

Ergonomic Standards in Product Packaging Design as a Tool to Enhance Consumer Brand Loyalty

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Abstract:

In the era of rapidly evolving marketing, packaging has transcended its traditional role as a mere product container to become an integrated sensory communication tool. It reflects brand values, attracts consumers, and fosters positive initial impressions. Packaging goes beyond conventional wrapping by integrating innovative design elements such as shape, size, color, and texture to provide a sensory experience that meets consumer needs and enhances product interaction. Packaging serves as a unique marketing tool that contributes to building brand loyalty communities. It is not only a means of attracting consumer attention on shelves but also a fundamental part of the user experience, from initial product viewing to usage. In this context, ergonomic standards in packaging design are crucial, improving comfort, ease of use, and providing a satisfying experience that meets consumer expectations. As packaging's importance as a brand-consumer communication tool grows, companies face significant challenges in designing packages that combine visual appeal with usability to enhance consumer satisfaction and loyalty. There remains a gap in applying ergonomic standards to meet diverse consumer expectations and balance aesthetics with functionality. Herein lies the research problem: how ergonomic standards contribute to improving the packaging usage experience and their role in enhancing consumer brand loyalty. Product packaging design plays a crucial role in shaping consumer experience and building brand loyalty, especially when ergonomic standards are considered. Ergonomics refers to designing products to match users' needs and capabilities, ensuring comfort, well-being, and effective . Applying ergonomic standards in packaging design is an essential part of brand strategies to enhance product appeal and improve user experience. Packaging design is not just an aesthetic element; it is a marketing communication tool that influences purchasing decisions and shapes initial brand impressions. Studies indicate that packaging characteristics, such as shape, colors, and materials, play a key role in enhancing consumer loyalty by providing a positive user experience. When packaging is easy to use and reflects brand values, it enhances consumer satisfaction and deepens brand connection. Packaging has become an integral part of brand identity. Packaging design expresses brand personality, sends indirect messages to consumers, influences purchasing decisions, and increases emotional brand connection. Additionally, applying ergonomic standards adds value by providing comfortable and practical designs that improve user satisfaction and reduce product handling effort . Packaging design evolution has moved beyond basic protection to provide a comprehensive consumer experience combining practical and aesthetic aspects., packaging design has become an effective consumer communication tool, conveying brand values and orientations, enhancing trust and emotional connection. Ergonomic standards play a prominent role in achieving this integration by focusing on designing user-friendly products that provide comfort, considering users' physiological and psychological needs. This approach is crucial in consumer product markets, where ergonomic packaging can improve consumer experience from opening to use, enhancing positive brand impressions. Moreover, the main challenge is integrating ergonomics with marketing and aesthetic aspects. Research indicates that combining creative design with practical packaging functions improves consumer perception of added value, enhancing brand loyalty. This integration is not only a functional requirement but also an opportunity for companies to excel in a competitive market that heavily relies on customer loyalty.

Research problem: With the growing importance of packaging as a brand-consumer communication tool, companies face significant challenges in designing packages that combine visual appeal with usability to enhance consumer satisfaction and loyalty. There remains a gap in applying ergonomic standards to meet diverse consumer expectations and balance aesthetics with functionality. This research aims to answer the following questions: How do ergonomic standards contribute to improving the packaging usage experience? What is the role of ergonomic standards in enhancing consumer brand loyalty? How can packaging design

ergonomics be aligned with consumer needs?

Research Objective: To identify ergonomic standards in product packaging design and their role in improving user experience and enhancing comfort and satisfaction. To clarify the relationship between ergonomic packaging design and consumer brand loyalty by analyzing the impact of comfort and effectiveness on consumer opinions. To help designers understand the importance of balancing aesthetics and functionality in packaging design to ensure market success and meet consumer expectations.

Research Methodology: This research adopts a descriptive-analytical approach by analyzing a range of product packages designed with ergonomic standards, focusing on design elements that reflect ergonomic standards. The analysis will also evaluate visual and material packaging elements such as shape, size, texture, weight, and ease of opening and closing. The analysis focuses on reviewing various packaging design aspects, including visual appeal, usability, and their relation to consumer experience

Results : Applying ergonomic standards in packaging design enhances user experience by providing comfort and ease of opening and closing, reducing consumer effort and enhancing overall satisfaction. Ergonomic packaging enhances loyalty by improving user experience and providing a sense of sustainability and social responsibility, increasing repeat purchases. Using recyclable materials and eco-friendly designs enhances loyalty among environmentally conscious consumers who prefer brands committed to sustainability. Attractive colors and innovative designs play a significant role in attracting consumer attention, enhancing emotional brand connection and positively impacting purchasing decisions. Ergonomic and attractive packaging design is a powerful tool to enhance consumer brand loyalty by providing a comfortable user experience and clear information that reflects brand identity and values.

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References:

- 1- Borgman, I. (2018). The influence of packaging design features on consumers' purchasing & recycling behaviour (Master's thesis, University of Twente).
- 2- Bošnjaković, G., & Vladić, G. (2020). Research methodologies for assessing the ergonomics of packaging products-a review. *International Symposium on Graphic Engineering and Design*, 335–345. <https://doi.org/10.24867/GRID-2020-p37>
- 3- Calza, F., Sorrentino, A., & Tutore, I. (2023). Combining corporate environmental sustainability and customer experience management to build an integrated model for decision-making. *Management Decision*, 61(13), 54–84. <https://doi.org/10.1108/MD-05-2022-0613>
- 4- Costa-Feito, A., González-Fernández, A. M., Rodríguez-Santos, C., & Cervantes-Blanco, M. (2023). Electroencephalography in consumer behaviour and marketing: a science mapping approach. In *Humanities and Social Sciences*
- 5- De La Fuente, J., Gustafson, S., Twomey, C., & Bix, L. (2015). An affordance-based methodology for package design. *Packaging Technology and Science*, 28(2), 157–171. <https://doi.org/10.1002/pts.2087>
- 6- Ding, Y., Meng, X., & Sun, C. (2024). Simplicity Matters: Unraveling the Impact of Minimalist Packaging on Green Trust in Daily Consumer Goods. *Sustainability*, 16(12), 4932.
- 7- Dul, J., & Weerdmeester, B. (n.d.). *Ergonomics for Beginners: A quick reference guide*, Second edition.
- 8- Eagle, L., Czarnecka, B., Dahl, S., & Lloyd, J. (n.d.). *Marketing Communications*; Second Edition.
- 9- Epley, N. (2018). A mind like mine: The exceptionally ordinary underpinnings of anthropomorphism. *Journal of the Association for Consumer Research*, 3(4), 591–598. <https://doi.org/10.1086/699516>
- 10- Franken, G. (2020). Packaging design and testing by eye tracking. *International Symposium on Graphic Engineering and Design*, 347–354. <https://doi.org/10.24867/GRID-2020-p38>
- 11- Ghosh, S., Bagchi, A., Sen, D., & Bandyopadhyay, P. (2011). Ergonomics: A bridge between fundamentals and applied research. In *Indian Journal of Occupational and Environmental Medicine* (Vol. 15, Issue 1, pp. 14–17). <https://doi.org/10.4103/0019-5278.83000>
- 12- Glock, C. H., Grosse, E. H., Kim, T., Neumann, W. P., & Sobhani, A. (2019). An integrated cost and worker fatigue evaluation model of a packaging process. *International Journal of Production Economics*, 207, 107–124. <https://doi.org/10.1016/j.ijpe.2018.09.022>
- 13- Guastello, S. J. (n.d.). *HUMAN FACTORS ENGINEERING AND ERGONOMICS A Systems Approach*.
- 14- Karwowski, W., & Zhang, W. (2021). The discipline of human factors and ergonomics. *Handbook of human factors and ergonomics*, 1-37.

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- 15- Kent, B. O. B., Mosley, B. N., & Schweidel, D. A. (2019). Advertisements in DVR time the shelf life of recorded television commercials in drama, reality, and
 - 16- Kesercioğlu, B. (2005). THE CONTRIBUTION OF USER-CENTERED DESIGN TO CONSUMER PACKAGES A THESIS SUBMITTED TO THE GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES OF THE MIDDLE EAST TECHNICAL UNIVERSITY.
 - 17- Kesercioğlu, B. (2005). THE CONTRIBUTION OF USER-CENTERED DESIGN TO CONSUMER PACKAGES A THESIS SUBMITTED TO THE GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES OF THE MIDDLE EAST TECHNICAL UNIVERSITY.
 - 18- Kumar, R., & Sharma, A. (2024). Review of Pet Food Packaging in the US Market: Future Direction Towards Innovation and Sustainability. *Annual Research & Review in Biology*, 39(6), 16–30. <https://doi.org/10.9734/arrb/2024/v39i62085>
 - 19- 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>
 - 20- Magnier, L., & Schoormans, J. (2017). How Do Packaging Material, Colour and Environmental Claim Influence Package, Brand and Product Evaluations? *Packaging Technology and Science*, 30(11), 735–751. <https://doi.org/10.1002/pts.2318>
 - 21- Mahmoud, A., Said, J., Ahmed, M., & Mohamed, I. (n.d.). Ergonomics: Definition and Genesis. Journal Homepage. <http://ijimct.journals.ekb.eg/>
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