

Establishing A Business Production For Written and Stamped Batik Crafts

Mulyanto

Art Education Department, Faculty of Teacher Training and Education,
Sebelas Maret University, Surakarta, Indonesia

mulyanto@staff.uns.ac.id

Batik has become everyday clothing for the people of Indonesia, many batik businesses have sprung up in several regions in Indonesia. The purpose of this study is to describe the minimum standards of aspects needed to establish a batik craft business. These aspects include capital funds, materials, equipment, employees, human resource management, production management, financial management, and marketing management. This qualitative descriptive research was conducted in several batik craft businesses on the island of Java. Twenty key informants consisted of 10 batik entrepreneurs, 3 motive designers, 3 batik makers, 1 stamper, and 3 color workers. The research data was collected through interview techniques, focus group discussion, document observation and study, then analyzed using interactive models. To establish a batik business with an initial production process for one month, a fund of Rp.37,350,000.00 is needed, 5 batik makers, 1 color dealer, an area of 100m² and a building of 64m². To establish a combination of stamp and writing batik business with an initial production process for one month, funds amounting to Rp 113,900,000.00, 4 employees, land 100m² and building 69m² are needed. The establishment of a batik business is estimated to be the main point of return for 7 months.

Keywords: establishment, business, batik, write, stamp

Pendirian Usaha Produksi Kriya Batik Tulis Dan Cap

Batik telah menjadi pakaian sehari-hari bagi masyarakat Indonesia, usaha batik pun banyak bermunculan di beberapa daerah di Indonesia. Tujuan penelitian ini mendeskripsikan standar minimal aspek yang dibutuhkan dalam mendirikan usaha kriya batik. Aspek tersebut meliputi modal dana, bahan, peralatan, karyawan, manajemen sumberdaya manusia, manajemen produksi, manajemen keuangan, dan manajemen pemasaran. Riset deskriptif kualitatif ini dilakukan di beberapa usaha kriya batik di pulau Jawa. Informan kunci sebanyak 20 orang terdiri atas 10 pengusaha batik, 3 pendesain motif, 3 pembatik, 1 tukang cap, dan 3 tukang warna. Data penelitian dikumpulkan melalui teknik wawancara, diskusi kelompok terfokus, observasi dan studi dokumen, kemudian data dianalisis menggunakan model interaktif. Hasil riset bahwa untuk mendirikan usaha batik tulis dengan proses produksi awal selama satu bulan dibutuhkan dana sebesar Rp 37.350.000, 5 pembatik, 1 tukang warna, lahan seluas 100 m² dan bangunan seluas 64 m². Untuk mendirikan usaha batik kombinasi cap dan tulis dengan proses produksi awal selama satu bulan dibutuhkan dana sebesar Rp 113.900.000, 4 karyawan, lahan seluas 100 m² dan bangunan 69 m². Pendirian usaha batik tulis tersebut diperkirakan memiliki titik pulang pokok selama 7 bulan.

Kata kunci: pendirian, usaha, batik, tulis, cap

Received: January 21, 2022; Accepted February 10, 2022; Published April 19, 2022
<https://doi.org/10.31091/mudra.v37i2.1868>

© 2022 The Author(s). Published by Pusat Penerbitan LP2MPP Institut Seni Indonesia Denpasar.
This is an open-access article under the CC BY-NC-SA license

INTRODUCTION

Batik was designated as a world cultural heritage site by UNESCO on October 2, 2009. This recognition has a positive impact in that batik is becoming more well-known around the world. Indonesian batik products have long been a popular export product. Batik was originally used to make clothing. Nowadays, batik is a beautiful motif fabric that can be used for clothing and interior materials ([Sartika, at. all., 2017](#)). Batik is characterized through the use of wax/*malam* (batik wax) as a coloring obstruction during the coloring process ([Salma at. all., 2015](#)). There is a motif on the cloth due to the batik wax that prevents color absorption during dyeing. Nowadays, the batik technique is applied to media other than cloth, such as wood, and is known as wooden batik. This is an expression of national creativity in preserving and developing the art of batik ([Sukaya at. all., 2018](#)). This type of creativity shows that the Indonesian people maintain exceptional talent in the field of artistic intelligence ([Salma at. all., 2016](#)). This study focused on batik as a fabric material.

Batik, as a noble art work of the Indonesian nation, has a distinct and unique beauty that distinguishes it from other textile decoration patterns. Batik's uniqueness arises from the use of specific materials, tools, and processes that require perseverance, craft, patience, and a high level of creativity ([Eskak, 2013](#)). Batik is classified into three types based on the process: written batik, stamped batik, and combination batik. Written batik is batik that is completely made during the production process by applying hot wax to the cloth to block the color using a canting tool. Stamped batik is batik which is made by applying hot wax to a cloth with a patterned stamp. Batik Combination is a type of batik in which the color is obstructed by incising hot wax on the cloth using a combination of two or more techniques, one of which is the writing technique or the stamp technique. For example, writing techniques are combined with stamping techniques, writing techniques are combined with brush techniques, writing techniques are combined with painting techniques, stamping techniques are combined with stick techniques, etc.

In Indonesia, batik is widely used in everyday life, whether as fashion clothing, crafts, or home accessories. Shirts, dresses, skirts, negligee, *jarit*, sarongs, scarves, headbands, Muslim clothing, and other types of everyday batik clothing are popular among the community. Tablecloths, bed sheets, pillowcases, curtains, prayer rugs, and other household items made from batik cloth.

Indonesian batik small and medium enterprises are spread across 101 centers, including Central Java, West Java, East Java, and D.I. Yogyakarta, and can employ up to 15 thousand people ([Ministry of Industry of the Republic of Indonesia, 2017](#)). Yogyakarta, Solo, Sragen, Sukoharjo, Wonogiri, Pekalongan, Kudus, Semarang, Lasem, Banyumas, Tuban, Ponorogo, Madura, Bandung, Tasikmalaya, Garut, Cirebon, and other areas on the island of Java are currently centers of batik production. Furthermore, several regions, both within and outside of Java, have begun to pioneer the establishment of batik handicraft businesses ([Takdir and Mohammad, 2021](#); [Nurchayanti, at.all. 2020](#)).

The batik craft business is generally passed down from generation to generation, with the managed batik business inherited from their parents. There is, however, a new batik company that is not a legacy manufacturer. Prospective entrepreneurs interested in starting a batik craft business should be aware of some of the most essential factors to consider.

The objective of this study is to describe the minimum standards for several aspects of starting a batik craft business, such as written batik crafts, stamped batik crafts, and combination batik crafts. Capital funds, raw materials, equipment, human resources, production management, financial management, and marketing management are some of the requirements for these aspects.

METHODS

This qualitative descriptive research was conducted in 2019 in several batik craft businesses on the island of Java, which include the Regencies of Sragen, Klaten, Semarang, Rembang, Kudus, Pekalongan, Cirebon, Bandung, and Ponorogo. There were 20 key informants consisting of 10 batik entrepreneurs, 3 batik motif designers, 3 batik artisans, 1 batik stamp maker, and 3 batik color craftsmen. Informants of batik entrepreneurs are Wartiti from Dewi Ratih's batik business in Sragen, Suparno of Jalidin batik business in Sragen, Sarwidi of Natural batik business in Klaten, Fauzi of batik business in Semarang, Reni Maranata's batik business in Lasem Rembang, Yuli Muria batik business in Kudus, Katura business Katura batik in Cirebon, Komarudin Komar batik business in Bandung, and Sony Lesoeng batik business in Ponorogo. The research data were collected through interview techniques, focus group discussions, observation and document studies. To maintain the validity of the data, data triangulation is used, then the data is analyzed using an interactive model ([Miles and Huberman, 1984](#)).

RESULTS AND DISCUSSION

The results of the research are several aspects needed in the establishment of a batik craft production business, sequentially covering (1) capital consisting of funds, raw materials, equipment, land, buildings, and labor, (2) human resource management, (3) management production, (4) financial management, and (5) marketing management.

Capital

Land, buildings, equipment, raw materials, and employees are all required as capital to start a batik craft production business. Land that is suitable for establishing a batik business has water resources, especially water and soil, and is safe for disposing of batik liquid waste without disconcerting the life around it. A lot of water is used during the batik craft production process, however a great deal of liquid waste is disposed.

The building should have adequate natural lighting such as sunlight, the roof should be in good condition and not easily penetrated by rainwater and dirt from above, the walls of the building should have adequate ventilation, for example, the walls are made of bamboo sticks, and the floor should be in good condition flat and dry.

The following are the minimum capital requirements for starting a batik craft business: (see Table 1). The minimum building capital is 64 m², which includes 5 m² for a motif drawing room, 9 m² for the batik process by 5 batik makers working together, 10 m² for the coloring process, 20 m² for the drying process of the fabric after it has been colored, and 20 m² for storage space for raw materials, semi-finished products, and finished products.

The capital fund for the one-month production plan is IDR 37,350,000, which includes IDR 12,000,000 for equipment procurement and IDR 25,350,000 for raw material procurement. The need for raw materials and labor costs in the handmade batik business is estimated to be approximately three times that of ready-to-sale products. This is due to the long and complex nature of the process of creating written batik. The higher the quality of a batik product produced, the longer the time required for the production process, the longer the capital turnover, and the greater the capital required. If the final product is worth Rp. 8,450,000, the stock of raw materials, the stock of semi-finished products, and the wages of the workers who work on it total Rp. 16,900,000.

Table 1. Analysis of the capital requirements for establishing a handmade batik business.

No	Activities	Space (m ²)	Tools/raw materials	Price* (Rp)
1.	Drawing	2x2,5=5	Wood-glass drawing table	1.000.000
2.	Batik craftsmen (5 people)	3x3=9	1 set of stove-pan, 15 cantings, 5 wooden chairs, 5 wickets	1.000.000
3.	Coloring	2x5=10	1 color tub, 1 lock tub, 3 sinks	2.000.000
			1 set of weighing tools	500.000
			1 <i>kenceng lorod</i> , 1 <i>pawon</i> cement	5.500.000
4.	Water installation		Clean and dirty water	500.000
5.	Drying	4x5=20	Pole, rope, clamp	500.000
6.	Storing	4x5=20	materials, raw products, finished production	1.000.000
7.	Subtotal-a	-	1 s.d. 6	12.000.000
8.	Production 25 pieces/month	-	Primissima fabric 63/70 yards	1.750.000
			12.5 kg of Wax	500.000
			Naphthol 2.5 ounces, diazo salt 750 gr	625.000
			Indigozol 1 ons, zuur ½ liter	75.000
9.	Employee	-	5 batik artisans (5 people x 25 days x IDR 40,000), 1 colorant (1 person x 5hrs x IDR 100,000)	5.500.000
10.	Subtotal-b		8 + 9	8.450.000
11.	Total	64 m ²	a + (3 x b)	37.350.000

Information:

*) Estimated prices for 2019: primissima cloth Rp. 25,000/yard, wax Rp. 40,000/kg, naphthol Rp. 100,000/ounce, naphthol salt Rp. 50,000/ounce, indigozol Rp. 70.000/ounce, zuur Rp. 7,000/liter.

Written batik is most effectively applied in groups of 4-5 people. This means that each set of stoves and pans is used by 4-5 people. Working in this group has the advantage of making the wax's heat level more stable, as hot wax is frequently used in alternating batik. It also saves pans and stoves, fuel (kerosene or gas), and space.

In order for the batik dyeing process to be effective (good results) and efficient (saving raw materials), approximately 25 pieces of cloth must be dyed in one coloring process. It is estimated that 5 batik manufacturers will be able to produce approximately 25 pieces of batikan cloth over the course of 25 working days.

Table 2. The analysis of the capital requirements for establishing a combination batik business.

No.	Activities	Space (m ²)	Tools/raw materials	Price* (Rp)
1.	Stamping worker (1 person)	2x2,5=5	1 wood stamping table	1.000.000
			1 set of stove and copper pan	2.000.000
			5 patterned stamps (@Rp1.000.000)	5.000.000
2.	Drawing	2x2,5=5	Wood-glass drawing table	1.000.000
3.	Batik craftsmen (5 people)	3x3=9	1 set of stove, skillet, 15 canting	700.000
			5 small chairs and a hurdle	500.000
4.	Coloring	2x5=10	1 coloring tub, 1 locking tub	1.000.000
			3 sinks/bucket/cement	1.000.000
			1 <i>kenceng lorod/</i> copper, 1 <i>pawon</i>	5.000.000
5.	Water installation	-	Clean and dirty water	500.000
6.	Drying	4x5=20	Poles, ropes, clothespins	500.000
7.	Storing	4x5=20	Materials, raw products, finished products	1.000.000
8.	Subtotal-a	-	1 to 7	19.200.000
9.	Stamped Batik production 350 pots/month 200cm/pieces	-	780 yard primissima cloth	19.500.000
			40 kg of wax	5.600.000
			Naphthol 35 ounces, diazo salt 105 ounces	8.800.000
			Indigozol 140 ons, suur 7 liter	9.850.000
10.	Employee	-	1 stamper and 1 colorist (2 people x 8 days x IDR 100,000), 2 batik craftsmen (2 people x 25 days x Rp. 40,000)	3.600.000
11.	Subtotal-b	-	9+10	47.350.000
12.	Total	69 m ²	a + 2b	113.900.000

Information:

*) Estimated prices for 2019: primissima cloth Rp. 25,000/yard, wax Rp. 40,000/kg, naphthol Rp. 100,000/ounce, naphthol salt Rp. 50,000/ounce, indigozol Rp. 70.000/ounce, zuur Rp. 7,000/liter.

Stamped batik craft businesses are relatively rare. In general, the stamped batik business is accompanied by the written batik business. Because the stamped batik products will be of higher quality when combined with writing techniques. Thus, the following capital is required to start a batik craft business, which combines stamping and writing techniques (see Table 2). The minimum building capital is 69 m², which is divided into 5 m² for stamping motifs, 5 m² for drawing motifs, 9 m² for batik, 10 m² for coloring, 20 m² for drying, and 20 m² for storage of materials and products. Combination batik craft business in carrying out the production process for one month, it is estimated that the required funds is around Rp. 113.9 million. The capital is used for the purchase of equipment in the amount of Rp. 19.2 million, and the capital for the purchase of raw materials and labor wages is expected to be two times the cost of finished production in the amount of Rp. 47.35 million, for a total of Rp. 94.7 million.

Based on Table 2, the capital required to set up a wax stamping service business without a coloring process and so on is as follows. The construction area is 5 m², and Rp 8,000,000 is used to purchase equipment such as a stamp table, stove, baking sheet, and 5 stamping tools. If someone wants to set up a batik motif drawing service business, they will need a capital space of 5 m² and a drawing table for Rp. 1,000,000.

Stove-pan, canting, handrail, *dingklik* (small chair), dyed tub, tub for color locking, tub for washing, *kenceng* to melt the waxes, *pawon* or stove, tools for draining and drying the cloth are the main types of equipment required for a handcrafted batik business. Handmade batik requires the following raw materials: cotton cloth, usually primissima, wax or wax, synthetic dyes such as naphthol, indigozole, remazol, natural dyes, water, and wood fuel or gas.

The following items are required for a stamped batik craft business: motif stamps (preferably made of copper), a stamping table, a set of stamping stoves, tubs for dyeing clothes, tubs for washing, *kenceng* to melt wax, *pawon* or stoves, and tools for draining and drying cloth. Cotton cloth, usually primisima or prima, wax, synthetic dyestuffs, naphthol, natural dyes, water, and wood or gas fuel are all required to make stamped batik crafts.

Types of batik dyes consist of synthetic dyes and natural dyes. Synthetic dyes used to color batik include naphthol-diazo salt, remazol-waterglass, indigozol-suur water (H_2SO_4 / sulfuric acid), and indigo. While natural dyes that are often used are: *teger*, *jambal*, *tingi*, *indigofera*, mahogany skin, mango leaves, etc.

The characteristics of naphthol-diazo salt dyes, namely the color produced is strong or dark, the color is easily absorbed by the fabric, the color properties cover the previous color, and the intensity of the color is determined by salt as a color generator. The characteristics of remazol-water glass dyes are that the resulting color is bright, the color is difficult to absorb into the fabric, making the substance suitable for cotton fabrics but not for silk fabrics, and the drying process must be drained as it is not good to be exposed to direct sunlight. Indigosol-water dyes have the following characteristics: the color produced is light/ soft/ pastel, the color is easily absorbed into the fabric, suitable for use in the colet process, and the drying process must be exposed to sunlight with the fabric positioned horizontally or stretched.

Production Management

The first stage in making batik, i.e. production planning, entails planning everything from the materials, tools, and techniques used in the

production process to the quality of batik that will be produced (Noor and Emad, 2020). The batik that will be produced must correspond to its market share. For example, the economic class of the consumer, the use of batik, the user's gender, age level, socio-cultural background, and so on. Batik products must be designed with the consumer's background in mind, so motifs, dominant colors, fabric materials, dyes, and techniques used must all be taken into account. The product plan is then poured onto paper in the form of a motif image as a master motif. Using a pencil, the master motif drawing is then transferred across several pieces of cloth.

To produce a high-quality product, the cloth is mordant, sluggish, or stifled before being drawn; that is, the cloth is soaked in a boiled alum solution for 24 hours before being squeezed and drained. The cloth is kneaded or rubbed with alum water the next day, then drained, and so on, repeating 1 to 3 times as needed. After *mordanting* and drying the cloth, it is drawn, crossed out, or sketched according to the motif plan with a pencil, and the cloth is ready to be batik *klowong* with canting tools.

The flow of the written batik production process includes several stages, one of which is a production process that involves only one wax melt (see Figure 1). (1) The fabric is batik *klowong*, and (2) it is dyed a light color (A) using a dyeing technique. (3) Some parts of the desired motif are still colored (A) and then waxed (batik on the wall). (4) The cloth is dyed the second (B) an older color with a dyeing technique. (5) Some of the desired motif's parts are covered with wax in the second color (B). (6) The cloth is dyed a third (C) color that is older than the second color, etc. (7) in the final stage, the wax is being *lorod*, and then the cloth is washed and drained.

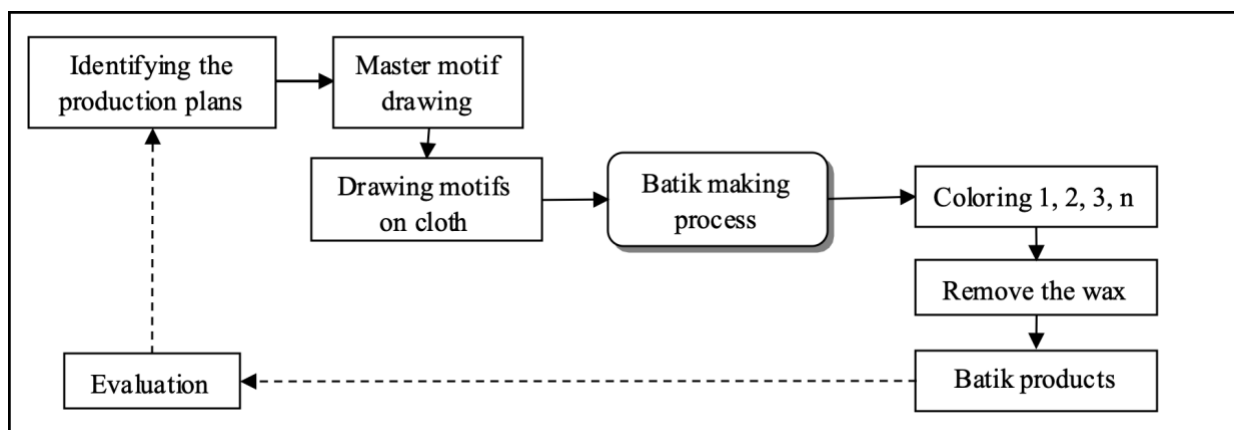


Figure 1. The flow of the batik production process

The coloring process can be done from a light color to a dark color or vice versa from an old color to a light color. While the specific procedure for the coloring process of Lasem batik (three-country batik) is as follows. (1) being sluggish fabric, (2) being painted with a pencil, (3) being made into batik *klowong* and overalls batik, (4) fabric being dyed red (naphthol substance), (5) fabric on certain parts of the motif, batik *isen-isen*, (6) cloth dyed blue (indigo substance), (7) cloth with certain motifs made into wall batik and or *isen-isen* batik, (8) cloth dyed yellow with naphthol, and (9) lastly with getting *lorod* with wax ([Atika and Haerudin, 2013](#)).

The "cap batik" production process flow is as follows: (see Figure 2). The first stage, prior to the stamping motif process, must be prepared with a stamp motif. The motif stamp tool can be purchased directly or you can order your own motif by first creating a design on paper. Copper is a good material for a motif stamp tool. Standard motif stamp dimensions are 18 cm x 18 cm, 20 cm x 20 cm, and 7 cm x 20 cm. The stamp to be used, 1 stamp, 2 stamps, or 3 stamps as needed. Prepare the stove, baking sheet, and hot wax to the right of the batik maker, with the batik maker facing the stamp table. The stamping pan should be made of copper, have a minimum diameter of 40 cm, and weigh approximately 4.5 kg.

The first step in stamping motifs is to prepare pieces of cloth as needed, with a length of 200 cm or 250 cm, which is then stretched flat on the table. The stamping of the wax on the cloth begins in the lower left corner and progresses to the right and up until the entire surface of the cloth has been stamped according to the plan. The wax-stamped fabric is then dyed, which is usually done using a dyeing technique, such as color A. Following the completion of the dyeing process, the wax is getting *lorod* to produce a stamped batik product with one color, namely color A and white cloth.

There are two methods for coloring batik stamps. The first method involves stamping the cloth with wax, coloring it with an old color (A), and then

loroding the wax. In addition, the second color of the fabric (B) is a lighter color. As a result, the finished batik is stamped with basic color A and colored motif B. The second method involves stamping the cloth with wax, coloring it first with an old color using the *colet* technique, then coloring the second cloth with a lighter color, and finally *loroding* the wax. The following is a brief description of the stamped batik production process.

Combination batik is batik that is created by combining two or more batik techniques. For example, stamping techniques combined with writing techniques, or the two techniques combined with other techniques. The production process of "combination technique batik" is as follows (Figure 2). (1) The process of stamping wax on fabric in accordance with the plans. (2) The fabric is then colored, such as dyed (A) with the dyeing technique or dab dyed (B). (3) Once the color has dried, the wax is getting *lorod* to create a stamped batik product with one color A. (4) the batik cloth is then written with *isen-isen* in certain parts of the motif, or certain motifs are covered with wax, or both. (5) The cloth is dyed a second time (B) using the dab technique, dyeing techniques, or other methods. (6) The wax is then being *lorod*, the cloth is washed, and the product is a combination batik. The first and second colors should be applied using the dab and dye technique, or the dip and dab technique, respectively.

The cloth should be undergoing the process of *loyoring* first before it is made into batik. Alum water is used in the *meloyor* process to remove starch and dirt that has adhered to the fabric. The element alum will bind iron (Fe) on the fabric, allowing it to easily and strongly bind dyes, especially natural dyes. How to make a *loyor* dough solution, which consists of 120 grams of alum + 40 grams of soda ash + 20 liters of water, which is then boiled for 1 hour. If the solution is to melt cotton cloth, the temperature of the solution can reach 100°C, whereas the temperature of the solution to stretch silk cloth is around 70°C.

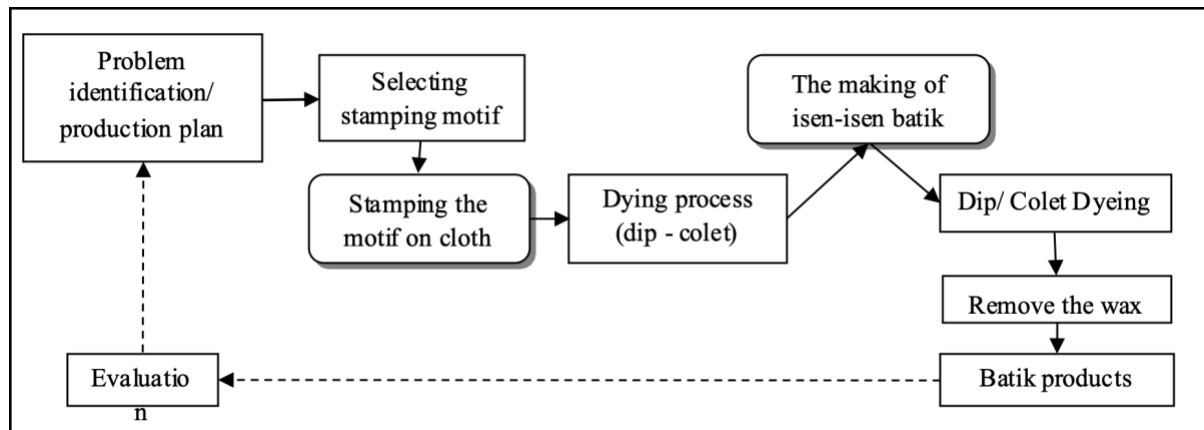


Figure 2. The flow of the combination batik production process

The simplest method of peeling the cloth, namely (1) cleaning the cloth with TRO water or detergent. (2) The cloth is boiled or immersed in boiling water for one hour, after which the heat is reduced. (3) Soak the cloth for 24 hours to 3 days. The cloth is washed in clean water before being removed and drained. The method of *loyoring* the cloth is a long and complex step which comes after doing no. 3 and before doing no. 4. (4) The cloth is soaked in alum solution overnight in the afternoon, then kneaded, rubbed, squeezed, and drained in the morning. (5) In the afternoon, after the cloth has dried slightly, it is returned to the alum solution. (6) The following day, the cloth is kneaded, rubbed, and then drained, repeating this process up to 20 times or as needed. The more the fabric is getting *loyor*, the more broken the fabric threads become, and the fabric becomes more sticky and weak, allowing the dye to stick more easily and be stronger or not fade as easily. Furthermore, the fabric's character will be more flexible and weak, making it easier to make batik and color it.

Naphthol dye is one of the dyestuffs in batik that uses diazo salt to create its color. How to make naphthol dough: 10 grams naphthol + liter hot water + 5 grams cosmic soda, then stir until blended. How to make diazo salt dough: 30 grams diazo salt + liter cold water, then stir. How to dye naphthol substances, specifically: (1) The batik cloth is dyed in TRO or Rinso water until evenly distributed, then the cloth is drained until it is slightly dry/*atos/malem*. The TRO ratio is 10 grams of TRO + 20 liters of water. (2) One piece of cloth is dipped in a naphthol solution (3 liters of water + 300cc naphthol solution) using a color bath evenly, ensuring that the dye is evenly distributed in all parts of the cloth, and then the cloth is drained; the color has not yet appeared. (3) The cloth is dipped in a diazo salt solution, then treated evenly as if it were dipped in a naphthol solution, until a new color appears according to the formula, and the cloth is drained. Comparison of

diazo salt, which is 3 liters of water + 300cc salt. (4) The cloth is rinsed, cleaned, and drained. (5) The cloth is dipped in a naphthol solution once more (the second dyeing process is the same as the first dyeing process). (6) The cloth is dipped in a diazo salt solution (the second process, here the resulting color is more intense). (7) After the dyeing process is completed two or three times, the cloth is washed until clean (Susanto, 1980).

Remazol is a batik dye that can only be locked with a water glass. How to make remazol dough, for example, 1 ounce of remazol (black) + 1 liter of water, and half ounce of remazol (blue) + 1 liter of water. To make waterglass dough, combine 10 kg waterglass, 1 kg costic, 1 kg soda ash, and 5-10 liters of water. (1) The batik cloth is moistened with water until evenly distributed before staining with remazol. (2) The cloth is dipped into the remazol solution with a feeder one at a time, then dried in the sun. (3) The cloth is dipped in waterglass solution with a feeder one at a time, then drained. When the cloth is dry, the wax is being *lorod* and the cloth is washed.

Indigozole (sol) is a batik dye for which a water solution of battery/battery zuur/H₂SO₄ is used as the locking material. How to make an indigosol (*babonan*) solution is as follows: Indigozol IB green 6 gram + IGK 4 gram + nitrite 20 gram + half liter water, then stirred until smooth, resulting in a dark green color. How to make zuur solution, specifically: 240 ml (1 cup) zuur + 15 liters cold water, then stir until combined.

The following is the process for staining with indigozole. (1) Moisture the batik cloth, then drain it. (2) The cloth is dipped in indigozol solution one by one (3 liters of water + 300 cc of baboon Indigosol solution), then dried in the sun. Each time a piece of cloth was dipped, the color solution was mixed with 300 cc of baboon solution to maintain

the color intensity. (3) After dipping one piece of cloth in indigozol solution (3 liters of water + 300 cc of Indigozol solution), the cloth is sun dried (4) One piece of cloth is dipped in indigozol solution (3 liters of water + 300 cc Indigozol solution), then the cloth is dried in the sun. (5) After 2 or 3 times immersion in the indigozol solution, the new color is locked by dipping the cloth into the *zuur* solution, then the cloth is washed with soda ash, and the cloth is hung in the sun by hanging.

However apart from batik, there are several imitation batik products on the market that are similar to batik, such as cold wax printed batik or print *malam*, which is often abbreviated as PM, color-printed batik, and color-printed batik, also known as full print. The following are the visible visual differences between written batik products, stamped batik, and non-batik or printed batik. The motifs in written batik products are very flexible, different strokes are always produced when repeating the same motif, the shape of the *isen-isen* is relatively tight, neat, and flexible, and the strength of the outer and inner colors is relatively the same. The characteristics of stamped batik are in a piece of cloth, the repetition of the motif appears at the same distance, which is about the size of the stamp, such as 18 cm x 18 cm, 20 cm x 20 cm, 10 cm x 20 cm, or 6 cm x 20 cm, the strength of the wax, or the color of the motif. The thickness of each stamp or repetition of the stamp is not the same (thick - thin), and the shape of the *isen-isen* is not neat, slightly loose, and stiff. The lines of the motif are somewhat stiff, and the repetition of the motifs appears monotonous in batik-patterned textiles or printed batik. Repeating the same motif on a piece of cloth always results in the same strokes depending on the screen size of 60 cm x 115 cm, 70 cm x 115 cm, or 80 cm x 115 cm. When the screen is as large as a piece of cloth (250 cm x 115 cm), the comparison of one product's motifs with those of another is exactly the same. Typically, it takes the form of a long roll of cloth ([Masiswo, at. all., 2017](#)).

Employees and materials are two of the most common challenges that batik entrepreneurs face. Challenges caused by employees, namely, when the planting, harvest, and harvesting seasons arrive, the employees do not come to work, preferring to work in the fields or splice helping neighbors who are working. Furthermore, it is extremely difficult to find skilled batik designers at this time. Another impediment is that caused by the dye material. Several factors can influence the results of batik color, including the quality of the dyestuff, the recipe for making the color solution, the type of water used, the temperature of the water used, and

the coloring process. To overcome these obstacles, it is preferable to test the color mixture on similar fabrics first before coloring.

Human Resource Management

The following are the human resources required to support the establishment of a batik business: (1) The founder, owner, or skipper is responsible for seeking capital, receiving orders, designing motifs, procuring materials and equipment, dividing work tasks, managing employees, marketing, and bookkeeping. (2) The motif designer and/or drawing artist, whose job it is to draw the master batik motif on paper or cloth and transfer the image of the master motif to the cloth. (3) Batik maker, whose task is to carve hot wax on cloth with canting tools, such as when making *klowong* batik, *nerusi* batik, *isen-isen* batik, *nutup* batik, and *nembok* batik. (4) The stamp maker's job is to use a stamping tool to inscribe hot wax on the cloth. (5) A colorist, whose job it is to create a color mixture, a locking agent mixture, and to carry out the processes of dyeing fabrics, drying fabrics, waxing wax, and washing fabrics.

Typically, batik workers are recruited from the surrounding community who have a background in batik. The recruitment process is carried out using an existing workforce, neighbors, acquaintances, training, or collaboration with labor providers. Outsourcing is used for work management ([Oksana Morhulets, at all. 2020](#)). Employees who are already proficient are usually given training, mentoring, or internships for new employees. They are assigned jobs that are not difficult.

The following steps are included in the coaching process to help employees feel more at ease at work, be more creative, and produce higher-quality products. (1) task assignment based on expertise or ability; (2) freedom to choose the method of daily or piecemeal remuneration; (3) providing incentives based on level of performance, either in the form of praise or material/money bonuses; (4) the working relationship between the skipper and the employee is created with a family approach; and (5) creating a work atmosphere capable of developing work creativity by providing psychological security ([Kaufman and Sternberg, 2007](#)); and (6) the work process is adapted to the community's social and cultural environmental system, for example, during the season when working in the fields, employees are given the freedom to work in the fields.

An employment contract should be created in order to maintain a working relationship between employers and employees in order for cooperation

to be sustainable. The employment contract agreement, particularly with the motif designer, aims to ensure that the motifs created by the designer on the entrepreneur's orders belong to the company and are not sold, given, or used by third parties.

There are several hazardous chemicals used in the batik production process, including battery water/sulfuric acid, water glass, chlorine, naphthol dyes, remazole substances, and others. These dyes must be kept in a special cupboard in a special room. The batik dye storage room must be ventilated so that air circulation is smooth. Meanwhile, the space used for the coloring process must be designed in such a way that air circulation is adequate. There are batik dyes and locking agents that have a strong odor and can cause itching if they come into contact with the skin. These dyes are in the form of powder, which can be easily inhaled through the nose and cause respiratory problems. As a result, workers are required to wear masks, gloves, rubber boots, and aprons while working to ensure their safety.

The batik industry will generate wax waste, which can be recycled into useful wax. The wax waste is collected in this way, then boiled and filtered to remove the dirt. After cleaning the wax, each 10 kg of wax is mixed with half a kg of *gondorukem*, half a kg of resin, half a kg of micro, and half a kg of *kote*, and the solution is boiled again until all components are combined. The wax is cooled, and once cooled, it is ready to be used for batik again.

Financial management

The examination, management, control, search, and storage of a company's funds. The financial management principle of physically separating personal money from business money; planning the best possible use of business money; and keeping a book of financial records, at least in the cash in and out books, to record the entry and exit of money. An example of calculating the main turning point or Break Event Point (BEP) of a batik business (see Table 3).

Table 3. Calculation of profit and loss and BEP of batik business

Types of Expenditure	Price	Income Type	Price
70 yards of primissima cloth x Rp 25.000	Rp 1.750.000	Selling 25 piece batik x Rp 450.000	Rp 11.250.000
Wax 12.5 kg x Rp 40,000	Rp 500.000		
Naptol substance & diazo salt	Rp 625.000		
Indigozol & zuur 100 gr x Rp 500	Rp 75.000		
The cost of batik for 5 people x 25 hr x Rp 40.000	Rp 5.000.000		
The cost of batik for 1 person x 5 hr x Rp 100.000	Rp 500.000		
Total	Rp 8.450.000	Total	Rp 11.250.000

Financial management is the activity of planning, budgeting, and profit per month, which is the sum of income minus expenditure. The profit, according to Table 3, is IDR 2,800,000 = IDR 11,250,000 – IDR 8,450,000. The most essential turning point is capital divided by profits. Rp 20,450,000 capital = Rp 12,000,000 + Rp 8,450,000 divided by Rp 2,800,000 equals 7.3. Thus, for approximately 7 months, the Break Event Point (BEP) is the point of return for this written batik business.

Marketing Management

Marketing management is the primary activity that a company must perform in order to maintain the viability of its business and earn profits in order to expand. The basic concept of marketing management is that producers must pay attention to the needs and demands of consumers. The implemented strategy must be completely focused on making customers feel important and special. Products must be marketed in such a way that consumers believe the product was created specifically for them. The following are effective marketing strategies for batik products. (1) Take part

in exhibitions, both on a national and local scale. Adi Wastra, Inacraf, Archipelago Batik Titles, Heritage, ICR, Krafina, National Batik Day, and Katumbiri are all exhibitions related to the marketing of batik products. Regular exhibitions and fashion shows in the form of batik marketing strategy increase public interest even more ([Wening et al., 2013](#)). (2) Establishing a store or outlet. (3) Setting up a pre-paid website. (4) Using social media (blogs, Facebook). (5) Establishing and expanding networks among batik producers, nurtured partners, etc.

Several factors must be considered when determining the price of a batik cloth product, including (1) the quality of the motif, which means that a good motif has philosophical value, a specific symbolic meaning, and is a unique motif that is not produced by other similar manufacturers. Producers explain the philosophical values and meanings contained in the batik motifs to consumers in both written and oral form. (2) The level of difficulty in creating motifs; some are complicated, while others are simple. The density of motifs on the fabric; some

batiks are densely packed with motifs on all surfaces of the fabric, while others are sparse. (3) Raw material quality, such as cloth and dyestuffs. (4) The smoothness, mediumness, and roughness of the batik process, as well as the complexity of the color workmanship, such as the number of colors and techniques used. (5) Product packaging, manufacturing, and promotion costs.

CONCLUSIONS AND SUGGESTIONS

Based on the results and discussions, establishing a written batik business with a one-month initial production process required a capital fund of Rp. 37,350,000 to be used for the purchase of materials, tools, and employee wages. There is a need for 5 batik artists and 1 color artist. The minimum required land area is 100 m², and the minimum required building area is 64 m². Meanwhile, a capital fund of Rp 113.900.000 was required to set up a combination batik business consisting of stamped batik and written batik, with an initial production process of one month, to be used for the procurement of materials, tools, and employee wages. There is a need for 1 stamp maker, 2 batik artisans, and 1 color artist. There is a requirement for 100 m² of land and 69 m² of building space. With a capital of IDR 37,350,000, a monthly profit of around IDR 2,800,000 can be obtained, as well as a 7-month return on principal. If someone wants to start a wax stamping service business, they will need a 5 m² building and Rp 8,000,000 to buy stamping table equipment, stoves, baking sheets, and 5 stamping tools. If someone wants to start a batik motif drawing service, they will need 5 m² of space and a drawing table. If one wishes to produce batik using the stamp technique, it is recommended that the product be combined with the writing technique, because with the addition of a small cost, a higher quality product will be produced, increasing the selling value. If one wishes to set up a hand-drawn batik business, it is preferable if each batik process is carried out by 4 or 5 batik people.

REFERENCES

- Atika, V., and Haerudin, (2013). A. Effect of natural resin composition on wax temperature for natural color batik. (Pengaruh komposisi resin alami terhadap suhu pelorodan lilin untuk batik warna alam). *Dinamika Kerajinan dan Batik*, 30(1), p23-29. ejournal.kememperin.go.id/dkb/article/view/949
- Eskak, E. (2013). Mendorong Kreativitas dan Cinta Batik Pada Generasi Muda: Kritik Seni Karya Pemenang Lomba Desain Batik 2012. *Dinamika Kerajinan dan Batik*, 30(1), p.1-10. DOI: <http://dx.doi.org/10.22322/dkb.v30i1.947>
- Kaufman, J. C. and R. J. Sternberg. Creativity. *Journal of Change*, 39(4), 2007. p55-57.
- Masiswo, Setiawan, J., Atika, V., dan Mandegani, G.B. (2017). Karakteristik fisik produk batik dan tiruan batik. *Dinamika Kerajinan dan Batik*, 34(2), p.103-112. ejournal.kememperin.go.id/dkb/article/view/3439
- Miles M.B. and Huberman A.M. (1984). *Qualitative Data Analysis: A Sourcebook of New Methods*. SAGE Publications, Inc, 264. [https://doi.org/10.1016/0149-7189\(96\)88232-2](https://doi.org/10.1016/0149-7189(96)88232-2)
- Ministry of Industry of the Republic of Indonesia, 2017. <http://www.kememperin.go.id/artikel/18591/Hingga-Oktober-2017,-Nilai-Ekspor-Batik-Lampau-USD-51-Juta>
- Noor Abdulhadi Alsubyani and EmadEldin Sayed Gohar. (2020). Application's barriers of quality systems in read-made garment factories in the Kingdom of Saudi Arabia. *Vlákna a textil*, 27(1), p.99-106. http://vat.ft.tul.cz/2021/1/VaT_2021_1_1.pdf
- Nurchayanti, Desy; Agus Sachari; and, Achmad Haldani Destiarmand. (2020). Peran Kearifan Lokal Masyarakat Jawa Untuk Melestarikan Batik Tradisi di Girilayu, Karanganyar, Indonesia. *Mudra: Jurnal Seni Budaya*. 35(2), p. 145-153. <https://jurnal.isi-dps.ac.id/index.php/mudra/article/view/816/485>
- Oksana Morhulets, Svitlana Arabuli, Olena Nyschenko and Arsenii Arabuli. (2020). Analytical assessment of the apparel industry in ukraine: Problems and opportunities. *Vlákna a textil*, 27(3), p.111-118. http://vat.ft.tul.cz/2020/3/VaT_2020_3_17.pdf
- Salma, I.R., Wibowo, A. A., and Satria, Y. (2015). Kopi dan Kakao Dalam Kreasi Motif Batik Khas Jember. *Dinamika Kerajinan dan Batik*, 32(2), p.63-72. DOI: <http://dx.doi.org/10.22322/dkb.v33i2.1636>
- Salma, I.R., Eskak, E., and Wibowo, A.A. (2016). Kreasi Batik Kupang. *Dinamika Kerajinan Dan Batik*, 33(1), p.45-54. <http://dx.doi.org/10.22322/dkb.v33i1.1040>
- Sartika, D., Eskak, E., dan Sunarya, I.K. (2017). Uma Lenge dalam Kreasi Batik Bima. *Jurnal*

Dinamika Kerajinan dan Batik, 34(2), p.73–82.
DOI: <http://dx.doi.org/10.22322/dkb.v34i2.3365>.

Sukaya, Y., Eskak, E., dan Salma, I.R.S. (2018). Addition of Use Value to New Creations of Kreet Wooden Batik Doll Products Bantul, *Dynamics of Crafts and Batik*. (Penambahan Nilai Guna Pada Kreasi Baru Produk Boneka Batik Kayu Kreet Bantul). *Dinamika Kerajinan dan Batik*, 35(1), p.15–24. DOI: <http://dx.doi.org/10.22322/dkb.v35i1.3826>

Susanto, S.S.K. (1980). *Seni Kerajinan Batik Indonesia*. Yogyakarta: Balai Penelitian Batik dan Kerajinan, Departemen Industri.

Takdir, Mohammad and Mohammad Hosnan, (2021). Revitalisasi Kesenian Batik sebagai Destinasi Wisata Berbasis Budaya dan Agama: Peran Generasi Muda dalam Mempromosikan Kesenian Batik di Pamekasan Madura. *Mudra: Jurnal Seni Budaya*, 36(3), p.366-374. <https://jurnal.isi-dps.ac.id/index.php/mudra/article/view/1284/720>

Wening, Sri, Enny Zuhni Khayati, Sri Emy Yuli Suprihatin. (2013). Product development and marketing strategy for Bantulan batik clothing with modern ethno motif stylization (Pengembangan produk dan strategi pemasaran busana batik Bantulan dengan stilasi motif ethno modern). *Jurnal Penelitian Humaniora*, 18(1), p.70-81. staffnew.uny.ac.id.