The Impact of Visual Communication in Packaging Design on Consumer Purchase Behaviour: A Case-Based Analysis

Jianan Wang[*]
Faculty of social sciences and humanities, Universiti Kebangsaan Malaysia, Bangi, Malaysia, 43600
ORCID: https://orcid.org/0009-0001-4675-6984
Email: p117801@siswa.ukm.edu.my/jianan970113@gmail.com

Normah Binti Mustaffa
Faculty of social sciences and humanities, Universiti Kebangsaan Malaysia, Bangi, Malaysia, 43600
ORCID: https://orcid.org/0000-0002-5238-7732
Email: normahm@ukm.edu.my

Maizatul Haizan Binti Mahbob
Faculty of social sciences and humanities, Universiti Kebangsaan Malaysia, Bangi, Malaysia, 43600
ORCID: https://orcid.org/0000-0002-4506-5284
Email: maiz@ukm.edu.my

*Corresponding Author Email:
p117801@siswa.ukm.edu.my/jianan970113@gmail.com

Abstract
This study explores the role of visual communication in packaging design and its effect on consumer purchasing behaviour, with a particular emphasis on China's food and beverage sector. It specifically examines how cultural symbols, the psychological impact of colour, and the strategic placement of brand logos influence consumer decisions. Employing a mixed-methods approach, quantitative data were gathered via an online questionnaire distributed to 249 respondents, while qualitative insights were drawn from a case study of Mengniu Dairy. Participants were reached through widely

used Chinese social media platforms, including Douyin, WeChat, and Weibo. The results indicate that cultural motifs and traditional designs exert the most substantial impact on consumer preferences, followed by colour schemes and logo placement. Collectively, these visual elements accounted for 93.5% of the variance in consumers' purchase intentions, reinforcing the argument that well-crafted packaging significantly affects buying choices. The findings validate the importance of integrating culturally resonant imagery, effective colour use, and thoughtful logo positioning in packaging strategies. These insights may serve as valuable guidance for companies within the competitive food and beverage industry when developing packaging designs.

Keywords: Visual Communication, Packaging Design, Consumer Behaviour, Cultural Symbols, Colour Psychology

Introduction

Background

Product packaging significantly shapes consumers' initial perception of a product, making it a critical component across various industries. As Y. Li (2021) notes, in today's highly competitive, product-saturated environment, visual communication has become essential for brands aiming to deliver immediate impressions and distinguish themselves in ways that can sway consumer decisions. Elements such as colour schemes, typography, graphic illustrations, and the spatial arrangement of visual features can elicit emotional reactions, trigger associations, and enhance perceived product value. Waheed et al. (2018) also stress that colour is among the most powerful aspects of visual communication in packaging, influencing consumer perceptions and actions. Psychological theories suggest that specific colours are tied to particular emotional responses and symbolic meanings. For example, red often evokes excitement and can drive impulsive purchases, whereas blue fosters a sense of reliability and trust. Correspondingly, Ahlawat and Swami (2024) assert that brands intentionally use colour to elicit desired consumer reactions and strategically position their offerings in the market.

Typography, too, plays a crucial role in shaping consumer expectations. Choices related to font type, size, and placement affect both readability and brand perception, helping to convey a tone—whether formal, modern, sophisticated, or playful—that aligns with the brand identity. Similarly, the use of images on packaging significantly contributes to influencing buyer decisions. In this regard, Chitturi et al. (2022) argue that high-quality visuals—such as photos, illustrations, or graphic elements—elevate the perceived quality of the product. The inclusion of compelling imagery, particularly those illustrating product benefits or depicting aspirational lifestyles, enhances visual appeal and can boost purchase likelihood. Furthermore, Steenis et al. (2017) emphasise the importance of layout and structural organisation in determining how consumers interpret and interact with

packaging. Overly complex or crowded designs may overwhelm or confuse potential buyers, whereas minimalist layouts tend to project clarity and professionalism. Beyond visual appeal, these elements also serve an informative function by guiding consumer behaviour. Srivastava et al. (2022) highlight that clear labelling, intuitive layout, and logically organised content support more efficient purchasing decisions.

The emotional and cognitive dimensions of packaging design are particularly influential during impulse buying scenarios. Moser et al. (2019) confirm that when faced with numerous product options, visually striking packaging that conveys clear product differentiation can play a pivotal role in shaping rapid purchase decisions. Many studies acknowledge that consumers conduct swift visual assessments of products, with packaging often serving as a direct representation of the product itself—thereby making aesthetic quality a key sales driver. Wang (2024) expands on this by arguing that packaging effectiveness is not confined to physical retail spaces but extends to online platforms and social media. Visually appealing packaging often prompts user-generated content, such as customer posts, thereby enhancing brand visibility through informal digital endorsements. Moreover, Junfeng and Halabi (2024) observe that shifts in consumer preferences have compelled brands to innovate more effective packaging strategies to better communicate their brand identities. Companies are increasingly recognising the psychological and emotional dimensions of packaging design as integral to crafting marketing approaches that shape and reinforce consumer perceptions of their products.

Problem Statement

In China's highly competitive food and beverage sector, packaging design has evolved into a critical strategic tool. Visual elements such as culturally significant symbols, traditional graphic motifs, and the strategic use of colour are known to affect consumer emotions and increase the likelihood of purchase. Despite their apparent influence, there remains a notable gap in academic literature concerning the specific psychological and behavioural responses of Chinese consumers to such visual cues. A comprehensive understanding of the emotional and cognitive effects associated with packaging aesthetics can enable brands to embed persuasive and culturally resonant marketing stimuli, thereby elevating product appeal and stimulating consumption Wang et al. (2023). This study therefore aims to investigate the roles of cultural symbolism, colour psychology, and the positioning of brand logos in shaping consumers' purchasing decisions within the context of China's food and beverage market.

Research Objectives

• To explore how cultural symbols and traditional visual motifs incorporated

into packaging influence consumer purchasing behaviour within China's food and beverage sector.
- To assess the psychological effects of colour usage in packaging design and its role in shaping purchasing decisions among Chinese consumers.
- To evaluate how the positioning and dimensions of brand logos on packaging affect consumer buying behaviour in the context of China's food and beverage industry.

Research Questions

- In what ways do cultural symbolism and traditional design features within packaging influence the purchasing decisions of consumers in China's food and beverage sector?
- How does the psychological interpretation of colour in packaging design shape consumer buying behaviour in the Chinese food and beverage market?
- What effect does the positioning and scale of brand logos on packaging have on consumer purchasing patterns in China's food and beverage industry?

Significance of the Study

This study holds considerable value in elucidating the role of visual communication in packaging design within China's food and beverage industry. By examining the influence of cultural motifs, colour psychology, and brand logo placement, the research offers actionable insights for businesses seeking to refine their packaging strategies to enhance both customer acquisition and loyalty. The findings may assist brands in making their products visually compelling and distinct from market competitors. Furthermore, the research contributes theoretically by expanding the academic discourse on consumer behaviour and assessing the strategic utility of packaging design in highly competitive commercial settings.

Literature Review

Overview

This chapter seeks to systematically identify and categorise the cultural elements that influence consumer purchasing behaviour regarding food and beverage products in China, with particular attention to colour application and logo positioning. It outlines the theoretical framework, formulates research hypotheses, and highlights gaps within the existing literature—potentially laying the groundwork for a series of related future investigations.

Impact of Cultural Symbols and Traditional Design in Packaging on Consumer Behaviour

Packaging plays an indispensable role in shaping consumer perception and decision-making within China's food and beverage industry. According to Celhay et al. (2020), enduring trends in the incorporation of cultural symbolism and traditional graphic elements in packaging suggest that such features engage consumers on a deeper psychological level while simultaneously reinforcing national identity. Cultural context is a significant determinant in Chinese consumers' purchasing choices, where packaging adorned with traditional artistic elements, calligraphy, motifs, or icons referencing folklore and auspicious symbols tends to inspire consumer trust. Yu (2018) further noted that the application of patterns influenced by Chinese dynastic heritage—such as dragons, phoenixes, or peonies—evokes sentiments of prosperity, good fortune, and originality, thereby enhancing product appeal. Brands that adeptly integrate these elements foster consumer resonance with cultural norms and practices. Hu (2020) expands on this notion, asserting that within the food and beverage domain, where authenticity and heritage are highly valued, the presence of cultural cues is particularly influential. For instance, tea brands often incorporate post-modern interpretations of traditional Chinese calligraphy and ink illustrations in their logo designs, thereby appealing to consumers with an appreciation for cultural artistry. Similarly, the frequent use of red—a colour symbolising fortune and vitality in Chinese tradition—serves to attract consumers who associate it with positive emotional outcomes.

Chinese consumers often interpret culturally resonant packaging as indicative of both quality and authenticity. Products that neglect to incorporate traditional visual aesthetics, particularly those of foreign origin or contemporary orientation, may face challenges in building trust with local buyers. Conversely, brands that honour and creatively embed cultural elements within their packaging tend to secure a competitive advantage. As highlighted by Fois et al. (2019), the interrelation between aesthetic presentation and cultural identity not only influences immediate purchasing decisions but also fosters long-term brand loyalty. The increasing popularity of the 'guochao' or 'China chic' movement has further intensified this trend, with younger consumer segments displaying a strong preference for brands that modernise heritage motifs within contemporary packaging formats. Nevertheless, the success of traditional aesthetics in packaging remains contingent on product categorisation. For heritage food products, cultural symbolism reinforces credibility, whereas for modern health-centric offerings, consumers often favour minimalist, streamlined designs (M. Li, 2021). Thus, achieving a harmonious synthesis between tradition and modernity is vital for brands aiming to appeal to a heterogeneous consumer demographic (Bai, 2022).

Impact of Colour Psychology in Packaging on Consumer Behaviour

Colour psychology holds significant influence over consumer decision-making

within China's food and beverage sector, as colours are capable of evoking specific emotions, cultural connotations, and perceptions of product quality. In this regard, Nilsen and Zawkhai (2023) observed that individual colours carry distinct cultural meanings in the Chinese context, and their strategic application in packaging design can profoundly shape consumer attitudes and purchasing intentions. For example, red is widely favoured in Chinese packaging due to its association with fortune, happiness, and prosperity. Su and Wang (2023) affirmed that red is frequently employed by brands to attract attention and elicit excitement, particularly in the case of tea, snack foods, and celebratory product editions. Gold is another colour imbued with strong cultural resonance, symbolising affluence, luxury, and prestige. Often used in conjunction with red, gold reinforces themes of auspiciousness and opulence, creating a visually appealing and culturally rich aesthetic. According to Wang (2024), premium tea producers, alcohol brands, and confectionery manufacturers commonly integrate gold elements in their packaging to appeal to consumers seeking sophistication and exclusivity for special occasions.

In contrast, green connotes health, nature, and freshness, positioning it as an ideal colour for products aimed at health-conscious consumers. Organic foods, green teas, herbal beverages, and dietary supplements frequently adopt green-dominated packaging to convey their alignment with wellness and natural living. This trend reflects a broader consumer shift towards healthier lifestyles and environmentally responsible consumption. Hence, the deliberate use of culturally symbolic colours not only strengthens a product's visual identity but also fosters deeper emotional connections with consumers, ultimately influencing their purchase decisions in a competitive marketplace. Blue, though linked to calm and trust in Western marketing, is less used in China's food sector due to its weak link with appetite. Yet, for dairy, bottled water, and drinks that stress purity, it effectively signals cleanliness and reliability (Junfeng & Halabi, 2024). White, symbolising simplicity and purity, is often seen in premium packaging and minimalist designs aimed at urban elites. Black, reflecting elegance and luxury, is rising in popularity, especially in modern packaging for specialty teas, coffee, and premium alcohol (Veli & Savochkina, 2023). Yellow, tied to imperial status, conveys warmth, richness, and tradition, remaining popular in some food packaging (Azman, 2020). Poor colour choices may harm brand appeal, while suitable hues enhance identity and positioning.

Impact of Brand Logo Placement and Size on Consumer Behaviour

Brand logo placement and size significantly impact consumer perception and purchase behaviour in China's food and beverage sector. Dong and Gleim (2018) note that logos represent a brand's identity, values, and quality, with brand-conscious Chinese consumers using them to judge authenticity. Prominent, well-placed logos boost recognition, helping consumers spot trusted brands in a

crowded market. Li et al. (2020) observed that many brands position logos at the top centre for instant visibility, matching natural reading patterns. Similarly, Scott et al. (2022) found that centre-placed logos create a strong focal point, reinforcing brand authority. In contrast, premium or minimalist brands often use subtle corner placement to convey sophistication and exclusivity.

The size of the logo plays a crucial role in shaping consumer perceptions, as it communicates different brand attributes and influences purchasing behaviour. A large, prominent logo typically signifies confidence, heritage, and a strong market presence, which can reassure consumers about the product's dependability. This approach is particularly effective for market leaders like Master Kong and Wahaha, which leverage larger logos to project power and dominance. Conversely, smaller logos are often associated with niche, high-end, or health-focused brands, which emphasise product quality over logo prominence (Park & Hong, 2024). For example, organic or artisanal food brands may opt for more subtle logo placements to allow the product's image and design to take centre stage, while still ensuring brand recognition. In China, large logos are frequently perceived as indicative of mass-market, affordable products intended for everyday use (Wong et al., 2022). In contrast, a smaller, less conspicuous logo can evoke a sense of luxury and exclusivity, appealing to consumers seeking high-quality goods. Furthermore, cultural values play an important role in logo design, as certain consumer groups in Hong Kong and mainland China tend to favour logos with traditional calligraphic elements, which provide a sense of history and cultural richness (Bettels & Wiedmann, 2019). By carefully considering logo size and positioning in accordance with cultural preferences, brands can enhance consumer confidence, gain a competitive advantage, and effectively influence purchase decisions.

Theoretical Framework

This research draws on Cue Utilisation Theory and the Stimulus-Organism-Response (S-O-R) Model, both of which explain how packaging design influences consumer behaviour in China's food and beverage market.

Cue Utilisation Theory

Cue Utilisation Theory suggests that consumers rely on various cues to evaluate products before making purchasing decisions, categorising them as either intrinsic or extrinsic. In the context of packaging design, cultural symbols, traditional elements, colour perception, and logo positioning are all extrinsic cues that influence perceptions of product quality, authenticity, and brand credibility. Chinese consumers, being highly culturally receptive, use these cues to assess whether a product meets their expectations, with packaging playing a crucial role in influencing purchasing behaviour (Kakaria et al., 2023). This theory helps explain why products featuring familiar cultural symbols or the appropriate

colours are perceived as more credible and appealing to consumers.

S-O-R Model

The S-O-R Model supports this study by illustrating how visual packaging cues affect consumer emotions and purchase decisions, as shown in Figure 1. Wang et al. (2024) identified packaging design as the stimulus that triggers conscious or unconscious reactions in the consumer (organism), leading to behaviours such as purchase intention (response). Elements like colour, logo size, and cultural symbolism evoke emotions that shape buying behaviour. This model reflects the psychological and emotional mechanisms through which packaging design influences consumer behaviour in China's fast food and beverage market.
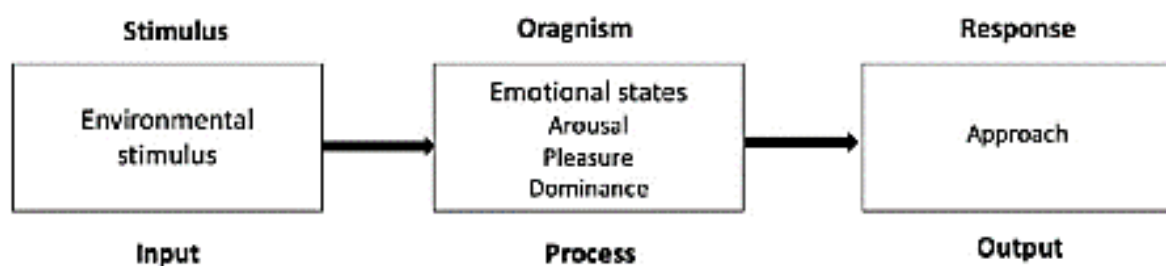

Figure 1: S-O-R Model ((Wang, 2023))

Research Hypothesis

The hypotheses of this study are presented in Table 1.

Table 1: Hypothesis

Hypothesis	Alternative Hypothesis (H_1)	Null Hypothesis (H_0)
H_1	Cultural symbols and traditional design elements in packaging significantly influence consumer purchase behaviour in China's food & beverage industry.	H_{01}: Cultural symbols and traditional design elements in packaging do not significantly influence consumer purchase behaviour in China's food & beverage industry.
H_2	Colour psychology in packaging design significantly affects consumer purchase behaviour in China's food & beverage industry.	H_{02}: Colour psychology in packaging design does not significantly affect consumer purchase behaviour in China's food & beverage industry.
H_3	Brand logo placement and size significantly influence consumer purchase behaviour in China's food & beverage industry.	H_{03}: Brand logo placement and size do not significantly influence consumer purchase behaviour in China's food & beverage industry.

Literature Gap

Although previous studies have explored the impact of packaging design on consumer behaviour, limited research addresses the roles of cultural symbolism, colour psychology, and brand logo placement within China's food and beverage sector. Most existing work centres on Western markets, overlooking the culturally ingrained aesthetic perceptions of Chinese consumers. Additionally, the interaction of these design elements remains underexplored. This study addresses these gaps by examining how visual communication in packaging influences consumer responses and purchase behaviour in China's competitive market.

Methodology

Overview

This chapter outlines the research methods used to assess the effectiveness of visual communication in packaging design on consumers within China's food and beverage industry. It covers the research approach, study design, data collection techniques, sampling procedures, data analysis strategy, and ethical considerations, thereby ensuring the study's credibility.

Research Method

This research adopts a mixed-method approach to examine how cultural symbolism, colour associations, and logo placement influence consumer purchase decisions. This approach is suitable as it combines statistical analysis with qualitative insights, enabling deeper exploration and pattern identification. It supports a stronger correlation between packaging design elements and actual usage or purchasing behaviour.

Research Design

This study uses a survey method supported by a case study of Mengniu Dairy. Data are collected directly from participants using a structured questionnaire and then linked to the case. As a cross-sectional survey, it captures consumer responses at a specific point in time to assess current attitudes. To ensure clarity and comparability, only closed-ended questions are used, presented in a Likert scale format to facilitate self-assessment of preferences and attitudes. According to Mazhar et al. (2021), primary data collection through surveys, interviews, and observations ensures relevance, accuracy, and alignment with research objectives.

Data Collection Method

Data for this study was gathered through an online questionnaire created using Google Forms, alongside an analysis of secondary sources for a case study on

Mengniu Dairy. The survey was distributed via social networks, ensuring a broad reach and enabling responses from a diverse range of consumers across China who regularly purchase food and beverage products. This method allowed for widespread participation, and the results offer valuable insights into consumers' views on packaging design. The responses collected were subsequently analysed to identify significant trends in consumer behaviour.

Sampling Technique and Sample Size

This study employs a convenience non-probability sampling method, which is appropriate as it allows direct access to respondents who meet the study's criteria and are willing to participate. The sample includes 249 respondents, sufficient for quantitative analysis, and consists of food and beverage consumers in China, ensuring diversity.

Data Analysis Method

The data is collected and analysed using SPSS (Statistical Package for the Social Sciences). Descriptive statistics provide demographic insights and general consumer preferences for packaging design. Correlation analysis explores the relationships between cultural symbols, the perceived meaning of colours, logo placement, and purchasing behaviour. Normality tests ensure the data distributions are suitable for analysis. Regression analysis assesses how packaging elements influence actual consumer purchasing decisions, offering deeper insights into visual communication's impact. Additionally, Mengniu Dairy is examined qualitatively through secondary case data analysis, focusing on strategic packaging design elements, cultural symbols, colour psychology, and logo placement, and their effect on Chinese consumers.

Ethical Considerations

Ethical considerations for this study include obtaining informed consent from all participants, ensuring their voluntary participation. Participants' identities are kept confidential, and no personal information is collected. Data is stored securely and used solely for research analysis. The questionnaire is designed to ensure valid responses and maintain research credibility by avoiding leading questions that could bias participants' answers.

Data Analysis

Overview

This chapter outlines the descriptive analysis, normality tests, reliability coefficients, correlations, and regression analysis regarding the influence of packaging design characteristics on consumer decision-making.

Descriptive Statistics

Table 2 displays the validity of the responses. The validity of the responses shows that all 249 participants submitted complete data for the variables of gender, age, and frequency of purchasing packaged food and beverages. No responses were missing, ensuring that the analysis is based on valid and complete data for each variable. Table 3 illustrates the gender distribution in the survey. Moreover, the sample comprises 249 participants, with a relatively balanced gender distribution. Of the total, 122 participants (49%) are female, and 127 participants (51%) are male. The cumulative percentage reflects a complete distribution, with males slightly outnumbering females in this dataset. Table 4 presents the age distribution in the survey.

Table 2: Validity of Responses

Statistics			
	Gender	Age	Frequency of Purchasing Packaged Food and Beverages
N Valid	249	249	249
Missing	0	0	0

Table 3: Gender

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	122	49.0	49.0	49.0
	Male	127	51.0	51.0	100.0
	Total	249	100.0	100.0	

Table 4: Age

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-24 Years	51	20.5	20.5	20.5
	25-34 Years	45	18.1	18.1	38.6
	35-44 Years	37	14.9	14.9	53.4
	45-54 Years	56	22.5	22.5	75.9
	55 Years and Above	60	24.1	24.1	100.0
	Total	249	100.0	100.0	

Participants are distributed across a range of age groups, with the largest proportion (24.1%) in the 55 years and above category, followed by those aged 45-

54 years (22.5%). Younger age groups, specifically 18-24 years and 25-34 years, represent 20.5% and 18.1%, respectively. This distribution ensures a diverse representation of age demographics. Table 5 presents the frequency of purchasing packaged food and beverages. The frequency of purchasing packaged food and beverages varies notably. 32.5% of participants reported purchasing "very frequently," 23.3% purchase "rarely," another 23.3% "frequently," and 20.9% purchase "occasionally." This indicates a general trend towards frequent or very frequent purchases of packaged goods.

Table 5: Frequency of Purchasing Packaged Food and Beverages

Frequency of Purchasing Packaged Food and Beverages					
		Frequency	Percent	Valid Percent	Cumulative Percent
VALID	Rarely	58	23.3	23.3	23.3
	Occasionally	52	20.9	20.9	44.2
	Frequently	58	23.3	23.3	67.5
	Very Frequently	81	32.5	32.5	100.0
	Total	249	100.0	100.0	

Normality Analysis

Table 6 presents the results of the normality test for the survey data.

Table 6: Normality Test

Tests of Normality						
	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Cultural Symbols and Traditional Design Elements in Packaging	.369	249	.000	.577	249	.000
Colour Psychology in Packaging Design	.362	249	.000	.596	249	.000
Brand Logo Placement & Size on Packaging	.375	249	.000	.598	249	.000
Consumer Purchase Behaviour	.359	249	.000	.606	249	.000
a. Lilliefors Significance Correction.						

The normality tests for the four variables (Cultural Symbols and Traditional Design

Elements in Packaging, Colour Psychology in Packaging Design, Brand Logo Placement & Size on Packaging, and Consumer Purchase Behaviour) reveal significant deviations from normality. Both the Kolmogorov-Smirnov and Shapiro-Wilk tests returned p-values of 0.000, which are below the threshold of 0.05, indicating that the data for all variables are not normally distributed. Consequently, non-parametric methods or data transformations may be required for further analysis, as the assumptions of normality for parametric tests have been violated. As illustrated in Figure 2, cultural symbols and traditional design elements play a crucial role in packaging design.
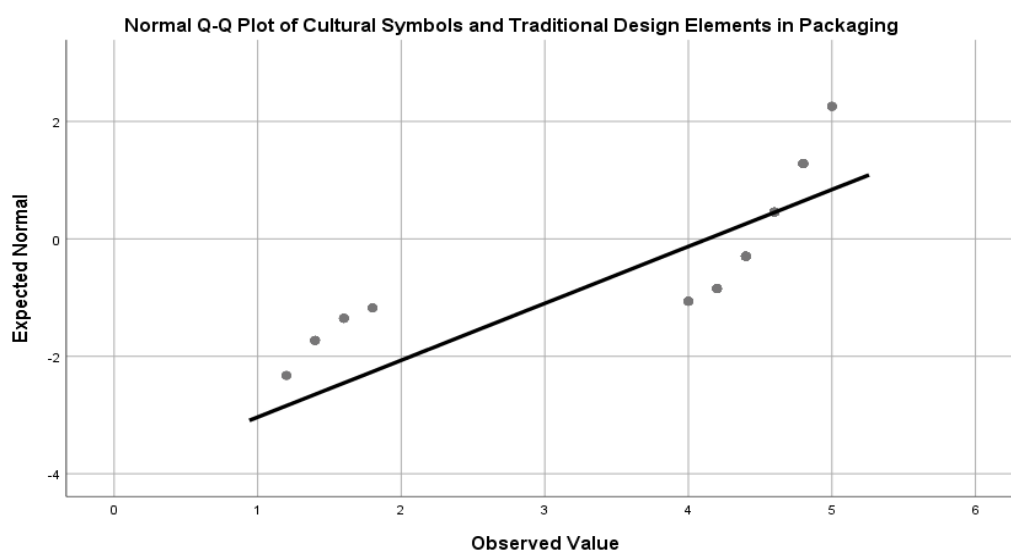

Figure 2: Cultural Symbols and Traditional Design Elements in Packaging

Colour Psychology in Packaging Design

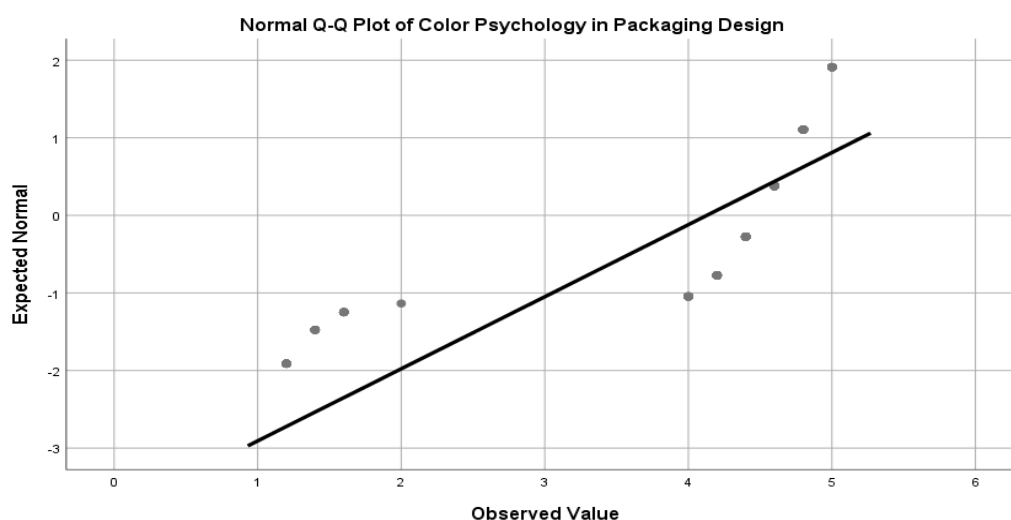Figure 3 presents the Normal Q-Q Plot for Colour Psychology in Packaging Design.

Figure 3: Cultural Symbols and Traditional Design Elements in Packaging

Brand Logo Placement & Size on Packaging

Figure 4 presents the Normal Q-Q Plot of Brand Logo Placement and Size on Packaging.

Figure 4: Cultural Symbols and Traditional Design Elements in Packaging

Consumer Purchase Behaviour

Figure 5 displays the Normal Q-Q Plot for Consumer Purchase Behaviour.

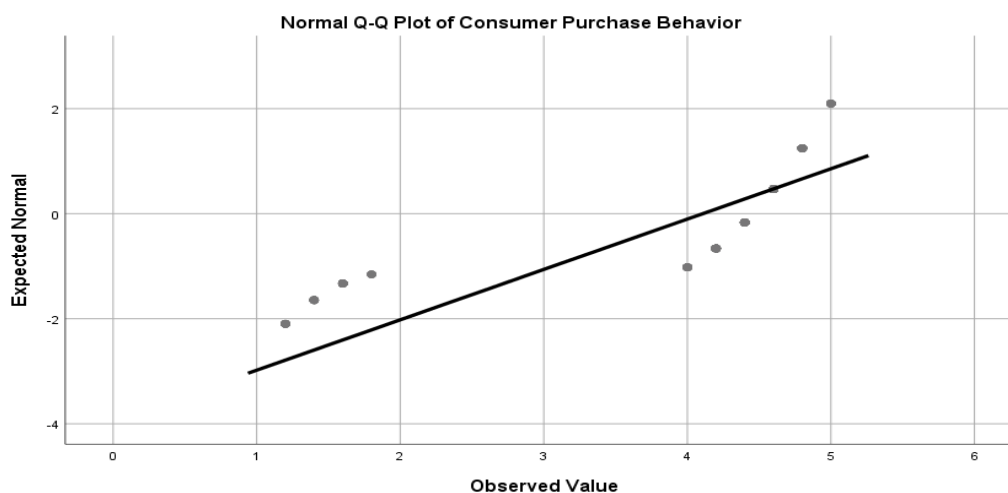**Figure 5:** Normal Q-Q Plot of Consumer Purchase Behaviour

Reliability Analysis

Table 7 presents the reliability statistics for the Cultural Symbols and Traditional Design Elements in Packaging variable. The Cronbach's Alpha value of 0.851 demonstrates strong internal consistency for this scale, indicating that the five items used to measure cultural symbols and traditional design elements in packaging are reliable.

Scale: Cultural Symbols and Traditional Design Elements in Packaging

Table 7: Reliability Statistics of Cultural Symbols and Traditional Design Elements in Packaging

Reliability Statistics	
Cronbach's Alpha	No. of Items
.851	5

Scale: Colour Psychology in Packaging Design

Table 8 presents the Reliability Statistics for Colour Psychology in Packaging Design. With a Cronbach's Alpha of 0.859, this scale demonstrates strong reliability, indicating that the five items assessing colour psychology in packaging design consistently measure the same construct.

Table 8: Reliability Statistics of Colour Psychology in Packaging Design

Reliability Statistics	
Cronbach's Alpha	No of Items
.859	5

Scale: Brand Logo Placement and Size on Packaging

Table 9 presents the Reliability Statistics for Brand Logo Placement and Size on Packaging. The Cronbach's Alpha value of 0.855 indicates high reliability, suggesting that the five items on brand logo placement and size in packaging are internally consistent.

Table 9: Reliability Statistics of Brand Logo Placement and Size on Packaging

Reliability Statistics	
Cronbach's Alpha	No of Items
.855	5

Scale: Consumer Purchase Behaviour

Table 10 presents the Reliability Statistics for Consumer Purchase Behaviour. A Cronbach's Alpha of 0.855 for this scale reflects strong reliability, demonstrating that the five items used to measure consumer purchase behaviour are consistent and dependable for analysis.

Table 10: Reliability Statistics of Consumer Purchase Behaviour

Reliability Statistics	
Cronbach's Alpha	No of Items
.855	5

Correlation Analysis

Table 11 presents the Correlation Analysis, showing significant positive relationships among all variables at the 0.01 level. The correlation analysis reveals significant relationships between the variables at the 0.01 level. Cultural Symbols and Traditional Design Elements in Packaging positively correlate with Colour Psychology (r = 0.325), Brand Logo Placement (r = 0.440), and Consumer Purchase Behaviour (r = 0.385). Colour Psychology shows moderate positive correlations with both Brand Logo Placement (r = 0.310) and Consumer Purchase Behaviour (r = 0.323). Brand Logo Placement has a strong positive correlation with Consumer Purchase Behaviour (r = 0.350). All correlations are statistically significant, indicating that these packaging elements are interconnected and influence consumer behaviour.

Table 11: Correlation Analysis

Correlations			Cultural Symbols and Traditional Design Elements in Packaging	Colour Psychology in Packaging Design	Brand Logo Placement & Size on Packaging	Consumer Purchase Behaviour
Spearman's Rho	Cultural Symbols and Traditional Design Elements in Packaging	Correlation Coefficient	1.000	.325**	.440**	.385**
		Sig. (2-Tailed)	.	.000	.000	.000
		N	249	249	249	249
	Colour Psychology in Packaging Design	Correlation Coefficient	.325**	1.000	.310**	.323**
		Sig. (2-Tailed)	.000	.	.000	.000
		N	249	249	249	249
	Brand Logo Placement & Size on Packaging	Correlation Coefficient	.440**	.310**	1.000	.350**
		Sig. (2-Tailed)	.000	.000	.	.000
		N	249	249	249	249
	Consumer Purchase Behaviour	Correlation Coefficient	.385**	.323**	.350**	1.000
		Sig. (2-Tailed)	.000	.000	.000	.
		N	249	249	249	249
**. Correlation Is Significant At The 0.01 Level (2-Tailed).						

Regression Analysis

Table 12 presents the Model Summary for the Regression Analysis. The regression analysis model shows a strong correlation (R = 0.967) and explains 93.5% of the variance in consumer purchase behaviour (R^2 = 0.935). The adjusted R^2 value of 0.934 indicates a good fit, reflecting the influence of the predictors. The standard error of the estimate is 0.268, indicating relatively small prediction errors. The F-change statistic (1173.232) with a p-value of 0.000 confirms the model's statistical

significance, demonstrating that the packaging design elements significantly predict consumer purchase behaviour.

Table 12: Model Summary

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.967a	.935	.934	.267682583676189	.935	1173.232	3
Model		Change Statistics					
		df2			Sig. F Change		
1		245			.000		
a. Predictors: (Constant), Brand Logo Placement & Size on Packaging, Colour Psychology in Packaging Design, Cultural Symbols and Traditional Design Elements in Packaging.							

Table 13 presents the ANOVA results, assessing the overall significance of the regression model. The ANOVA results reveal that the regression model significantly explains the variation in consumer purchase behaviour (F = 1173.232, $p < 0.001$). The total sum of squares (269.756) is partitioned into the regression sum of squares (252.200) and the residual sum of squares (17.555). This indicates that the predictors—Cultural Symbols and Traditional Design Elements, Colour Psychology, and Brand Logo Placement—explain a substantial portion of the variance in consumer purchase behaviour. The p-value of 0.000 confirms the statistical significance of the model, validating the relevance of these predictors in understanding consumer behaviour.

Table 13: ANOVA

ANOVAa						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	252.200	3	84.067	1173.232	.000b
	Residual	17.555	245	.072		
	Total	269.756	248			
a. Dependent Variable: Consumer Purchase Behaviour.						
b. Predictors: (Constant), Brand Logo Placement & Size on Packaging, Colour Psychology in Packaging Design, Cultural Symbols and Traditional Design Elements in Packaging.						

Table 14 presents the Coefficients, detailing the individual predictor contributions in the regression model. The coefficients Table 14 reveals that all three independent variables significantly affect consumer purchase behaviour. Cultural Symbols and Traditional Design Elements in Packaging (B = 0.416, $p < 0.001$) have the strongest

impact, followed by Colour Psychology (B = 0.283, p < 0.001) and Brand Logo Placement (B = 0.277, p < 0.001). The standardized coefficients (Beta values) indicate that Cultural Symbols have the greatest relative influence on consumer purchase behaviour (Beta = 0.412), followed by Colour Psychology (Beta = 0.292) and Brand Logo Placement (Beta = 0.278). All predictors are statistically significant, highlighting their importance in shaping consumer behaviour.

Table 14: Coefficients

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.079	.070		1.118	.265
Cultural Symbols and Traditional Design Elements in Packaging	.416	.068	.412	6.151	.000
Colour Psychology in Packaging Design	.283	.056	.292	5.024	.000
Brand Logo Placement and Size on Packaging	.277	.064	.278	4.301	.000

Data Analysis: Mengniu Dairy Case Study

Mengniu Dairy has been chosen as the relevant case study to examine the impact of visual communication in packaging design on consumer behaviour. As a prominent Chinese dairy brand, Mengniu has effectively utilised packaging design as a strategic tool for connecting with the community. By adhering to the principles of cultural symbolism, colour psychology, and logo placement, Mengniu's packaging design resonates with Chinese consumers, enhancing their perception of the product's credibility.

Cultural Symbols and Traditional Design Elements

Mengniu's incorporation of culturally sensitive design features aligns with the fundamental psychological preferences of Chinese consumers. The brand's use of oriental motifs, such as the dragon and lotus flower symbols, alongside elements that highlight health and purity, positions it as trustworthy, prosperous, and authentic (Zhang, 2024). These design choices are consistent with the correlation analysis findings from this study, which reveal a positive relationship between cultural symbols and consumers' purchase intentions (r = 0.385). For example, the inclusion of auspicious colours and symbols like the lotus or dragon conveys positive connotations, such as good fortune, which is likely to resonate with consumers who prioritise quality and originality in their purchasing decisions.

Colour Psychology

Mengniu's packaging incorporates colour psychology, a crucial factor influencing purchasing decisions. The use of red and gold in their packaging signifies richness and prosperity, qualities highly esteemed in China. Red is associated with joy, festivity, and prosperity, while gold conveys opulence and elitism. These colours, particularly in premium milk and yogurt products, not only make the packaging stand out but also signal high value and quality (El-Aidie & Khalifa, 2024). The correlation analysis reveals a positive and significant relationship between colour psychology and consumer purchase behaviour (r = 0.323), supporting the notion that colours shape consumers' perceptions of a product's value and appeal.

Brand Logo Placement

Depending on the type of product Mengniu produces, the brand logo is prominently placed at the top or centre of the packaging. This strategic positioning fosters brand familiarity, which in turn enhances brand credibility (Qader et al., 2022). According to the findings, Mengniu has effectively leveraged the correlation between logo placement and consumer purchase behaviour (r = 0.350) to increase logo visibility, reinforcing brand recognition and credibility as indicators of product quality. This visibility enhances Mengniu's competitiveness, allowing consumers to make purchasing decisions with greater ease and confidence.

Discussion

The findings of this study demonstrate that Cultural Symbols, Colour Psychology, and Brand Logo Placement are all significant determinants of consumer purchase behaviour. The strongest impact was observed for Cultural Symbols and Traditional Design Elements (Beta = 0.412), followed by a moderate influence from Colour Psychology (Beta = 0.292) and Brand Logo Placement (Beta = 0.278). These results align with extensive literature on cultural symbolism in consumer behaviour. Ploom et al. (2020) argue that culturally appealing symbols and colours capture attention and evoke emotional responses that positively affect purchase decisions. Additionally, Kuo et al. (2021) established that packaging colour influences consumer perception, making colour psychology a crucial element in packaging design. Correlation analysis further supports these findings, revealing a positive correlation between packaging design elements and consumer behaviour. Notably, Cultural Symbols showed a moderately positive relationship with Consumer Purchase Behaviour (r = 0.385), emphasising the significance of cultural influence in purchasing decisions. This is consistent with the research by Sarkar and Rehman (2024), which identified culture as a critical factor influencing trust and purchasing attitudes toward product packaging. Similarly, the positive impact of Brand Logo Placement on consumer behaviour, reflected in the high correlation coefficient (r = 0.350), supports the theory that a stronger brand image fosters consumer loyalty and drives higher sales (Okonji et al., 2018).

The regression analysis reveals that these three factors account for 93.5% of the total variance in consumer behaviour, making them suitable for prediction. This supports the conclusions of various studies that have examined the role of packaging in consumer decision-making across diverse product categories. Packaging is considered one of the most influential marketing communication tools, affecting purchasing decisions even before direct interaction with the product. The high explanatory power of these findings highlights the growing importance of packaging design in the modern marketplace, driven by aesthetics and cultural relevance (Ghorbani & Westermann, 2024).

Conclusion

The objective of the current research was to examine the impact of visual components in packaging design, specifically focusing on cultural symbolism, colour associations, and brand logo placement, and their effect on consumer purchasing behaviour in China's food and beverage industry. The study found that these three design aspects significantly influence consumer decision-making. Cultural and traditional symbols emerged as the most critical elements in shaping purchase intent, with a coefficient of 0.44. Colour, closely tied to both emotional and cultural significance, was identified as the second most impactful factor, particularly for products like tea and snacks. Moreover, the positioning of the brand logo played a crucial role in fostering consumer trust and brand familiarity. Interestingly, the combined influence of these three variables accounted for 93.5% of the variance in consumer buying behaviour, emphasising the importance of well-thought-out packaging. The results highlight that packaging designs in China must effectively incorporate cultural relevance, colour associations, and clear brand recognition. These elements extend beyond aesthetic considerations, functioning as potent persuasive tools at the point of purchase. By leveraging these insights, companies can design packaging that not only attracts attention but also improves consumer perceptions, leading to increased sales. The significance of packaging is evident in how brands use distinctive designs to set themselves apart in a competitive marketplace.

Recommendations

Preserving Local Culture: Brands should integrate traditional Chinese motifs and imagery into packaging design to establish a connection with cultural symbolism, allowing the product to resonate more deeply with consumers and reflect their cultural identity.

Emotional Appeal through Colour: Packaging should utilise vibrant colours that carry significant cultural meanings, such as red for luck or gold for prosperity, to evoke positive emotions and enhance the product's attractiveness. It is crucial for brands to consider the psychological impact of colours, particularly when targeting specific consumer groups.

Visibility of Logos: The prominence of brand logos is another critical element in packaging design. Logos should be positioned strategically, such as at the centre or top of the

packaging, to build consumer trust. For premium brands, subtle logo placement can help convey exclusivity, indicating that the product stands apart from the ordinary.

Simplify Layouts for Maximum Clarity: A clear and straightforward design that focuses on communicating key product details will aid consumers in making informed decisions and enhance the perceived quality of the product. Simplified packaging contributes to a better user experience by removing unnecessary clutter.

Packaging for E-Commerce: Given the rise in online shopping, packaging must be designed to stand out in the digital marketplace. It should be visually compelling and capable of capturing high-quality images that accurately reflect the brand, ensuring it grabs attention across various online platforms.

Limitations and Future Direction

Limitations

A limitation of this study is its reliance on self-reported data from participants, which may be susceptible to biases such as socially desirable responses or recall bias. Additionally, the research was conducted within the Chinese cultural context, meaning the findings may not be directly applicable to other regions globally. The study also did not account for potential mediating factors, such as variations across income levels or regional differences within China, which could influence the results. Lastly, this study focused solely on the immediate impact of packaging design on purchasing decisions, without considering long-term purchasing patterns or trends.

Future Directions

Future research could examine how packaging design elements interact with variables such as consumer personality traits or environmental factors to influence purchasing behaviour. Another avenue for exploration is the impact of packaging design on customer loyalty and long-term product consumption. Expanding this research to other cultures beyond China could provide valuable insights into cultural differences in packaging perceptions. Additionally, contemporary trends in e-commerce and digital, interactive packaging present an opportunity to extend the theoretical framework and investigate how virtual packaging affects consumer choices, including e-shopping and social media influences.

References

Ahlawat, R., & Swami, P. (2024). The right color attracts the right customer: The art of selling smartly with neuromarketing and color psychology. In S. S. T. S. Neuromarketin (Ed.), (pp. 354-375). https://doi.org/10.4018/979-8-3693-4236-7.ch017

Azman, S. A. (2020). Color in packaging. *Journal of Art and Design (REKA)*, 2, 17-19. https://ir.uitm.edu.my/id/eprint/28614

Bai, Y. (2022). Projecting Authenticity with Cultural Heritage: Chinoiserie of Contemporary Chinese Fashion Designer Brands. In *Fashion in 21st Century China: Design, Education, and Business* (pp. 15-33). Springer Singapore. https://doi.org/10.1007/978-981-16-2926-6_2

Bettels, J., & Wiedmann, K. P. (2019). Brand logo symmetry and product design: The spillover effects on consumer inferences. *Journal of Business Research*, *97*, 1-9. https://doi.org/10.1016/j.jbusres.2018.12.039

Celhay, F., Cheng, P., Masson, J., & Li, W. (2020). Package graphic design and communication across cultures: An investigation of Chinese consumers' interpretation of imported wine labels. *International Journal of Research in Marketing, 37*(1), 108-128. https://doi.org/10.1016/j.ijresmar.2019.07.004

Chitturi, R., Londoño, J. C., & Henriquez, M. C. (2022). Visual design elements of product packaging: Implications for consumers' emotions, perceptions of quality, and price. *Color Research & Application*, *47*(3), 729-744. https://doi.org/10.1002/col.22761

Dong, R., & Gleim, M. R. (2018). High or low: The impact of brand logo location on consumers product perceptions. *Food Quality and Preference*, *69*, 28-35. https://doi.org/10.1016/j.foodqual.2018.05.003

El-Aidie, S. A. M., & Khalifa, G. S. A. (2024). Innovative applications of whey protein for sustainable dairy industry: Environmental and technological perspectives—A comprehensive review. *Comprehensive Reviews in Food Science and Food Safety*, *23*(2), e13319. https://doi.org/10.1111/1541-4337.13319

Fois, F., Woods, M., Yang, Y., & Zheng, X. (2019). Recovering Tradition in Globalising Rural China: Handicraft Birdcages in Da'ou village. *Sociologia Ruralis*, *59*(4), 661-684. https://doi.org/10.1111/soru.12266

Ghorbani, M., & Westermann, A. (2024). Exploring the role of packaging in the formation of brand images: a mixed methods investigation of consumer perspectives. *Journal of Product and Brand Management*. https://doi.org/10.1108/JPBM-09-2023-4738

Hu, B. (2020). Exploring Contemporary Visualizations of Traditional Chinese Symbols: A Case of Tea Packaging Design. *The Design Journal*, *23*(2), 309-320. https://doi.org/10.1080/14606925.2019.1699763

Junfeng, W., & Halabi, K. N. M. (2024). Revitalising Packaging Design of Children Food Brand for Marketing Strategy in China. *International Journal of Business and Technology Management*, *6*(3), 150-160. https://myjms.mohe.gov.my/index.php/ijbtm/article/view/27561

Kakaria, S., Simonetti, A., & Bigne, E. (2023). Interaction between extrinsic and intrinsic online review cues: perspectives from cue utilization theory. *Electronic Commerce Research*, 1-29. https://doi.org/10.1007/s10660-022-09665-2

Kuo, L., Chang, T., & Lai, C. C. (2021). Visual color research of packaging design using sensory factors. *Color Research and Application*, *46*(5), 1106-1118. https://doi.org/10.1002/col.22624

Li, M. (2021). Packaging Design and the Changing Needs of End Consumers. *Proceedings of Business and Economic Studies*, *4*(6), 67-72. https://doi.org/10.26689/pbes.v4i6.2862

Li, S., Zeng, Y., & Zhou, S. (2020). The congruence effect of food shape and name typeface on consumers' food preferences. *Food Quality and Preference*, *86*, 104017. https://doi.org/10.1016/j.foodqual.2020.104017

Li, Y. (2021). Analysis of Visual Communication Packaging Design Based on Interactive Experience. *Journal of Physics: Conference Series*, *1852*(2). https://doi.org/10.1088/1742-6596/1852/2/022074

Mazhar, S. A., Anjum, R., Anwar, A. I., & Khan, A. A. (2021). Methods of data collection: A fundamental tool of research. *Journal of Integrated Community Health*, *10*(1), 6-10. https://doi.org/10.24321/2319.9113.202101

Moser, C., Schoenebeck, S. Y., & Resnick, P. (2019). Impulse buying: Design practices and consumer needs. Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems, https://doi.org/10.1145/3290605.3300472

Nilsen, J. H., & Zawkhai, L. (2023). *Exploring the Influence of Consumer Behavior, Psychology, and Personality on Purchase Intention: A Study on the Impact of Color, Font Type, and Material in Coffee …* https://hdl.handle.net/11250/3089244

Okonji, P. S., Olayemi, O. O., & Oghojafor, B. E. (2018). Strengthening Sales Performance and Consumer loyalty through Sales Promotion: An Empirical Investigation. *Nigerian Journal of Management Studies*, *18*(1), 116-123. http://lares.unilag.edu.ng/index.php/njms/article/view/822

Park, Y. W., & Hong, P. (2024). *Cosmetics Marketing Strategy in the Era of the Digital Ecosystem: Revolutionizing Beauty in the New Market Frontier*. Springer. https://doi.org/10.1007/978-981-97-3674-4

Ploom, K., Pentus, K., Kuusik, A., & Varblane, U. (2020). The Effect of Culture on the Perception of Product Packaging: A Multimethod Cross-Cultural Study. *Journal of International Consumer Marketing*, *32*(3), 163-177. https://doi.org/10.1080/08961530.2019.1660752

Qader, K. S., Hamza, P. A., Othman, R. N., Anwer, S. A., Hamad, H. A., Gardi, B., & Ibrahim, H. K. (2022). Analyzing different types of advertising and its influence on customer choice. *Journal of Humanities and Education Development*, *4*(6), 8-21. https://doi.org/10.22161/jhed.4.6.2

Sarkar, S., & Rehman, J. (2024). Influence of Food Packaging Cues on Consumer Buying Behavior. *IUP Journal of Marketing Management*, *23*(1), 175-207. https://iupindia.in/ViewArticleDetails.asp?ArticleID=311

Scott, S. P., Sheinin, D., & Labrecque, L. I. (2022). Small sounds, big impact: sonic logos and their effect on consumer attitudes, emotions, brands and advertising placement. *Journal of Product and Brand Management*, *31*(7), 1091-1103. https://doi.org/10.1108/JPBM-06-2021-3507

Srivastava, P., Ramakanth, D., Akhila, K., & Gaikwad, K. K. (2022). Package design as a branding tool in the cosmetic industry: consumers' perception vs.

reality. *SN Business & Economics*, *2*(6), 58. https://doi.org/10.1007/s43546-022-00222-5

Steenis, N. D., van Herpen, E., van der Lans, I. A., Ligthart, T. N., & van Trijp, H. C. M. (2017). Consumer response to packaging design: The role of packaging materials and graphics in sustainability perceptions and product evaluations. *Journal of Cleaner Production*, *162*, 286-298. https://doi.org/10.1016/j.jclepro.2017.06.036

Su, J., & Wang, S. (2023). Influence of food packaging color and foods type on consumer purchase intention: the mediating role of perceived fluency. *Frontiers in Nutrition*, *10*. https://doi.org/10.3389/fnut.2023.1344237

Veli, N., & Savochkina, N. (2023). *The Power of Contrast: Exploring the Allure of Black-and-White Advertising in Shaping Brand Luxury Perception* Handelshøyskolen BI]. https://hdl.handle.net/11250/3108537

Waheed, S., Khan, M. M., & Ahmad, N. (2018). Product Packaging and Consumer Purchase Intentions Sidrah Waheed. *Market Forces*, *13*(2). https://kiet.edu.pk/marketforces/index.php/marketforces/article/view/376

Wang, F., Wang, K., Han, Y., & Cho, J. H. (2024). Influences of design-driven FMCG on consumers' purchase intentions: A test of S-O-R model. *Humanities and Social Sciences Communications*, *11*(1), 1-11. https://doi.org/10.1057/s41599-024-03362-1

Wang, H., Ab Gani, M. A. A., & Liu, C. (2023). Impact of Snack Food Packaging Design Characteristics on Consumer Purchase Decisions. *SAGE Open*, *13*(2), 2158244023116. https://doi.org/10.1177/21582440231167109

Wang, M. (2024). *The role of interactive technologies in the physical retail fashion store* [Doctoral dissertation, University of Leeds]. https://etheses.whiterose.ac.uk/35947/

Wang, Q. (2023). The Impact of Expert Endorser in Electric Vehicle Advertising on Consumers' Purchase Intention. *Advances in Economics, Management and Political Sciences*, *41*(1), 106-110. https://doi.org/10.54254/2754-1169/41/20232051

Wong, J., Lalwani, A. K., & Wang, J. J. (2022). The interactive effect of power and self-construal on consumers' preferences for brand-logo size. *Journal of Business Research*, *150*, 279-296. https://doi.org/10.1016/j.jbusres.2022.05.050

Yu, P. (2018). *Seeking Cultural Originality: A Critical Study on Contemporary Product Design in China* [Doctoral dissertation, Birmingham City University]. https://www.open-access.bcu.ac.uk/id/eprint/7240

Zhang, J. (2024). Chinese Brand Cross-Cultural Communication Strategy: Psychological Distance: Spatial Relation Perspective. In J. Zhang (Ed.), *Cross-Cultural Communication of Chinese Brands* (pp. 83-145). Springer Nature Singapore. https://doi.org/10.1007/978-981-97-1371-4_4