

THE MEDIATION ROLE OF PURCHASE INTENTION ON BRAND IMAGE AND STORE IMAGE ON DRUG PURCHASING DECISIONS IN PHARMACY

Sigit Ratnanto^{1*}, Subagyo²

¹ Student of Doctoral Science Management, Indonesia Scholl of Economic (STIESIA) Surabaya

² Nusantra University PGRI Kediri, Kediri, Indonesia

Corresponding Author: *sgt.ratnanto@gmail.com

Abstract: The aim of this research is to analyze the mediating role of purchase intention on brand image and store image on drug purchase decisions in pharmacies. Using a quantitative approach with survey methods. A sample of 100 respondents were drug consumers in Kediri City pharmacies who did not carry or have a doctor's prescription. Data was collected using a questionnaire. The analysis technique uses *Path Analysis* (SPSS ver 23.0). The research results show that the purchase intention variable in the brand image variable plays a big role in the purchase decision, whereas in the store image variable in the purchase decision the purchase intention variable does not play a role.

Keywords: brand image, store image, purchase intention, purchase decision

1. Introduction

Consumer behavior emphasizes how consumers form their purchasing decisions as a result of spending their time, money and effort to obtain certain products or services (Schiffman and Kanuk, 2007). Retailers must determine various strategies to maintain business (Levy and Weitz: 2014). Having a better understanding of the factors that influence consumer purchasing intentions and decisions will benefit them in creating marketing strategies that will address the needs of each of their consumers and thus be more effective (Liew and Falahat, 2019).

Consumer needs for medicines and supplements are increasing sharply day by day, in line with public awareness of the importance of health. Pharmacy as a distribution facility for medicines, medicinal ingredients, traditional medicines and cosmetics as well Health equipment to the community has an important role in the health sector. Judging from its development, the number of pharmacies in Indonesia is increasing from year to year. Indonesia has 30,199 pharmacies in 2021. With the largest number of pharmacies in West Java, 4,874 pharmacies, East Java 4,250 pharmacies, and Central Java 3,768 pharmacies (<https://dataindonesia.id/>).

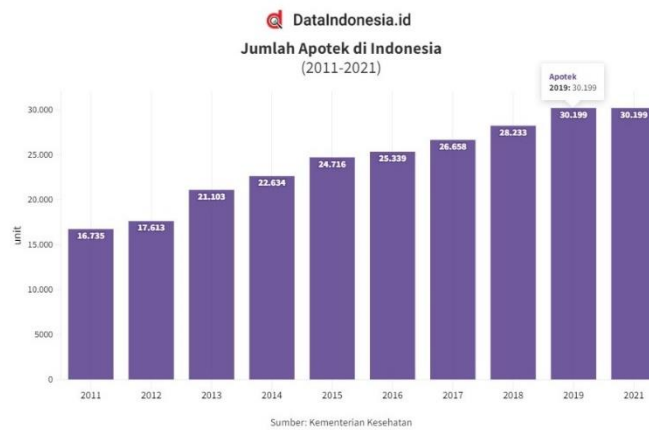


Figure 2. Number of pharmacies in Indonesia (dataindonesia.id)

Competition in the pharmacy business in the city of Kediri is quite high, there are 90 pharmacies established in Kediri Municipality (<https://medicalclinic.id/apotek/region/jawa-timur/apotek-kediri.html>), so that these pharmacies are able to survive in business competition, pharmacy managers must have a different strategy from other competitors. Retailers must determine various strategies to maintain their business (Levy and Weitz : 2014).

Understanding consumer preferences regarding the choice of pharmacy where to buy medicines and their preferences for the quality and brand of certain medicines is important, because it will provide an indication of consumer demands. This information will help marketers ensure that they have enough products that match their preferences to meet consumer wants and demands. Consumers divide purchasing decisions into three dimensions (Hawkins, 2001), namely: (1) product selection: choosing products that suit consumer needs, (2) brand selection: consumer preferences about a brand during the consumption process, (3) store selection: the choice of certain stores made by consumers to buy a product.

However, our findings show that consumers when buying medicines at pharmacies will be influenced by their preferences and buying interest, especially the choice of medicine brand. This needs to be a concern for pharmacy managers in creating future strategies and increasing customer retention. On the other hand, our findings also strengthen the theory put forward by Hawkins (2001), regarding consumer preferences in purchasing decisions.

The remainder of this paper is as follows. The second section presents related literature and hypothesis development. The third section explains the research sample and defines the variables including the methodology used. The fourth section presents the empirical results. The fifth section concludes the paper.

2. Literature Review

Purchase Decision

Decisions are actions taken by consumers to buy a particular product after receiving purchasing stimuli (Kotler and Keller, 2016). Of the various factors that influence decisions about a product or service, consumers usually always consider quality, price and products that are already known to them. Purchasing decisions occur through processes, one of the processes in purchasing decisions is the selection process, in the selection process there are consumer preferences which cause this purchasing decision to occur.

According to Kotler and Armstrong (2008) purchasing decision indicators are as follows: (1) confidence in buying after knowing product information. (2) deciding to buy because it is the

most preferred brand. (3) buy because it suits your wants and needs. (4) bought because of recommendations from other people.

Brand Image

Brand image is the perception and belief held by consumers, as reflected by associations embedded in customer memories, which are always remembered first when they hear a slogan and are embedded in the minds of consumers (Kotler & Keller, 2009). According to (Aaker & Biel, 2009) brand image indicators are (1) *corporate image*, how consumers view the company that produces a good or service, including popularity, credibility, company network and users. (2) product image, consumer perceptions of goods or services including product attributes, benefits for consumers, and guarantees. (3) user image (*user image*), the perception generated by consumers regarding the use of a good or service includes the user himself and his social status.

The research results of Agustini and Devita (2019) show that brand image influences purchasing decisions. These results are in line with research by Rosanti, Salam and Panus (2021), that brand image influences purchasing decisions. Based on this explanation, the hypothesis in this research can be proposed as follows:

H1: Brand image influences purchasing decisions

H2: Brand image influences purchasing decisions which are mediated by purchasing interest

Store Image

Each shop certainly has its own image. Bellenger & Goldstucker (2002), defines store image as *the customer perception of the store versus competitive store*, which means that brand image is the consumer's perception of a store compared to other stores. Store image can be seen as something that is the image and thoughts of consumers about the store, including perceptions and attitudes received through the five human senses. Several things are part of a store's image according to Berman and Evans (2001), namely physical facilities, merchandise, comfort and service. *Store image* is used as a store personality that differentiates one store from another as perceived by consumers." Consumers can remember well if a shop they have visited has a positive image so that consumers are interested in making purchasing decisions at that shop again.

research results show that store image influences purchasing decisions. These results are in line with research by Togar and Hakim (2022), that store image influences purchasing decisions. Based on this explanation, the hypothesis in this research can be proposed as follows:

H3: Store image influences purchasing decisions

H4: Store image influences purchasing decisions which are mediated by purchasing interest

Purchase Intention

Purchase interest is caused by the attractiveness of the product or service being offered, which is a mental condition for consumers to reflect on their plans to purchase a product for a particular brand. Kotler and Keller (2012) explain that purchasing interest is "consumer behavior that appears as a response to objects that indicate the customer's desire to make a purchase". Purchase intention is regularly used to measure the effectiveness of marketing actions as well as anticipated responses from consumers (Liew and Falahat, 2019).

According to Ferdinand (2008), purchase intention can be identified through the following indicators: (1) transactional interest, (2) referential interest, (3) preferential interest, (4) exploratory interest.

H5: purchase intention influence the purchase decision

3. Method

This research uses a quantitative approach with a survey method. The survey was conducted by distributing questionnaires to respondents. The population in this study is included in the infinite population, because the number of consumers in the population area is not known with certainty, namely pharmacy consumers in Kediri City. The sampling technique uses *non-probability sampling techniques*, and samples are taken by *purposive sampling*. The respondents selected were consumers who bought medicine at a pharmacy and did not carry or have a doctor's prescription. Questionnaires are submitted and then collected after being filled in individually by 100 respondents, the number is determined according to Sugiyono (2017), namely a minimum of 10 x the number of variables. The analysis technique uses *Path Analysis* (SPSS ver 23.0) through stages of assumption testing, namely: linearity test, recursive relationship patterns between variables, minimum variables on an interval scale, and variables measured without error. The questionnaire was developed from variable indicators and to calculate them using a Likert scale with the assessment technique explained below: score 1 : Strongly disagree (STS) score 2 : Disagree (TS) score 3 : Disagree (KS) score 4 : Agree (S) score 5: Strongly Agree (SS).

This study will help marketers to identify factors that influence purchasing interest and purchasing decisions, especially in the pharmacy industry so that marketers can formulate future policies that will further help in customer retention.

Testing of the validity of the questionnaire statements was carried out by reviewing the sig value. on *the Pearson correlation* compared with the level of significance. If the sig value is ≤ 0.05 then the statement in the questionnaire is said to be valid.

Testing the reliability of all statements in this study used the *Cronbach alpha method*. The criteria used are if the *Cronbach alpha coefficient* is ≥ 0.6 then it can be said that the statements in the questionnaire are declared reliable.

4. Results and Discussion

Validity And Reliability Test Results

The following are the results of the validity and reliability tests of the questionnaire developed in this research.

Table 1. Validity and Reliability tests

No	Items	Correlation coefficient	Sig.	Note.	Cronbach's Alpha	Note.
1	x1.1	0.872	0,000	Valid	0.799	Reliable
2	x1.2	0.805	0,000	Valid		
3	x1.3	0.864	0,000	Valid		
4	x2.1	0.715	0,000	Valid	0.849	Reliable
5	x2.2	0.849	0,000	Valid		
6	x2.3	0.890	0,000	Valid		
7	x2.4	0.857	0,000	Valid		
8	z1	0.793	0,000	Valid	0.815	Reliable
9	z2	0.907	0,000	Valid		
10	z3	0.662	0,000	Valid		
11	z4	0.830	0,000	Valid	0.681	Reliable
12	y1	0.637	0,000	Valid		
13	y2	0.721	0,000	Valid		

14	y3	0.813	0,000	Valid
15	y4	0.672	0,000	Valid

Path Analysis Interpretation

This research was conducted to determine the influence of Brand Image and Store Image on Purchase Decision through Purchase Intention .

1. Path Diagram Development

After the theory-based model was developed in the previous chapter, the model is then presented in *path form diagram* as follows:

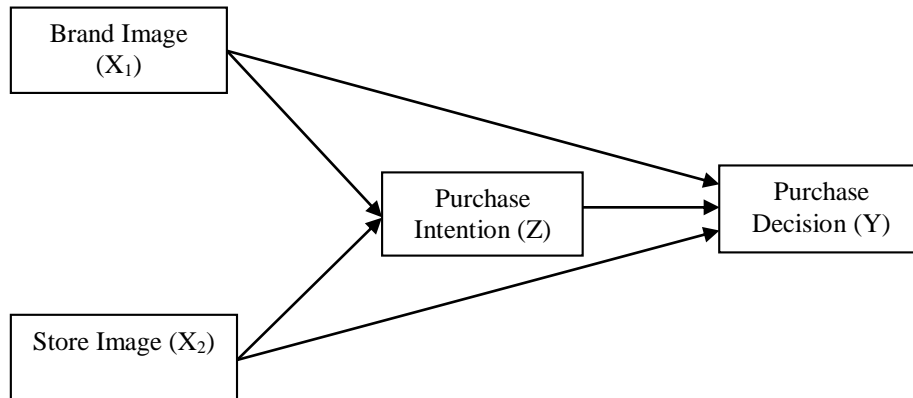


Figure 1. Research Model

2. Assumption Testing

▪ Relationships Between Linear Variables

To determine the linearity of the causal relationship, it can be seen using a *scatter plot* between each variable. If the *scatter plot* has a linear pattern from bottom left to top right, then the linearity assumption is met.

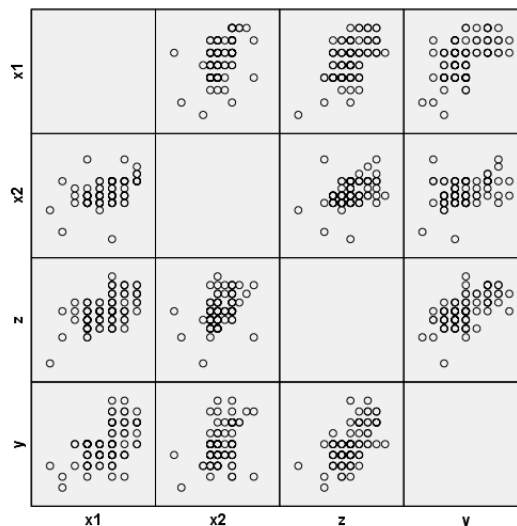


Figure 2. Linearity test

Based on the picture above, it can be seen that the trajectory of the influence of Brand Image and Store Image on Purchase Intention and the trajectory of the influence of Brand Image, Store Image, and Purchase Intention on Purchase Decisions is linear as shown by a linear pattern from bottom left to top right, which means that the linearity assumption is met.

- The pattern of relationships between variables is recursive
A recursive model means that the causal flow system only goes in one direction . In this research model, the model used is a recursive model, in other words there are no variables that have an alternating influence (the causal relationship is in the same direction), namely Brand Image and Store Image have a causal relationship with Purchase Intention and Purchase Decision, and Purchase Intention has a causal relationship. with Purchase Decision. Thus, the assumptions regarding the recursive model in this research model are fulfilled.
- Minimal Variables in Interval Scales
Path analysis *requires* the variable values used in modeling to have at least an interval data scale. The data scale has an order, namely nominal-ordinal-interval-ratio, where nominal is the lowest data scale and ratio is the highest data scale.
In this research, the data scale used is a *Likert scale* where the sum of these data scales is an interval type scale, so that *path* analysis can be used for this research data.
- Observation Variables Measured Without Error (Valid and Reliable Measurement Instrument)
In path analysis, the observed variables must be measured without error. In other words, the measurement instrument (questionnaire) used must be valid and reliable.

3. **Path Coefficient Estimation (Path)**

Based on the results of path analysis with the help of SPSS 2 3.0 for Windows , it can be seen in the following table:

Table 2. Results of Path Analysis

Track	Path Coefficient	t-count	Significant
Brand Image (X1)→ Purchase Intention (Z)	0.489	5,240	0,000
Store Image (X2)→ Purchase Intention (Z)	0, 174	1,864	0,065
Brand Image (X1)→ Purchase Decision (Y)	0.222	2,216	0.029
Store Image (X2)→ Purchase Decision (Y)	0.071	0.786	0.434
Purchase Intention (Z)→ Purchase Decision (Y)	0.458	4,760	0,000

Based on the table above, the path analysis for sub structure 1 can be described as follows:

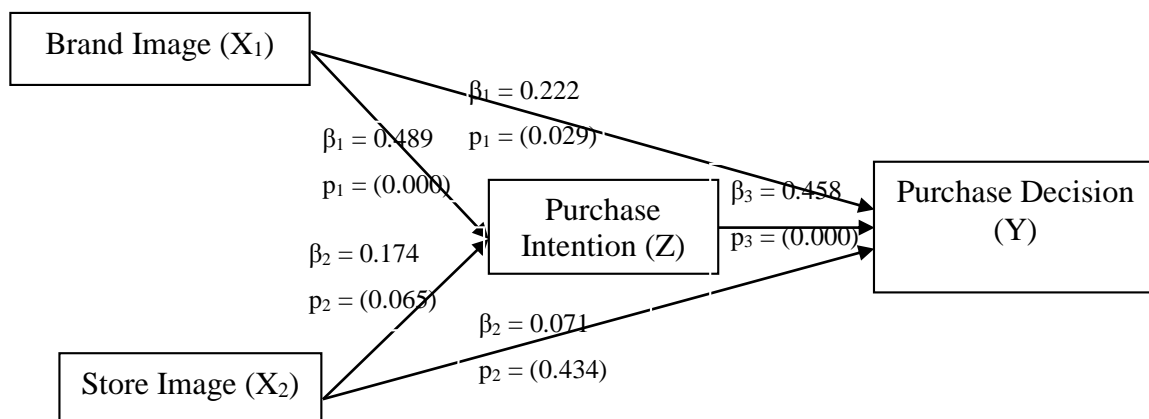


Figure 3. Path analysis

Direct effect hypothesis testing:

- The magnitude of the influence of Brand Image on Purchase Intention is 0.489, where this influence is significant. This significant influence can be seen from the probability value which is less than 0.05, namely 0.000.

- The magnitude of Store Image on Purchase Intention is 0.174, where the influence is not significant. This insignificant influence can be seen from the probability value which is greater than 0.05, namely 0.065.
- The magnitude of the influence of Brand Image on Purchase Decision is 0.222, where this influence is significant. This significant influence can be seen from the probability value which is less than 0.05, namely 0.029 .
- The magnitude of the influence of Store Image on Purchase Decision is 0.071, where this influence is not significant. This insignificant influence can be seen from the probability value which is greater than 0.05, namely 0.434 .
- The magnitude of the influence of Purchase Intention on Purchase Decision is 0.458, where this influence is significant. This significant influence can be seen from the probability value which is less than 0.05, namely 0.000 .

4. Model Validity Check

The coefficient of determination or *R-square* shows the percentage of how much influence the independent variable has on changes in the dependent variable. The following are the *R-square values* obtained from the analysis results:

Table 3. coefficient of determination

Connection	R ²
Brand Image and Store Image → Purchase Intention	0.337
Brand Image, Store Image, and Purchase Intention → Purchase Decision	0.422

Based on the table above, it is known that the *R-Square value* is 0.337 for the relationship between Brand Image and Store Image Purchase Intention, this indicates that Purchase Intention can be explained by Brand Image and Store Image by 33.7 %, the *R-Square value* of the relationship between Brand Image, Store Image and Purchase Intention to Purchase Decision is 0.422, this indicates that Purchase Decision can be explained by Brand Image, Store Image, and Purchase Intention of 42.2%.

After obtaining the two influence models above, a *path model can then be constructed*, with the *error influence* determined as follows:

$$Pe_i = \sqrt{1 - Ri^2} = (1 - Ri)^{0.5}$$

Where:

$$Pe_1 = (1 - 0.337)^{0.5} = 0.814$$

$$Pe_2 = (1 - 0.422)^{0.5} = 0.760$$

Next, the total coefficient of determination for *the path diagram development will be calculated* . The total coefficient of determination is the total diversity that can be explained by the model. The total diversity can be calculated using the following formula:

$$R^2_m = 1 - (Pe_1^2 \times Pe_2^2) = 1 - (0.814^2 \times 0.760^2) = 0,634 = 63.4\%$$

The total coefficient of determination for *the path diagram was found* to be 63.4%, meaning that the diversity of data that can be explained by the *path diagram model* in this study is 63.4% or in other words, 63.4% of the information contained in the data can be explained by the model , while the remaining 26.6% is explained by other variables (which are not yet in the model) and *error*.

5. Indirect Effect hypothesis testing

To determine the significance value (p-value) of the indirect coefficient, *the Sobel test will be used* by entering the t-calculated value from path 1 and the t-calculated value from path 2 online at <https://quantpsy.org/sobel/sobel.htm>.

← → ↻ 🔒 quantpsy.org/sobel/sobel.htm

CALCULATION FOR THE SOBEL TEST

An interactive calculation tool for mediation tests

Alternatively, you can insert t_a and t_b into the cells below, where t_a and t_b are the t-test statistics for the difference between the a and b coefficients and zero. Results should be identical to the first test, except for error due to rounding.

Input:	Test statistic:	p-value:
t_a 5.240	Sobel test: 3.52333149	0.00042616
t_b 4.760	Aroian test: 3.48869664	0.00048538
	Goodman test: 3.55901879	0.00037224
	Reset all	Calculate

The reported p-values (rounded to 8 decimal places) are drawn from the unit normal distribution under the assumption of a two-tailed z-test of the hypothesis that the mediated effect equals zero in the population. +/- 1.96 are the critical values of the test ratio which contain the central 95% of the unit normal distribution.

We should note that there are three principal versions of the "Sobel test" - one that adds the third denominator term (Aroian, 1944/1947 - this is the version popularized by Baron & Kenny as the Sobel test), one that subtracts it (Goodman, 1960), and one that does not include it at all. We stress that researchers should consult Mackinnon, Lockwood, Hoffman, West, and Sheets (2002), as well as sources cited therein, before attempting to interpret the results of any of these tests. Researchers should consult Krull & MacKinnon (1999) before attempting to apply the Sobel test to parameter estimates obtained from multilevel modeling.

Formulae for the tests provided here were drawn from MacKinnon & Dwyer (1994) and from MacKinnon, Warsi, & Dwyer (1995):

Sobel test equation
z-value = $a*b/\sqrt{b^2*s_a^2 + a^2*s_b^2}$

Aroian test equation
z-value = $a*b/\sqrt{b^2*s_a^2 + a^2*s_b^2 + s_a^2*s_b^2}$

Goodman test equation
z-value = $a*b/\sqrt{b^2*s_a^2 + a^2*s_b^2 - s_a^2*s_b^2}$

Figure 4. Example of Hypothesis Testing for Indirect Coefficients.

The following is a hypothesis testing table on the influence of Brand Image and Store Image on Purchase Decision with Purchase Intention as the mediating variable.

Table 4. Hypothesis testing with *sobel test*

Trajectory through Purchase Intention		t-count	p-value
Brand Image	→ Purchase Decision	3,523	0.0004
Store Image	→ Purchase Decision	1,736	0.0826

Based on *the Sobel test*, it is known that :

1. The calculated t for the indirect coefficient of Brand Image is 3.523 with a significance value (p-value) of 0.0004. Because the resulting significance value is smaller than 0.05, the hypothesis states that "It is suspected that Brand Image has an indirect and significant effect on Purchase Decision with Purchase Intention as a mediating variable " is proven true.
2. The calculated t for the indirect coefficient of Store Image is 1.736 with a significance value (p-value) of 0.0826. Because the resulting significance value is greater than 0.05, the hypothesis states that "It is suspected that Store Image has an indirect and significant effect on Purchase Decision with Purchase Intention as a mediating variable" is not proven to be true.

Limitations and further research

Respondents in this study were respondents who did not have a doctor's prescription, so the choice of brand and pharmacy was only based on consumer preferences and did not take into account suggestions from other people.

Recommendations for further research include: (1) It is best to conduct initial research, such as field research, to obtain more appropriate indicators. (2) Increasing the number of samples to produce more accurate data (3) Adding new variables such as: product quality, price, location,

reference group to produce more complete and clear research regarding purchasing decisions, especially in the pharmaceutical sector.

5. Conclusions

This research was conducted to analyze the mediating role of purchase intention on brand image and store image on drug purchase decisions in pharmacies Kediri city. Many similar studies have been carried out but with different research objects. Based on East Java BPS data, the city of Kediri is the city with the highest per capita income in East Java, so this research is important to understand the purchasing behavior of consumers in the city of Kediri, especially in the pharmaceutical sector.

The results of research on direct influence show that brand image influence on purchase intention and brand image influence on purchase decisions. Meanwhile store image has no effect on Purchase Decision and purchase intention influence on purchase decisions.

The results of research on indirect effects show that the purchase intention variable in the brand image variable plays a big role in the purchase decision, while in the store image variable in the purchase decision the purchase intention variable does not play a role.

Acknowledgements

Thanks are expressed to the parties who have helped the researcher in completing this paper, namely: (1) respondents who are pharmacy consumers in the city of Kediri, (2) pharmacy owners where the data was collected, (3) colleagues who have helped in provide ideas and concepts as well as fluency for this research, and the development of future research.

References

- Jalal Rajeh Hanaysha, (2018) "*An examination of the factors affecting consumer's purchase decision in the Malaysian retail market*", PSU Research Review, <https://doi.org/10.1108/PRR-08-2017-0034> Permanent link to this document: <https://doi.org/10.1108/PRR-08-2017-0034>
- Buntak, K., Adelsberger, Z., & Nađ, I. (2012). Impact of product quality on the business of the organization. *International journal for quality research*, 6 (3), 657-672.
- Jahanshahi, AA, Gashti, MAH, Mirdamadi, S.A., Nawaser, K., & Khaksar, SMS (2011). Study the effects of customer service and product quality on customer satisfaction and loyalty. *International Journal of Humanities and Social Science*, 1(7), 253-260.
- LN Ronauli, and F. Indriani, "Analysis of Factors that Influence Consumer Preferences on Generic Drug Purchasing Decisions (Study of Consumers at Kimia Farma Pandanaran Pharmacy, Semarang City)", *Indonesian Journal of Marketing Science*, vol. 19, no. 3, pp. 159-174, Dec. 2020. <https://doi.org/10.14710/jspi.v19i3.172-187>
- Suhadi, E., Tulung, JE, & Gunawan, EM (2023). Consumer Preference Of Skincare Products Using Analytical Hierarchy Process (AHP). *EMBA Journal: Journal of Economic, Management, Business and Accounting Research*; Vol. 11 No. 3 (2023): J.E. VOL. 11 No. 3 ; 913-923 ; 2622-6219 ; 10.35794/Emba.V11i3. <https://ejournal.unsrat.ac.id/v3/index.php/emba/article/view/50248>
- Berman, B and Evans. (2001), *Retail Management A Strategic Approach*. New Jersey: Prentice Hall.
- Bellenger and Goldstucker. (2002), *Retail Management Strategy*. New Jersey: Prentice Hall
- Buchari, A. (2009), *Entrepreneurship for Students and the Public*, Bandung: Alfabeta
- Hawkins, D. I., Best, R. J., & Coney, K. A. (2001). *Consumer behavior: Building marketing strategy* (8th ed.). McGraw-Hill.



- Kotler, Philip. (2011). *Marketing Management in Indonesia: Analysis, Planning, Implementation and Control*. Jakarta: Salemba Empat.
- Kotler, Philip. (2012). *Marketing Management*. Jakarta: Rajawali.
- Kotler, Philip and Gary Armstrong. (2008). *Marketing Principles Volume 1 12th Edition*. Translation by Bob Sabran. Erlangga. Jakarta.
- Kotler, Philip and Kevin Lane Keller. 2009. Translation: Benyamin Molan. *Marketing Management*. Twelfth Edition. Volume 1. Fourth Printing. PT. Index. Jakarta.
- Kotler, P., & Armstrong, G. (2012). *Principles of Marketing*, 14th New Jersey: Pearson Education Inc.
- Kotler, Philip and Kevin Lane Keller. (2007). *Marketing Management Volume 1 12th Edition*. Translation by Benyamin Molan. Index. Jakarta.
- Kotler, P. and Keller, K.L. (2012). *Marketing Management*. Jakarta: Erlangga.
- Kotler, Philip., Keller, Kevin L. (2013). *Marketing Management, Volume Two*, Jakarta: Erlangga.
- Kotler, Phillip and Kevin Lane Keller. (2016). *Marketing Management 12th edition Volumes 1 & 2*. Jakarta: PT. Index
- Levy and Weitz. 2014. *Retailing Management*. Mc. Graw Hill. Boston.
- Schiffman, LG and Kanuk, LL (2007), *Consumer Behavior*, 9th ed., Prentice-Hall, NJ.
- Sugiyono (2017). *Quantitative, Qualitative, and R&D Research Methods*. Bandung: Alfabeta.
- Tjiptono, Fandy, 2008, *Marketing Strategy Edition 3*, ANDI: Yogyakarta.
- <https://www.pom.go.id/new/view/more/berita/6948/Diklat--bagi-Inspektur-CPOB-Yogyakarta.html#:~:text=Medicine%20quality%20cover%203%20aspects,which%20is%20used%20according%20to%20its%20purpose%20use> .
- <https://dataindonesia.id/sektor-riil/detail/kinerja-industri-farmasi-tumbuh-tipis-069-pada-2022>
- <https://medicalclinic.id/apotek/region/jawa-timur/apotek-kediri.html>