Implementation of Cultural Heritage in the Development of the Batik Industry in Ngawi Regency

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Abstract. Batik is one of the cultural heritages and has become a characteristic of Indonesia. The focus and priority of developing batik starts with the problem of the lack of existing decorative styles. Therefore, the development needs to continue of Ngawi batik motifs with a foundation on exploration of its cultural potential and landscape. This research aims to analyze the problems faced by batik entrepreneurs; superior motifs that can be developed to become a batik attraction; and analyze the stakeholders involved in developing batik in Ngawi.

There are some obstacles in the batik industry: product development, marketing, the role of government. The superior batik motif that can develop in Ngawi are bamboo, teak forest, Van De Bosch fortress, and Trinil. The batik business development model in Ngawi Regency will be carried out with a system of who does what consisting of regulators, executors, and supporting systems to create home of entrepreneurs.

Keywords: *Batik, Tourism, Marketing, Cultural Heritage*

1. Introduction

Batik is one of the cultural heritages that has been recognized by UNESCO. It has a long history in the life of the Indonesian people in various aspects such as origin, motifs, manufacturing processes, and stakeholder involvement in its development. Batik motifs are full of meaning especially about who is drawing the motifs, and so the name of batik will depend on the story behind the motifs drawn. Batik comes from the Javanese word *Ambathik*, which means drawing dots on a wide cloth (*amba*). At first, batik was known only by the royal circles. Batik motifs are influenced by ideas, desires and hopes so that the names of motifs are have special meaning. For example, the *truntum* motif is a motif that tells the story of love created by Kanjeng Ratu Kencana, empress of Paku Buwono III Surakarta Hadiningrat, who felt sad and despaired because of losing the attention of the King. At night, the Empress stared at the stars and during the day the cape flowers, and so the idea was born to create batik motifs which were a blend of stars and cape flowers. This beautiful motif drawn by the Empress then drew the King's attention and made him love his wife again. This motif was later known as *truntum*, which means blossoming. Until now the *truntum* motif has become a symbol of love and affection so that it will generally be worn by husband and wife in the form of *sarimbit*, or couple. Other popular motifs include Sidomukti, Sidoluhur, Sido Wirasat, Wahyu Tumurun, Kasatriyan, and Parang Rusak. Batik motifs are developing very rapidly and increasingly diverse over time so that now almost every region has its own batik motif. (Hidayat, 2004)[1].

Batik is one of the main industries in Micro, Small and Medium Enterprises (MSMEs) in Indonesia which already has an international market share. Data shows that in 2017, Indonesia's total batik exports reached 58.46 million dollars with the main destination countries such as Japan, the United States, and European countries. In 2018, the value of exports increased by around 7%. Data from the Ministry of Industry states that there are currently 47,755 batik IKM units, with the number of workers reaching 199,444 people. The national batik industry has comparative and competitive competitiveness in the international market.

This activity is a combination of research and community service conducted in Ngawi regency, East Java Province. Ngawi is an area that borders directly with Central Java and is one of the hub cities with cities in Central Java, so there are many types of industries that grow and develop in this city, one of which is batik. Table 1 shows data about batik centers in Ngawi.

Table 1. Batik Small and Medium Industry Centers in Ngawi Regency

| Year | INDICATOR | | | |
	Business Unit	Workers	Production Value	Marketing Areas
2011	9	162	835,000,000	Ngawi
2012	11	181	1,170,000,000	East Java
2013	16	247	1,675,000,000	East Java, National
2014	19	276	1,842,000,000	East Java, National
2015	18	195	710,363,000	East Java, National
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Source: Statistics Ngawi, 2017

Table 1 above shows that from year to year the amount of batik production in Ngawi has actually declined. This research aims to 1) analyze the problems faced by batik entrepreneurs in Ngawi; 2) analyze superior motifs that can be developed to become a batik attraction for Ngawi; 3) analyze the stakeholders involved in developing batik in Ngawi.

2. Literature Review

Batik is a traditional cloth with a unique pattern that is applied to the fabric using wax-resistant coloring techniques. The batik pattern is divided into several design groups according to the template class with hundreds of variations in it. Although there are similarities in batik patterns so they can be identified, the motifs developed are based on high-level features that do not change in scale, rotation, and other transformations. Research by Nurhaida et all (2015)[2] introduces an approach to batik pattern recognition using the scale-invariant feature transform (SIFT) as a feature extraction method. This approach is an effort to facilitate understanding of batik patterns and motifs due to the symmetrical and repetitive characteristics of batik patterns. The results showed that from a collection of 120 batik drawings, all of them could be grouped into 20 basic batik patterns (Nurhaida *et al*, 2015)[2].

The batik industry can be divided into several types: written (hand-drawn), printed, and batik motif cloth without batik process. Hand-made batik tends to be considered to be of higher quality and is much in demand by people and art lovers, but the manufacturing process takes a long time, starting from the process of making motifs, writing (hand drawing) using a specialized equipment *tjanting*, coloring, removing, and washing. The longest process is hand-drawing which can take up to weeks or even months depending on the complexity of the motives. This causes the price of handmade batik to be very expensive even reaching millions of rupiah for one piece of cloth. Susanti (2016)[3] succeeded in optimizing batik so that it can save raw materials by 14.801% and production time of 10.345% with the particle swarm optimization (PSO) method. This method was introduced as an effort to speed up the production process and reduce the selling price of batik (Susanti, 2016)[3].

Research conducted by Novani et all (2014)[4] about the role of stakeholders in the development of batik clusters in Solo shows that all stakeholders in the solo batik group work

together to create both entrepreneur value and customer value. All stakeholders must develop creativity that not only meets customer needs (low cost) but also art and culture (originality) and batik (high quality and innovation). Entrepreneurs must often conduct on the job training with more complex equipment, always innovate products, and optimize product promotion through exhibitions and the online marketing. The training program is usually held in collaboration with relevant government agencies (Novani et all, 2014)[4].

3. Method

This study used a combination of qualitative and quantitative methods (Creswell, 2014)[5]. In depth interviews and field observations with ATLAS.ti as an analytical tool were carried out to answer the first objective, while the second objective was investigated by developing secondary data and regional potential and was analyzed qualitatively. The third objective was examined through a focus group discussion to formulate a model for developing batik based on cultural heritage and local wisdom of Ngawi.

4. Result and Discussion

Creative industries are currently being developed by the government. The contribution of this sector to GDP continues to increase from year to year. In 2017, the creative industry's contribution reached Rp 990 trillion and absorbed a workforce of 17.14%. In 2018 the contribution increased to Rp 1,041 trillion and absorbed labor as much as 18.2%. For 2019, the Indonesian Creative Economy Agency is targeting a contribution of 1,200 trillion. This condition is very encouraging because the creative economy sector will become one of the pillars in non-oil exports. Batik is one part of the creative industry, especially in the field of fashion, but there are some major obstacles in the batik industry.
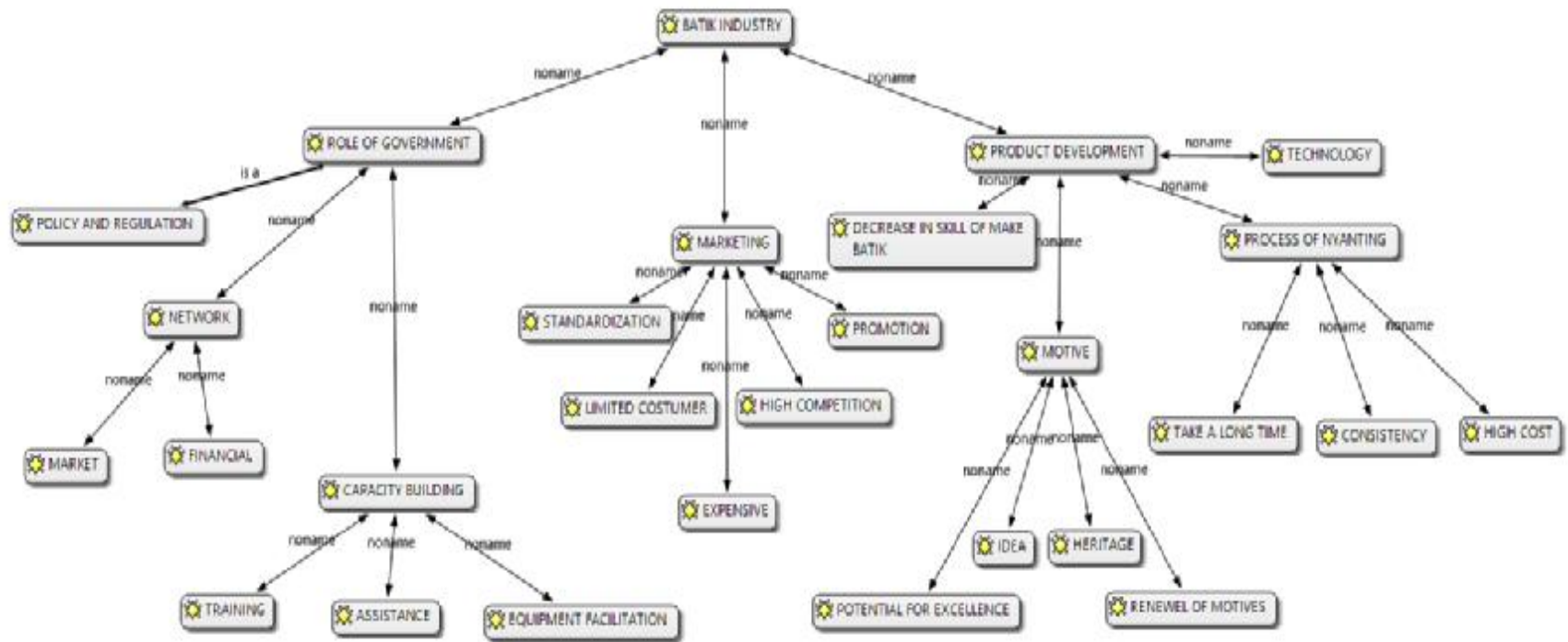
The purpose of identifying and mapping problems in the development of batik will be answered with a combination of qualitative and quantitative. The analytical tool used is atlas ti. Atlas ti, is a method carried out by observation and in-depth interviews followed by classification based on transcripts that have been prepared. Atlas.ti will be useful for identifying, classifying and mapping out problems so that they can be used as a priority for policy making (Mafruhah, Waridin, Iskandar, & Thohir, 2019)[6]. The results of in-depth interviews and observations on five batik industries in Ngawi show the following issues:

1. Product Development. The in-depth interview that focused on written batik found the following issues:
   a. Motif. Motif development is influenced by ideas that arise. Regional excellence becomes the basis for the discovery of basic ideas and trends in Ngawi, cultural heritage, and fashionable or up-to-date motifs so that they can attract consumers.
   b. Hand-drawing process that requires accuracy especially for complicated motifs; consistency in making products in bulk; and high costs for spending more work time.
   c. Batik technology that still relies on traditional methods and tools.
   d. The decline in expertise in batik, especially among the younger generation so that it will cause a reduction in labor in the field of batik.
2. Marketing, experienced several main problems as follows :
   a. High production costs lead to expensive prices.
   b. The number of customers is limited because it has its own exclusivity.
   c. The number of competitors that are eroding the market share.
   d. Simple promotion by relying solely on exhibits and traditional marketing.
   e. Weak product standardization because everything is handmade so it is difficult to maintain consistency.
3. The role of government, including the following issues :

a. Policies and regulations that must be developed to protect small businesses, especially creative businesses, including batik.
b. Development of cooperation networks both in terms of capital and marketing. The opening of this cooperation network will provide opportunities for entrepreneurs to develop their businesses.
c. Capacity building consisting of (i) specific training in developing new batik methods that are faster and more consistent; (ii) equipment assistance to be more targeted and in accordance with the needs of business actors; (iii) assistance provided continuously in accordance with the conditions and needs of business actors.

These problems can be identified and shown in the following figure:

Figure 1. Problem Identification of Batik centers in Ngawi

Regarding the second objective, based on secondary data obtained, the advantages possessed by Ngawi are (a) Bamboo, where the name Ngawi comes from the Javanese word *Awi* which means a type of bamboo; (b) Teak Forest is one of the main potentials in Ngawi Regency which will be reflected in cambium; (c) One of the famous cultural heritages in Ngawi is Van De Bosch fortress which is commonly known as the *pendem* (buried) fortress; (d) Ngawi is famous for its *Trinil* museum which is the location where ancient life history is found, so the mammoth ivory motif is a choice because it is relatively attractive. The results of the secondary data are then discussed with batik entrepreneurs to be compiled and formulated in Ngawi batik excellence models.
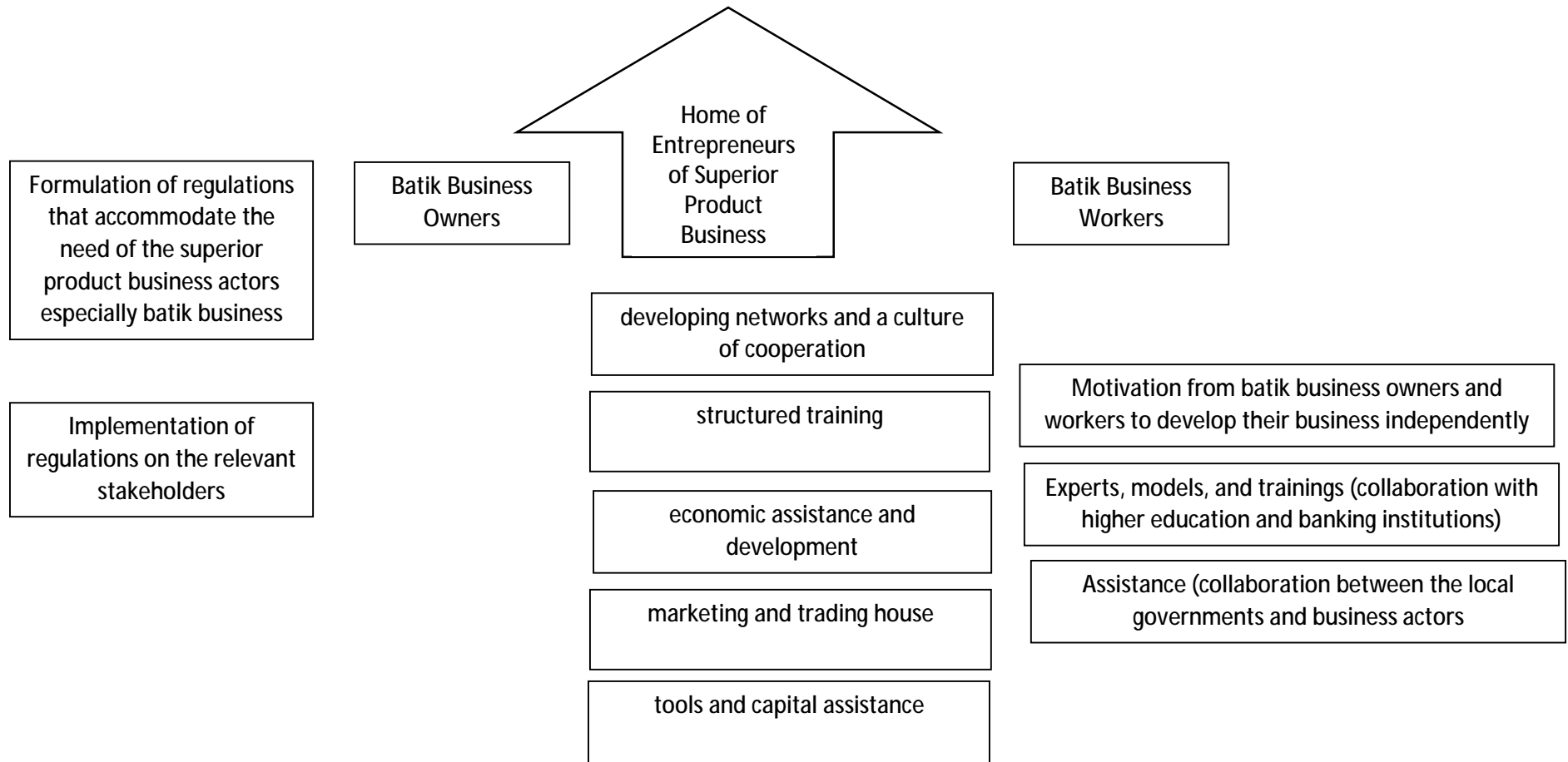
The third objective of this research is to analyze the stakeholders involved in developing batik in Ngawi. Stakeholders who are directly or indirectly involved are Academics, Business, Community, and Government. These stakeholders are arranged in the "who does what" model. Stakeholders are divided into four: 1) Regulators, those who set regulations in the cluster development, namely the local government and the local House of Representatives. The drafted regulations are expected to be implemented as technical guidelines for the development of batik clusters. The regulations will be implemented by executors consisting of related local government organizations such as the trade service, industry service, cooperative and MSME service. Supporting institutions include Banking, Academic and Business Institutions. Finally, the target or end user is the batik business actors.

Clusters are realized in the homes of batik entrepreneurs with a variety of activities consisting of (1) developing networks and a culture of cooperation; (2) structured training; (3) economic assistance and development; (4) marketing and trading house; (5) tools and capital assistance

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Figure 2 Cluster Development Model in Ngawi

REGULATOR	EXECUTOR	STAKEHOLDER	SUPPORTING INSTITUTION	TARGET/END-USER
the local government, the local House of Representatives	trade service, industry service, cooperative and MSME service	*who does what* SOCIAL ENGINEERING STRATEGY	Banking, Academic and Business Institutions	batik business actors

Home of Entrepreneurs of Superior Product Business

Formulation of regulations that accommodate the need of the superior product business actors especially batik business

Batik Business Owners

Batik Business Workers

Implementation of regulations on the relevant stakeholders

developing networks and a culture of cooperation

structured training

Motivation from batik business owners and workers to develop their business independently

Experts, models, and trainings (collaboration with higher education and banking institutions)

economic assistance and development

marketing and trading house

Assistance (collaboration between the local governments and business actors

tools and capital assistance

5. Conclusion

This research found three issues in the development of batik products, namely (1) product development, especially written batik; (2) marketing which has several constraints on both internal and external factors; (3) The role of the government both in policies and regulations and in the implementation and opening of networks. The main motif in developing Ngawi batik is to incorporate local wisdom and the most dominant potential in Ngawi district, so that it will bring out its own uniqueness and special characteristics. The batik business development model in Ngawi Regency will be carried out with a system of who does what consisting of regulators, executors, and supporting systems to create home of entrepreneurs.

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by Leon Akbar

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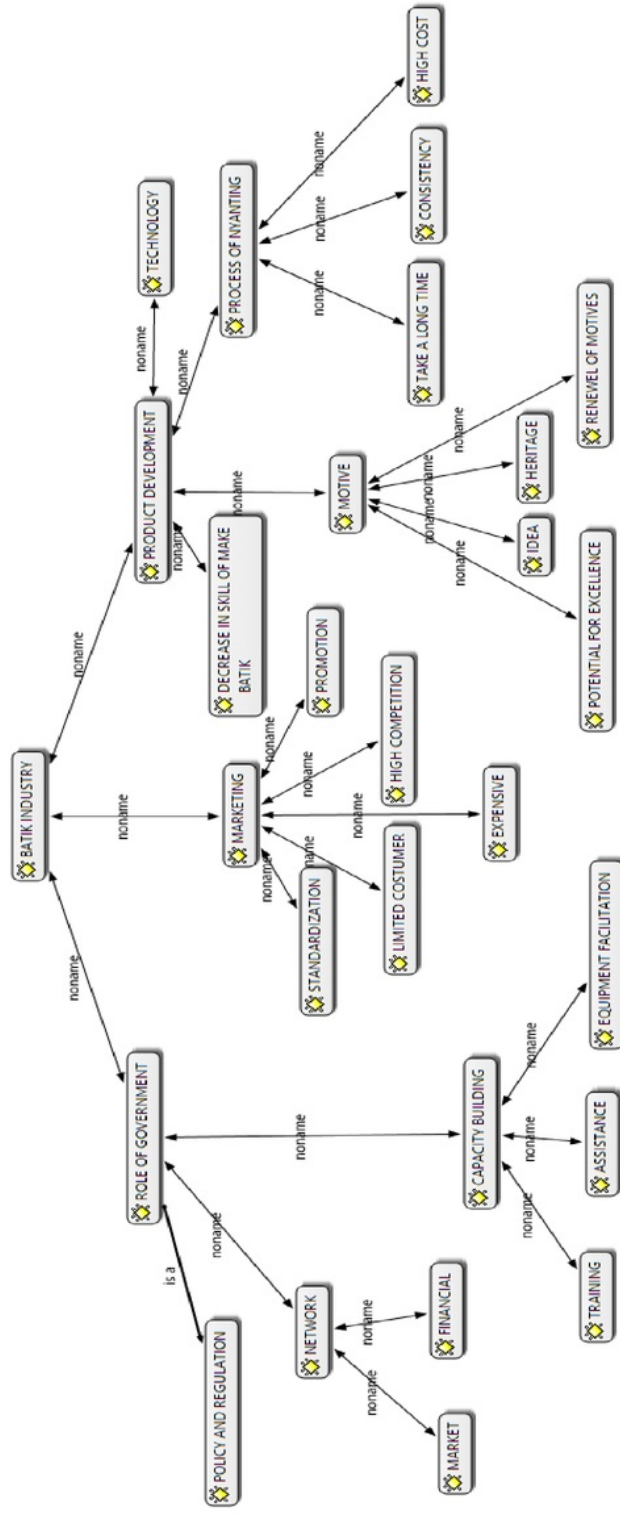
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b. Development of cooperation networks both in terms of capital and marketing. The opening of this cooperation network will provide opportunities for entrepreneurs to develop their businesses.

c. Capacity building consisting of (i) specific training in developing new batik methods that are faster and more consistent; (ii) equipment assistance to be more targeted and in accordance with the needs of business actors; (iii) assistance provided continuously in accordance with the conditions and needs of business actors.

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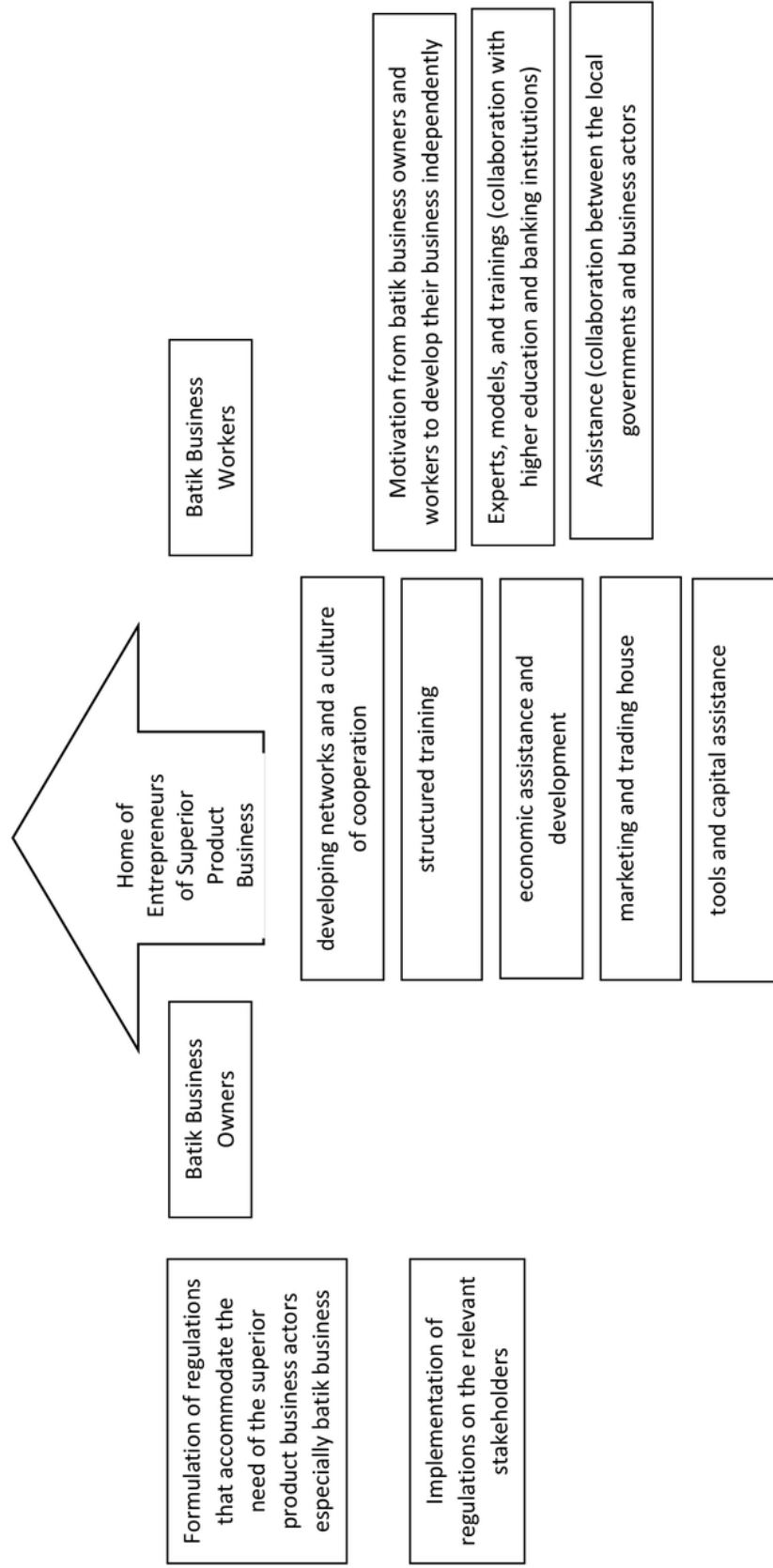
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Clusters are realized in the homes of batik entrepreneurs with a variety of activities consisting of (1) developing networks and a culture of cooperation; (2) structured training; (3) economic assistance and development; (4) marketing and trading house; (5) tools and capital assistance

The model is shown in the following Figure 2:

Figure 2 Cluster Development Model in Ngawi

REGULATOR	EXECUTOR	STAKEHOLDER *who does what* SOCIAL ENGINEERING STRATEGY	SUPPORTING INSTITUTION	TARGET/END-USER
the local government, the local House of Representatives	trade service, industry service, cooperative and MSME service		Banking, Academic and Business Institutions	batik business actors

Home of Entrepreneurs of Superior Product Business

Batik Business Owners

Batik Business Workers

Formulation of regulations that accommodate the need of the superior product business actors especially batik business

Implementation of regulations on the relevant stakeholders

developing networks and a culture of cooperation

structured training

economic assistance and development

marketing and trading house

tools and capital assistance

Motivation from batik business owners and workers to develop their business independently

Experts, models, and trainings (collaboration with higher education and banking institutions)

Assistance (collaboration between the local governments and business actors)

5. Conclusion

This research found three issues in the development of batik products, namely (1) product development, especially written batik; (2) marketing which has several constraints on both internal and external factors; (3) The role of the government both in policies and regulations and in the implementation and opening of networks. The main motif in developing Ngawi batik is to incorporate local wisdom and the most dominant potential in Ngawi district, so that it will bring out its own uniqueness and special characteristics. The batik business development model in Ngawi Regency will be carried out with a system of who does what consisting of regulators, executors, and supporting systems to create home of entrepreneurs.

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