

Analysis of Effect of Product Quality, Product Design and Distribution Channel toward Purchase Decision of Soy Milk with ABC company

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บทคัดย่อ- งานวิจัยชิ้นนี้เป็นงานวิจัยที่ ศึกษาเกี่ยวกับปัจจัยในการตัดสินใจเลือกซื้อที่ผลิตภัณฑ์นมถั่วเหลืองกับแบรนด์ ABC ซึ่งจัดจำหน่ายในเมือง มุดา ประเทศอินโดนีเซีย จุดมุ่งหมายหลักของงานวิจัยนี้คือเพื่อทราบถึงผลกระทบของคุณภาพผลิตภัณฑ์ (X1) การออกแบบผลิตภัณฑ์ (X2) และช่องทางการจัดจำหน่าย (X3) ต่อการตัดสินใจซื้อ (Y) หรือเกิดขึ้นจากทั้งสามอย่างพร้อมกัน งานวิจัยนี้เป็นการวิจัยเชิงปริมาณโดยใช้แบบสอบถามที่มีโครงสร้างเพื่อรวบรวมข้อมูลจากสมาชิก 100 ราย โดยใช้สถิติเชิงพรรณนาและเชิงอนุมานในการวิเคราะห์ การวิจัยนี้นักวิจัยได้เลือกตัวอย่างความน่าจะเป็นเพื่อประหยัดเวลาและค่าใช้จ่าย ผู้ตอบแบบสอบถามทั้งชายและหญิง ในขณะที่การวิเคราะห์และตีความหมายรวมถึงการแก้ไข และเขียนโค้ดการทดสอบโดยใช้การวิเคราะห์ทางสถิติของชุดสถิติสำหรับสังคมศาสตร์ (SPSS) พบว่า ผู้ตอบแบบสอบถามส่วนใหญ่คือผู้หญิงที่อายุ 20-29 ปี เป็นนักเรียนและมีรายได้เฉลี่ยต่อเดือน 1.500.000 รูปี เครื่องมือที่ใช้ในแบบสอบถามมีความถูกต้องและเชื่อถือได้ทั้งใน X1, X2, X3 และ Y โดยพบว่าตัวแปรที่มีอิทธิพลมากที่สุดในการตัดสินใจซื้อผลิตภัณฑ์นมถั่วเหลืองของบริษัท ABC คือคุณภาพของผลิตภัณฑ์ ซึ่งมีค่านับเป็นค่าที่ใหญ่ที่สุดของทั้งหมดและยังสอดคล้องกับสมมติฐาน โดยข้อเสนอแนะสำหรับงานวิจัยครั้งต่อไป ผู้วิจัยเห็นว่าควรใส่ใจกับตัวแปรอื่นที่ไม่รวมอยู่ในงานวิจัยนี้ เช่น การส่งเสริมราคา ฯลฯ เพื่อให้การวิจัยสมบูรณ์ยิ่งขึ้น

Keyword – คุณภาพของผลิตภัณฑ์, ออกแบบผลิตภัณฑ์, ช่องทางการแจกจ่าย, นมถั่วเหลือง

Abstract— This research takes research object in Mr. Muda Indonesia which produce soy milk with ABC brand. The problem is declining number of subscriber for 2 consecutive months. The main aim of this research is to know what the effect of product quality (X1), product design (X2) and distribution channel (X3) toward purchase decision (Y) is, both simultaneously, partially and dominant effect. The research is a quantitative research, using structured questionnaire survey to collect data from 100 subscribers. Both descriptive and inferential statistics are used to analyze the result of this, the researcher has chosen the probability samples to save time and cost. The respondents are both male and female. Whereas for analysis and interpretation includes editing and coding, testing by using the statistical analysis of Statistical Package for Social Science (SPSS) In fact the most respondents of the research are female, with the age 20-29 years old. Most of them are student and the income/month is < Rp. 1.500.000. The instruments of questionnaire are valid and reliable both in X1, X2, X3, and Y. Then variable with the most dominant effect is product quality. That value of t count is the biggest of all and it is suitable with the hypothesis. The researcher must pay attention to another variables which is exclude in this research like promotion, price etc. to perfect the research. (*Abstract*)

Keywords-product quality; product design; distribution chanel ; purchase desion soy milk (key words)

1. INTRODUCTION

This business' vision is to become the company producing of ABCin every province in Indonesia, thus ABCcan be consumed by all Indonesian people. This business has been running for 1 year with the approximate number of 350 subscribers. Each month, the management

of ABCdo the evaluation. In one of months, the management found problem. It needs to be evaluated. The problem is declining number of subscribers for 2 consecutive months, it's based on sales amount are declining. Quality, product design and the significances of the study are the profit gets well, the opportunity for growth and better tastes for customers according to the needs and desires of each. While for the purposes of study are to determine whether there is simultaneous and partial effect of product quality, product design and distribution channel toward purchase decision of soy milk with ABCbrand in Mr. Muda Indonesia and determine which independent variable that has dominant effect toward purchase decision of soy milk with ABCbrand in Mr. Muda Indonesia. In this research the researcher limits to the 100 subscribers of ABConly. They have been considered well and adequate number to research problem. The study about analysis of effect of product quality, product design and distribution channel to purchase decision of soy milk with ABCbrand in Mr. Muda Indonesia

1.2 Research Framework

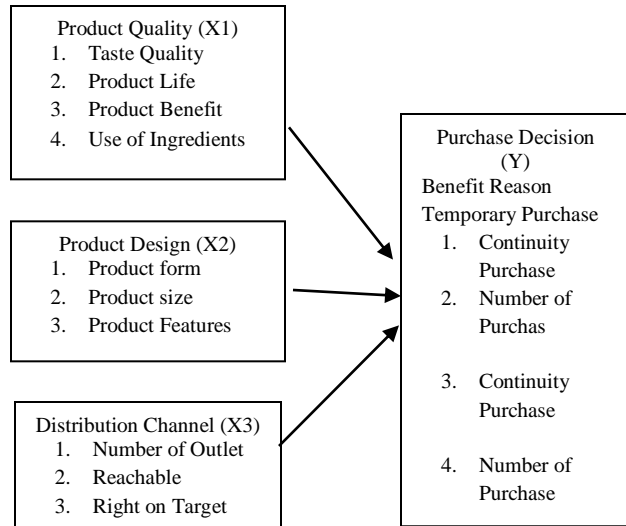


Figure 1.1 Research Framework

2. THE LITERATURE REVIEW

2.1 The Product

Product is the most important element of the marketing program. People satisfy their needs and desires with the product. According to Philip Kotler (2007; 52) the product is: Anything that can be offered to a market to satisfy a want or need."

Definition of the product according to Fandy Tjiptono (2002; 95) is : "The product is anything that can be offered by manufacturers to note, asked, sought, bought, rented, used mainly, or consumed markets (both end-consumer market and market or industry) as fulfilling the needs or desires the relevant market."

2.2 Product Quality

According to A. V. Feignbaum (2000: 12) that: "Product quality is the combined overall characteristics of the goods and services of marketing, engineering, manufacture and maintenance that make the products and services used to meet the expectations of customers". Based on the definition of the quality above, it can be concluded that the quality is based on the actual experience of customers for goods or services, measured based on customer requirements, meaning that it is declared or not declared, recognized or only perceived, done technically or can represent a moving target in the market with full competition.

One of the purposes of the product quality implementation is to influence the consumer in making his choice to use homemade products, therefore facilitate consumers in making purchase decisions. An understanding of consumer behavior on the product quality can be used as the basis for

Chapter	Description
Chapter 1 : Introduction	<ul style="list-style-type: none"> Describe about the technical things in a thesis Consist of background and statement of the problem, significance of the study, purpose of the study, research question and hypothesis, research framework, limitation, scope and organization of the study
Chapter 2 : Review of the Literature	<ul style="list-style-type: none"> Contain systematical description about relevant basis theories, facts, results of previous studies, which is derived from up to date literature
Chapter 3 : Research Methodology	<ul style="list-style-type: none"> Describe about how the research will be held by the researcher
Chapter 4 : Research Result	<ul style="list-style-type: none"> Describe about the hypothesis testing result and research result description
Chapter 5 : Conclusions and Recommendations	<ul style="list-style-type: none"> Contain the final answer of research question and additional note from researcher

Table 1.1 The Organization of This Study

the consumer buying decision process (Sutisna, 2002: 26).

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One of the purposes of the product quality implementation is to influence the consumer in making his choice to use homemade products, therefore facilitate consumers in making purchase decisions. An understanding of consumer behavior on the product quality can be used as the basis for the consumer buying decision process (Sutisna, 2002: 26).2.3 Product Design

According to Kotler and Keller (2012) define "Design is the totality of features that Affect how a product looks, feels, and functions to a consumer". It means that design is the totality of features which affect how product looks, feels, and functions for consumers. Design offers three things:

- Function
- Aesthetics
- Fascination

2.4 Distribution Channel

Distribution is a process of delivering goods or services from producers to consumers and users, when and where the goods or services are required. Distribution channels is a group of companies or individuals who have the right of ownership of the product or help assign ownership of a product or service when it is transferred from producers to consumers (Kotler, 1991). According to Winardi (1989) states "The distribution channel is an intermediary groups that are closely related to each other and distribute the products to the buyer".The main function of the distribution channel is to deliver the goods from producers to consumers, the company in implementing and determining the distribution channel should do a good consideration

2.5 Purchase Decision

- Consumer Perception

Understanding to the perception and the processes related is important for marketers in order to form the right perception. The formation of the right perception in consumers causes them to have an impression and give a proper assessment.

- Consumer Behavior
- The Factors that Influence Consumer Purchase Behavior

1. Cultural Factors:
2. Social factors
3. Personal factors
4. Psychological Factors:

2.5.4 Stages of the Purchase Decision Process

According to Kotler (translated by Teguh Hendra and Ronny A. Rush, 2002: 204), suggests that the purchasing process

2.6 Soy Milk

- The General Description of Soy Milk

Milk is the first food that is known to a baby through breast milk. Society has advised that the quality of breast milk is superior to cow's milk, infant formula and powdered milk. The milk is a food that is composed of food substances with well-balanced proportions. From another angle milk can also be seen as a raw material containing sources of essential foods. Milk is a food that is very important in human life. It is already known also by the people who lived long before the AD,that can encourage the growth of human milk very well from infancy to adulthood. According to Buckle, K.A, Edward, RA, Flett, G.H., and Wootton, M (1987: 269), milk is a beverage that is almost perfect and is a natural drink, and also as a source of food is the giver of life after birth.

- The Benefits of Soy Milk

Health benefits of soy milk for human body was devastating. If you've been to underestimate the efficacy of a drink made from soymilk, then after reading this article you'll soon change your mind. Because behind the way of making simple, contained extraordinary health benefits.

3.RESEARCH METHODOLOGY

3.1 Research Process

The flow chart below represents the research process

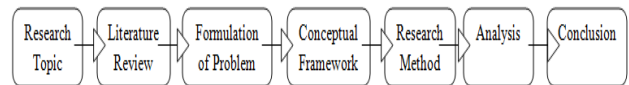


Figure 3.1 the Research Process

This study entitled "The analysis of effect of product quality, product design and distribution channel toward purchase decision of soy milk with ABCbrand in Mr. Muda Indonesia" uses quantitative research methods. The reason why the researcher have chosen the quantitative method is the reliability in order to ensure analysis which this method covers the statistical methods used to test the hypothesis regarding the relationship between each variable. Also, the strength of the quantitative method are often most suitable for evaluating the results since we are studying the consumer behavior which considered as the intangible aspects. Thus, the quantitative method can help the researcher to tighten analysis.

The quantitative method is applied for analyze the survey since the researcher use questionnaire in order to get the information from a random sample. A questionnaire was structured to determine the consumer

attitude and behavior toward the product quality, product design and distribution channel in Mr. Muda Indonesia. The researcher will conduct the survey within the Surabaya city which are considered as an appropriate region.

3.2 Research Design

The researcher has conducted a survey in order to come up with a personal description of the answer to the research problem. Due to the reason of reliability as the researcher has mentioned above about the quantitative method which includes statistical instrument, the hypothesis significance testing is chosen. It can prove or disprove the relationship between variables. The hypothesis testing is reasonable statistical method in order to decide whether the outcome should be rejected or should be accepted. Then, it can scrutinize the main factor in the next step by using the outcomes of hypothesis testing to support and this process can ensure our analytical system in the right direction.

Thus, the analysis will be in the following step by using the statistical instrument to test hypothesis. The tests establish whether there is a relationship between the variables, or not. There are five elements to any statistical test which present in the figure below.

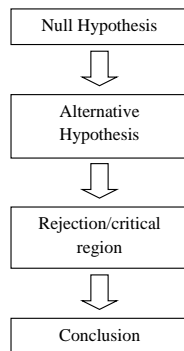


Figure 3.2 the Hypothesis Testing

Source: Self – Illustration

3.3 Method of Data Collection Table Type Styles

This section of data collection methods are introduced to apply for gathering the data for the study of quick service restaurant. The primary and secondary data are preferred due to the reliability and efficiency of the data evaluation.

3.4 Population and Sampling

This section focuses on the sample of the population and the interaction of the respondent. For the quantitative studies, in particular, sampling is considered the most important since it is known as elements which useful information will be collected. The sampling procedures according to Ghauri & Gronhaug (2010) have categorized the sampling method into two broad types which are probability and non-probability samples population of this

study is sukud sahe’s subscribers both male and female with the age over 16 years old. According to data from ABCmanagement, there are 350 subscribers until now. The size of sample group in this study is calculated 100 subscribers.

3.6 The Questionnaire Design

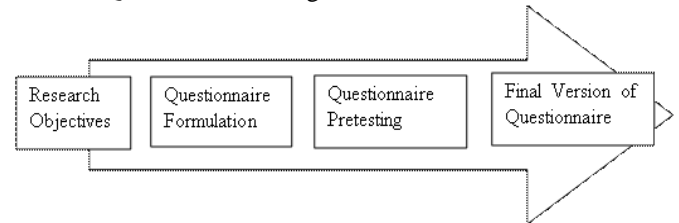


Figure 3.3 Questionnaire Design

The data are collected through the questionnaire and transform them into the usable results. In the quantitative research, the information which gets from the participants is expressed in numerical form. This section clarifies more on the process of analysis as well as the interpretation. According to Ghauri & Gronhaug (2010) has stated the step of preparation and analysis of data namely editing and Coding, analyzing the variables, cross tabulation, test hypothesis (Chi – Square) and use of computer in research.

4. RESEARCH RESULT

The researcher has chosen a convenience sampling which is often known in term of accidental sample, units that the researcher finds convenient for the survey. The reason is to save time and cost. The number of male respondent is 37 and female respondent is 63, while for <20 years respondent is 3, 20-29 years is 33, 30-39years is 28 and >39 years is 36. For student is 27, entrepreneur is 22, government employee is 12, private employee is 25 and housewife is 14. For <Rp. 1,500,000 is 32, Rp. 1,500,000-Rp. 2,000,000 is 25, Rp. 2,000,001-3,000,000 is 26 and >Rp.3, 000,000 is 17.

4.1 Validity and Reliability Test

In this discussion will be discussed for a method of testing the validity of the item. The validity of the items indicated by the correlation or support of items total (total score), the calculation is done by correlating the scores of items with a total score of items. If we use more than one factor means testing the validity of items by correlating between the scores of items with a score factor, followed correlate between the scores of items with a total score factor (the sum of several factors). From the calculation of correlation will be obtained a correlation coefficient is used to measure the validity of an item and to determine whether an item is used or not feasible. At the SPSS program testing techniques which often used by researchers to test the validity is using Pearson bivariate correlation (Pearson Product Moment) and Corrected Item-Total Correlation. In this research, the researcher

uses Pearson bivariate correlation. Tests using two-sided tests with significance level of 0.05. Testing criteria are as follows:

- If $r \text{ count} \geq r \text{ table}$ (test 2 sides with sig. 0.05) the instrument or item-item questions correlated significantly to the total score (declared invalid).

- If $r \text{ count} < r \text{ table}$ (test 2 sides with sig. 0.05) the instrument or item-item question did not correlate significantly to the total score (declared invalid). Based on the analysis result, all the items or instrument ($r \text{ count} \geq r \text{ table}$), it means all the items are valid.

Reliability is an index indicating the extent to which a measuring device is reliable or unreliable. When a measuring instrument is used twice to measure the same symptoms and the measurement results obtained are relatively consistent, the measuring instrument is reliable. Or in other words, the reliability demonstrated consistency of a measuring instrument in measuring the same symptoms. From the analysis can be obtained the value of Cronbach's Alpha is 0.720. Since the value is above 0.720, thus it can be concluded that the measurement instrument of the research is reliable

4.2 Hypothesis Test

To prove the hypothesis that has been proposed, then it will be tested the hypothesis by using statistical analysis particularly multiple regression analysis and the calculation will be used is SPSS. The equation of multiple linear regression are as follows:

$$Y' = a + b_1 X_1 + b_2 X_2 + b_3 X_3 \dots\dots\dots + b_n X_n$$

The data entered into SPSS is processed by multiple linear regression analysis.

The following table is the calculation results of SPSS regression equation:

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.536	0.712		0.753	0.453
1 The respond of respondent to product quality	0.306	0.109	0.263	2.81	0.006
The respond of respondent to product design	0.337	0.131	0.249	2.584	0.011

Source: SPSS Program

The regression equation is as follows:

$$Y' = a + b_1 X_1 + b_2 X_2 + b_3 X_3$$

$$Y' = 0.536 + 0.306 X_1 + 0.337 X_2 + 0.128 X_3$$

A. Simultaneous Test

To test the independent variables simultaneously toward purchase decision can be done by F test. Before

going to that test, the researcher wants to know how much the relationship between the independent variables (X1, X2, and X3) toward the dependent variable (Y) simultaneously. F test results can be seen in the output of ANOVA of the results of multiple linear regression analysis. $F \text{ count} > F \text{ table}$ ($7.356 > 2.699$), thus H_0 rejected, it means product quality, product design and distribution channel have effect simultaneously toward purchase decision.

B. Partial Test

$T \text{ count} > t \text{ table}$ ($2.810 > 1.985$), thus H_0 rejected, it means product quality has effect partially toward purchase decision. While $t \text{ count} > t \text{ table}$ ($2.584 > 1.985$), thus H_0 rejected, means product design has effect partially toward purchase decision. The last, $t \text{ count} \leq t \text{ table}$ ($1.318 > 1.985$), thus H_0 accepted, means distribution channel does not has effect partially toward purchase decision.

C. Dominant Test

The value of dominant can be recognized by t count test namely $t \text{ count} > t \text{ table}$. Based on the calculation from SPSS, product quality has biggest value of t count as big as 2.810 and it is bigger than t table (1.985). It means product quality (X1) has the most dominant effect toward purchase decision (Y).

5. CONCLUSIONS

Independent variables such as product quality (X1), product design (X2) and distribution channel (X3) have effect simultaneously toward purchase decision (Y) of soy milk with ABCbrand in Mr. Muda Indonesia. Partially, independent variables for product quality (X1) and product design (X2) have effect toward purchase decision (Y). Whereas for distribution channel (X3) has no effect toward it. The value of dominant can be recognized by t count test namely $t \text{ count} > t \text{ table}$. In this research the most dominant variable that can give effect toward purchase decision (Y) is product quality with t count as big as 2.810 that value is the biggest value of all. Thus the conclusion number 1 and 3 evidence the truth of research hypothesis. The researcher recommends that independent variables of product quality (X1), product design (X2), and distribution channel (X3) need attention simultaneously in an effort to enhance the purchase decision (Y) further, because the variables have the substantial influence. Variable of product quality (X1) is a variable which has the most dominant effect toward purchase decision (Y), so that product life, product benefit and product taste remain a top priority in order to increase the purchase decision in Mr. Muda Indonesia and another variables which is not included in this research like promotion, price etc, should need attention, this is

because the variables also can influence purchase decision, thus it will be found the strengths and the weaknesses of research

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