The Effect of Packaging on Students' Buying Interest

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Abstract:
The purpose of this study is to explain the influence of brands, images, shapes, colors, and labels on packaging in unison against the interest of buying consumers; And to know the packaging attributes that most affect consumer buying interest. The data collection techniques used are observation and questionnaire. Data analysis consists of two parts i.e. 1) descriptive analysis to describe the identity of respondents and research variables; 2) Double linear regression analysis to determine the impact of packaging attributes simultaneously on the interest of buying consumers. The research method used is a double linear regression analysis with five free variables and one bound variable with the help of the IBM SPSS version 25 program. The hypothesis testing uses only simultaneous testing with the F test apparatus and the coefficient of determination to know the amount of free variable donations to bonded variables. The results showed that all variables are free, consisting of brands on the packaging, images on the packaging, packaging shapes, packing colors, and labels on packaging together significantly affecting buying interest. As for the free variables, the greatest effect on buying interest is the color on the packaging.
Key Word*:the packaging; shapes; pictures; brand; label; colors; students*

I. Introduction

The packaging is the protector of goods, both ordinary goods and products of industrial production. In the world of the packaging industry is the fulfillment of a necessity due to the relationship between producers and buyers community. Some of the functions of the packaging are as follows: (1) place or container in a certain form and can protect the goods from the possibility of damage, since exiting the factory to the hands of the buyer, even can still be used as a container after the contents of goods used, (in this case the container still bears its advertising function); (2) The packaging is not just a wrapper, but also a household complement; A nice soy sauce bottle with an interesting et Kenya can enhance a certain atmosphere at the dining table or closet in the kitchen; A beautifully designed "Kleenex" lap paper can embellish a beautiful bathroom and bottle of perfume giving a girl an ornate table. (3) The quality of the packaging can foster confidence and complement of self-image and influence prospective buyers to drop options on the goods it is in; (4) The packaging has the ease of use (open, close, hold, carry) without compromising the quality of its durability in protecting the goods; (5) The outer appearance of the packaging should immediately cause a correct impression of the type of contents of the packaged goods; (6) Good planning in terms of size and shape, so that it is efficient and not difficult in terms of packing, shipping, and placement, as well as drafting in a cabinet display; (7) Through the form and the layout it holds serves as a tool marketer to enhance the selling power of goods. In this function, the shape-packing design should get full support from the elements of the design-the graphics, so that the form of packaging besides pulling should be able to convey the caption and his messages' own.

Considering that Indonesia's consumers are mostly still limited literacy capability, then until the middle of the century, we still see the language of the image is very much used in addition to the color language and letters (Danger, 1992). This, evidenced in the trademark designs, packaging ethics, as well as the use of color to strengthen the identity of the product.The success of the marketing of goods, not only determined by the quality of goods as well as the promotion effort done, but also in the same effort by the quality and appearance of the packaging itself. For this fact, we know the philosophy of marketing that has been prevalent since the 19th century in the UK "the product is the package", product goods are determined by its packaging. Awareness of packaging is a part that is not separate from product goods, so it is not surprising if a graphic planning bureau is "we can not raise the quality of product goods, therefore we the packaging level".Because of this, the other quality of the packaging is assessed by its ability to fulfill its function, where the packaging is demanded to have a greater appeal than the goods wrapped in it. The success of the packaging attractiveness is determined by the aesthetic that has been the consideration since the beginning of packaging because the aesthetic value should be

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contained in the harmony between the form and the arrangement of graphic design without forgetting the impression of the type, characteristic and nature of the goods produced.

The graphic design language is a visual language, symbol language expressed through images, shapes, colors, and characters. The graphics must be able to deliver the message that the manufacturer of the goods has created by the packaging; Information on how to use the product. The choice of the typeface by the type of goods, combined with the right illustration image and printed with good printing technique, will bring a direct or indirect message from the goods to the quality and value. Drawing and writing, not only are it important as an attraction but mainly a fit to communicate with consumers about the information desired.We can imagine the fierce competition that a product will encounter with its severity on a shelf of other similar products that are dozens of numbers. For packaging that uses elements of graphic and color with more careful will certainly appear as the main brushing for prospective buyers. Especially if it is realized that the human memory of the shape is more sluggish than the color and people can forget about the name of a product but hard to forget the color of the light. For example, this is seen on the packaging of the film, Kodak (yellow), Fuji Color (green), Corned beef Cip/Petronas and Sardencis (red), Sari Ayu (Dark brown), Mustika Ratu (dark red).

Then, along with our economic progress, it has also begun to promote the export and import of domestic production goods to various countries (Kotler, 2001). This effort must certainly be supported by the quality of goods and also the quality of packaging that is authoritative and selling power. Regarding planning the packaging are some things that can be considered to be a consideration for producers and graphic planners of Indonesia; (a) Some form of packaging following the graphics of an item manufactured for foreign markets should not be made the same as marketed for domestic; (b) sensitive and familiar with various cultures of the world is crucial in calculating packaging design for export. It is based on the local environmental factors that must be considered; (c) The usual packaging that will be marketed has been through the results of the above research and deep Field trials, both in form and material packaging and graphic design, given the high fact of climate difference, language, reading ability, trade terms, tax, delivery traffic, etc.; (d) Each item of product to be exported, must also complement its packaging design with the requirements of the computerized code that has been used everywhere, to facilitate the calculation of prices; (e) should also consider the use of elements of symbolism spoken through shapes and colors. This is due to the culture, culture, and characteristics of local areas.

Designing suitable packaging design encourages consumers to buy a product, while the wrong design, will turn off the sale of the product. With the above problem, the author is interested to examine how the packaging affects the consumer's buying interest, so in this research, the writer took the title "The Effect of Packaging onStudent's Buying Interest".

II. Material And Methods

The packaging includes also various variations such as a direct wrapper that may be necessary, and a carton or exterior that has a display function and distribution function. Each packaging is of any nature, helping packaging fulfill its role in the marketing process. The ideal packaging should effectively protect its contents, should make a contribution that reality on effective distribution, and should be at an effective cost in the sense does not exceed the proportion of its benefits. However, the most important function is the part that plays a role in sales. The ideal packaging is simultaneously in a functional, economic, and sales standpoint for example, the packaging should be easy to hold, easy to open, and looks good.

Packaging should be a short impression of the product image that the factory wants to convey, and the packaging must be integrated with the product function. Putting product identities into customer minds is an important part of good marketing and sales.

Packaging plays an important role in the identity of the product because the packaging is an important link between the factory, retailer, and customer. The packaging is an integral part of the marketing plan and should reflect the theme of the promotion you want to convey.

a)   Appeal the packaging and product contents.
b)   Act as a reminder of product advertisements
c)   Create the urge to buy the product, because it has been advertised.
d)   Promote brand image if possible

While the understanding of the packaging according to some experts is as follows: Peter Salim & Yenny Salim defines the packaging as follows: "The wrapper should be used to protect merchandise, production, and so on". Eric Schulz's Opinion (Neumier, 2003) on the packaging is: "Packaging is the best way to convey to the consumer the most attractive and undisputed base to buy your product". The packaging that is commonly used by the company is divided into three, namely:

1)   Primary Packaging

The primary packaging is the packaging of a product, in other words, the primary packaging is the packaging of a retail product or a product sold in units. Examples of primary packaging are ballpoint, pencil, cassette, canned drink, and other products sold in units.

2) Secondary Packaging

The secondary packaging is packaging from the primary packaging. This packaging contains more than one or more products that already have packaging. For example, one pack of a ball, a drink of cans, and so on.

3) Packaging delivery

Delivery is a package that is used to send products, so this delivery package contains several products that are already packaged both in primary and secondary. For example, a beer crat, one box Indomie, and so on.
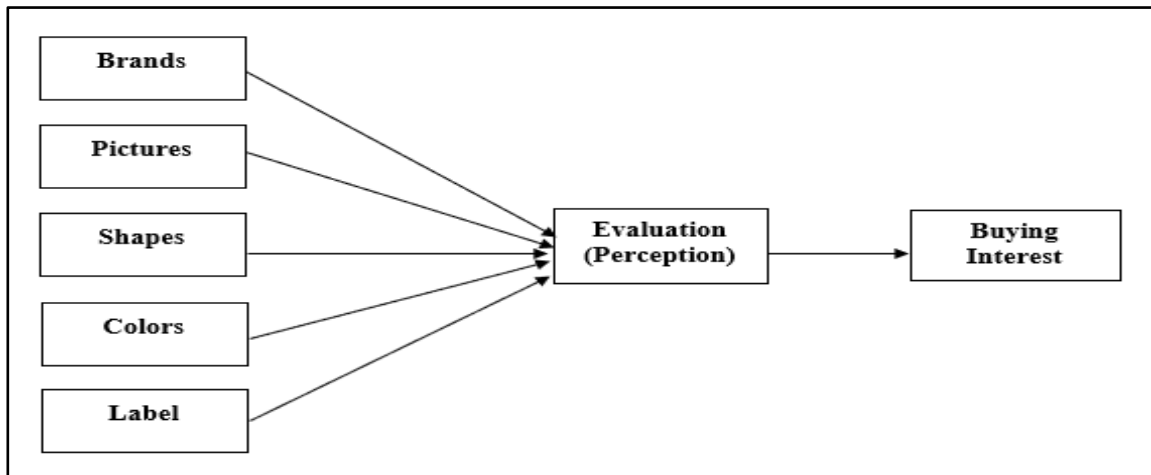

Figure 1. Conceptual Framework

Methods

The method of data analysis used is quantitative analysis, with multiple linear regression.To produce a good model, multiple regression analysis results require classical assumption testing. Testing this classic assumption includes:

a) Multicollinearity

Multicholinerity is a circumstance where free variables are correlated/related between one variable and another. A good double regression equation is a free equation of multicollinearity. The commonly used measuring instrument is the VIF value of > 5.

b) Heteroskedasticity

This test is used to find out if the regression model occurs heteroskedasticity variant of the residual one observation to another observation. This is shown in the Scatterplot graph (in the appendix) that the point spreads randomly or does not form a certain pattern that is clear and scattered both above and below 0 in the Y-axis, so it can be concluded that in a regression model does not occur heteroskedasticity which means the regression model deserves to predict the dependent variable based on the input of independent variables

c) Autocorrelation

Assuming the feasibility of this regression model is used to test the absence of freedom (independence) data. Data freedom here means that data for a given period is not affected by previous data and a good regression model should be free of autocorrelation. In this research, because it uses cross-section data that only consists of a one-time unit, the autocorrelation test is not necessary.

d) Normality

The data normality test is performed to analyze whether a regression equation requirement is met or not. The Output of the data normality test is a visual image that shows the nearby dots in the image with a diagonal line.

Multiple linear regression analysis, this model is a regression with five free variables and one bound variable. The equation Regresinya form as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

where:

Y	=	interest
X_1	=	brand on packaging
X_2	=	picture on packaging
X_3	=	shapeon packaging

X_4	=	coloron packaging	
X_5	=	label on packaging	
β_0	=	constanta	
$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$	=	coefficient	
ϵ	=	term of error	

This F-statistic test is done to see how large the effect of free variables in unison to the bound variables. This test is done by comparing the F-count value with the F-table. If F-count > F-table, then the H_0 is rejected which means the free variables in unison affect the bound variables. The F-count value can be obtained by formula:

$$\text{F-test} = \frac{R^2/(k-1)}{(1-R^2)/(n-k)}$$

where:

R^2 = coefficient of determination
k = number of all variables (free & bound)
n = number of observations

where:

H_a = when the probability value of a sig $< \alpha$ 0.05 Then there is a free variable influence on the bound variable.
$H_0 \neq$ when the probability value of sig $> \alpha$ 0.05 Then there is no significant influence of each variable to the bound variable.

The coefficient of determination is to see how large a variable donation is free to a bound variable. The formula for the coefficient of determination (Azwar, 2004):

$$R^2 = r^2 \times 100\%$$

III. Result

Data from the first hypothesis that is a brand factor, the image on the packaging, packaging form, color packaging, and packaging label jointly affect the interest of buying consumers who have been processed by SPSS program, obtained the following results:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon$$

where:

Y	=	buying interest	
X_1	=	brand on packaging	
X_2	=	pictures on the packaging	
X_3	=	shapeon packaging	
X_4	=	coloron packaging	
X_5	=	label on the packaging	
β_0	=	Constanta	
$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$	=	coefficient	
ϵ	=	term of error	

Table 1. The Result of The Regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.314	1.386		.948	.346
	Merek	.247	.089	.273	2.765	.007
	Gambar	.145	.083	.162	1.738	.086
	Bentuk	.122	.089	.139	1.378	.171
	Warna	.284	.111	.252	2.570	.012
	Label	.082	.089	.076	.923	.358
a. Dependent Variable: Interest						

Source: SPSS v.25

Based on the results of data processed that have been done using the help of SPSS obtained the following results:

$$Y = 1.314 + 0{,}247X_1 + 0{,}145X_2 + 0{,}122X_3 + 0{,}284X_4 + 0{,}082X_5$$

The F test is used to determine the significant effect between brand variables, images, shapes, colors, and packaging labels together with the bound variables, i.e. buying interest.

Table 2. F-test

Model		Sum of Squares	df	Mean Square	F	Sig.
ANOVA[a]						
1	Regression	419.196	5	83.839	19.792	.000[b]
	Residual	398.194	94	4.236		
	Total	817.390	99			
a. Dependent Variable: Minat						
b. Predictors: (Constant), Label, Picture, Brand, Color, Shape						

Source: SPSS v.25

The result of the F test value from the table above is 19.792. Because F-stat> F-table (19.792 > 2.311) and the sign value. 0.000 < 0.05 then H_0 rejected and H_a accepted, this means that the brand factors, images, shapes, colors and labels on the packaging jointly affect the buying interest.

To find out which packaging attributes most influence the consumer's buying interest can be seen from the magnitude coefficient of multiple regression equations. Significant double regression equation coefficient (level of significant 5%) and is most impacting the buying interest of consumers.

Table 3. The Summary of Regression

Number	Variable	Coefficient	Sig.
1.	Barnd on packaging	0.247	0.007
2.	Pictureon packaging	0.145	0.086
3.	Shapeon packaging	0.122	0.171
4.	Color on packaging	0.284	0.012
5.	Label on packaging	0.082	0.358

Source: data processed

According to the table, it can be seen that there are only 2 (two) significant packaging attributes; namely the brand on packaging and color packaging. Then the packaging attribute that has the greatest impact on consumer buying interest is the packaging color attribute.

The value of R^2 or coefficient of determination is used to know how much effect a variable Y can describe by variable X. As for the results obtained with the help of SPSS program as follows:

Table 4. R-squared

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Model Summary				
1	.716[a]	.513	.487	2.058
a. Predictors: (Constant), Label, Gambar, Merek, Warna , Bentuk				

Source: SPSS v.25

The results of the analysis show coefficient of determination (R^2) of 0.487 = 48.7%. This can be said that the buying interest together can be described as brand variables on the packaging, drawing on the packaging, packaging form, color packaging, and packaging labels amounting to 48.7%, while the remaining 51.3% are described by other variables outside the study.

IV. Discussion

Based on the results of the average respondent's perception score against Indomie packaging attributes, it is known that respondents have a good perception of Indomie packaging attributes.

Table 5. Average Respondent Answer for Packaging Attributes

Packaging Attributes	Average Respondent Answer Score
Shapeon packaging	3.66
Coloron packaging	3.64
Label on packaging	3.55
Brandon packaging	3.39
Pictureon packaging	3.32

Source: data processed

From the results of the analysis is also known that the form of packaging has the highest score, this shows that the form of Indomie packaging is considered best by the respondent. This can be caused by creating visual appeal, ease of use, ease of carrying and ease of use for consumers have been achieved. Whereas the image attributes on the packaging have the lowest score, this indicates that the respondent looked at there is still a deficiency in the image attribute on the packaging. However, the average value of the respondent's answering score still indicates that the image attributes on the packaging are in good enough criteria.

Based on the outcome of the average interest rate analysis of respondents to Indomie products, it is knowable: the average buying interest score of all respondents to Indomie is 3.42. This means the interest of respondents to buy Indomie is said to be good. The average table of interest rate buys respondents by gender.

Table 6. Average of Score Respondent for Gender

Gender	Average Respondent Answer Score
Male	3.48
Female	3.35

Source: data processed

The average purchase interest rate for male respondents was greater than the average buying interest of female respondents. This means that the interest in buying male respondents is higher than that of female respondents. Table averages the respondents' buying interest score by age.

Table 7. Average of Score Respondent for Age

Age	Average Respondent Answer Score
21 – 25 years old	3.48
≤ 20 years old	3.38
> 25 years old	3.00

Source: data processed

From the average outcome of a buy interest rate based on the respondent's age, it is known that respondents over the age of 21 – 25 years have the most average score.

Tabel 8.Average of Score Respondent for Allowance

Allowance per Month	Average Respondent Answer Score
≤ Rp 500,000	3.55
Rp 501,000 - Rp 999,000	3.35
Rp1,000,000	3.10

Source: data processed

From the average outcome of a buy interest score based on the respondent's allowance per month, it is known that respondents with pocket money have the highest average score. This means that the respondent with a monthly allowance is ≤ Rp 500,000.

Hypothesis, which is about the influence of the brand on the packaging, pictures on the packaging, shape packaging, color packaging, and packaging labels together to the interest of buying instant noodles Indomie. Packaging has a noticeable impact on Indomie instant noodle buying interest. To decide in choosing a consumer has various considerations and consideration can be more than one factor. And the packaging is also a consumer consideration to choose Indomie instant noodle. If it meets the consumer criteria and expectations, it can affect the buying interest of Indomie. It can be seen that these five variables have a positive effect on buying interest. Then it can be concluded if the evaluation (perception) of consumers to the packaging is good, then the interest of buying consumers to Indomie will also be good.

The second problem is the packaging attribute that has the greatest impact on consumers' buy interest in Indomie. In this study, it can be known that there are only 2 (two) attributes that influence the impact of consumers' interest to buy products instant noodle brand Indomie, namely brand on packaging and color packaging. And the attribute of packaging attributes has the greatest impact on Indomie consumer buy interest in packaging color attributes. Color is the most important stimulant for creating visual appeal and attractiveness to customers, and this is a very important part of the design of a package. Color usage is the center of the entire packaging design process (Danger, 1992).

Color is important because it wasan evocative feeling and needn't be debated. First people see the color of the packing first. Shape, appearance, packaged products, all noted later. Colors are vital to sales spontaneously because colors attract customers ' attention and can create sales especially when people only have a little time to mature consideration, that's where colors and packaging are appealing to customers into packaging that sells. (Danger, 1992).

V. Conclusion

From the results of data analysis on the influence of brand variable influence on the packaging, images on the packaging, packaging form, color packaging, and Label on the packaging together against the interest buy, then it can be concluded, the characteristics of respondents who have the interest in buying Indomie highest is the respondent with the following characteristics: Respondents with male gender, respondents who are 21 years-25 years, and respondents who have a monthly allowance $\leq$ Rp. 500,000 ,-. Brand variables on the packaging, images on the packaging, packaging form, color packaging, and labels on packaging jointly affect buying interest significantly. Data analysis results show that the equations of multiple linear regression acquired are $Y = 1.314 + 0.247X_1 + 0.145X_2 + 0.122X_3 + 0.284X_4 + 0.082X_5$. The value obtained from the coefficient of determination (R2) amounted to $0.487 = 48.7\%$. This can be said that the purchase interest together can be described brand variables on the packaging, images on the packaging, packaging form, color packaging, and packaging labels amounted to 48.7%, while remaining 51.3% described by other variables. Based on the magnitude of the value of multiple regression coefficients of the five variables, the significant packaging attribute and the greatest influence on consumer interest are the packaging color attribute.

References

[1].   Azwar, Saifudin, *Metode Penelitian*, Pustaka Pelaja, Yogyakarta, 2004
[2].   Cenadi, Christine Suharto, *Nirmana Jurnal Deskomvis*, www.puslit.petra.ac.id/journals/design, Universitas Kristen Petra Vol.2/ No.2, Juli 2000
[3].   Danger, E.P, *Memilih Warna Kemasan,* PT Pustaka Binaman Pressindo, Jakarta, 1992
[4].   Husein, Umar, *Riset Pemasaran dan Perilaku Konsumen*, PT Gramedia Pustaka Utama, Jakarta, 2002
[5].   Indarmadim. *Dasar-dasar Desain grafis*, www.toekangweb.or.id/07-tips-bentukwarna1.html
[6].   Kotler, Philip, Seew Meng Leong and Cheng Tiong Tan, *Marketing Management* Prentice Hall, 1996
[7].   Kotler, Philip, Manajemen *Pemasaran: Analisis, Perencanaan, Implementasi dan Kontrol* (Edisi revisi), Erlangga, Jakarta,1997
[8].   Kotler, Philip,. *Manajemen Pemasaran* (Marketing Management), Prentice Hall, 2000
[9].   Kotler, Philip,. *Manajemen Pemasaran* (Marketing Management), Prentice Hall, 2001
[10].   Neumier, Marty, *The Brand Gap, How to Bridge the Distance between Business Strategy and Design*. Edisi Pertama, New Riders. Januari 2003.