

Creative Kampong and the Promotion of Sustainable Development Knowledge in Urban Grassroots: The Case of Surakarta

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Abstract

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As the global trend is going into circular economy paradigm. The trend encourages business entities to focus on the production of durable, efficient, and reusable commodities to promote sustainable development. On the demand side, the market also gradually adjusts its preferences to commodities with sustainability values. With limited scale of capital, networks, and technology, Small and Medium Enterprises (SMEs) are usually lagged behind in catching new knowledge, especially those exchanged internationally. Sustainability, which is as an important knowledge under the circular economy trend, has caused serious problem for SMEs because those unable to catch the knowledge will be incompetent to serve the new market preferences and vulnerable to survive. Urban planning practices introduce the business district as one of spatial concepts to mediate the problem. It encourages enterprises with business linkages to locate next to each other and share activities and facilities. In Indonesia, the creative kampong is a local translation of business district concept, which emerges as a national hype. This research aims at studying the empirical case of the creative kampong and its knowledge transfer effectiveness for SMEs. By using the logic of Actor Network Theory (ANT) and focusing on the case study of four creative kampongs in Surakarta, we unravel the level of understanding of SMEs towards sustainability. Our data are based on stakeholder interviews and documentary reviews. The findings reveal that the majority of SMEs were understand of sustainability, and the creative kampong provided a significant contribution to ease the transfer knowledge process.

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1. Introduction

As the global climate change and environmental degradation increasingly evidenced in urban areas, the so-called circular economy becomes a hype for urban policy makers and planners. Circular economy refers to an umbrella concept that promotes efforts to encourage zero waste and minimum pollution in urban economic activities, ranging from natural resource explorations to final consumptions (Petit-Boix & Leipold, 2018). It is crucial since the global urbanisation is rapidly evolving, and has put more than 50% of the socio-economic activities to be located within urban boundaries (Hudalah et al., 2020). In this premise, a city that applies circular economy principle has a tendency to gradually encourage local industries to transform their business approach from “take-make-dispose” habits to “take-make-use-reuse-remake-recycle” – a longer loop to reduce waste and pollution through mindsets and business approaches (Remøy et al., 2019).

The knowledge behind circular economy is “sustainability”. In the context of urban studies, it is also known as sustainable-city planning or an implication of sustainability in urban activities. Sustainable city planning emphasises planning and development of infrastructure as well as management of land-use to be in accordance with sustainability values (C. T. Permana & Harsanto, 2020). Fairly often, the knowledge is interpreted into a set of policies and regulatory frameworks to limit natural resource explorations and to maintain land use harmony, to encourage industries to use environmentally-friendly machinery and technology, and to encourage business entities to deliver educative programmes to supplement communities with sustainability knowledge and capacity (de Leeuw & Simos, 2017; C. T. Permana & Harsanto, 2020).

Sustainability as a knowledge is travelling across continents, transmitted through global business networking and supply chains (Kong & O’Connor, 2009; Pratt, 2009). One of the most significant implications is the coming of smart and creative industrialisation era, which successfully helped the sinking enterprises and industries to regain their business (Landry & Bianchini, 1995). Under this label, many enterprises change their nature from manufacturing, resource-based activities, and large quantity products into smart and creative industries, value-adding activities, and small quantity but high quality products (Hartley, 2005). The success stories, which mainly come from the European and American cities, provide a domino-effect, as many large and mature enterprises in other regions began to copy the value and give influence to each other to conduct innovations in their business activities to cope with sustainability values (De Medeiros et al., 2014).

Nevertheless, not many Small and Medium Enterprises (SMEs) are able to follow the global hype. Their business characteristics that are spontaneous, sometimes informal, and lacking of capital, well-trained employees, and unorganised managements have hindered them to catch the sustainability knowledge quickly (Clusel et al., 2014; McKeiver & Gadenne, 2005; Sandee, 2002; M. Sasaki, 2010). A study conducted by OECD (2010), for instance, reveals that SMEs account for more than 90% of the current global business environment and generate many job opportunities in the regions, yet their performance in the realisation of circular economy into business activities is far from ideal (Binek & Al-Muhannadi, 2020; Fernández-Viñé et al., 2010; Kong & O’Connor, 2009; Marin et al., 2015). Some of them still run inefficient and environmentally harmful production activities, such as to utilise natural resource illegally and do not have significant control over waste and pollutions to surrounding neighbourhoods (Foxon & Pearson, 2008). Their capacity to catch new sustainability knowledge are still relied upon

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external supports especially local governments and larger enterprises under their supply chain networks (Binek & Al-Muhannadi, 2020).

Urban planning is increasingly aware of the SMEs and sustainability issues in urban areas, and many scholars link the situation to the concept of business district. It is an effort to build business clustering where the surrounding enterprises can grow and learn together with each other. The literature argue that business districts show a promising result in the promotion of sustainable industries at the level of urban area (Evans, 2009; Pappalepore et al., 2014; Yum, 2019). By bringing enterprises to work together in a specific area, the tendency of mutual learning and sharing is high and this relationship could lead to harmony and equality in the overall business progress (Douglass, 2015). Some enterprises, usually the large and mature ones, take the role of leader and initiator to introduce sustainability values, whilst some others, especially the smaller ones, occupy following, supplementary and supporting roles (Douglass, 2015; Magala et al., 2019; Millard, 2017). Under this mechanism, large enterprises can promote sustainability knowledge by pushing surrounding SMEs as their material suppliers, through contractual agreements, to produce materials that meet sustainability standards. This is one of the benefits of business district to help the realisation of circular economy from the upstream (Tschang, 2009).

This research aims at exploring the empirical case of the business district and its knowledge transfer effectiveness. We use the case study of Creative Kampong in Surakarta as the research window of discussions. Creative Kampong is a thematic business district comprising of dozen enterprises that focuses on specific culture and creative products (Astuti et al., 2016; C. Permana, 2019). We propose the Actor Network Theory (ANT) as a tool to describe the level of knowledge gained by business entities in the case study areas. By the ANT, we identify the level of knowledge understanding within four dimensions, which are problematisation, interessement, enrolment, and mobilisation. This research comprises of six parts, after introduction, the next section is theoretical underpinning, followed by a short introduction of methodology applied for this study, results and discussions, and summarised by a conclusion section.

Besides all the problems and challenges, cities have the capacity and determination to drive the changes needed for a more sustainable future. We are currently witnessing a shift where cities are becoming major players with different approaches, models and strategies to drive sustainable transformation, one of which is circular economy model (Vanhuysse et al., 2021). Circular economy (CE) is an ideal model of economic development that promotes the responsible and cyclical use of resources in order to maintain their value in the economy, minimize their environmental impact and contribute to improved socioeconomic well-being (Henrysson et al., 2022).

CE can be implemented at three system levels. It aims to achieve sustainable development at the micro level (products, consumers, companies), meso level (eco-industrial parks) and macro level (cities, regions, countries) (Kirchherr et al., 2017). Within cities, the transition to the CE model could affect many people in terms of livelihoods, access to resources and services, and social welfare. Local governments can play a central role in the CE transition and are often responsible for areas such as waste management and urban planning. Employment and business opportunities for CEs are also driven by financial incentives, as they can lead to reduced taxation and waste management costs for local governments (Vanhuysse et al., 2021). If implemented

correctly, CE can not only unlock environmental benefits, but also provide many opportunities for all stakeholders.

The growth of CE has positioned sustainability as an important knowledge. Sustainability generally refers to certain conditions where our living environment provides our basic needs without reducing its capacity to serve the growing needs of the future generations. The circular economy concept is fundamentally supported by practices endorsed by sustainability values, such as cutting waste, encouraging durable products, and utilising renewable energy (Ellen MacArthur Foundation, 2013). Sustainability principles teach us that human activities should be organised and conducted wisely because the environmental carrying capacity is limited. Over exploitation of natural resources in the upstream as well as poor management and control over their end-products in the downstream will lead to many socio-economic and environmental problems and create uncertainty in the future (de Leeuw & Simos, 2017). Sustainability as a knowledge argues that destructive behaviours of human as an economic entity trigger ecological imbalance, which is usually followed by natural incidents like landslides and land subsidences, global warming, floods, sea level rises, and long-term drought in many places (Campbell, 2016).

Responding to the importance of the sustainability knowledge, the declaration of Sustainable Development Agenda 2030 in the Urban Agenda of the Earth Summit 1992 emerged as the pioneering event to spread the needs to ensure sustainable development values to be the global concern (C. T. Permana & Harsanto, 2020). The event has also encouraged many other initiatives at both international, regional, national and even local level, to contribute in both sustainable development's transfer knowledge and project implementations (Hart & Milstein, 2003; Meerow & Newell, 2019).

In the context of urban development, sustainability knowledge is echoed as sustainable cities. The term endorses many cities provide their population's needs carefully without compromising the environmental carrying capacity for the future. One of the suggested actions is to make urban plans that promote effective and efficient land use utilisation, natural resource management, and green infrastructure provisions (C. T. Permana & Harsanto, 2020). The failure to comply with sustainable city principles does not only give a risk to urban population in terms of environmental concern, but also long-term socio-economic issues like poverty, slum, social conflict, and so on (C. T. Permana & Harsanto, 2020).

Whilst the expected contribution of sustainability-led actions is to all actors, the economic entities may be considered the most important one. The entities, which comprise of enterprises, industries, and employees in many economic sectors, are those who directly interacted with natural resource exploitations, reproductions, and environmental managements through their engagement in production, distribution, and consumption activities. Supplementing sustainability knowledge to economic entities will help the realisation of more environmentally friendly economic activities, such as reduce carbon footprint and emissions through decarbonization industrial cluster, smart and creative district, and eco-villages (De Medeiros et al., 2014).

The effort to share sustainability knowledge to economic entities can be conducted by clustering and area-based policy approaches. In this case, business district is one of the realisations of clustering and area-based policy introduced by urban planning practices. Business district refers to a spatial concentration of economic entities within a specific

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delineation area in the city, which functionally allocated for thematic economic activities (Cooke & Lazzeretti, 2008; van Meerkerk et al., 2013). Business district is established through top-down process under government policies or bottom-up process proposed by business groups and communities (Evans, 2009; Guimarães, 2021). Business district usually applies a land use formation that allows large and small scale business entities, so they can build mutual engagement in terms of supply chain, networking, facility sharing and so on (Darchen & Tremblay, 2015; Douglass, 2015). In the topic of sustainability knowledge, one of the benefits of business district is the easiness to have knowledge and technological spill-over between surrounding business entities (Cooke & Lazzeretti, 2008).

In terms of its function as a means of promoting sustainability value, the literature also envisages a number of case studies. In small and town-scale areas, for instance, business district is adopted to strengthen local initiatives to preserve heritage and culture along with the interests to promote sustainable development and community engagement (Scott, 2016). Their key activities include the process of community engagement through local festivals and pop-up markets that sell traditional foods and handicrafts, capacity building and training activities that combine creativity skill with cultural values like knitting traditional clothes, handmaking of wooden toys and crafts, and cooking local and traditional foods. In addition to engagement activities, there are also physical improvement efforts in the form of landmark constructions that represent local cultural figure, revitalisations of old and historical buildings and parks, and repairing and redecoration of a neighbourhood with specific themes that represent local culture. Amongst the most popular cases are the cases of 'book-town' Hay-in-Wye, 'the town of sign' Montpellier, and the 'British festival town' Cheltenham (Hospers & Van Dalm, 2005; Landry, 2000). In Asia, a few other cases that follow the similar pattern includes 'the artist village' Insadong, 'the sake brewing village' Kyoto, and 'floating town' Bangkok (Douglass, 2015; I. Sasaki & Sone, 2015; Wattanacharoensil & Sakdiyakorn, 2016).

2. Methodology

This paper follows deductive approach and qualitative methodology. Our intention is to explore the growing theoretical argumentations that say a business district effectively facilitate the transfer of knowledge amongst its members, and help the city to achieve sustainability from their local industries together. By looking at the empirical case and identify local existing industries in terms of their sustainability knowledge, this research is able to justify the effectiveness of business district case of Indonesia, the creative kampong, and seek potential similarities and differences of the results. Case study method is presented to discuss the research questions. There are four creative kampongs involved in the process, which were selected on the basis of scale of area, the year of establishment, the scale of creative production, and suggestions from Surakarta city government (Trade Agency and Tourism Agency representatives).

This article applies the Actor Network Theory (ANT) as an analytical framework to discuss the process of transfer knowledge in the creative kampong. ANT has been long recognised by scholars as one of the semantic-descriptive approaches to explore relationships of urban phenomena (Yvone Rydin & Tate, 2016). ANT works through the exploration of objects on the basis of their networks or socio-material relations (Yvonne Rydin, 2012). ANT as an analytical framework suggests four stages of assessment, which are problematization, interessement, enrolment, and mobilization. Problematization is a process of problem identification. Interessement is the identification of actors (people,

organisation, knowledge, artefact, building, tools, and so on). Enrolment is a stage of consolidation and network building through connections and similarities in meanings. Finally, mobilisation is a final stage of how the networks are maintained.

Our data and information were obtained from observations, semi-structured interviews and documentary reviews. The interviews were conducted in June-July 2022 and involved thirty enterprises representing three business districts, four local government officials from Municipal Planning Agency, Cooperative and SMEs Agency, Tourism Agency, and *Kelurahan*, and two academics with relevant research experiences in the case study areas. The documentary reviews were conducted in parallel and involved dozen documents including Surakarta City Spatial Plan, Surakarta Mid-term Development Plan, Kelurahan in Figure, and various publications that discuss the case study areas like thesis, journals, proceedings, project reports, neighbourhood profiles, kampong's brochures, and credible online news. The structure of the interview questions follows the logic of four dimensions of Actor Network Theory (ANT). Each interview lasted about 90 minutes. Meanwhile the documentary reviews were conducted in parallel, focusing on capturing information, statements, and explanations of sustainability according to the referred documents, as a counter-information for the interview results.

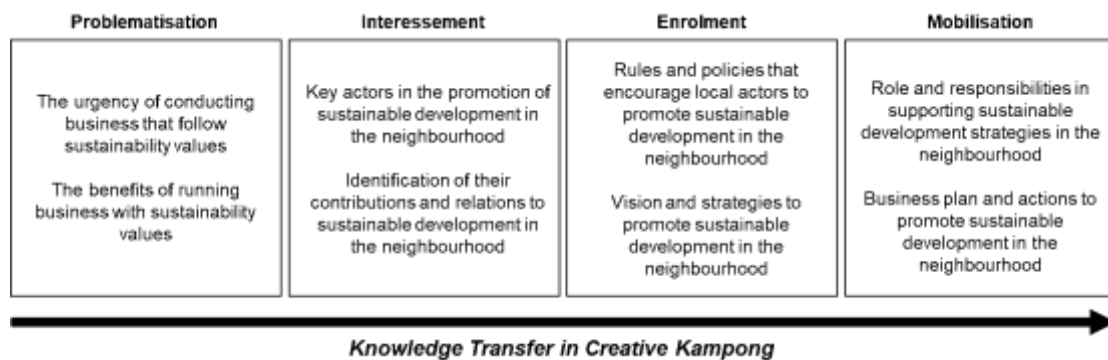


Figure 1. The Assessment of the Transfer of Knowledge in Creative Kampong

3. Result and Discussion

Creative Kampong and the SMEs Activities towards Sustainability

One of the SME development policies in Surakarta has been stated in one of the missions of the Regional Long-Term Development Plan of Surakarta City for 2005 - 2025, namely Creating a Quality, Inclusive, Regional Economy that is, Cultured, Sustainable, and competitive. In the first 10 years (2005-2010) the policy focused on SMEs business facilitation, accessibility to financial support, network building, quality assurance, regional competitiveness, business expansion and area improvement. One of the key strategies stipulated by the policy in terms of Creative Kampong is written as "Growing small and medium-sized industrial centers so that they are able to play an active role in employment, growth, and sustainable development". According to this policy statement, it is clear that Surakarta City Government expects SMEs to be one of the key actors to lead sustainable development process in the city.

Furthermore, in the last five years (2015-2025), the economic policy of the City of Surakarta has led to the actualization of local wisdom values and integration with the smart economy concept as one of the pillars of a smart city. The focus is on increasing sustainable partnerships and developing innovation and competitiveness of the creative

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economy with MICE-based tourism (*Meetings, incentives, conferencing, exhibitions*). Surakarta City, through BAPPEDA (The Board of Planning, Development and Research of Surakarta) therefore prepared the Action Plan of Creative Economic Development of Surakarta 2017-2021, which has nine goals as follows: 1) Improvement of human resources in of creative SMEs; 2) Development of Education and training institution of the creative economy; 3) Strengthened internal and external collaboration among creative economic actors; 4) Database creative economy 5) Improvement of research and study in the creative economic sector; 6) Property right of creative economic industries; 7) the growing if creative economic zone; 8) enhancing contribution of creative economy to PDPB and 9) Increasing creative economic business and income earning opportunities. This Action Plan also supports Surakarta's vision: "Creating Surakarta as a modern, Resilience, Agile, Creative and Wealth Cultural City" (Bappeda Kota Surakarta, 2014).

The local agenda to facilitate the organic emergence of SMEs in kampongs in terms of knowledge development is based on the above policy. Creative Kampong is expected to be the living laboratory, in addition to economic hub, that is able to provide human resource capacity improvement, collaboration building, and data and information sharing. In terms of sustainability knowledge, The Government unit of Environment (Local Environmental Agency) prepared the Master Plan of Waste Treatment of Surakarta, which stipulates the institution's development through Information technology of Waste Treatment; Collaboration with the Department of Manpower and Transmigration and Government unit of Cooperative and SMEs for Waste Water treatment in the cluster of SMEs with a partnership with the private sector; socialization and education with SMEs actors (Dinas Lingkungan Hidup Kota Surakarta, 2019).

According to an interview with the Cooperation and SMEs Agency of Surakarta, this unit stipulated the development of SMEs on sustainability knowledge and capacity in creative kampong by 1) facilitating capacity building by expo facilitation and omzet enhancement and financial management training; 2) Product diversification; 3) market expansion by preparation of MoU with Marketplace in Indonesia and abroad; 4) Catalog of SMEs; 5). Integrating with the Surakarta Website; 5) Facilitating publication through YouTube, Instagram, and Twitter). Policy direction at the National, Provincial and local level, continues with collaboration of all parties and institutions will sustain the development of creative SMEs as the core competence of economy of Surakarta.

Creative Kampong: SMEs and Sustainability Efforts

Our study went through the four case studies of creative kampong and generally found that sustainability efforts have been organically demonstrated even if it was on simple, small scale, and temporal activities (See: **Figure 2**). Whilst Kampong Laweyan and Sondakhan emerged as the most progressing ones, the other two Kampong, Kauman and Serengan, were still lagged behind. However, they have also shown some promising efforts in terms of sustainability approach. The following sections discuss the overview and sustainability efforts in each kampong.

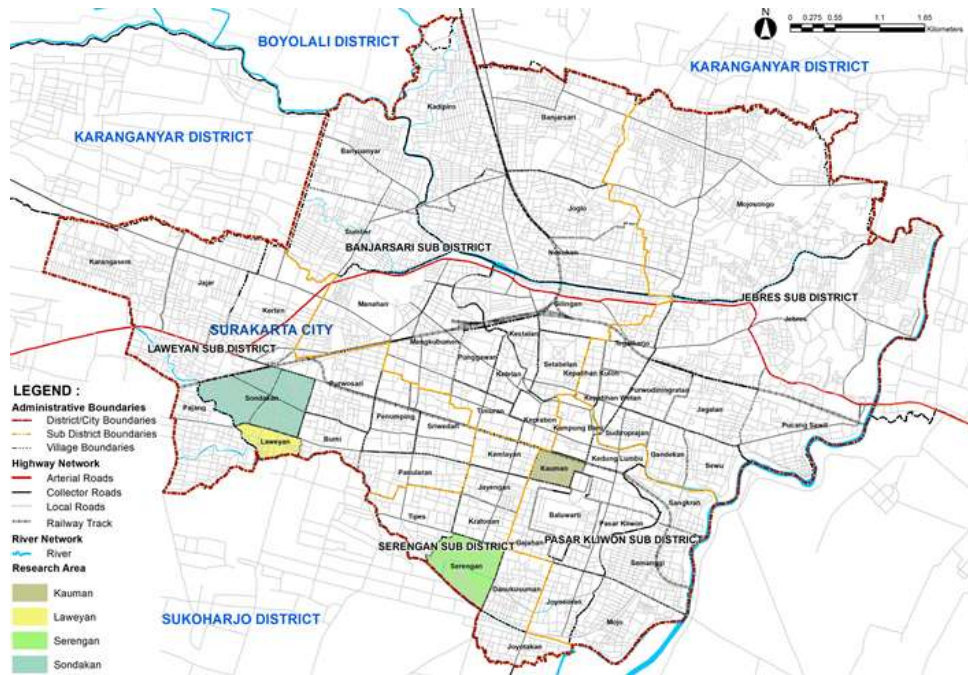


Figure 2. The Four Creative Kampong in Surakarta

Kampong Laweyan

Desa Lawe (currently Laweyan) has been known as a batik producer since 1546, when Ki Ageng Henis began living in this area. The development of Laweyan was supported by the royal government (Keraton) by completing the liaison infrastructure between the palace and Kampong Laweyan. In 1912, the first association of entrepreneurs in Indonesia was formed, the Sarekat Dagang Islam (SDI), which was initiated by Haji Samanhudi, until 1935 the Persatoean Peroesahaan Batik Boemipoetra Soerakarta cooperative (PPBBS) was established. The determination of Laweyan as a Kampong batik by the Surakarta City Government, as well as the establishment of the Kampong Batik Laweyan Development Forum (FPKBL), was carried out in 2004. In 2010, Kampong Batik Laweyan was designated as a cultural heritage area protected by the Ministry of Culture and Tourism. Since then, various programs related to the development of Kampong Laweyan, both physically and non-physically, have continued. The programs were not only for the preservation of cultural heritage but also related to the development of batik SMEs. Apart from coming from the central government or local governments, these programs were also initiated by academics, the private sector, and FPKBL (see Figure 3)



Figure 3. SMEs Activities in Kampong Laweyan

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Since its early development and experiencing ups and downs, currently, there are around 70 batik entrepreneurs in Kampung Laweyan. Each industry in Kampung Laweyan has its design to minimise competition between industries. The marketing process of most entrepreneurs has used online media with consumers from all over Indonesia and abroad. Kampung Laweyan also has a cooperative (with support from the private sector and development agencies like PT. ASTRA, Telkom, the World Bank, GIZ, and many others) to increase entrepreneurs' access to finance, capital, and technology. One of the initiatives conducted with GIZ has successfully put a fundamental effort to promote sustainability in Laweyan through the project name "Laweyan Eco-Batik" (Febela, 2015).

Under the vision of eco-batik, the overall economic activities in Laweyan were organised through environmentally-friendly approaches. The batik production process has begun using modern and energy-efficient equipment, such as electric stoves, design with application software, electric canting, and solar energy for electrical panels. In addition, there was the development of green products, as indicated by the standardization of raw materials, standardization of bookkeeping, and consideration of the environmental impact. There were attempts to use natural dyes for batik, but the dyeing process takes up to 30 dyes/dyeing process longer. Kampung Batik Laweyan also collaborates with LSPO (palm oil entrepreneurs) for environmentally friendly materials (both from color and wax) derived from palm oil. The fabric left over from manufacturing finished batik products is also used for making souvenirs such as dolls, blangkon, and other crafts. As a neighbourhood, Kampung Laweyan has a Communal Wastewater Treatment, which only serves some industries and reduces the existing issue of water pollution that comes to the river. Besides that, some batik entrepreneurs far from the Communal Wastewater Treatment already have Individual Wastewater Treatment, all are controlled and supervised by the FPKBL (the local forum) and local government.

Kampong Kauman

Kampong Kauman is located right near the mosque and the palace square of Surakarta City. Kampong Kauman began to grow when the King of the Surakarta Palace, Paku Buwono III, built the Great Mosque of the Palace in 1763-1788. The development of batik in this village began in 1876 by the leader of the Sarekat Islam, namely Haji Misbach, who was a descendant of a batik merchant family. The palace's need for batik commodities also encouraged the development of the Kampong Kauman as a center for batik makers. In the 1970-1980s, the demand for batik in Kampong Kauman began to decline. There was a shift in fashion trends from sarongs and jarik to more modern jeans and shirts. Some batik workers began to switch professions. With the potential for the cultural heritage of ancient buildings and batik culture, the Surakarta City government began to redevelop Kampong Kauman's glory by being designated as the Kampong Wisata Batik Kauman in 2006. The establishment of Kampong Kauman as a tourist Kampong was also followed by the formation of the Surakarta Kampong Wisata Batik Kauman Association. In addition, in the Regional Medium Term Development Plan of Surakarta City in 2011 - 2031, it is stated that Pasar Kliwon Sub-district (including Kampong Kauman) was included as cultural tourism destination (See **Figure 4**).



Figure 4. SMEs Activities in Kampong Kauman

Kampung Batik Kauman currently consists of 50 entrepreneurs from 5 batik entrepreneurs when it was first established. Most batik craftsmen were centralized on the west side of the Surakarta Palace, namely in RW.3 and RW.4. The Kauman batik tradition directly inherits the batik inspiration from the Ndalem Keraton Kasunanan Surakarta Hadiningrat. This was indicated by the batik works that were produced, which were related to the batik motifs that the Keraton family often uses. Three batik shops still maintain the traditional batik-making process: Batik Gunawan Setiawan, Batik Dakon Mas, and Batik Sekar Tadji.

According to the study, the progress of Kauman in terms of promoting sustainability has relatively a step behind Laweyan. However, the existing batik enterprises begin to use some environmentally friendly materials, including the uses of local plantation to support the colouring material, the minimum uses of plastic for handicraft and packaging, and the implementation of paperless documentation in some members. In the production process, several entrepreneurs have used the stamping technique, using a stamping tool made of copper that can be used repeatedly. This technique allows a more efficient production process than hand-drawn batik. The variety of types of batik also expands the target market from the middle to the upper. In addition, this stamped batik also reuses wax that has been used, called "nglorot". The processing of batik waste in Kampung Kauman has also utilised the Communal Wastewater Treatment and the reuse of batik cleaning water for plantations. Some of the evidences provide an optimistic illustration of Kauman towards sustainability and moreover the principle of circular economy, which are reuse and recycle of the product and production process

Kampung Sondakan

Kampung Sondakan was located just north of Kampung Laweyan. The development of Kampung Sondakan began in the 1900s, along with the development of Kampung Laweyan. In the 1970s, Sondakan Village, through its Canting Kakung community initiated by Pak Kusairi (Batik Creator Danar Hadi), formed a community of contemporary batik artists with distinctive styles using stamps, cantings, and brushes. In 2012 Pokdarwis (Tourism Awareness Group) Sondakan reopened the Samanhudi museum, which was inaugurated by the Mayor of Surakarta in 2008. In 2013, Kampung Sondakan was awarded the top 10 national tourism Kampong and received funds from the National Community Empowerment Program (PNPM) tourism from the Ministry of Tourism and Creative Economy (see SMEs activities in **Figure 5**).

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Figure 5. SMEs Activities in Kampung Sondakhan

The same year, the Kampung Sondakan Tourism Development Forum (FPKW) was formed to develop Sondakan as a tourist Kampung. Since then, Kampung Sondakan has been active in holding the Napak Budaya Samanhoedi (NBS) carnival to emulate the hero and founder of the Islamic Trade Union. In addition, various programs from the Surakarta City Government began to be implemented to developing Kampung Sondakan. These programs include providing MSMEs capital, management and marketing training, and integrating tourism Kampung with ASITA (Association of The Indonesian Tours and Travel Agencies) and PHRI (Indonesian Hotel and Restaurant Association).

Apart from being a batik producer, Kampung Sondakan has culinary potential, keroncong art, wayang art, museums, and handcraft products in the form of knitted bags, hats, and others. Its location that is directly adjacent to Kampung Laweyan has made the neighbourhood to have similar quality in terms of sustainability effort. Although the neighbourhood is establishing on its own characteristics and depending on its own resources, many batik enterprises in the neighbourhood build strong engagement and networking to those in Laweyan. This interaction creates wider opportunities to knowledge sharing.

The batik production process in Kampung Sondakan mostly uses the stamp technique, following the needs of consumers. However, some still use the canting technique or a mixture (stamp and canting). The stamp tool was made of copper and can be used repeatedly. Until now, the entire industry still uses synthetic dyes. However, a communal WWTP already manages the waste of the entire batik industry, allowing waste water to be organised safely without risking surrounding environment. The efforts to use natural dyes have been made, but the coloring process takes longer, so it is not feasible to do so at the moment. Wax waste can be minimized by reusing wax by freezing it again after the "nglorot" process. Batik marketing has started using online media for promotion and networking. Most batik entrepreneurs in Kampung Sondakan use a pre-order system by offering samples of various motifs to consumers or popular batik shops, and new batik will be made to order. All of these processed were circulated through local interactions and have impacted on the efficiency and effectiveness of the enterprises, which is in line with the sustainability and the principle of circular economy.

Kampung Serengan

Craftsmen in Kampung Serengan began to produce in the 1960s, with the Keraton as one of the consumers. In 1989 Serengan was designated as Kampung Blangkon in line with the increasing demand for blangkon production. Kampung Blangkon Serengan Association "Blangkon Maju Utomo Craftsman" was formed in 2005 as a communication medium between craftsmen. Since 2017, Kampung Serengan has begun to open communication and collaboration with other stakeholders in developing Kampung

Serengan as a Tourism Kampong. The collaboration is carried out with ASITA so that the Kampong Serengan could be included as a tourist destination in Surakarta. The development of Kampong Serengan continue to be carried out, one of which is the plan to build a showroom and education center for making blangkon. In addition, in 2020, the Surakarta City Culture and Tourism Office assisted in the form of blangkon prints to craftsmen (10 pieces each).

Blangkon was a hat of Java Traditional custom. Kampung Blangkon, which is located in Kelurahan Serengan is the biggest Blangkon creative industry production in Surakarta centralized in Potrojayan (see **Figure 6**). Right now, the number of producer of blangkon industry craftman 28 business units, eventhough only 6 of them still operates until recently. Most of them are located in in RT 02 and 2 Blangkon workers stay in RT 01 (interview with secretary of forum of Blankon Worker). The pioneer of Bangkon creative industry was Mbah Joyo, which therefore been inherited to his third generation, Bapak Wardoyo and Ibu Rusmiyati. In terms of production process, blangkon industry is produced by handmade, however a recycle process is applied in this industry by using the leftover cloths as the new raw material for other blangkon. It is something that can be captured as a natural and unconscious effort to promote sustainability.



Figure 5. SMEs Activities in Kampong Serengan

Some patterns of blangkon are recognized, such as Solo Kasatrian, Solo Cekok, Solo Perbawan, Solo Mangkunegaran, dan Solo Mudha. The blangkon designer is the only one worker, which has certificate and becomes delegation of 6 embassy (Saudi Arabia, Singapore, Brunei Darussalam, Malaysia, Qatar, Indonesia). He initiated the Forum of Blangkon Kampung, which has been existed namely “Pengrajin Blangkon Maju Utomo”, which organizes all the blangkon community and all creative economic activities in Serengan.

In addition to a few efforts to apply recycling and reuse in their production activities, right now, online marketing system has been applied in Kampung Blangkon Serengan to ease the distribution and make efficient of trade activities. They also provided by showroom located closed RS Bung Karno Hospital Semanggi, which displays various Surakarta community craft including blangkon. It is also another notable innovation in terms of the promotion and selling that applies the hybrid model connecting to public services. However, due to its very small scale of production, blangkon industry does not has impact directly to the environment. However, this creative industry gives a great economic impact to the surrounding neighborhood as this gives sustainable income earning opportunities as well as a strong branding image of the neighbourhood as the centre of Blangkon. Cultural impact has been recognised as the blangkon is inherited from generation to generation of Java Culture.

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What is “Sustainability”? The Level of Knowledge and Its Challenges for SMEs in Creative Kampongs

In this article, we look at four case study areas and assess the existing stakeholders' perception and understanding about sustainability. All of the involved stakeholders have similarities in terms of business, which are handicrafts and fashion products such as batik, blangkon, and toys, necklaces, rings, puppets, and many others. In general, the four kampongs share almost similar characteristics in terms of their production activities which combine traditional and modern techniques, and naturally aim at promoting sustainability but based on their local cultural values and interpretations. The most common sustainability actions are the uses of stamping techniques to allow reuse of some production tools, the uses of colouring materials from local plantation, the development of drainage system and waste water communal system, and the introduction of online promotion and selling to reduce the cost of renting galleries and to reduce the potential of overproduction. The following **table 1** illustrate the overall findings of the knowledge level of SMEs in four kampongs in terms of the sustainability motivation to the awareness of the sustainability policies and plans in the neighbourhood and the city.

Table 1. Knowledge Level in Four Creative Kampong

| Dimension | Creative Kampong | | | | |
|-------------------------|---|---|---|---|---|
| | Laweyan | Kauman | Sondakhan | Serengan | |
| <i>Problematisation</i> | Sustainability importance for the neighbourhood | Solid knowledge reflected from the vision of neighbourhood and many local enterprises | Initial knowledge on the basis of environmental problems like inundation and air pollution | Solid knowledge reflected from the vision of neighbourhood and many local enterprises | Lack of knowledge as the concern is still on business survival |
| | Sustainability importance for own business | Strong understanding from many enterprises that sustainability values help their business survival | Not many enterprises aware of the importance of sustainability to their business activities | Basic understanding from a few enterprises that demonstrating sustainability may help business efficiency | Not many enterprises aware of the importance of sustainability to their business activities |
| | Key actors for neighbourhood sustainability | Community leaders, activists, government officials, batik entrepreneurs, and local academics | A community leader and batik entrepreneur and his staffs, and academics | Community leaders, activists, government officials, batik entrepreneurs | A few local artists |
| <i>Interessement</i> | Identification of contributions and relations to sustainability | Strong organisation and actor relations indicated by the community forum and its regular role sharing | Domination of the role of community leader and his enterprise | Strong actor relations facilitated by the neighbourhood government (kelurahan) | Self-organised and initial action led by a few local artists |
| | Rules and policies to promote sustainable development | Strong support from both government, NGOs, universities and the local forums | Strong support from both government, NGOs, universities and the local forums | Support from universities and local forums | A few supports from universities |
| <i>Enrolment</i> | Vision and strategies to promote sustainable development | Clearly described and systematically planned on the neighbourhood grand design | Described by the neighbourhood profile in general | Described by the neighbourhood profile in general | There is still limited effort to articulate the vision and strategies of sustainability |

| Dimension | Creative Kampong | | | |
|---|---|--|--|---|
| | Laweyan | Kauman | Sondakhan | Serengan |
| Area of improvement to support sustainability | Replication of eco-batik industries from a few major enterprises to surrounding batik enterprises | Financial and technical support in terms of managerial, financing, and collaboration | Innovation to rebrand its sustainability value to compete with its neighbouring cluster | Basic capacity building to strengthening existing business, networks, and technical aspects |
| Mobilisation Business contributions to support sustainable development | Significant contribution and the role model of the sustainability innovation at the city and regional level | Fair contribution as one of the cases of sustainable kampong in the city | Fair contribution as the kampong that help sustainable development within the local boundary | Insignificant contribution but shows some embrionic potential for further development |

4. Conclusion

This research aims at studying the actual contribution of creative kampong in helping SMEs to catch the growing knowledge of sustainable development. By using the logic of Actor Network Theory (ANT) and focusing on the case study of four creative kampongs in Surakarta, the study found that the majority of SMEs were familiar to sustainability. Although not all actors have similar level of understanding, according to the study, the majority of business enterprises especially in Laweyan and Sondakhan were in sufficient level of knowledge. They were agreed on the justification to say that its neighbourhood, the creative kampong, provides significant contributions to make them aware of the needs to promote sustainable development to help surrounding as well as their own business interests. In terms of the actors and role sharing, almost all cases show the strategic role of community leaders and activists, especially those living in the neighbourhood and acted as the point of reference. Even in the case of Serengan where the knowledge is still limited, the existence of a local community leader who is also the most contributing artist, help the initial process of introducing sustainability to the neighbourhood. After all, the all evidences guide us to conclude that the creative kampong and its characteristics of business sharing, networking, and mutual learning along with the existing ways of doing things significantly ease the process of transfer knowledge amongst the SMEs in the neighbourhood. The difference between the four cases indicates the factors like business maturity, scale of cluster, and attention of government with regards to their strategic location and function for the city.

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