PERCEPTUAL MAPPING OF BRANDED COFFEE CHAINS IN MANADO USING MULTIDIMENSIONAL SCALING ANALYSIS

PEMETAAN PERSEPTUAL RANTAI KOPI BERMEREK DI MANADO MENGGUNAKAN ANALISIS PENSKALAAN MULTIDIMENSI

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Abstract: The coffee chain business has penetrated the country since many years ago until unconsciously it has become the lifestyle of many people, especially students and business people of various ages. Not only that, branded coffee chains that entered Indonesia have become a symbol of pride and compete with local coffee businesses. To become a branded coffee chain that dominates the market, of course, it requires customers who can continue to choose the coffee chain. Companies must know find out how customers perceive their company in various ways as a benchmark for strategies that they will continue to use in the future. The objectives of this study are To Know the Perceptual Mapping of Branded Coffee Chains in Manado (Starbucks and the Coffee Bean). The analytical method used is Multi-dimensional Scaling Analysis with 7p's as indicators. Based on the results of the analysis and discussion using Perceptual Mapping and Multi-dimensional Scaling (MDS) test, it is concluded that the results of hypothesis testing found that Starbucks becomes the most preferred brand of Coffee Chains compared to the Coffee Bean in Manado.

Keywords: Coffee chains, consumers preference, perceptual mapping

Abstrak: Bisnis rantai kopi telah merambah tanah air sejak bertahun-tahun yang lalu hingga tanpa disadari telah menjadi gaya hidup banyak orang, terutama mahasiswa dan pebisnis dari berbagai usia. Tak hanya itu, rantai kopi bermerek yang masuk ke Indonesia menjadi simbol kebanggaan dan bersaing dengan bisnis kopi lokal. Untuk menjadi rantai kopi bermerek yang mendominasi pasar, tentunya dibutuhkan pelanggan yang bisa terus memilih rantai kopi. Perusahaan harus tahu bagaimana pelanggan memandang perusahaan mereka dengan berbagai cara sebagai tolok ukur strategi yang akan terus mereka gunakan di masa depan. Tujuan dari penelitian ini adalah Untuk Mengetahui Pemetaan Persepsi Rantai Kopi Bermerek di Manado (Starbucks dan Biji Kopi). Metode analisis yang digunakan adalah Analisis Penskalaan Multi-dimensi dengan 7p sebagai indikator. Berdasarkan hasil analisis dan diskusi menggunakan tes Perceptual Mapping dan Multi-dimensional Scaling (MDS), disimpulkan bahwa hasil pengujian hipotesis menemukan bahwa Starbucks menjadi merek Rantai Kopi yang paling disukai dibandingkan dengan Biji Kopi di Manado.

Keyword: Rantai-kedai kopi, pilihan konsumen, pemetaan persepsi

INTRODUCTION

Research Background

Along with the increasing mobility and modern lifestyle especially in the big cities in Indonesia, the growth of coffee shops are also increasing fast enough. The Coffee shop can be a meeting place with business partners, reunion and even youth discussion place. In fact, coffee shop became the identity of existence and

symbol of prestige for the business community. It is also supported by the study of Kasali (2010:27) the coffee is no longer just for relieving drowsiness, but as a part of lifestyle, where the convenience of the shop is a gathering place that is very desirable for people. This lifestyle is in accordance with the character of Indonesian people who like to gather and socialize. Coffee shop began to become lively in Indonesia and gaining more coffee lovers. Its appearance is judged only following the trending lifestyle, because not all of the consumers who come to the coffee shop are coffee enthusiasts. The phenomenon of the coffee shop is also happening in Manado. Currently, coffee is no longer associated as a male-owned drink only.

There are some major differences in the customer profiles between local coffee shops and international brands. Customers in local coffee shops tend to be those who really enjoy coffee and want to try unique coffee experiences. They enjoy the experience of coming to the local shops, chatting with the barista over a cup of coffee and learning more about the story behind the coffee beans. Other major customers for local coffee shops are young people who have either limited budget or some community or they want to share their experience of visiting unique cafes with novel designs on social media (sharing photos on instagram). On the other hand, majority of customers for international brands are working professionals and people who look for places to hold meetings.

The development of branded coffee shop business in Manado is still increasing, it is characterized by a lot of the appearance of branded coffee shop that is in the city of Manado with 4 brands coffee shop and 10 outlets. Each coffee shop offers a variety of drinks menu especially coffee and facilities that can satisfy consumers. With the increasing number of existing branded coffee chains, the level of competition is higher. To respond to the increasingly competitive coffee shop business competition, the positioning aspect of the product is something that needs to get more serious attention. Given the success of a product in a competition depends also on how a product is positioned in the target market, and how the consumers perceive the product offered as stated by Kotler (2014:293).

Knowing the positioning of a company based on consumer perception is important. The success of positioning depends heavily on the consumer's perception of the company. When the company defines competition, the company must determine how consumers are perceptual to the competition and should think about what attributes are considered important by consumers when consumers evaluate the product (Belch, 2013:65). To be able to know the positioning of the coffee shop in the city of Manado, it is necessary to do research positioning based on customer perception in the city of Manado through a map of its customers perception. Based on the previously described exposure, researchers are interested in conducting research on four top brands of coffee shop in Manado namely, Starbucks Coffee and The coffee bean & tea leaves. Because these three brands are the top branded coffee chains that also has the most outlets in Indonesia.

Research Objective

To know and find out the consumer perception mapping of various Branded Coffee chains in Manado based on attributes of Coffee Chains

THEORITICAL FRAMEWORK

Marketing

According to c, Marketing is a social and managerial process in which individuals and groups get what they need and want by creating, offering and exchanging products of value with other parties. While according to Stanton (2013), Marketing is a total system of business activities designed to plan, determine prices, promote and distribute goods that satisfy desires and services both to current and current consumers potential consumers.

Consumer Behavior

Consumer behavior can arise as a result of environmental factors and self-encouragement. Consumer behavior is the activities of individuals who are directly involved in obtaining and using goods and services, including the decision-making process in the preparation and determination of these activities (Dharmmesta and Handoko, 2014). Engel (2012) explained that actions that directly involved in obtaining, consuming and spent the products and services, including the decision process and following this action precedes. Louden (2012), explained that consumer behavior is the decision process and physical activity individuals involved in evaluating, obtaining, using or providing goods and services acquired. Consumer behaviour entails all activities

associated with the purchase, use and disposal of goods and services, including the consumer's emotional, mental and behavioural responses that precede or follow these activities.

Branding

According to Joseph Arthur Rooney, (1995), branding is an effective marketing strategy tool that has been used with frequent success in the past. Today, branding is experiencing a new popularity resulting from new, innovative applications. Although there have been instances where branding has been less than successful, marketers are beginning to find the appropriate applications in a given setting. Finally, keeping the brand in a strong position is a critical concern. New areas of branding include corporate, industrial, and service branding. These nontraditional branding environments are becoming the future for marketers using branding strategy. To add to the new branding areas, there are new branding techniques. These techniques include brand extensions and ingredient branding. New strategies, techniques, and arenas for branding have to be managed. The organization must support and identify with the strategy. The goals, objectives, and mission of any organization should be in line with the branding strategy employed.

Positioning

According to Kotler (2014), positioning is the product settings to place clear, different, and desirable than the competitor's product in the minds of the targeted consumers. In determining the position, It suggests there are six steps that must be performed, which are: identification of competitors, consumer perceptions research, determining the position of competitors based on attributes, and compare a competitor with one another. In order to do this, there has to be conducted consumers' research which include activities as: analyze the preferences of consumers, figure out the desired position by the consumers towards a product, make decisions and monitor position.

Perception of Customer

According to Remiasa and Lukman (2007), service quality affects the perception of the consumer against a coffee shop. According to the research of Chen and Hu (2009:535), the quality of service significantly affect consumer perception against the coffee shop, in addition to the quality of service, the quality of coffee, variety of other food and beverage menu, comfort and advantages offered by the coffee shop also positively influence against the perception of consumers. The research said that lifestyle give influence on the perception of consumers.

Previous Research

41-1-1 Remiasa & Lukman (2007:70) This research explains the experiment of a modified MDS method, named multidimensional scaling based on symbolic Kronecker-delta dissimilarity (MDSK), where the symbolic process is needed. The analysis reveals a clearer division of the eighteen indices of financial stocks than MDS methods with other alternative dissimilarity measurement. As the aim of the study is to know which method is more effective to find the factors influencing the stock markets, the related financial systems and environments, which are hidden in the time series. Also to distinguishes indices from diverse financial backgrounds by their different irregularities in signals.

Dong Jin Kim, Woo Gon Kim, Jin Soo Han (2007) This research purpose is to investigate the important choice attributes of online travel agencies from which online customers may select and to identifies the current positions of seven online travel agencies in the perception of the customer. The result from the Multidimensional scaling showed how travelers perceived the seven online travel agencies in comparison with each other and revealed that each online agency had some different patterns based on travelers' perception in terms of web features, user friendliness and security and finding low fares.

Michael A. Nestrud, Harry T. Lawless (2008) This research explains the comparison between MFA, gpa the more direct comparisons to sorting or other tasks used for perceptual mapping across product of citrus juice sets of different diversity. Other important issues include the realibility of the results from this method and the abilty of the technique to uncover individual differences and consumer segments.

Conceptual Framework

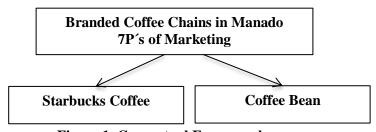


Figure 1. Conceptual Framework

Source: Literature Review

RESEARCH METHOD

Research Approach

This research is comparative research, which is a study by collecting data from several settings or organizations. In this case is the Perceptual Mapping toward mid-end smartphone product attributes of smartphones and research using quantitative research method because it uses a questionnaire as a tool to collect the data from respondent.

Population, Sample, and Sampling Technique

Population refers to the entire group of people, events of things of interest that the researcher wishes to investigate (Sekaran and Bougie, 2016). It refer to the population as an aggregate or totality of all the objects, subjects or members that conform to a set of specifications. The population in this research is all customers of Starbucks and Coffee Bean. Kolter (2014) defines a sample as a segment of the population selected for marketing research to represent the population as a whole. While according to Sugiyono (2012), sample is a part of the number and characteristics owned by the population. Sample also means as a partial or representative of the population under study (Arikunto, 2002). According to Sugiarto (2018), sample is part of the population selected by using certain procedures in order to be able represents the population. The sampling method used in this research is a non-probability sampling method, using purposive sampling techniques. Purposive sampling is a specific type of people who can provide the desired information, either because they are only ones who have it, or conform to some criteria set by researcher.

Type of Data and Data Sources

The data collection in this research is the use of primary data and secondary data. Primary data is a data source that directly provides the data to researcher, which is collected from the questionnaire that has given to respondent. Secondary data is a data source which does not directly provide the data to researcher for example from the others or documents.

Operational Definition of Research Variables

Table 1. Variables Operational Definition and Indicators

Variables	Indicators	
7Ps of Marketing (X ₁)	Product	
	Price	
	Place	
	Promotion	
	People	
	Process	
	Physical Evidence	

Source: Previous Research (2020)

Validity and Reliability Test

This sub-section will be used to determine if the validity level from this current research is valid or not. This testing can be conducted by comparing correlation index Validity test is need for a research to test the

validity of the data gathered. According to Sekaran (2016), a test of validity described how the questionnaire (question or item) are truly able to measure what is measured, based on theories and experts. From several analysis tools test validity that exists, researchers choose to use pearson correlation product moment to test the validity of the data obtained. Reliability test conducted to make sure that there no repetition. According to Sekaran (2016), the reliability of a measure is achieved when it consistently, and without bias, measure the concepts it is supposed to measure. Reliability is established either through test-re-test where the same test administered to the same respondents at different times obtains the same results or parallel form reliability when the same test with different wordings or sequence of questions also results in the same data..

Multidimensional Scaling Analysis

The data analysis technique which used in this research is Multi Dimensional scaling analysis, using SPSS. Multi Dimensional Scaling Analysis is a procedure used to describe perception in a display. Multi Dimensional Scaling (MDS) is a series of techniques that helps the analyst to identify key dimensions underlying respondents' evaluations of objects. It is often used in the marketing to identify key dimensions underlying customer evaluations of products, services, or companies.

Multi Dimensional Scaling can be considered as involving three basic steps. In the first step, a scale of comparative distance between all pairs of stimuli is obtain. This scale is analogous to the scale of stimuli obtained in the traditional paired comparison methods, in this scale, however, instead of locating each stimulus object on a given continuum, the distances between each pair of stimuli are located on a distance continuum. As in paired comparisons, the procedures for obtaining a scale of comparative distances leave the true zero point undetermined. Hence, a comparative distance is not a distance in the usual sense of the term, but is a distance minus an unknown constant. The second step, involve estimating this unknown constant. When the unknown constant is obtained, the comparative distance can be converted into absolute distances. In the third step, the dimensionality of the psychological space necessary to account these absolute distance is determined, and the projections of stimuli on axes of this space are obtained. A set of analytical procedures was developed for each of the three steps given above, including a least-squares solution for obtaining comparative distances by the complete method of triads, two practical methods for estimating the additive constant, and an extension of Young and householder's Euclidean model to include procedures for obtaining the projection of stimuli on axes from fallible absolute distance.

Analysis of Multi Dimensional Scaling (MDS) is a technique that can be used multiple variables to determine the position of other objects based on similarity assessment. MDS is also called the perceptual Map. MDS associated with Map-making to describe the position of an object with other objects based on the similarity of these objects.

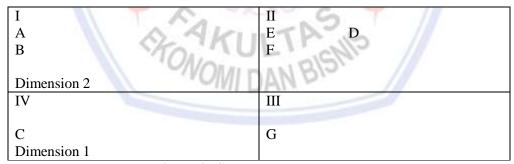


Figure 2. Conceptual Framework

Source: Literature Review

Perceptual Mapping

Perceptual Mapping is a set of technique that attempts to identify the perceived related image of the objects (firms, product, ideas, or other items associated with commonly held perceptions). The objective for any perceptual mapping approach is to use consumer judgments of similarity or preference to represent the object in a multidimensional space (Hair, Black, Babin, & Anderson, 2009).

The three basic elements of perceptual mapping process are defining objects, defining a measure of similarity, and establishing the dimensions of comparison. Object can be any entity that can be evaluated by the respondents, which can be a tangible object (e.g., product, people, etc.) and intangible object (e.g., political philosophies, cultural beliefs, etc.). The second aspect of perceptual mapping is the concept of similarity -a

relative judgment of one object versus another. A key characteristic of similarity is that it can be defined differently by each respondent. All that is required is that the respondent can make a comparison between the objects and form some perception of similarity.

RESULTS AND DISCUSSION

Result

Validity and Reliability Tests

The result of validity test shows that the correlation index is higher than 0.3 and below the significance level of 5%, thus, the data is considered valid. The value of Alpha Cronbach is 0.919 which is the research instrument is reliable.

Perceptual Mapping

Table 2. Perceptual Mapping of Indicator/Attribute Products

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Stimulus Number	Stimulus Name	Dimension 1	Dimension 2	
1	Starbucks	-1.969	0.7796	
2	Coffee Bean	0.9378	2.3894	

(Source: Processed Data, 2020)

Based on the position above, there is a difference in terms of products that tells Starbucks are in quadrant I. That shows Starbucks has no similarity with Coffee Bean in terms of products and its location is different quadrant with Coffee Bean where they are located in quadrant II.

Table 5. Perceptual Mapping of Indicator/Attribute Price

Stimulus Number	Stimulus Name	Dimension 1	Dimension 2
1	Starbucks	-1.670	1.6940
2	Coffee Bean	- 1.064	2.2785

(Source: Processed Data, 2020)

Based on the position above, from the perceptual map Price, it is known that in quadrant I there are Coffee Bean and Starbucks where the 1st dimension is negative and the second dimension is positive. This indicates that the two coffee shops have a close distance, which indicates that Coffee Bean and Starbucks are perceived to be similar.

Table 6. Perceptual Mapping of Indicator/Attribute Place

Stimulus Number	Stimulus Name	Dimension 1	Dimension 2
1	Starbucks	0.7960	1.4190
2	Coffee Bean	1.4501	1.2583

(Source: Processed Data, 2020)

Based on the position above, it is known that in Quadrant II there are Starbucks and Coffee Bean with dimensions 1 and 2 which are both positive, which means that the two coffee shops are perceived to be the same or have similarities.

Table 7. Perceptual Mapping of Indicator/Attribute Promotion

Stimulus Number	Stimulus Name	Dimension 1	Dimension 2
1	Starbucks	0.4669	2.5143
2	Coffee Bean	0.4659	2.4483

(Source: Processed Data, 2020)

Based on the position above on the Perceptual Map, in quadrant II there are Starbucks and Coffee Bean with dimensions 1 and 2 that are positive. Based from the perceptual mapping that has been done, the coordinates touches each other.

Table 8. Perceptual Mapping of Indicator/Attribute People

Stimulus Number	Stimulus Name	Dimension 1	Dimension 2
1	Starbucks	-1.131	1.4341
2	Coffee Bean	-0.160	-2.073

(Source: Processed Data, 2020)

Based on the position above, it can be seen that the Starbucks is located in quadrant I. This indicates that the people' attributes at the Starbucks were perceived as different from Coffee Bean which is located in quadrant III with negative 1 and 2 dimensions, indicating that the Coffee Bean people' attributes are perceived as different from Starbucks.

Table 9. Perceptual Mapping of Indicator/Attribute Process

Stimulus Number	Stimulus Name	Dimension 1	Dimension 2
1	Starbucks	-0.7231	2.6387
2	Coffee Bean	-2.9824	-0.564

(Source: Processed Data, 2020)

Based on the position above, it is known that in Quadrant I there is Starbucks. This indicates that the process attribute of Starbucks is perceived to be different or not have in common with Coffee Bean that located in quadrant III, with negative 1 and 2 dimensions.

Table 10. Perceptual Mapping of Indicator/Attribute Physical Evidence

Stimulus Number	Stimulus Name	Dimension 1	Dimension 2
1 /// 6	Starbucks	1.9684	0.1741
2	Coffee Bean	-3.327	1.1845

(Source: Processed Data, 2020)

Based on the position above, there is a difference in terms of products that tells Starbucks are in quadrant II and Coffee Bean where they are located in quadrant I.

Table 11. Preference Analysis

Attributes	Starbucks	Coffee Bean	Highest Frequency
1	4.10	3.87	Starbucks
2	4.03	3.89	Starbucks
3	3.63	3.80	Coffee Bean
4	3.83	3.89	Coffee Bean
5	3.75	3.84	Coffee Bean
6	3.37	3.29	Starbucks
7	3.69	2.81	Starbucks
Total	26.4	25.39	Starbucks

(Source: Processed Data, 2020)

In the table shows that the calculation of Modus of each attributes of the Coffee Shop can be describe as follow

- 1. The consumer's preference of Starbucks's Coffee Shop of Products ranks higher than Coffee Bean because consumers more Starbucks with more variety of beverages options than Coffee Bean and it is become an attraction to the consumer, so it occupies the rank.
- 2. The consumer's preference of Starbucks's Coffee Shop of Price ranks higher than Coffee Bean because the way Starbucks sets the price up that suits with the products and service that consumer receive.
- 3. The consumer's preference of Coffee Bean's Coffee Shop of Place ranks higher than Starbucks since Coffee Bean wins at making their place more cozy that Starbucks which is usually crowded.
- 4. The consumer's preference of Coffee Bean's Coffee Shop of Promotion ranks higher than Starbucks because Coffee Bean comes up with loyalty card member that makes consumer became more repititive in terms of visiting Coffee Bean

- 5. The consumer's preference of Coffee Bean's Coffee Shop of People ranks higher than Starbucks because the loyalty that Coffee Bean builds throughout their promotions
- 6. The consumer's preference of Starbucks's Coffee Shop of Process ranks higher than Coffee Bean because the service made by Starbucks is better than Coffee Bean
- 7. The consumer's preference of Starbucks's Coffee Shop of Physical Evidence ranks higher than Coffee Bean because Starbucks outlet's and products are looks better than Coffee Bean since they try to reach a wider market.

Discussion

From the whole calculation of perceptual mapping that has been processed by using SPSS 23 application, can be explained on the map position as follows:

- The differences in consumer perceptions based on indicators of Product, Price, Place, Promotion, People,
 Process and Physical Evidence can establish the position of coffee shop's competition so that consumers can state that each shop has a significant difference.
- Based on the results of consumer preferences, the order of consumer preference rankings on coffee shop as follows:
 - 1. Starbucks
 - 2. Coffee Bean

These results implicitly have answered the objectives proposed in this research is to find out the perceptual mapping of Starbucks and Coffee Bean. Therefore, Starbucks is the most favored coffee shop by consumers based on the indicator or attribute Product, Price, Place, Promotion, People, Process and Physical Evidence. These results show that Starbucks became the most preferred brand of coffee shop compared to Coffee Bean. From the results of previous research obtained that the analysis of consumer perceptions of dairy products by using categorizing and perceptual mapping. The calculations show that the difference in consumer perceptions based on certain indicators can establish a competitive position map of the dairy product is very different, so the consumers can state the establish of each brand product has a significant difference. When compared with this study, the previous research has a similarity that states each coffee shop has a distinct advantage and according to customers own criteria. This can be seen from the mapping of consumer perceptions. Based on consumer preference in this research Starbucks is superior compared with coffee bean product based on indicator or attribute.

CONCLUSION AND RECOMMENDATION

Conclusion

- 1. Based on the result researcher get from the processed data, the perceptual mapping of soap product in packaging design based on attributes Product, Price, Place, Promotion, People, Proccess and Physical Evidence using Multidimensional scaling analysis can be describe below: Starbucks (Based on the results of data processing using Multidimensional Scalling analysis, it can be seen that in terms of Product, Price, Place, Promotion, People, Proccess and Physical Evidence. Starbucks has no equation because the location on the perception map is in different quadrant). Coffee Bean (Based on the results of data processing by using Multidimensional Scalling analysis, it can be seen that in the case of Product, Price, Place, Promotion, People, Proccess and Physical Evidence. Coffee Bean have no similarities with Starbucks).
- 2. Based on the results of consumer preferences can be seen the sequence ranking consumer preferences of Soap Product as follows: Starbucks as Ranking I and Coffee Bean as ranking II.

Recommendation

- 1. Starbucks in the first position, needs to maintain or improve the quality and give more innovative stuff for consumers so they can be more loyal with the product
- 2. For Coffee Bean which is ranked 2nd position, at it is wise for shop to pay more attention for its all indicators. Better performance in each indicators could lead to customer attraction and increasing sales. As the competition keeps on rising among the competitor, Coffee Bean should consider more about the all the attributes.

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