Spatial distribution in the emergence of coffee shops in Surakarta

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Abstract. The phenomenon of the rise of coffee-drinking has become a trend economic-cultural as globalization in lifestyle for the community in Surakarta. This coffee-drinking habit increasingly supporting the emergence of coffee shops that keep flourishing and the number continuously expand. Specifically, each coffee shop presents their own theme and display the architectural style that show its earmark of the coffee shops. It indicates that the growth of coffee shop has contributed to enrich the architecture in the city. The aim of the paper to identify spatial distribution patterns of the emergence of coffee shop in Surakarta. The research is carried out through spatial analysis, which is mapping the distribution of the coffee shops. Later, use spatial observation to find the patterns of distribution from the emergence of the coffee shop. As a result, is expected to be an outset for further research of spatial development structure as seen from the growth of coffee shop in Surakarta.

Keywords: coffee shop, spatial, distribution

1. Introduction

Coffee has become the second-most important product of tropical commodity traded worldwide in 21st century [1]. Currently, coffee culture become common as “coffee-drinking habits.” around the world [2]. Coffee in social life keep its alive as a cultural symbol. In civilization, coffee consolidate friendship among people [3].

In Indonesia, drinking coffee is a community tradition that is usually done in a roadside coffee shop and is dominated by adults especially men. Coffee-drinking habits increase when dealing with coffee consumers, not only adults but also young people, both men, and women [4]. International Coffee Organization (ICO) 2018 published that the consumption of coffee in Indonesia has grown in recent years in various variant of coffee and civet coffee. Furthermore, Nielsen in Setiati (2015) stated that the number of visitors to the coffee shop in Indonesia has increased not less than two times in the last three years. The phenomenon of the rise of coffee-drinking as a current development of economic and globalization has become a lifestyle in the environment increasingly supporting the emergence of coffee shops that keep flourishing. From the past to present, coffee shops have existed and the number has expanded [5]. Coffee shops is a prevalent business making an enormous opportunities in Indonesia [6].

Surakarta is a cultural city in Central Java, Indonesia, that better known as ‘wedangan’ than coffee-drink. But lately, the growth of coffee shops and public interest in coffee shops is quite high. Trend and globalization of social media have taken that rising the coffee shops. Coffee shops are present in
places across the city from the high streets to the suburbs [7]. The emergence many of coffee shops is one a palpable example in daily urban life to consume spaces in neighbour [8].

In general, coffee shops business growth in Surakarta has increased quite rapidly. There have been many coffee shops with various concepts and various classes for consumers. It is starting from the middle class down to the middle class and above [9]. Most coffee shops display the space and it place to attract customer by its design as a main differentiator. They also have product quality stategy as serving the high-quality and premium coffee. They presenting their coffee shops to provide space for enjoying coffee [10].

![Figure 1. Evidence of Coffee Shop in Surakarta](image)

These coffee shops in its space of city become a spatial phenomenon which is distributed in urban space. The emergence of the coffee shop has drawn attention for many parties. These coffee shops phenomena called by scientest as mushroom and disperse in urban area [11]. The spreading can be classified based on the location and accessibility, infrastructure, architecture even behavior of coffee shop users to carry out and understand the spatial distribution [12].

The method used in this paper is qualitative descriptive analysis research that located in Surakarta, Central Java. Spatial analysis is used in this paper by mapping the coffee shop to support various form of urban spatial research [11]. This phase is part of spatial research through typology and recognizing the pattern of the coffee shops. It has an particular factor that can be organized and compared to identify the similarity even distinctive features among the coffee shops [13]. Coffee shops in this research is selected to be independent coffee shops that have a space to enjoy the coffee and the place.

This article presents an overview of how spatial patterns in the distribution of coffee shops are created and how they influence the spatial structure as geographically urban Entities. Space comfort, in specific location react to its ac and main activity [14]. The process used sketches the emergence of distribution from the coffee shops and mapping techniques of the coffee shops appropriate to denote the spatial distribution [15]. As a result, spatial is used to know the distribution and linkage of the coffee shops over its spread either location, accessibility, infrastructure or architecture or even behavior of coffee shop users. Obviously, therefore knowledge about spatial characteristics can have an impact on the urban space [15].

2. From Coffee to Coffee shops

Started from the etymology, begin with word “coffee” itself is not certainly known, but there are various sights about it. James murray say that African language is originally made word of coffee then called as “Kaffa”, that is a city in the Soha region of Ethiopia, an upland region in Africa. [16] There is primary and center production of coffee, also recognize to be the motherland coffee [17].

Word coffee has another point that claimed from Arabic. It comes from coffee tree called “bunn” (bun) then its fruit called “kahva” around 15th century [18]. The word “kahva” has been claimed to be an changed version of “kaiffa” in Arabic. The result coffee beans then produce as a drink by grinding and brewing with boiling water [19]. Later, there is no valid proof of who was the first created coffee as a drink. First evidence has seen in the middle ages that Africa become the place of coffee. Later
then, it spread to Mecca and Medina through Yemen in southern [20]. Istanbul, especially in Tahtakale has become the first place to open the first coffeehouse in 1555. The social activities in socialization increase as a routine that take place in coffeehouse [21]. Another study mentions the introduction of coffee came from Ottomans culture [22]. In 1520 – 1566 as era of Suleiman the Magnificent, called that coffee have brought the Ottoman then widespread the Western countries around the 16th century [23].

In the end of the 17 century, coffee became well known in the most Europe and was already known worldwide then it was becoming a commercial and significant product as beverages [24]. Coffee has developed to be the most popular drinking that was previously consumed by the aristocracy. Now, coffee is part of our daily consumption and bigger as lifestyle then grow become a significant bussiness in some countries especially as a major source of income for many coffee-producing places [25].

Coffee itself evolve into a space to enjoy drinking coffee; Coffeehouse. Firstly, Coffeehouses built by enormous architectural with many of bright lamps. The social activities took it place where people communicate to other as an art and oral tradition [26]. Furthermore, according to Cowan (2005), coffee houses has become a “public house” in a domestic environment that is open to everyone. The coffeehouse gradually became a commercial space for the community until the designation changed to coffee shops, although coffee houses still exist in some areas [27].

From time to time, coffee spread fast instead brought along some prohibitions. It is considered heretical for Islam because it is pleasing and, therefore, it was even prohibited with belief that “Coffee seeds are not heretical anymore once roasted”, later its fast spread and continue as coffee culture [28].

In Indonesia, Syafrudin as a Chairman Specialty Coffee Association of Indonesia (SCAI), said that contributes of coffee shops over the uptake of domestic coffee production reach 25%—30% and it keep increasing. But, the history of the Indonesian coffee still missing even empty. Coffee is related to the issue of the culture stelsel that was carried out by the Dutch [29]. This might need some further research to know how coffee become a drinking habits for society in Indonesia.

3. Spatiality of coffee shops
Spatial become one of determines to recognize some object in practical research. It has pattern that play significant in forming space, place, over urban development [30]. There are some theories about factors take effect in spatial location, such as density and population, accessibility or activities [31]. Later, spatial indicated that economy has reward structure that form hexagon unit. This relatively accessibility even transportation has a role in spatial analysis [32]. This leads finding and studying the relationship of social phenomena in spatial patterns and spatial distribution of geographical spaces.

The spatial by Habraken (1982) offers three ways to classify architectural forms; i.e. spatial system; a spatial system that is related to a plan that includes a floor plan, spatial arrangement, orientation and space hierarchy; Physical system; physical system that is related to the use of materials of the building elements of building construction; and the model/display system (stylistic system): the system model is related to the front view / façade. There are three types of spatial structure; concentrated area pattern, linear pattern and evenly distributed pattern [32].

Another theory, spatial can be defined as a social pattern with a broad relationship, including the distribution pattern of land use, location, urban, and its movement. [33]. This configuration should be linked to the threshold for certain space and its intensity [15]. Furthermore, Schulz (1984) in “Sprawling Places book” revealed a general understanding related to space where each space has a genius loci attachment to developing architectural phenomena [34]. It means every space and place might have connection between user and its place.

The trend of coffee shops as a mold that grow in almost big cities across the world and are becoming part of the contemporary urban living. Next, coffee give some experience in taste, flavors matter and it place [35]. These coffee shops mostly attract young people, Educated and culturally conscious communities, which in turn produce a new form of urbanism even adults have some attention as consumers. For some customers, coffee shops it place providing a place to work,
socialization, relaxation and finding some spare time [11]. It seems related to urban spatial planning as a local manifestation of sociocultural.

Coffee shops in Surakarta have been collected and identified based on data on the internet and in the field directly by survey to know the place of each coffee shops. In this sense, coffee shops selected to be independent coffee shops that have a space to enjoy the coffee and the place. The evidence presented, the coffee shops divided in some classes that seen in the urban spaces at some areas. However, the extent of the distribution of coffee shops touch the urban setting in most urban areas that closed to economic and geographical context. The spatiality of coffee shops is analysed that have a relationship in their locational economic strategies and spatial related to development of urban spaces [11]. Furthermore, an illustration visualize the emergence of the coffee shops and shown its density. Certain parts of the city have a denser coffee scene. It can be said that the concentration of coffee shops in the urban area may be limited to prospective areas and is not related to tourist or cultural areas [36].

Most of the coffee shops were established in 2017-2018 when the trend began to surface. The next wave led to the emergence of more coffee shops, especially social media. The emergence of new coffee shops caused high competition between coffee shops which caused some of them to go bankrupt. There is some maps that divided into some different subjects of coffee shops in Surakarta (Figure 2).

Figure 2. Distribution of coffee shops in Surakarta based on District

Figure 3. Distribution of coffee shops in Surakarta based on Function of zone in Surakarta

Figure 4. Distribution level on types of road in Surakarta

Figure 5. Density level of distribution of coffee shops
The set of raster analysis has to deal that Surakarta has been classified into 5 territories that divided in each sub-district. They are Laweyan, Serengan, Jebres, Banjarsari, and Pasar Kliwon. Pasar Kliwon is the location of the center of government in Surakarta. In zones, Surakarta divided into 6 zone, which is tourism and service area as zone 1; tourism and open-space area as zone 2; residential and service area as zone 3 and 4; tourism, educational and industries area as zone 5 and the last area functions as a government, tourism and services area as zone 6.

Data collected around 80 coffee shops spread across the city of Surakarta (Figure 2). In this scene, some distribution of the appearance of coffee shops in certain areas. Domination occurs in densely populated areas which is in zone I and II as a tourism and residential area. Surakarta has basically cultural tourism site in zone I and II as Laweyan and Baluwarti (Figure 3). Another data that exist visibly the spreading of coffee shops mostly happen in center of the city than suburban area, except area that provides tourism things and cultural heritage. The location is densely populated stimulate the emergence of coffee shops. The target market is the middle to lower class people who usually appear in spreading areas. This took advantage of an empty building at an affordable price which was later converted into a coffee shop. Some of them do not give a certain impression but only as business land.

The same is the case with locations in suburban areas and narrow alleys. They provide a coffee shop as a gathering area for the surrounding community. However, this coffee shop cannot be said to be bad. It's just different targets and target markets with different locations. A difficult achievement causes only certain people in the area to be the target market. Some also just follow the trend of the coffee shop business without the ability to process coffee shops. Not infrequently, the house is converted into a double function as a coffee shop just to provide coffee space.

Factors affecting the different trends in each sub-district regarding the relationship between population density and distance from the city center. There is some relationship between the distance to the city center and the population density in each sub-district will impact different trends. The region as an area unit that interacts with each other provides a very close relationship between each hierarchy in an area. Rustiadi in Gemilang (2008) stated that regional centers generally form a specific hierarchy determined by the number of three, there are availability service facilities, types of service facilities, and the number and density of residents. Later the higher all the three things, the higher the hierarchy. It means there is a positive correlation [37]. This factor showed a correlation in population density in an area. Coffee shops have a tendency in selecting locations. In specific zones, the number of coffee shops appears to be higher than in the other areas. Some of them are dominated by business, service and trade based locations. The data sector is quite interesting which the emergence of coffee shops in Surakarta.

In contrast to the education zone. The concentration in this area is an educational activity that is clustered by several schools or educational institutions. Several coffee shops have emerged in educational areas with market segments being students and university students. Coffee shops are becoming relevant as learning and interaction spaces for students and students. The demand for discussion, study and hangout spaces for young people and school children is an alternative coffee shop treat. The consumers and target market for this coffee shop are different from the business zone. The available space is more open and gives the impression of being independent. Giving garden, rustic, ornament to attract young people.

The level of distribution seen from the types of roads in Surakarta shows that most coffee shops appear on local roads, although some coffee shops are on a collector or primary street (Figure 3). In some case, coffee shops that shown in primary or collector road are middle to high class. They provide the specialty of coffee by brewing, serving and quality coffee beans and of course, at higher prices. Its target market is business people looking for strategic locations regardless of price or place. The location strategy is looking for easy access, facilities and infrastructure. Type of visitor only needs certain and fast and do not spend a long time in the coffee shop. This coffee shop are also open and busy at rush hour.
The emerging of coffee shops has a correlation in density area. Figure 4 shows us that, the denser area, the higher number the coffee shops that exist. The level of density usually based on the residence or neighborhood of the area. It directs us that there are some correlations that clearly confirm in wider environment and the hight number at some zone based on culture and economic subject, coffee shops are evident. From the statistical, and mapping investigation has result that raster and spatial analyses explains the connection between the new form of economy, culture and new urban consumption spaces in public. In a denser coffee scene there are wider environments with a culture and economy that tends to be more involved than other.

4. Discussion
That analysis above, mention and focus on the relationships spatial urban contexts and the emergence of coffee shops. We made some arguments on cultural economy in Surakarta and urban spaces of specialty coffee consumption using density and raster analysis. Later, aggregating source data, has been utilised to define the concentration of its mapping approach via the spatial join method in pre-defined zones. The approachment is concentration areas that built the coffee shops. It have some chances to calculate the number, map and visualize the density of coffee shops in Surakarta from its spatial.

Mapping the spatial distribution giving certain visualization about the spreading of the emergence of the coffee shops based on location, access, infrastructure even it space. The result of the mapping shown that the level of spreading of the coffee shops dominated in a residential area with denser population. The target market is known to be the neighborhood around its coffee shops instead to connect people in an urban area. Some factors has correlation in the emergence such as target market, strategic location, architectural and interior decoration even trend and social media that push the sustainability of the coffee shops.

Theory of Rustiadi about hierarchy place has determined by the number of available service facilities, the number of types of service facilities, and the number of residents where the higher all the three things, the higher the hierarchy. It means there are a positive correlation [37]. This factor showed a correlation in population density in an area. The emergence of coffee shops and density area means they have positive correlation and they have some hierarchy among the coffee shops that exist. Recently, the areas with a chance of economic to be higher has became the evidence in line with the higher of coffee shop in other areas. This research contribute to recent literature on consumption patterns and different lifestyle also support spatial the spatial structure.

5. Conclusion
The result from analyzing the spatial concentration and distribution of urban spaces of specialty coffee shops in Surakarta affected by business establishments and residential density, name kind of road and opportunities have been found. The emerging of coffee shop formed by economic, socio-culture as new urban consumption spaces.
In society, spatial itself has various space structures. Coffee shops has been evolved into a space that people can talk, communicate and interact with others of all ages without any pressure. Public space formed by the activity that occurs in the coffee shops and the number of the arise keep increasing. Data showed that coffee shops has contribution in urban space development. Someplace converted as a coffee shop to meet the needs of space for the community.

As conclusion, this research reveals that there are connection between the emerging of coffee shop, urban spaces, economic-culture, trend and lifestyle that has appeared to be stronger and more distinct at smaller scales. In other words, at the broader environmental level, take effect of coffee shop concentration is more visible than at the district level. However, clearer imagery needs to be looked more closely at reality and data that conforms to a certain level of detail from reliable data sources. This requires further research related to coffee shops.

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