

# Packaging as an Attractive Language to Stimulate Consumer Preference on Perfume: A Survey on Young Adult Respondents in the Area of Jabodetabek (Jakarta, Bogor, Depok, Tangerang, Bekasi) Indonesia

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**Abstract-** Indonesia is one of the biggest exporters of perfume raw materials to the world. However the local industry of perfume cannot compete with international imported brand. This journal research is supposed to find out the role of packaging on consumer preference on perfume, and was conducted in the area of Jakarta, Bogor, Depok, Tangerang and Bekasi (Jabodetabek) by spreading the questionnaire with the utilization of electronic mail and conventional way. From this research, relationship between independent variables (design, color and innovation, information specified and material used) towards dependent variable (consumer preference) was found and can be conclude that packaging has an important role to increase purchase decision of perfume, not for women only but also for men in young adult. Therefore, by paying more attention to perfume packaging, opportunity to increase sales of perfume that targeting young adult consumer will be higher.

**Index term-** Color and Innovation, Consumer preference, Design, Information specified, and Material used.

## 1. Introduction

Packaging is a serious issue nowadays because it can influence buying decision of consumer until 74% (Harminingtyas, 2013). Previously, people perceived “the cover” or commonly known as the packaging as only for the sake to protect the product it wrapped from damage and hazardous materials, but its function now had evolved as the marketing tools (Silayoi & Speece, 2007). One product could have mirror characteristics with its competitors, but the thing that can differentiate them is the packaging (Grundvåg & Østli, 2009).

According to Schulz (2003), the best way to have a communication with the consumer is through packaging. There is some information attached in the packaging to communicate the consumers what the products stands for. Consumers buy perfume not only for making them smell good, but also there is a tendency of people to keep the bottle of their perfume as a collection mostly for the decorative and commercial ones (Husfloen, 2009).

Speaking of perfume, Indonesia as a big country has a huge ability to make a world-class perfume as one of prime industries that can compete with other world well-known perfume makers. Indonesia has huge number of natural resources for making perfume, such as patchouli essential oil which is a the most important ingredient in the process of making perfume (Suhendra, 2009). More importantly, competing with China, India, and Brazils, Indonesia’s export of this particular oil can reach ninety percent (90%) of the total production, reaching the number of USD42.185.294,00 in 2004 (Tresnasih, 2011). Since the packaging can influence the consumer to make a purchase up to 74% summed up with the fact the Indonesia has huge number of exported patchouli essential oil to abroad to be produced as perfume, this excites the authors to help the local perfume producers to be able to win the local market through packaging. Therefore, this journal research would like to find out what are the factors of the packaging that consumers like for the packaging of perfume.

This research journal will contain the literature review that discuss about the importance of packaging and the things contains in the packaging, which makes packaging become unique factor for marketing and how the influence of this packaging related with consumer behavior and preferences. This journal will contain of the data and quantitative methodology which will help the writer to support the analysis about the relationship between the packaging and consumer preference since the first time they see the product from its packaging.

## II. Literature Review

In the eyes of people, the first thing they will see when they are looking around for something is the outer appearances of a product. This outer appearance is the packaging, which wraps the product and has main function to hold and protect the product (Kotler & Gary, 2008). In recent days, packaging holds even more responsibility as one of marketing tools in marketing mix. In the era when consumers have many varieties of product to choose, packaging is becoming the communication language that are attracting consumer to making purchase decision through it (Keegan & Green, 2012).

### 2.1 An overview of perfume and its packaging

Packaging in its marketing roles can gain people awareness and recognition which give the class differentiation of the product and the competitors, create reinforce favorable attitude toward the product, encourage the willing of people to purchase and occasionally increase the amount of purchase (Ampuero & Vila, 2006).

### 2.2 Variables that are contained in the packaging

As promotional tools, design, color and innovation, information specified and material used are several major ingredients that can lead to the successful and effective packaging.

#### 2.2.1 Design of Packaging

This visible language communicates thoughts and information through human sights (Carter, Day, & Meggs, 2007). A good design should be able to give additional value to the product. Marketers should manage the design process in packaging because it shows professionalism of the product and sets its target (Design Council, 2013).

#### 2.2.2 Color and Innovation of Packaging

According to Raisanen (2010), some specific color remind consumer to specific brand. So, in choosing color for packaging of product, company should prefer to what color can stimulate consumer to sophisticated experiences which people usually attracted to. Together with color, Innovation is the change and development of new product and services which supposed to fulfill the unmet or unknown need of consumer that have not been found by product or service before (Brand Packaging, 2013). As a great and innovative packaging, packaging should results in higher sales, multifunctional, durable and efficient because people respect more value in every purchase (Lockman, 2012).

#### 2.2.3 Information specified on Packaging

Packaging typically has three information which are; first, guidance how to use the product which tell the consumer the instruction of usage. Second is legal recruitments such as official label and environmental friendly and other symbols which proving the product is meet regulatory rules. The third information is about the net weight of the contain (Stewart, 2004).

#### 2.2.4 Material used

Paper box, and crystal bottle often used as elegant perfume packaging. Considering about the function of packaging as the protector of the product, high quality, performance and functionality are the requirement for the material used in order to influence consumer purchase decision (Deliya & Parmar, 2012).

### 2.3 Consumer Preference

In International Communications Research, consumer preference is defined as "The power or ability to choose one thing over another with the anticipation that the choice will result in greater satisfaction, greater capability or improved performance." (53 West Baltimore Pike). In order to understand the preference and the function of it; the desire emotive outcomes and primary assumption that influence consumer to make purchase are what important here as well as consumer behavior.

### 2.4 Hypothesis

- H1: There is a relationship between Consumer Preference and packaging design
- H2: There is a relationship between Consumer Preference and packaging color and innovation.
- H3: There is a relationship between Consumer Preference and packaging information specified
- H4: There is a relationship between Consumer Preference and packaging material used

## III. Methodology

### 3.1 Sampling

The targeted population of this research journal consisted of young adult in Jabodetabek who use perfume on daily basis and praise the aesthetic of the packaging of perfume. The unit analysis was end consumers. In gathering the data through spreading questionnaires, the researchers were using non-probability sampling method. The researchers combined several branches of non-probability sampling method, which were judgmental sample and snowball sample.

Those two method samplings were combined because they were suitable and supported this research journal. The respondents required were selective limited to people who use perfume from limited age, therefore judgmental sampling was chosen because it can eradicate people who did not meet the criterions. Since the number of the population is unknown, according to (VanVoorhis & Morgan, n.d), the sample size suggested can be determined by Statistical Rule of Thumbs where the number of respondent can be got using this formula;  $N > 50 + 8m$  where N is the respondents and m is the number of questions in variable. Here are 16 questions so,  $50 + 8(16) = 178$ . Based on this formula, the number of sample size is rounded up to 300 respondents to overcome response error as well. The socio-demographic information of the respondents could be seen in table 1.1.

## 1.2 Data Collection

To gather the data, it was approximately needed six weeks started from October until November of 2013 with the utilization of electronic mail and conventional way, which Authors spread questionnaire directly to the respondents. In the process, there were no incentives given to the correspondents.

The data were measured by using likert scale from one to five with five as strongly agree, four as agree, three as moderate, two as disagree, and one as strongly disagree. This is how to measure how big the influence of the variables following: design, color and innovation, size, and material used of packaging towards the consumers' preference. In making the questionnaire, the researchers relied in several sources like online journal, neither English nor Bahasa Indonesia and also from online survey.

## 3.3 Measures

### 3.3.1 Validity

To check the validity of data, the researchers must check the data convergent and data divergent. Data convergent is when two same likely questions have the same answer and data divergent is when two conflicting questions have conflicting result (Survey Method Blog, 2011). Factor Analysis is a method to reducing and removing the redundancy or the variable which actually duplicate from another variable. These factors will become relatively independent from each other (Mayer, 2006).

### 3.3.2 Reliability

Reliability is processes to check whether the questions that are being asked are reliable or not. Since the data gathered was five hundred in total the result of Cronbach's alpha must show at least 0.6 to state if the questions are valid and reliable to be asked and can be used for further process (Sekaran & Bougie, 2013).

### 3.3.3 Multiple Regressions

Multiple Regressions is a statistical method used to measure the values of the independent variables toward dependent variable.

### 3.3.4 F-Test and T-Test

F-test is used to show if the independent variable can give significant influence to dependent variable (Levigne, 2004). T-Test is used to find out whether individually independent variable influences the dependent variable Invalid source specified.

## IV. Implication and Discussion

### 4.1 Data Analysis

Before running the statistic data analysis and multiple regression, KMO and communalities test should be conducted before. Here are the result for both independent and dependent variables.

#### 4.1.1 Kaiser-Meyer-Olkin Test

KMO test tells whether the sample size used for the research is enough or not to covered the questions in the variable. If the KMO is greater 0.5, it means the sample size used for this research is enough for factor analysis and reliability. The significant of Barlett's test should be less than 0.05 in order to prove null hypothesis as stated are correct. In this result the KMO value is 0.771 and barlett's value is 0.00 which means that the factor model is appropriate for further analysis process. KMO Test result for Four Independent Variables and Dependent Variable could be seen in the table 1.2.

#### 4.1.2 Communalities

Communalities test is used to test whether the questions for the variable is sufficient to explain the variable itself. Value of communalities of each questions must be greater than 0.5, and from the table above shows that the value of communalities is all greater than 0.5. Therefore, the variable is highly represented by the questions.

#### 4.1.3 Total Variance Explained

The Variance is to explain the eigenvalue of the factors. That eigenvalue itself having a relation with the number of variables. SPSS extract only total value more than 1.0, because if the total value less than 1.0 it means the contribution of the variance is not sufficient or it causing redundancy. From the figure 1.3, the variables is explained with strong relationship as 64.7% and can be extracted because the total value is greater than 1.0.

## 4.2 Factor Loading and Cronbach Alpha

To see the close relationship between the questions in the same group variable, Cronbach Alpha is used as the standard measurement. As high the result, it means the relationship is measuring real parts to form something as a whole. The value of Chronbach Alfa and Loading factors in rotated component matrix is all above 0.6, showing close relationship between the questions in variables.

## 4.3 Multiple Regression

As stated before in chapter 3, Multiple regression is used to measure the value created from independent to dependent variable. However, before Multiple regression executed, the data should passed three Classical Assumptions.

### 4.3.1 Normality

To ensure that the inferences of F-test and T-test are valid, the distribution of residuals should follow a normal distribution. Second measurement is called as normal probability plot. Without the exact calculation, the assumption of normal probability plot must supported the normal distribution of residuals by the plot point close to the straight line from which is drawn from the lower left to the upper right of the graph.

### 4.3.2 Heterocedasticity

The residuals scatterplots are spread randomly above and under zero line which means the data have no heterocedasticity problem. Heterocedasticity can make the statistical test of significant become invalid. Since there is no heterocedasticity, the next process need to be done is the multiple regression.

### 4.3.3 Multicollinearity

Multicollinearity is a correlation between all independent variables. It makes difficulty in the process of making inferences and multiple regression. There is a strong relationship between independent and dependent variables if the value of tolerance close to 1 and the VIF should be around 1.

The values of all VIFs are around 1 which means the independent and dependent variable have strong relationship. The significant interval on the table shows the significant possibility of the independent variable in influencing the dependent variable. Looking at the numbers constanta of the variables, those numbers are all positive, means that those four variables giving positive impact toward the dependent variables.

From the variables that shows in the coefficient table 1.4, started from design, color and innovation, information specified and material used, all have the significance below  $>.005$  which means that all of these variables has a really strong affect to the consumer preference.

### 4.3.4 F-test and T-Test

F-test or simultaneous test which used to check whether all the independent variable simultaneously influence the dependent variable. The requirement is P-value or the significant of the variables must be less than 0.05. With this result of significant, the hypothesis stated before is accepted. The F-test result could be seen in table 1.5. T-test is used to test whether partially of each independent variables are influenced the dependent variable. The requirement is that the significance in Coefficient Table 1.4 is less than 0.05 means each independent variable strongly influenced dependent variable.

### 4.3.6 Adjusted R-square Table

Table 1.6 shows the relationship between all the independent variables's portion contributed for dependent variable. In Multiple regression, the percentage shown by Adjusted R-square. The value is 0.415 which means all the independent variables (design, color and innovation, information specified, material used) contributed 41,5% to dependent variable (consumer preferences).

## V. Conclusion and Recommendation

### 5.1 Conclusion

Hypothesis  $H_1$ ,  $H_2$ ,  $H_3$ , and  $H_4$  are focussing on the factors that affecting why packaging can attract consumer preferences. The variables are design, color and innovation, information specified, and material used. To prove that the research result is supporting the variables, as mentioned before, the T-test values should be less than 0.05.

According to the result of the T-Test, Authors came to the conclusion of hypothesis. With the significance about .00, all the hypothesis is accepted. As the result in R-square table, the percentage of overall variables is influencing 41.5% of consumer preferences. It means, in buying a perfume, consumer's decision on preferences is 41.5% influencing by the packaging meanwhile the rest 58.5% is influnced by other factors (it could be original fragrance, brand, etc).

## 5.2 Recommendation

The result of this research is proving that the packaging takes 41.5% of 100% consumer preferences toward perfume packaging. Considering there are still many factors outside this model that influencing consumer buying decision towards perfume (such as fragrance, brand, etc), this result is giving quite strong influences. Therefore, to the local perfume producer, here are some future recommendation that can be applied to secure the 41.5% opportunity of increasing the sales of perfume.

First, man and woman young adult who use perfume are considering the design, color and innovation, material used, and information specified. Authors recommend that the design of perfume should adjust with the gender of the user. If the target user is women make sure to have elegant and feminine packaging. while for men, the packaging should give masculine impression.

Second, the opportunity to make sales of perfume that targeting young adult consumer is high. Therefore, if local perfume producer is targeting young adult consumer which mostly student, price is need to be considered because their income and allowance is not so high. The producer can set cheaper price for the perfume, but the packaging should not give poor impression. The packaging should be nice in order to build competitive advantages for local perfume producer. Especially in this research location which covered Jakarta, Bogor, Depok, Tangerang, and Bekasi, the most populated cities in Indonesia.

Compare to the one research of role of packaging on consumer behavior in Patan district, Western India by Deliya and Palmar (2012), it is also stated that packaging contribute 50.7% of consumer buying decision for any product and commodity. In this research, for only perfume product, packaging contribute 41.5%, and it is not far from what was established by Deliya and Palmar. Based on this discovery, the authors believe that Packaging contribute stable influence of customer preference. Therefore, the authors strongly suggested to local perfume producer to take care better of the packaging because it must bring significant progress on the sales.

## References

- Ampuero, O., & Vila, N. (2006). *Consumer Perception of Product Packaging*. Spain: Emerald Group Publishing Limited.
- Brand Packaging. (2013 йил 20-May). *Articles: Study Expands Innovation's Definition in Packaging Industry*. Retrieved 2013 йил 20-October from Brand Packaging: <http://www.brandpackaging.com>
- Castilo, J. (2009 йил September). Retrieved 2013 йил 17-October from Explorable: <http://www.explorable.com>
- Carter, R., Day, B., & Meggs, P. (2007). *Form and Communication*. In *Typographic Design*. United States of America: John Wiley and Sons Inc.
- DC Velocity Staff. (2013 йил 3-September). *Packaging: from cost center to competitive advantage*. Retrieved 2013 йил 20-october from DC Velocity: <http://www.dcelocity.com>
- Deliya, M., & Parmar, B. (2012). *Role of Packaging on Consumer Buying Behavior*. Patan District: Global Journal of Management and Business Research .
- Design Council. (2013). *About Design: The Power Of Packaging Design*. Retrieved 2013 йил 20-October from Design Council: <http://www.designcouncil.com>
- DS Smith Packaging. (2013 йил 1-august). *Design and Innovation*. Retrieved 2013 йил sunday-october from DS Smith Packaging: <http://www.dssmithpackagingeurope.com>
- Gobé, M. (2005). *Emotional branding: paradigma baru untuk menghubungkan merek dengan pelanggan*. (B. Mahendra, Trans.) Jakarta: Erlangga.
- Grundvåg, G. S., & Østli, J. (2009). Consumer evaluation of unbranded and unlabelled food products: The case of bacalhau. , *European Journal of Marketing*, 43.
- Husfloen, K. (2009). *Antique Trader Perfume Bottles Price Guide*. United States of America: Krause Publications.
- Hair Jr, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis 7th Edition*. Pearson Prentice Hall.
- Harminingtyas, R. (2013). Analisis Fungsi Kemasan Produk Melalui Model View Dan Pengaruhnya Terhadap Keputusan Pembelian Konsumen Pada Produk Rokok Kretek Merek Dji Sam Soe Di Kota Semarang . *Jurnal STIE Semarang* , 5 (2), 3.
- How Can Packaging Increase Sales*. (2013, January 2). Retrieved October 14, 2013, from Business Marketing Press: <http://www.businessmarketingpress.com>
- Keegan, W. J., & Green, M. (2012). In P. Policy, *Global Marketing*. New Jersey: Pearson Prentice Hall.
- Kotler, P., & Gary, A. (2008). *Consumer Markets and Consumer Buyer Behavior*. In *Principles of Marketing 12th Edition*. United States of America: Pearson Prentice Hall.
- Ksenia, P. (2013). *Packaging Design as a Marketing Tool and Desire to Purchase*.
- Levigne, D. M. (2004). In *Statistic for Managers Using Microsoft Excel*. New York: McGraw Hill.
- Lockman, J. (2012 йил 2012-November). *Creative Packaging Design: Live Creatively*. Retrieved 2013 йил 20-October from M-Theory: <http://www.mogultheory.com>
- Mayer, E. G. (2006). *Factor Analysis 1. Statistical in Psychosocial Research* .
- Market Research Group, LLC. (2004). *Convenience Foods Packaging and Serving Size Trends, Volume 3 in the Series, The U.S. Market for Convenience Foods. Packaging Facts* .
- Peter, P. J., & Olson, J. C. (2005). *Consumer Behavior and Product Strategy*. In *Consumer Behavior and Marketing Strategy*. New York: McGraw Hill.

Polyakova, K. (2013). *Packaging design as a Marketing tool and Desire to purchase*. Saimaa University of Applied Sciences, Faculty of Business Administration, Lappeenranta. <http://www.Publications.Theseus.Fi>.

Suhendra. (2009, 10 26). *Pemasok 90% Bahan Baku Dunia, Tapi RI Masih Impor Parfum*. Retrieved 10 14, 2013, from detikFinance : <http://www.finance.detik.com>

Sekaran, U., & Bougie, R. (2013). *Research Method for Business* (6th Edition ed.). Italy: John Wiley.

Silayoi, P., & Speece, M. (2007). *The Importance of Packaging Attributes: A Conjoint Analysis Approach*. European Journal of Marketing.

Stewart, B. (2004). In *Packaging Design Strategies Second Edition*. United Kingdom: Pira International Ltd.

Rundh, B. (2009). *Packaging Design Creating Competitive Advantage with Product Packaging* .

Tresnasih, W. (2011). *Pemanfaatan Methylobacterium spp. untuk meningkatkan pertumbuhan bibit tanaman nilam (Pogostemon cablin Benth.) dalam kultur in vitro*. Thesis , Institut Pertanian Bogor, Fakultas Pertanian.

VanVoorhis, C., & Morgan, B. (n.d). What Authors Don't Want to Forget About Sample Sizes. *Statistical Rule of Thumbs* . (2011 йил 6-November). Retrieved 2013 йил 10-October from Survey Method Blog : <http://www.blog.surveymethods.com>

53 Authorst Baltimore Pike. (n.d.). Developing Consumer Insight: The Determination of Consumer Preference. *International Communications Research* .

**Notes:**

**Table 1.1**

	N	%	Income		Occupation			
Gender			1,000 k -	205	68.7	Student	189	83
Female	139	46.3	2,000 K			Employee	54	18
Male	161	53.7	2,000 K -	64	21.3	Entrepreneur	17	5.7
Total	300	100	5,000 K			Professional	18	6
Age			5,000 K -	-		Housewife	8	2.7
20-30	300	100	10,000 K			Others	14	4.6
Total	300	100	> 10,000 K	30	10	Total	300	100
			Total	300	100			

**Table 1.2**

KMO Dependet Variable Sig	.771
KMO Independent Variable Sig	.683

**Table 1.3**Total Variance Explained

Extraction Sums of Squared Loadings (Total)	Rotation Sums of Squared Loadings (Cumulative %)
<b>1.131</b>	<b>64.778</b>

**Table 1.4**

**Coefficients<sup>a</sup>**

Model	Sig
1 (Constant)	-.892
AVERAGE D	.000
AVERAGE C I	.000
AVERAGE IS	.002
AVERAGE M	.000

Dependent variable: AVERAGE Y

**Table 1.5**

**Annova<sup>a</sup>**

Model	F	Sig
1. Regression	54.226	.000 <sup>b</sup>
Residual		
Total		

a. Dependent Variable: AVERAGE CONSUMER PREFERENCE

b. Predictors: (Constant), AVERAGE MATERIAL USED, AVERAGE INFORMATION SPECIFIED, AVERAGE DESIGN, AVERAGE COLOR AND INNOVATION

**Table 1.6**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimated	Change Statistics				
					R Square Change	F Change	Df 1	Df 2	Sig. F Change
1	.650 <sup>a</sup>	.423	.415	.52094	.423	54.226	4	296	.000

a. Predictors: (Constant), AVERAGE MATERIAL USED, AVERAGE INFORMATION SPECIFIED, AVERAGE DESIGN, AVERAGE COLOR AND INNOVATION

b. Dependent Variable: AVERAGE CONSUMER PREFERENCE