

スラカルタ市におけるバティック産業クラスターの 活力と観光産業への影響

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Vitality of Urban Industrial Batik Clusters in Surakarta City and Its Implication on Tourism Industry

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This study intends to analyze the sustainability of *kampung* in cluster industry focusing on the vitality and sense of place in the urban heritage of Surakarta City in Laweyan and Kauman. The similarities and differences in vital industries of the industrial Batik clusters within urban heritage was clarified; then the sense of place focusing on local community and tourist perception of industrial Batik cluster was clarified by asking their opinion. Subsequently, to identify justification proposal for *kampung* improvement in urban heritage of Laweyan and Kauman Batik's cluster. The analysis enabled a summary of the common vitality characteristic of Batik clusters in urban heritage is associated with the number of business type, the concentration, relationship of entrepreneurship within the area and the uses of public space in various streetscape. Based on these findings, this study provides adaptable suggestions for future *kampung* improvement planning in the urban Batik industrial clusters.

Keywords: Batik, Industrial Batik Clusters, Home-based Enterprises, Kampung

バティック, 産業クラスター, 家庭企業, カンボン

1. INTRODUCTION

1.1 Background

The human settlements in developing regions continue to preserve the characteristic of rural village and such a concept applies to urban *kampung* (urban villages). According to Funo¹⁾, it is one unique feature of Indonesia that urban settlements are called *kampung*. A *kampung* is influenced by trade and commercial goods, and generally has high density, and a compact community pattern. In Surakarta City 90 % of manufacturing industry output is from small and medium enterprises (SME). The manufacturing and trade and tourism service industries are the largest sectors in the economic structure of Surakarta City. Surakarta's gross domestic product was accrued from manufacturing (24.1%) and trade and tourism service (24.2 %) in 2008²⁾. Thus, the SMEs which is appear in *kampung* are scattered throughout the region of Surakarta

City³⁾. Both of SMEs and tourism industries were an important sector for local economic development.

In Surakarta City Batik is one of the SME heritage-based industries. Batik industry consists of a group of crafts industries⁴⁾. The handmade-Batik industries as cultural heritage have faded from glory for almost 30 years. It caused by the changed Javanese life style and mass production of Batik using modern technology⁵⁾. To revitalized the situation, Indonesian government initiated the setting up of industrial district which known as industrial cluster to make existence easier to provide all necessary infrastructure and facilities in the same location, thus providing a secure base for industry and manufacturing⁶⁾. The present situation shows that Batik industry in urban area is clustering. 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 along with the development of tourism industry in Surakarta City.

The reviving of the Batik industry, which is a heritage-based industry clustering within urban heritage, is a potential issue in urban economic development and urban sustainability. It is vital transforming these *kampung* settlements with her-

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itage value in to vibrant communities for the sustainability of the city. Many scholars have referred industries mainly carried out in homes as Home Base Enterprises (HBE). Jane Jacobs⁷⁾ described places where people can easily interact with each other and benefit from social networks as vibrant communities. These features can be recognized with new function of HBE in volume and scale within in the historic urban pattern. This study emphasizes the vitality in broad context of industrial Batik clusters in urban heritage areas as well as their vibrant nature to make a sustainable and economically independent area harmonized with historical urban environment. This study, therefore, focuses on the vitality and sense of place in urban heritage of Surakarta City.

1.2 Objective

The objectives of this study are as follows;

- 1) To identify the similarities and differences in vitality of a urban space in industrial Batik clusters within urban heritage areas Laweyan and Kauman
- 2) To clarify the sense of place focusing on local community and tourists perception of industrial Batik cluster in Laweyan and Kauman
- 3) To identify strategies for *kampung* improvement in urban heritage of industrial Batik cluster in Laweyan and Kauman

1.3 Literature Review

There are several studies on vitality of urban space. Among others Jacobs⁷⁾ and Bosselmann⁸⁾ have conducted these studies. These studies have shown the vitality of urban space is integrated with the presence of people living in close proximity. The design of built environment can influence both the functionality and the desirability of place. Bosselman shown the vitality of urban spaces can be measured by examining density, physical street dimension, mixture of activities, and public life.

In addition literature research on Batik clusters in Indonesia have been conducted. Based on Irawati⁹⁾, a geographical concentration of related industries and institutions in the same sector were shown as a cluster. The cluster phenomenon in Indonesia was constrained by the boundaries artificially set by the promoters of the cluster. It is spread and located in diverse area. Tambunan⁹⁾ shown that the government policies on SME with a clustering approach in Indonesia has not been so successful. Neglecting cluster linkage to markets is one main reason for the failure. Both of studies were analyzed from the economic perspective. Thus, of those studies do not clearly define the vitality of urban space in the organization industrial cluster settlement within the context of urban heritage. Therefore to strengthen cluster development studying on the vitality

of urban space in cluster industries will help in future development. The previous studies related to tourism industry were conducted by Snaith etc. et all¹⁰⁾ and Chua¹¹⁾. Snaith was using residents' opinion of tourism development in the historic city. He defined impact of tourism in the historic city. According to Snaith, the residents should not be viewed as homogenous in their support for tourism development. Other studies show that, tourist-dependent adaptive reuse in the historic city was dominated in the revitalization of the historic city. It can be applied for the purpose of conservation management in historic city of Batik clusters.

1.4 Methodology

The methodology of this study as follows; first, as comparative study, this research compares the vitality of urban Batik industry that has occurred within two industrial Batik clusters in Surakarta City. Laweyan and Kauman were selected for the reasons that they have definite geographic identities in urban area, classification as a cluster industry and history of development process of Batik industry. In order to understand the vitality, the building density and the neighbourhood street size of Batik clusters have been conducted through the field survey. Meanwhile, the organizations of the Batik industry's process and capabilities, and intertwining relation of production have been studied through structured interviews with the entrepreneurs. The questionnaire survey gathered information about of type of business, location of production space, the total size of HBE and the possibility of braided thing production within the cluster.

Second, in order to make assessment of the sense of place in industrial Batik cluster, questionnaire survey about opinion of entrepreneurs and tourist related to heritage site of Batik industry have been made. A questionnaire survey gathered information about accessibility, security, tourism amenities, and identity of place. A total of 179 samples were collected. The questionnaire survey covered 79 Batik's entrepreneurs and 100 visiting tourist. The entrepreneurs were selected by proportional stratified-random sampling and tourists via random sampling. The field survey was conducted from September to October 2011.

Lastly, the arrangements with comparison studies were reflected by investigation of vitality on industrial Batik cluster and the analyses of opinion of conservation management of industrial Batik clusters from entrepreneurs and tourist has been made to identify the critical issues for sustainability of industrial Batik clusters within urban heritage issues in Surakarta City.

1.5 Surakarta Industrial Batik Cluster

The working definition of cluster in this research is based

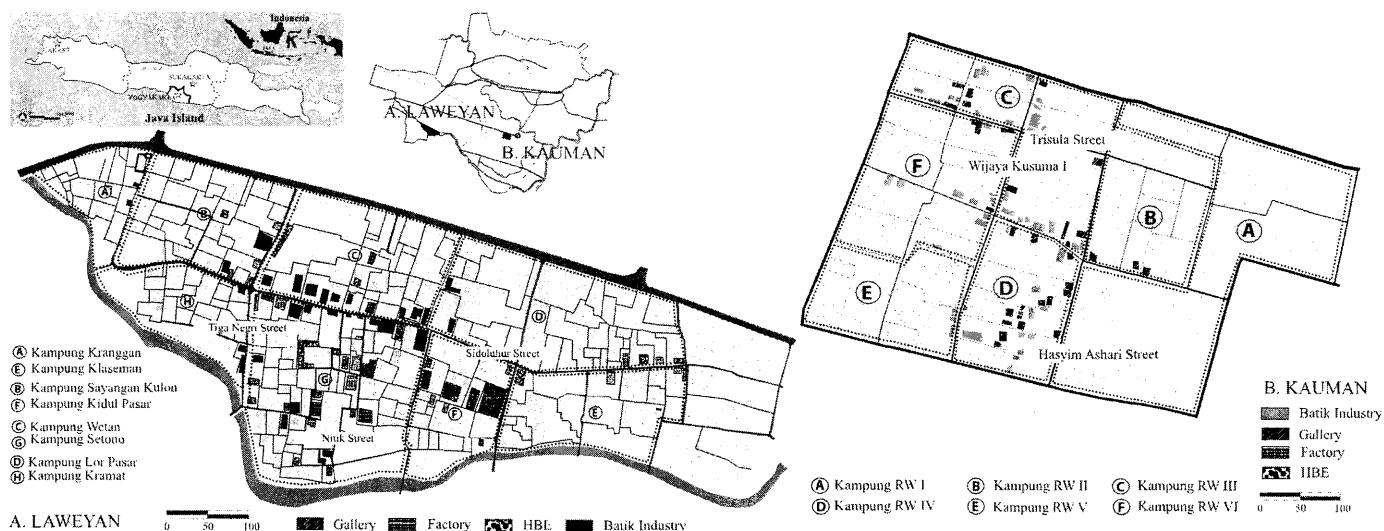


Fig. 1 Laweyan and Kauman Industrial Batik Clusters

on Irawati⁶⁾. A cluster is a geographically proximate group of interconnected businesses and associated institutions in a particular field, liked by communalities. Clustering refers to the process in which geographically proximate producers, suppliers, buyers and other actors develop and intensify collaboration with mutual beneficial of Batik manufacture. Batik manufacture is a textile processed and assembled by hand. Generally, the Batik workshops are located in the houses of the proprietors. The numbers of employees in these businesses are small and a close relationship is usually maintained between worker and employer. Craftsmanship and knowledge is passed through families from generation to generation. Two chosen sites which formed clusters have been selected: Laweyan (20.56 ha) and Kauman (20.10 ha) in Surakarta (Fig. 1). The selection of the study areas based on the formation of each cluster was Batik manufacture.

Another reason for selecting the site was the clusters were established naturally as traditional activities of local communities whose production of textile handmade production, have long been proceeding and the workers have special skills in making Batik textile. Laweyan was a cotton industrial cluster which then developed into a Batik cluster due to market demand. It was an independent industrial center in the periphery of Surakarta city. By mayoral decision No. 646/11/1/1997¹²⁾, 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. Meanwhile, Kauman in Surakarta is part of the castle and was originally occupied by royal servants (*abdi dalam*). The greatest demand for Batik during this period has been for traditional clothing and ritual articles. Another reason of selection site is recently; both sites were tourism destination in Surakarta City.

Table 1. Population and Building Density

District	Area (ha)	Population (People)	Population Density (People/ha)	Total Number of Building	Building Density (Building/ha)
1 Laweyan	20.48	2083	101.70	855	41
2 Kauman	20.10	3524	175.32	942	46

In Surakarta City, the tourism industry is dominated by domestic tourist visitors. The number of domestic tourists visiting Surakarta City from 2008 until 2010 significantly increased. The average increased was around 33.33 %¹³⁾. In 2008 the total number of tourist visiting is about 600,639 people, in 2009 it was about 616,956 and in 2010, about 988,615 visitors. The increasing number of visitors was caused by good effort of local government to create an international and national event and promotion, including promotion of Batik clusters in Laweyan and Kauman area as tourism destination. Related event for promoting Batik for national scale have been launched since 2008 as a yearly event.

2. VITALITY

2.1 Density

The analysis of density in this research was analyzed through building density and the neighbourhood street size within the cluster area. In Laweyan the total number of buildings was about 855 and building density in Laweyan was about 41 building per ha. Meanwhile, the total number of buildings was about 942 and the building density was 46 building per ha in Kauman. The registered population of Laweyan neighbourhoods in 2009 was around 2,083 inhabitants and population density was 101.70 people per ha. In Kauman, the registered population of neighbourhood in 2010 was around 3,524 inhabitants and population density reached 175.32 people per ha (Table 1). The result showed that Kauman has the higher-density neighbourhoods compared to Laweyan area.

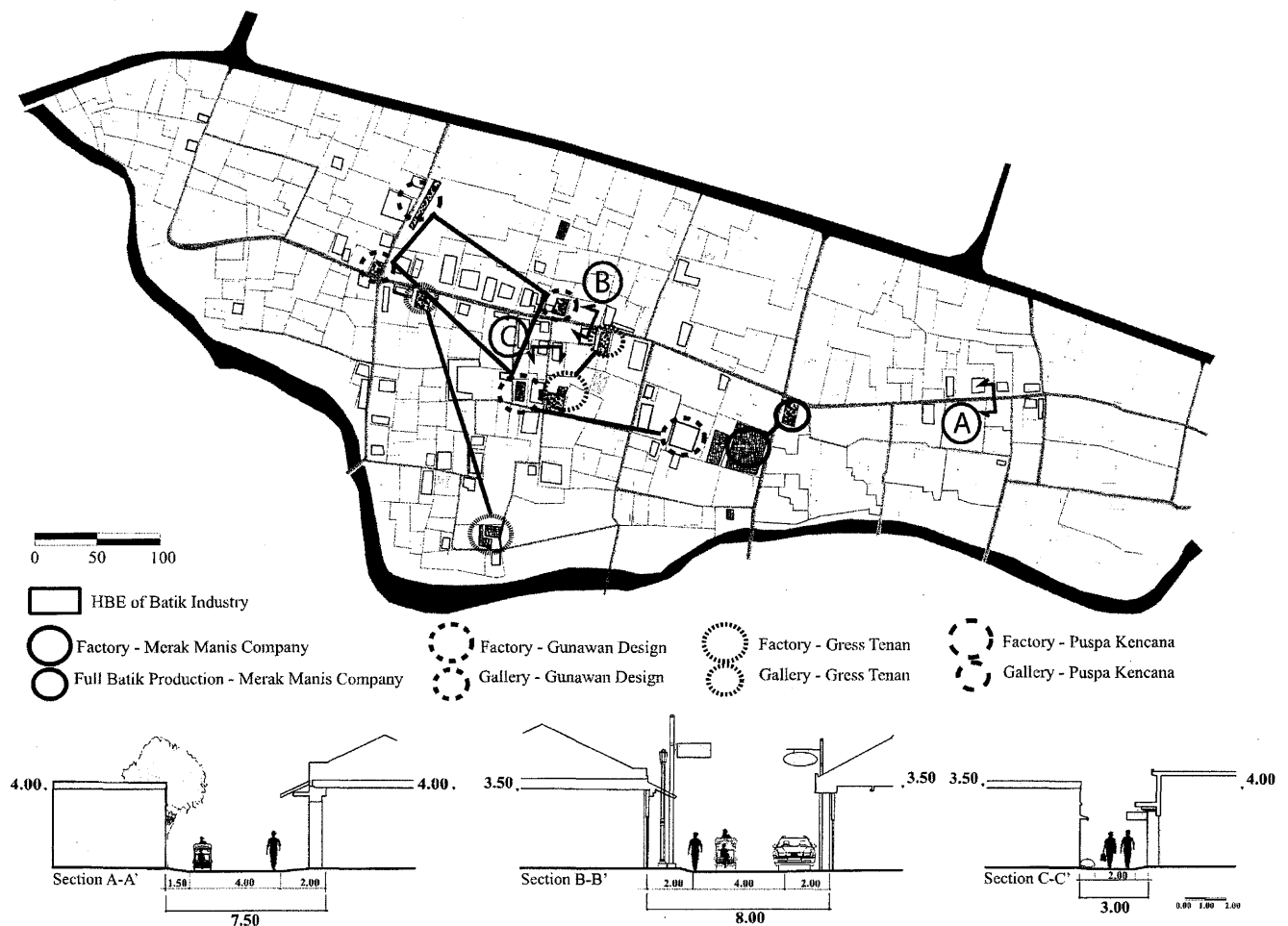


Fig. 2 Relationship of Bussiness in Laweyan Area

Based on Bosselmann⁹⁾, neighbourhood street size can be also identical with density, as in building density or people per-acre. It can be perceived differently depending upon physical, but also social variable. Bosselmann mentioned that based on Rapoport, the perception of density is influenced by those characteristics that confirm the sense of being in crowded environment. From the field survey show three types of kampung's street were found out based on the shape and locations within HBE of Batik were concentrating. In Laweyan, the hierarchy of kampung's streets are more clearly visiable. The main street within kampung is Sidoluhur street. It's located in the northern part. It has width about 8.00 m. In the centre of the Sidoluhur street (section B-B', Fig. 2), along the side of the street is higher density street of gallery facade compared to the west area (section A-A', Fig. 2).

The density perceived is associated with actual façade gallery. High degree of façade articulation for gallery, high window and commerce street amenities such as advertising billboard, public lamp, and garbage trash is counted. Meanwhile in the west area, the surrounding of façade articulation is dominated with wall barring fence of compound house with low windows and doors articulation. Meanwhile the sub-street

Table 2. Street Type of Batik's Cluster

	Section Type	Width	Average Building Height	Surroundings	Streetscape Amenities
Laweyan	1 A-A'	7.50	500-550	Walled Concrete Fence	-
	2 B-B'	8.00	400-700	Walled Concrete Fence	Dominance advertising
	3 C-C'	3.00	400-550	Walled Concrete Fence	-
Kauman	1 A-A'	4.90	350-700	Front Side of Gallery	Dominance advertising
	2 B-B'	4.70	500-550	Front Side of Gallery	-
	3 C-C'	3.00	500-550	Front Side of Gallery	Dominance advertising

was located in the southern part has width from 2.00 m to 3.00 m (section C-C', Fig. 2). The characteristic in this street is less dense. The surroundings are dominated with wall barring fence of compound house (Table 2, Fig. 4).

In Kauman, the area was surrounded with the main Street of Surakarta City. Hasyim Ashari Street is the dense street where Batik's gallery concentrated. It's located in west part area. The width street is about 4.90m (section A-A', Fig. 3). The surroundings are dominated with high degree of façade, window and door articulation for gallery function. The sub-street has located in the southern part has width about from 2.00 m until 3.00 m (section B-B' and section C-C', Fig. 3).

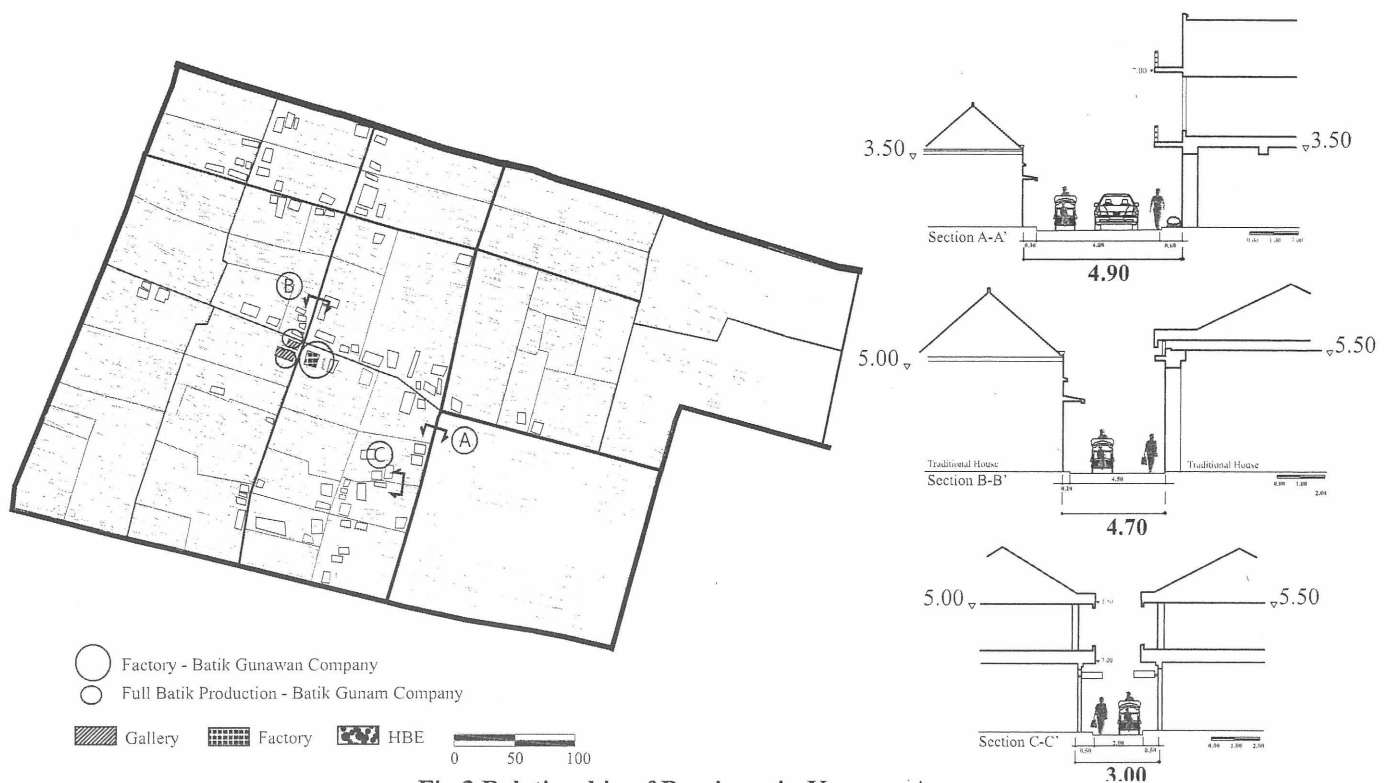


Fig.3 Relationship of Bussiness in Kauman Area

The surroundings are dominated with high degree of façade, window, and door articulation for gallery function. The amenities of streetscape for tourism are also found more diverse (Table 2, Fig. 4).

It was found that the characteristic of street in Laweyan is perceived differently from Kauman's. The perceived density is closely associated with actual density when measured as a total façade surroundings area per linear measurement. In the more densely populated areas the majority of pedestrians arrived at the Batik's HBE by informal transportation such as foot, motorcycle or rickshaw. Inside of Kauman Area can only be accessed by several limited of transportation methods due to the width of the kampung's street. In the lower-density neighbourhoods the majority of pedestrians came from neighbourhoods further away and reached the Batik's shop predominantly by car, taxi or bus. Even though, the southern part of Laweyan is less accessible by any formal transportation due to narrow roads with a width of about 2 meters due to the structure of urban pattern.

2.2 Mixture of Business Type of Industrial Batik Cluster and Their Distribution in Laweyan and Kauman

The result of the field survey show that the distribution of Batik's HBE in Laweyan and Kauman depends on the process and capabilities of Batik production. 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,

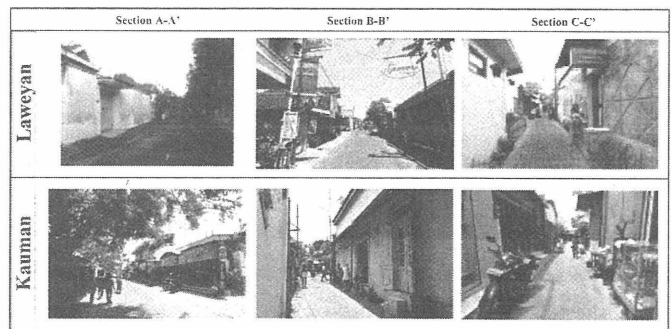


Fig.4 Street Scape in Laweyan and Kauman

it was discovered that there are two types of production process. 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". In half production process, half of the production 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 function, such as workshop, apparel, gallery, workshop and gallery, apparel and gallery, and full production company of Batik. In Laweyan, the uses include workshop (13.0%), apparel (13.0%), gallery (41.3 %), workshop and gallery (15.2 %), apparel and gallery (4.3 %) and company of Batik full production (13.0%). In Kauman, galleries dominated the uses (81.3%). This demonstrates the diversity of business types in Batik production that appears in the Laweyan cluster (Table 3). The mixture of Batik production business is visible in space used for different activities within HBE. In Laweyan, 28.3 % of entrepreneurs used

living or family room as part of business space. Meanwhile, in Kauman, 40.6 % of entrepreneurs used special room, an expansion of the main house for gallery. One unique feature of Laweyan is 21.7 % of entrepreneurs have their own Batik factories (Table 3). The total size of an HBE is determined by the technology and production process that occur in each firm. Laweyan has a bigger mean size of HBE for full Batik production (567.5 m²). HBE mean sized for workshop used is about 172.8 m². It has bigger mean size compared to Kauman where the workshop size was only 1114.0 m². Meanwhile Kauman has a bigger mean size for gallery used (203.0 m²) compared to Laweyan (120.7 m²). It was visible that proofed the mixture of business type in Kauman is dominance by gallery. Meanwhile in Laweyan has biggest mean size for workshop (Table 3).

The field survey finding showed that the concentration of business type of Batik industry for gallery function in Laweyan and Kauman are different. In Laweyan the galleries are especially concentrated along Sidoluhur Street. The concentrations of apparel and Batik's factory were dispersed around south part area of *kampung* neighbourhood, particularly in *kampung* Sentono and *kampung* Kidul Pasar. Meanwhile in Kauman showed that the agglomerations of galleries are in the south part of Kauman area, due to its proximity to the main market of Klewer. The galleries are especially concentrated in Wijaya Kusuma Street, Trisula Street, and Hasyim Ashari Street (Fig. 1).

2.3 Intertwining of Production

Batik's cluster can be classified into active cluster types⁶⁾. It is indicating has developed rapidly in term of skill improvement, technological upgrading and successful of domestic and export market. It caused by good relation of intertwining of production. Intertwining of production refers to the relationships in production chain among entrepreneurs within cluster. The intertwining of Batik industry can be divided into two main types: The Batik industry that has branch units and the independent units of production within the cluster. The former means HBEs that cooperating for production with others HBEs, While the latter have less frequented cooperation with others HBEs or independent business.

In Laweyan, these relationships show that the business has relation to other HBEs are often under single ownership. The business runs the full Batik production include; Merak Manis Company, Gress Tenan Company, Putra Laweyan, and Batik Gunawan Design Company. Among others, Batik Gunawan Company has four HBEs Batik factories in different locations. (Fig.2). Meanwhile in Kauman, there was only one big company that has a two HBE units within the area, which is Guna-

Table 3. Bussiness Types

No	Number of Business Type	Laweyan (46)	Kauman (32)
1.	Workshop	6 (13.0%)	1 (3.1%)
2.	Apparel	6 (13.0%)	2 (6.3%)
3.	Gallery	19 (41.3 %)	26 (81.3%)
4.	Workshop & Gallery	7 (15.2 %)	2 (6.3%)
5.	Apparel & Gallery	2 (4.3 %)	1 (3.1%)
6.	Company of Batik Full Production	6 (13.0 %)	-
No	Number of Business Location	Laweyan (46)	Kauman (32)
1.	Terrace	4 (8.7%)	12 (37.5%)
2.	Living/ Family Room	16(34.8%)	4 (12.5%)
3.	Special Room	13(28.3%)	13 (40.6%)
4.	Outside within Compound	3 (6.5%)	3 (9.4%)
5.	Factory	10 (21.7%)	-
No	Mean Size of HBE	Laweyan (46)	Kauman (32)
1.	Company of Batik Full Production	567.5 m ²	397.2 m ²
2.	Living Space & Gallery Used	150.3 m ²	203.0 m ²
3.	Living Space & Workshop	172.8 m ²	-
4.	Workshop	1114.0 m ²	-
5.	Gallery	73.8 m ²	120.7 m ²

wan Batik Company (Fig.3). The reason for opening more than one unit business was to open for more wider market segment. The galleries are located in strategic locations such as the main street or accessible street. Meanwhile the production units (Batik factory) placed near supporting units such as the apparel production in the sub-street of *kampung* Street. The apparel industry within Batik cluster has a close relationship with other enterprises. The apparel industries support the galleries to produce clothing and sell it through the galleries within the cluster area. The field survey show, in Laweyan 4.3 % has production relationships among the HBE's within the cluster, meanwhile in Kauman it was 3.1 % (Table 3).

2.4 Uses of Kampung Space

According Randolph¹⁴⁾ public outdoor space in neighbourhood used any occasion such as for work and leisure activities, political gatherings, and educational projects. In *kampung* Batik Laweyan and Kauman, the public outdoor spaces are used obviously on sidewalk as space of economic activities (street vendors, pool of rent motor cycle or rickshaw), leisure activities (taking a walk, children playing, hanging out, sitting on the front yard of HBE, watching communal television); sidewalk as security activities (pool of communal security – *Pos Kamling*), community gathering (Batik Training Center - BTC, mosque) and movement from place to place (walking to work). From the field survey, it was understood that the public outdoor space in *kampung* Batik was used commonly

for economic and leisure activity rather than for work related to the Batik industry (Fig. 5). The economic benefits by tourism activities were observed in both clusters. In the observation it was found that much more activity related to Batik production process occurred inside the compound of HBE both in Laweyan and Kauman. It was caused by the influenced of merchant house typology. Particularly in Laweyan, the typology of house is inside the wall of compound house. As mention above in chapter 2.2, the average mean sized of HBE for workshop uses is big in Laweyan, Thus, the home-based spaces accounted for the major portion of work used space.

The survey results show that the types of public space in Laweyan are more diverse than in the Kauman Area. Open space such as cemetery and street space are used for public space. Meanwhile in Kauman there is no open space such as cemetery within the area, due to the limitation of open space for the neighbourhood. Laweyan and Kauman use the corner junction area as public space such as security guard, public information or the pool of informal transportation (rickshaw or motorcycle rentals) (Fig. 6).

3. SENSE OF PLACE

3.1 Sense of Place Based Local Community

It is important to design place that bring about attachment, dependency, and identity clearly goes beyond the setting of dimension⁹). Sense of place has focused on place attachment, dependency and identification with place, in each of environments of Batik's cluster in Laweyan and Kauman. In order to analyze the sense of place, a questioner survey has been conducted. The total number of questionnaire for entrepreneurs in both areas was different. Laweyan has 46 of questionnaires; meanwhile Kauman has 32 numbers of questionnaires. The survey found 29 (63.10 %) of entrepreneurs started their business because of inheritance. In second rank, 5 (11.10 %) of entrepreneurs shown that near supply chain within the cluster was their reason. Another reason, 4 (8.60 %) of entrepreneurs have expressed the history of the site area is the reason started their business. Meanwhile in Kauman, 11 (34.30 %) of entrepreneurs started their business because they are near their supply chain. In second rank, 7 (21.90 %) of entrepreneurs expressed that the inheritance was the reason. Another reason, 6 (18.70 %) of entrepreneurs shown that history of the site area





is the reason started their business. In the social analyze that influence sense of place, both of locations had positive feelings associated with sense of place related with the history of

Physical Setting	LAWEYAN					KAUMAN			
	Front of HBE	Front yard of HBE	Sidewalk	Corner Street Junction	Kampung's street	Community Center	Open Space	Front of HBE	Sidewalk
Type Activity									
Leisure Activity	Taking a walk	●	○	●	●	○	○	●	○
	playing football	○	●	●	●	○	○	○	○
	children playing	○	●	○	●	○	○	○	○
	bicycling	○	○	●	●	○	○	○	○
	hanging out	○	○	○	○	○	○	○	○
	setting on the front porch	●	○	○	○	○	○	○	○
	playing chess or card	○	○	○	○	○	○	○	○
Economic	street vendors	○	○	○	○	○	○	○	○
	the pool of motor cycle rentals	○	○	○	○	○	○	○	○
	the pool of rickshaw rentals	○	○	○	○	○	○	○	○
Tourism Industry	meeting point	●	○	○	○	○	○	○	○
	parking area	○	○	○	○	○	○	○	○
	advertisement	○	○	○	○	○	○	○	○
Security	the pool of Pos Kamling	○	○	○	○	○	○	○	○

- Indicates highest number of observed activity
○ Indicates lower number of observed activity

Fig.5 Uses of Kampung Space

LAWEYAN

Public Space	Open Space		
	Streetscape		

KAUMAN



Public Space	Streetscape		
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Fig.6 Type of Public Space in Laweyan and Kauman

Table 4. Visitor Users

Batik Cluster	No. of respondent	Gender(%)		Age(%)		Duration to Stay (Hours)			Intention (%)			
		Female	Male	<15-34	<35-60	>1	1-3	3-5	Weekend	1/Month	2-3/ Month	First Time
Laweyan	50	30 (60%)	20 (40%)	18 (36%)	17 (34%)	5 (10%)	42 (84%)	3 (6%)	0	6 (12%)	18 (36%)	26 (52%)
Kauman	50	31 (62%)	19 (38%)	32 (64%)	33 (66%)	9 (18%)	39 (78%)	2 (4%)	11 (22%)	8 (16%)	6 (12%)	50 (25%)

the site (Fig.7). Although the entrepreneurs in Laweyan have a strong attachment within the site compared to Kauman. Kauman has a strategic location due to the proximity to central market and to the city center. It was easy to start a business in Kauman area compared to in Laweyan. It makes most of the entrepreneurs were new comers. They are come from outside of Kauman area.

In search of other physical characteristics that influence sense of place, the field survey found that a narrow street was associated with a stronger feeling of desirability, uniqueness, tidiness, and enclosure. The wide street was associated with stronger feelings of safety, spaciousness, openness and brightness. Both locations had positive feelings associated with them. The street typology in Laweyan are very special due to their location on surroundings of physical appearance (merchant house of Batik's maker)¹²⁾. Along the wide street (Sidoluhur street) located galleries, the unique character of baring wall fence and an easily distinguishable street form is likely to produce a strong sense of place in Laweyan. The field study found that in Kauman dominated with narrow street type, the entrepreneurs knew more neighbours and more by name. And due to face to face of façade in the narrow street it apparently attracted more people to communicate. The presences of face to face façade in the narrow street explain the intimacy relation and finding about knowing neighbours in Kauman. Both of locations have the identity of the place that shown form the social and physical analyze. It is the reason why most of the entrepreneurs interested to start their own business in both areas. They are willing to conserve their environment area as value of selling market.

3.2 Sense of Place Based Visitor-dependent Visiting

In order to understand attachment, dependency and identification with place the tourist visiting has been conducted. The Total number of questionnaire in both areas was 100, most of them being domestic tourists. Laweyan has 50 of questionnaires; meanwhile Kauman has 50 numbers of questionnaires. In Laweyan, 30 (60%) of respondents were female respondents versus Kauman's 31 (62 %). The average age of residents respondents in both of location were in the range of 35-60 years old (Table 4).

The result of tourist visiting shows that the average tourist comes to visit each area for similar about 1-3 hours. Although, 42 (84 %) of tourist respondents stayed longer in Laweyan compared to Kauman 39 (78%). In Laweyan, they offered diverse activities to promote tourism. It was arranged by Laweyan Batik's communities. Most of tourists stayed longer in Laweyan were having heritage trail or Batik's workshop instead having Batik's shopping. In Laweyan 18 (26 %)

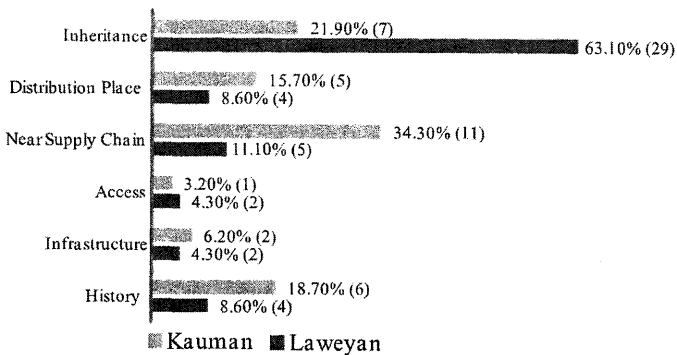


Fig.7 Sense of Place (Local Community Opinion)

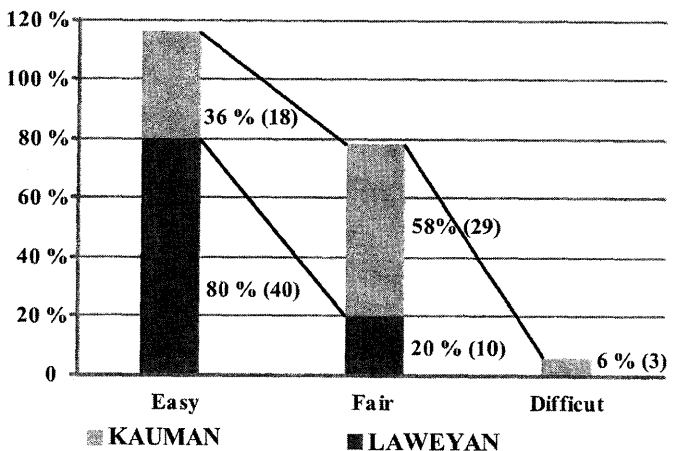


Fig.8 Accessibility (Visitor Opinion)

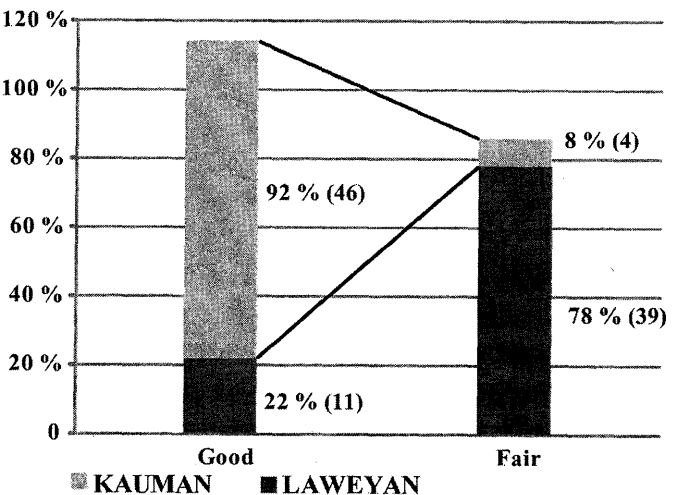


Fig.9 Security (Visitor Opinion)

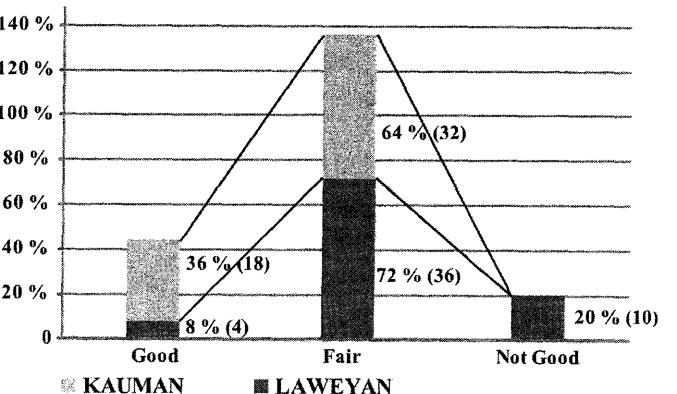


Fig.10 Tourism Amenities (Visitor Opinion)

of respondents shown rarely visit to Laweyan. It is reversed in Kauman. 11 (22) % of tourist respondents in Kauman visit every weekend, due to proximity to the city center. Among them, 26 (52 %) of tourist respondents shown it was first time visited Laweyan. Meanwhile, 50 (25 %) of tourist respondents shown it was first time to visit Kauman. Even though, visitor to Laweyan show it is easy to reach Laweyan area compared to Kauman area. In Laweyan, 40 (80%) was mentioned it was easy to reach Laweyan. Most of the visitor to Kauman area reflected that Kauman area is not accessible 29 (58 %) (Fig. 8). Due to the narrow of the street type in Kauman it is not accessible for visitor to walk used their own vehicle.

Both visitor groups agree that security in those areas were different. In Laweyan 39 (78 %) feel fairly secure walking within the area (Fig. 9). In Kauman 42 (92 %) of them expressed felt safe. In Laweyan, 36 (72 %) expressed that there is a fair availability of tourism amenities, meanwhile in Kauman (32) 64 % felt this way. 10 (20 %) of tourist respondent in Laweyan expressed that there is not good of tourism amenities (Fig. 10). Subsequently, the questionnaire results indicate that identity is needed to preserve the Kauman 49 (98 %) area when comparing Laweyan 27 (54 %). The developments in the city center is dynamic, and due to this reason the visitor to Kauman recommend it is strongly necessary to preserve the traditional Batik houses in Kauman Area. Mean while the respondent in Laweyan reflected the reverse (Fig. 11).

4. INFLUENCING FACTORS IN VITALITY OF KAMPUNG BATIK

4.1 Functionality as Lively Environment

The vitality of *kampung* Batik industrial clusters in Laweyan and Kauman can be influenced by functionality and the desirability of place. The field survey found that vitality is closely associated with the mixture of building function uses when measured as total building type within the area. Functionality as *kampung* settlement, industrial Batik cluster and historical integrity in both industrial Batik clusters in both areas influences desirability of tourism service industry.

Currently, the tourism service industry comes after the revival of Batik industry in 2004. The tourism service industry caused a greater mixed of business type in Laweyan Batik cluster. Thus, Laweyan business types are more diverse than in Kauman.

The revival period of Batik industry since 2004 has caused the agglomeration of gallery within the area. Before Laweyan building function was the place only for the production of Batik. Building use type and the distribution each of businesses type in Laweyan will create more liveliness in the neighbour-

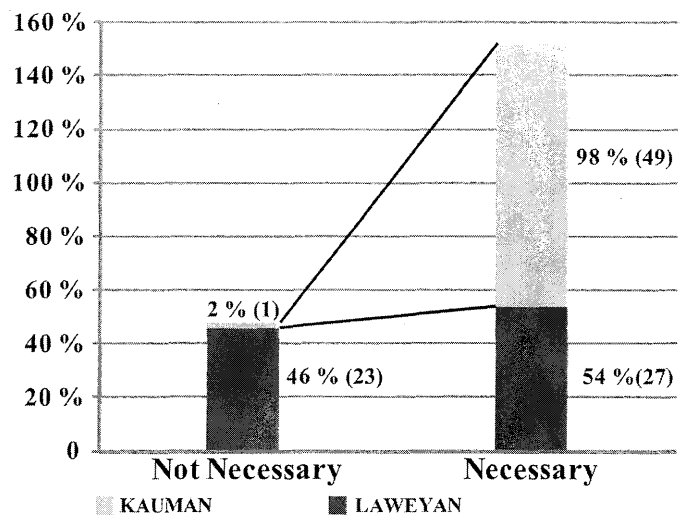


Fig.11 Identity of The Place (Visitor Opinion)

hood environment. The relationship of the owner of business in Laweyan is determining the closed link of family business within the area. Even though in Laweyan has closed intertwining in process production, but the perception of intimacy of closeness from one business to others is perceived more closely in Kauman Batik cluster. This caused by social and physical factor. From the social factors, the total number of entrepreneurs in Kauman (about 40 entrepreneurs) is less compared to Laweyan (about 70 entrepreneurs). With more less of the total number of entrepreneurs it is easy to communicate with one another. They are more solid.

Meanwhile in Laweyan, it is felt more capitalistic competition and individualistic. From the physical aspect, it proved the width of street and street density reflected liveliness of Batik cluster area. Kauman has the higher-density neighbourhood compared to Laweyan. It can be conclude Laweyan has function and lively environment for producing Batik cluster meanwhile Kauman has characteristic function and lively environment as market place for selling Batik.

4.2 Desirability Creating Vibrancy for Tourism Industry

The field survey found that the heritage value and the traditional activities production of Batik in both areas were associated with a stronger feeling of desirability and uniqueness to preserve as local identity of the place. That is, both locations had positive feelings associated with them by the local community and tourists' visitors concern. The physical characteristics that influenced those concerned were the diverse and hierarchy type of street pattern, building type and traditional Batik making process. Local identity as the heritage value should be maintain along with adding new activities.

4.3 Planning for Vibrancy Urban Environment *Kampung* Batik Industry

This paper put forward proposals that complement the existing guideline for the improvement of *kampung* Batik in the

future. The proposal is based on the needs of the local community and tourist as the users of *kampung* Batik, which were grouped into two categories: lively environment with the historical integrity and quality of tourism service to support mutual relationships. Lively environment with the historical integrity can be concerned with density, building use type, building use concentration and public space use. While the quality of tourism support concerned with the accessibility, security, qualities of amenities and conservation of the local environment as the identity of the place.

5. CONCLUSION

The sustainable growth of industrial Batik clusters in *kampung* settlement has been influenced by several factors. This study aims to clarify the urban spaces of *kampung* environment in Surakarta's Batik industry. In order to study urban spaces this study focused on the vitality and sense of place in urban heritage areas of Surakarta City. First, the similarities and differences in the vitality of industrial Batik clusters within urban heritage in Laweyan and Kauman was clarified; then the sense of place focusing on local community and tourist perception of industrial Batik cluster in Laweyan and Kauman was clarified by analysing their opinion. At the same time, we identified and formulated a proposal for *kampung* improvement in urban heritage of Laweyan and Kauman Batik's clusters. The analysis enabled a summary of the common characteristic of vitality in Batik clusters in urban heritage as follows;

- 1) The vitality of Industrial Batik cluster in urban *kampung* within urban heritage area has been associated with the number of business type, the concentration of businesses, the relationship of businesses within the area and the uses of public space in various streetscapes. The density is perceived differently from the traditional methods customarily used (i.e., people per acre or units per acre), but perceived density is closely associated with the actual density when measured as diversity of streetscape varies in urban heritage of Batik cluster.
- 2) The following points were derived from the study to improve *kampung* settlements and the Batik industry within urban heritage sites by; a) conserving building heritage by adaptive reuse of buildings, b) conserving the layout of the built environment and carrying out improvements and introducing amenities for tourist convenience, c) establishing local planning guidelines which will guide Batik cluster development for heritage conservation and the demands of the tourism industry.

References :

- 1) Funo, S.; Yamamoto, N.; Johan, S.: Typology of Kampung Houses and Their Transformation Process – A Study on Urban Tissues of Indonesian City, *Journal of Asian Architecture and Building Engineering*, vol. 1 no.2, pp. 193-200, 2002.
- 2) Surakarta City Statistic Bureau: Surakarta City in Figures 2007, Surakarta, 2008 (Indonesia).
- 3) Kusumaningdyah, N.H.; Sakai, T.; Deguchi, A. & Divigalpitiya, P.: The Impact of Home-Based Enterprises to Kampung Settlement Case Study of Serengan District, Surakarta, *Proceeding Asian Urban Research Group*, pp.297-310, 2012.
- 4) Rebecca, M, J.: Diffused Batik Production in Central Java, A Dissertation Thesis, University of California, San Diego, 1987.
- 5) Ganug Nugroho, A.: Revival of Kampung Laweyan's Batik Industry, *The Jakarta Post News Papers*, Friday, 03/16/2012, accessed 03/19.2012, 2:12 PM, 2012.
- 6) Irawati, D: Strengthening Cluster Building in Developing Country alongside the Triple Helix: Challenge for Indonesia Clusters – A Case Study of The Java Region
- 7) Jacobs, J.: *Death and Life of Great American Cities*, New York, 1961.
- 8) Bosselmann, P.: *Urban Transformation: Understanding City Design and Form*, Island Press, London, 2008.
- 9) Tambunan. T: Promoting Small and Medium Enterprises with a Clustering Approach: A Policy Experience from Indonesia, *Journal Small Business Management*, pp. 138-154, 2005.
- 10) Snaith, T. and Haley, A.: Residents' Opinions of Tourism Development in The Historic City of York, England, *Tourism Management* 20, pp. 595-603, 1999.
- 11) Chua, R. and Deguchi, A.: Tourist-dependent Adaptive Reuse in The Old Residential Quarter of Malaka City, Malaysia, *Journal of Architecture Plane, AIJ*, Vol. 76, No. 662, pp. 779-787, 2011.
- 12) Astuti, Sri.: Revitalization of Laweyan Surakarta, *Vernacular Settlement Symposium*, University of Indonesia, 2002.
- 13) BAPPEDA Surakarta City.: *Sistem Informasi Profil Daerah Kota Surakarta Tahun 2009* (Indonesia).
- 14) Randolp. T., H.: *Planning Neighbourhood Space with People*, Van Nostrand Reinhold, New York, 1984.

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