

Mapping Service Performance and Communication Patterns in the Networked Coffee Shop Community in Jember Regency

Erlambang Budi Darmanto¹ (corresponding author), **Luh Putu Suciati**², **Moh. Adenan**³, **Yunita Setya Pratiwi**⁴, **Erman Arif**⁵, **Doni Waluyo**⁶, **Fadiatul Ismaniah**⁷

¹Development Economics Department, Universitas Terbuka, Indonesia; erlambangbudi_d@campus.ut.ac.id

²Faculty of Agriculture, Universitas Jember, Indonesia; suciati.faperta@unej.ac.id

³Faculty of Economics and Business, Universitas Jember, Indonesia: mohadenan.feb@unej.ac.id

⁴Universitas Pembangunan Nasional Veteran Jawa Timur, Indonesia: yunita.satya.tp@upnjatim.ac.id

⁵Universitas Terbuka, Indonesia; erman.arif@ecampus.ut.ac.id

⁶Bedhag Kopi, Jember, Indonesia; donnyesq@gmail.com

⁷Faculty of Agriculture, Universitas Jember, Indonesia; 191510601072@mail.unej.ac.id

Submitted: December 28, 2022 -Revised: January 24, 2023 -Accepted: January 28, 2023 -Published: January 31, 2023

ABSTRACT

Jember Regency is one of the coffee center areas in East Java. The increasing consumption of coffee has led to the proliferation of coffee shops in the Jember Regency. The importance of a relationship for a coffee shop or shop will facilitate the dissemination of information about the current development of coffee. Forum Barista Nusantara is a networked coffee community as a forum for coffee shops/shops to serve and mix coffee according to their respective competencies. This study aims to obtain data, process, and analyze mapping service performance and communication patterns in the networked coffee shop community in Jember Regency. The research method used is the analytical descriptive method. Data analysis techniques use spatial analysis and analysis of nearby neighbors as well as analysis of communication patterns. The results showed that in the Spatial Distribution of networked coffee shops in the Jember Regency there were 40 samples of shops spread across the Jember Regency. The performance of coffee shop services based on ratings on Google Maps shows that coffee shops in the Summersari District area have good performance with an average performance rating of 4.5-5 stars. The distribution pattern of coffee shops in Jember Regency through the analysis of nearby neighbors processed from QGIS software version 3.16 can be known to tend to group (cluster) because the distance between one coffee shop and another coffee shop is close together.

Keywords: communication patterns; coffee shops; spread; networking

INTRODUCTION

As time goes by and people's interest in consuming coffee, many business actors in the field of coffee shops are increasing and growing, and this has resulted in coffee shops mushrooming in various places. The level of competition for coffee shops in Jember Regency is already quite fierce. Many coffee shops with their respective various brands coupled with brands that already have a large enough market share make market conditions very saturated so that coffee shops that do not have innovation can be eliminated. Tjiptoherijanto in Firdaus M (2016) stated that lack of capital, lack of accounting system (bookkeeping), low management and technological capabilities, limited ability to market their merchandise, and lack of working hours are factors that affect the income of traders. In addition, the location of the business is also very influential on the income of the trader, because if the location is strategic then it is very profitable for the trader and vice versa. ⁽¹⁾

People's consumption interest in coffee continues to increase. The trend of coffee consumption has increased by an average of 8-10% per year in the last decade, which means that each person consumes 1.3 kg of coffee per year. Lestari ⁽¹⁾, stated that the people of Jember consume a lot of coffee because of habits and reduce drowsiness. The frequency of coffee consumption is often done is 1-2 cups/day. Coffee shops in Jember Regency continue to grow, even often found in one adjacent location, there are two or more coffee shops with the same large business scale with more or less the same menu list. Seeing this phenomenon, there is certainly fierce competition between coffee shops.

A business must have a strategy for competing. One way for coffee shops to keep up with the times is the need to have a social network with fellow coffee shops. According to Nabila ⁽²⁾, social networks are a means to carry out activities to meet social needs, such as work goals, hobbies, shopping, entertainment, sports, and others. According to the perspective of economic sociology, the concept of social networks itself shows how individuals can allocate resources and share as many relationships as possible with other individuals to benefit themselves.

The same circle of social networks will tend to group itself into one particular community. Networks like this tend to be based on what they like or are interested in together ⁽²⁾. Coffee shops and coffee shops in Jember Regency have a social network called Forum Barista Nusantara. Forum Barista Nusantara is a forum for baristas throughout the archipelago in Jember to live family and togetherness and often serving and mixing coffee according to their respective competencies. The concentration of information about coffee certainly comes from one party which greatly influences the dissemination of information. Therefore, it is important to know who can be relied on in disseminating information related to the development of a coffee shop business.

According to Elly et al ⁽³⁾, coffee shops are categorized into informal restaurants and are usually open for 24 hours and it is often found in hotels, but due to the development and needs of customers that are very complex and endless, the development of coffee shops as they are today is an informal restaurant that provides some snacks, drinks and provides a place to relax and is not necessarily located in hotels, but it can be in shophouses or malls. At this time, the emergence of the trend of discussing together in coffee shops is very popular with women, men, old, and young. The existence of this trend makes it a business opportunity for coffee shop entrepreneurs and prospective coffee shop entrepreneurs. The positive growth of coffee shops has led to many new concepts and product variants that fit the concept of the coffee shop. Each coffee shop offers processed coffee products such as espresso, double espresso, ristretto, Americano, long black, macchiato, flat white, cafe latte, cappuccino, kalita, Japanese, V60, manual brew, and cold brew. These differences are made so that each coffee shop has a product that is its own characteristic ⁽⁴⁾.

Jember Regency is the second largest area after Malang with the potential for coffee development ⁽⁵⁾. The demand for authentic coffee in Jember Regency is very strong, especially for robusta coffee. The production of Robusta Coffee distributed to the general public or local government units every year in Jember exceeds 100-200 tons. Several sub-districts sell people's coffee, namely in Kalisat and Silo. Currently, people's coffee is often exported abroad to become a variety with higher economic standards ⁽⁶⁾. In addition, the spread of coffee shops in Jember Regency provides opportunities for business opportunities through the use of regional superior commodities.

Coffee is a leading commodity for plantations with control by smallholder plantations reaching 96% and has an important role in the national economy, namely the main source of income for farmers, sources of employment, sources of state division, sources of industrial raw materials ⁽⁷⁾. There are two types of coffee plants produced in Indonesia, namely robusta coffee and arabica coffee. Arabica coffee is a traditional type of coffee with a very sweet taste, while robusta coffee has a higher caffeine content and can be grown in areas that are not possible for arabica coffee ⁽⁸⁾.

Based on this background, researchers are interested in researching service performance mapping and communication patterns in the Networked Coffee Shop Community in Jember Regency. The novelty of this research is that research related to the distribution of service performance in the networked coffee shop community in Jember Regency has never been carried out and the communication patterns carried out at the level of downstream actors of coffee commodities, namely coffee shop owners. The objectives of this study are 1) To determine the distribution of service performance in the networked coffee shop community in Jember Regency based on ratings on Google Maps 2) To find out communication patterns in the networked coffee shop community in Jember Regency.

METHODS

The population in this study was all coffee shops in Jember Regency. The method of determining respondents in this study was to use purposive sampling or intentionally. According to Sugiyono ⁽⁹⁾, purposive sampling is a sampling technique with certain considerations. The samples selected for this study were from the networked coffee shop community, Forum Barista Nusantara (FBN) as many as 40 samples. The research location was chosen deliberately, namely in Jember Regency as one of the coffee production centers in the East Java region.

The research method used is the analytical descriptive method. The descriptive method is used to analyze the data by describing in detail related to the service performance mapping based on visitor reviews listed on google maps and communication patterns in the networked coffee shop community in Jember Regency.

The data sources used in this research process are primary data sources and secondary data. The primary data obtained is related to the communication patterns of the Jember Coffee shop (parties who are often invited to discussions and their roles, communication media, frequency, and discussion topics). Secondary data is obtained from the previous research literature, statistical data on food consumption, BPS, Jember Regency in Numbers, and Google Maps. The data collection techniques used are:

a. Observation

Observation is a data collection technique that bases field facts and texts, through the experience of the five senses without using any manipulation ⁽¹⁰⁾.

b. Interview

According to Sugiyono ⁽⁹⁾, the interview method is one of the data collection techniques if researchers want to conduct a preliminary study of respondents that is more in-depth and the number of respondents is small/small.

c. Questionnaire

The questionnaire method is a method by formulating the goals to be achieved with the questionnaire, identifying the variables to be used as the target of the questionnaire, describing each variable into more specific and single sub-variables and determining the type of data to be collected at the same time to determine the analysis technique. ⁽¹¹⁾

d. Documentation

The documentation method is a data collection technique by discriminating data on things or variables in the form of written objects such as books, magazines, documents, news veins, magazines, inscriptions, meeting minutes, and existing daily notes. ⁽¹¹⁾

Method of Mapping Service Performance in Networked Coffee Shop Communities in Jember Regency

The analysis used to determine the location and pattern of the grouping is Spatial Analysis and Average Nearest Neighbor Analysis. According to Indarto & Faisal ⁽¹²⁾, there are two types of models in the framework of spatial analysis, namely representation-based models and process-based models. This study uses a representation-based model, which describes objects on the earth's surface (such as buildings, rivers, roads, and forests) through data layers in the Geographic Information System. The spatial analysis aims to obtain coordinate point data in each coffee shop listed on Google Maps so that it can be clearly mapped the distribution of coffee shops in Jember Regency. Before processing spatial analysis, first, convert coffee shop coordinate point data from Google Maps into QGIS version 3.16 to become shp data then, coordinate points are unified with the Jember Regency Administration Map to obtain a Map of Coffee Shop Distribution in Jember Regency. ⁽¹³⁾ Spatial analysis aims to obtain coordinate point data in each coffee shop listed on google maps so that it can be clearly mapped the distribution of coffee shops in Jember Regency.

Nearest Neighbour Analysis or better known as Nearest Neighbour Analysis is a geographic quantitative analysis method used to determine distribution patterns. Nearest Neighbour Analysis is one of the analyses used to explain the distribution pattern of place location points using calculations that take into account, distance, number of location points, and area, the final result in the form of index calculations has a range between 0 - 2.15. The nearest neighboring parameter T (nearest neighbor statistic T) can be shown with a continuum to facilitate comparison between point patterns. The analysis of the nearest neighbors aims to determine the distribution pattern from one point of the location of the research site to the location of another research place with calculations taking into account the distance, location, or area of the area. T is a measure of the observed distance pattern relative to the random pattern. T ranges from 0 to 2.15, where it will be randomly patterned if the T value is around 1, group patterned when the T value is smaller than 1, and uniformly patterned if the T value is greater than 1. ⁽¹⁴⁾

Communication Network Method in Networked Coffee Shop Community in Jember Regency

The data analysis used to test the formulation of the second problem is the analysis of sociometric communication networks, used to find out the communication networks formed. The sociometry is carried out manually based on the data from the interview, then a sociogram is formed to see the pattern of relationships and identify the role of each individual in the network. Communication network analysis is a method that describes and explains the social network and network structure through the analysis of coffee shop communication networks in Jember Regency, which will later obtain results of who are the actors who are most often communicated with regarding the development of coffee shops that will be presented in the form of sociograms. If the communication network structure related to coffee development is known, it will facilitate the dissemination of information between coffee shop owners.

RESULTS

Mapping the Performance of Networked Coffee Shop Services in Jember Regency

The results of the identification and tracing that have been carried out obtained samples of coordinate points as many as 40 points classified as coffee shops. Not all coffee shops scattered in Jember Regency can be identified using the mapping application. The identification results can be seen in the picture.



Figure 1. Distribution map of networked coffee shops in Jember Regency

The pattern of distribution of points (points) from an area, in this study, namely networked coffee shops using the analysis of nearest neighbors (Average Nearest Neighbor) is an analysis to determine clustering, random, or regular patterns. Based on the analysis of the nearest neighbors, the distribution pattern of coffee shops in Jember Regency obtained the following results:

- Observed mean distance: 1268.68544869503
- Expected mean distance: 2602.40121099552
- Nearest neighbour index: 0.48750570947
- Number of points: 40
- Z-Score: -6.20083121328

Figure 2. Analysis results of the nearest neighbor index of a coffee shop in Jember

Communication Patterns in the Networked Coffee Shop Community in Jember Regency

Based on the results of research on communication patterns in the networked coffee shop community, the following patterns were obtained:

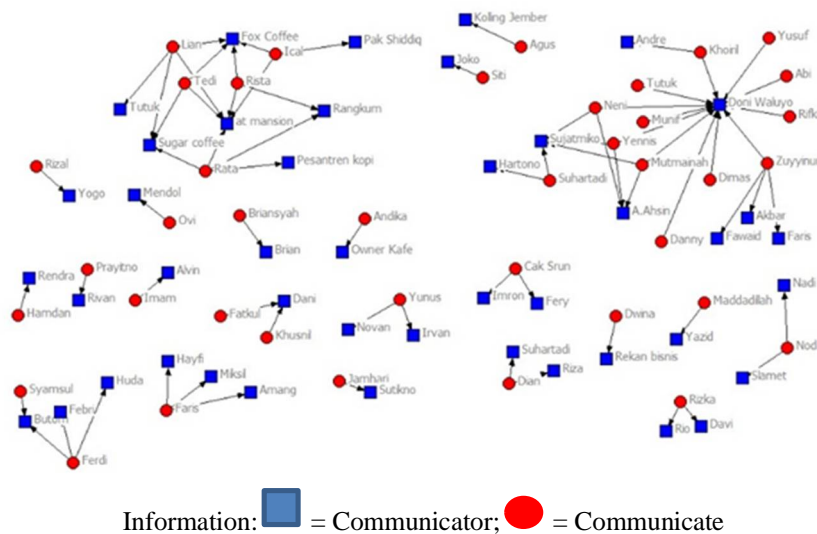


Figure 3. Sociogram of communication network between coffee shop owners

The sociogram that is formed, shows that each individual has a role in the communication network system. The following table identifies the roles formed in the communication network system:

Table 1. Identify roles in information network systems

Respondent's name	Role	Definitions
Doni Waluyo	Star	Individuals who are widely selected and become a source of information
Butom, Febri, Huda, Hayfi, Miksil, Amang, Sutikno, Irvan, Novan, Dani, Alvin, Rivan, Rendra, Mendol, Yogo, Brian, Owner Kafe, Imron, Fery, Suhartadi, Riza, Rekan Bisnis, Yazid, Rio, Davi, Slamet, Nadi, Akbar, Faris, Fawad, A. Ahsin, Sujatmiko, Hartono, Andre, Kolling Jember, Joko, Pesantren kopi, Sugar Coffee, Tutuk, Fox coffee, Rangkum, Pak Shiddiq, at mansion, dan Doni Waluyo	Opinion leader	Individuals whose role is controlling other individuals in obtaining information
Ferdi, Syamsul, Faris, Imam, Prayitno, Hamdan, Fatkul, Khunul, Yunus, Cak Srun, Dian, Dwina, Maddadillah, Rizka, Nodi, Andika, Brianyah, Rizal, Rata, Tedi, Lian, Ical, Rista, Siti, Agus, Suhartadu, Yennis, Neni, Mutmainah, Dimas, Danny, Zuyyinur, Rifki, Abi, Yusuf, Tutuk, Munif, dan Khoiril	Neglectee	Individuals not selected to be communication partners

Source: Personal data (2022)

DISCUSSION

Mapping the Performance of Networked Coffee Shop Services in Jember Regency

Based on the results of research on the Spatial Distribution of Coffee Shops in the Jember Regency, there are 40 samples of Coffee Shops distributed in the Jember Regency. The spatial distribution can be known from the coordinate point search system. The search for the coordinate points of coffee shops is carried out by survey method and through google maps. Based on figure 1, coffee shops located in Jember Regency there are 40 samples of Coffee Shops spread out, namely: DKN, Warkop Mbah Rip, My Way Coffee, Kopi Kesuwon, ABC, Surjo, Sugar Coffee, Kedai Surjo 2 Nia, Angkringan Tanggul, Beli Kopi, Warkop Cakpong, Ningnong Coffee, 50:50 Coffee Shop, Like A Latte Café, Angkringan Sekeco, Javanese Coffee, Planet Coffee, Pak Tua Coffee Shop, Café Hore, Dusk Legendary Tavern, Fox Coffee & Roastery, Imaji, Warkop D'cangkrukan, Endulita, Warkop Mas Bri Iiril, Loscafe And Resto, Angkringan Mbah Raden, At Maison, Summary, Kedai 45, Estona Jember, Arongan, DL Coffee, Armor Coffee Shop, Padma Shop, Warkop Ndepis, Zeco Coffee, Kenanga Coffee Shop and Fortune Coffee Shop.

Coffee shop performance based on ratings on Google Maps shows that coffee shops in Jember Regency have performed well based on visitor reviews. The reviews are based on the service of the café, the place, and the taste of the tavern or café. Shops or cafes in Jember Regency have an average performance rating of 4.5-5.0 stars. Coffee shops with a star rating above 4.5 are most in the Summersari District area, while the average performance of coffee shops with a star rating below 4.5 is in other districts such as Silo, Tanggul, and Ambulu Districts. The spatial distribution of networked coffee shop service performance in certain areas is in line with Langoday's research ⁽¹³⁾, which shows that the spatial distribution of coffee shops in Bogor City is concentrated in the central part of Bogor City.

The distribution pattern of an object can be known by the Index value obtained from the formula above, It will produce a range value between 0-2.15. Based on the analysis of the nearest neighbors, it can be seen that the trend of the distribution pattern of coffee shop businesses in Jember Regency is clustered ($T = 0.487$), it is known that the T value is obtained which is <1 (0.487) with the clustering category (cluster). The results of this study are by the research of Putri et al ⁽¹⁵⁾, stating that, the spatial distribution of coffee shops in Jambi Province tends to show a cluster distribution pattern spread over 18 coffee shops in Bangko District, Jambi Province.

Communication Patterns in the Networked Coffee Shop Community in Jember Regency

Shop owners running a coffee shop business find it difficult to develop their business so there is a decrease in income. Accuracy in choosing individuals who provide information will be more beneficial to the shop owner

because it provides information about the development of coffee communication Patterns in the Networked Coffee Shop Community in Jember Regency. Figure 3 shows the sociogram of the communication network in the coffee shop development information, where 22 components can be identified, Hubs, Cutpoints, and 2 Clicks. A component is a grouping of actors (nodes) that have at least one link in the network. The number of components formed on the basis of the sociogram image is 22 components. The first component is a collection from actor Doni Waluyo to Faris the second component is a collection from actor Nodi to Slamet and so on.

The sociogram image of the communication network also shows the existence of Hubs. Hubs refer to the actors (nodes) that have the most connections in the network. Hubs in the communication network showed actor Doni Waluyo. The actor has 12 links. Next, there are cutpoints, which are actors who become the glue of the network. The sociogram image of the communication network shows Rista, Tedi, and Lian as Cutpoints.

Clicks are the most important part of a communication network, where clicks are formed by the presence of respondents who have frequent relationships. The number of clicks formed based on the sociogram image is 2, the first click is the one with 12 respondents and the second click is the at mansion component which consists of 5 respondents. The formation of the click is due to several similarities in the form of similar communication choices, the proximity of residence, sibling relationships, and proximity of residence.

Based on table 1, the center of the communication network lies in respondent Doni Waluyo who acts as a star and also acts as an Opinion Leader. The role of Star is because the respondent Doni Waluyo is the most chosen, and the role of Opinion Leader is because the respondent can influence and lead the respondents who choose him. Other Opinion Leader roles totaled 44 respondents. Neglectee denotes individuals who choose a communication partner but are not selected by another individual totaling 39 respondents. The results of this study are by the research of Diana ⁽¹⁶⁾, which shows that the communication network for price information and marketing of wulan coffee in the Sinar tani 01B Farmer Group forms a personal locking network (Interlocking Personal Network) which is centered on two respondents number 9 and 28. There are three specific roles of individuals in the price information communication network, namely star, opinion leader, and neglected, while the marketing communication network identified two individual roles, namely star and liaison. The individuals who became stars were respondents number 9 and 28, having positions as leaders of farmer groups and middlemen. In addition, the results of the study are also in line with the research of Ningsih ⁽¹⁷⁾, which shows that the structure of the communication network formed in the Sidomulyo I farmer group tends to be centered or wheel-shaped and the specific role of individuals in the communication network of the Sidomulyo I farmer group is 2 (two), namely star (star) and opinion leader.

CONCLUSION

Spatial Distribution in coffee shop networked communities in Jember Regency there are 40 samples of shops spread across Jember Regency with coffee shop performance based on ratings on Google Maps showing that coffee shops in the Summersari District area have good performance with an average performance rating of 4.5-5 stars. The distribution pattern of coffee shops in Jember Regency through the analysis of the nearest neighbors processed by QGIS software version 3.16 can be known to tend to group (claster) because the distance between one coffee shop and another coffee shop is close together.

The communication patterns formed in the networked coffee shop community are 22 components, Hubs, Cutpoints, and 2 Clicks. The center of the communication network is located in Doni Waluyo who plays the star, which means that Doni Waluyo is the actor who is the most influential in providing information.

The suggestion in this study is that coffee shops as facility providers and competitors in the coffee shop business should conduct a more detailed study of strategic locations and the provision of facilities that can attract consumers to visit coffee shops. Further research can be done in the form of strategies to increase coffee shop networks in Jember Regency.

REFERENCES

1. Lestari EW. Tingkat Konsumsi Kopi Domestik dan Faktor-Faktor yang Mempengaruhi pada Masyarakat Perkotaan di Kabupaten Jember Level. Thesis. 2009.
2. Nabila AP. Jaringan Sosial Pengusaha Café: Story Coffe Roestery = Social Networks on Coffe Business: a Case Study of the Story Coffee. Makassar: UNHAS; 2021.
3. Elly AS, Saefudin BR. Kasus pada Belike Coffee Shop dan Balad Coffee Works. Agritekh. 2020;1(1):29.
4. Kurniawan I. Pengaruh Inovasi Proses dan Inovasi Produk terhadap Kinerja Usaha Kedai Kopi di Bogor. Bogor: Institut Pertanian Bogor; 2020.
5. Sholihah DCH, Aji JMM, Kuntadi EB. Analisis Perwilayahn Komoditas dan Kontribusi Subsektor Perkebunan Kopi Rakyat di Kabupaten Jember. Berkala Ilmiah Pertanian. 2015;1(2):1-9.

6. Hariyati Y. Pengembangan Produk Olahan Kopi di Desa Sidomulyo Kecamatan Silo Kabupaten Jember. *Agriekonomika*. 2014;3:81–91.
7. Sunarharum WB, Fibrianto K, Yunowo SS, N M. Sains Kopi Indonesia. Malang: UB Press; 2019.
8. Abimanyu W, Hadi S, Ridho AA. Studi Komparatif Usaha Perkebunan Kopi Robusta dan Kopi Arabika di Kecamatan Panti Kabupaten Jember. *Jurnal Agribest*. 2018;2(1):14–23.
9. Sugiyono. *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta; 2013.
10. Hasanah H. Teknik-Teknik Observasi (Sebuah Alternatif Metode Pengumpulan Data Kualitatif Ilmu-Ilmu Sosial). *At-Taqaddum*. 2017;8(1):21.
11. Siyoto S, Sodik MA. *Dasar Metodologi Penelitian*. Literasi Media Publishing; 2015.
12. Indarto, Faisol A. *Konsep Dasar Analisis Spasial*. Yogyakarta: CV. ANDI OFFSET; 2012.
13. Langoday BS. *Kesesuaian Lahan Perkebunan Kopi di Kabupaten Bogor dan Sebaran Spasial Kedai Kopi di Kota Bogor*. Thesis. 2020.
14. Riadhi AR, Aidid MK, Ahmar AS. Analisis Penyebaran Hunian dengan Menggunakan Metode Nearest Neighbor Analysis. *VARIANSI: Journal of Statistics and Its Application on Teaching and Research*. 2020;2(1):46.
15. Putri PS, Dasrizal, Ulni AZP. Distribusi dan Pola Spasial Usaha Coffee Shop di Kecamatan Bangko Provinsi Jambi. *Jurnal Pendidikan Geografi Undiksha*. 2021;9(3):217–223.
16. Diana ED. *Jaringan Komunikasi Informasi Harga dan Pemasaran Kopi Wulan Kecamatan Maesan Kabupaten Bondowoso*. Jember: Univeritas Jember; 2021.
17. Ningsih HN. *Jaringan Komunikasi Perkembangan Harga Kopi pada Kelompok Tani Sidomulyo I Kecamatan Silo Kabupaten Jember*. Jember: UNEJ; 2010.