

*Exploring Indonesian Cultural Symbols for Food Packaging Design–
A Comparative Study: Indonesian and Thai Consumers*

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Abstract

Globally, the fad of consciously eating healthier and paying more attention to overall health and wellness appears to be driving a cultural shift towards more traditional foods. These are now replacing processed food because of a nutritious and sustainable food supply. In Southeast Asia, Indonesia currently consumes the highest proportion of plant-based foods, besides significant exports to international markets such as Thailand. However, Indonesia as the food item country of origin is often absent to identify Indonesian culture in the graphic design on the packaging which makes the product unrecognizable as Indonesian food. Thus, the existence of a product in the marketing mixes cannot be separated from the packaging container. Packaging designs are also required, which could feature and contribute to identifying and categorizing, the unique attributes of the products. This study aims to explore and understand consumer perceptions of a country's cultural identity and the representation of its packaging designs. Regarding traditional foods and focusing on symbols of Indonesian culture, design evaluations were carried out on Indonesian and Thai consumers, using a semantic differential, where the participants were asked to rate a set of perceptions from several samples on a five-point scale, with two opposite ends. The points of all the perceived items were summed up to obtain the symbols of what objects, motifs, and colors could truly represent Indonesia. Finally, this study's findings also provided a representation that could contribute to developing graphic designs for packaging that use symbols of Indonesian culture as a source of inspiration.

Keywords: Cultural Identity, Cultural Heritage, Graphic Design, Indonesian Culture, Packaging Design, Indonesian Culture

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Introduction

The COVID-19 pandemic has accelerated the growth of several food trends worldwide. More people are looking for food and beverage products to help them stay healthy. This fad has also captured Thai consumers starting in 2020 and is predicted to expand until 2025 (Puranabhandu, 2021). This was reflected in sales of plant foods which are growing 2–10% per year and are predicted to grow 10-35% per year as the popularity of vegan, vegetarian, and flexitarian diets grow in Thailand (Sirikeratikul, 2021). Meanwhile, Indonesia has the highest proportion of plant-based foods consumption and production in Southeast Asia, especially for soy foods (US Soybean Export Council, 2020). The majority of soybeans are processed into traditional foods such as tempeh, tofu, oncom, and other food.

Furthermore, Indonesia has many traditional foods made from plants that are not widely known, such as emping. It resembles a chip made from melinjo seeds which are suitable for export to international markets because of its unique taste and health benefits. Our preliminary findings revealed that 93% of Indonesian respondents suggested emping be marketed in Thailand, while 96% of Thai respondents stated they would try emping if it is available in their area. Thus, this is a new potential opportunity for Indonesian food exports, particularly in Thailand.

However, Indonesia as the food item country of origin is often absent from the product packaging. According to our preliminary findings, 50% of Thai respondents explicitly acknowledged having ever purchased Indonesian products, while 40% were unsure. Additionally, as many as 94% of Thai consumers who had purchased Indonesian products claimed that they could identify the products as being from Indonesia by reading the detailed information on the labels, not from graphic designs. This implicitly concludes that the lack of information to identify Indonesian culture in graphic design on the packaging renders the product unrecognizable as an original Indonesian product. Thus, the existence of a product in the marketing mix cannot be separated from its packaging. They also require packaging designs since these features aid in classifying, recognizing, and highlighting the unique characteristics of the products.

Moreover, Indonesia and Thailand are countries located in the Southeast Asia region. Although they are not exactly adjacent, yet it cannot be denied that there are some shared between both. Thailand, for example, is regarded as the land of temples, whereas Indonesia also has many temples, the most popular of which are Borobudur, Prambanan, and Uluwatu. Furthermore, in culinary, many Thai food and beverage products, such as Tom Yam and Thai Milk Tea are sold in various cities throughout Indonesia. These serve as an example that they have common historical wealth in terms of culture, food taste preferences, customs, and other things.

Therefore, this study was developed by involving Indonesian cultural symbols which were assessed by the preferences of Indonesian consumers and Thai consumers towards Indonesian culture to obtain a symbol that can truly represent Indonesia. This study also revealed how cultural heritage in packaging design can have an impact on consumers' attention, interest and desire to purchase a product.

Research Framework

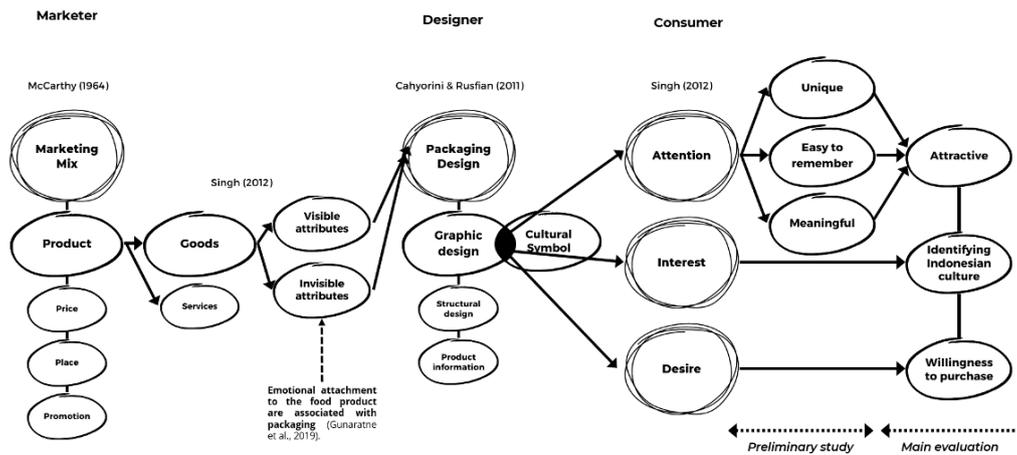


Figure 1: Research framework

In the process of marketing, a marketer needs a designer to create the packaging design for a product to be offer to consumers and it is be part of the marketing mix. There are many different P concepts in the marketing mix. In extended literature, Chai Lee Goi (2009) mentioned that the origin of the marketing mix concept stemmed from the single P that is the price from microeconomic theory. Further, McCarthy in 1964 introduced the marketing mix as the 4Ps including price, place, product, and promotion. Since the 1980s, a number of researchers propose a new P into the marketing mix. In 1987, Judd suggested a fifth P that is people. Booms and Bitner added three Ps: participants, physical evidence, and process in 1980. Kotler in 1986 constructed the Ps concept to include political power and public opinion formation. In the same year, MaGrath discussed the addition of three Ps: personnel, physical facilities, and process management. Baumgartner proposed the 15 Ps concept in 1991. Then, Goldsmith derived to 8 Ps in 1999 including product, price, place, promotion, participants, physical evidence, process, and personalization.

However, regardless of how many Ps are involved in the marketing mix, the product is a critical element. According to Singh (2012), products refer to tangible items (goods) or intangible items (services) that marketers offer to customers. She also explained that a product is a set of various attributes consisting of visible factors such as color, graphics, shape, size, and others that can be seen by our eyes, as well as invisible factors such as value, quality, and others that can only be felt emotionally. Furthermore, emotional attachment to the food product and purchase decision are associated with its packaging as well (Gunaratne et al., 2019).

Packaging design is a creative strategy to convey the product by combining shapes, materials, colors, images, typography, and other design elements with information about the product (Klimchuck & Krasovec, 2006). Cahyorini & Rusfian (2011) further divided them into three elements, namely graphic design, structural design, and product information. Despite all that, graphic design elements are the most important element in today's world since design can capture consumers' attention, pique their interest to get more information about products, and influence their desire to purchase the product (Singh, 2012). In this study, we focus on graphic design elements by adding cultural symbols which were assessed through two phases, namely preliminary study, and main evaluation to obtain the symbol that can truly represent Indonesia.

Methodology

The semantic differential is one of measuring instrument using a scale in extreme points that are opposite each other or called bipolar, which was developed by Osgood et al. (1967). The rating scale used in this study was a 5-point scale where respondents judge from the selected Indonesian cultural heritage. this survey was created by Google Forms and was conducted entirely online with both Indonesian and Thai respondents as well. Thus, in both the preliminary and main evaluation, participants were asked to rate a set of perceptions from several samples on a five-point scale with two opposite ends.

Participants that meet the general requirements for this study's participants must be older than 20 years old, as consumers at this age tend to be active, financially independent, and able to travel. In order to ensure that respondents from Indonesia are familiar with different Indonesian cultures, there are specific criteria for Indonesian respondents, such as having ever traveled to a province other than their city of birth or residence. In contrast, the criteria for Thai respondents, such as having ever traveled to Indonesia or at least having an interest in Indonesia, aims to ensure that respondents have sufficient knowledge to evaluate Indonesian cultural symbols.

The data were analyzed using Microsoft Excel and the Statistical Package for the Social Sciences (SPSS). Firstly, the points on a scale of 1 to 5 were converted into scores with polar of - and + (the more to the left the lower the score, the more to the right the higher the score). The measurement of stimuli that received a score of 3 was regarded as a neutral response; while, the larger the number in the polar +, the more likely it is to be favored, and vice versa, the larger the number in the polar -, the less likely it is to be preferred.

Scale	1	2	3	4	5
Scores	-2	-1	0	1	2

Table 1: Examples of semantic differential polar

Preliminary Study

In Indonesia, there are many various cultures symbols. Statistics Indonesia (BPS) reported that in 2021, Indonesia has an area of 1,916,906.77 km² consisting of 16,766 islands inhabited by various ethnic groups with heterogeneous cultural backgrounds. As a result, 35 items were chosen based on a set of requirements, including originating from an Indonesian region, having a cultural heritage, being tangible, still surviving today, and being well-known locally, internationally, or even being recognized by UNESCO as. Then, they were divided into three categories The first category consists of twenty-three pictures (P) including architecture, performance art, dance, myth, and so on. The second category consists of eight motifs (M). The third category consists of four palette colors (C).

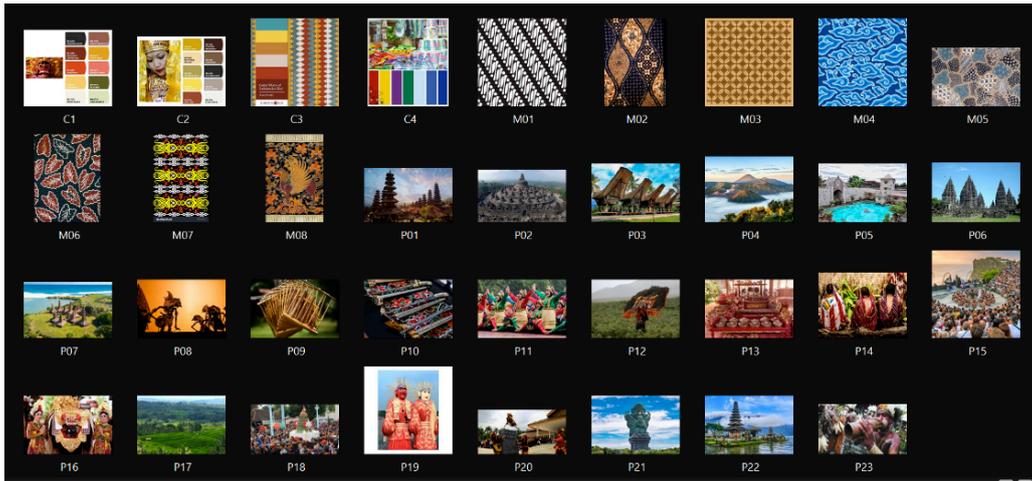


Figure 2: 35 selected cultural symbols of Indonesia

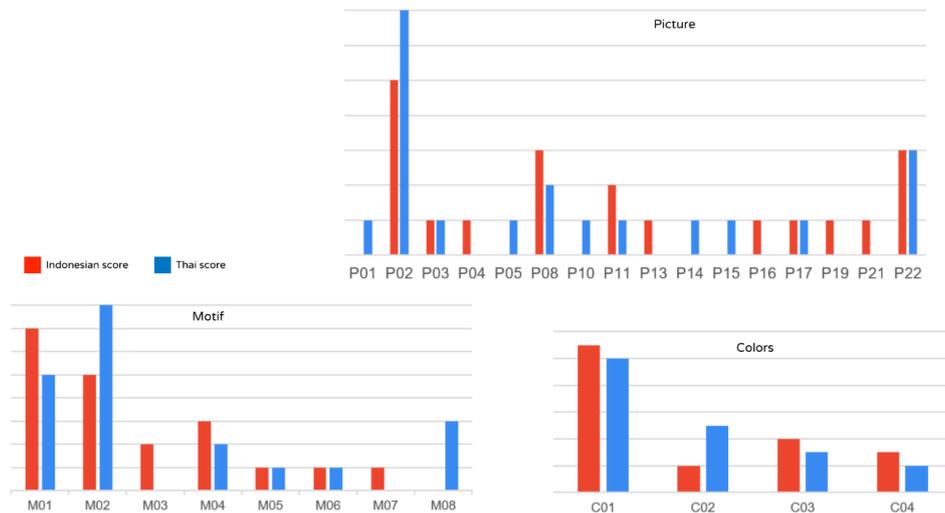


Figure 3: Score of selected samples

A total of 40 participants (20 Indonesian respondents and Thai) who met the criteria were successfully collected in the preliminary evaluation in the period of 26 July to 04 August 2022. First of all, participants were asked to choose which sample of each category they think best represented Indonesia. The graph shows that Borobudur temple (P02) became the architectural building that was chosen the most by both Indonesian and Thai respondents. Indonesians responded to Borobudur temple as *“One of the world's recognized Indonesian cultural heritage”*, while Thai responded to Borobudur temple as *“The outstanding example of Indonesia's art & culture”*. The next graph shows that the Parang motif (M01) and the Sogan motif (M02) are the most chosen motifs. The Parang motif was preferred by Indonesian respondents, while the Thai respondents preferred the Sogan motif above the Parang motif. Indonesians considered the Parang motif to *“It is most commonly used in traditional clothing”*, while Thai also considered the Sogan motif as *“It has various motifs and is a familiar batik motif seen from Indonesian who wear it”*. Next, graphics on the color palette shows that the C01 palette became the most chosen color palette by both Indonesian and Thai respondents. Indonesians explained *“Warm and colorful is very suitable with the colors of Indonesian culture”*, while Thai suggested *“Bright color and is often seen in Indonesian”*.

Participants were then asked to rate each sample based on how unique it is, how easy it is to remember, and how meaningful it is to them. The following are the results:

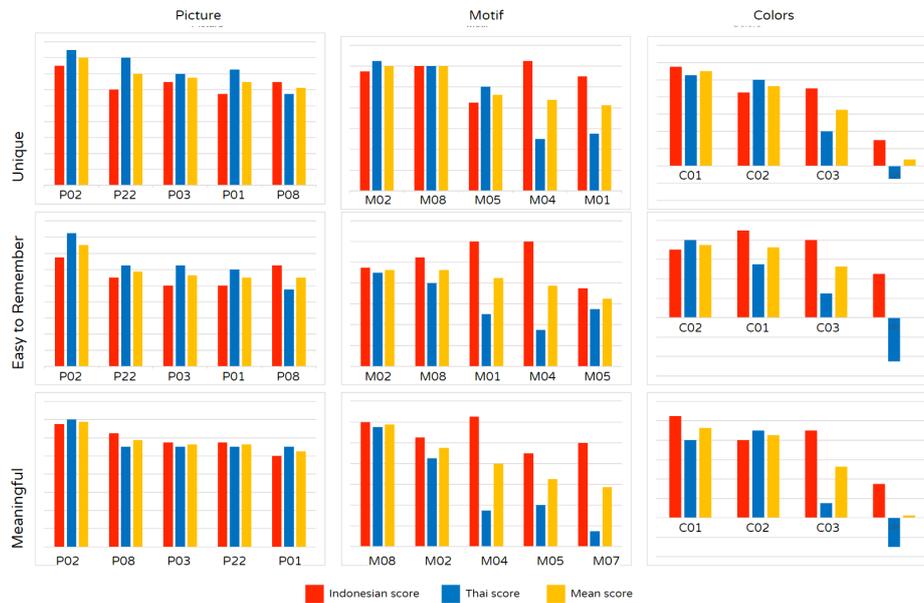


Figure 4: Score of each sample on perception

Figure 4 shows that P02 and P22 consistently received the highest score for being a unique, easy-to-remember, and meaningful object, with P02 constantly receiving the highest score. M02 and M08 received the highest score compared to the other samples, yet M02 consistently received the highest score on the unique and easy to remember assessment, while M01, as one of the preferred motifs, received a lower score than M08 in each perception. The last one, the C01 palette received the highest score as a unique and meaningful color palette and was included in one of the preferred color palettes, although the C01 palette took second place in the score in the category of easy to remember.

Thus, it can be concluded that warm, colorful, and bright colors truly represent Indonesia which is then used as a color palette in this study. Meanwhile, the other five preferred symbol options, namely P02, P22, M01, M02, and M08 were further developed into packaging designs.

Main Evaluation

Five packaging designs for emping with each preferred symbol were developed as a 2D stimulus at the main evaluation stage (table 2). Photoshop and Canva premium were used to create the design. As in the preliminary study, participants were also asked which sample they preferred to choose as a whole and asked about how attractive the packaging is, how much they want to buy products based on each cultural symbol and how much it can represent Indonesian culture. A total of 200 participants (100 Indonesian respondents and 100 Thai respondents) who met the criteria were successfully collected for the main evaluation in between September 09 to September 30, 2022.

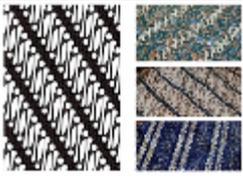
Sample Id	Respondents' preferred sample	Graphic Design	2D Stimulus
P02			
P22			
M01			
M02			
M08			

Table 2: Packaging designs developed based on selected symbols

First of all, an investigation of the mean score was also carried out to compare the preliminary evaluation and the main evaluation. The table on figure 10 shows when it is examined as a cultural symbol, P02 has the greatest score to be regarded as the symbol that most accurately represents Indonesia, followed by P22 in second place, and M01 in last place. In contrast, when applied to packaging design, the M01 obtained the highest score and is followed by other motifs, while P02 and P22, which previously held the top two scores, had dropped to the bottom two.

Sample Id	Selected Sample	Average Rating Score (-2 to +2)				Score
		Perception Factors	Indonesian Consumers	Thai Consumers	Mean	
P02		Unique	1,5	1,7	1,6	1,5
		Easy to Remember	1,4	1,7	1,5	
		Meaningful	1,4	1,4	1,4	
P22		Unique	1,2	1,6	1,4	1,2
		Easy to Remember	1,1	1,3	1,2	
		Meaningful	1,2	1,1	1,1	
M01		Unique	1,1	0,6	0,8	0,7
		Easy to Remember	1,2	0,5	0,9	
		Meaningful	1,1	-0,1	0,5	
M02		Unique	1,2	1,3	1,2	1,0
		Easy to Remember	1,0	0,9	0,9	
		Meaningful	1,1	0,9	1,0	
M08		Unique	1,2	1,2	1,2	1,1
		Easy to Remember	1,1	0,8	0,9	
		Meaningful	1,2	1,2	1,2	

Sample Id	Selected Sample	Average Rating Score (-2 to +2)				Score
		Perception Factors	Indonesian Consumers	Thai Consumers	Mean	
P02		Attractive	0,4	0,6	0,5	0,4
		Willingness to purchase	0,5	0,5	0,5	
		Identify Indonesian culture	0,6	0,1	0,4	
P22		Attractive	0,1	0,2	0,1	0,2
		Willingness to purchase	0,5	0,2	0,3	
		Identify Indonesian culture	0,4	-0,1	0,1	
M01		Attractive	0,6	0,5	0,5	0,6
		Willingness to purchase	0,6	0,3	0,5	
		Identify Indonesian culture	1,1	0,6	0,8	
M02		Attractive	0,2	0,3	0,3	0,5
		Willingness to purchase	0,4	0,6	0,5	
		Identify Indonesian culture	0,7	0,9	0,8	
M08		Attractive	0,2	0,8	0,5	0,5
		Willingness to purchase	0,2	0,5	0,4	
		Identify Indonesian culture	0,4	1,0	0,7	

Figure 5: The comparison of scores on the preliminary evaluation and the main evaluation

In addition, the difference in the mean scores between the preliminary evaluation and the main evaluation concluded that the cultural symbol in the packaging also influenced the respondents' assessment of the packaged product. In this study, respondents tend not to be able to give a maximum score because they study were only exposed to cultural symbols in graphic designs and not other packaging design elements. This is consistent with the findings of Cahyorini & Rusfian (2011), who suggested that three factors—graphic design, structural design, and product information—must be taken into account when creating a packaging design, where color, typography, graphics, illustrations, decorations, and other pictorial elements are examples of graphic design elements (Nilsson & Öström, 2005), while physical attributes like shape, size, and material are associated with structural design elements (Nugroho, et al, 2017), as well as elements of product information provided in detail on the label such as expiration date, ingredients, volume, weight, and disposal or other necessary information that they need to know prior to making a purchase. (Kupiec and Revell, 2001; Mustikiwa and Marumbwa, 2013).

The Kruskal-Wallis test was employed to investigate whether there was a significant difference between each stimulus or not. The following are the Kruskal-Wallis test results:

	P02	P22	M01	M02	M08
Kruskal-Wallis H	1.454	2.340	5.771	1.576	12.012
df	1	1	1	1	1
Asymp. Sig.	.228	.126	.016	.209	<.001

a. Kruskal Wallis Test
b. Grouping Variable: Respondent

Figure 6: The Kruskal-Wallis test results

Figure 8 demonstrates that only the M08 stimulus received the Asymp. Sig. value less than 0.05 (5%) which means that there is a significant difference between how Indonesian respondents and Thai respondents rate the stimulus. The M01 stimulus came next, which also indicated a significant difference in the given score. Meanwhile, the largest Asymp. Sig. value was obtained for the P02 stimulus indicates that there is no significant difference between the two group respondents. For further investigation, the summarized scores of each respondent group were calculated and presented in the following graphic form:

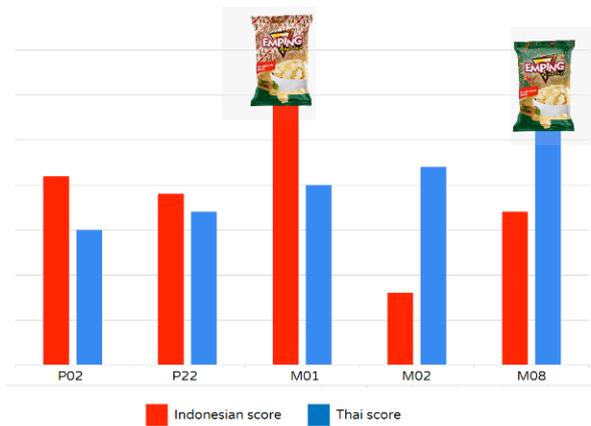


Figure 7: The summarized scores of each 2D stimulus

Figure 7 illustrates that there was a significant difference between Indonesian and Thai respondents in assessing the M01 and the M08 stimulus. In this evaluation, Indonesian respondents prefer to choose the M01 stimulus, while Thai respondents prefer to choose the M08 stimulus.

At last, in order to discover whether the use of cultural symbols has an effect on consumers' impressions and interests, as well their willingness to purchase a product, an analysis on the mode score was also conducted to show up the most frequently occurring scores for each stimulus.

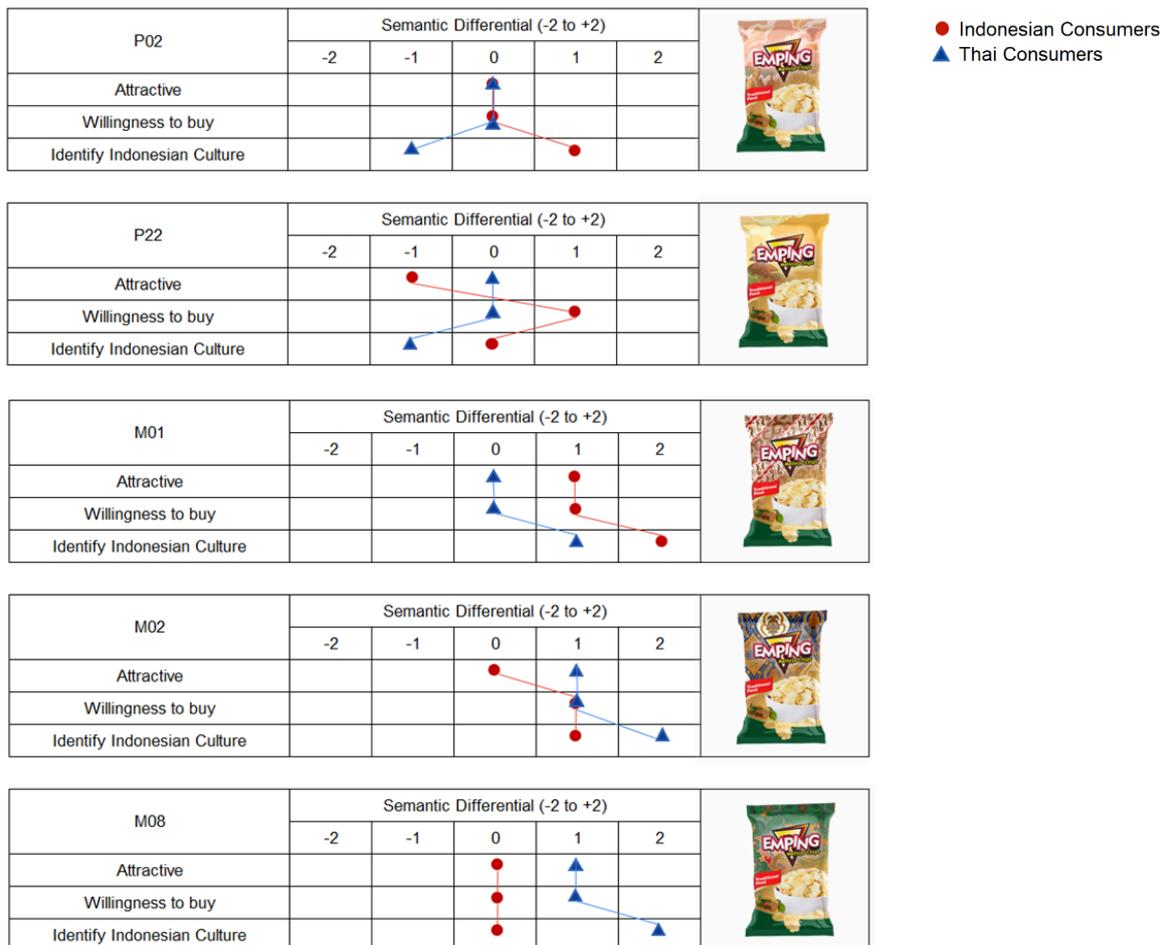


Figure 8: Mode scores of the five 2D stimulus

Iyang (2005) suggested that symbols may be anything: objects, words, colors, or motifs. However, our research revealed that not all symbols can influence customer preferences when designing a product packaging. As shown in Figure 8, all motifs received favorable scores that frequently appeared, whereas the stimulus with the temple icon tended to get a normal response, even a minus score. This demonstrates that the motif is more suitable to be applied to the packaging design. It does not only to draw attention and represent culture but also to influence the consumer's willingness to purchase the product.

Conclusion

Based on the research findings, it can be concluded that iconic places are better recognizable as cultural symbols of an area. Yet, when iconic places are implemented into a package's graphic design, they appear that the icon has less of an impact on consumer preferences while the motif becomes a cultural symbol that is preferred by consumers. Another significant difference is observed in the evaluations of Thai consumers who occur to be more aware of Balinese cultures as a representative of Indonesian culture. The Uluwatu temple (P02) and Balinese motifs (M08), which consistently received positive responses from Thai consumers. However, the Borobudur temple (P02) and the Parang motif (M01) obtained the best evaluations from both Indonesian and Thai consumers. On the other hand, warm, colorful, and bright colors are associated with Indonesian palette colors.

Furthermore, cultural symbols included into graphic design for product packaging have an impact on consumers' impressions and interests, as well as their willingness to purchase a product; this impact may be preferred or disliked by consumers. It implies that graphic design elements cannot be separated from other packaging design elements such as the use of typography, shape, size, material, and verbal messages such as product information, product benefits, and others. As a result, designers, marketers, or companies who want to develop a product's packaging design must take into account proper cultural identity designs for product success, especially in traditional food export activities. Further research is recommended to investigate the color palette of a culture more deeply considering different countries have different meanings for certain colors as well.

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