Analysis of Knowledge Management Implementation on SME'S (Study on SME's Tofu)

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Abstract

Knowledge management is currently applied at various levels of the company. Its implementation can generate competitive advantages, ensure business sustainability, and enhance company performance. At the SME level, knowledge management serves as a strategy to sustain operations, addressing a key challenge: the inability of many SMEs to survive due to the potential loss of knowledge held by individuals and the lack of successor expertise in business processes. This study examines the implementation of knowledge management in Tahu Putra Soma, a tofu SME that has remained operational after transitioning ownership to the second generation. Using a qualitative case study method, the researcher analyzes the SME's application of knowledge management based on Fernandez and Sabherwal's process framework. This framework consists of four key processes—knowledge discovery, knowledge capture, knowledge sharing, and knowledge application—along with their sub-processes.

Keywords: Knowledge Management, SME's, Knowledge Discovery, Knowledge Capture, Knowledge Sharing, Knowledge Application

Introduction

Knowledge Management is a company's systematic approach to managing its knowledge resources to ensure long-term growth and sustainability. Several experts argue that implementing good knowledge management can help to maintain the development and sustainability of a company because good management can maintain and develop existing knowledge so that the company's goals can be achieved (Fernandez & Sabherwal, 2010a; Greiner et al., 2007; Niu & Li, 2010; Wiig, 1997; Wong et al., 2014). The application of knowledge management aims to manage tacit and explicit knowledge owned by individuals and companies. Previous research indicates that KM adoption can enhance competitive advantage, ensure business sustainability, and improve overall company performance. Given its benefits, knowledge management should be implemented across all organizational levels (Teng & Song, 2011), including in Small and Medium Enterprises (SMEs). In SMEs, owners typically acquire external knowledge and adapt it to their operational capabilities.

Indonesia holds significant potential for SME development. With the diversity of types and business processes of SMEs in Indonesia, the application of knowledge management to SMEs can further strengthen SMEs as key contributors to the national economy (Jayani, 2020). However, KM implementation in SMEs tends to be simpler and more owner-driven, relying heavily on the owner's ability to generate and disseminate knowledge, with support from

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employee awareness (Wee & Chua, 2013).

A major challenge for SMEs is knowledge loss during ownership or employee transitions, particularly in those relying on traditional business methods, where individual expertise serves as a critical asset. This issue is evident in tofu SMEs, which often employ semi-traditional production techniques.

Since 1960, Matraman has become a tofu production center where the majority of production processes use traditional methods. In tofu production, employee expertise is crucial for maintaining consistent product quality. However, based on data from the Matraman Tofu SME association, the number of tofu factories still producing has decreased from year to year.

According to the association, there is a decline in tofu SMEs operating in connection with the closure of tofu SMEs which is caused by the inability of the tofu factory's successor to continue the tofu SMEs due to a lack of understanding of the tofu factory both in business management and tofu production itself, which is one of the causes of inability successors in continuing tofu SMEs due to the lack of guidelines that can be adhered to for operating tofu factories, which has an impact on the activities of the tofu factory itself. Despite this trend, Putra Soma Tofu SME remains operational under second-generation ownership, largely due to successful knowledge transfer from the founders to their successors.

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 process management that collects, manages, and develops knowledge within the company. Knowledge Management is also defined by all actions leading to access to knowledge for all members of the organization so that it is useful in the decision-making process (Trisninawati & Mellita, 2020). In other opinions, Knowledge Management is defined as resource management knowledge owned by the organization and the formation process knowledge that will provide a competitive advantage for the company (Wong et al., 2014). Greiner et al (2007) and Tung (2018) argue knowledge management as the management and utilization of knowledge owned 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. From various expert opinions, it can be concluded knowledge management is a series of processes carried out by a company to manage knowledge as a company asset to be able to achieve various company goals. Knowledge management can be categorized into two according to Nonaka & Lewin (1994), namely tacit knowledge and explicit knowledge. Tacit knowledge is insight that an individual has that is difficult to share whereas tacit knowledge is an individual skill that comes from experience whereas Explicit Knowledge is the 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

The concept of the knowledge management process used is a concept put forward by Fernandez and Sabherwal (2010) where in concept there are 4 processes consisting of knowledge discovery, knowledge capture, knowledge sharing, and knowledge application.

Knowledge Discovery

Knowledge discovery is a process to develop knowledge existing ones are good tacit nor explicit knowledge that has existed before. The purpose of knowledge discovery is to discover new knowledge from reworking existing knowledge within the company (Fernandez & Sabherwal, 2010). As for the process, Fernandez and Sabherwal (2010) argue that there are two sub-processes, namely socialization and combination. Socialization is the interaction between individuals that produce tacit knowledge interactions in the form of discussion processes or sharing experiences (Baldé et al., 2018; Nurcahyo & Ilmuse, 2019; Nonaka et.al., 2000) while the combination is the process of creating explicit knowledge from various explicit knowledge to produce new knowledge (Fernandez & Sabherwal, 2010; Nonaka et al., 2000). In the knowledge discovery process, according to Fernandez and Sabherwal (2010), there are two sub-processes to support the knowledge discovery process, including socialization and combination. The socialization sub-process is the extraction process of tacit knowledge possessed by individuals both internal and external to the company and the combination sub-process is the conversion process between explicit knowledge to create new knowledge.

Knowledge Capture

Knowledge capture is the process of obtaining knowledge from various other objects to be used again within the company. Knowledge capture aims 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) argue that there are two sub-processes, namely internalization and externalization. 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 & Ilmuse, 2019) while externalization is the process of translating tacit knowledge into explicit knowledge in the form of documentation (Nurcahyo & Ilmuse, 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 is related to the process of changing explicit knowledge into tacit knowledge and the externalization sub-process is related to the process of changing the tacit knowledge possessed by each individual into explicit knowledge.

Knowledge Sharing

Knowledge sharing is the process of communicating knowledge between individuals within a company. This process aims to transfer knowledge between individuals so that it can be maintained within the company (Fernandez & Sabherwal, 2010). As for the process, Fernandez and Sabherwal (2010) argue that there are two sub-processes, namely socialization and exchange. Socialization is an interaction between individuals that produce tacit knowledge interactions in the form of a discussion process or sharing experiences (Baldé et al., 2018; Nurcahyo & Ilmuse, 2019; Nonaka et.al., 2000) while the exchange is a process that focuses on sharing explicit knowledge between individuals or groups (Fernandez & Sabherwal, 2010). In the knowledge-sharing process, according to Fernandez and Sabherwal (2010), there are two sub-processes to support the knowledge-sharing process, including socialization and exchange. The socialization sub-process is related to the tacit knowledge exchange process and the exchange sub-process is related to the explicit knowledge exchange process.

Knowledge Application

Knowledge application is the process of applying knowledge that has been possessed into the form of company activities. The form of application can be in 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 be guides 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 is related to the process of directing individuals to carry out a work process orally, while the routines sub-process is related to providing direction in the form of explicit knowledge to guide processes within the company.

Method

The research method used is qualitative case study research, where case study research is in-depth research regarding individuals or groups at a certain time. In collecting data, interview methods were used with both SME's owners and SME's employees and observations of the production environment at UKM Putra Soma.

Results

Knowledge Management in SMEs

Knowledge Discovery

Based on interview results with SME owners, knowledge discovery is implemented through communication and discussions during daily business operations. Additionally, the process of discovering new knowledge is also obtained from online media sources. 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. Both employees and owners analyze and refine newly acquired knowledge before applying or storing it. During discussions, owners and employees openly exchange perspectives and respect differing viewpoints. According to the owners, there has never been a recorded instance of opinion rejection within the SME, fostering a collaborative environment.

Beyond discussions, knowledge discovery is further supported by job rotation. Routine task exchanges among employees facilitate knowledge acquisition and ensure all staff can perform every production process. This practice mitigates disruptions caused by employee absences.

Finally, SME owners document valuable knowledge that has the potential to enhance operations or solve business challenges.

Knowledge Capture

Based on interviews with SME owners, the implementation of knowledge capture in SMEs occurs primarily through internal communication among employees to access existing organizational knowledge. This process typically serves as a preliminary step before employees engage in business operations.

Another key method supporting knowledge capture is the learning-by-doing approach. New employees first receive theoretical training about the business and production processes to establish foundational knowledge. This theoretical understanding is then reinforced through practical, hands-on experience.

The learning-by-doing process typically lasts 1-4 weeks, depending on the employee's learning pace, and is conducted under the guidance of SME owners and senior staff. This approach aims to help new employees quickly develop an intuitive understanding of each process. Training begins with the simplest tasks, such as soybean washing and grinding, before progressing to more complex operations. Senior employees initially demonstrate each process verbally and practically, then supervise as new employees attempt the tasks themselves.

Knowledge Sharing

Based on interview findings with SME owners, knowledge sharing is implemented primarily through enhanced communication and discussions among SME members. These discussions serve dual purposes: facilitating the acquisition of new knowledge and enabling the exchange of both internal and external information to help owners find business solutions.

The knowledge sharing process predominantly occurs through informal discussions, which are not scheduled but occur organically - either during or after production activities. Owners emphasize the importance of this relaxed approach, as it naturally facilitates knowledge exchange and helps them obtain necessary business information.

Beyond discussions, SME owners report that employees demonstrate willingness to share knowledge with both colleagues and workers at other SMEs. However, owners note that effective knowledge transfer can be challenging, as most interactions occur in regional languages, which sometimes hinders clear communication. On the positive side, owners themselves possess strong communication skills that help employees understand shared information more easily.

During discussions, both owners and employees show openness to different perspectives. When interpretation differences arise, owners play a crucial mediating role by providing explanations and clarifications, ensuring these differences don't impede the knowledge sharing process.

A significant limitation in this SME's knowledge management is its reliance on verbal exchanges. The absence of standardized documentation means no explicit knowledge transfer occurs, as there are no interchangeable documents to share between SMEs.

Knowledge Application

Interview results with SME owners reveal that applied knowledge serves as solutions to operational challenges. For instance, implementing a steam engine in tofu production significantly reduced processing time and costs compared to the traditional cauldron and firewood method. This innovation resulted from gathering information from fellow SME owners and online sources, followed by discussions with employees and stakeholders before final implementation.

The transition to new methods has been well-received by employees, largely because owners actively involved them in preliminary discussions about proposed changes. According to employees, owners effectively communicate both the practical aspects and expected outcomes of production process modifications. Typically, after one or two practice sessions, employees

can implement new knowledge, with adoption speed varying according to the change's complexity.

To reinforce knowledge transfer, owners create written guidelines with input from senior staff to ensure accuracy. When new knowledge requires documentation, owners collaborate with their children to update materials. This documentation serves dual purposes: facilitating training for new employees and preserving institutional knowledge for future successors.

Analysis of the Application of Knowledge Management

The knowledge management framework proposed by Fernandez and Sabherwal (2010) identifies four key phases: (1) knowledge discovery and capture (creation phase), (2) knowledge sharing (dissemination between individuals), and (3) knowledge application (implementing solutions for SME challenges).

The knowledge discovery process at UKM 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 carried out at UKM Putra Soma in one of the processes of applying a steam machine to replace the traditional cooking process in the tofu production process. The knowledge discovery process is carried out by SME's owners where SME's owners get information from other tofu SME's owners regarding how to speed up the soybean porridge cooking process in the tofu production process. The majority of applications of knowledge discovery in UKM Putra Soma use the socialization sub-process where this can be seen from the knowledge discovery process supported by the implementation of combining the tacit knowledge possessed by each individual in the SME's. As seen from its implementation, the owners and employees of UKM Putra Soma are able to accept and understand new points of view and are able to accept differences in new points of view so that the socialization process can take place in SME's. The combination process is also carried out mainly by SME owners just to gain new insights into existing business processes from online media. In carrying out knowledge discovery, SME's owners have an important role in updating the knowledge possessed by SME in connection with the SME's owner as the party who has access to the knowledge documentation.

The knowledge capture process at UKM Putra Soma has been implemented where the implementation of this process can be seen from the acquisition of knowledge that has previously been applied in other Tofu SME's which can be emulated and re-applied to this tofu SMEs's. For example, SME's employees gain knowledge regarding how employees at other tofu SME's make filtering soybean juice easier and faster. This was discovered by SME's employees from the results of discussions and direct observations with other SME's employees. From the results of these discussions and direct observations, SME's employees saw that there was a cistern that was used as a filter support, which was assessed by SME's employees as being able to simplify the production process in SME. The implementation of knowledge capture in SMEs has implemented an internalization and externalization process in the knowledge capture process carried out. The internalization process has been implemented which can be seen from the owners and employees of SMEs understanding knowledge from existing documents in the company and other media to obtain appropriate knowledge to support the production process in the factory. The externalization process can also be seen from the owners and employees of SMEs who have the motivation to exchange knowledge and discuss in order to obtain the tacit knowledge possessed by each individual.

The knowledge sharing process at UKM Putra Soma has been implemented where the implementation can be seen from the knowledge exchange carried out by SME's owners with employees and external parties to share and gain new knowledge. For example, the exchange of knowledge carried out by SME owners with employees through discussions such as the example of making a container to facilitate the process of filtering soybean juice where previously employees obtained this knowledge from observing its application in other tofu SMEs. This is then conveyed to the SME's owner and provides suggestions for applying this knowledge to the production process and after getting this information, the SME's owner discusses with the SME's owner in question to obtain information regarding the use of the tool. At UKM Putra Soma, the majority of the knowledge sharing process goes hand in hand with business processes and the knowledge sharing process is carried out using informal, unscheduled discussions. The implementation of knowledge sharing at UKM Putra Soma as a whole is carried out using a socialization sub-process where the knowledge transfer process is carried out only in the form of tacit knowledge by holding casual discussions. This discussion process makes SME's employees and SME's owners able to accept and understand the other party's point of view and able to accept different points of view from the interlocutor so that the knowledge sharing process can run. The exchange sub-process cannot be carried out in connection with the knowledge sharing process carried out by the majority of SME's in the form of verbal knowledge exchange and the documentation process is not carried out by all SME's known to the SME's owner.

The knowledge application process at UKM Putra Soma has been implemented where the implementation of this process can be seen from the application of knowledge as an answer to problems in SME's and employees in SME's can accept changes in existing processes. For example, the use of a steam engine that can support the soybean cooking process is applied to address problems related to the long time required to cook soybeans, which makes production costs higher. The implementation of the sub-processes proposed in the concept of Fernandez and Sabherwal (2010) has been carried out by guiding 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. machine. Apart from the manual located near the machine, this process has also been documented by the owner in the main manual owned by the SME's owner.

Characteristics of the Knowledge Management Process in UKM Putra Soma

From the results of interviews and observations at UKM Putra Soma, there are several characteristics of the implementation of knowledge management in SME's with the following details:

a.   SME owners have a vital role in developing knowledge management

SME owners have an important role in obtaining, sharing, processing and applying knowledge obtained from internal and external SMEs. SME's owners also have a role as initiators in documenting existing knowledge in SME's.

b.   Existing ideas and concepts are obtained from common practices in other SMEs

The majority of ideas and ideas that exist in SME's are ideas that have been implemented in other SME's or other SME's. Considerations for executing knowledge take into account the costs and impact on existing business processes. Meanwhile, the products produced by SMEs are not diverse, 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 carry out 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 in informal discussions and do not have a specific time allocation.

Conclusion

Based on the knowledge management process concept from Fernandez and Sabherwal, the implementation of knowledge management at UKM Putra Soma has been carried out by utilizing the resources owned by the SME. The knowledge discovery process has been carried out through a discussion process and acquiring knowledge from digital media. The knowledge capture process has been carried out by obtaining knowledge that has previously been applied elsewhere which 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 holding informal discussions where the process of interaction between individuals can occur with the support of the abilities 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.

Acknowledgment

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