

K-Means Clustering Segmentation Model Using SPSS: A Case Study at Komuka Cafe Customers

K-Means Clustering Segmentation Model Using SPSS: Case Study Of Komuka Cafe Customers

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Cafe Business,
Marketing Mix,
Cluster Analysis,
SPSS

Abstract. Post pandemic has led to a significant and rapid increase in the growth of the cafe business. Every year, many new cafes emerge with different and unique concepts, intensifying competition in the cafe industry and necessitating continuous innovation for cafe entrepreneurs. Previously, Komuka has always highly recommended Google Reviews to prospective customers. This has caused Komuka's market share to stagnate and not experience meaningful growth. This research aims to enhance the marketing strategy of Komuka Cafe by applying K-Means cluster analysis for customer segmentation. Through data collection from Komuka's Cafe customers and klaster analysis using SPSS, the study identifies three main customer klusters: Single Employee, Married Employee, and Single Student. The detailed marketing strategy focuses on the Single Employee group because this cluster has the lowest assessment of Komuka Cafe. In this research, the author uses the Marketing Mix model 6Ps as a framework analysis to make strategy suggestions that need to be maintained and developed including Product, Place, Promotion, People, Process, and Physical Evidence. This research provides the preferences and behavior of Single Employee groups, Komuka Cafe can improve its 6Ps marketing strategy to increase competitive advantage, customer satisfaction and loyalty, as well as increase the revenue.

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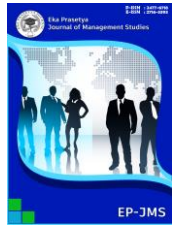
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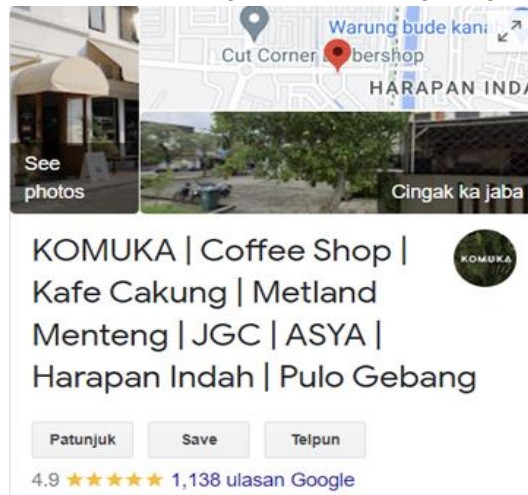
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1. INTRODUCTION

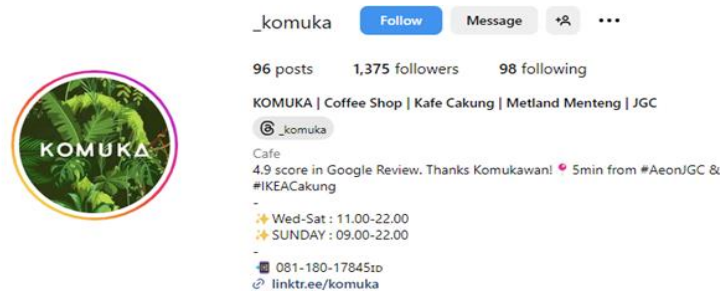
Nowadays, growth business cafe experience enhancement enough fast. Each year, numerous new cafes emerge, offering distinct and unique concepts that intensify competition within the cafe business. This heightened competition necessitates constant innovation by cafe owners. Cafe concepts are often closely linked to lifestyle trends, as cafes have evolved into popular hangout spots that cater not only to coffee consumption but also to activities such as work, social gatherings, parties, and even informal business meetings. The key to success lies in a cafe's ability to continuously introduce innovative food and beverage offerings, creating a unique and captivating experience that captures the attention of consumers.

Komuka Cafe is one of the cafes with the best location in East Jakarta, strategically located in Housing Metland Menteng Block F4 No.10, Ujung Menteng, Cakung, East Jakarta. Komuka Cafe gets the award as cafe best, as is reflected from Google reviews that get high ratings, namely 4.9.



Picture 1. Komuka Cafe

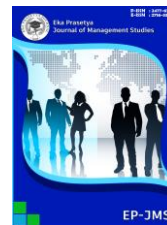
Komuka provides a pleasant atmosphere and a varied menu. Not only satisfied with the flavors presented but also with the comfortable facilities available. Cafe interiors are designed with attention to detail to create a fun and friendly atmosphere. Clean and well-maintained facilities with good hygiene become a priority, creating an inviting and friendly environment for customers.





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Picture 2. Instagram Komuka Cafe

Digital marketing carried out by Cafe Komuka to reach the target can cover the utilization of Google Reviews as one of the main strategies. The benefits of digital marketing lie in his ability to support management processes to identify, anticipate, and satisfy needs of customers in a way that is profitable and emphasizes importance in relation to operations other businesses use to reach profitability while still centering attention on the needs of customers (Dave Chaffey, 2015).

Marketing is a social process in which individuals and groups aim to fulfill their needs and desires by creating, offering, and exchanging valuable products and services with others (Kotler, 2009). Komuka Cafe can employ strategies such as placing advertisements that appear in Google search results when people search for keywords related to "best cafe in East Jakarta," as well as actively engaging with customers on social media platforms, where they can interact with customers and share interesting content about Komuka Cafe. According to a study by (Gujral et al., 2016) published in a journal, digital marketing is a highly effective platform for conveying and communicating the desired message to the target audience.

Up to this point, Komuka has primarily depended on Google Reviews to gauge customer trends, resulting in a relatively stagnant profit with limited noticeable improvement. This situation arises because Komuka Cafe has yet to identify the specific areas of customer feedback that require attention in order to enhance profit.

Therefore, this research aims to discern the specific areas of improvement required by Komuka Cafe based on customer feedback, which may encompass aspects such as the menu, service quality, and promotional activities. This research used the K-Means Clustering method to identify the customer segments with the highest potential for Komuka Cafe. By gaining insights into these matters, Komuka Cafe can formulate a strategic plan to enhance its omzet and further develop its value proposition.

By comprehending customer preferences and addressing their concerns, as well as identifying various customer personas visiting the cafe, this research facilitates the development of a more effective marketing strategy encompassing the "6P" approach. This approach involves determining what aspects of the marketing strategy should be maintained and what actions need to be initiated to increase customer traffic and transactions at the cafe.

In the realm of marketing, there is a well-known tool called the "4P" framework, which includes Product, Price, Place, and Promotion. Furthermore, in the context of service marketing, several additional elements are considered, collectively referred to as the "8P" framework. These additional elements include People, Process, Physical Evidence, and Partnership (A. G. Kotler, 2016). Therefore, the comprehensive mix of marketing elements comprises Product, Price, Place, Promotion, People, Process, Physical Evidence, and Partnership.

- **Product**

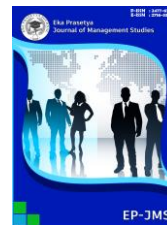
According to (Armstrong & Kotler, 2001) product is all the various offerings that are made available to the market with the primary objective of capturing the attention of consumers, persuading them to acquire, use, or consume these offerings. These products are designed to fulfill the desires or needs of consumers.

- **Place**



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According to (Armstrong & Kotler, 2001) place covers activity producing company product available for consumer target. This involves all the actions and strategies employed by the company to ensure that its products reach the intended customers.

- Promotion

According to (Ryan Nugroho & Edwin Japariato, 2013) promotion is effort by a company for influence candidate buyer through the use of all elements, or mix marketing. In essence promotion is something form communication marketing, which means communication marketing is an activity of purposeful marketing to spread information, influence, and remind the target market about a company and its products to be ready to accept, buy, and be loyal to the products offered by the company concerned. Advertising, promotion sales, publicity and relationships in society, and marketing direct are several promotional media that can be used for this business. What media will be used, depending on the type and shape product .

- People

"People" refers to the individuals who are involved in providing or presenting services to consumers during the process of purchasing goods (Nirwana, 2004). In this research, the active role of cafe employees in providing services to consumers during their purchases underscores the importance of the "people" factor. These employees have the ability to actively and positively influence purchasing decisions.

- Process

According to (Hurriyati, 2010) work activity is a comprehensive process that encompasses various elements such as tasks, procedures, schedules, mechanisms, activities, and routines, all of which are employed to enable customers to obtain goods or services. To enhance the quality of service, the management of these processes must carefully consider different tasks. This is particularly crucial for service businesses due to the nature of services, which often cannot be stored like physical inventory, making this aspect of the process highly significant.

- Physical Evidence

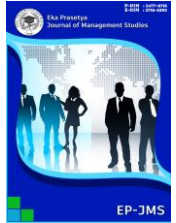
Physical Evidence according to (Ratnasari, 2011) is one of the components of the marketing mix that is not static and can change. It is closely related to the physical aspects and appearance that contribute to the customer's experience when they use or interact with a product or service. As (Lupiyoadi, 2009) states, physical evidence refers to the environment in which services are provided and the location where the company and customers interact. It encompasses all tangible components that aid in the concrete implementation or communication of the service.

In this research, the author employs K-Means Clustering segmentation analysis with the SPSS application. The study utilizes a questionnaire that includes information about the respondents' backgrounds. The questionnaire also contains questions related to various variables that help in profiling the personas of the respondents. These variables encompass aspects such as gender, age, marital status, employment status, education level, monthly income, reasons for visiting cafes, sources of reference, proximity of residence to the cafe, and frequency of visits. Viewed from the data, grouping can be achieved by identifying individuals or data points with similar characteristics. One of the clustering methods, the K-Means algorithm, functions by dividing the data into multiple clusters to analyze the existing similarities and differences among the data points (M. W. Talakua, 2017).



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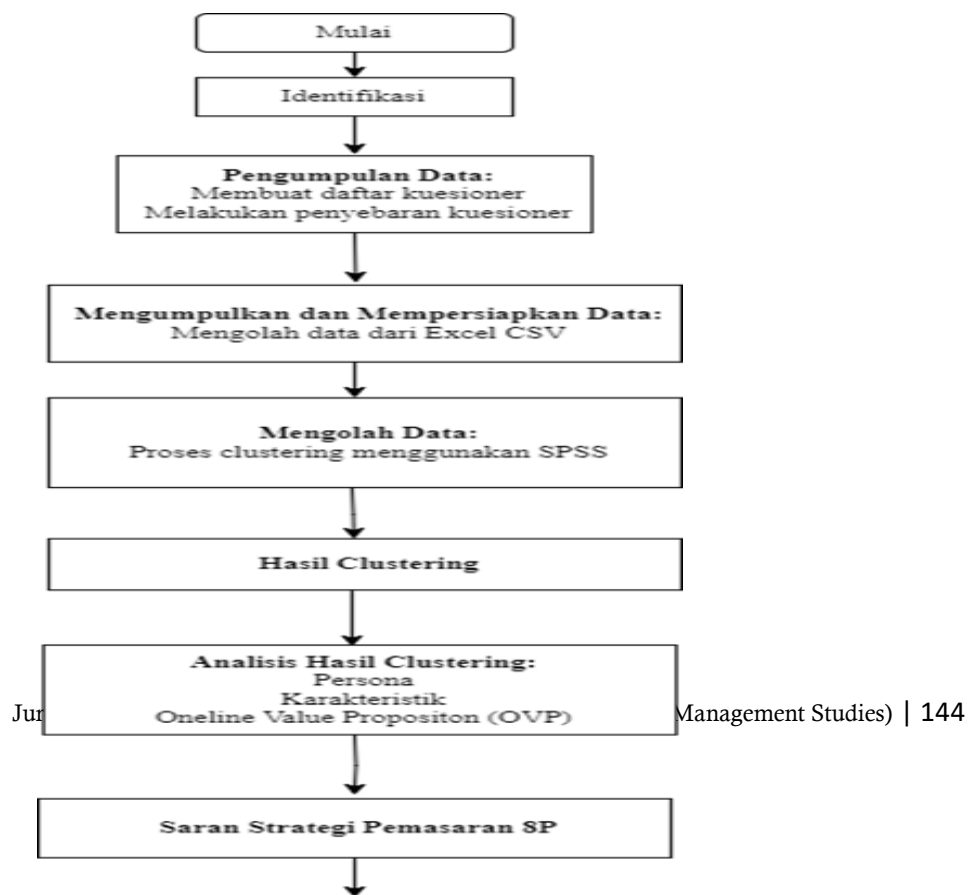


K-Means, initially introduced in 1979 by MacQueen JB, is an algorithm employed to separate data into distinct groups. The utilization of the K-means algorithm in the clustering process depends on the specific data being processed and the desired conclusions to be obtained at the end of the process (U. Ma'rifatin, 2020). There are specific rules to follow when using the K-means algorithm, which include:

1. Determining the number of clusters you intend to create.
2. Ensuring that the attributes used for clustering are of a numeric type.

This research analyzes segmentation with discover the persona, characteristics, and Online Value Proposition (OVP) of clusters formed. For furthermore identify needs, wants, and preferences customers, develop proposition mark on line for segment existing targets, and develop segmentation strategy tactics based on the "6P" marketing approach.

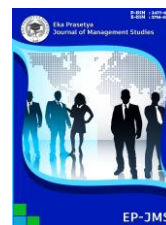
2. RESEARCH METHOD





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Following is an explanation of the research process that is researcher do data collection phase involves the preparation of a questionnaire designed to capture information related to segmentation, personas, and characteristics. This questionnaire includes variables such as gender, age, marital status, employment status, education level, monthly income, reasons for visiting Komuka Cafe, sources of reference, distance of residence from the cafe, and frequency of visits. The primary focus of the study is the customers of Komuka Cafe.

The researcher gathered data by distributing questionnaires to customers of Cafe Komuka. Subsequently, the collected questionnaire data was compiled and organized in Microsoft Excel. After the data preparation phase, the next step involved processing the data using SPSS, with the application of the K-Means analysis method. This method was employed to generate a certain number of clusters, with the goal of grouping the data into homogeneous segments. The aim was to identify potential patterns or similarities among the groups. The final outcome of the K-Means analysis is the formation of clusters, each containing members who share certain similarities within their respective groups.

Following the clustering process using the K-Means method with SPSS, the next step involves analyzing the clustering results to gain a comprehensive understanding of each customer segment. This analysis delves into the personas, characteristics, and Online Value Proposition (OVP) associated with each segment. Additionally, the research proceeds to implement a 6P marketing strategy, which includes considerations for Product, Place, Promotion, People, Process, and Physical Evidence. This strategy is essential for maintaining and enhancing the identified segments.

Finally, the research concludes with a summary of the findings and the strategies derived from the data analysis and clustering process. This summary provides a comprehensive overview of the insights gained and the actionable recommendations for effectively targeting and serving each customer segment.

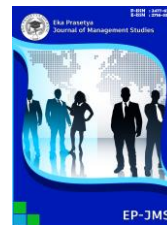
4. RESULT AND DISCUSSION

Research methods such as interviews, surveys, and other techniques were employed to deepen the researcher's understanding of the ongoing study, with the intention of presenting the



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findings to others. In this section, we will discuss the steps such as data preparation, data collection, data processing, interpretation of clustering results, clustering analysis, and marketing strategy (Marketing Mix).

Data Preparation

In the data preparation process, it involves creating a questionnaire and determining the research sample. The researcher's goal in creating the questionnaire is to obtain initial customer data. The questionnaire includes background information about respondents, questions covering variables that display personas, respondent characteristics such as gender, age, marital status, occupation, education, monthly income, reasons for visiting the cafe, references, distance from home to the cafe, and visit frequency.

Researchers also asked respondents about their satisfaction with the taste of food and drinks provided by Komuka Cafe, such as coffee menu, milk coffee, non-coffee drinks, snacks, and main menu items. Questions about satisfaction with comfort while inside the cafe, satisfaction with the cafe's interior design, and satisfaction with the cleanliness of the cafe were also posed to respondents.

As a conclusion to the questionnaire presented to respondents, Researchers also inquired about overall satisfaction levels, including service, facilities, Wifi, and the overall interior design of Komuka Cafe. The research sample or object used by Researchers in this study is customers of Komuka Cafe in the Cakung area, Bekasi, and its surroundings.

Data Collection

To obtain data from the specified sample, researchers distributed a questionnaire through a Google form to selected respondents among the customers at Komuka Cafe. The result from 30 respondents was entered in Microsoft Excel. As an input for the SPSS program, the data is converted from Microsoft Excel into CSV format.

Data Processing

In processing the data for this research, researchers utilized Microsoft Excel for inputting the initial data and the SPSS program for K-Means Clustering analysis to determine the final results, including the number of formed groups and their characteristics.

The steps are as follows:

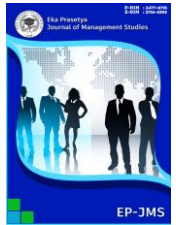
1. Inputting the initial data into Microsoft Excel; the algorithm (0;1) in the column under attributes describes the background, persona, and characteristics of the respondents, and Likert scale (1 to 5) for attributes related to respondent satisfaction with service quality, cleanliness, interior design, taste of food and drinks, facilities, and overall satisfaction.

Here are the results:



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Initial	Jenis Kelamin	Jenis Kelamin	Usia 15 sampai 20	Usia 21 sampai 30	Usia 31 sampai 40	Usia 41 sampai 50	Usia 51 sampai 60	Usia >60 Tahun	Status Lajang	Status Menikah	Pekerjaan Pelajar/Mahasiswa	Pekerjaan Pegawai Swasta	Pendidikan Sekolah Menengah	Pendidikan Diploma	Pendidikan Sarjana	Pendidikan Magister	Penghasilan <1jt	Penghasilan 1jt sampai 3jt	Penghasilan 4jt sampai 6jt	Penghasilan 7jt sampai 9jt	Penghasilan >10jt
Dita	1	0	0	1	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0
Raden	1	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0
Anggik	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	1	0	0	1	0	0
Eko	1	0	0	1	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	1
ikhwan	1	0	1	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0
Ardi	1	0	1	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0
Rend	1	0	1	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0
Mali	1	0	1	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0
Moha	1	0	0	1	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1	0	0
Lisd	0	1	0	1	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1	0	0
Debi	0	1	0	1	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	1	0
Nadi	0	1	0	1	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	1	0
Fitr	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	1
Ersa	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	1	0
Angg	1	0	0	1	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	1
Yuli	0	1	0	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	1	0
Rofi	0	1	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0	1
Anda	1	0	0	0	1	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	1
Chri	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1	0	0	0	1	0	0
Dede	1	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	1
Sri	0	1	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	1
mean	0	1	0	0	1	0	0	0	0	1	0	1	1	0	0	0	0	1	0	0	1

Picture 3: Survey Results in Excel File

- The next step is to save the data in "Microsoft Excel Comma Separated Values File" (CSV) format. This "csv" format status as input data for the SPSS program. Here are the results:

Initial	Jenis Kelamin	Jenis Kelamin	Usia 15to20	Usia 21to30	Usia 31to40	Usia 41to50	Usia 51to60	Usia >60Tahun	Lajang	Menikah	Pelajar	PegawaiSw	SekolahM	Diploma	Sarjana	Magister	<1jt	1jtsampai4jtsam
Dita	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	1	0	0
Raden	1	0	1	0	0	0	0	0	0	1	0	1	0	0	1	0	0	1
Anggik	1	0	0	1	0	0	0	0	0	1	0	1	0	0	1	0	0	1
Eko	1	0	0	1	0	0	0	0	0	1	0	0	1	0	0	1	0	0
ikhwan	1	0	1	0	0	0	0	0	0	1	0	1	0	1	0	0	0	1
Ardi	1	0	1	0	0	0	0	0	0	1	0	1	0	1	0	0	0	1
Rend	1	0	1	0	0	0	0	0	0	1	0	1	0	1	0	0	0	1
Mali	1	0	1	0	0	0	0	0	0	1	0	1	0	1	0	0	0	1
Moha	1	0	0	1	0	0	0	0	0	1	0	0	1	1	0	0	0	0
Lisd	0	1	0	1	0	0	0	0	0	1	0	0	1	1	0	0	0	0
Debi	0	1	0	1	0	0	0	0	0	1	0	0	1	0	0	1	0	0
Nadi	0	1	0	1	0	0	0	0	0	1	0	0	1	0	1	0	0	0
Fitr	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1	0	0	0
Ersa	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1	0	0	0
Angg	1	0	0	1	0	0	0	0	0	1	0	0	1	0	0	1	0	0
Yuli	0	1	0	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0
Rofi	0	1	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0
Anda	1	0	0	0	1	0	0	0	0	1	0	1	0	0	1	0	0	0
Chri	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1	0	0	0

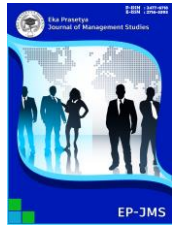
Picture 4: Survey Results in CSV Format

- The next step is to open the SPSS program. In this program, two views will appear: "data view" and the variable view as follows:



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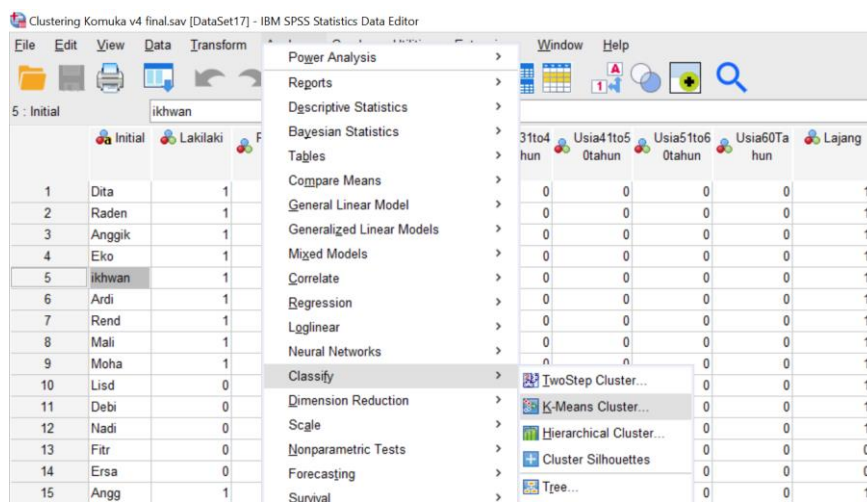
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	Initial	Lakilaki	Perempuan	usia15to20 tahun	Usia21to30 tahun	Usia31to40 tahun	Usia41to50 tahun	Usia51to60 tahun	Usia60Tahun	Lajang	Menikah	Pelajar	PegawaiSewa	SekolahMenengah	Dip
1	Dita	1	0	0	1	0	0	0	0	1	0	1	0	0	
2	Raden	1	0	1	0	0	0	0	0	1	0	1	0	1	
3	Anggik	1	0	0	1	0	0	0	0	1	0	1	0	0	
4	Eko	1	0	0	1	0	0	0	0	1	0	0	1	0	
5	ikhwan	1	0	1	0	0	0	0	0	1	0	1	0	1	
6	Ardi	1	0	1	0	0	0	0	0	1	0	1	0	1	
7	Rend	1	0	1	0	0	0	0	0	1	0	1	0	1	
8	Mali	1	0	1	0	0	0	0	0	1	0	1	0	1	
9	Moha	1	0	0	1	0	0	0	0	1	0	0	1	1	
10	Lisd	0	1	0	1	0	0	0	0	1	0	0	1	1	
11	Debi	0	1	0	1	0	0	0	0	1	0	0	1	0	
12	Nadi	0	1	0	1	0	0	0	0	1	0	0	1	0	
13	Fitri	0	1	0	1	0	0	0	0	0	1	0	1	0	
14	Ersa	0	1	0	1	0	0	0	0	0	1	0	1	0	
15	Angg	1	0	0	1	0	0	0	0	1	0	0	1	0	
16	Yuli	0	1	0	0	0	0	1	0	0	1	0	1	0	

Picture 5: Loading CSV Data in SPSS Program

- Next, perform analysis using the SPSS program for K-Means Clustering. Go to the "Analyze" item, proceed to "Classify," and select the "K-Means Cluster" program. Here is how it looks:



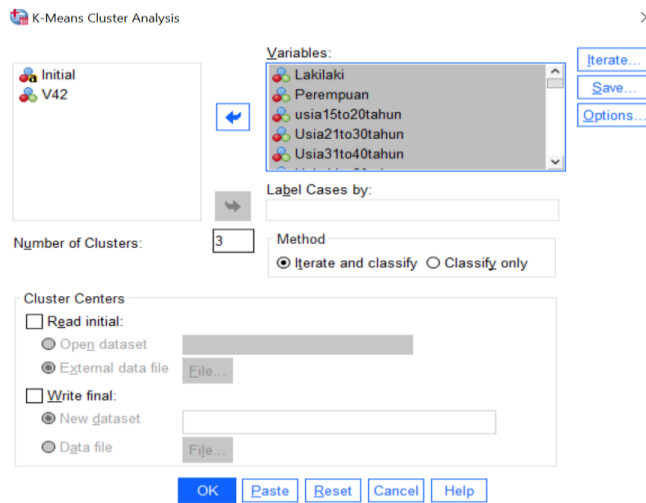
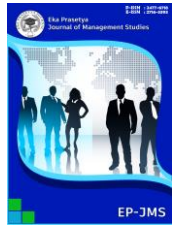
Picture 6: K-Means Cluster Process for Survey Results in SPSS

- Then, input all numerical attributes into the "variable" column and specify the "number of groups" to be created; enter the number "4" for the desired number of groups to be analyzed. Here is how it looks:



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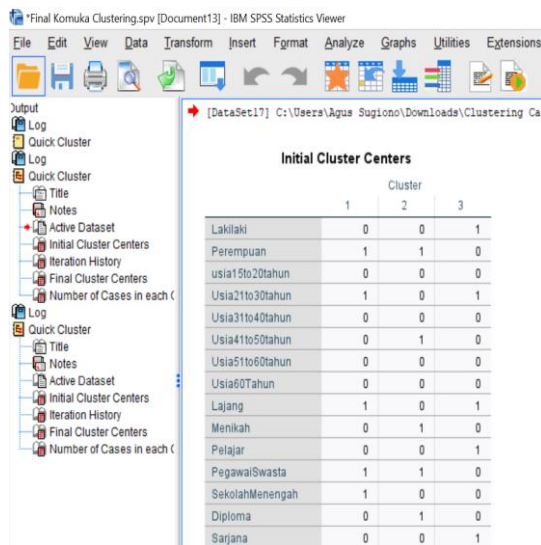


Picture 7: Setting Variables and Clusters in K-Means Cluster SPSS

Clustering Results

The results of the clustering involve the following steps:

1. After all input data has been entered into the SPSS program, the output view will appear as follows:



Iteration History ^a			
Iteration	Change in Cluster Centers		
	1	2	3
1	1.581	1.857	2.419
2	.000	.115	.322
3	.000	.000	.000

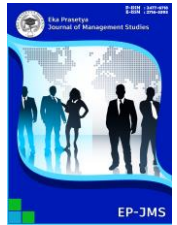
a. Convergence achieved due to no or small change in cluster centers. The maximum absolute coordinate

Number of Cases in each Cluster	
Cluster	
1	2.000
2	19.000
3	8.000
Valid	29.000



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Picture 8: Output View of K-Means Clustering

- In this research, from the SPSS program results, we attempted to detail the figures for each group using the "Microsoft Excel" program, resulting in the following:

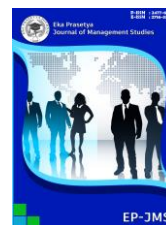
	Final Cluster Centers			
		Pegawai Lajang	Cluster Pegawai Menikah	Pelajar Lajang
Usia	Usia51to60tahun	-	0.05	-
Usia	Usia60Tahun	-	0.05	-
Status	Lajang	1.00	0.26	1.00
Status	Menikah	-	0.74	-
Pekerjaan	Pelajar	-	0.05	0.88
Pekerjaan	PegawaiSwasta	1.00	0.95	0.13
Pendidikan	SekolahMenengah	1.00	0.05	0.63
Pendidikan	Diploma	-	0.16	-
Pendidikan	Sarjana	-	0.74	0.38
Pendidikan	Magister	-	0.05	-
Penghasilan Bulanan	@1jt	-	-	0.63
Penghasilan Bulanan	@1jtsampai3jt	-	0.05	0.25
Penghasilan Bulanan	@4jtsampai6jt	1.00	0.11	-
Penghasilan Bulanan	@7jtsampai9jt	-	0.42	0.13
Penghasilan Bulanan	@10jt	-	0.42	-
Pertimbangan ke Komuka	Hangout	1.00	0.11	0.88
Pertimbangan ke Komuka	Pertemuan	-	0.89	-
Pertimbangan ke Komuka	WFC	-	-	0.13
Mengetahui Komuka	ReferensiOrangDekat	0.50	1.00	0.88
Mengetahui Komuka	GoogleReview	-	-	0.13
Mengetahui Komuka	MediaSosial	0.50	-	-

	Final Cluster Centers			
		Pegawai Lajang	Cluster Pegawai Menikah	Pelajar Lajang
Jarak tempat tinggal	@1km	-	-	0.13
Jarak tempat tinggal	@2kmsampai3km	0.50	-	0.25
Jarak tempat tinggal	@4kmsampai5km	0.50	-	0.38
Jarak tempat tinggal	@5km	-	1.00	0.25
Frekuensi	pertamakali	-	0.21	-
Frekuensi	@1kalisampai2kali/bulan	1.00	0.05	0.25
Frekuensi	@2kalisampai4kali/bulan	-	-	0.25
Frekuensi	TidakMenentu	-	0.74	0.50
Seberapa enak?	Makananminuman	4.00	4.47	4.38
Seberapa puas Anda dengan kenyamanan suasana Komuka Cafe?	Kenyamanan	4.50	4.74	4.75
Seberapa menarik?	Designinterior	4.50	4.68	4.38
Bagaimana penilaian?	Kebersihan	4.50	4.79	4.50
Seberapa puas Anda dengan pelayanan pelanggan Komuka Cafe?	Pelayanan	4.50	4.84	4.88



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Picture 9: SPSS Clustering Output View in Excel

Cluster Analysis Results

From the previous clustering results, researchers analyzed and identified different Cluster types. The analysis included examining personas, characteristics, segmentation, and the Online Value Proposition (OVP) of the formed Clusters. The following is an explanation of each Cluster:

Cluster 1: Single (Not yet married) - Employee Customers

- Gender distribution in this Cluster is balanced between male (0.50) and female (0.50).
- The average age of this Cluster is 21-30 years (1.00).
- Most customers in this Cluster are single/ unmarried (1.00).
- The education level in this Cluster is mostly high school (1.00).
- Monthly income ranges between IDR 4 million to 6 million (1.00).
- Customers in this Cluster visit Komuka Cafe 1-2 times a month (1.00).
- This Cluster indicates that on average, single employee visitors learn about Komuka Cafe from close references (0.50) and social media (0.50).
- The distance from home is 2-3 km from Komuka Cafe.
- The main purpose of visitors in this Cluster is to Hang Out or socialize.
- This Cluster gives the lowest scores for the taste of food and drinks (4.00), satisfaction with comfort and service (4.50). This is an important concern for Komuka Cafe regarding the taste of food, drinks, comfort, and service in this Cluster.
- Customers in this Cluster are generally satisfied, giving a rating of 4.5 out of 5 for comfort level, interior design, cleanliness, and overall satisfaction.

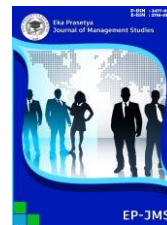
Cluster 2: Married - Employee Customers

- Gender in this Cluster is mostly dominated by males (0.74).
- Age distribution includes 15-20 (0.42), followed by 21-30 (0.32), and 41-50 (0.16).
- Most customers in this Cluster are married (0.74).
- Education level in this Cluster is mostly bachelor's degrees (0.74).
- Monthly income in this Cluster ranges from IDR 7 million to 9 million (0.42) and 10 million and above (0.42).
- Customers in this Cluster visit Komuka Cafe more irregularly (0.74), while others are first-time visitors (0.21), and some visit 1-2 times (0.05).
- This Cluster indicates that all employee customers learn about Komuka Cafe from close references (1.00).
- The distance from home is >5 km from Komuka Cafe.
- The main purpose of employee customers in this Cluster is for meetings or work-related gatherings (0.89).



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- Customers in this Cluster are highly satisfied, giving ratings of 4.68 to 4.84 out of 5 for comfort level, interior design, cleanliness, and overall satisfaction. The lowest score is for the taste of food and drinks, rated 4.47 out of 5.

Cluster 3: Single (Not yet married)- Student Customers

- Gender in this Cluster is mostly dominated by males (1.00).
- Age distribution varies widely, ranging from 15 to 20 years (0.63) and 21-30 years (0.38).
- The majority of customers in this Cluster are students (0.88).
- Education level in this Cluster is mostly high school (0.63) and bachelor's degree (0.38).
- Monthly income in this Cluster is around 1 million (0.63) and 1-3 million (0.25).
- Customers in this Cluster visit Komuka Cafe irregularly (0.50) during the month.
- This Cluster indicates that all student customers learn about Komuka Cafe from close references (0.88) and Google Reviews (0.13).
- The main purpose of customers in this Cluster around Komuka Cafe is to Hang Out or socialize (0.88).
- Customers in this Cluster are highly satisfied, giving ratings of 4.38 to 4.88 out of 5 for comfort level, cleanliness, and overall satisfaction.
- The lowest scores are for the taste of food & drinks and interior design, rated 4.38 out of 5.

6P Marketing Mix Analysis:

In this analysis, researchers will detail each element in the 6Ps marketing mix strategy, discussing strategies implemented previously, strategies that need to be maintained, and strategies that need to be developed, starting based on the results of the previous analysis. The researchers focuses the analysis on the Single Employees Cluster (cluster 1) which has been identified as the target customer who has the lowest assessment among the 3 clusters regarding the taste of food, drinks, and satisfaction with the comfort and service of Komuka Cafe. With a deep understanding of customer preferences, needs, and behavior in this Cluster, the researchers will outline a strategic overview for each element in the 6Ps marketing mix.

1. Product

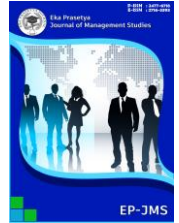
The strategy needs to be maintained:

- Serves several types of heavy food and snacks, as well as coffee and non-coffee drinks.
- Provides several types of traditional food and drinks (spiced drinks, batagor, lunpia) and modern/international food (spaghetti, French fries).
- Food and drinks come from quality ingredients.
- Diversify the menu
- An attractive and appetizing menu presentation



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The Strategy needs to be developed:

- Improves the taste of food and drinks.
- Selection of food raw materials to improve the taste.

2. Place

The strategy needs to be maintained:

- Complete information about promotions, discounts, atmosphere, menus on the Komuka Cafe Instagram account.
- Ease of getting information from Google Reviews regarding reviews of location, atmosphere, food, and drink menus.

The Strategy needs to be developed:

- Consider using other social media such as TikTok.

3. Promotion

The strategy needs to be maintained:

- Use *digital marketing* (Google Review and Instagram).

The Strategy needs to be developed:

- Maximize Google Ads for post promotion
- Carry out active interactions with netizens on Komuka social media, for example by responding to mentions from customers, liking and commenting on posts or netizen responses about Komuka.
- Consider creating a TikTok account to expand your promotional market reach.
- Develop creative promotional campaigns, for example by collaborating with influencer posts or digital platforms for young people.
- Consider special events to increase exposure.
- Consider giving rewards or special prices, for example, to customer workers who make the most visits.
- Create a consumer royalty program (member card or points).

4. People

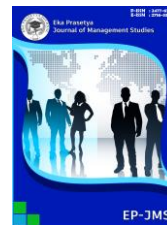
The strategy needs to be maintained:

- The owner has been directly involved since the cafe opened until now.
- The owner comes to the cafe almost every day to ensure everything runs according to the cafe's vision and values.
- Recruit young male employees.
- Some employees live in the cafe, and some are not far from the cafe location for efficiency.



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- Pay attention to employee welfare, health, and comfort through a policy of working 5 times a week, with 12 working hours.

- Good and friendly service.

The Strategy needs to be developed:

- Implement ongoing training programs to improve employee interpersonal skills.
- Encourage more proactive customer service initiatives.

5. Process

The strategy needs to be maintained:

- Fast and efficient service
- Ask customers for a menu list a few days before the event, for a meeting with a large number of customers.

6. Physical Evidence:

The strategy needs to be maintained:

- Google Review.
- Social Media (Instagram)

The strategy needs to be maintained:

- Consider using other social media such as TikTok.

5. CONCLUSION

This research succeeded in applying K-Means cluster analysis to determine the Komuka Cafe customer segmentation model. The results of the analysis identified three groups of Komuka customers: single-employee customers, married employees, and single students. The focus of explanation of the 6Ps Marketing Mix is focused on the single employee group because this cluster has the lowest assessment of Komuka Cafe.

In this research, the author uses the Marketing Mix model as an analysis framework to make strategy suggestions that need to be maintained and developed, including product, place, promotion, people, process, and physical evidence. By understanding the preferences and behavior of single-employee customer groups, Komuka Cafe can improve its 6Ps marketing strategy to increase competitive advantage, customer satisfaction, and loyalty, as well as increase its turnover.

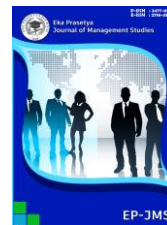
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