

## *Retraction*

# **Retracted: Analytical Facts of Product Designing, Branding, Packaging, and Distributing through Internet of Things Applications**

### **Wireless Communications and Mobile Computing**

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

- (1) Discrepancies in scope
- (2) Discrepancies in the description of the research reported
- (3) Discrepancies between the availability of data and the research described
- (4) Inappropriate citations
- (5) Incoherent, meaningless and/or irrelevant content included in the article
- (6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

### **References**

- [1] W. Zhang and J. Xie, "Analytical Facts of Product Designing, Branding, Packaging, and Distributing through Internet of Things Applications," *Wireless Communications and Mobile Computing*, vol. 2022, Article ID 7711848, 8 pages, 2022.

## Research Article

# Analytical Facts of Product Designing, Branding, Packaging, and Distributing through Internet of Things Applications

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The unmistakable parts of a decided product can be crucial for imparting the situation of the brand, since these viewpoints are projected as perceived components of the product. Hence, the point of this exploration is to survey the connection between the course of shopper buys right now of securing individual consideration products and the unmistakable parts of packaging as per their generational accomplice. These substantial parts of packaging are the visual perspectives that a product contains, recognized as realistic components and educational components. Deviations in notable improvements stand out. Moreover, deviations in the presence of upgrades influence the manner by which purchasers classify improvements. Our trial examines the impact of the level of deviation of espresso bundles on buyers' consideration and classification. The boosts are altered bundles of the most popular Dutch ground espresso brand.

## 1. Introduction

Packaging has turned into an essential vehicle for correspondence and branding. Packaging is a significant figure buy choice made at retail location and furthermore assumes a part of a sales rep on the rack. Certain elements in packaging are expected to be incorporated by the authoritative and administrative prerequisites. Furthermore, the packaging has many capabilities, for example, safeguard the merchandise from the climate, draw in the buyers, and give data to the clients. Pnueli revealed that bundle size, shape, and prolongation influence client decisions and choices [1–5]. Illustrations incorporate design, variety mixes, typography, and product photography; these guides to make a picture and influence the brand correspondence and advertising and buyer outlook. Packaging can serve a significant job in the product utilization experience; however, shopper product organizations and specialists frequently center around packaging's effect on product advancements, conveyance, and a scope of bias and cost-based capabilities. Showcasing and packaging writing frequently separate the two disciplines in

a manner that may not precisely mirror the shopper experience. Packaging research frequently falls under two classifications, each in reasonably segregated disciplines.

Modern innovation research frequently distributed in packaging-explicit diaries zeros in on how actual bundle qualities influence:

- (i) Dissemination productivity
- (ii) Shrinkage (i.e., product robbery)
- (iii) Cost of materials
- (iv) Utilization

Wireless and Internet of Things (IoT) technology may be utilized to improve the efficiency and efficacy of many significant local and national environmental programs, including the monitoring the gathering of recyclable items, the monitoring of vehicle emissions to assist with air quality, the reusing packaging materials and electrical components, and getting rid of electronic trash (RFID) used to distinguish the electronic

components that make up PCs, smartphones, and other consumer electrical waste by increasing the reuse of these components in electronic goods [6–10]. RFID keeps going to increase supply chain awareness by assisting businesses in tracking goods more effectively and inventory management, resulting in less need for wasteful fuel and transportation.

*1.1. Package and Packaging Plan.* In advancing composition, packaging is a piece of the thing and the brand. Item's pack tends to its characteristics and bestows the item data [11–17]. For customers, the thing and the group are to be sure the very same at the moment that they see it on the supermarket racks. During the purchasing decision, the bundle helps the customer by making the overall thing insight which helps the evaluation and the production of the best choice. In addition, the bundle is the thing until the veritable thing is consumed and the group is reused.

The group setup expands the worth of the pack and to the thing individually. Plan parts like tones, printed style, text, and plans have a critical influence in bundle appearance. Pictures on the group in sort of engaging circumstances (mountains, beaches, luxury houses, and vehicles) can assist with setting off method of life goals. The basic task of bundling and packaging design at checkout is to get the customer's attention and overcome resistance in stores and supermarkets.

Productive group planning and packaging itself is the result of the association and the work of publicists, creators, and customers. Therefore, packaging is an important tool in today's progress in customer inventory activity [18–22]. One study believes that the group can allow customers to go out, convey the name and image of the organization, separate the brand from competitors, and increase the value of the item. Second, the actual group is likely to be considered a particular device and will provide the buyer with the appropriate information when making a purchase decision. There are terms that come from the constant planning of packaging articles. It is normal to arrange the meaning of things and the images of associations and separate things into buyer characters. Therefore, the organization supports the attention of groups and articles and prevents them from presenting themselves to competitors in the minds of buyers in formulating characteristics that the name of the brand or association does not provide. One study considers that thing arranging prompts displaying mix where the parts, for example, evaluating technique, spot, things, and progression, are consolidated. These parts help to arrive at the purchasers and describe the appropriate thing arranging to them.

Arranging might consolidate different parts which depend upon the situating methodologies. This can be around the world, new, and neighbourhood purchaser culture situation where the characteristics, for instance, plan, group, and execution, can have unique works and purposes [23–29]. In any case, the crucial goal of arranging is to give fruitful show and explanation on why the customers should buy specific thing. Subsequently, the group and packaging setup centres on shoppers' thought, while the arranging helps the association with setting the items fittingly keeping watch. Figure 1 is the packaging process.

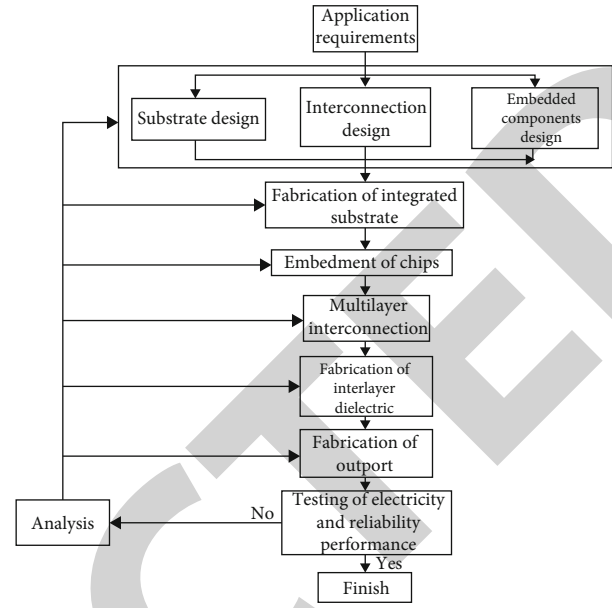


FIGURE 1: Packaging process.

*1.2. Packaging as a Quality Estimation.* Group quality and tested concepts are central elements of the purchasing route. When a buyer evaluates a new group, the packaging planning element is very important. Customers perform quality assessments that take into account package credits and the entire group. Here, the customer can see the placement of the bundle and determine the benefits of the new one. Packaging is a quality assessment of things. According to previous research, when a customer sees a new pack on a shelf, they are usually forced to perform a quality assessment of the item through group experience. Quality decisions affect results and group points. Often, when a group conveys unmatched quality, customers want to see the product itself as something special. If the group gives a bad impression, the buyer mistakes the real thing for a terrible quality one. The authors recommend that buyers be able to naturally visualize the look, taste, feel, smell, and sound of things while looking at the images on the package. Packaging aims to be exhilarating and safe, with incredible impact [30–33]. Food suspicions are raised, for example, by packaging factual information as well as parts and labels. Again, the assortment section expects a large market share. The colour of the package should be visible and associated with quality attributes such as taste and food. It is recognized that productive results can be achieved by combining packaging parts such as assortment, transparent packaging, and event lighting. In the food organization, the foods selected for the show are selected for their variety and appearance.

The quality got together with thing cost can affect the purchase goal. It says that the expense of lower-assessed packaged products gets less consideration than luxurious products, suggesting that the disposition towards the group and anticipated item quality affects the customer's inspiration to buy a low-estimated bundled thing in the supermarket.

*1.3. Customer Conduct.* The cutting edge market comprises of a major assortment and variety of packaging, plans, items, products, and administrations. It creates and improves day to day and makes upgrades in systems forever. Nonetheless, it would not invest such a lot of energy into the turn of events on the off chance that the shopper and the general society would not require new items, item thoughts, and capabilities. The market is the reliable area of industry and the shoppers are just a single key component of market execution which permits the businesses to exist and develop. Organizations must understand their customers' needs and concerns, as well as how they behave and think, in order to produce the right product or service.

Customer conduct is the interaction included when people or gatherings select, buy, use, or discard items, administrations, thoughts or encounters to fulfill their requirements and wants.

There are various individuals with various jobs who are engaged with this cycle: the buyer, whose capability is to purchase the item or administration; the client who utilizes the genuine item or administration; and the force to be reckoned with who gives data and suggestions possibly in support of the item or administration without purchasing or utilizing it.

*1.4. Perception.* Nature contributes people with feelings and resources by which an individual can insight the environment. Wisdom helps a person in sorting out their environmental variables and eccentricities as a more point by point thought. As such, insight is the cycle by which real sensations like sights, sounds, and smells are picked, composed, and unravelled.

People during for what seems like forever get bunches of information which in this manner is sifted furthermore, picked. Information can be in the form of typical or established screams, publications or news, or even sounds [34–36]. Of course, people get the information here and respond according to their requirements, wishes, or experience. Figure 2 is the process of perception.

## 2. Review of Literature

The article investigates the development of product improvement designing by giving an outline of the different formative stages according to a verifiable viewpoint. Besides, plan unwavering quality assessment which is a vital part of product improvement designing cycles is concentrated by considering and giving direction how to sort and evaluate dependability data right on time at the product configuration stage, as well as how to represent adaptability and master's attitudinal person (data), which have been tracked down based on the appraisal of designing product unwavering quality. Then, perceptual planning is utilized to determine beginning detail and select another situation for the new product. From that point onward, new product ideas are created and tried. The strategy is delineated utilizing a contextual investigation use of new pen development.

The progress of new product advancement (NPD) depends on the viable joining of showcasing and designing particularly when the improvement is designated at making

new products equipped for fulfilling client needs created by sentiments, perspectives, and feelings. Such products can be called emotional products [37–40]. This paper presents a precise new product improvement philosophy that incorporates the processes expected to evoke both substantial/goal and elusive/full of feeling client needs and makes an interpretation of those requirements into product parameters to be utilized in the advancement of new products that meet both the client utilitarian and emotional necessities. The technique starts by recognizing client substantial and intangibles needs and then makes an interpretation of those requirements into measurements. Then, perceptual planning is utilized to determine the beginning detail and selects another situation for the new product. From that point onward, new product ideas are created and tried. The technique is outlined utilizing a contextual investigation utilization of new pen development.

The progress of new product advancement (NPD) depends on the compelling reconciliation of advertising and designing particularly when the improvement is focused on at making new products equipped for fulfilling client needs created by sentiments, mentalities, and feelings. Such products can be called full of feeling products. This paper presents a methodical new product improvement philosophy that coordinates the cycles expected to evoke both substantial/goal and elusive/emotional client needs and makes an interpretation of those requirements into product boundaries to be utilized in the improvement of new products that meet both the client useful and full of feeling needs. The procedure starts by distinguishing client unmistakable and intangible needs and then makes an interpretation of those necessities into measurements. Then, perceptual planning is utilized to decide introductory detail and select another situation for the new product. From that point forward, new product ideas are created and tried. The philosophy is shown utilizing a contextual investigation utilization of new pen improvement. The development level is not adequate in Latvia. One of the hugest players in the development field are business hatcheries in Latvia. This exploration study underlines the job of assessment of each phase of advancement processes. The creators offer another model for the assessment of development processes stage by stage. This model permits to distinguish the primary issues that impede advancement. This model permits to create substantial recommendations for working on the creative environment in the country. The examination is in view of the creators' directed examination as a piece of logical award of Rezekne Academy of Technologies „New product advancement process displaying and examination in Latvia -development hindrances.

The development level is not adequate in Latvia. Perhaps of the main player in the development field are business hatcheries in Latvia. This examination concentrates and underlines the job of assessment of each phase of advancement processes. The creators offer another model for the assessment of development processes stage by stage. This model permits distinguishing the primary issues that ruin development.

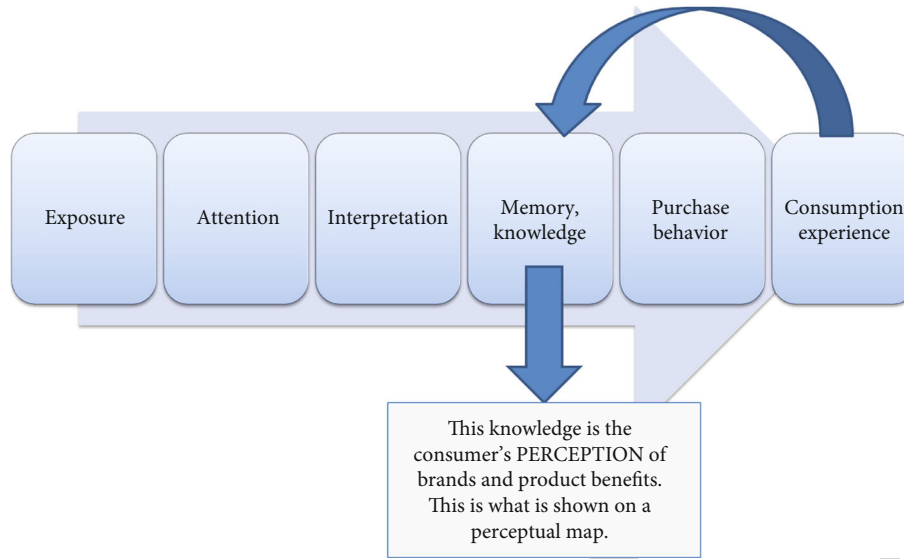


FIGURE 2: Process of perception.

Hermawan Kartajaya, an expert in the field of advertising, said that development has made packaging change capacity; people used to say, “Packaging secures what it sells.” Now, “Packaging sells what it safeguards” by the day’s end; the packaging is at this point not defender or a compartment yet ought to have the choice to sell the items it packs. The valuable headway of packaging does not stop there. As of now, the packaging has worked as a correspondence medium. Packaging cans likewise capacity to confer a particular picture. By looking at the essential ability of packaging, the useful thought of packaging ought to cover the whole advertising system from thing thought to unmistakable use.

Packaging can be characterized as movements of every sort planning furthermore, delivering a compartment or packaging of an item. Packaging incorporates three things, specifically the brand, the actual packaging, and the mark.

There are three major purposes behind wrapping, specifically as follows:

- (1) The packaging meets the prosperity and convenience prerequisites. Packaging shields the thing coming from creator to purchaser. Packaged things are generally all the more perfect, seriously appealing, and more impenetrable to climate induced hurt
- (2) Packaging can do exhibiting programs. Through packaging, thing ID ends up being more powerful and without assistance from any other person hinders exchange by contending items. Packaging is the fundamental way organizations separate their things
- (3) Packaging is a strategy for extending association benefits. In along these lines, the association ought to make the packaging as alluring as could truly be anticipated. With a charming packaging, it is expected to ceaselessly attract the thought of purchasers

TABLE 1: Gender of respondents.

		Frequency	Percent
Valid	Male	23	46.0
	Female	27	54.0
	Total	50	100.0

TABLE 2: Ages of respondents.

Age of respondents	Frequency	Percent
20-30	8	16.0
31-40	13	26.0
41-50	10	20.0
51 and above	19	38.0
Total	50	100.0
Missing	System	
Total		

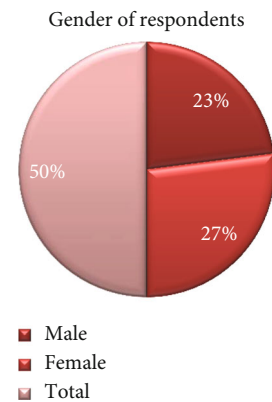


FIGURE 3: Graphical presentation.

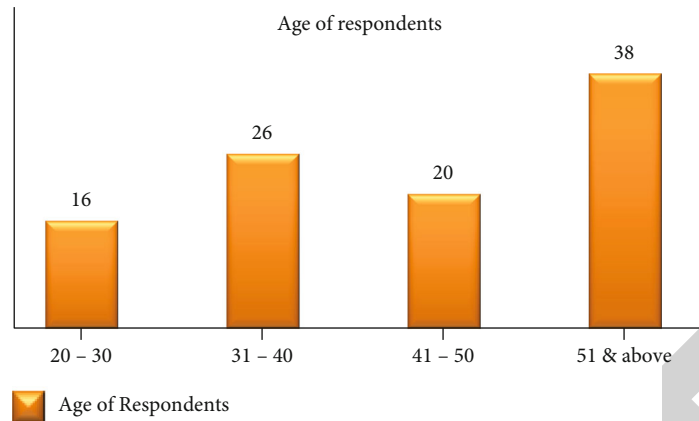


FIGURE 4: Graphical presentations.

Additionally, packaging can moreover diminish the opportunity of harm to products and work with conveyance. For the most part, the inspiration driving packaging setup is explicit to each particular thing or brand. Packaging setup can facilitate the following:

- (a) Displays the phenomenal characteristics of a thing
- (b) Reinforce the classy appearance and worth of the thing
- (c) Maintaining consistency in thing brand solidarity
- (d) Strengthening the capability among item lines and product contributions
- (e) Develop different sorts of buntlines showed by classes
- (f) Using new materials and creating imaginative plans to diminish costs, be more harmless to the environment, or increment usefulness

### 3. Research Methodology

**3.1. Questionnaire.** A poll was regulated among 102 people. We got some information about age, orientation, and occupation.

We likewise asked them inquiries about their experience about the useful advantages of the packaging. These are (1) attractiveness, position, and indication of the logo; (2) verbal data; (3) utilization of varieties and its nonabrasiveness and brilliance; (4) lucidness of textual style and its straightforwardness to recall; (5) attention drawing capacity of shape and size; (6) uniqueness of the material; and (7) usefulness of the data on the bundle.

**3.2. Statistics Analysis.** IBM Statistics Software for Social Science 21 SPSS21 was used. I used descriptive statistics to calculate the frequency of each item. ANOVA was used to understand if there were changes depending on the package attributes associated with the demographic variables (age, gender, and occupation). We used correlation statistics to investigate the relationship between consumer response

(attractive, product selection and purchase, packaging as an advertising medium, and brand communicator) and packaging design attributes.

### 4. Data Analysis

This part oversees the quantifiable analysis performed to achieve the research goals and test the hypothesis.

**4.1. Socioeconomic Background.** The responses and opinion of faculties and students are shown in Table 1 and Table 2 and graphical form Figures 3 and 4.

**4.2. Descriptive Statistics.** Table 3 shows the descriptive statistics. A representation scale is a short, attractive coefficient that summarizes a collection of specific information and represents either the entire population or a sample of the population. Expressive insights can be divided into focus tilt estimation and instability (diffusion) estimation. Focus gradient estimates include mean and mode, and variability estimates include standard deviation, variation, minimum and maximum factors, kurtosis, and skewness. Skewness is an important measurable technique that helps determine imbalanced behaviour as repeats spread and, more specifically, imbalances in the left and right tails of repeat bends. Circulations or records are symmetric if they look similar to the left and right of the midpoint. It is also the quality of repetitive scattering. I have an idea about the status of regular distribution. In essence, the rate of kurtosis is beyond repeated applications in common curved studies. The spread is sharp.

**4.3. Correlation Matrix.** Table 4 shows the correlation. Relationship is a measurable term that depicts how two factors move working together with one another. On the off chance that two factors move in similar bearing, they are supposed to be decidedly associated. Assuming they move the other way, they have a negative connection. Relationship is a broadly involved idea in current money. For instance, brokers can utilize verifiable connections to foresee whether an organization's stock will rise or fall because of changes in loan fees or item costs. Likewise, portfolio administrators might look to moderate gamble by guaranteeing that

TABLE 3: Descriptive statistics.

Descriptive statistics	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. deviation Statistic	Skewness		Kurtosis	
						Statistic	Std. error	Statistic	Std. error
Attractiveness, position, and sign of the logo	50	.000	1.000	.54000	.503457	-.166	.337	-2.057	.662
Verbal information	50	1.00	4.00	2.8000	1.12486	-.305	.337	-1.338	.662
Usage of colours and its softness and brightness	50	1.00	3.00	2.1000	.73540	-.160	.337	-1.095	.662
Readability of font and its ease to remember	50	1.00	3.00	2.0000	.67006	.000	.337	-.675	.662
Uniqueness of the material	50	1.00	3.00	2.1800	.71969	-.285	.337	-.991	.662
Attention drawing ability of shape and size	50	1.00	3.00	2.1600	.71027	-.241	.337	-.947	.662
Usefulness of the information on the package	50	1.00	3.00	2.1400	.72871	-.223	.337	-1.050	.662
Valid N (listwise)	50								

TABLE 4: Correlation table.

Correlations		Social sector	Political sector	Economic sector	COVID-19
Readability of font and its ease to remember, uniqueness of the material, attention drawing ability of shape and size	Pearson correlation	1	-.127	.086	.125
	Sig. (2-tailed)		.380	.554	.386
	N	50	50	50	50
Usefulness of the information on the package readability of font and its ease to remember, uniqueness of the material	Pearson correlation	-.127	1	-.177	-.010
	Sig. (2-tailed)	.380		.218	.944
	N	50	50	50	50
Attention drawing ability of shape and size readability of font and its ease to remember	Pearson correlation	.086	-.177	1	-.360*
	Sig. (2-tailed)	.554	.218		.010
	N	50	50	50	50
Uniqueness of the material	Pearson correlation	.125	-.010	-.360*	1
	Sig. (2-tailed)	.386	.944	.010	
	N	50	50	50	50

\*Correlation is significant at the 0.05 level (2-tailed).

singular resources in the portfolio do not connect exorbitantly with one another.

## 5. Conclusion

We have made practical suggestions to our customers from various packaging parts. Correlation studies have shown differences in ratio factors in terms of mature meetings and key contributions. Connections focus on the parts of the packag-

ing plan that influence your choices, attract ways to buy things, and see packaging as a brand progress tool. Most of the people asked responded positively to shape, typography, images, materials, quality, and diversity. Visual parts are more effective and compelling for packaging plans because they are immediately noticed by the customer and passed to checkout as soon as they are created. The survey found that each component of the package plan had a significant impact and the importance of each component to the

shopper's mindset. Package architects need to accurately present visual and verbal content in order to add factual information to regular brands.

### Data Availability

The data used to support the findings of this study are included within the article.

### Conflicts of Interest

The authors declare that they have no conflicts of interest.

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### References

- [1] A. Pnueli, "In transition from global to modular temporal reasoning about programs," in *Logics and Models of Concurrent Systems*, K. R. Apt, Ed., pp. 123–144, Springer, Berlin, Heidelberg, 1985.
- [2] O. Ampuero and N. Vila, "Consumer perceptions of product packaging," *Journal of Consumer Marketing*, vol. 23, no. 2, pp. 100–112, 2006.
- [3] M. B. Alazzam, F. Alassery, and A. Almulih, "A novel smart healthcare monitoring system using machine learning and the Internet of Things," *Wireless Communications and Mobile Computing*, vol. 2021, 7 pages, 2021.
- [4] B. Meyer, "Applying "design by contract"," *Computer*, vol. 25, no. 10, pp. 40–51, 1992.
- [5] M. E. H. Creusen, R. W. Veryzer, and J. P. L. Schoormans, "Product value importance and consumer preference for visual complexity and symmetry," *European Journal of Marketing*, vol. 44, no. 9/10, pp. 1437–1452, 2010.
- [6] L. L. Garber Jr., R. R. Burke, and J. M. Jones, *The role of package color in consumer purchase consideration and choice*, Marketing Science Institute, 2000.
- [7] A. Gofman, H. R. Moskowitz, and T. Mets, "Accelerating structured consumer-driven package design," *Journal of Consumer Marketing*, vol. 27, no. 2, pp. 157–168, 2010.
- [8] S. Greener, *Business Research Methods*, Ventus Publishing ApS, 2008.
- [9] D. Hanson and M. Grimmer, "The mix of qualitative and quantitative research in major marketing journals, 1993–2002," *European Journal of Marketing*, vol. 41, no. 1/2, pp. 58–70, 2005.
- [10] H. Barringer, C. S. Pasareanu, and D. Giannakopoulou, "Proof rules for automated compositional verification through learning," in *Proc. of the 2nd International Workshop on Specification and Verification of Component Based Systems*, 2003.
- [11] M. K. Al-Azzam, M. B. Alazzam, and M. K. Al-Manasra, "MHealth for decision making support: a case study of EHealth in the public sector," *International Journal of Advanced Computer Science and Applications*, vol. 10, no. 5, pp. 381–387, 2019.
- [12] R. L. Harrison and T. M. Reilly, "Mixed methods designs in marketing research," *Qualitative Market Research: An International Journal*, vol. 14, no. 1, pp. 7–26, 2011.
- [13] G. R. Holmes and A. Paswan, "Consumer reaction to new package design," *Journal of Product & Brand Management*, vol. 21, no. 2, pp. 109–116, 2012.
- [14] K. R. Berger, *A brief history of packaging*, Inst. Food Agric. Sci. Univ. Florida, 2000.
- [15] H. Kauppinen-Räsänen and H. T. Luomala, "Exploring consumers' product-specific colour meanings," *Qualitative Market Research: An International Journal*, vol. 13, no. 3, pp. 287–308, 2010.
- [16] M. G. Bobaru, C. S. Pasareanu, and D. Giannakopoulou, "Automated assume-guarantee reasoning by abstraction refinement," *Proceedings of the computer aided verification*, A. Gupta and S. Malik, Eds., , pp. 135–148, Springer, Berlin, Heidelberg, 2008.
- [17] R. Nugrahani, "Perandesaingrafispada label dankemasanproduk makananumkm," *Jurnal Imajinasi*, vol. IX, no. 2, pp. 127–136, 2015.
- [18] R. Wang, M. B. Alazzam, F. Alassery, A. Almulih, and M. White, "Innovative research of trajectory prediction algorithm based on deep learning in car network collision detection and early warning system," *Mobile Information Systems*, vol. 2021, Article ID 3773688, 8 pages, 2021.
- [19] S. Bensalem, M. Bogza, A. Legay, T. H. Nguyen, J. Sifakis, and R. Yan, "Incremental component-based construction and verification using invariants," *Proceedings of the Conference on Formal Methods in Computer Aided Design (FMCAD)*, , IEEE Press, p. 257–256, 2010.
- [20] Y. Erlyana and R. Ressiani, "Perancangan Buku Desain Kemasan "Basic of packaging"," *ANDHARUPA: Jurnal Desain Komunikasi Visual & Multimedia*, vol. 6, no. 2, pp. 160–172, 2020.
- [21] C. E. Hackley, *Doing research projects in marketing, management and consumer research*, Routledge, London, 2003.
- [22] H. Harmsen, "Tendencies in product development in Danish food companies – report of a qualitative analysis," *MAPP Working Paper*, vol. 17, no. Project 2, 1994.
- [23] C. Knee, "Learning from experience: five challenges for retailers," *International Journal of Retail & Distribution Management*, vol. 30, no. 11, pp. 518–529, 2002.
- [24] O. Vermesan, P. Friess, P. Guillemin et al., "Internet of Things strategic research roadmap," *Internet of Things-Global Technological and Societal Trends*, vol. 1, pp. 9–52, 2011.
- [25] M. Lewis, *Understanding Brands*, Kogan Page, London, 1991.
- [26] J. B. Lord, "New product failure and success," in *Developing New Food Products for a Changing Marketplace*, Technomic Publishing, A. L. Brody and J. B. Lord, Eds., Lancaster, PA, 1999.
- [27] D. Marshall, "Commentary on Garber et al. measuring consumer response to food products," *Food Quality and Preference*, vol. 14, no. 1, pp. 17–21, 2003.
- [28] H. J. Meiselman, J. L. Johnson, W. Reeve, and J. E. Crouch, "Demonstrations of the influence of the eating environment on food acceptance," *Appetite*, vol. 35, no. 3, pp. 231–237, 2000.
- [29] D. Miller, "A Theory of Shopping," in (1991), *Packaging Design*, Cornell University Press, N. Y. Ithaca, and H. Milton, Eds., Bourne Press Ltd, Bournemouth, 1998.
- [30] Mintel, *Own-Label Food & Drink-UK*, Mintel International Group Limited, London, 2003.



- [31] Mintel, *Chilled Desserts-UK*, Mintel International Group Limited, London, 2005.
- [32] Mintel, *Own-Label Food & Drink-UK*, Mintel International Group Limited, London, 2005.
- [33] Y. Zhang and J. Wen, "The IoT electric business model: using blockchain technology for the internet of things," *Peer-to-Peer Networking and Applications*, vol. 10, no. 4, pp. 983–994, 2017.
- [34] H. R. Moskowitz, "On the intersection of products and concepts: opportunities for sensory analysis to improve the commercial development process," *Food Quality and Preference*, vol. 10, no. 4-5, pp. 333–342, 1999.
- [35] M. Muniz and T. C. O'Guinn, "Brand community," *Journal of Consumer Research*, vol. 27, no. 4, pp. 412–432, 2001.
- [36] C. Nancarrow, L. T. Wright, and I. Brace, "Gaining competitive advantage from packaging and labelling in marketing communications," *British Food Journal*, vol. 100, no. 2, pp. 110–118, 1998.
- [37] J. C. Olson and J. Jacoby, "Cue utilization in the quality perception process," *Proceedings of the Third Annual Conference of the Association for Consumer Research*, M. Venkatesan, Ed., pp. 167–179, 1972.
- [38] S. Perrin, "Own-label branding," *Food & Drink*, 2003, 2002, November 2003, <https://www.foodanddrinkeurope.com/news>.
- [39] M. Peters, "Good packaging gets through to the fickle buyer," *Marketing*, vol. 20, pp. 10–12, 1994.
- [40] K. Zhao and L. Ge, "A survey on the Internet of Things security," in *2013 Ninth international conference on computational intelligence and security*, pp. 663–667, Emeishan, China, December 2013.