

## THE DEVELOPMENT OF LOCAL WISDOM-BASED REGIONAL LEADING PRODUCT: A PROPOSED IDEA

### *Pengembangan Produk Unggulan Berbasis Kearifan Lokal: Pengajuan Ide*

**Lina Anatan**

Faculty of Business, Universitas Kristen Maranatha Bandung  
Jl. Prof. drg. Surya Sumantri, MPH. No. 65 Bandung 40164  
West Java, Indonesia

---

#### Author Correspondence

Email : lina.anatan@eco.maranatha.edu

Submitted : 24 March 2020

Revised : 13 July 2021

Approved : 19 July 2021

---

**Keywords:** batik, creative industry, competitiveness, SMEs, local wisdom

**Kata kunci:** batik, industri kreatif, daya saing, IKM, kearifan lokal

---

#### ABSTRACT

This study aims to explore the problems faced by *Batik Sekar Putri* and offer the ideas to develop the business to be the leading products in Cimahi City. Qualitative approach was used to understand problems based on natural settings that are holistic, complex and detailed. From the interview, several main problems were identified, including: limited human resources creativity; lack of capital and fund to purchase production equipment and for marketing; quality management have not been fully implemented; no separation between corporate and personal finances; limitations in using information technology as a promotional medium; and a simple organizational management. This study analyzed the problems faced by Small and Medium Enterprises (SMEs) from several functional and organizational aspects as a consideration for decision makers to formulate their business strategy. The managerial implications of the study could be summarized as follow: 1) Developing business partners that focused on SMEs empowerment including mentoring and development. 2) The SMEs limited knowledge could be solved through knowledge transfer activities by the university. Through this empowerment, it is expected that the performance and competitiveness of the SMEs can be improved so that they can be made as one of the regional superior products based on local wisdom.

#### ABSTRAK

*Studi ini bertujuan untuk menggali permasalahan yang dihadapi Batik Sekar Putri dan menawarkan ide untuk mengembangkan usaha sebagai salah satu produk unggulan di Kota Cimahi. Pendekatan dilakukan secara kualitatif untuk memahami masalah berdasarkan pengaturan alamiah yang holistik, kompleks dan rinci. Berdasarkan hasil wawancara, masalah-masalah yang teridentifikasi adalah: terbatasnya kreativitas sumber daya manusia; kurangnya modal dan dana untuk membeli alat produksi dan pengembangan mini museum; manajemen mutu yang belum sepenuhnya dilaksanakan; tidak ada pemisahan antara keuangan perusahaan dan pribadi; keterbatasan penggunaan teknologi informasi sebagai media promosi; dan pengelolaan organisasi yang masih sangat sederhana. Secara umum, studi kasus ini memberikan kontribusi dalam menganalisa masalah mendasar yang dihadapi oleh Usaha Kecil dan Menengah (UKM) dari beberapa aspek fungsional dan organisasional sebagai bahan pertimbangan bagi pembuat keputusan untuk memformulasikan strategi bisnis mereka. Implikasi studi manajerial ini dapat dirangkum sebagai berikut: 1) Pembinaan mitra usaha dengan fokus pada aspek pemberdayaan UKM termasuk pendampingan dan pengembangan 2) Memberi akses pengetahuan eksternal melalui aktivitas transfer pengetahuan dari universitas. Melalui pemberdayaan ini diharapkan kinerja dan daya*

*saing mitra kerja dapat ditingkatkan sehingga dapat menjadi salah satu produk unggulan daerah yang berbasis kearifan lokal.*

---

## INTRODUCTION

*Batik* is one of the distinctive features of Indonesian culture that has been designated as masterpieces of the oral and intangible heritage of humanity by UNESCO since 2 October 2009. Each region has a unique *batik* motif born from the inspiration of natural wealth and local wisdom of the community that can be used as a regional leading product. According to (Nurhaida et al., 2015) the word *Batik* consists of two words include "*Mbat*" and "*Titik*" which means to make a dot or in Bahasa called as "*titik*". The word *Batik* itself comes from Javanese language. *Batik* has become Indonesian cultural heritage which represents Indonesian cultural characteristics. As a native Indonesian culture, *Batik* has become a work of art, culture, and society for centuries (Basiroen, 2019).

In its development, *Batik* has been through many acculturations of various culture in Indonesia, for example *Batik* Cimahi. *Batik* is a creative industry that generally undertaken by small and family-run businesses, or known as small and medium enterprises (SMEs) ((Felaza, 2015); (Wahono & Hara, 2019)). SMEs in Indonesia become the main player in domestic economic activities, this means SMES become a huge contributor for employment opportunities (Setyorini et al., 2013). In 2020, the contribution of SMEs to Indonesia's GDP reaches 61% with a total domestic employment absorption reach to 99%. As a pillar of the economy, SMEs are required to

have good performance and high competitiveness. However, various challenges must be faced both internally related to various problems due to limited resources and externally, one of which is the opportunities and threats that arise due to the Industrial Revolution 4.0.

For SMEs that able to adapt, the Industrial Revolution 4.0 will be a great opportunity to increase business efficiency and effectiveness to expand their market share, those for those that unable to adapt to change will be a threat that can endanger the survival of SMEs. To overcome the problems that arise due to the limited resources owned by SMEs and take advantage of the opportunities that arise as a result of the Industrial Revolution 4.0, knowledge transfer activities from external parties, such as universities are needed.

This research conducted to identify the basic problems faced by SMEs in terms of several functional aspects such as financial, marketing, operational and human resources aspects, as well as organizational aspects. With the identification of existing problems, it is hoped that decision makers have a solid basis of consideration in formulating business strategy according to their circumstances. This research is expected to contribute in providing an overview of one of SMEs in Indonesia through a case study approach and provide insights in solving problems through the approaches offered so that SMEs might develop business potential, even become regional leading product.

One of a SMEs in Cimahi that have great potential to make *batik* as a regional leading product is *Batik Sekar Putri*, located on Jl. Permana Timur D-21, Permana-Cimahi Indonesia. It is an individual business that was established in 2011 that engaged in the business of *batik* and craft, fashion, and convection services. In addition to these business fields, *Batik Sekar Putri* provides educational tourism for *batik* culture training in Cimahi City.

The selection of *Batik Sekar Putri* in this study is based on the reason that *Batik Sekar Putri* has great potential in developing the Cimahi tourism sector as an icon of local cultural wisdom. The great potential is considered based on the fact that currently *Batik Sekar Putri* has more than 20 IPRs (Intellectual Property Rights) and has a mission in developing a mini museum, which already set up and planned as one of the travel destination centers to learn the history of *batik* and provide workshops for learning about *batik*. This study was conducted to explore some of the problems currently faced by *Batik Sekar Putri* and offer ideas to develop the business as one of the leading products in Cimahi City.

### **Industrial Revolution 4.0 and Its Impact to SMEs**

The concept of the industrial revolution has been known since the Industrial Revolution 1.0 in the 1750s that occurred in England. The industrial revolution focuses on the speed factor and the overall availability of information in an industrial environment that connects all entities and allows the exchange of information between entities. In its development to date,

the Industrial Revolution has reached a new generation that we know as the Industrial Revolution 4.0.

Schlechtendahl (Schlechtendahl et al., 2015) defines the Industrial Revolution 4.0 era as an industrial era where all entities involved can be connected to each other through real time communication anytime and anywhere through the use of internet technology and Cyber Physical System (CPS).

The Industrial Revolution 4.0 focuses on the technological dimension to the point of ignoring the understanding of the meaning and value of technology itself (Ellitan & Anatan, 2019). It means that the adoption of technology, in this case digital technology, is assumed to have an impact on increasing the efficiency and flexibility of the company. Because of that reason, investment in digital technology is considered as determining factor for the company's success in surviving and winning the competition in the era of the Industrial Revolution 4.0, regardless of the type of business or the scale of the business or business owned, including for SMEs.

It becomes challenges and threats for SMEs, especially in Indonesia. A recent study related to the readiness of SMEs in responding to changes due to the Industrial Revolution 4.0 shows that the level of SMEs e-readiness in Indonesia is still quite low. For example, a study conducted in Karawang Regency that involved 100 young entrepreneurs who were taken using a random sampling technique aims to identify the readiness of SMEs in responding to the evolution of Industry 4.0 (Sari & Santoso, 2020). The results of the study show that business actors can indeed

capture market opportunities and demands, however they are faced with difficulties in business development due to the limitations in networking and the use of technology so that efforts are needed such as providing coaching to develop their business to be more adaptive and innovative in facing business competition in industrial revolution 4.0 era.

The Industrial Revolution 4.0 has impact on the company's operational activities, as one example is a change in the marketing aspect that focuses more on implementing digital-based marketing strategies. The main obstacle faced in implementing this strategy is the low level of digital literacy so that it becomes the main obstacle in efforts to carry out digital-based business transformation (Insi Nantika Jelita, 2021). Limited resources, for example related to funding and knowledge, are important factors in exacerbating the low level of readiness and competitiveness of SMEs in Indonesia. To overcome these problems, cooperation with external parties, especially universities and banks is needed. Banking has an important role in providing funding solutions, while universities have an important role as knowledge producers to provide solutions to overcome the problem of limited knowledge and skills of SMEs.

### **University to SMEs Knowledge Transfer: Alternative Solution for The Lack of SMEs Resources**

Limited resources, such as knowledge, is one of the internal problems that are often faced by SMEs. To overcome this problem, SMEs might cooperate with external parties, one of which is universities. Universities as higher education institutions

and knowledge producers have an important role as transferors to transfer their knowledge to SMEs as transferees.

Empirical studies on knowledge transfer from universities to SMEs show that universities have an important role in increasing the productivity, performance, e-readiness and competitiveness of SMEs (Piterou & Birch, 2016); (Lianu et al., 2020); (Ibidunni et al., 2020). Knowledge transfer is an important element in the SME sector (Ibidunni et al., 2020). Knowledge transfer activity refers to the movement or transfer of knowledge from one individual or organization to another through various channels. Knowledge as a practice or activity that includes the exchange of experience and knowledge related to a job (Ibidunni et al., 2020). Knowledge transferred can be in the form of tacit knowledge or implicit knowledge. Regardless of the type of knowledge transferred, knowledge has an important role in facilitating the operational activities of SMEs because it provides benefits in improving the skills and expertise of SMEs.

An example of the channel that can be used as a medium to transfer knowledge from universities to SMEs and promote SMEs business development is business incubator. A business incubator is a special unit of an organization, in this case a university, which aims to develop clusters related to business, namely SMEs. Business incubators allow for wider and more productive use of university spaces such as teaching and learning spaces, offices, even laboratories and testing facilities.

Several types of incubators including business innovation centers, university business incubators, independent private

incubators, and corporate private incubators (Piterou & Birch, 2016). The business innovation center offers services to tenants in the form of space, IT Infrastructure, and financial-related information. University Business Incubators relate to the issues discussed in the previous paragraph. Independent private incubators or better known as accelerators are units established by individuals with the aim of supporting SMEs, especially at the growth stage. Corporate private incubators were established by large companies to support the establishment of corporate spin-offs.

### **An Overview of *Batik* SMEs in Cimahi City**

The history of Cimahi *Batik* began in a competition held by the *Dewan Kerajinan Nasional Daerah* (Dekranasda), a regional national crafts council. Through competition resulting from gatherings attended by community leaders, artists, business people, and the Dekranasda elements of Cimahi City, around 80 *batik* motifs were obtained to become *batik* motifs of Cimahi. Of the 80 motifs, five *batik* motifs were set to be used as *Batik* Cimahi motifs, namely Cirendeu motifs (cassava leaves), Ciawitali (bamboo paintings and woven), Cimahi waterfall (waterfall motif), Pusdik (military education activities such as war training, Candradimuka (crater motifs) which is a symbol of military education), and Kujang (depicting traditional weapons typical of West Java).

In 2009, Cimahi City Government's Office of Tourism and Culture launched *Batik* Cimahi as part of the culture and tourism icon in Cimahi City. Although *Batik*

Cimahi has a unique motif that represents the icon of local wisdom and cultural richness of Cimahi, *Batik* Cimahi has not touched the tourism sector market. One of the main reason is that Cimahi has not become a major destination for tourist visits either for local or foreign tourists. Until 2017, Cimahi was still in the stage of exploring tourism potential to generate regional economy. Cimahi is considered without natural resources that have the potential to become the representative natural tourism and there are no specific tourist objects that can be used as the main attraction for tourists. Another problem is related to the lack of availability of accommodation as an important supporting facility in the development of tourist destinations. At present, Cimahi focus more on heritage tourism and use Heritage City as its City Branding. Specific reason related to *batik* tourism is the lack of centralization of *batik*, resulting in *Batik* Cimahi not as popular as *Batik* from other cities such as Yogyakarta, Solo, Pekalongan, or Cirebon which already have *Batik* centralization.

Cimahi City has five *batik* artisans and entrepreneurs who have become members of DEKRANASDA, namely Lembur *Batik* Canting Art, Anggraeni *Batik*, Tiga Putri *Batik* (now Sekar Putri *Batik*), Micha Collection, and Yommy Collection (*KOPERASI DAN UMKM KOTA CIMAHI*, n.d.) The proposed business partner in this study is Ms. Rienny Yuniarti from *Batik* Sekar Putri. *Batik* Sekar Putri is located on Jl. Permana Timur D-21. Permana-Cimahi, Indonesia.

*Batik* Sekar Putri has the potential to become a Regional Leading Product



**Figure 1. Motifs of *Batik Cimahi*** (Source: <https://infobatik.id/>)

because it already has more than 20 IPRs and has experience in overseas expos. This is supported by the launching of *Cimahi Batik* as part of Cimahi's cultural and tourism icons. Certificate of No. 518/1506 / KUKM Trade Office for SME and Industry Cooperatives also stated that *Batik Sekar Putri* is one of the leading products of Cimahi.

## METHODOLOGY

This study uses a qualitative approach that emphasizes understanding of problems based on the real conditions with natural settings that are holistic, complex and detailed. The data used are secondary data from company documentation, publications by the media, and data sources from the website and primary data from interviews with business owners. The process of data

analysis is conducted according to stages in qualitative research which include data collection, data reduction, data presentation, and data verification.

## RESULTS AND DISCUSSION

### Business Partner's Analysis of Situation

The product produced by the partners are *batik* cloth (i.e. stamped *batik* and written *batik*), each of which has unique characteristics, uniqueness, and quality according to the standards set by businesses. Cimahi *Batik* has five superior motifs namely Cirende, Ciawitali, Cimahi Curug, Pusedik, and Kujang. These five motifs become superior motifs and are the basis for Cimahi *Batik* craftsmen. Figure 1. shows the five patented *Batik Cimahi* motifs.

Sekar Putri *Batik* also has five superior motifs that have become the hallmarks of Cimahi *Batik*, namely *Bambu Ciawitali*,



**Figure 2.** Development of Cimahi *Batik* Motif in *Batik Sekar Putri* (Source: *Company Profile of Batik Sekar Putri*)

*Rereng Kujang, Sampeu Cirendeu, Military Pusdik* and *Cimahi Waterfall*. Those motifs are always present in *Sekar Putri Batik*. Since starting its business in 2011, *Sekar Putri Batik* has produced 65 stamped *batik* and 15 written *batik* that still maintains the five distinctive features of Cimahi *batik*. Some of the new motifs of Cimahi *Batik* that have been successfully developed includes *Sekar Kupu Ngibing, Sekar Hanjuang, Sekar Kembang Baros, Sekar Kembang Melati* and *Sekar Awi Ligar* for written *Batik*. As for the printed *batik, Sekar Daun Sampeu Cirendeu, Sekar Awi Alit, Sekar Pakarang* and *Sekar Kujang Liris*. The average selling price of *Batik Sekar Putri* is IDR 130 thousand to IDR

5 million. Figure 2. shows some of the motifs developed by *Batik Sekar Putri*.

Based on the results of several visits to the location and interviews with *Batik Sekar Putri*, the latest conditions of partners can be explained as follows:

#### 1. Human Resources Aspects

*Batik Sekar Putri* has 10 employees consist of 3 persons in administration, 3 persons in production, 1 in finance, 1 in gallery, and 2 in marketing. The employees of the production department are from Central Java, so the owner must provide them with a place to live and eat. This is due to the difficulty of finding employees with the skills and expertise needed by businesses. The average employee education is D3 and S1

depending on their placement, and employees are recruited based on other party's references. In the previous recruitment process, *Batik Sekar Putri* relied on jobstreet, however the high employee turnover rate has become the most important problem that arose.

The employee payroll system follows the Regional Minimum Wage (UMR) standard, which ranges from 1.7 million to 3 million Indonesian Rupiah. For training and employee competency development is based on the available facilities, for example taking part in the expo based on the invitation received. The placement of employees to fill the required positions is based on basic education, and the regeneration process is a major challenge that must be faced by businesses today.

## 2. Production Aspects

In conducting production, the main raw materials needed include cloth, dyes, and wax. The fabric used is *primisima*, which is usually contained in rolls in a length of 15.5 m and width of 1.06 meters, to produce fine handmade *batik* at a price of IDR 26,000 per yard (1 yard = 90cm). The main suppliers come from Pekalongan, and alternative suppliers come from Yogyakarta. The *batik* cloth produced has three types of quality from the lowest, medium, to the best quality. The criteria of quality classification is based on the product type and the design process. The lowest quality for printed *batik*, medium quality for stamped *batik*, while highest quality for written *batik*. The prices are distinguished based on the classification of quality. The price of *batik* cloth with

the lowest quality starts from IDR 130,000, medium quality ranges from IDR 200,000-300,000, and high-quality ranges from IDR 500,000 to IDR 5 million. One important thing that distinguishes quality is in terms of the coloring process and the level of difficulty.

Some of the equipment needed in the implementation of production process includes dyeing *batik*, stool or bench, pendulum, tablecloth, wooden or *kemplongan* table, canting, stove, *endar* or frying pan, drum, and *gawangan*. In a single production process, 10 *batik* fabrics per day or around 300-400 *batik* fabrics per month was produced. The average production time needed to make printed *batik* is 2 days, while for written *batik* the average is 4 months. The quality control is done manually by the owner or business owner himself. Figure 3 shows the equipment and production room conditions at *Batik Sekar Putri*.



**Figure 3.** Equipment and Production Process Room (Source: Author's Visit)



The process of stamped *batik* making is different from written *batik* (Hidayat & Fatmahwaty, 2014). Printed *batik* requires a shorter time. Figure 4. shows an example of printed *batik* motifs produced in *Batik Sekar Putri*. Technically, the process of printed *batik* making can be explained in the following stages of the process: First, preparing burlap cloth that has been filled with melted wax. The flame's heat should not be too hot since it might cause the wax easily drip onto the fabric. Second, applying the canting cap to the fabric surface so that excess wax can be returned to the pan, Third, preparing thick plastic foam pads that must be moistened to reduce the heat so that the liquid wax might dries quickly. Fourth, putting the cloth on the stamped table then applying the canting that has been exposed to the wax directly on the cloth.



**Figure 4.** Examples of Printed *Batik* in *Batik Sekar Putri* (Source: Author's Visit)

While the process of written *batik* making through five stages of the process can be described as follows: First, making a motif image, at this stage required fabric, drawing patterns or malls, 4B pencils, and glass tables. Second, wax applying so that at this stage needed fabric, wax and canting. The types of wax

needed for written *batik* are vacant wax, printed wax, and white or paraffin wax. Third, giving the color of written *batik*, done with rapid color by sweeping rapid color to the desired part. Fourth, the dyeing process, this process is carried out in three steps which include: immersion of the solution in naptol, immersion in a color salt solution, and immersion in rinse water. Fifth, removing wax, this stage is done by inserting a cloth into a tub of hot water mixed with soda ash and caustic soda.

The layout to support the production process of *Batik Sekar Putri* is quite good considering that there is an ample room for production activities and workshops. Product quality assurance still does not exist because the quality control is still done manually by the owner. Current distribution channels for partners are from producers to consumers, product sales are carried out in galleries, based on orders from other institutions, and opening outlets at exhibitions. The main problem faced in the production aspect at this time is the limited stamp equipment owned by businesses so that the diversification of *batik* motifs is still limited. Another aspect that needs to get important attention is good quality control to increase production capacity and company productivity through integrated quality management.

### 3. Financial Aspects

In terms of financial aspects, the main problem faced by *Batik Sekar Putri* is in the use of personal assets as venture capital, namely a private home used as a *batik* gallery. In particular, the business

has an area of around 1500m<sup>2</sup> as a fixed capital venture. Other capital comes from the Ministry of Cooperatives loan of 1.2 billion which is used as working capital or company operational activities. The total operational cost reaches 70% which consists of 50% of raw material requirements and 20% for daily operations. Sales per month reach IDR 50-100 million. In minimal demand conditions, business actors can incur losses of up to 10% of business capital if there is no purchase, so sometimes they must sell their personal assets to cover these losses.

#### 4. Marketing Aspects

The current market target of Sekar Putri *Batik* is the domestic market, such as the City Government, schools, and other agencies in Cimahi City. Unlike *batik* originating from Central Java such as Pekalongan, Solo, and Yogyakarta which has penetrated the national market, the majority market share of Cimahi *Batik* is, currently, still limited to the city and guest visitors from agencies in Cimahi City. In terms of marketing, the average product sales volume of 60% is *batik* products worth IDR 130 thousand, and the other 40% worth above IDR 500 thousand. In terms of pricing, the product selling price is determined based on COGS (Cost of Goods Sold). COGS is the total total costs incurred directly by a company to get goods sold, which includes the cost of raw materials, labor costs, and overhead costs.

In terms of distribution, so far it is still limited to exhibiting activities at the central seminar and gallery. Utilization of

social media such as Facebook and Instagram, print media, and electronic media as promotional media is still very minimal. This condition shows that promotion is lacking so that appropriate promotional strategies need to be developed in order to increase product competitiveness so that losses incurred because there are no buyers can be minimized or even prevented.

#### 5. Organizational Management Aspects

Organizational management is still very simple since it is a small-scale individual business. The word simple refers to traditional organization structure. It means that in managing the organization, all of the decisions in organizational planning including production planning, auditing, taxation, inventory control are the responsibility of the owner, as well as related to financial statements even though there are employees who are responsible for the relevant section. Separation of corporate and personal finances has not been fully carried out, so that in conditions of very minimal demand, the owner often has to give up his personal assets to cover operational costs. The business does not have SOPs (Standard Operational Procedures) and KPIs (Key Performance Indicators) to support the organization survival.

The simple organizational structure does provide an advantage for the owner to have tight control over the operational activities of his business, including in terms of decision making. The decision-making process is faster because it does not require a long bureaucracy. However, a simple organizational structure will

provide a heavier workload for the owner. Likewise, when the owner has succeeded in recruiting but is unable to provide trust and authority, and delegate work to his subordinates, another problem will arise in terms of the slower decision-making process. Therefore, business owners need to consider switching from a simple organizational structure to a functional organizational structure, each of which has a responsibility in making decisions for each functional area, including human resources, marketing, operations and finance.



**Figure 5.** *Batik Sekar Putri's Copyright and Award* (Source: Author's Visit)

*Batik Sekar Putri* has the slogan "*Batik Apik Ti Cimahi*". Currently, *Batik Sekar Putri* has developed the concept of a mini tourism called "One Stop Shopping Creative" and will develop heritage tourism in a mini museum with the

concept of education related to the history of *batik*, including the development of other business units such as *Batik Coffee*, *Batik Craft*, and *Batik Pawon*. Figure 5 shows some IPRs (Intellectual Property Rights) and *Batik Sekar Putri* awards stored in a storage room. So far, based on the information given by the owner during the in-depth interview, the IPRs and award owned by *Batik Sekar Putri* has increased its reputation and credibility to get funding from external parties, such as the IDR 1,2 billion loan from the Ministry of Cooperatives and Small and Medium Enterprises of the Republic of Indonesia. However, the researcher could not find any information related to revenue and royalties received due to some specific reasons.

Related to the problem of facilities and infrastructure, the administration room is located inside the adjoining storage room containing various photos, awards and IPRs documents. The storage room (located between the production and administrative space) will be used as a mini museum. Figure 6-8 shows the *Batik Sekar Putri* showroom or gallery. In addition to being engaged in the business of *batik* and craft, fashion and convection services, *Batik Sekar Putri* also operates in the culinary field under the name *Pawon Batik*, and education for *batik* culture training. Based on an interview with Ms. Rienny, it was found that at the beginning of opening the business, the main focus was to obtain copyright over the *batik* designs she created. Figure 8 shows the *Pawon Batik* business space and snack products sold.

Access to the highway is about 100 meters from the location, electricity and telecommunications facilities are adequate, but the use of information and communication technology has not been used optimally.



**Figure 6.** *Batik* Sekar Putri's Business Room (Outside) (Source: Author's Visit)



**Figure 7.** *Batik* Sekar Putri's Business Room (Inside) (Source: Author's Visit)



**Figure 8.** Pawon *Batik* Culinary Business Space (Source: Author's Visit)

## Problem Identifications and Solution

To summarize the analysis of situation of *Batik* Sekar Putri, problems are identified based on interviews with the owner of *Batik* Sekar Putri. Some of the main problems faced by partners are summarized as follows:

### 1. Human Resource (HR) Aspects

The limitations of HR creativity are due to the difficulty in getting employees with relevant expertise. The business owner stated that the level of interest of the younger generation and the surrounding community to *batik* was still minimal, so it is very difficult to find workers who are able to produce additional *batik* motifs. Another problem arises related to the high turnover rate if the owner recruits through job vacancies such as job-street. To overcome this problem, owner decided to recruit employees based on the recommendations of existing employees. For example, for employees in the production department, the owner recruit employees from Central Java who are familiar with *batik* production so that they already have skills and another advantage is that employees can live in the mess that is already available in the company.

### 2. Production Aspects

Problems in the production aspect include lack of capital to purchase production equipment such as stamp canting, quality management has not been fully implemented, the motifs, patterns, and colors of the product are still limited. Limited capital results in the limited ability of business actors to

rejuvenate and increase investment in equipment to support the production process, such as stamps so that the company's ability to enrich motifs, patterns and coloring *batik* prints and stamps is limited, while limited skills result in limited speed in adding written *batik* motifs. The quality control is conducted manually by the owner without paying attention to aspects that should be included in the production planning and control process such as routine scheduling, dispatching, and follow-up processes.

### 3. Financial Aspects

Problems in the financial aspect focus on financial management, such as there are no division between business assets and personal assets, so that in conditions where market demand is low, the owner must give up personal assets to finance the company's operational activities.

### 4. Marketing and Strategy Aspects

Problems in the aspects of marketing and business strategy are related to the limited promotion and use of information and communication technology that might lead to the financial problems, especially in conditions of minimal demand or sales. Limited skills, facilities and infrastructure such as skills in mastering digital technology and the availability of internet facilities result in limitations in marketing and selling online through the use of digital technology. Other issues related to limited funds have resulted in efforts to develop mini heritage museum tourism which has not been realized until now even though the

place has been set up. In fact, the realization of the mini museum is expected to be an attraction for visitors so that sales are also expected to be increased.

### 5. Organizational Management Aspects

Organizational management issues place more emphasis on management of the organization is very simple and is the responsibility of the owner and they do not have SOP (Standard Operational Procedures) and KPI (Key Performance Indicators). A simple organizational structure is advantageous in terms of speed of decision making, but in a growing business condition and has few employees, delegation of authority based on functional areas will be very necessary. Likewise, the importance of SOPs and KPIs to support operational activities and improve company performance.

Based on the problem identification, it can also be identified several solutions that must be considered and implemented to overcome the problems faced by partners. The solutions include: 1) Increasing the skills and creativity of employees; 2) Increasing capacity and productivity in the production process through quality management; 3) Increasing the company's financial management capabilities; 4) Development of the right business strategy to increase product competitiveness so that the company is able to create a competitive advantage from the products produced and the realization of heritage tourism development through the realization of

the development of a mini *batik* museum;  
5) Application of SOPs and KPIs for SMEs.

To be able to realize the target solutions that have been identified, several approaches such as training and technical guidance related to each existing problem can be used. The training is conducted as a learning tool for partners to increase their knowledge and skills as a provision to implement the knowledge gained in their daily work life. Whereas technical guidance and assistance are carried out as a means to implement the knowledge obtained during the training stage into practice or use to support work activities. In addition, other solutions that can be offered are through efforts to look for grant funds or soft loans for the purpose of increasing partner capacity, specifically related to the problem of limited funds for purchasing production equipment (e.g., stamp) and the realization of the mini museum development.

Training activities can be carried out in the form of knowledge transfer to partners related to issues of developing HR creativity and partner products, development of production capacity and productivity in the field of company operations, understanding of good financial management, utilization of information and communication technology in developing business strategies in the digital era, understanding of the importance of SOPs and KPIs for SMEs. While technical guidance can focus on the implementation of the knowledge transferred in training activities such as exploring the creativity of HR to develop

more *batik* motifs, collecting data on museum needs, separating corporate and personal finances including understanding the importance of preparing simple journals, recording cash flows and accounts receivable debts, web development and use of social media as a means of promotion, and the development of SOPs and KPIs for SMEs.

### **Empowerment Idea to Develop Local Wisdom-Based Regional Leading Product**

*Batik* Cimahi has the potential to be developed into a Regional Leading Product due to the uniqueness of its motives ((Nurjaman, 2015); (Hafiar et al., 2019)). The Cimahi City Government's Office of Tourism and Culture has launched Cimahi *Batik* as part of the cultural and tourism icon in Cimahi. *Batik* Sekar Putri has more than 20 IPRs and experience in participating in exhibitions and expos at home and abroad such as in Hungary, the Netherlands, France and Ukraine (*Mengenal Lebih Jauh Batik Cimahi Yang Sudah Dipatenkan*, 2014). To support the development of the Cimahi tourism sector, *Batik* Sekar Putri intends to build a mini museum as a center for *batik* history tourism destinations and to learn *batik making process*.

As one of the local wisdom-based products of the region that has the potential to be developed as one of the regional leading products, the main step that needs to be taken is to solve the main problems faced by *Batik* Sekar Putri as discussed in how to identify problems and target solutions before. Another important breakthrough that must be done by partners, especially in the face of trade liberalization and the Industrial Revolution

4.0 is to do business transformation into digital world, this is important to do especially in supporting company performance improvement through the use of information technology in supporting promotional activities and other business activities. The transformation of SMEs into the digital world made a significant contribution not only in encouraging the growth of the Indonesian economy, but also improving SMEs performance, especially in winning international business competition (Awaluddin, 2015).

Business transformation in the digital world is expected to increase the independence of SMEs in conducting business activities. In addition to utilizing information and communication technology in supporting business activities, a transformation strategy in the digital world that can be pursued is through the development of e-marketplaces and integrated social media. The e-marketplace development is carried out for the purpose of introducing products produced by SMEs, in this case *Batik Sekar Putri* so that it has a strong branding in existing business competition, and is expected to expand market share not only to dominate regional markets but also nationally and internationally. The development of integrated social media is carried out through the use of a number of social media accounts for the purpose of supporting the promotion of SME products.

## **CONCLUSION AND SUGGESTION**

### **Conclusion**

Achieving the goal as one of the regional leading products based on local wisdom is very much determined by the

success in solving every problem faced from the aspects of human resources, production, finance, marketing, and organizational management. In addition, in responding to trade liberalization and the Industrial Revolution 4.0, business transformation into the digital world is considered very important to be done as a breakthrough of SMEs to improve performance and productivity so as to increase competitiveness and to win the business competition they face. Strategies that can be taken to transform business in the digital world include through the development of e-marketplaces and integrated social media. To overcome the lack of resource problem that might hinder the business transformation, knowledge transfer from university to SMEs is needed.

This study provides theoretical contributions in the field of strategic management and entrepreneurship, specifically in understanding the influence of the Industrial Revolution 4.0 on SMEs and the role of universities in developing SMEs through knowledge transfer activities. In addition, this study also contributes to understand the basic problems faced by SMEs, especially those related to functional aspects such as human resources, production, finance, and marketing as well as organizational aspects related to company management and business strategy. With the understanding of the problem, it is expected that decision makers can get the right considerations in formulating business strategies in accordance with company conditions.

### **Suggestion**

Given the importance of mastering digital technology in the Industrial Revolution 4.0 era and the importance of knowledge transfer activities from universities to SMEs, future research can focus on the following issues:

1. Investigating the level of readiness of MSMEs in adopting digital technology and its impact on the competitiveness of SMEs
2. Investigating the important role of knowledge transfer from universities to SMEs in improving the performance and competitiveness of SMEs
3. Developing a comprehensive knowledge transfer model from universities to SMEs so that effectiveness and efficiency can be achieved.

## ACKNOWLEDGMENT

The authors gratefully appreciate *Batik Sekar Putri* for their time and cooperation in conducting this study.

## REFERENCES

- Awaluddin, M. (2015). *Digital Entrepreneurship*. Gramedia Pustaka Utama.
- Basiroen, V. J. (2019). Cultural Expression Of Javanese & Chinese Culture In *Batik Lasem From 14th To 19th Century*. *INTERNATIONAL JOURNAL OF SCIENTIFIC & TECHNOLOGY RESEARCH*, 8(10), 1708–1718.
- Ellitan, L., & Anatan, L. (2019). Achieving business continuity in Industrial 4.0 and Society 5.0. *International Journal of Trend in Scientific Research and Development*, 4(2).
- Felaza, E. (2015). Conserving Indonesia's nature and culture through empowerment of indigenous technology in creative industry SMEs. *The International Journal of Management Science and Information Technology (IJMSIT)*, 18, 3–10.
- Hafiar, H., Subekti, P., Komala, L., & Komariah, K. (2019). *Batik Cimahi: An Opportunity Of People's Economic Movement*. *1st International Conference on Life, Innovation, Change and Knowledge (ICLICK 2018)*, 22–26.
- Hidayat, J., & Fatmahwaty, F. (2014). The Art and Sustainable Aspects of Natural Dyeing in KANAWIDA Hand Drawn *Batik* (Green *Batik*). *IPTEK Journal of Proceedings Series*, 1(1).
- Ibidunni, A. S., Kolawole, A. I., Olokundun, M. A., & Ogbari, M. E. (2020). Knowledge transfer and innovation performance of small and medium enterprises (SMEs): An informal economy analysis. *Heliyon*, 6(8), e04740.
- Insi Nantika Jelita. (2021). *Literasi Digital UMKM Jadi Kendala dalam Transformasi Digital*. Mediaindonesia.Com. <https://mediaindonesia.com/ekonomi/403910/literasi-digital-umkm-jadi-kendala-dalam-transformasi-digital>
- KOPERASI DAN UMKM KOTA CIMAHI. (n.d.). *Www.Kumkm-Cimahi.Com*. Retrieved July 8, 2021, from <https://kumkm-cimahi.page.tl/Batik-Cimahi.htm>
- Lianu, C., Rădulescu, I. G., Dobre, G. C. S., & Lianu, C. (2020). Knowledge transfer between universities and smes and regional development. The role of the clusters as communities of practice. *Proceedings of the International Conference on Business Excellence*, 14(1), 490–504.
- Mengenal Lebih Jauh Batik Cimahi yang Sudah Dipatenkan*. (2014). Bandungupdate.Com. <http://m.bandungupdate.com/news/read/442-mengenal-lebih-jauh--batik-cimahi-yang-sudah-dipatenkan>
- Nurhaida, I., Noviyanto, A., Manurung, R., & Arymurthy, A. M. (2015). Automatic Indonesian's *batik* pattern recognition using SIFT approach. *Procedia Computer Science*, 59, 567–576.
- Nurjaman, A. R. (2015). Perancangan Visual Brand Army City untuk Menunjang Promosi *Batik* Kota Cimahi. *Jurnal Sketsa*, 2(1).
- Piterou, A., & Birch, C. (2016). The role of higher education institutions in supporting innovation in SMEs: University-based incubators and student internships as knowledge transfer tools. *InImpact: The*



*Journal of Innovation Impact*, 7(1), 72.

- Sari, R. P., & Santoso, D. T. (2020). Readiness Factor Identification on Kabupaten Karawang SMEs towards Industry 4.0 Era. *Jurnal Teknik Industri*, 22(1), 65–74.
- Schlechtendahl, J., Keinert, M., Kretschmer, F., Lechler, A., & Verl, A. (2015). Making existing production systems Industry 4.0-ready. *Production Engineering*, 9(1), 143–148.
- Setyorini, C. T., Pinasti, M., & Rokhayati, H. (2013). Strengthening the internal factors of batik cluster smes in indonesia: A case of six districts in south-central java. *International Journal of Business, Humanities and Technology*, 3(1), 21–28.
- Wahono, P., & Hara, A. E. (2019). *The Creation of Corporate Knowledge and Innovation among Indonesia's Batik Producers: A Case Study of Four Main Areas of Batik Production in Java*.

