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**HAND-DRAWN BATIK SIDOARJO: KNOWLEDGE CONVERSION AND COMPETITIVE
ADVANTAGE STRATEGY IN FAMILY BUSINESS SUSTAINABILITY
IN THE POST PANDEMIC ERA**

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ABSTRACT

Hand-Drawn batik industry, dominated by family-owned business, has functional, economic and cultural values. The study is based on what and how knowledge is shared and be a competitive advantage of family businesses. The Nonaka's SECI model is an aspirational process to build a new knowledge, and to explore what and how knowledge sharing in family businesses, and to be applied during the knowledge creation in the succession process. Individual in-depth interviews were conducted with six participants who owned Hand-Drawn Batik family business in Sidoarjo, which posed open-ended questions about values and knowledge sharing of Hand-Drawn Batik within the family. The endeavors to knowledge management are in place though in less-established and structured framework. Founders and successors found storytelling, mentoring, internal training, and involving in the production, as the most used knowledge creating activities. Tacit knowledge creation during succession plays important role in organizational knowledge creation, which needs quality of successor's knowledge to build the competitive advantage. In term of conversion to explicit, the successors take bigger role by leveraging technology, network and database.

KEY WORDS

Knowledge conversion, family business, SECI, hand-drawn batik.

Batik is one of the important creative industries and Indonesia's masterpiece which is very well-known worldwide. The most well-known Batik are in Central Java Mataraman, such as Yogya, Solo, and Sragen; Pesisiran (North Coast) Area such as Pekalongan, Lasem, and Cirebon; and several cities in East Java, such as Madura, Sidoarjo, Tuban, and Bojonegoro. Its uniqueness in a comprehensive technique, technology, and development of motifs and cultural related, has been designated by UNESCO as Heritage Humanity of Oral Culture and Non-Material (Masterpieces of the Oral and Intangible Heritage of Humanity) since October 2009 (UNESCO, 2009), and inscribed in 2009 on the Representative List of the Intangible Cultural Heritage of Humanity.

As the cultural heritage of the past and still exists to this day, batik can provide a variety of values such as functional value, cultural value and economic value on the lives of people. Increase new opportunities for batik business in the field of batik industry in various regions by raising local wisdom coming from numerous ethnics in Indonesia in the form of designs has raised batik as "the art of batik" that is wonderful, unique, and has true meaning and also high philosophical value (Elliot & Brian, 2000).



The batik business is one of the areas that has up to this point made a critical commitment to the public economy, including one that has set out many works open doors. This is on the grounds that the area which is overwhelmed by little and medium-sized enterprises has assimilated 200 thousand laborers from 47 thousand specialty units spread across 101 territorial communities of Indonesia. The industries of *tenun* (traditional hand-woven textiles) and batik have a significant contribution to the national economy, in which its export value in 2020 reached US\$533 million (Dihni, 2021). The Ministry of Trade of the Republik of Indonesia (2020) also noted that Indonesian batik industry is considered to have dominated global market so it can be a driving force for the national economy. Even the batik industry recorded a good performance during the Covid-19 pandemic, batik exports increased compared to the same period in 2019 (Ministry of Trade, 2020) with major exports destination including Japan, USA and Europe. The commercial value of apparel products currently amounts to 442 billion US dollars, which could be a great opportunity for the national batik industry to increase its market share.

Sidoarjo Regency, East Java, also produces a variety of batik that is not inferior to other regions, especially in East Java, such as Madura or Tuban. Since 1675 to date, started in Jetis, several regions in Sidoarjo have become batik centers; call it Sekardangan, Jetis, Tulangan, Kedungcangkring, and Chinese Peranakan (Sidoarjo, 2009).

Batik industry in Sidoarjo is predominantly owned by family (family business). Family business as privately-owned company vision of long haul, trans-generational development of family firm and abundance, is the primary distinctive variable between family and nonfamily firms as can be seen in the study of Zellweger et al. (2012). In many cases, a family business is strongly influenced by the perceptions of its founders, which often could be embedded in his/her ambitions in the long run, the actual transition from entrepreneurial to the family business usually occurs when the children of the founder of the company are included in the work as employees (Poza, 2010). In a family business, undeniably, the family is a resource in the company (Fedakova & Vodova, 2020).

The trans-generational knowledge sharing in small family businesses is the main responsibility of owner-manager, including the decision on the relevant resources, knowledge, and capabilities in the company and its network to be shared. Study by Monticelli et al (2020) found that the third generation deals with a greater challenge to transfer knowledge across generations than faced by the previous generation, at the same time that it extends formalization of norms and creation of boundaries between firm and family. This raises a concern about the extinction of knowledge in the family business. Especially when there is no established system in sharing knowledge, and personal knowledge is often only limited to tacit knowledge, and the danger of being lost.

The family forms a ground for sustaining the imprescriptible and hidden knowledge of the business and its operations. The problem faced is pertaining to the consistent level of willingness of Hand-Drawn batik to constantly transfer the knowledge of its local wisdom from Batik creators. In the context of batik production, it means from design and philosophy to main production (tacit knowledge) and the lack of production process documentation and design's philosophy.

Batik Sidoarjo, like other family companies and MSMEs, has also been affected by the Covid-19 pandemic. This is an unavoidable global phenomenon. Research on family business by KPMG in 2021 found that 69% of family businesses experienced a decline in revenue in the early months of the pandemic. The impact of this pandemic is very real. On a macro basis, Indonesia's economic growth fell to minus 2% in 2020, even though during the 2016-2019 period, Indonesia recorded economic growth in the range of 5%.

A blessing in disguise, the Covid-19 pandemic has forced MSMEs to survive by utilizing digital technology. There has been a significant increase in the use of the digital ecosystem by MSMEs to market their products. The Ministry of Cooperatives and MSMEs recorded the addition of 6.5 million MSMEs utilizing the digital ecosystem through the marketplace. A fantastic number considering that for 10 years since the marketplace was present in Indonesia, the number of MSMEs recorded was only 8 million (Ramadhan, 2021).



This phenomenon is like a sign of how important it is to continue to adapt to technological developments, not least in the realm of knowledge management. Knowledge management is not only owned by large companies, but MSMEs must be able to use it. Kusuma et al. (2020) in Knowledge Management for SME suggest the importance of using digital technology in knowledge management for SMEs, some of which can even be accessed for free such as the cloud, various social media, and webinars with various topics to gain new knowledge.

As the pandemic is getting better and controlled, the Indonesian government is trying to make a gradual transition from pandemic to endemic with health, economic, and socio-cultural considerations. (Cabinet Secretariat of the Republic of Indonesia, 2022). However, the use of digital technology in MSMEs will undoubtedly grow even in the post-pandemic era. MSMEs must dare to be professional, productive, creative, and hone their entrepreneurial spirit on an ongoing basis. Utilizing digital technology, MSMEs are directed to take advantage of digital technology, no longer playing in a conservative area but seeing market opportunities that are disrupted by digital technology so that they can adapt and even reach a wider market. A role and effort that involves the management of knowledge in it.

Knowledge sharing role for Small and medium-sized enterprises is considered as a very important economic resource (Lin & G.L, 2004). While studies on both knowledge management and organization usually are focused on building innovation capabilities, however, very limited literature focuses on how small and medium-sized family business use knowledge management to achieve competitive advantages.

Various studies on knowledge sharing in small and medium-sized enterprises have been undertaken (Darroch, 2005; Ngah & Kamaruzaman, 2009). The studies resulted knowledge sharing improving the business performance and supporting small and medium-sized enterprises to face the uncertain business competition. The findings of the study conducted by Balcerzyk (2020) underlines that knowledge management in the global economy is a resource of strategic importance that affects the organisation's market value and provides a competitive advantage. The formation of a significant intellectual capital for an organisation requires the use of appropriate methods and tools supporting management, regular measurements, continuous comparison with competitors, elimination of barriers to knowledge sharing.

To explore knowledge management and small and medium-sized family business in an empirical fashion, we use a well-known knowledge management model, the SECI model of Ikujiro Nonaka, as a framework for conducting our research, which has been widely used in previous studies on manufacturing industries.

However, considering the making of Hand-Drawn Batik--the art and craft-- involves the artisan's unique characters as well as the soul poured in a piece of cloth to produce a work, then the process of knowledge transfer becomes a unique experience that is not always the same between artisans with each other. The novelty in this research is to explore the sharing of knowledge on Hand-Drawn Batik small and medium-sized family businesses to sharpen its competitive advantage in Sidoarjo as one of the main producing area of batik in East Java by employing Nonaka's SECI model.

An interesting opportunity in mobilizing knowledge management or knowledge management in the creative industry, in this case batik in Sidoarjo, one of which is to bring Sidoarjo batik to a higher level, in the context of batik in Indonesia, to become part of the mainstream of Indonesian batik, by continuing to strive innovation and creativity in order to increase the added value of the economy through the capitalization of creative ideas.

METHODS OF RESEARCH

In order to develop a comprehensive research model for the future survey, the study applied an exploratory field study based on qualitative method and in-depth interview with participants, descriptive data analysis through literature approach and document tracking to explore the how the knowledge of local wisdom in Hand-Drawn Batik Sidoarjo family business is shared to build the competitive advantages. Literature study conducted by



thoroughly investigating the source of information through books and internet related to batik's relationship with cultural element. The data obtained from both the secondary and primary data then analyzed to obtain a description of information on bataik analysis in relation to the elements in culture. The focus areas are Batik production sites in Sidoarjo.

Sample Selection. The main criteria for selecting subjects were that they must own the business that employs the family members in running the business. There were about 30 hand-drawn batik owners in Sidoarjo who are also members of Sidoarjo's Hand-Drawn Batik Owners Association. Among the 30 members, 6 interviewees from 3 workshops, including family members were invited to participate, represented different areas of batik workshop in Sidoarjo. All participants participated in this study on a voluntary basis. They were interviewed inside their workshop to obtain the information about their interaction style with the artisans and how the knowledge is stored, documented and archived in the workshop

Data collection. Data were collected through semi-structured interviews. The interviews with the participants lasted an average 60-90 minutes and were audio-taped and noted for future transcription. Field notes were immediately documented within two days to maintain the vital nuance and cues. To interpret the interview transcripts and field note, an objective coding scheme was applied. Since the nature of this study is more exploratory than confirmatory, content analysis is cost-effective and useful in analyzing interview data (Berg, 2004). The content analysis of interview transcripts be used from the participants' perspective, in the process of identifying, coding, and categorizing the primary patterns in the data. This means analyzing the contents of interviews and observations (Berg, 2004; Silverman, 2000).

Table 1 – Participants' background information

Firm	Alpha		Beta		Gamma	
	A	B	C	D	E	F
Participants Profile	Founder	Successor	Founder	Successor	Founder	Successor
Gender	M	F	F	F	F	F
Highest education	Master Degree	Bachelor	High School	Bachelor	High School	High School
Age	55	24	65	36	45	20
Years in current job	37	6	48	12	28	4
Number of employees	20		15		10	

Data Analysis. All interview transcripts were subjected into systematic content analysis. While variables, established prior to the analysis and compiled and categorized by the researchers merely guide the study, other categories were expected to emerge from the data (Manning & Cullum-Swan, 1994). Transcripts were then identified and divided into segments representing topic-units on how knowledge is shared trans-generationally with appropriate established and emerging codes. Once the initial coding task was completed, all segments of text addressing the same topic were grouped and labeled by a keyword or expression capturing the underlying issue.

RESULTS AND DISCUSSION

Our results categories are presented on the basis of four SECI knowledge creation modes. Table 2 maps the model that emerged from our data analysis with respect to creation of SECI knowledge that can be retained to summarize the opinions and responses of participants. According to , all the SECI phases have to be performed for successful knowledge conversion. Development of organizations without internalization or combination activities could be inefficient because employees' "know-how" and professional knowledge develops in the combination phase of internalizing and collective knowledge.

Socialization. The knowledge conversion from tacit to tacit. As shown in Table 2, socialization (tacit to tacit) mode presumes the process of converting new tacit knowledge through shared experiences in daily social interaction. Family business owners (founders) and their heirs (successors) sharing knowledge and acquire tacit knowledge without language or blindly.



Table 2 – SECI Knowledge Conversion Modes

SECI Modes	Assumptions	Implication to Participants
Socialization (Tacit to Tacit)	<ul style="list-style-type: none"> • Social interaction • Tacit knowledge sharing by face-to-face or through experiences. • Meetings and brainstorming • Shared experience, (i.e., spending time together or living in the same environment) • The mentoring concept is defined as the socialization, which typically occurs in a traditional apprenticeship, where apprentices learn the tacit knowledge, they need in their craft through hands-on experience 	<p><i>Alpha</i></p> <p>A. Socialization on batik production is important as part of the heritage preservation. Continuing what parents did, sharing knowledge and stories about batik could be different, to heirs and the artisans. Knowledge sharing is conducted through informal social interaction, meeting and brainstorms not limited during the production time, but also in the midst of leisure time. Intensive sharing is limited to family members especially the heirs. To the heirs, the shared knowledge not merely on the production process but the value, philosophy, meaning behind the picture that the heirs should understand, the whole story of batik. However, it is not necessary the same to artisans, they get the knowledge sharing on how to make a batik, but not all the artisans understand about the deep values, philosophy and meaning. Because heirs are involved from the very beginning, felt they are chosen, they responsible to share their insights. Financial and other simple management of the business are thought in day-to-day basis.</p> <p>B. Certain family members involved in the production process and understand by sitting, doing and listening to the story of parents. Only the chosen heirs and those who wants to continue the business. The sharing of knowledge is not limited by time, at any time, because the process of batik is like painting a story, pouring flavor into a piece of cloth. Stories from philosophy, history, symbols, meanings until drawing techniques. Business operation, needless to say, we are involved in daily operation, from finance, marketing, meeting suppliers and networks.</p> <p><i>Beta</i></p> <p>C. My parents are artisans. I loved to see how they made the batik so beautifully, and started to learn batik. Batik is a story, the drawing of the history, symbols, meanings, something happened in society. It aimed to maintain environmental sustainability and mutual survival by duplicate the motif and share it to artisans even the beginners. They sometimes do not understand the philosophy, they just draw, color it and finish it. It differs to my daughters who sit next to me all the time learning, from the values to technical aspects. We don't have special time to talk about it, because Batik is our life, so life should be talked about every time and this is what we strive. Pertaining to management, not too complicated, as long as financially save and we can pay the workers and suppliers on time.. simple.</p> <p>D. Batik is symbols of society, to me it is also mother's love. My mother talked about batik so passionately. There is no special moment in knowledge sharing, meeting with the artisans and brainstorming sessions can happen at any time. Sometimes I am afraid I cannot absorb that much knowledge from my mother and I don't want this precious cultural heritage and knowledge to be extinct.</p> <p><i>Gamma</i></p> <p>E. Producing batik is like raising a child, you have to be very careful. It is a heritage, so that we try so hard to maintain its authenticity and quality of production as much as possible, from methods, manufacturing techniques to the final results. I learn batik from my parents, by listening and doing. There were no books, no special school, we were just doing and copying what my parents doing. We—their children—try to remember everything they taught. Descendants were expected to preserve the culture of their ancestors by inviting descendants to participate in the process of producing batik (especially hand-drawn batik), to get used to and understand the order of batik production to batik marketing. I hope one day it can become a livelihood. The method used in knowledge sharing is copying and imitating. Special techniques are not shared with other people, only to descendants and heirs by always participating when we—parents—produced batik. Knowledge of the batik production process is only owned by artisans and their families</p> <p>F. It is not easy to produce batik today by following the old order. This is very challenging, because we don't have enough documentation back-up. We obtained knowledge from word of mouth, interviewing artisans. Even the image pattern that I have is only papers from my grandmother and the story that she once delivered.</p>
Externalization (Tacit to Explicit)	<ul style="list-style-type: none"> • Publishing, articulating knowledge, developing factors, which embed the combined tacit knowledge which enable its communication. • Developing concepts, images, and written documents can support this kind of interaction. • Crystallized tacit knowledge, and it becomes the basis of new knowledge. • Concept creation 	<p><i>Alpha</i></p> <p>A. Concepts are in brains of owners—the parents and heirs. There is no systematic documentation of design and philosophy in my business. We never think about this. Our main concerns are production. Documentation about philosophy, values, meaning are in the brains. In term of techniques and method, we can learn it by doing, once you are hands-on you automatically can do the production. Designs, motifs, philosophy are part of the competitive advantages, because every workshop has their own unique designs. Uniqueness, distinctive design, and quality will be safe with the heirs. [...] We teach the artisans and are open to society to learn batik, we share the philosophy and values, but again, batik is very individual in concept. What we teach does not mean will be absorbed exactly the same by everyone. Batik has its own soul, especially the classic ones compare to contemporary ones. So, what happen in common is the documented knowledge of Batik is related to history, patterns, motifs, production process and method. It is hard to archive the soul of batik, it is united to the artisans. Different artisans may produce different 'soul' of batik that can be felt.</p> <p>B. Batik looks simple but not many can appreciate the process of making a piece of hand-drawn classic batik. What my parents taught me is uniting the soul, emotion and feeling on batik to create a quality batik. Everyone can do the process and drawing, but soul will make it differs to another. I help my parents in collecting and documenting the classic design from their ancestors, and writing the story. Pertaining to designs, I contribute more to contemporary design, combining it with the classical designs to meet the market demands. I wish that I can contribute more by having all the information properly-collected and safe. It is truly a heritage.</p> <p><i>Beta</i></p> <p>C. Our business is simple, the process is simple, and I have children who help me. I am not too bothered about the knowledge to be shared. I did not have a tertiary education, because from the beginning I had plunged into helping batik production. So if I have to think about things, I can't [...] the important thing is that my children who have higher education can think better to develop this business. My job is to teach them what they should understand about the world of batik business. Let those who develop themselves.</p> <p>D. So far what I can do to help develop this business is that in addition to developing the motive design that people enjoy today is as much as I can, starting to gather the concepts and knowledge that my parents have. Although this is not easy, because from the beginning more knowledge was transmitted orally and the image copies of old and classic batik were scattered. Another challenge is developing batik business itself is not easy, in terms of competition and maintaining traditional techniques.</p> <p><i>Gamma</i></p> <p>E. Concept creation for me is to continue and maintain what has been taught to me. I am also open to market input, the design of what is liked and more acceptable. I am only able to do it in a simple way. I hope by telling and teaching children and some chosen artisans will be able to develop the concept of batik better in the future and survive [...] Enduring means, don't get extinct, win society's heart, because the unique design of batik is a competitive advantage of our local products.</p> <p>F. I am still young ... I have plenty of time to continue my business, not just business, but this is work. I tried to develop what I could. Mother is very dependent on me especially in terms of knowledge that must be conserved, designs and techniques.</p>



Combination (Explicit to Explicit)	<ul style="list-style-type: none"> • combining different types of explicit knowledge • organizing, integrating knowledge • Develop design and prototypes • The creative use of technology, network and database • Explicit knowledge is collected from inside or outside the organization and then combined, edited or processed to form new knowledge. • The new explicit knowledge is then disseminated among the members of the organization 	<p><i>Alpha</i></p> <p>A. I have my own motivation to promote traditional natural tourism, not modern batik boutiques, that anyone can visit directly there to see the handicrafts and also the direct process of making his batik, especially Sidoarjo typical batik. I am an open person and academician, I am worried about the statement with UNESCO that this recognized batik if it shrinks will be revoked. Therefore, I opened training in making batik with a group of 10 people and equipment and materials provided. My objective is to help the government in increasing economic growth, adding new artisans of hand-drawn Batik, and conserving culture.</p> <p>I am assisted by my daughter as my crown-princess of this family business. She is assigned in developing the business in more modern ways, using her skills in technology to documenting our knowledge and intangible assets, fashion design and her network to make this business go forward.</p> <p>B. Incidentally, my father was a resource person in various forums that discussed the intricacies of batik. By always participating in many forums where my parent coaches I understand more how the business should run. I also build a batik information system owned by our family company. Not perfect, but it's clear that there is a direction to develop it more seriously. We utilize the networks we have to market and develop our batik business. The results also appear, more foreign tourists come and study in our workshops. Besides that, I try to be more creative in developing this batik by providing added value, namely designing the finished form and participating in various fashion shows.</p> <p><i>Beta</i></p> <p>C. I am continuing what was passed on by my parents. So I understand what my parents described. But of course what I inherited to my child also changed, especially in design. For example, during the batik exhibition, we met with fellow artisans from other regions, and we exchanged ideas to be a new inspiration for me. So I made new designs. Meanwhile, my daughter gives a lot of input in terms of management, creative financial and marketing management, and designs that are more popular with the younger generation. We can collaborate and synergize our ideas.</p> <p>D. The synergy between me and mother is more to the creation of new designs, and I help through documentation of batik knowledge on computers and online media marketing. I also give input to new, younger and dynamic designs, without leaving classic designs as our competitive advantage. Development of this treasure is to make us more competitive and stay in business. I want to open more with other communities, I want to develop a network with other artisans and parties, build a conducive environment to spread our business, enabling different platforms with other business to create new business environment.</p> <p><i>Gamma</i></p> <p>E. To be honest, compared to other artisan friends, I am still very junior [...] I have to open myself to learn and get ideas from others, to develop the design without losing my characteristics. I called it my 'new idea series', then I have no concern disseminating what I have because I need ideas either to develop mine...</p> <p>F. I received vocational education in the fashion field. Batik is my self-expression, maybe it was inherited from my mother. I want to focus on more fusion batik, a blend of classic and modern. I think this is the best collaboration we have and make us distinctive from others. I sharpen the design we have, using techniques I got from school, and make proper portfolio—something my mother may missed.</p>
Internalization (Explicit to Tacit)	<ul style="list-style-type: none"> • Knowledge receiving and application by an individual • Enclosed by learning by doing • Explicit knowledge becomes part of an individual's knowledge and will be assets for an organization. • It is a process of continuous individual and collective reflection and the ability to see connections and recognize patterns and the capacity to make sense between fields, ideas, and concepts. 	<p><i>Alpha</i></p> <p>A. I was greatly helped by this collaborative work. As an older generation, I took on the role of guardian of culture by preserving the philosophy, values, local wisdom of hand-drawn batik; while the younger generation gives nuance on how batik conservation efforts are packaged in a form that is more acceptable to the society now. This collaboration is a great invisible asset and new knowledge possessed by the family business becomes a competitive advantage.</p> <p>B. In the family, as the younger generation, I will be more willing to take risks. It does not mean to say that our family does not want new product development, new way or method ... they are well aware of innovation, but is not willing to take the associated risks. I try to accommodate their concerns with mine, that's what we called collaboration.</p> <p><i>Beta</i></p> <p>C. My daughter at first was not interested in this business. It is different now, the more she is in the business, the more she plays with her ideas. She is highly-motivated person, who are ready to take over leadership of this family business. So we play our parts. I am responsible to maintain the family character of the business and keep the family values alive in our work; she helped me to grow the company in a rapidly-changing economic and challenging business environment. What we learned together is not about the production, but how we grow the business together.</p> <p>D. I encourage mother to innovate at a faster pace than our competitors, in terms of design, methods to be able to compete in the market. My mother, in a certain way, keep our family's values, originated by my grandmother as the founder and transmitted down through succeeding generations. As families business expands, I think shared values become more important in binding family members together</p> <p><i>Gamma</i></p> <p>E. What we discussed most is impact of our co-work on family businesses. The ongoing struggle between honouring tradition and pioneering change. I fully understand what she strives for, and this is for our company to grow. I highlighted that this is a fruitful discussion to combine my concept and hers.</p> <p>F. Mother knows everything about product and methods, but she needs to explore more modern ideas to make this business grows [...] a synergy between mother and me. This new born concept we will implement in the business.</p>

Successors and selected artisans work with the owner which also the designer and learn batik production not through language but by observation, imitation, and practice. Experiences become the key to acquiring tacit knowledge (Nonaka, 1994). They are involved in the same experience; transferring information will often make little sense if it is abstracted from embedded emotions and nuanced contexts associated with shared experiences. It involves the emotion and feeling while making a piece of batik, which is a very individualistic process. Shared experience fosters the common perspective which will be shared among members as part of their respective tacit knowledge bodies.

The capability to absorb knowledge depends on education background and trainings within and outside a family business. Therefore, the educational background of founders and successors became important data. From the three case studies, one of the successor's



educational backgrounds is lower than the founder, one is the same educational level with the founder, and one is higher than the founder. The study revealed, however, that the educational background showed less-relevance with the capacity to absorb the knowledge. The daily habit of sharing through storytelling, the workshop's close location to their home, and the artisans as 'extended family member' created an unconscious exchange of information among family business members. Business of art becomes part of life.

In the context of family business, from the three workshops in this study, socialization was conducted through storytelling, internal training, individual training, mentoring in the production and design process. Constant involvement of successors since their childhood in the business and learning through problem solving are also methods used by the family business owners to bring 'feeling and soul' of the business to their successors. These methods were found in the study of (Swap et al., 2001), that storytelling is powerful for transferring knowledge rich in tacit dimensions and often implied moral; also suitable for internalization. Mentoring can be considered as an effective way of transferring critical skills and knowledge; mentors also teach norms of behaviours and transfer knowledge about the values of a firm; also suitable for internalization (Swap et al., 2001). However, no structured and well-documented mentoring activities were found. Brainstorming retreats or camps - informal meetings for detailed discussion to solve problems in development projects as well as apprentices working with their mentors and learning the tacit knowledge needed in their craft (Becerra-Fernandez & Sabherwal, 2001)

In the context of Sidoarjo batik, the socialization that is carried out is not only in visible forms, such as patterns, designs, techniques, which are only known orally from one generation to the next. However, craftsmen also socialize philosophy, values, meanings and symbols in batik as did Alpha and Beta. The process of making batik by the informants is believed not to be a mere physical activity, but also a process that involves the soul, feelings, and emotions. Batik is not treated just as an object, but like a living creature that has a soul.

Externalization. The knowledge conversion from tacit to explicit. The knowledge conversion involves both tacit and explicit. The conversion mode captures the idea that both tacit and explicit are complementary and can expand over time through a process of mutual interaction (Nonaka, 1994). In this study, Beta and Gamma's older generations put more concerns about the values and philosophy they inherited from the previous generation, for making batik properly is more important rather than making a documentation or archiving the knowledge. The process of capturing and transferring experts' knowledge into an understandable form was being done by the younger generations (the successors). Groupware and other tools for team collaboration—dialogue, listening and contributing to the benefit of all participants—strongly supports externalization (Becerra-Fernandez & Sabherwal, 2001). Modelling using metaphors—a creative, cognitive process which relates concepts that are far apart in an individual's memory (Nonaka, 1994) --is highly effective in fostering direct commitment to the creative process (Becerra-Fernandez & Sabherwal, 2001), by translating personals' expertise into explicit forms.

Combination. A knowledge conversion from explicit to explicit. It involves the use of social processes to combine different bodies of individual's explicit knowledge (Nonaka, 1994) . Individuals exchange and combine knowledge through different mechanisms of exchange (e.g., meetings, telephone conversations). Reconfiguring of existing information by sorting, adding, recategorizing, and recontextualizing of explicit knowledge can lead to new knowledge. It integrates knowledge with the use of technology, network and database to create a new knowledge. Combination is rooted in the processing of information. As the younger generation, the successors are actively participating in the combination of knowledge conversion in the context of this study. As they are more technology-savvy and familiar in managing information databases and repositories, best practices, and lessons learned - reconfiguring of existing information by sorting, adding, combining, and categorizing of explicit knowledge can lead to new knowledge, i.e.. building batik information system, developing portfolio, managing a network of artisans, designers, exhibition and fashion show organizers, documenting batik knowledge on computers and online media marketing, being an environment enabler, and using different business platforms to expand marketplace.



Internalization. A knowledge conversion from explicit to tacit. Internalization aims to incorporate explicit knowledge into tacit knowledge (Nonaka, Krogh, & Voelpel, 2006). Internalization is an individual, psychological process and is somewhat similar to the traditional notion of “learning”. Explicit knowledge can be shared among individuals and loses some of its explicit nature through internalization, where people move to act on knowledge. It is a process of continuous individual and collective reflection and the ability to see connections and recognize patterns and the ability to make sense between fields, ideas, and concepts. The successors called this conversion as collaboration and synergy. Learning and knowledge conversion happened through observation in a focused training with the founder and colleagues, a conceptualized thought and ideas to grow the business.

DISCUSSION OF RESULTS

Practical implementation of knowledge management in family business is a tough and challenging task. It includes building awareness of knowledge management, determining its intended outcomes, and valuing knowledge as intangible assets and resources, due to the fact that founder emphasizes the production, values and philosophies of their business and puts aside knowledge management as a critical business function.

The transfer of knowledge, especially the transfer of tacit knowledge from founder to successor and successor’s training to take over the leadership, is found to be key processes in the development and protection of knowledge and ensuring the continuity of a family business. Adopting SECI knowledge conversion modes of Nonaka, this study found that founders and successors find knowledge management practically found in their family business, although not developed in a more structured form. During the succession, many knowledge creation processes and activities are going on informally and spontaneously or even blindly.

In terms of SECI knowledge conversion mode, mentoring, internal training, and engaging in the meetings and production are the most used knowledge creation activities. Tacit knowledge is very dominant, in line with the business characteristics that are simple and less complex structure, flexible information flows and fluid culture, modest management skills and competency, the role of founder is highly visible influencing the operations and behaviour of employees by the ethos and outlook of owner-managers. Other characteristics of organizations generally appeared in this study were the simple planning and control system, and focus on operational processes - less focus on strategic processes, low degree of standardization and formalization.

Tacit knowledge introduction throughout succession needs to be placed in broader context of organizational knowledge creation as a way to increase the successor’s expertise and adding new knowledge that contributes to building the competitive advantage own family business. The lack of clear objectives and agenda can lead to lower productivity level. (Boyd, N, & M, 1999).

Although there is a growing demand from management in the practices of knowledge management to improve organizational performance, implementation of knowledge management has been found to be very challenging processes and requires careful planning and execution. The endeavor to implement the knowledge management in a structured manner will rely on the successors as the younger generation to develop structures and processes to govern the wide range of different knowledge management practices.

Knowledge management should be considered in support business development innovation. A comprehensive approach to designing knowledge management frameworks should include not only for the technological design, but also designing strategic sustainability of these systems to support the organizational excellence. It requires everyone in the organization—not limited to founders and successors—to understand the strategic importance of knowledge, and how knowledge sharing and its management is embedded in the vision and strategy of the organization.

The research conducted should be considered as preliminary in nature. From the three enterprise cases in the study, the analysis indicates that the importance of involving



successors in different knowledge creation activities by the founders of family businesses is to transmit the founders' tacit knowledge with the further expectation of creating new knowledge.

The dominant tacit knowledge reflected on both founders and successors' the processes of socialization and internalization (e.g., storytelling, mentoring, internal training, involving in the meetings and production process). These socialization and internalization processes are critical to building and sustaining the competitive advantage skills of business. The process was clearly found in the know-how of individuals, 'soul' and emotional knowledge, know-how in daily operations, working practices, organizational routines and organizational culture. This finding showed that storytelling is the dominant way of knowledge sharing, as hand-drawn Batik is the picture of society's story, with the pouring soul. Thus this is in line with study of Swap et al. (2001) stories are particularly powerful in transferring knowledge rich in tacit dimensions and can be used through the narrative and often implied moral to communicate managerial systems, norms and values. Stories are more memorable and more likely to guide behaviour and the moral side of stories.

Successors have the important roles in the knowledge sharing process. It underlined the ideas that lack of awareness of the of successors' important involvement in wide range of knowledge-building activities could lead to significant implications for practice on how to improve the creation of organizational knowledge and competitiveness in family businesses during and after the succession. Batik as a cultural heritage should indeed be preserved. It's not just about knowing how to draw patterns, choosing colors, and batik techniques, but also about the meaning, value, and philosophy behind the making of a batik cloth. This kind of tacit knowledge should be well documented so that it is not lost or there is a shift in values and meaning in the next generation. Documentation with videos accompanied by narratives about values, meanings, and philosophies is one of the right methods, especially for SMEs, to capture tacit knowledge (Kusuma, et al, 2020)

The prime movers in the organization's process of knowledge creation are individuals who accumulate tacit knowledge through direct "hands-on" experience and the quality of tacit knowledge on "knowledge experience" (Nonaka, 1994). Each of four modes of knowledge conversion can create new knowledge independently; the organizational knowledge creation should focus on the building of both tacit and explicit knowledge, and interchanging these two aspects of knowledge through internalization and externalization. Individuals are essential actors in the creation of knowledge. For that reason, the idea of "knowledge spiral" (Nonaka, 1994) described how knowledge is transmitting starting at the individual level and moving up to the collective level and then to organizational level. Thus, knowledge transfer is vital in succession processes, how knowledge is transferred from founder to successor, externalization and amplification through dynamic interaction among all four modes of knowledge conversions in the spiral of knowledge. Successor can build their unique business perspective that can be articulated and amplified through social interactions at the family business level and their network that can then be added as new knowledge that contributes to the competitive advantage family business.

The study has established that business founders encouraged their successors to acquire soft skills by including their successors in business early especially during strategy development and planning, as the most popular way of to groom successors. An effective succession program is where there is well-timed parent-children and mentoring as this encourages children to take active roles in business and ensure its future success. Lansberg and Astrachan (1994) emphasized that due to their early involvement, effective successors were more experienced with business operations. The more businesses involve successors, the more likely the businesses will be successful upon their resumption of leadership.

Both founders and successors understand that integration is key to supporting the organisation in using knowledge assets and determining the interfaces between the business processes supporting knowledge management. However this understanding should be fostered in how to leverage knowledge management not limited within organizational boundaries. From the perspective of successors, knowledge sharing, business networking and enabling environment begins with the integration of knowledge management with the



business strategies, the proper documentation of processes and best practices, the development of a supportive network, and opening up to change and adopting new technology.

CONCLUSION

These research findings contribute to broadening our understanding of the conversion perspectives of family business organizational knowledge as well as it opening up some new directions for research. Learning from the study of hand-drawn Batik, which the socialization and internalization of values, meanings, philosophy through storytelling, are inseparable with the day-to-day work, so that successors are involved in the business from the very beginning, thus further research we could propose is the process of “early socialization” from the perspective of family business that shapes organizational knowledge creation perspective and in the framework of other industries.

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