

**How Do Consumers Respond to Different Colours of A Package?
The Case of Local Food Product in Indonesia**

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ABSTRACT

Colour is the key feature in package, particularly in the food industry. This study sets sight on investigating the relationship between consumer responses and package colour of local food products of small enterprises in Indonesia. This study was undertaken by three stages of quantitative approach and was examined by multivariate analysis of variance. We found that consumers have positive perception and preference towards yellow as package colour. We also found that the set of responses has significant effect on package colour, when examined as combined response as well as each of responses individually. It provides package colour discussion, especially on consumer responses in the specific product and region, and contributes to local enterprises marketing improvement.

Keywords: Packaging, Package Colour, Local Food Products, Bakpia, Consumer Response, Multivariate Analysis of Variance

Introduction

Colours are significant feature in a package (Ampuero & Vila, 2006; Ares & Deliza, 2010; Hutchings, 2003; Marshall, Stuart, & Bell, 2006). They trigger the fastest response among packages' features (Swientek, 2001), and have developed into one of the most important visual design elements for package (Farhana, 2012). Separating background colour from the other package elements enables researchers to examine the influence of colour alone (Marshall et al., 2006).

Colour is an important component in the food industry (Deliza, Macfie, & Hedderley, 2003; Hine, 1995; Hutchings, 2003; Piqueras-Fiszman & Spence, 2011). Due to this reason, manufacturers should use food package to attract consumers' attention in order to increase their interest in purchasing the product, and to generate sensory and hedonic expectations that match the products' real characteristics (Ares & Deliza, 2010).

Despite the fact that earlier research considered colour as an influential design element, fewer empirical studies were conducted on colour with marketing implications (Garber, Burke, & Jones, 2000; Kauppinen-Räsänen & Luomala, 2010; Schoormans & Robben, 1997). Colour has been claimed as one of understudied packaging visual cues in scholarly research (Kauppinen-Räsänen, 2014; Orth, Campana, & Malkewitz, 2010). Not a lot of research has examined colour as the major focus of packaging, or studied the relationship between package colour and consumers' product experiences (Garber et al., 2000; Gordon, Finlay, & Watts, 1994; Kauppinen-Räsänen, 2011, 2014; Kauppinen-Räsänen & Luomala, 2010; Schoormans & Robben, 1997).

This study aims at examining the relationship between consumer responses and package colours of a particular local food product called *Bakpia* originally from a specific region (Yogyakarta) in Indonesia. *Bakpia* is a steamed dumpling filled with bean paste and similar to some Chinese dishes. It is a very popular snack in the country. In terms of product excellence and performance, *Bakpia* gets the highest rating compared to other important regional food products such as Geplak, Yangko, Wingko Babat and so on (Nurendah, 2015). *Bakpia*, being a superior snack as well as a top priority for the local government (Nurendah, 2015) is an ideal product to be used in this research. As a market, Indonesia is under-researched. Furthermore, the local food product industry that strengthens countries economy is also under-researched. It offers researchers the opportunity to look at a market populated

by small, local companies that support the economic growth of the region but do not necessarily use the marketing strategies followed by large companies operating in different national markets. Food products are one of the cornerstones of the products/brands in Indonesia. Small companies can be distinguished from larger companies in terms of certain traditional attitudes, such as involving family members as employees or stakeholders. This attitude can at times leave companies completely alone in facing marketing, purchasing, or technological innovation issues (Najib & Kiminami, 2011). As far as packing is concerned, companies seem to pack their productions simply because of functional needs, which makes the product seem unattractive and without any added value to attract consumers. Adding value to packaging could increase the sales and improve company performance in future.

Literature Review

Colour is an inescapable part of human reality and human experience. Colour emerges regularly as a factor in human decision making and conversation (Elliot & Maier, 2014). Different implications of colour may appear due to different meanings given to colours in different contexts. For example, in situations in which competence is evaluated and both positive and negative outcomes are possible, red carries negative meaning. Here, red is associated with the danger of failure and evokes the motivation of avoidance (Elliot & Maier, 2014; Elliot, Maier, Moller, Friedman, & Meinhardt, 2007). On the other hand, in human relationships and in the context of mating, red carries a positive meaning. It is especially associated with a potential mate and facilitates approach-relevant responding (Elliot & Maier, 2014). Reviewing another example from daily life, red is likely to be connected to courage (positive meaning) and to stop/prohibit doing something (negative meaning). The impact of colour can be attributed to a wide range of colour associations in which that particular colour is seen as either as a symbol or a sign.

Regarding emotional responses, colour can be classified into independent, orthogonal dimensions, and correlated closely with the three colour appearance attributes: hue (corresponding to the warm/cool response), lightness (heavy/light), and chroma (active/passive). The fourth attribute is

related to liking and has been called colour preference by some researchers (Gollety & Guichard, 2011).

Colour is presumed to be used in shaping image/personality and facilitating reflexive purchase behaviour (Hynes, 2009). For example, in relation to purchase intention toward products, male consumers have been shown to perceive greater savings when product prices are presented in red rather than black (Puccinelli, Chandrashekar, Grewal, & Suri, 2013). Consumers also desire that the product's colour matches its intended use or purpose. Specifically, consumers prefer blue for products that are functional or associated with water, and red for products that are luxury items or are associated with status, such as sports cars (Bottomley & Doyle, 2006; Hanss & Böhm, 2012). Consumers learn colour associations, which lead them to prefer certain colours for various product categories (Grossman & Wisenblit, 1999).

Colour acts as integral aspect of logos and product packaging (e.g., red for Coca Cola red, blue for IBM blue, purple for Cadbury and so on) (Hynes, 2009), and functions as the most important part in a package beside shape. Colour and shape significantly affect consumers' association, expected liking, and willingness to purchase (Ares & Deliza, 2010). A recent study about the impact of product's packaging colour on customer's buying preferences under time pressure revealed that the buying preference of a customer is relatively more dependent on the colour scheme than on time pressure (Javed & Javed, 2015). Meanwhile, there is a study from Beneke, Mathews, Munthree, and Pillay (2015) that stated income has a significant influence in colour preference for bottled water, with lower income groups preferring cold and warm colours and higher income groups preferring neutral colours. Nevertheless, all packaging elements, including colour and shape, have to be combined in order to attract consumers in their decision making (McNeal & Ji, 2003). A right choice of packaging colour, background image, wrapper design, innovative ideas when imparted to a product's packaging will create a happy feeling in consumers' mind (Ghosh, 2016).

Specifically, in food and beverage industries, package is critical in the handling, storage, and commercialization processes of the product (Ares & Deliza, 2010). It provides food companies the last chance to persuade consumers to buy the product before brand selection (McDaniel & Baker, 1977). Regarding colour as a package element, consumers might use their memory of colour on food package to recall. Some authors studied this function of colour as generating recall for consumers (Garber et al., 2000; Kahneman, 1973; Kauppinen-Räsänen & Luomala, 2010) and defined it as voluntary attention (Kahneman, 1973). Recently, study about impact of package colour and nutrition content labels on consumers' perception by Huang and Lu (2015) argued that once the nutrition content claim (NCC) was presented, food in a blue package with health claims in the NCC (e.g., "light" label) was perceived healthier than food in a red package with regular labels. Similarly, L. K. Lempert and S. A. Glantz (2016) stated that black is visually prominent, placing dark pack elements on a contrasting light background makes them stand out more, and black text on a white background is more prominent than white text on a black background. Moreover, yellow most quickly and effectively seizes and holds consumers' attention and signals warning or danger, while white connotes health and safety. Using black text on a bright contrasting background colour, particularly yellow, attracts consumers' attention to the message. Another study from L. K. Lempert and S. Glantz (2016) about cigarettes stated that package colours were demonstrated to manipulate consumers' brand choices and perceptions of harm, taste, and strength of the cigarettes inside the pack without changing the cigarettes themselves. Furthermore, Greenland (2016) proposed that new brands and variants were not inhibited by the introduction of plain packaging in Australia. After plain packaging, leading brand variant numbers expanded by 9 to 116 and colour variant names increased by 73.6% and became the norm—lighter colours (blue, gold and silver) dominated, perpetuating notions of less harmful cigarettes. Additionally, in most cases, packaging does not relate directly to the necessary ingredients of the product. User and usage imagery attributes can be formed by consumers' experiences and other sources of information. Here, word of mouth functions as the source of information to convey the imagery attributes which are related to the brand and enhance the appeal to the target market (Keller, 1993).

Based on the previous discussions this study attempts to identify the relationship between package colours and consumer responses: colour likeability and colour preference, colour association, word of mouth, perceived quality, and purchase intention. Specifically, the study addresses following questions:

- a. To what extent do consumers' responses towards different colour of packages vary?
- b. How does the relationship between package colour and consumer responses differ when examined together (i.e. colour likeability, colour preferences, colour association, word of mouth, perceived quality, purchase intention) and when they are examined individually?

Data and Method

This study surveyed consumers that had personally purchased and consumed the local food product called Bakpia in at least the last six months. Based on the data of current study, more than 50% of participants that were recruited directly in front of the store came from any city than Yogyakarta, the place where the local product originally comes from. The market therefore while local is at least national or inter-regional rather than restricted to one city.

This study was undertaken in three stages using a quantitative approach. A preliminary study contained questions regarding consumers' preference and likeability of colour. The purpose of this preliminary study was to identify the most prominent colours used as packaging for the food Bakpia in Indonesia. The aim of the next stage was to examine and finalise the instruments and length of questionnaire, by applying multiple Likert-type scale questions. A validity and reliability analysis was conducted in this second stage. The final study zeroed in on the major focus of this study: an investigation of package colours on several consumer responses including colour likeability, colour preference, colour association, word of mouth, perceived quality, and purchase intention, both individually and simultaneously. At this stage, the relationship between consumers' responses and package colours were examined, and a multivariate analysis of variance with several colour treatments (groups) was employed. The choice of colour treatments was blue, yellow, green, and red, as yielded from the previous preliminary study.

Multivariate analysis of variance or MANOVA was applied in order to achieve several outcomes at once. The two main outcomes that we can attain from using MANOVA in this present study are: investigating whether groups (treatments) of different package colour differ along the combination of response variables through multivariate test. At the same time, whether groups differ along the single response variable through tests of between-subjects effects. This current study examines whether these two different relationships result in the same significant effect or not. Different from ANOVA (analysis of variance) that can be used only in situations in which there is one dependent variable (or outcome)/a univariate test, MANOVA is designed to look at several dependent variables (outcomes) simultaneously/a multivariate test. This present study involved some dependent variables (likeability and preference, association, word of mouth, perceived quality, and purchase intention); and groups that consist of four treatments based on package colour blue, yellow, green, and red as independent variables. Multivariate analysis of variance or MANOVA has hardly been used in earlier studies about package colour and its relationship to consumer responses. Regarding package colour, previous studies mostly used only a univariate analysis of variance or ANOVA, or employing conjoint analysis, structural equation modelling, and even a qualitative approach.

Result and Discussion

The results reveal that yellow recorded the highest positive response, followed by green, red, and blue which received the least positive response. For example, it is seen in Table 1, the first subscale variable of perceived quality, that is “quality,” shows that yellow received the highest mean (5.13) compared to green (4.83), red (4.16), and blue (3.65). Similarly, in the first subscale variable of purchase intention that is “likelihood of buying”, we can see that yellow again achieved the highest score (5.09) compared to other colours green (4.78), red (4.17), and blue (3.78). This pattern appears the same across all variables. In this study, four variables, except colour likeability and colour preferences, consist of items or subscale variables. The perceived quality variable consists of four subscales: the quality itself, safety, appearance, and value. Three other subscales, which are likelihood of buying, definitely buying, and consider buying belong to purchase intention variable. Word of

mouth variable consists of subscales frequency of speaking, recommendation, encouragement, and speaking unflatteringly from the consumers. The subscales “speaking unflatteringly” had been dropped through validity and reliability analysis. While the colour associations variable contains subscales of fitting, compatibility, positiveness, palatability, and high preference of the package.

Table 1 appears here.

The finding from the table suggests that consumers have the most positive perception and preference towards yellow packaging and least towards blue. Through multiple data checks and cleaning, this is consistently replicated across all subscale variables without exception. Table 1 shows that yellow receives the highest mean of four available colours, followed by green, red, and blue. Accordingly, consumers would look for the same product in a package with green colour, if the yellow package were not available in the store.

Table 2 appears here.

Calculated at alpha level .05 in multivariate test (Table 2), the results are significant for all four tests (Pillai’s Trace, Wilks’s Lambda, Hotelling’s Trace, and Roy’s Largest Root). It explains *p*-values less than a given alpha level .05 and the test rejects the null hypothesis that assumed responses to the colours (groups) were the same in all dependent variables that were included. In other words, the set of six consumer responses demonstrate that the variables have a significant effect on consumer preferences.

In further analysis (tests of between-subjects effects), it is revealed that each of consumer responses individually has a significant effect on package colours. Based on this result, we can conclude that colour had a significant effect on types of consumer response.

The results of the study show that yellow colour of package is the one most preferred by the consumers. The local food is identically recognized as the city product; additionally, yellow colour is identically preferred as the local food package colour. Unfortunately, local companies do not pay much attention to product packaging. The result implies that consumers had their own consideration of package colour, especially for a specific local food product. Once consumers in this region linked the product with responses such as high quality or safety, yellow came as the first response to their minds.

Conclusion and Implications:

This study examined the significant effects that occurred between consumer responses and package colours simultaneously through multivariate test and separately through tests of between-subjects effects (a univariate test), in relation to a local food product called Bakpia in a certain region in Indonesia. We found that:

- Consumers preferred yellow package colour in general as descriptive analysis outcomes reveal. Yellow receives the highest positive response of all variables by consumers, followed by green, then red and blue as the least likely to be selected.
- In terms of the relationship between consumer responses and package colours, we found a significant effect when the responses were examined together (i.e. colour likeability, colour preferences, colour association, word of mouth, perceived quality, purchase intention) as well as when examined individually; the results show that one of colour achieves highest consideration across six variables.

The implication of the study for marketing literature is that it provides a discussion of package colour, especially on the relationship between package colour and several consumer responses, simultaneously and individually. This research enhanced the body of knowledge with respect to impact of colour on choice. It provides insight to the marketing practitioner by confirming the current understanding of the extent of the impact of colour on consumer response. The object of this study was a certain local food product produced by small enterprises in Indonesia. For local food products with small brands in particular region and that not internationally renowned, this study can help regional entrepreneurs to improve their marketing process and their company's performance in market competition.

Lastly, it should be noted that while the findings of this study may show that yellow achieves the highest score in all items of consumer responses, followed by green, red, and blue, it need not necessarily be the same for each of the subscale variable. It is worth acknowledging that there is a need for further robust analyses and extension to other regional food products to confirm if these

preferences would translate to other regional food products in Indonesia, or to locally-produced food products worldwide. Future research will take this limitation into account and examine the relationship between packaging colour and consumer preferences at a wider level. Future research could investigate and demonstrate these responses deeply.

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Table 1. Descriptive Statistics

Variable	Subscale Variable	Group	Mean	Std. Deviation	Number of Sample
Colour Preference	Colour Preference	Yellow	5.28	1.517	458
		Green	5.00	1.622	458
		Red	4.05	1.668	458
		Blue	3.52	1.686	458
		Total	4.46	1.771	1832
Colour Likeability	Colour Likeability	Yellow	5.27	1.517	458
		Green	4.97	1.580	458
		Red	4.06	1.650	458
		Blue	3.55	1.686	458
		Total	4.46	1.751	1832
Perceived Quality	Quality	Yellow	5.13	1.489	458
		Green	4.83	1.567	458
		Red	4.16	1.595	458
		Blue	3.65	1.597	458
		Total	4.44	1.664	1832
	Safety	Yellow	5.11	1.536	458
		Green	4.91	1.541	458
		Red	4.20	1.637	458
		Blue	3.91	1.653	458
		Total	4.53	1.666	1832
	Appearance	Yellow	5.10	1.516	458
		Green	4.84	1.545	458
		Red	4.14	1.582	458
		Blue	3.72	1.617	458
		Total	4.45	1.658	1832
	Value	Yellow	5.09	1.504	458
		Green	4.78	1.594	458
		Red	4.17	1.628	458
		Blue	3.74	1.601	458
Total		4.44	1.666	1832	
Purchase Intention	Likely to Buy	Yellow	5.04	1.596	458
		Green	4.81	1.557	458
		Red	3.86	1.666	458
		Blue	3.46	1.680	458
		Total	4.29	1.750	1832
	Definitely Buying	Yellow	4.96	1.600	458
		Green	4.67	1.588	458
		Red	3.89	1.669	458
		Blue	3.47	1.637	458
		Total	4.25	1.729	1832
	Considering Buying	Yellow	4.74	1.662	458
		Green	4.37	1.643	458
		Red	4.02	1.756	458
		Blue	3.84	1.756	458
		Total	4.24	1.738	1832

Table 1. Descriptive Statistics (continue)

Variable	Subscale Variable	Group	Mean	Std. Deviation	Number of Sample
Word of Mouth	Frequent of Speaking	Yellow	4.79	1.558	458
		Green	4.52	1.627	458
		Red	3.71	1.728	458
		Blue	3.49	1.705	458
		Total	4.13	1.742	1832
	Recommendation	Yellow	4.93	1.594	458
		Green	4.65	1.586	458
		Red	3.79	1.631	458
		Blue	3.44	1.717	458
		Total	4.20	1.742	1832
	Encouragement	Yellow	4.78	1.592	458
		Green	4.55	1.664	458
		Red	3.89	1.684	458
		Blue	3.46	1.711	458
		Total	4.17	1.743	1832
Colour Association	Fitting	Yellow	5.30	1.588	458
		Green	4.85	1.655	458
		Red	3.94	1.787	458
		Blue	3.32	1.746	458
		Total	4.35	1.862	1832
	Compatibility	Yellow	5.29	1.563	458
		Green	4.85	1.655	458
		Red	3.95	1.716	458
		Blue	3.39	1.708	458
		Total	4.37	1.819	1832
	Positiveness	Yellow	5.24	1.550	458
		Green	4.95	1.614	458
		Red	4.15	1.835	458
		Blue	3.56	1.766	458
		Total	4.48	1.819	1832
Palatability	Yellow	4.96	1.737	458	
	Green	4.66	1.772	458	
	Red	3.73	1.820	458	
	Blue	3.22	1.684	458	
	Total	4.14	1.886	1832	
High Preference	Yellow	5.29	1.638	458	
	Green	4.88	1.724	458	
	Red	3.76	1.850	458	
	Blue	3.25	1.824	458	
	Total	4.29	1.944	1832	

Table 2. Multivariate Test

		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.928	1303.686	18.000	1811.000	.000
	Wilks' Lambda	.072	1303.686	18.000	1811.000	.000
	Hotelling's Trace	12.958	1303.686	18.000	1811.000	.000
	Roy's Largest Root	12.958	1303.686	18.000	1811.000	.000
Group (Colour)	Pillai's Trace	.238	8.689	54.000	5439.000	.000
	Wilks' Lambda	.767	9.296	54.000	5396.882	.000
	Hotelling's Trace	.296	9.933	54.000	5429.000	.000
	Roy's Largest Root	.271	27.305	18.000	1813.000	.000