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Strategy Development of Innovation Capability of Coffee SME Using Resource-based View Approach: Knowledge Sharing Perspective

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Abstract

The challenges of globalization in the SME sector are getting tougher. SMEs are required to innovate in order to be able to face the challenges of globalization. The purpose of this study is to identify the internal resources of Coffee SME to create innovation capabilities and to determine the effect of knowledge sharing on the innovation capabilities of Coffee SMEs in Garut Regency. This study uses the Mix Method. Qualitative method with Resource-Base View (RBV) approach based on knowledge sharing perspective. The quantitative method is implemented through distributing questionnaires. Data collected using a questionnaire were analyzed using a structural equation model - partial least squares (SEM-PLS). The unit of analysis is seven Coffee SMEs in Garut Regency which has the same character resemblance. The results of the qualitative research show that IKM Coffee in Garut Regency is at the level of competitive advantage. Competitive advantage in question can be seen in several aspects. First, Coffee SME is able to create innovation capabilities in coffee processing from post-harvest to ready-to-drink coffee, limited to various flavors and aromas, that are tacit knowledge. Second, Coffee SME is able to innovate on brands, solar dryer domes, video content as a marketing tool, and coffee processing SOPs that are explicit knowledge. However, Garut coffee SMEs have not been able to achieve a level of sustainable competitive advantage where tacit knowledge and explicit knowledge can be well organized. While the results of quantitative research show that knowledge sharing has a positive effect on innovation capability.

Keywords: explicit knowledge; innovation capability; knowledge sharing; tacit knowledge

Abstrak

Tantangan globalisasi dalam sektor UKM semakin meningkat. UKM diharapkan untuk berinovasi guna menghadapi tantangan globalisasi. Tujuan dari penelitian ini adalah untuk mengidentifikasi sumber daya internal UKM Kopi dalam menciptakan kemampuan inovasi, dan untuk menentukan pengaruh berbagi pengetahuan terhadap kemampuan inovasi UKM Kopi di Kabupaten Garut. Penelitian ini menggunakan metode campuran. Metode kualitatif dengan pendekatan Resource-Based View (RBV) berdasarkan perspektif berbagi pengetahuan. Metode kuantitatif diimplementasikan melalui distribusi kuesioner. Data yang dikumpulkan menggunakan kuesioner dianalisis menggunakan model persamaan struktural - partial least squares (SEM-PLS). Unit analisisnya adalah tujuh UKM Kopi di Kabupaten Garut yang memiliki kemiripan karakter. Hasil penelitian kualitatif menunjukkan bahwa UKM Kopi di Kabupaten Garut berada pada tingkat keunggulan kompetitif. Keunggulan kompetitif dalam pertanyaan dapat dilihat dalam beberapa aspek. Pertama, UKM Kopi mampu menciptakan kemampuan inovasi dalam pengolahan kopi dari pasca panen hingga siap minum kopi, dengan beragam rasa dan aroma, yang merupakan pengetahuan tasis. Kedua, UKM Kopi mampu berinovasi dalam merek, kubah pengering tenaga surya, konten video sebagai alat pemasaran, dan SOP pengolahan kopi yang merupakan pengetahuan eksplisit. Namun, UKM Kopi di Garut belum mampu mencapai tingkat keunggulan kompetitif yang berkelanjutan di mana pengetahuan tasis dan eksplisit dapat diorganisir dengan baik. Sementara hasil penelitian kuantitatif menunjukkan bahwa berbagi pengetahuan memiliki pengaruh positif terhadap kemampuan inovasi

Kata Kunci: explicit knowledge; innovation capability; knowledge sharing; tacit knowledge

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INTRODUCTION

The global economy experienced a significant slowdown throughout 2022 due to the Covid-19 pandemic. Following the economic downturn caused by the pandemic, 2023 has brought forth concerns about the looming threat of recession in several countries, including Indonesia. The recession threat arises from the global increase in inflation due to disruptions in supply chains caused by the pandemic and the Russia-Ukraine conflict, coupled with tightening monetary policies in developed nations. Faced with escalating economic uncertainty, Small and Medium-sized Enterprises (SMEs) are perceived as a viable solution in confronting the recession if their presence can be maximized. Despite enduring the pressures of the pandemic, SMEs face increasingly stringent challenges in the era of globalization, such as the implementation of the ASEAN-China Free Trade Agreement (ACFTA). ACFTA demands that SMEs compete with industrial products from various regions and even foreign countries (Smesco, 2023).

An organization, particularly one oriented towards profit, continually strives to remain viable and competitive. The efforts undertaken to endure and benefit the relevant stakeholders are challenging, as organizations must consistently adapt to changes in their internal and external environments (Muharam, 2017). In today's dynamic and global competitive landscape, innovation has become even more pertinent, primarily due to three main trends: concentrated international competition, volatile and challenging markets, and rapidly evolving technologies. Innovation strategies aim to achieve competitive advantage by creating customer value and new markets (Hamdani, 2023).

The ability to innovate will be a key factor in enhancing industries to succeed in the global market competition. Creating new products, improving the integrity of existing ones, introducing novel organizational methods, forging new markets, and tapping into new sources of raw materials and other inputs will all contribute to high competitiveness (Rumanti, 2018). In the era of Industry 4.0, organizations must evolve and sustain innovation to remain competitive and meet market demands (Aulawi, 2018). The vision and mission of an organization should be oriented toward sustained innovation in the human resource management (Aulawi, 2021), thereby encouraging human resources to innovate in their work (Nurmala & Widyasari, 2021).

The ability to enhance innovation capabilities, both individually and organizationally, can be influenced by knowledge sharing. Knowledge sharing is expected to stimulate the capacity of human resources to innovate and generate creative ideas. Collaboration through knowledge sharing among those involved can create a culture of mutual acceptance and contribution among employees and organizations. Such collaboration will foster innovation capability (Asegaff & Wasitowati, 2015). As the industrial revolution unfolds, the business world offers vast opportunities based on creativity and innovation. The development of domestic SMEs currently requires high-quality, innovative, and creative human resources as the driving force behind economic competitiveness. Indonesia's primary challenge at present lies in the mismatch between human resources and the business environment, as is evident in the case of the coffee SMEs.

Coffee SMEs represent one of the most attractive commodities in today's business world (Hermina & Fauziah, 2022). According to the International Coffee Organization (ICO), Indonesia's coffee consumption reached record levels in 2020/2021, with coffee being a popular beverage in Indonesia, consuming approximately 5 million 60kg bags of coffee (Mahmudan, 2022). One of the

coffee-producing regions in West Java is Garut Regency. Garut Regency is known for its coffee production, which has a distinctive aroma and flavor due to the region's predominantly mountainous terrain. Garut Regency boasts approximately 3,870 hectares of Arabica coffee plantations spread across 14 districts, grown at altitudes exceeding 1,000 meters above sea level. Additionally, there are also robusta coffee plants in the low-lying coastal areas in the southern part of Garut.

Intense competition in the coffee industry demands high levels of innovation. This can be achieved through the enhancement of human resource and business environment innovation (Basit et al. 2019). Licensed training and education are required to develop innovative human resources. Innovative human resources will be capable of creating high-quality coffee products (Alkautsar et al., 2023). Another internal factor affecting the coffee industry's development is the insufficient utilization of rapidly evolving information technology.

External constraints, such as economic, demographic, and environmental changes, also impact the sustainable development of a business. Nearly 80% of start-up companies fail in their first year, and the failure rate for small industries in Indonesia is around 78% (Abimanyu & Prakasa, 2022). This can be overcome through knowledge sharing via education and training. Training provided by associations to coffee SMEs is considered inadequate. Several studies show that knowledge sharing influences innovation capacity (Lustono and Wening, 2023; Yasir et al., 2023). Significantly, innovation capacity further enhances operational income (Nanda Oktasavira & Ismanto, 2022) and the well-being (Setini et al., 2022) of SMEs. Lustono and Wening demonstrate the significant influence of knowledge sharing on innovation capacity among culinary SMEs in Banjarnegara. (Yasir et al., 2023) indicate the significant impact of knowledge sharing on innovation capacity among SMEs in Pakistan.

On the other hand, the mastery of knowledge, technology, and technical skills in the coffee SMEs is not yet sufficient to meet market demands. Technical aspects are not yet standardized to produce better quality coffee that can be accepted by specialty coffee markets, especially in Garut Regency. The coffee processing processes within SMEs remain largely traditional and have not embraced current technological advancements. Therefore, this research focuses on the coffee industry's post-harvest processing, as post-harvest processing is a crucial point in creating the taste, aroma, and quality of good coffee. This industry's activities include sorting coffee cherries, peeling coffee fruit skin (adjusted to the type of coffee to be produced), fermentation, washing, drying in the form of green beans, peeling parchment skin, roasting, grinding into coffee powder, quality control, and monitoring.

RESEARCH METHOD

This study employs a Mixed Methods approach, incorporating both qualitative and quantitative methodologies to address research questions of a correlational and causal nature. The study's respondents are Small and Medium-sized Enterprises (SMEs) engaged in coffee production within Garut Regency. The qualitative analysis employs a systems approach with a focus on the Resource-Based View (RBV) framework, specifically examining it from the perspective of knowledge sharing. RBV emphasizes the development of knowledge-based competitive advantages characterized as valuable, rare, inimitable, and organizable (VRIO) within the internal structure of

SMEs. The RBV approach involves conducting interviews to gather information related to the following aspects:

1. Knowledge Management: This encompasses the creation, documentation, classification, and dissemination of knowledge within the organization.
2. Knowledge Sharing: This relates to the culture of social interaction, involving the exchange of knowledge among employees, their experiences, and skills across all departments or the entire organization.
3. Depth of Knowledge: This refers to the extent of knowledge possessed by coffee SMEs in explaining the various aspects and processes involved in coffee processing.
4. Origin and Process: This entails how coffee SMEs explain the origin of the knowledge they have acquired.
5. Coffee SME Management: This involves how SMEs manage their industry, covering aspects such as inventory, quality control, and documentation.
6. Marketing: This pertains to the knowledge of marketing strategies employed by SMEs to introduce their products to the public.
7. Coffee Types Knowledge: This concerns various types of coffee and their characteristics.
8. Processing: This relates to the knowledge of coffee processing after the coffee has been harvested.
9. Products: This involves knowledge about how coffee SMEs determine their flagship products and how they develop and market these products.
10. Promotion: This encompasses the knowledge of the strategies employed by coffee SMEs to increase their customer base.

These variables collectively provide a comprehensive view of the knowledge landscape within coffee SMEs, shedding light on their capabilities, processes, and strategies for innovation in the coffee industry. Quantitative analysis is conducted by distributing questionnaires to coffee SME stakeholders to gain insight into the influence of knowledge sharing on innovation capability. The questionnaire comprises 33 questions (indicators) designed to measure knowledge sharing and seven (7) indicators to measure innovation capability. The distribution of these questionnaires is conducted offline, in person, to coffee SME stakeholders. Subsequently, data are analyzed using the Structural Equation Model-Partial Least Squares (SEM-PLS) method. The unit of analysis comprises seven coffee SMEs sharing similar characteristics within Garut Regency. The study employs a saturated sampling technique, involving the entire population due to the homogeneity of these SMEs in terms of characteristics.

RESULTS AND DISCUSSION

Knowledge Sharing in Coffee SMEs Based on the Resource-Based View

Interviews conducted with 7 coffee SME owners resulted in the information presented in Table 1. These seven coffee SME owners interviewed are from the following establishments: Balekambang Coffee SME, Chery Coffee from Bukit Sadakeling, Papandak Coffee SME, Chery Coffee from Gunung Karaha, Munjul Coffee SME, Chery Coffee from Gunung Cikuray, Ebod Coffee SME, Chery Coffee from Gunung Papandayan, MG Coffee SME, Chery Coffee from Gunung Mandalagiri, Lestari Coffee SME, Chery Coffee from Gunung Papandayan, and Talegong Coffee SME, Chery Coffee from Gunung Papandayan.

Table 1. SECI Model Interview Results

Socialization (tacit to tacit)	*Externalization* (tacit to explicit)	*Combination* (eksplisit ke eksplisit)	*Internalization* (eksplisit ke tasit)
1. Discussing with a friend or team member about the process of producing quality coffee cherries. 2. Engaging in a dialogue with an atmosphere conducive to sharing knowledge (ideas and experience) with fellow small and medium-sized coffee business owners and coffee enthusiasts, which is part of coffee lovers' culture. 3. Attending an industry management training organized by the Garut Regency government 4. Participating in coffee cherry processing training provided by a company's corporate social responsibility (CSR) program. 5. Infrequently holding scheduled meetings to evaluate the performance of small and medium-sized enterprises.	1. Standard Operating Procedure (SOP) for post-harvest coffee processing is a guide, methods, or steps that must be followed in coffee processing. 2. Understanding the administrative process involves financial recording to the supply of coffee processed by the small and medium-sized enterprise (IKM). These records will serve as a database document that can be used when needed but are still handwritten and not computerized. 3. Education for coffee farmers who have limited knowledge about coffee tree maintenance. 4. Knowledge about making various coffee flavors and aromas such as Natural, Wine, Honey, Full Wash, and Semi Wash has been acquired.	1. Design the brand and slogan on coffee packaging to convey unique information and characteristics of the coffee-producing region of the small and medium-sized enterprise (SMEs) to be shared with coffee enthusiasts. 2. Insufficient content creation, such as videos and images related to the processed products or the post-harvest coffee processing techniques. 3. Using only personal WhatsApp status for sharing promotional videos of coffee processing products, with simple videos of relatively short duration.	1. Welcoming visits from researchers or students on a Real Work Experience program to the small and medium-sized coffee business (IKM) where new knowledge related to proper coffee processing that is not yet known to IKM can be discovered. 2. The lack of standardized coffee processing guidelines to meet the preferences of coffee enthusiasts. 3. Limited employee involvement in coffee processing concerning ideas for improvement, as it is predominantly controlled by the IKM owners with regard to processing standards.

The interview results indicate that knowledge sharing in coffee SMEs, based on the SECI model, starts from post-harvest processing of coffee to ready-to-brew coffee. This knowledge sharing takes place through discussions/dialogues, storytelling, training, guidebooks, the internet, videos, social media, visits from researchers, and other forms of learning. Those involved in these

SMEs can foster good cooperation among employees or organizations, thus enhancing their ability to innovate.

The SECI model results in Table 1 are then mapped using the Resource-Based View approach, with VRIO analysis to measure the level of competitive advantage. The mapping results can be seen in Table 2.

Table 2. Mapping Result

Level	Indicators			
	Valuable	Rare	Inimitable	Organized
Does not have a competitive advantage	None	None	None	None
Similar competitive advantages	*Socialization, Externalization, Combination, Internalization*	None	None	None
Temporary competitive advantage	*Socialization, Combination, Internalization*	*Externalization*	None	None
Competitive advantage	*Socialization, Combination,*	*Externalization*	*Internalization*	None
Sustainable competitive advantage	*Socialization, Combination,*	*Externalization*	*Internalization*	*None*

Table 2 shows that coffee SMEs in Garut Regency are at the level of competitive advantage but have not yet created sustainable competitive advantage. Coffee SMEs still lack knowledge in financial and HR management, digital transformation, and coffee processing tools or machinery. Financial management is still manual and not computerized. In terms of HR, the regeneration of coffee processing experts has not been implemented. Coffee SMEs do not fully understand digital transformation, especially in marketing. This is evident from the uncreative content without any editing in their creations. Lack of understanding of coffee processing tools or machinery is apparent from the many unused coffee machines. There has been a change in capability development through knowledge management, especially in the Socialization and Externalization indicators. This is evident from the creation of unique coffee flavors in each region, such as Wine, Honey, Natural, Semi-wash, and Full-wash flavors. These flavors have become recognized brands in their respective regions. In addition, from the Combination and Internalization indicators, innovation capacity has increased. Coffee SMEs have begun to use coffee processing technology, such as Solar Dryer dome for drying coffee beans. Previously, coffee was only dried by sun-drying, which was not possible during rainy seasons.

Coffee SMEs have also started using digital tools like mobile phones with video applications to document all coffee processing activities. The use of mobile phones has brought about technological changes in the realm of digital transformation, particularly in knowledge preservation. This change will improve insights into coffee processing, and the processed products can be better appreciated by coffee enthusiasts. The relationship between knowledge sharing and innovation capabilities in coffee SMEs.

In summary, knowledge sharing in coffee SMEs in Garut Regency has led to increased capabilities and innovation. While they have a competitive advantage, it still needs to be sustainable, and there is room for improvement, particularly in financial management, HR development, digital transformation, and the utilization of coffee processing tools and machinery. Nonetheless, there has been progress in creating unique coffee flavors and adopting new technologies, which will likely contribute to further advancements in the coffee SME sector.

The Influence of Knowledge Sharing on Innovation Capability

The tested model can be seen in Figure 2. Model testing begins with validity tests using convergent validity and reliability tests using the discriminant validity approach. Table 3 and the outer model in Figure 2 are used to measure the specification of relationships between latent variables and their indicators. Table 3 and Figure 2 show the results of the validity test. Indicators are evaluated based on the correlation between item scores. Indicators are considered valid if the factor loading is 0.70 or higher. Factor loadings between 0.50 and 0.60 are considered adequate (Ghozali 2014).

Using Smart PLS V. 4.0, only 18 out of 33 knowledge sharing (KS) indicators had factor loadings above 0.70. Indicators for the innovation capability variable (IC) had only two (2) out of 7 indicators with factor loadings above 0.70, namely, knowledge of understanding the principles, theories, concepts, and methodologies underlying coffee processing through formal training or education (IC-5) and knowledge of understanding the principles, theories, concepts, and methodologies underlying coffee processing through non-formal education (IC-6). Testing was conducted again after removing indicators with factor loadings below 0.70. The results of this retesting can be seen in Table 3 and Figure 3. As can be seen in Table 3 and Figure 3, all indicators had factor loadings above 0.70, so all indicators can be considered valid.

The results of the reliability test of variables are shown in Table 4. Reliability testing is done by comparing the square root of the Average Variance Extracted (AVE) for each construct with the correlations between constructs in the model. The model has good discriminant validity if the square root of AVE for each latent variable is greater than the correlation between latent variables and other latent variables in the model, and it is recommended that the AVE value should be greater than 0.50. As seen in Table 4, the Cronbach's Alpha value, Composite Reliability for all variables is above 0.6, so it can be concluded that all constructs meet the reliability criteria.

The inner model or structural model is used to test the relationships between constructs, the significance values, and the R-square of the research model. The relationships between latent variables in the study are also known as inner relations. There are three categories of R-square values: 0.67, 0.33, and 0.19, which are interpreted as strong, moderate, and weak, respectively (Ghazali, 2014). The R-square value for innovation capability is 0.432 with an adjusted R-square of 0.429.

This R-square value indicates that 43.2% of the variability in innovation capability can be explained by all the knowledge sharing constructs. The remaining 56.8% can be explained by factors outside of knowledge sharing. The adjusted R-square is less than 67% but above 33%, indicating that the influence of all knowledge sharing constructs on innovation capability is moderate. These results show that improving the innovation capability of coffee SMEs can be

achieved through knowledge sharing. Knowledge sharing can be done through training, discussions, internships, and other means.

CONCLUSION

This study explores innovation capability strategies in coffee SMEs by analyzing internal strengths and the impact of knowledge sharing. Findings suggest that coffee SMEs should enhance coffee processing techniques through knowledge sharing, involving industry experts and consumers to establish high-quality standards. This shared knowledge evolves into tacit knowledge for SMEs. Transferring coffee management expertise to employees is crucial for converting it into explicit knowledge. Additionally, improving digital transformation knowledge is valuable for innovative content creation through digital media, attracting customers and becoming tacit and explicit knowledge. The study emphasizes integrating environmental situations, technological changes, and experiences for a cohesive management approach. Computerized financial management based on technology is essential. In conclusion, knowledge sharing positively influences innovation capability. Recommendations for future research include further exploring the integration of knowledge-sharing strategies with the "Resource-Based View" and "Knowledge Sharing Perspective" approaches to enhance innovation sustainability in coffee SMEs.

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