their peers. Through these discussions and direct observations, SME employees identified a cistern serving as a filter support, a feature they deemed capable of streamlining their production process. Knowledge capture has been implemented in SMEs through an internalization and externalization process. Owners and employees of SMEs have implemented the internalization process, gaining knowledge from the company's existing documents and other media to support the factory's production process. The owners and employees of SMEs demonstrate the externalization process by actively exchanging and discussing knowledge, thereby acquiring the tacit knowledge that each individual possesses.

The knowledge sharing process at SMEs Putra Soma has been implemented, as evidenced by the knowledge exchange carried out by SMEs owners with employees and external parties to share and gain new knowledge. For example, SME employees share knowledge with their owners through discussions, such as creating a container to streamline the soybean extract filtering process. Previously, employees acquired this knowledge by witnessing its implementation in other tofu SMEs, This is then conveyed to the SMEs owner, who provides suggestions for applying this knowledge to the production process. After receiving this information, the SME owner engages in a discussion with the other SME owner to gain insights into the tool's usage. At Putra Soma SMEs, the majority of the

knowledge sharing process aligns with business processes and is conducted through informal, unscheduled discussions. SMEs in Putra Soma implement knowledge sharing through a socialization sub-process, transferring knowledge solely through informal discussions. This discussion process enables SMEs employees and owners to accept and understand different points of view from each other, thereby facilitating the effective operation of the knowledge sharing process. The exchange sub-process cannot be carried out in connection with the knowledge sharing process carried out by the majority of SMEs in the form of verbal exchange of knowledge, and the documentation process is not carried out by all SMEs known to the SMEs owner.

The knowledge application process at SMEs in Putra Soma has been implemented. Employees at SMEs in Putra Soma are able to embrace changes in existing processes, as evidenced by the application of knowledge as a solution to their problems. For instance, the application of a steam engine to support the soybean extract cooking process addresses issues related to the prolonged cooking time of soybeans, thereby reducing production costs. The implementation of the sub-processes proposed in the concept of Fernandez and Sabherwal (2010), has been carried out by providing guidance on the use of the steam engine, which is placed adjacent to the steam engine, which includes information regarding how to use the machine and the number to contact if there is damage to the machine. Apart from the manual guidance that the owner provides near the machine, this process has also been documented by the owner in the main guidance that is owned by the SMEs.

Characteristics of Knowledge Management Process di SMES Putra Soma

From the results of interviews and observations at SMES Putra Soma, there are several characteristics of the application of knowledge management in SMES with the following details:

- a. SME owners have a vital role for the development of knowledge management
SME owners have an important role in acquiring, sharing, processing and applying knowledge obtained from both internal and external SMEs. SME owners also have a role as initiators in documenting the knowledge that exists in SMEs.
- b. Existing ideas and ideas are obtained from common practice in other SMEs

The majority of ideas that exist in UKM are ideas that have been implemented in other UKMs. Considerations for executing knowledge take into account the costs and impact on existing business

processes. Meanwhile, the products produced by SMEs are not diverse, and the majority of the application of new knowledge to SMEs aims to simplify and maintain the continuity of the SMEs' business.

- c. There is no specific time to run the knowledge management process

The majority of knowledge management processes in SMEs do not have a predetermined time, but several knowledge management processes, such as knowledge capture, knowledge discovery, and knowledge sharing, are carried out through informal discussions and do not have a specific time allocation.

6. Conclusion

Based on the concept of knowledge management process from Fernandez and Sabherwal, the application of knowledge management in Putra Soma SMES has been carried out by utilizing the resources owned by the SMES. The knowledge discovery process has been carried out by the process of discussion and knowledge acquisition from digital media. The knowledge capture process has been carried out by acquiring knowledge that has previously been applied in other places that has the potential to be reused in SMEs. SME employees also carry out this process where the majority of the processes carried out are related to the knowledge acquisition process to increase understanding of the knowledge that the company already has. The knowledge-sharing process has been carried out with internal and external parties by conducting informal discussions where the process of interaction between individuals can occur with the support of the ability and willingness of each individual. The knowledge application process has been carried out by making adjustments to the knowledge that has been obtained so that the application of knowledge can answer the problems that exist in SMEs.

Acknowledgement

This research aims to find out how knowledge management is implemented in tofu SME, which has low use of technology as a supporting capacity for implementing knowledge management, so that the implementation of knowledge management is a simple method.

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The authors equally contributed in the present research, at all stages from the formulation of the problem to the final findings and solution.

Sources of Funding for Research Presented in a Scientific Article or Scientific Article Itself

Alternatively, in case of no funding the following text will be published:

No funding was received for conducting this study.

Conflict of Interest

The authors have no conflicts of interest to declare that are relevant to the content of this article.

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