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Influence of Packaging Element on Beverage Product Marketing

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ABSTRACT

This research aims to discover the influence of packaging elements on consumers purchase intention towards beverage products that use polyethylene terephthalate bottles. The conceptual framework of the study was developed based on various previous studies, which divide the packaging into visual and verbal variables. There are three methods to rate product packaging (image tests, usage test, and visibility tests). The results show that the model generated is only able to explain 39.2% of the variance. The visual element of packaging is the most significant influence on consumers purchase intention. There are two significant indicators that influence the visual variable (bottles with different colours and shape attractiveness), and shape distinctiveness is the indicator that best describes the visual variable.

Keywords: Beverage Products, Informational Packaging, Polyethylene Terephthalate Package Bottle, Verbal Elements, Visual Appearance, Visual Packaging
JEL Classifications: M110, M310, M370

1. INTRODUCTION

Nowadays, the market for various beverage products is growing due to the increase in consumers' awareness of quality food products. Besides, lifestyle changes that emphasize practicality and simplicity are increasing the demand for these products. Packaging plays an important role in these kinds of products and cannot be separated from them.

The main function of food packaging is to protect products from damage and external influences, facilitate the products' transportation, and provide information about the food's components and the nutrients that it contains (Coles et al., 2003). Other functions of packaging are traceability, convenience, and tamper indication (Marsh and Bugusu, 2007). Along with the increase in the competition in the food industry, various additional functions have been developed and even been used as organizational marketing strategies (Coles et al., 2003).

There are some fundamental reasons for the importance of package as a component of marketing strategy. Underwood (2003), Ampuero and Vila (2006) stated that with the increase in the number of similar products and brands on the market, companies need to differentiate their products. Accordingly, a different/unique packaging design is the best way to attract consumer attention (Bloch, 1995). The other reason is that consumers have limited shopping time, so the decision to buy a particular product is often made at the time of purchase (Silayoi and Speece, 2004). Wells et al. (2007) stated that 73% of consumers rely on the packaging design to help them to purchase products, and it is becoming important for quick product recognition. Cost limitations are another reason, and marketing communication such as advertising has started to become obsolete; thus, the role of packaging is shifting from "protecting what is sold" to "selling what is protected" (Prendergast and Pitt, 1996).

Many studies of packaging's role as a component of marketing strategy have been conducted by researchers, concerning topics

such as packaging's role in logistics and marketing (Prendergast and Pitt, 1996); packaging as a positioning tool (Ampuero and Vila, 2006); packaging design for segmentation purposes (Silayoi and Speece, 2007); packaging as brand communication and identity (Nancarrow et al., 1998; Underwood et al., 2001; Orth and Malkewitz, 2008); and packaging's role in product purchase decisions (Silayoi and Speece, 2004; Koutsimanis et al., 2012).

In various packaging research, attributes have been developed that describe its characteristics. Ampuero and Villa (2006) used many alternatives of color, typography, shape, and picture to determine the exact packaging design for consumer positioning purposes. Underwood et al. (2001) reviewed product packaging pictures in relation to the attention paid to the brand. Rettie and Brewer (2000) used verbal and visual elements to understand the effect of packaging design on brand laterality. Orth and Malkewitz (2006) separated packaging into holistic components (holistic package design) to create brand identity. These holistic components were used by Orth and Malkewitz (2008) to determine the consumer brand impression. Generic package design factors were used by Orth et al. (2010) to understand the consumer expectation of the product price. In studies of packaging's influence on the decision to purchase products, attributes such as the price, shelf life, size of container, disposal method, material, integrity, and fruit stem (Koutsimanis et al., 2012), packaging elements of general FMCG products (Silayoi and Speece, 2004), figure and color (Schoorman and Robben, 1997), packaging form, product information, packaging technology, and graphic layout have been developed (Silayoi and Speece, 2007).

The research objects in those studies also differed. Schoorman and Robben (1997) used coffee packaging to understand packaging's influence on purchase decisions. Underwood et al. (2001) used objects such as candy, bacon, and margarine packages. Rettie and Brewer (2000) used cookie and cake packaging as research objects. To understand the formation of the purpose of brand identity and consumer brand impression, Orth and Malkewitz (2006; 2008), Orth et al. (2010) used wine bottle packages as an object. Koutsimanis et al. (2012) investigated the packaging design of fresh fruit, and Silayoi and Speece (2004) investigated general FMCG and instant curry packaging (Silayoi and Speece, 2007).

These earlier studies show that research specifically discussing packaging elements' influence on consumer purchase decisions regarding beverage products is still limited.

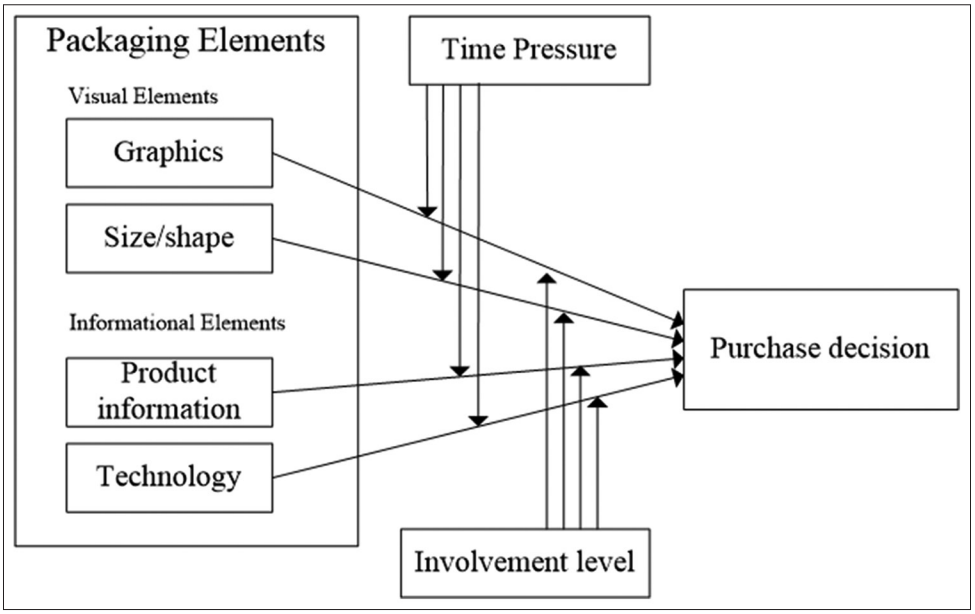
2. CONCEPTUAL BACKGROUND

Silayoi and Speece (2004) developed a conceptual model of packaging elements' role in purchase decisions in bounded and time-pressured conditions (Figure 1). This model was developed from the qualitative approach of a focus group discussion. This model needs to be studied further, especially in relation to beverage products.

In this model, the packaging is composed of two main components, namely the visual and informational elements. The visual elements consist of graphic elements – the packaging shape and size – and the informational element consists of product and packaging technology information. Each component has a different role in the purchase decision process.

According to the preliminary studies of beverage products in polyethylene terephthalate (PET) bottles, packaging consists of a bottle (included a cap) and a label. Packaging attributes are developed based on these components: shape and color for the bottle component and graphic (layout, color combination, typography, picture) and product information (brand, ingredient composition, net weight, name and address of the producer/importer, expiry date, production code, follow-up of product/packaging) for the label component. Information related to

Figure 1: Conceptual model on packaging elements and purchase decision



Source: Silayoi and Speece, 2004

packaging technology (Silayoi and Speece, 2004; 2007) on beverage products using PET bottles is not listed. Hence, these attributes are more precisely classified as verbal and visual elements (Rettie and Brewer, 2000).

There are three methods to rate product packaging, namely image tests, usage tests, and visibility tests (Schwartz, 1971 in Rettie and Brewer, 2000). This research uses qualitative and quantitative image tests to evaluate consumer behavior and preferences as well as messages delivered to the consumers.

Studies concerning the purchase decision have been undertaken by previous researchers. Zeithaml (1988) and Holmes and Paswan (2012) used the term "intention to purchase," while Silayoi and Speece (2004) and Koutsimanis et al. (2012) used the term "purchase decision." According to Bloch (1995), the purchase decision and intention to purchase can be categorized as behavioral responses. There are two stages in the decision-making process related to packaging products (Murphy 1997 in Holmes and Paswan, 2012). In the earlier stage, the packaging design plays an important role in the initial decision to inspect products further. After the consumer has examined them, the further role of packaging is to encourage consumers to select the product and to lead to higher intentions to purchase. The product selection process is a decision-making process that could be described as a mental orientation characterizing consumers' approach to making a choice (Lysonski et al., 1996 in Silayoi and Speece, 2004). This approach to the decision-making process is cognitively and affectively oriented (visual element). Based on these descriptions, a research model was designed (Figure 2) and variable attributes were developed (Table 1). This research aims to discover the influence of packaging elements on consumers' intention to purchase beverage products that use PET bottles.

3. MATERIALS AND METHODS

Explanatory research explains the relationship or influence between two or more variables. The research object, in this case, is beverage products in PET bottles. The research subjects were students of the Technology and Management of Packaging class.

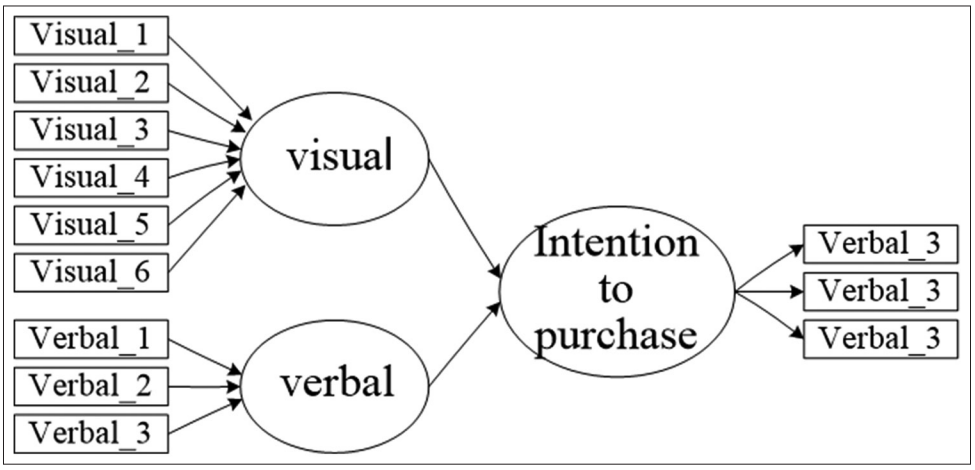
The data collection was performed in April 2015 using questionnaires, which consisted of two parts: questions about the respondents' personal data and research topic questions (Table 1). The respondents' personal data were specifically gender, age, purchased beverage products, and monthly purchased beverage products. Beverage products were categorized into six types: Juice, tea, carbonated drinks, energy drinks, mineral water, and coffee–milk.

The evaluation was performed by giving an X to figures that showed an assessment based on a Likert scale (1 = strongly

Table 1: Research variables

Variable	Indicator	Descriptions
Visual	Translucent bottle	Translucent bottle makes it easier to see the contents inside.
	Bottles with different colors	Different colors make it easier to choose products.
	Label graphics	Label graphics (layout, color combination, typography and picture) of product.
	Shape distinctiveness	Distinct bottle shape makes it easier to identify products.
	Shape attractiveness	Attractive bottle shape shows the image of products quality.
	Easiness to held	Ergonomic bottle shape.
Verbal	Easiness to read	Easy to read product information on label.
	Information comprehensiveness	Comprehensive product minimal information (Indonesian Government Regulation No. 69-1999).
	Quality assurance information	Information of implemented quality assurance.
Intention to purchase	Searching for information	Searching for further information.
	Interested to try	Interested to try.
	Purchase consideration	Considering to purchase the product.

Figure 2: Research model



disagree, 5 = strongly agree). The data analysis was conducted using the online generalized structured component analysis (GSCA) regression method application at www.sem-gesca.org.

4. RESULTS AND DISCUSSION

A total of 86 respondents were obtained, consisting of 38 males (44.2%) and 48 females (55.2%) aged 19-22 years. Of these respondents, 78 (90.1%) purchased mineral water with a frequency of 3-120 times/month. The second drink type was coffee–milk beverages, with a frequency of 2-50 times/month, reported by 62 respondents (72.1%). Third was tea, with a frequency of 2-10 times/month, as mentioned by 60 respondents (69.8%). Regarding carbonated drinks and juice, 35 respondents (40.7%) reported purchasing them with a frequency of 1-7 times/month and 1-10 times/month. The least-purchased beverage product was energy drinks, reported by 25 respondents (29.1%), with a frequency of 1-6 times/month.

Based on the mean value of the indicators (Table 2), all the indicator values are >3, which means that most of the respondents had the same opinion about the beverage products. The GSCA analysis results can be classified into three groups: model fit criteria (Table 3), evaluation of the measurement model, and evaluation of the structural model.

There are 3 model fit criteria, namely FIT, AFIT (adjusted FIT), and number of free parameters (NPAR), in this study. FIT showed the total variances from all the variables that can be explained by the model, with the value 0-1. FIT = 0.392, while AFIT = 0.382, which means that FIT = 0.392 < 0.5 and consequently this model is not good enough to examine and explain the phenomenon discussed. NPAR = 17, showing the total estimations of the free parameter, weights, loading, and path coefficient.

This research reviewed the influence of visual and verbal packaging elements on the intention to purchase beverage products. The intention to purchase is influenced by many factors. According to Holmes and Paswan (2012), the intention to purchase is influenced by the expected product quality, packaging ease of use, and packaging ease of handling. Zeithaml (1988) stated that the purchase intention of a product is affected by the quality and price perception. The quality perception, according to Compeau et al. (1998), is the result of consumers' product evaluation, integrating their affective and cognitive response. Szybillo and Jacoby (1974) stated that the quality perception is affected by extrinsic cues and intrinsic cues. Intrinsic cues are physical product characteristics, such as the brand name and packaging (Rigaux-Bricmont, 1982), and extrinsic cues are non-physical products that can be changed without altering the nature of the product (Szybillo and Jacoby, 1974; Richardson et al., 1994), such as the brand name, store name, and price (Teas and Agarwal, 2000).

Table 4 shows for the reliability item of the visual variable a loading factor value of 6 indicators under 0.7, and only one indicator has a value >0.7, which is still acceptable. For the verbal variable, there is an indicator reliability item <0.7, and for the intention to purchase variable, all the indicators >0.7, so these are categorized as good.

There are two significant indicators that influence the visual variable (bottles with different colors and shape attractiveness), and shape distinctiveness is the indicator that best describes the visual variable. Regarding the verbal variable, there is no indicator that affects the variable, while the quality assurance information

Table 2: Mean value of indicators

Variable	Indicator	Mean
Visual	Translucent bottle	4.33
	Bottles with different colors	3.60
	Label graphics	3.33
	Shape distinctiveness	3.90
	Shape attractiveness	3.24
	Easiness to held	4.38
Verbal	Easiness to read	4.12
	Information comprehensiveness	3.80
	Quality assurance information	4.53
Intention to purchase	Searching for information	3.50
	Interested to try	3.65
	Purchase consideration	3.72

Table 3: GSCA analysis result-model fit

Model fit	Value
FIT	0.392
AFIT	0.382
NPAR	17

GSCA: Generalized structured component analysis

Table 4: GSCA analysis result-evaluation of measurement model

Indicator	Weighted		
	Estimate	SE	CR
Visual	**AVE=0.000, Alpha=0.528**		
Translucent bottle	−0.209	0.127	1.65
Bottles with different colours	0.394	0.142	2.77*
Label graphics	0.110	0.165	0.67
Shape distinctiveness	0.206	0.186	1.11
Shape attractiveness	0.729	0.151	4.81*
Easiness to held	−0.006	0.174	0.04
Verbal	**AVE=0.000, Alpha=0.601**		
Easiness to read	0.709	0.529	1.34
Information comprehensiveness	−0.387	0.459	0.84
Quality assurance information	0.774	0.607	1.27
Intention to purchase	**AVE=0.642, Alpha=0.719**		
Searching for information	0.743	0.077	9.61*
Interested to try	0.830	0.032	26.27*
Purchase consideration	0.828	0.043	19.3*

CR*: Significant value at 0.05 level. GSCA: Generalized structured component analysis, SE: Standard error

Table 5: GSCA analysis result-evaluation of structural model

	Path coefficients		
	Estimate	SE	CR
Visual- >purchase intention	0.617	0.084	7.3*
Verbal- >purchase intention	0.249	0.240	1.03

CR*: Significant at 0.05 level. GSCA: Generalized structured component analysis, SE: Standard error

indicator is the best-described verbal variable. All the indicators of the intention to purchase variable affect the variable, and the indicator that best describes this variable interest in trying.

For the evaluation of the structural model (Table 5), the visual variable significantly affects the intention to purchase beverage products. Rusko et al. (2011) stated that visual elements are stronger and more reliable than verbal elements.

From various items in the packaging visual variable, generally there are two main attributes (colors and packaging shape) that are important in the packaging design because they determine the product's visual appearance. The product's visual appearance could affect consumers' product evaluation and product choice (Creusen and Schoormans, 2005). Many studies about products' visual appearance role have been conducted by researchers (Bloch, 1995; Garber, 1995; Garber et al., 2000). The product's appearance also helps consumers to assess the functional, aesthetic, symbolic, and ergonomic aspects (Blijlevens et al., 2009), and Creusen and Schoormans (2005) added another two product visual appearance roles: the attention drawing and categorization functions.

Schoormans and Robben (1997) used color combination and shape to understand the influence of new packaging design on product attention, categorization, and evaluation. Colors affect consumers' ability to recognize products, packaging's ability to deliver messages, novelty, and packaging contracts, which also affect consumers' probability of picking up and purchasing products (Garber et al., 2000). Packaging designs were used by Luo et al. (2012) to discover the suitability perception and product quality perception between visual and affective perceptions using the perceptual matching method. From the description, it can be concluded that visual appearance plays an important role in increasing consumers' purchase intention towards beverage products.

Studies have been carried out by researchers using various objects, but the research on beverage products in PET bottles is still very limited. Many variables need to be studied further to understand consumers' purchase intention regarding beverage products. Further research needs to be conducted with the addition of time pressure and product involvement as moderation variables, as suggested by Silayoi and Speece (2004). Colors and shape are the significant indicators that will determine packaging's visual appearance, and further research needs to be performed to understand their influence on consumers' response based on the conceptual model suggested by Bloch (1995).

5. CONCLUSION

The packaging visual element significantly affects the purchase intention of beverage products in PET bottles. The indicators that influence visual variables are bottles with different colors and shape attractiveness. Shape attractiveness is the indicator that best describes the packaging visual variable. The model generated from this research is only able to explain 39.2% of the variance; the rest is explained by other variables.

Among various items in the packaging visual variable, there are two main attributes (colors and packaging shape) that are important in packaging design, because they determine the product's visual appearance. An effort to increase consumers' purchase intention towards beverage products can be made by improving the packaging's visual appearance.

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