

ジャワにおけるバティック産業の変遷と課題：スラカルタとジョグジャカルタにおけるケーススタディ

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ジャワにおけるバティック産業の変遷と課題 — スラカルタとジョグジャカルタにおけるケーススタディ —

Changes and Issues of Development and Management of Batik Industry in Java
— Case Study of Surakarta and Yogyakarta —

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This paper discusses the features and issues of the urban industrial Batik cluster in the cities of Surakarta and Yogyakarta, in Central Java, Indonesia. First, the historical development process of the Batik industry was clarified and stressed during the revitalization phase (2004 – Present) using timeline analysis; then the performance, industrial organization, and current conditions were identified for three selected sites in the areas of Laweyan, Kauman and Tamansari by comparison of each cluster's performance. Several factors have been analyzed, such as internal, external, and social factors. Subsequently, our analysis shows the main factors influencing sustainability are: traditional home-based production and the role of female managers, the strategic location and geographic closeness of sites to the labor supply and diversity. Furthermore, the issues facing all three of the sites in this study are the performance of the Forum as a knowledge-sharing agent, and as a platform for organizing the Batik industry and managing tourism within urban heritage sites. Based on these findings, this study provides suggestions which can be adopted for the future planning in the urban industrial Batik clusters.

Key words: *Batik, Industrial Cluster, Small Medium Enterprises, Heritage, Indonesia*

バティック, 産業クラスター, 中小企業, 遺産, インドネシア

1. INTRODUCTION

1.1 Background

The cities of Surakarta and Yogyakarta are twin cities in Central Java, Indonesia. They are the result of the split of the Mataram Kingdom in 1755. These cities are considered as the centers of Javanese culture where the Batik industry is a cultural asset. During the 1930's, Batik's industry consisted of a group of crafts industries, and was comprised of the most important small-scale industry in Java after rice milling and weaving¹⁾. Therefore, Surakarta and Yogyakarta were taken as a study area (Fig.1). However, the handmade-Batik industries as cultural heritage have faded from glory in almost 30 years. As a result of the changed Javanese life style and mass production of Batik using modern technology²⁾, it is becoming

a pressing concern to handmade-Batik industries in Central Java, particularly in the cities of Surakarta and Yogyakarta. According Manzi³⁾, the nature of sustainable development is complex and dynamic. It's incorporating social, cultural, economic and community dimension, demonstration a strong interdependence between environment and people. The presence situation shown that Batik industries are remains sustain. Both of two cities have a local identity of Batik industries. Following the recognition of Indonesian Batik's significance, UNESCO in 2009 inscribed it as one of the masterpieces of intangible heritage of humanity. It's impacted the Batik industry to revive. Thus, sustainability of Batik industry in urban heritage areas is important issues.

The manufacturing and trade and tourism service industry are the largest sectors in the economic structure of Surakarta City. Surakarta's gross domestic product is accrued from manufacturing (24.1%) and trade and tourism service (24.2 %) ⁴⁾. Meanwhile in Yogyakarta, the gross domestic product is accrued mostly from trade and tourism service (25.8 %) followed by the manufacturing industry (11.3 %) ⁵⁾. In Surakarta

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Indonesia



- City Center
- Neighbourhood boundaries
- - - District boundaries
- ~ River
- == Arterial Street
- === Collector Street
- Local Street
- Heritage Compound
- Heritage Site
- Palace Square

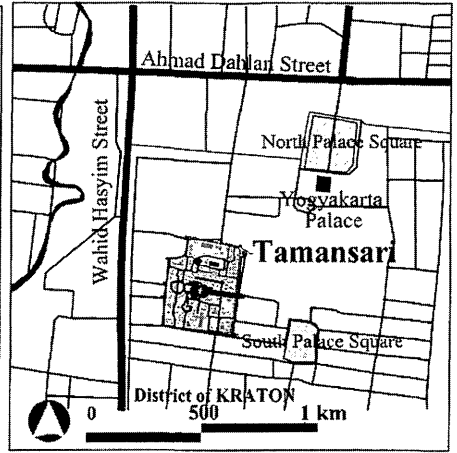
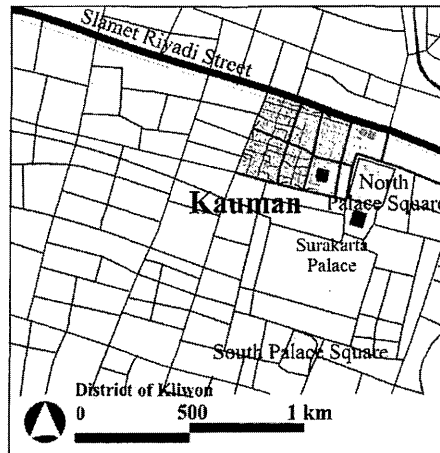
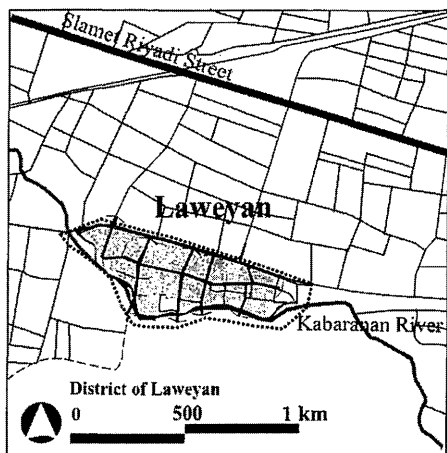
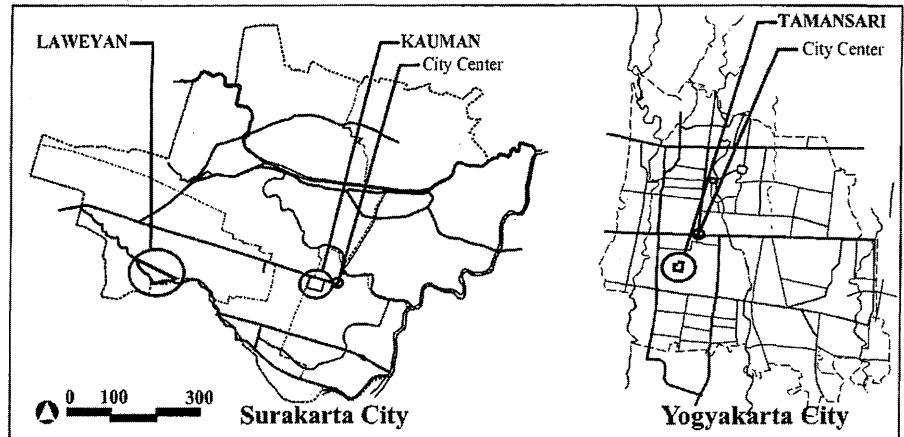


Fig. 1 Study Areas of Surakarta and Yogyakarta

City 90 % of manufacturing industry output is from small medium enterprises (SME)⁶. Thus, the Batik industry, which is a heritage-based industry within urban heritage, is a potential issue in urban economic development and urban sustainability. In order to understand how the Batik industry can be sustain as heritage-based industrial cluster in the urban heritage areas, this study will focus on the historical process and social sustainability of Batik industries in current condition of Surakarta and Yogyakarta Cities. The social sustainability is mainly concerned with the relationships between communities and the created environment³. This study focuses on the people individual life chance in Batik industry and institutional structure.

1.2 Objective

The objectives of this study are as follows;

- 1) To clarify the conditions of the development phase in the Batik industry

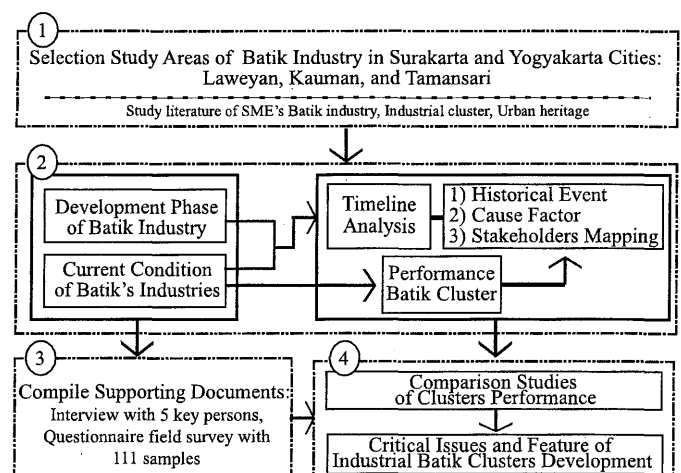


Fig. 2 Flow of this Study

- 2) To clarify the performance and industrial organization of the Batik industry
- 3) To clarify the critical issues for the social sustainability of industrial Batik clusters in the both cities

1.3 Previous Research

There are several studies on SME industries in rural Indonesia by Rebecca¹⁾ and Dunham⁷⁾. These studies have shown that SME's operation in rural areas are integrated into local life styles. Many studies on industrial clusters exists. Morosini⁸⁾ and Scott⁹⁾ explain industrial clusters as a geographic cooperative groups organized around their own center of gravity. Morosini⁷⁾ defines three broad factors of industrial clusters: internal; external; and social. However, both Morosini and Scott do not clearly define the organization of industrial clusters within the context of urban heritage. This study emphasizes the broad context of industrial Batik clusters in urban heritage areas as well as their performance to make a sustainable and economically independent area harmonized with historical properties.

1.4 Methodology

The methodology of this study is shown in (Fig. 2). First, the sites which formed industrial clusters in urban areas were selected. Second, from the past studies and documents, the historical development of the Batik industry using the timeline has been studied to understand the important historical events, the causes for those events, the stakeholders, and market development. Third, five structured interviews with three leaders of local initiative organizations and two officers of the Surakarta City government were carried out. The interview contents were about historical events, the causes for those events, the stakeholders, the organizations of local community initiatives history and market development. Later, two unstructured interviews with the local community and experts from local universities were carried out to verify the information in a structured interview. In order to understand the current condition of the Batik industry, the organization of the Batik industry's resources, processes and capabilities, product market, regulatory framework, and knowledge sharing have been studied. A questionnaire survey to 111 entrepreneurs based on the above-mentioned framework was carried out. This survey gathered information about of entrepreneurs and labour, types of businesses as well as the total size of home based enterprises (HBE), suppliers, market distribution, tourism and community initiatives. The physical assessment of the size of HBE has been studied. The questionnaire survey and analysis of the performance and industrial organization of the Batik industry have been used in all three sites. The field survey was conducted from September to October 2011. Lastly, to identify the critical issues for sustainability of industrial Batik clusters synthesis between historical analysis and the comparison of current condition, performance and industrial organization of clusters has been made.

1.5 Study Areas

Three sites which formed clusters have been selected: Kauman (20.10 ha) and Laweyan (20.56 ha) in Surakarta, and Tamansari (12.66 ha) in Yogyakarta (Fig. 1). The selection of the study areas based on the formation of each cluster was related to the heritage value of the site. Kauman in Surakarta and Tamansari in Yogyakarta are part of the castle and originally were occupied by royal servants (*Abdi dalam*). The causes the development of the Batik industry was from cultural activities in Kauman and Tamansari. The skill of producing Batik was introduced from royal family¹⁰⁾¹¹⁾. The greatest demand has been for traditional clothing and ritual articles. Laweyan was an independent industrial center in the periphery of Surakarta city. By mayoral decision No. 646/11/1/1997 in 1997¹⁰⁾¹²⁾, Laweyan was designated as a heritage settlement in order to conserve Batik houses built around 1913, as well as the merchant township with European, Chinese and Islamic architecture. Laweyan was a cotton industrial cluster which then developed into a Batik cluster due to market demand. Other reason of selection site is all three sites are tourism destination.

2. THE HISTORY OF THE INDUSTRIAL BATIK CLUSTER IN CENTRAL JAVA

2.1 Batik Industry and under Kingdom's Control (1800-1850)

Batik in Central Java existed from the late 18th century¹⁾. In the early 19th century Batik manufacturing in Surakarta was influenced by the fame of the Mataram Kingdom which represented the cultural base of Javanese society¹⁾. Laweyan was the first industrial cluster for producing Batik in Surakarta City. It was established in 1546¹⁰⁾. The Kingdom provided a demand for Batik products, which served as a cultural symbol. The kingdom had control of Batik development, particularly in the Kauman area¹¹⁾ (Fig. 3).

2.2 Modernization of Batik Making and Mass Production (1850 -1945)

In 1850, Batik production became commercial mass products due to national demand and the innovations in technology¹⁾. Dramatic population growth and subsequent urban immigration increased the demand for manufactured cloth while creating a large pool of surplus labor which led to the innovation of Batik technology and low cost Batik production. The stamp for Batik or Batik Cap in Javanese was invented as an alternative to drawing. "Batik for sandang" or Batik convection was established. This development triggered the modernization of the Batik industry. Meanwhile in the 1930's, the Batik industry started in the Tamansari area¹³⁾. The golden age of Batik in Central Java was the early 20th century¹¹⁾¹⁰⁾¹³⁾. The construction of

inland roads and railway opened up a new market enabling the emergence of urban-based Batik enterprises producing goods for mass consumption¹⁾. The Batik industry became the main occupation of the people in Kauman and Laweyan. In 1930, there were 230 Batik enterprises in Laweyan, a fact clearly reflected in the physical settlements of Kauman and Laweyan. Most of the Batik houses found today were constructed around 1913, and most of the Batik manufacturing workshops were constructed around 1930¹⁰⁾¹³⁾. The transformation in demand for Batik production from royal demand into tourism demand took place during this period⁹⁾ (Fig. 3).

2.3 Industrialization of Batik Production (1945 – 2004)

Post-independence development policies had a large impact on the SME's Batik enterprises. Among the issues were textile policy and competition from well-financed, large scale enterprises¹⁾. Big enterprises started producing Batik using modern Batik printing technology. Since 1945 the numbers of SME's were constantly decreasing¹¹⁾¹⁰⁾¹³⁾. Lack of access to current markets and lack of information were major reasons for decrease during the period from 1970-1999¹³⁾¹³⁾. The changing of life styles led entrepreneurs in Laweyan and Kauman to become government employees. By 2003 there were only 10 enterprises remaining in Laweyan. To safeguarding against the decrease of Batik industry in 1960, the Indonesian government started to develop Batik Cooperatives¹⁾. Meanwhile, in the 1970s, the tourism in Yogyakarta and the export markets in Japan and the Western Countries became lucrative markets¹⁾. By facilities in major tourist centers like the Tamansari water castle heritage site area, a number of Batik producers began to market their goods directly to retailers or even consumers, reducing the role of middle size entrepreneurs in the Batik market¹²⁾. The driving factor of the Batik industry in Tamansari was tourism in the Tamansari Water Castle (Fig. 3).

2.4 The Reviving of Batik Industry as Heritage-Base Industry (2004-Present)

Surakarta City is promoting the symbolic importance

of Batik by conserving Surakarta's heritage assets. Both national and local governments have pursued policies aimed at fulfilling the revival of the Batik industry through local meetings, cooperative schemes, and physical structural neighborhood improvements. The declaration of the Laweyan area as an industrial Batik heritage site, and as a tourism destination was in 2004. In the same year a "Forum", group of business related to the Batik industry was established to promote tourism. During 2005-2010, in Laweyan first and Kauman later, the Surakarta City government was invested in the public domain, in things such as signage, pedestrian way greenery, street furniture, and recycling waste. The purpose of all these projects was to improve the environments for residents, Batik producers, and tourists. In 2010, the city followed-up on pedestrian improvements to create a "Batik walk" inside the compound. The same spirit to revive Batik industry happened in Kauman. In 2006, Kauman was inaugurated as a tourism destination for Batik Industry. The city has been sponsoring cultural programs at Laweyan and Kauman, including the Solo Batik Carnival, since 2008, as well as international performing arts festivals³⁾. The number of Batik enterprises in Kauman and Laweyan has slightly increased since local governments started supporting the promotion and infrastructure development within these areas. By 2003 Laweyan had 10 enterprises, and in 2008 there were 60 enterprises³⁾⁴⁾. The number of enterprises in Kauman before 2006 was 14 enterprises. By 2008 there were 40 enterprises (Fig.3).

3. PERFORMANCE OF INDUSTRIAL BATIK CLUSTERS

Industrial Batik clusters are geographic cooperative groups based on cultural heritage that include their own suppliers, consumers, and peripheral supporting industries. The formation of industrial Batik clusters are group of business within the same areas and near with each others. In this section, the key factors that govern the efficient functioning of the Batik Industry in Kauman, Laweyan and

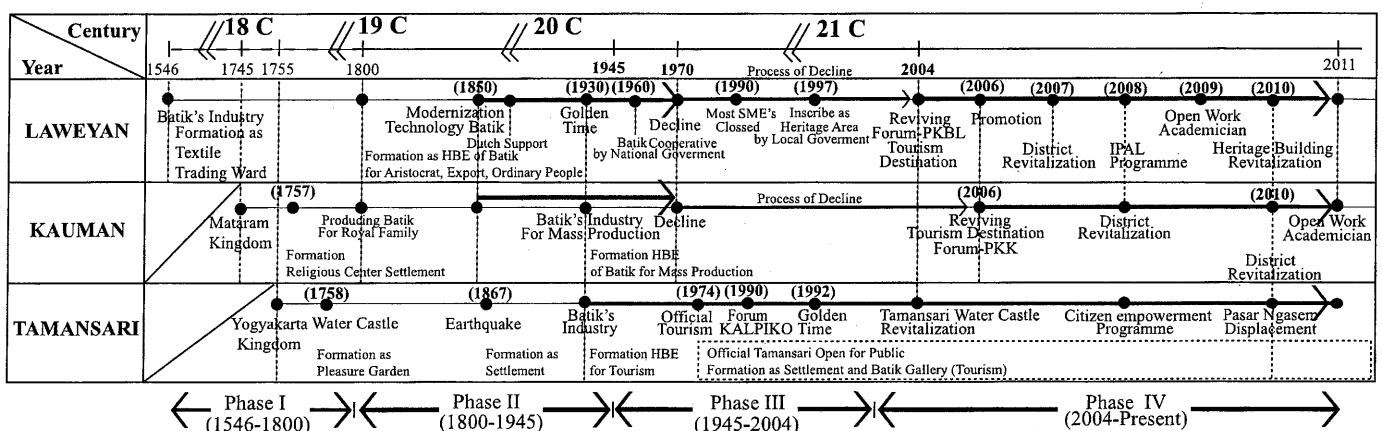


Fig. 3 Development Phase of Industrial Batik Clusters

Tamansari is examined. According to Murosinni⁸⁾, resources and process-capabilities are internal factors that are driven by local forces. The external factors are product markets and regulatory framework which can be geographically localized either within the cluster or nearby. Social approaches to learning and knowledge creation are described as social factors. The questionnaire was designed to understand cluster elements. A total of 111 samples were collected using purposive random sampling out of the total number of 187 entrepreneurs in all three sites. The total number of Batik businesses in Laweyan consisted of 90 entrepreneurs, and in Kauman consisted of 57 entrepreneurs⁴⁾. Meanwhile in Tamansari there were 40 entrepreneurs. The contents of the questionnaire are: resources, process and capabilities, product market, regulatory framework, and knowledge sharing. This framework allowed us to understand the performance of the Batik industrial clusters in our sites. Accordingly, this second step entails an investigation into the performance of the Batik clusters to determine the opportunities and the weaknesses of the industrial Batik clusters (Fig. 4).

3.1 Resources of Location and Human Capital

Characteristics of location can be analyzed by natural components, distance from the city center, heritage values, and related businesses. The Kabanaran River is a natural component of the environment that demarcates the southern boundary of the Laweyan settlement. It is a feature among all three sites unique to Laweyan. The road networks in old Javanese cities are designed so as to follow a north-south axis. Laweyan and Kauman have a north-south axis. The axis influenced the orientation of houses in the settlement. The Laweyan and Kauman settlements are uniform and follow a grid system. Tamansari, a recent settlement, does not follow this pattern and has an irregular settlement pattern (Fig. 1). Kauman and Tamansari are located within an old Javanese city, which typically consists of palaces, squares (*Alun-alun*), and markets (*Pasar*). Tamansari, in particular, is inside

Yogyakarta's palace walls and is located about 2.5 km from the city center. The uniqueness of the Tamansari cluster is that it is located inside a well known tourist destination. Kauman is located near the Surakarta palace and located about 0.5 km from the city center. Laweyan is located about 4 km from the city center (Fig. 1). Human resources were analyzed by using the data obtained through questionnaires given to entrepreneurs.

The composition of the entrepreneurs was analyzed by factors such as dominance of gender, average production age, and ownership of business venue. Composition of labor was analyzed by employment size and origin of labor. The average age of owners was 35-60 years old in all three sites, 8 (17.4 %) of business owners in Laweyan were above 60 years old (Fig. 5). It proved the active productive age appeared in all three cases studies. Females are the dominant gender in ownership of firms in Laweyan 27 (58.7%) and Kauman 18 (56.3%) (Fig. 6). In contrast to Kauman and Laweyan, the majority of business owners in Tamansari are

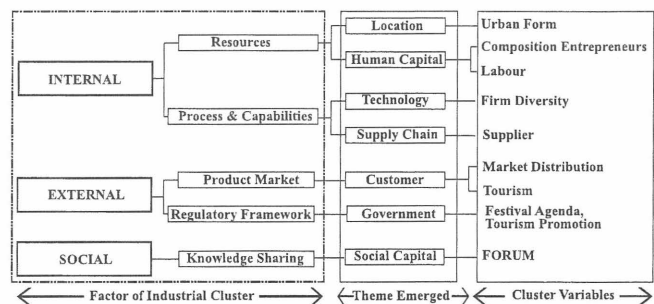


Fig. 4 Internal-External and Social Factor Force

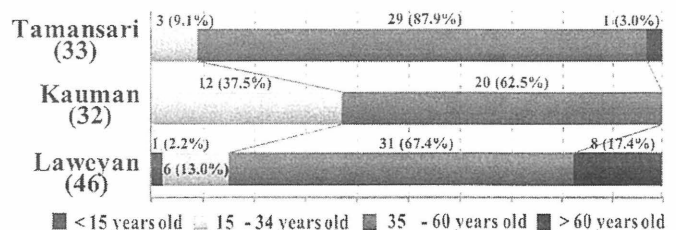


Fig. 5 Ownership by Age

Table 1. Formation of Industrial Batik Cluster

No	Number of Business Type	Laweyan (46)	Kauman (32)	Tamansari (33)
1.	Workshop	6 (13.0%)	1 (3.1%)	4 (11.8%)
2.	Apparel	6 (13.0%)	2 (6.3%)	5 (14.7%)
3.	Gallery	19 (41.3%)	26 (81.3%)	15 (21.2%)
4.	Workshop & Gallery	7 (15.2%)	2 (6.3%)	7 (20.6%)
5.	Apparel & Gallery	2 (4.3%)	1 (3.1%)	1 (2.9%)
6.	Company of Batik Full Production	6 (13.0%)	-	1 (2.9%)

No	Number of Business Location	Laweyan (46)	Kauman (32)	Tamansari (33)
1.	Terrace	4 (8.7%)	12 (37.5%)	10 (30.3%)
2.	Living/ Family Room	16 (34.8%)	4 (12.5%)	16 (45.5%)
3.	Special Room	13 (28.3%)	13 (40.6%)	3 (9.1%)
4.	Outside within Compound	3 (6.5%)	3 (9.4%)	4 (12.1%)
5.	Factory	10 (21.7%)	-	-

No	Mean Size of HBE	Laweyan (46)	Kauman (32)	Tamansari (33)
1.	Company of Batik Full Production	567.5 m ²	397.2 m ²	167.8 m ²
2.	Living Space & Gallery Used	150.3 m ²	203.0 m ²	135.5 m ²
3.	Living Space & Workshop	172.8 m ²	-	82.5 m ²
4.	Workshop	1114.0 m ²	-	-
5.	Gallery	73.8 m ²	120.7 m ²	-

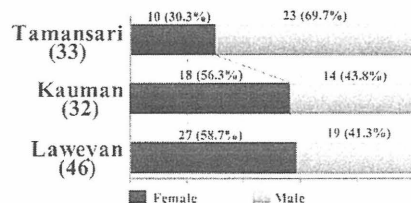


Fig. 6 Business Ownership by Gender

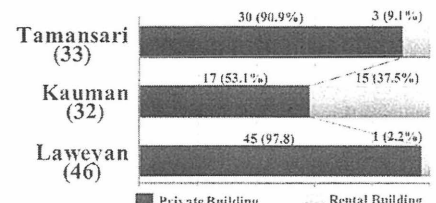


Fig. 7 Ownership by Business Venue

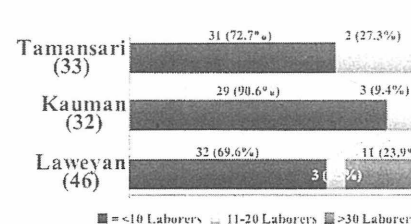


Fig. 8 Employment Size

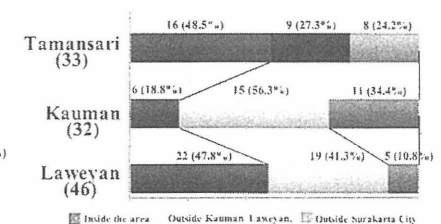


Fig. 9 Labour Origin

male 23 (69.7 %). As the heritage based production process, the production of Batik was dominated by female gender. It appeared in Laweyan and Kauman. Meanwhile, Tamansari is recent development. It dominated by male entrepreneurs.

Kauman has the highest percentage 15 (37.5%) of business venues in rented buildings. This demonstrates that the Kauman cluster has the highest number of new entrepreneurs from outside the area (Fig. 7). Most of the Batik industries in all three sites were small enterprises with less than 10 laborers. In Tamansari, 31 (72.7 %) of businesses had less than 10 laborers and Laweyan has the highest number of businesses with more than 30 laborers 11 (23.9 %) (Fig. 8). Although 2 (27.3 %) of Tamansari entrepreneurs have 11-20 laborers, most of these businesses have their workshops outside the Tamansari area. Nearly half of the laborers in Laweyan and Tamansari live and work within the cluster area. In Kauman the majority of the laborers live outside the cluster area 15 (56.3 %) (Fig. 9). The majority of the workers in all three sites are coming from the city limits.

3.2 Process and Capabilities

The production process of Batik as a whole generally consists of six basic steps: (1) pattern-making, (2) the waxing process, (3) dyeing, (4) removing the wax, (5) tailoring (designing clothes, cloth-cutting, sewing, finishing), and (6) sales. From the field survey, it was discovered that there are two types of production processes. In the full Batik process, the whole production process is carried out in the same workshop. This type of production is referred to as “factory-based production”. Half of the production process was carried out outside the site area. In both situations the finishing and selling of products are conducted within the site areas. Batik workshops can be classified into six categories based on the production process, such as workshop, apparel, gallery, workshop and gallery, apparel and gallery, and full production company of Batik. The majority of businesses in Kauman are galleries 26 (81.3%). In Laweyan, 6 (13 %) are full production businesses. In Tamansari, 15 (21.2 %) of businesses are galleries. From above analysis, galleries uses functions are the dominant function in every site. This demonstrates the diversity of business types in all three cases studies were different. Kauman and Tamansari were dominated by galleries function rather than workshop function. Meanwhile, in Laweyan, it shows that workshops, galleries and factories were fair in total number (Table 1). The diversity of Batik production businesses is also visible in spaces used for different activities. In Kauman, 13 (40.6 %) of production is carried out in special rooms, an expansion of the main house used for Batik production. In Tamansari, 4 (12.1 %) of production is carried out in special spaces within the compound, and the majority of production activities are carried out in living rooms 16 (45.5 %). One unique feature

of Laweyan is that 10 (21.7 %) of businesses have their own factories. HBEs are informal sector economic activities that operate from the house. The total size of an HBE is determined by the technology and production processes that occur in each firm. Laweyan has a bigger mean size of workshop production (1114.0 m2) and living area than Kauman or Tamansari (Table 1). From above analyzed, Laweyan has diverse, complex mixture business type and biggest size of HBE compared to others areas.

3.3 Product Market

It can be seen that Tamansari has the widest range of suppliers, including foreign countries. Kauman relies mainly on local suppliers for materials. Laweyan’s supplier base, which includes Java, is wider than that of Kauman. The majority of suppliers are coming from within the city area. Only in Tamansari did 4 (12 %) of businesses source some of the raw material from foreign countries (Fig. 10). Tamansari exports 8 (24.2 %) of their products to foreign countries. Kauman and Laweyan still have demand from local markets. Most of the big firms in the Laweyan cluster area have wider access to markets in Java Island (Fig. 11). According to field survey, Kauman 24 (75 %) and Tamansari 11 (33.3 %) have the benefit of tourism industry compared to Laweyan 11 (23.9 %). Promotion from the tourism industry has a direct effect

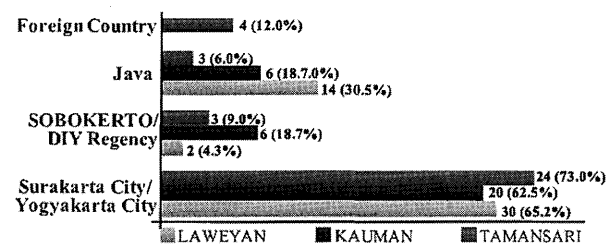


Fig. 10 Origin of Supplier

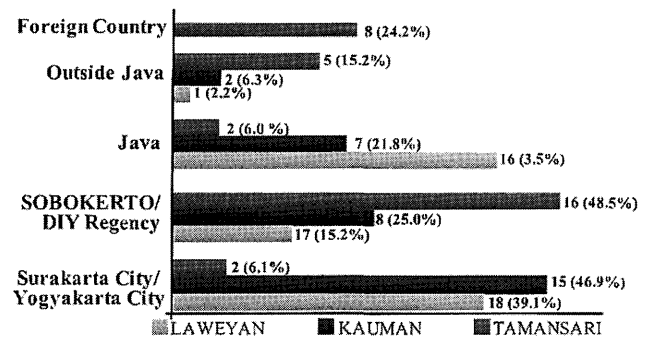


Fig. 11 Product Market Distribution

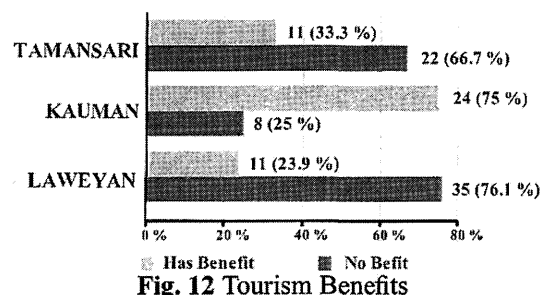


Fig. 12 Tourism Benefits

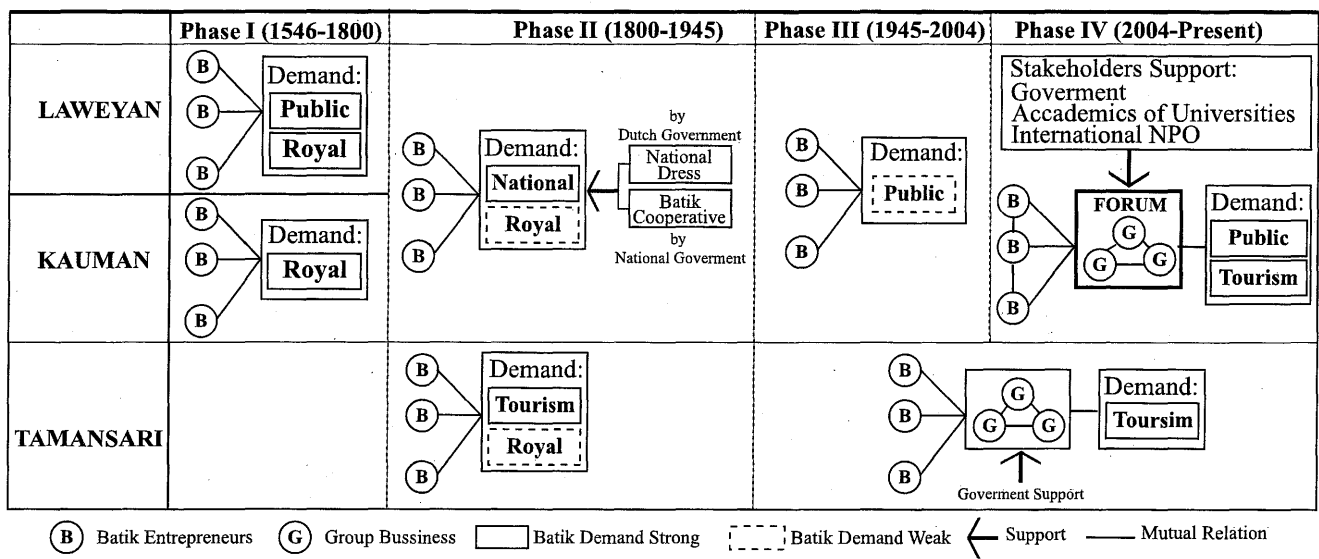


Fig. 13 Benefits of Forum for Business Owners

on most entrepreneurs (Fig. 12). Kauman and Tamansari were near to the city center and center business district.

3.4 Regulatory Framework

We recognized that important historical events have a connection to government policies and people's initiative support. In each phase there is a different connection (Fig. 13). During the Phase I from 1546-1800 there was no relation between entrepreneurs with any stakeholders. The entrepreneur started receiving government support during the Phase II from 1800-1945. The golden time of Batik handmade production was given quite a lot of support with the regulations of the Dutch government. The Dutch government helped promote the usage of Batik fabric for Javanese clothing¹⁾. After Indonesia's independence, when the industry started to decline, the Indonesian government established the Batik Cooperative. Phase III from 1945-2004 is the vacuum. There was not essential support to revive the Batik industry and Industrial clusters. Entering Phase IV from 2004-Present is the revitalization period. There were a lot of stakeholder involved in redeveloping both the Batik industry and industrial Batik cluster, particularly in Surakarta City. In the revitalization phase of 2004-Present there were a lot of activities regarding the tourism and the Batik's empowerment, particularly in Surakarta City that were supported from different stakeholders. Open accesses to academics and experts occurred in all sites during this period (Fig. 13, Table 2).

3.5 Knowledge-Sharing

Knowledge-sharing is the ability to transfer knowledge quickly and effectively from one part of the organization to another¹⁴⁾. Knowledge-sharing can be evaluated by the dynamics of Forum in each of the cluster industries²⁾. Forum is a local initiative which has been developed by Batik entrepreneurs. Most of the members of Forum are Batik entrepreneurs and groups of businesses related to the Batik

Table 2 Regulatory Framework 2004-2011

	ACTIVITIES	STAKEHOLDERS
2004	Declaration of Laweyan as Tourism Destination ●■	(F)(G)(E)
	Declaration of FPKBL in Laweyan ●■	(F)(G)(E)(A)
	Event for Tourism Promotion in Laweyan "Mengenal Kampung Batik Laweyan" ○	(F)(G)(E)
	Training for Laweyan Guide ●■	(F)(G)
2005	Technical Assistance Community Based Development From Academician to establish Kauman Batik Forum●	(F)(E)
	Physical Revitalitation Water Castle Tamansari ●▲	(G)(E)(R)(C)
2006	Declaration of Kauman as Kampung Batik for Tourism Destination ●■	(F)(G)(E)
	Declaration of Forum PKBK in Kauman	(F)(G)(E)(A)
	Monthly Event for Tourism Promotion in Laweyan "SELAWEYAN" ○	(F)(G)(C)
2007	Physical Revitalitation in Laweyan Batik Area ▲	(F)(G)(E)(C)
	Development Batik Waste Recyling in Laweyan ▲	(F)(G)(E)
	Monthly Event for Batik - Photo Exhibition in Laweyan ○	(F)(C)
2008	Physical Revitalitation # 1 in Laweyan Batik Area ●▲	(F)(G)(E)(C)
	Development Batik Waste Recyling in Laweyan ●▲	(F)(G)(E)
	Conservation Programme for Heritage Building from Local Government in Laweyan ▲	(F)(G)(C)
	Annual National Event held by Surakarta City Government "Solo Batik Carnival" ●■	(F)(G)(E)
2009	Forum Cluster form Government in Laweyan ●■	(F)(G)(E)
	Internship Programme in Laweyan from University●■	(F)(A)
	Conservation Programme for Heritage Building from Local Government in Kauman ●▲	(F)(G)(C)
2010	Empowerment Programme in Tamansari by Clean Batik Initiative, German ●■	(g)(G)(E)
	Internship Programme in Tamansari ●■	(F)(A)
	Open Working Academician & Forum in Laweyan ●■	(F)(A)
	Physical Revitalitation # 2 in Laweyan Batik Area ●▲	(F)(G)(E)(C)
2011	Physical Revitalitation # 1 in Kauman Batik Area ●▲	(F)(G)(E)(C)
	Building Heritage Mapping in Laweyan ●▲	(F)(G)(A)

(F) Forum (g) Group Bussiness (G) Government (A) Academician (E) Expert (C) Local Community
 ● Formal Media ○ Informal Media ■ Empowerment Support ▲ Physical Support

industry. The main role of Forum is negotiating the prices of products and materials with outside partners. The other roles are knowledge sharing, empowerment of local businesses, promoting tourism, organizing events and exhibitions within the site or with the partnership of the government, NPO (non profit organization) and big enterprises. Forum of the Laweyan site was established in 2004 and Forum of the Kauman Sites was established in 2006.

The characteristic of Forum through the statement of mission, capability of resources and management of style and transfer media type were observed in order to understand the performance of knowledge-sharing¹⁵⁾. Laweyan Forum has three missions as follows: to open Laweyan as a tourism destination for Batik heritage based traditional and Laweyan area as a living heritage, to empower the Batik business members, and to strengthen the local economy. Meanwhile in Kauman, the mission of the Forum is to open Kauman as a tourism destination for Batik Industry with a religious atmosphere and to empower its members. The development of Forum was influenced to a large extent by expert institutions, particularly by academics from different universities. Kauman and Laweyan have been supported both by national and private universities in Surakarta City (Fig. 13).

Meanwhile in Tamansari, knowledge-sharing appears in a dispersed group of businesses. Three important groups were founded in Tamansari; (1) Kalpika's group for the Batik T-shirt product. (2) Geyong group for the Batik Painting products, and (3) Kampung Budaya Tamansari (KBT) for the Batik clothing. Most of the group businesses that were founded are now involved in stagnant activities. Most the activities related to empowerment via methods such as training Batik makers, internship programmes taught by experts, and promotion taking part exhibitions are coordinated by individual businesses.

4. INFLUENCING FACTORS IN INDUSTRIAL BATIK CLUSTERS

Based on the results of the above analysis, the different historical factors, internal factors, external factors and social factors were clarified in all three sites with the aim of identifying related issues facing each of the industrial clusters (Table. 3).

4.1 Influenced by Kingdom

The arises for the development of Batik industry in each cluster are different. In Kauman and Tamansari, cultural activities and needs influenced the start of Batik due to their proximity to the Palace which was the center of Javanese culture. Meanwhile, Laweyan was an industrial cluster from the beginning. In fact, according to history, Laweyan was develop to become Batik clusters due to a demand from the Royal Palace (1546-1800).

4.2 The Role of Female Managers (*Mbok-mase*)

In traditional Batik production, female members of the family were the managers who are running the Batik industry. Their role had traditionally been important in the managing, marketing and promoting of Batik. The role of the *mbok Mase*/ female manager was a form of social structure amidst the Laweyan and Kauman class structure. This tradition is still visible both in Laweyan and Kauman where the ratio of female members is high.

4.3 Strategic Location

The benefits of site location are diverse in all three sites. Kauman is located close to the Surakarta Royal Palace which is a tourism destination and the city center. Tamansari is located within the archeological site of Water Castle in Yogyakarta Palace heritage site. Meanwhile, Laweyan has one unique characteristic. While it is 4 km from the city center, the settlement itself, which is in a heritage area, was developed in 1997. Kauman has the added advantage of being able to easily start a business due to its proximity to the city center.

4.4 Labor Supply

Close proximity to the labor supply is vital for the continuation of the traditional Batik industry. Traditionally, labor was supplied from peripheral agricultural areas¹⁾. Now the origin of labor is in surrounding neighborhoods within the city and within the clusters. Tamansari has the highest percentage of 48.5% labor origin within the cluster, while Laweyan has 47.8%. Meanwhile, Kauman's origin of labour

Table 3 Critical Issues in Each Cluster

	HISTORICAL FACTORS	LAWEYAN	KAUMAN	TAMANSARI	Issues in the three Batik Clusters
Historical Event	1) Kraton influence	—	●	●	Triggered by Cultural Activities
	2) Industrial based cluster	●	—	—	Independent Industrial Cluster
	3) Dynamic Development	—	—	—	
	a) Golden Time	●	●	—	Laweyan and Kauman have a dynamic process
	b) Decline Process	●	●	—	
Site Location	3) Reviving Process	●	●	—	
	INTERNAL FACTORS				
	1) Proximity to the Heritage Site	—	●	●	Possibility easily for the market distribution
	2) Proximity to the City Center	—	●	●	
	3) North-South Axis	●	●	—	
Human Capital	4) Grid System	●	●	—	Conserving natural element
	6) Proximity to the Natural Element	●	—	—	
	1) Dominance Female Entrepreneurs	●	●	—	Traditional based production
	2) Dominance Private Business Venue	●	—	—	Possibility easily open business in Kauman
	3) Dominance Rent Business Venue	—	—	—	Diversity of Employment Size in Laweyan
Present & Capabilities	4) Vary of Employment Size	●	●	—	
	1) Vary of Business Type	●	●	●	Diversity of Business Type in Kauman
	2) Vary of HBE's Size	●	—	—	Independent Industrial Cluster in Laweyan
	3) Vary of Space Used	●	—	—	
	4) Vary of Supplier	—	—	●	
Product & Marketing Framework	EXTERNAL FACTORS				Tourism Industry Influence in Tamansari
	1) Vary of Product Market Distribution	—	—	●	
	2) Promotion Tourism Industry	●	●	—	Active tourism promotion in Surakarta Support by government
	3) Vary of Tourism Event	●	●	—	
	SOCIAL FACTORS				
Social Capital	1) Active Forum Approaches	—	●	—	Active Forum Approaches
	2) Knowledge-sharing with The Academician	●	●	—	
	3) Knowledge-sharing with The Expert	●	●	—	Diversity of Actor Player

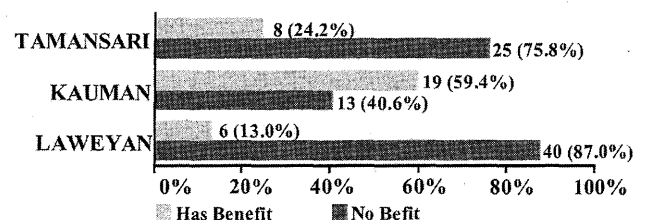


Fig. 14 Forum Benefits

comes from outside Kauman, within Surakarta City (34.4 %) and outside Surakarta City (12.5 %) (Fig. 9).

4.5 Diversity of Business Types

From the above analysis the development process of Batik industry can be divided into four phases. During the Phase I to Phase IV, Laweyan and Kauman have dynamic Batik industry development compared with the Tamansari area. Both Laweyan and Tamansari went through a golden time in the Phase II (1800-1945), Phase III of decline (1945-2004) and revitalization phase IV (2004-present) almost at the same times. The promotion of the tourism industry in Laweyan and Kauman had a strong impact on the revival process of their Batik industry since 2004. In Laweyan and Kauman, the Batik industry has become diverse after 2004. This diversity is visible in the production process, technology, organizing of businesses, and market distribution. Meanwhile the driving factor of the Batik industry in Tamansari was tourism since the 1930's due to its proximity to Water Castle in Yogyakarta Palace heritage site, which faced a stagnant condition. Compared to the other sites, Laweyan has the most diverse business types within its cluster. Having the highest variation in business, Laweyan is not relying on the central business district as a market. Laweyan has possessed a rigid structure as an industrial cluster for a long time. This was visible in Laweyan by the fact that 17.4 % of the owners are above 60 years old. In Kauman, the dominant business type was galleries with 81.3%. It was proved that the selling method has changed from the traditional business methods. A new comer can easily start a business in the Kauman area. Kauman has the highest number of rental housing (37.5%). This proves that family inherited businesses did not continue in Kauman.

4.6 Diversity of Space and the Size of Home-based Enterprises

Laweyan has a diverse number of business types, and this caused diversity in the way the space was used and the size of HBE, compared with others Batik industrial clusters. Laweyan has a diverse labor age range from 15 years old until the age of 60 years old. Laweyan has a diverse size of laborers per business, with a percentage of more than 30 laborers per business at 23.9%. Kauman and Tamansari do not have any businesses with more than a 30 laborer workforce.

4.7 Diversity of Product Market and Players

It was noted that Tamansari has a wider product market with 24.2 % of product exports, and 15.2 % of products sold outside the Island of Java. Other clusters still depend on local markets for the distribution of their products. This proves that geographic proximity of cluster areas combined with tourism industries may provide an open opportunity to form wider connections not only for procuring material supplies, but also for market distribution. In the revitalization phase (2004-Present), in Laweyan and Kauman the tourism

influenced lot of stakeholders to be involved in Batik industry development. It can be determined that the players are not only coming from the entrepreneurs but also from community citizens and the tourism industry, such as guides, tourism agents, academics, and NPO experts.

4.8 Critical Issues for Sustainability of Industrial Batik Clusters

Surakarta and Yogyakarta cities are historic tourist cities, therefore the tourism industry has an important connection to the development of Batik's SME. However, the issues facing the all three sites differ from each others because of the differences of their historical development, the size of their areas' forms, and their total number of entrepreneurs. Hence based on the influential factors shown, it can be found that the issues facing all three sites are performance of the Forum as a knowledge-sharing agent, and as a platform for organizing the Batik industry and managing tourism within urban heritage sites (Table. 3). Based on these findings, this study raises additional suggestions to be considered in future city planning and design.

Industrial clusters have begun to be regarded as social communities of knowledge creation and transfer. Forum is critical for knowledge-sharing within members of Forum and outside partners. The success of Forum as a negotiator and facilitator vary from cluster to clusters. From the analysis in section 3 we found that active Forum appears in Laweyan and Kauman (Table. 3). Although Laweyan's Forum has active event, 87 % of the businesses expressed there is not enough benefits from the Forum due to a lack of internal communication. In Kauman 59.4 % of businesses expressed that the forum helped empower and promote themselves (Fig. 14). Thus, in a short period of time since the establishment of the Forum in Kauman in 2006, it gained a lot of support from local, national, government, and external partners to promote Batik industry in Kauman. Meanwhile in Tamansari the condition remains stagnant. Thus Forum can be heavily influenced by the surrounding socioeconomic system of local cultural values and the institutional fabric of industrial clusters. To improve the effectiveness of the knowledge transfer in Batik industrial clusters' performance one must build a solid Forum. The relationship between entrepreneurs should also be fluid and solid.

Kauman and Laweyan Batik clusters have transformed their market distribution from closed markets to open tourism-based markets from 2004, as a heritage-based industry. As a result, the internal, external, and social factors have been changed. In 2004, Surakarta's city branding of itself as a Batik city helped the redevelopment of both Kauman and Laweyan. Since then there are a lot of physical and non-physical programs were implemented to support industrial Batik facilities and tourism. Out of all sites in Kauman, 87.0

% of the businesses expressed that they had benefited by local tourism. In Tamansari 75.6% of businesses expressed that they had benefited from national and international tourism. Tamansari in particular has the widest market, including foreign countries. Meanwhile, in Laweyan only 25.0 % of businesses expressed that they had benefited from tourism industry (Fig. 12). In addition, Laweyan can improve the tourism industry with its tangible and intangible assets of cultural identity to promote tourism. Building an area's identity around Batik production could be proposed as another alternative for tourism promotion. Meanwhile, the Tamansari cluster can revitalize the environment and atmosphere of the kampung, rather than rely only on tourists who only visit the water castle archeological site. Yogyakarta's City Government should start to consider and promote the potential of Batik industry in the Tamansari heritage site to improve the quality of livelihood within the artifact heritage site.

5. CONCLUSION

The growth of the urban industrial Batik clusters in Surakarta and Yogyakarta has been influenced by several factors. The timeline analysis with four phases, the structured interviews, and the questionnaire surveys with Batik entrepreneurs were applied to clarify the conditions of the development phase, the performance, and industrial organization of the Batik industry. The results in this study are as follows;

- 1) Through the timeline analysis of historical development, the Kingdom's control, modernization with innovations in technology, development of tourism, expansion of import and export markets, national government's development policies and stakeholders' support, access to the sites, and information for customers are the conditions of the development phase in the Batik industry.
- 2) The performance and industrial organization were clarified by analyzing several factors that emerged from the main factors such as; internal, external, and social factors frame work. Analysis shows that the influencing factors of the performance and industrial organization of the Batik industry in all three sites are traditional home based production and the role of female managers (*Mbok-mase*), strategic location and geographic closeness to labor supply, development and diversity in business types, space and the size of the HBE, product market and diversity of players.
- 3) Laweyan and Kauman in Surakarta have a dynamic process of development in the Batik industry. In the Phase IV revitalization period (2004-Present), the tourism industry of Laweyan and Kauman brings an important component that triggered and revived the performance

and organization of the industrial Batik cluster. The issues facing the sustainability of industrial Batik clusters in the three sites are the performance of the Forum as a knowledge-sharing agent and as a platform for organizing the Batik industry and managing tourism within urban heritage sites. The conservation of the cultural identity of the production process and local identity of settlements are vital elements of Batik marketing within urban heritage.

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