



The role of packaging design in influencing consumer psychology in the organic food market: impacts on sales growth.

Trabajo de Grado.

Mariana Umaña Arenas.

Bogotá DC, Colombia

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Mariana Umaña Arenas (Administración de Negocios Internacionales)

EM Nomandie

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Contents

Declaración De Originalidad Y Autonomía	3
Glossary	6
Resumen.....	8
Abstract.....	10
1. Introduction	12
2. Literature Review	14
2.1 Consumer Psychology And Motivations.....	14
2.2 Influence Of Packaging And Labeling.....	20
2.3 Trust, Certification, And Willingness To Pay	25
2.4 Advertising Strategies And Psychological Influence.....	29
3. Research Assumptions And/Or Hypotheses.....	32
4. Research Design And Methodology	38
4.1 Overview	38
4.2 Population And Study Sample	38
4.3 Data Analysis Methods	40
4.4 Ethics And Human Subjects Issues.....	41
4.5 Sample.....	42
4.6 Experiment Guide	48
4.7 Experiment Structure.....	50
5. Conclusion.....	53
6. Declaration Of Ai Use	57
7. Bibliography	59

Glossary

Advertising: collection of communication techniques used to change the opinions, attitudes, and actions of customers to encourage the purchase of goods or services.

Clustering: unsupervised machine learning method that classifies customers according to shared preferences or behavioral patterns.

Consumer behavior: Analysis of how people choose, purchase, and evaluate products and services.

Consumer psychology: Study of emotional, and social factors that influence purchasing decisions.

Food Well-Being (FWB): Model that relate food consumption to consumers' physical, emotional, and social well-being.

Health Belief Model (HBM): A psychological model that explains how decisions about health are influenced by perceptions of health risks and benefits.

Nutri-Score: Labelling system that classifies using colors and letters the food products' nutritional quality.

Packaging design: The process of designing a product's package's visual, structural, and informational elements to communicate value, attract attention, and support in purchasing decisions.

Sentiment analysis: Text analysis method that categorizes comments or opinions as neutral, negative, or positive.

Visual branding: Integrated collection of visual components (colors, typography, logos, and design) that identify a brand.

Resumen

En el contexto de una demanda creciente por productos producidos sanamente y éticamente, la industria de alimentos orgánicos ha experimentado un crecimiento significativo. La presente tesis discute el uso del diseño del empaque como una herramienta psicológica y comercial dentro de la industria, específicamente como los estímulos visuales e informativos influyen la percepción del consumidor, la confianza, y el comportamiento de compra, y de igual manera, el crecimiento de las ventas. Acorde a la teoría de la psicología del consumidor, mercadeo emocional, y la teoría de la economía conductual, la investigación examina como elementos como el color, la tipografía, la textura, y el etiquetado pueden afectar las respuestas cognitivas y emocionales con respecto a productos alimenticios orgánicos.

Fue utilizado un diseño de métodos mixtos, combinando investigación mediante encuestas, grupos focales, y medición de emociones psicológicas por medio de un software de reconocimiento facial. La investigación enlista 900 participantes en París para determinar el comportamiento del consumidor, reacciones a diferenciaciones en el empaque, y el impacto de los estímulos psicológicos. Técnicas de análisis por agrupación, análisis de sentimiento, y modelación Random Forest proporciona una perspectiva extensa de como los estímulos visuales impactan la percepción y la compra.

Estudios demuestran que el diseño del empaque afecta significativamente la confianza de marca, la evaluación de producto, y la intención de compra. Estímulos emocionales y éticos, así como las certificaciones, narrativa, y la comunicación sostenible, fortalece la adhesión del consumidor y justifica los precios elevados. La coherencia visual de la marca en todas las

líneas de productos, a su vez, favorece el reconocimiento y sustenta el crecimiento de las ventas a largo plazo.

Este estudio contribuye a estrategias de mercadeo en el sector de los alimentos orgánicos, demostrando como el empaque es un factor clave en la experiencia del consumidor, construyendo percepción de marca e impulsando las decisiones de compra. La investigación demuestra la necesidad de alinear los atributos de diseño con los valores del consumidor con el fin de lograr la diferenciación y éxito competitivo a largo plazo.

Palabras clave

Diseño de empaque, psicología del consumidor, mercado de alimentos orgánicos, crecimiento de ventas.

Abstract

In the context of a growing demand for healthily and ethically produced products, the organic food industry has experienced significant growth. The present thesis discusses the application of packaging design as a psychological and commercial tool within this industry, specifically how visual and informational cues influence consumer perception, trust, and purchasing behaviour, and in that way, sales growth. Based on consumer psychology theory, emotional marketing, and behavioural economics theory, the research examines how elements such as colour, typography, texture, and labelling can influence cognitive and emotional responses to organic food products.

A mixed-methods design was employed, combining survey research, focus groups, and physiological emotion measurement through facial recognition software. The study enlisted 900 respondents in Paris to determine consumer behaviour, reactions to packaging differentials, and the impact of psychological stimuli. Analytic techniques of clustering, sentiment analysis, and random forest modelling gave an extensive perspective of how visual cues impact perception and purchase.

Studies indicate that packaging design significantly affects brand trust, product evaluation, and purchase intention. Emotional and ethical cues, such as certifications, storytelling, and sustainability communication, enhance consumer attachment and justify premium prices. Visual brand consistency across product lines, in turn, supports recognition and underlies long-term sales growth.

This study contributes to marketing strategy in the organic food sector by demonstrating that packaging is an active key-driver in the consumer experience, shaping brand impressions and boosting buying decisions. The study demonstrate the need to align design attributes with consumer values in order to achieve differentiation and long-term competitive success.

Keywords

Packaging design, consumer psychology, organic food market, sales growth.

1. Introduction

In the present consumer society, marketing and its associated sales strategies are essential to motivating purchasing behavior. The promotion tools have become primary driving forces and mediators of most consumption of products, particularly for those markets that have a product focus on lifestyle and health values. To understand the dynamics of such influence, market behavior needs to be understood in relation to consumer psychology, an area of study that examines how individuals make decisions based on emotional, social, and economic factors. Consumer psychology is essential to the efficacy of advertising, helping organizations align their approaches with changing consumer drivers.

To stimulate ethical and health-related consumption, research in consumerism data, consumer psychology, and publicity is necessary. As more public interest is generated about individual health and the environment, these aspects are now emerging as priorities for marketing strategies. Companies in the health food sector must leverage these shifts by positioning their marketing communications and product presentation in terms of the values and perceptions consumers appropriate to health, sustainability, and authenticity.

Organic food is, in this regard, a category of products, is a lifestyle and ethical choice. According to Gumber, 2021, organic foods are cultivated without synthetic fertilizers, pesticides, artificial coloring, flavoring, additives, or growth hormones. They also contribute to animal welfare protection and are mostly seen as healthier compared to conventional food. The consumption of organic foods is not only due to the perception of their health benefits but also because they are linked to environmental conservation as well as sustainable

agriculture (Amiot-Carlin, 2023; Oliveira et al., 2024). The product-purpose connection has a significant role in determining consumer choice.

The pandemic caused by Covid-19 has accelerated this trend further. According to Nguyen et al. (2021), even when the pandemic is over, the value of healthy eating as a way of life is likely to increase even more. Consumers are looking for satisfaction in products that also reflect increasingly higher expectations of health, cleanliness, and convenience, and are ready to pay a premium for such assurance. In the organic food market, it is a challenge and a chance: with more and more options on offer, consumers are confronted by complex decisions that are driven by a desire to differentiate lifestyles and consumption habits (Soomro et al., 2024).

In this competition, packaging design plays a crucial role in the way it captures consumer attention and supports product value. When consumer demand and expectations within the organic sector are being met, considerations such as product origin (local, regional, or foreign), absence of additives and poisonous chemicals, price point, and particularly packaging likability must be taken into consideration (Radojević et al., 2021 as cited in Cramarenco et al., 2023). The package is not merely a visual catch, it communicates trust, quality, and compatibility with consumer values. It is often the first point of contact between product and consumer and can have a substantial influence on perception and purchasing behavior.

This thesis examines how the design of packaging influences consumer psychology in the case of the organic food market, particularly its influence on sales growth. By investigating the way visual presentation, design components, and product name

communicate with consumers' values and motivations, this study aims to learn about the methods through which packaging functions as a psychological and business tool. Knowledge of these interactions will enable organic food manufacturers and marketers to more effectively communicate with consumers and support the continued expansion of this growing and values-based market.

2. Literature review

2.1 Consumer Psychology and Motivations

According to the University of Southern California (2023) “Consumer psychology examines consumers’ perceptions, beliefs, feelings and thoughts and considers all of them when examining purchasing behavior. It also accounts for social persuasion and motivation from third parties to purchasing decisions, such as commercials or advertising.” In the context of organic food products, consumer psychology helps understanding the motivations that drive purchasing behaviour, including health awareness, identity expression, environmental consciousness, and emotional satisfaction. The Food Well-Being (FWB), as mentioned by Bublitz et al. (2013), is key in this analysis. FWB is not only about the ‘conscious’ consumption, it explains how the perception and the closeness to well-being and

food, considering functional, symbolic or religious, and holistic goals, affects the decision-making process.

Usually, organic consumers show high levels of goal-directed behavior, categorized in three core food-related motivations: functional, symbolic, and hedonic goals (Bublitz et al., 2013). Functional goals are focused on prevent diseases or promote physical well-being, i.e., nutritional value, environmental safety, and health benefits are priority. These consumers care about reaffirmation through labels or certifications. Symbolic goals are positive self-stem and self-expression oriented. Is focused on the role of food in identity and social relationships. Finally, hedonic goals concentrate on sensory satisfaction and enjoyment of food.

As well, Rana et Paul (2017), there are different aspects organized in three categories within the consumer attituded for buying organic: very important (health consciousness, quality and safety, environment friendly), important (willingness to pay and certification) and less important (fashion trend and unique lifestyle, and social consciousness). These characteristics influence the consumer behavior, of which 3 different profiles can be identified: regular organic buyers, irregular organic buyers, and casual organic buyers. It helps to understand how to reach and satisfy define the target and how to reach the market.

The profile categorization is also mentioned by Machová et al., (2022), identifying four distinct types. Firstly *win-win purchase*, where the customer is aware about environment and is convinced that its purchase behaviour shows a positive impact. The trust on this product is high and the customer doesn't need an extra effort to compromise, i.e., it is not a difficult decision. The Theory of Planned Behavior (TPB) mentioned by Morosan et al., (2025) explains how people's willingness to purchase healthy foods is superior when it represents the moral thing to do, and if they have the resources and knowledge to do the favourable cause of action to make healthy choices. The second category, *feel-good*

purchase, is another category in which the level of consumer trust is high, but it comes with a certain sacrifice to contribute to the environment safety e.g., financial effort.

The third category, *why not to purchase*, occurs when the consumer has a low level of trust and willingness to sacrifice, i.e., the consumer is not convinced about the positive impact of the product but still decide to buy it because is an easy-to-access product. Lastly, *why to purchase the product*, in which it defines an unclear consumer about the safe contribution to environment friendly of the product and must make a higher level of compromise to buy the product, i.e., the sacrifice would be greater.

In addition, according to Kalam et al., (2024) there are 2 types of decisions that affect the customer's choice process: conscious or unconscious. They call them deliberative and automatic influences respectively. Deliberative influences are conscious decisions influenced by knowledge, emotions, and motivations. Automatic Influences are unconscious, such as mindless eating, that can negatively impact FWB.

Behavioural and cognitive profiling like personality, self-esteem, values, attitudes, and beliefs play a strong role in influencing people's perception and behaviour towards organic food products. Marketing specialist can understand consumers' responses towards the messages and presentation they receive from products through these psychology factors. Psychological triggers such as scarcity (Cialdini, 2021, as cited in Medina et al., 2024) and urgency are strong drivers in making sales more effective. These stimuli force consumers to take required actions. These are evident using packaging, for example, limited-time promotions, “last units” announcements, or special product labelling or marking, psychologically urge customers to make faster buying decisions, mostly in a competitive and price-conscious industry-like organic foods.

Raghunathan et al. (2006) find one major cultural assumption: consumers unconsciously attribute health food to more taste. This myth is a challenge for the organic food market, but it also constitutes a strategic challenge, useful packaging can dissipate misinformation by emphasizing both taste and health benefits using attractive pictures and words.

Further, Ajagbe et al. (2015) expose that consumer personality knowledge is needed to support organizations in building tailored customer journeys. Packaging may be arranged in ways to reflect these personality traits using colours, typography, and language that appeal to specific consumer personas e.g. environmentally friendly, health-conscious, or status-conscious consumers. Self-esteem is also implicated; consumers feel more self-respect when purchasing products that satisfy their health values or moral needs, and this can be communicated in aspirational packaging design that inspire prestige or responsibility.

Yang et al. (2023) substantiates this link by showing that consumers who are health-concerned with the risks associated with conventional food are ethically and naturally compelled to switch to their organic alternatives. This ethical motivation can be initiated or reinforced through packaging proclaiming transparency, ethical attribution, or health benefits corresponding to the internal motive power of the consumer.

The Health Belief Model (HBM) (Yazdanpanah et al., 2015 as cited in Morosan et al., 2025), centres on the position of individual beliefs regarding health and the perceived benefits of preventive action in directing behavior. So long as the packaging of organic foods properly communicates health advantages such as "pesticide-free" or "high in antioxidants,"

it speaks the language of the consumer's perceived benefits, and they will be more suitable to purchase the product.

Health-conscious consumers are particularly sensitive to these kinds of cues. Yang et al. (2023) say that consumers who are committed to taking care of themselves will be more likely to connect organic food with healthy consumption. Labels that highlight long-term benefits (e.g., heart health, digestive health) while reassuring consumers that they don't have to sacrifice short-term pleasure, such as great taste, can achieve both short-term and long-term objectives, a strategy supported by Li et al., (2024).

This conflict of motivation, as has been established through research by Stroebe et al., (2008), reflects the complexity of food choice and the requirement for packaging that consider the same. Such brands which reconcile appeal in terms of taste with health cues on their packaging manage better in such situations.

Another important factor is emotional intelligence (EI), in particular its effect on the perceptions that consumers have regarding packaging. Kidwell et al. (2008) conceptualized the Consumer Emotional Intelligence (CEI), which involves the ability to perceive, regulate, and employ emotions when making decisions. Consumers with high CEI will likely respond positively to emotionally stirring packaging, such as labels with family-based or local producers' stories. These features solidify affective ties, establish confidence, and foster customer satisfaction.

The Stages of Change Model developed by (Prochaska and DiClemente, 1982 as cited in Bublitx et al., 2012) is also useful in defining the willingness to change. Organics

companies are able to reach out to customers who are at the contemplation or preparation stages, people who are aware of health or environmental problems but not as ready yet to change. Labelling that affirms small, realistic benefits ("go organic for a cleaner world") helps consumers transition to the action and maintenance stages of change.

Social influence and normative behaviour are also powerful. Word-of-mouth and social-group consumption patterns, (Brown and Ringen, 1987 as cited in Bublit et al., 2012) have significant impact on purchase behaviour. When organic packaging adheres to group norms, such as using symbols that reflect ethical or environmentally friendly living, it strengthens validation by social norms. Shared participation, such as community-supported agriculture or farmers' markets, reinforces the positive social identity linked with organic consumption.

Apart from this, Nguyen et al. (2021) also view perception as a process of interpreting external factors, for example, packaging, into significant knowledge. Packaging is a primary input in this perceptual process that determines consumers' cognitive sorting of the product out, whether it is seen as premium, ethical, safe, or desirable.

Consumer preference is also triggered by a combination of emotional and functional values, as identified by Miyanoshita et al., (2020). While functional values are related with usability and utility (e.g., reusable packaging or informational labelling), emotional values are based on brand identity, visual appeal, and trust, usually triggered immediately through packaging. A successful visual identity on organic packaging can build emotional attachment and brand loyalty, especially when this is supported to enhance authenticity and care narratives.

Alongside this background of tendencies, Gumber (2021) enumerates some of the barriers to organic food buying as low awareness, unavailability, and consumer unwillingness to go out of their way. Packaging again emerges as a key to bridging the gap. Clear labelling that successfully educates consumers on the health, environmental, and moral benefits of organic foods can bridge the information gap. Moreover, accessible, compact, and easily recognizable packaging adds up to higher convenience and visibility levels, encouraging willingness to buying.

Packaging also boosts social acceptability and prestige, another determinant of consumer attitude, by associating the product with self-improving values. A high- or simple-style package can imply quality and align with consumers' desires to be considered health-conscious.

2.2 Influence of Packaging and Labeling

Packaging role goes beyond the physical purpose, it is also an effective marketing tool that transmit the brand identity, impact perception, and shapes consumer behavior. Packaging for the organic-food sector, packaging holds additional symbolic weight. It must reassure consumers of health advantage, environmental responsibility, and ethical

sourcing, while also draw sensory and aesthetic appeal. Visual design elements such as colour, typography, material texture, and layout all have an effect on consumer choice.

Among the changing consumer culture, the packaging design has become one of the strongest product promotion media, especially in the organic food industry. Yang et al. (2024) state that "one of the most effective ways to advertise a product is its packaging," which is becoming increasingly important due to the evolving beliefs of material usage among consumers. Packaging not only holds but also is a key driver for brand building, especially in organic products, in that it supports values such as naturalness, ethics, and sustainability (Guenther et al., 2020).

This role requires careful implementation to mitigate potential risks. Visual and emotional design have the power to easily impact consumer experience or even create distrust of food labels if not executed correctly (Cardello, 1995; Fenko et al., 2015, as cited in Bialkova et al., 2016). This shows up the importance of strategically balanced packaging design that conveys trust, value, and emotional resonance without misleading the consumer.

Packaging entails a set of cues, linguistic and non-linguistic, that influence perception and decision-making (Hallez et al., 2020 as cited in Liu et al., 2020). Non-linguistic cues such as color, form, texture, and material engage the senses, creating affective preferences (Becker et al., 2011), while linguistic cues, text, ingredients, certifications, inform consumers of a product's functional value (Ampuero & Vila, 2006; Masters & Mishra, 2019, as cited in Li et al., 2024). For instance, Vidal et al. (2022) add that for younger consumers (18–25), visual and informational signals are stronger than conventional nutritional data, so the design of the package becomes a more influential determinant compared to the label in isolation.

To appeal to health-conscious consumers, efficient packaging uses green color, low-fat emphasis, and claims built on nutrients, positioning the product as healthy and reinforcing its market positioning (Vidal et al., 2022). Confirming this, Li et al. (2024) found healthy foods with taste-focused packaging cues to trigger purchase intentions. This effect persists even when perceptions of healthiness are lower. This indicates the importance of compensate short-term delight with long-term health orientation in packaging strategy.

Color psychology is perhaps the best-studied field of packaging design. Madzharov, Block, and Ramanathan (2011) as cited in Bublit et al., 2012, indicate that colors such as green, beige, and brown are highly associated with naturality and purity. These colors have subconscious connotations to cleanliness, nature, and agriculture, and, as such, focus on the genuineness of the organic product. Equally, bright synthetic shades such as metallic silver or neon pink can be perceived as artificial and may undermine trust in an organic brand. Like so, the palette must be chosen responsibly to match brand values.

Typography also plays a significant role in consumer perception. Serif typography is used to convey tradition and trust, while sans-serif typography represents modernity and readability. Handwriting or script typography, especially those imitating calligraphy, can inspire an artisanal or handmade feel, which would be most effective for organic packaging. Font size and spacing affect comprehension, and an excess of clutter will result in cognitive overload and diminish the overall impact.

Pictures and symbols are effective visual tools. Strategic application of nature representation, such as leaves, trees, fields, or animals, triggers immediate identification of

the product as green or environmental. Deng and Kahn (2009) found that even where images are placed on packages, it influences perception. Right-aligned pictures, for example, can express abundance and completeness, whereas left-aligned pictures express simplicity and minimalism. These subtle hints may change the way the product is perceived even before consumption.

Research by Schouteten et al. (2019) suggests organic products are also rated more positively by consumers when package material communicates eco-friendliness, e.g., compostable wrapping, recyclable packages, or reusable containers. Textural properties not only influence environmental stewardship judgments but also those of premium-ness for the product. Material texture and finish on the packaging (i.e., matte vs. glossy) also play a significant role in shaping sensory experience. A matte, kraft-paper texture will stimulate sustainability and earthiness of authenticity, while glossy finishes will convey commerciality or artifice.

The term "organic" intrinsically serves as a heuristic prompt to generate cognitive connections with quality, safety, and genuineness. Vega-Zamora et al. (2013) suggest that the image precedes the concern for the environment, suggesting that health and trust are stronger drivers of the purchase than sustainability by itself. O'Doherty et al. (2011) also agree on this premise, compelling consumer confidence, access to transparent information, and perceived value as the causes of organic food demand. Consequently, packaging is an instrumental communication tool that can carry authenticity and reduce refusal of an emotional or cognitive nature, especially for new or inquiring consumers.

Packaging and labels are not only compliance tools but also essential marketing strategies, bringing helpful product information and holding up consumer confidence (Vidal et al., 2022). Miyanoshita et al. (2020) also add that new packaging designs, especially those supported by design patents, drive measurable business performance improvements. This means that packaging innovation isn't just superficial, it's a driver of competitive advantage. Emotional appeal is key in customer-brand interaction. Machová et al. (2022) suggest that advertising attempts (and packaging) must call up feelings linked to the product, or else forgotten. Emotional branding combined with visible images helps build enduring consumer relationships (Tong, 2023). Indeed, Daraboina et al. (2024) found packaging to be especially effective among image-oriented consumers, confirming the position of design as an affective channel, particularly where affective and symbolic value is equivalent to function.

Cultural meaning in packaging is also important. Designers must incorporate culturally appropriate visual symbols and language for effective information transmission and emotional congruence (Yang et al., 2024). Consumers select visual symbols based on familiarity and relevance, which must be simple to interpret. For organic food, for instance, Peng et al. (2023) found that smooth package surfaces communicate healthiness and pleasure, indicating that haptic sensations can reinforce product positioning as natural and of high quality.

As well as Schifferstein, 2013 as cited in Bialkova et al., 2016, explains that packaging design influences multisensory experiences that decide both the rational and emotional response to food packaging. Because design preferences and visual trends evolve constantly, Yang et al. (2024) recommend updating visual datasets from time to time to stay alongside of consumer preferences and be up to date in packaging design innovation.

The increasing ethical consumer adds yet another layer of complexity. As Tarhini (2022) mentions, packaging recyclability and reusability are increasingly important in ethical purchasing decisions. Morosan et al. (2025) also provide evidence that organic packaging ensures quality, improves sustainability, and ensures trust. So, packaging strategies must match psychographic segments, such as LOHAS (Lifestyle of Health and Sustainability), who are health- and sustainability-conscious (Ajagbe et al., 2015).

Nevertheless, health is still at the center. Yang et al. (2023) assert that healthy eating beliefs affect individual norms, so it is crucial for the labels to take these values effectively. Compared to this, Menger-Ogle & Graham (2018) observed how nutritional benefits by themselves are weak, but taste and familiarity are more effective. Hence, an effective package must combine informational clarity with emotional and sensory appeals to build credibility and relatability.

Finally, external packaging signs, such as emotional appeals or organic certification, may apply strong impacts on consumer behavior and grow consumption (Bublitz, 2013). Joachim et al. (2019) also confirm that organic labels elevate perception, raise willingness to pay, and impact sensory perceptions. Consumers associate organic-food brands with more flavor and positive emotions, which makes it imperative for the producers to offer the organic nature of the products clearly and prominently visible.

2.3 Trust, Certification, and Willingness to Pay

Organic food industry labels and packaging beauty are not only marketing devices—they are markers of credibility. They act as credibility, transparency, and authenticity indicators that influence the premium willingness of consumers to pay. Rousseau et al. (2013) found that information itself had a significant effect on consumer decisions; once participants were provided with information regarding the process of production, willingness to pay more for organic labels was significantly increased. This highlights that objective knowledge, when effectively communicated through packaging, can substantially impact purchasing behavior.

Moreover, consumer perception plays a critical role alongside objective information. Rousseau et al. (2013) emphasize that willingness to pay depends both on what consumers know and on how they perceive organic labels, suggesting that successful packaging design must simultaneously deliver clarity and cause positive emotional associations. This is particularly relevant in credence attributes categories, product traits (such as sustainability or responsible sourcing) that are hard to verify by the customer. In such cases, trustworthy visual cues and labeling play a key role. Customers will only be willing to pay a high price if they feel that signals on packaging are authentic and meaningful. (Rousseau et al., 2013)

Trust certification is an issue in organic products. Oliveira et al. (2024) found that consumers are highly reliant on packaging certification marks to determine whether a product is truly organic or not. The dependence underscores labelling's symbolic and psychological function, it communicates trustworthiness, quality, and authenticity as an information shortcut in apparent consumption situations. Consequently, Morosan et al. (2025) identify that clear certification and sustainability information have a key role in generating trust between consumers and supporting perceived authenticity of organic products.

Nonetheless, as awareness increases, even most consumers are still uncertain about organic food, with advertisement, supermarkets, the internet, and word of mouth being their primary sources of information. This reflects a communication gap that packaging must fill for them. Packaging and labeling are increasingly being charged with the responsibility of being educational tools, educating consumers through clear, concise, and visually compelling information (Rousseau et al., 2013). If this information is transparent and easily understandable, it can create not only confidence in products but also supply and demand for organic products' growth.

The credibility of organic products may also be subject to laws and institutional support. As Tarhini (2022) mention, Europe's rise in organic food consumption is most directly a result of trust in certification schemes and EU compulsory labeling norms, which makes tangible, regulated labels appealing. And in addition, it records growing consumer favor for "clean labels", an ambiguous but widely used term for foods produced with minimal, recognizable ingredients and no additives. The clean label trend connects the concept of health and purity to real labeling practices, generating confidence at the point of sale.

Both color and format are central design elements. Vidal et al. (2022) showed that not only make consumers believe in Nutri-Scores, but on a visual level, they also assimilate strategically healthy products with the color green, that can be leveraged by packaging to support healthy or sustainable statements. With the inclusion of attractive formats and health/hedonic benefits, labels play an even stronger role in product judgments.

However, marketing specialists must take care not to make these claims appear too promotional in tone. As Menger-Ogle and Graham (2018) point out, labels should serve as visual signals of authenticity and naturalness, not overstated marketing proclamations. This is critical for trust, especially within an oversaturated organic market where overclaiming will be viewed evident.

Certainly, as Vega-Zamora et al. (2013) propose, simply labelling with the word "organic" can create a positive bias towards the product. This is typically the result of superficial information processing, by which consumers respond more to emotional appeals and perceived credibility than to rational arguments. Emotional association, especially when presented via credible images and reputable certification sources, can therefore be more effective than extensive information.

Apart from organic labels, the same trust building blocks work for other certifications, such as halal. The more the consumers are aware of halal certification, the greater the inclination to improve buying behavior, as mentioned by Atiah et al. (2022). This proves the argument that transparency and visibility of the certification, regardless of whether it is on an ethical framework or not, are crucial in influencing consumer psychology.

Finally, Gumber et Rana (2021) highlights the point that marketing specialists must "go back to the basics" so that their communications convincingly express news of food quality through known, reliable packaging cues. Where organic food is packaged in a style that aligns with consumer notions of naturality, simplicity, and ethical production, it is significantly more likely to build trust and cause buyer retention.

2.4 Advertising Strategies and Psychological Influence

Advertising remains among the most powerful tools the marketing has available in creating consumer decision-making and promoting sales, particularly when complimented by consumer psychology, which reveals the core motivations and behaviors that drive buying decisions. As Tong (2023) explains, when businesses know the psychology of consumers, they can tailor their strategy more effectively, compensate in both emotional and cognitive levels.

Perhaps the most efficient way advertising influences sales is by transforming customers' needs. Advertising is primarily revenues-generating by changing perceptions, particularly in competitive and value-based markets such as organic food (Behr, 2021, cited by Liu et al., 2022). These perceptions are typically established through methodically developed advertising messages, visual identity, and packaging design, the latter being a physical representation of the promotional message.

Personalization, in this context, is an increasingly important consideration. According to Spytska (2024), marketing customization, through tailored offers, emails, and targeted advertising, raises campaign receptiveness. Promotions and visual merchandising, like packaging, also have a huge influence on how consumers assess product quality and brand authenticity. These strategies are especially powerful when combined with sustainability-motivated advertising appeals, which, Soomro et al. (2024) explain, use persuasive language to communicate the unique value of organic and eco-friendly products. Packaging and labelling both influence psychological perceptions and emotional engagement, they also have

direct effects on sales growth, product performance, and market competitiveness. In a competitive retail environment, packaging functions as a point-of-sale communicator, drawing attention, differentiating brands, and ultimately converting interest into sales.

Empirical studies confirm that strategic packaging design enhances business performance. Schouteten et al. (2019) carried out home-use and central location tests comparing consumer response to organic-labelled and conventional products. Organic-labelled options rated higher overall, taste expectations, and willingness to pay in all the studied scenarios. This shows that even under blind or semi-blind conditions, the cue from the package has a strong effect on consumer evaluation and perceived value.

But packaging content and shape must be requiring meticulous handling. Front-of-packaging (FOP) labeling such as Nutri-Score systems can either positively or negatively influence consumer choice depending on how the expectations of what is shown and its realization in terms of product worth. When customers anticipate a healthy product to be of high nutritional value but notice it being otherwise presented on the package, this may miscarry, reducing trust and sales (Yamim et Werle, 2025). This is evidence of the requirement for credible and expectation-compatible labelling.

Further, psychological research suggests that health consumption intentions can be compatible with sensory requirements. In its definition, Li et al. (2024) suggests that the use of taste-related information on packaging allows consumers to balance short-term pleasure and long-term health goals, pushing the purchase possibility. Similarly, Bialkova et al. (2016) found that taste statements not only impact expectations of taste but also enhance actual taste experiences when more emphasized than health statements on the front of packaging.

Combining taste with nutrition statements may be the most effective combination in influencing perception and behavior.

In health- and nutrition-oriented markets, like organic foods, consumer trust in labels matters most. Consumer research discovers that consumers attend more closely to health labels when consumers consider the product healthy, but they will ignore health data if the product perceives as unhealthy (Bialkova et al., 2016). Design and communication should consequently join to develop how a product, especially one not necessarily "healthy" in an instinctive way, provides real health benefit.

Packaging, pricing, and shelf display all impact sales performance directly. As Butt et al. (2013) point out, advertising tools influence a group of items, amount of product sold, price strategy, and package design, that ultimately denote revenue. They become more powerful when both advertising and direct sales spending are added, as demonstrated by Guenther et al. (2020) in B2B environments, which offer substitutions in retail contexts where product placement and influence are predominant.

It is also important to include advertising strategies appropriate for the current social and cultural context (Liu et al., 2022). This is particularly true with the organic food industry, in which consumer actions are greatly driven by values such as authenticity, sustainability, and well-being. Optimizing commercial strategies in the market, especially among small and medium-sized businesses, largely depends on consumer psychology and driver knowledge (Medina et al., 2024).

In fact, 80% of owners and employees give psychological selling techniques high marks in terms of performance enhancement. These are creating needs based on emotional stimuli such as scarcity, urgency, anchoring effects, and psychological pricing, all of which can be conveyed through advertising and packaging (Medina et al., 2024).

Besides, research by Misra et al. (2025) illustrates how positive attitude in traditional media remarkably increases sales by impacting consumer impression. It works particularly well in case of undifferentiated products or when services (such as trust, ethical qualities, and openness) are prioritized, as they typically are in the case of organics). Under such circumstances, packaging design is a symbolic way of certification, and it carries trust, identity, and value distinction, all of which can affect long-term commercial performance.

Lastly, firms that motivate shoppers to purchase lower-calorie and healthier food options via marketing, especially when augmented by effective packaging, have the potential to enjoy long-term sales increases. (Cardello et al., 2013). In this case, packaging design is a visible representation for brand commitment, and the level to which it can produce emotions, and cognitive response may be as important as the product itself.

3. Research assumptions and/or hypotheses

Assumption 1

Visual packaging elements (e.g., color, material, graphics) significantly change consumers' perception about organic food quality.

Hypothesis

- Null Hypothesis: Packaging design has no significant effect on consumers' perception about organic food quality.
- Alternative Hypothesis: Packaging design, especially use of natural colors, and eco-friendly materials, significantly enhances consumers' perception about organic food quality.

Assumption 2

Emotional cues included in packaging (such as images of local farms, messages “go back to the basics”, or labels “organic”) strengthen trust and connection to the product.

Hypothesis

- Null Hypothesis: Emotional cues included in packaging do not influence consumer trust and connection to organic products.
- Alternative Hypothesis: Emotional design elements in packaging boost the consumer trust and connection to organic products.

Assumption 3

A company's ethical and moral responsibility can influence consumer perception and influence within the decision-making process.

Hypothesis

- Null Hypothesis: A company's ethical and moral responsibility has no influence consumer perception and interfere with purchasing decisions.
- Alternative Hypothesis: A company's ethical and moral responsibility such as transparency within supply chain, and environmental engagement, significantly enhance influence purchasing decisions.

Assumption 4

Organic certifications and health-related labels are the main factors that consumers consider when evaluating organic food products.

Hypothesis

- Null Hypothesis: Organic certification on packaging has no significant effect on consumer trust or willingness to pay.
- Alternative Hypothesis: The presence of clear, credible certifications significantly increases consumer trust and willingness to pay for organic food products.

Assumption 5

Balanced health information and taste appeal on packaging supports the dual motivations of health and pleasure in organic food purchases.

Hypothesis

- Null Hypothesis: Health-or taste-only packaging has no more effect on consumer choice than neutral packaging.
- Alternative Hypothesis: Product packaging that comes together with health value and taste appeal (e.g., "antioxidant-rich and delicious") significantly increases consumer interest and product evaluation.

Assumption 6

Simple, well-structured packaging information and cues, reduces cognitive overload and enhance the organic food perceived value.

Hypothesis

- Null Hypothesis: Simple, well-structured packaging information and cues, has no effect in consumers' perception or purchasing behaviour.
- Alternative Hypothesis: Clear and concise organic food packaging details significantly influence the perceived value and encourages purchasing behaviour.

Assumption 7

Creating visual branding elements (such as colors, logos, fonts, layout, and packaging structure) across all product lines increases brand recognition, strengthens consumer trust, and ultimately contributes to sustained sales growth.

Hypothesis

- Null Hypothesis: Visual consistency of packaging design across the product line of an organic food brand will have no effect on consumer brand recognition, trust, or sales growth.
- Alternative Hypothesis: Visual consistency of packaging design across the product line of an organic food brand will have a material effect on consumer brand recognition and trust, leading to more purchase intention and sales growth.

4. Research Design and Methodology

4.1 Overview

This research apply mixed-approached methods, integrating qualitative and quantitative data to evaluate the impact of consumer psychology on purchasing behaviour in the healthy food industry. This study is design to gain exploratory and In-Depth data from participants, but also measurable data that can be analysed and categorized .

4.2 Population and Study Sample

This research is divided into two parts. The study will be focusing the population on people living in Paris, the capital of France, a city visited and inhabited by diverse cultures. The first part will be carried out to know the food consumption behavior and diet of individuals or families. For the collection of this quantitative data, shoppers will be selected in supermarkets to complete a survey questionnaire created in Google Forms with structured, multi-category questions and response sequences, to understand what products, they consume and why they consume them. It will be share by QR code. The sample size will be 500 randomly selected food shoppers in the 3 busiest markets in the city and 3 local markets in the busiest neighborhoods.

For the second part of the study, qualitative and quantitative data will be collected. People aged between 18-44 years, the ages in which the consumption of social networks is higher according to mediaticlick (2024), located in the city of Paris will be chosen. These people belong to the segment of consumers who usually make purchasing decisions or help in this process, in addition to being aware of the food they consume. The first step will be the registration to a focus group, in which two analyses will be conducted. In this form, created through Google forms, participants will be asked questions to prove they fit to the segment the study is looking for; also, participants will be informed about what the experiment consists about, and the date and place chosen. The purpose of this experiment is to test physiological practices, to evaluate emotions and reactions. The sample size will be 400 contributors.

Therefore, two tests will be carried out. The first will consist of showing the participants the same product but presented in two different ways, the original packaging (no nutri-score, no certifications, or any words or messages highlighting its benefit, taste or content) and a modified packaging, i.e., different material, design (graphics, logos, fonts) and shape, and incorporating labels or certifications. It is important to note that it is the same product, only the packaging will be changed. Subsequently, this research seeks to determine how factors such as consumer perception and taste may be affected by changes.

The second segment consists in a physiological practice to assess and understand the relationship that participants have with food, and how this relates to decision making. For this, they will be shown different visual stimuli (images or videos) representing various food-related scenarios, such as packaged processed food (displaying its nutriscore), images of organic farms, conventional crops (pesticides), certification labels, lifestyle bloggers

promoting organic products, among others. To measure the reactions in the participants, a facial recognition software for emotion analysis will be used. It performs a facial analysis in which it can determine and classify possible responses, from anger to joy. At the same time, individuals will be asked to provide written feedback.

4.3 Data Analysis methods

This research employs a combination of advanced data analysis techniques to analyze food consumption behavior and evaluate test results for products. The first technique is clustering, (an unsupervised machine learning approach that groups subjects based on patterns of similarity in their food consumptions. Through the analysis of survey responses about food consumption, algorithms like k-means or hierarchical clustering may identify distinct consumer categories such as "health-conscious" or "convenience-oriented" shoppers. These clusters will help in personalizing marketing efforts to reach consumer segments and reveal patterns of food selectivity.

The second component is sentiment analysis of feedback from focus groups. After that participants engage in physiological activities like taste tests or are subjected to food-related stimuli, their written responses will be analyzed using natural language processing techniques. This sentiment analysis will sort out responses into positive, negative, or neutral, compliant useful data on how subjective opinion and emotional response correlate with objective product testing outcomes. This ability to understand the relationship of emotional

response to product performance can inform product development as well as messaging approaches.

Lastly, the research uses random forest analysis to investigate purchase decision-making. This supervised learning method will use food intake survey variables e.g., demographic factors, dietary preferences, and chosen shopping location, to predict the likelihood of product purchase (a yes/no answer). The random forest method is particularly applicable because it can handle a large number of predictor variables effectively, minimize overfitting, and determine which predictors are most influential in driving purchase behavior. For instance, it can decide how much price point or organic certification matters for specific consumer segments.

Each of these analytical techniques adds to an integrated framework of understanding what consumers do. The clustering informs us about who the consumers are, sentiment analysis informs us about what they feel, and random forest informs us about what they will do. This multi-method approach provides key insights that can be practical to inform food business decision-making, marketing efforts, and product development. For example, when sentiment analysis reveals negative sentiment towards the texture of a product, but random forest indicates texture does not show up as a top purchase driver, companies can turn their attention to other product attributes that directly impact purchasing.

4.4 Ethics and Human Subjects Issues

- **Voluntary participation:** the participants are free to get in or out at any point.
- **Informed consent:** participants know the purpose behind the study before they agree to join.
- **Confidentiality:** the researcher know the participants but their personal identity is hidden. Personal identity is not collectable for the study.
- **Potential for harm:** the study tries to keep the minimum risk at physical, social and psychological harm.

4.5 Sample

Survey questionnaire

Food Consumption and Diet Survey – Paris

Welcome!

This survey aims to understand food consumption habits among shoppers in Paris.

Your participation is anonymous and will take about 5 minutes.

Section 1: Demographics

1. Age Group (single answer):

- ☐ Under 18
- ☐ 18–24
- ☐ 25–34
- ☐ 35–44
- ☐ 45–54
- ☐ 55+

2. Gender (single answer):

- ☐ Female
- ☐ Male
- ☐ Non-binary
- ☐ Prefer not to say

3. Household Type (single answer):

- ☐ Living alone
- ☐ Living with family
- ☐ Living with roommates
- ☐ Couple without children
- ☐ Other: _____

4. Occupation (single or multiple choice):

- ☐ Student
- ☐ Employed full-time
- ☐ Employed part-time
- ☐ Self-employed
- ☐ Unemployed
- ☐ Retired
- ☐ Other: _____

5. Which arrondissement of Paris do you live in?

(Dropdown list with all 20 arrondissements)

Section 2: Food Consumption Behaviour

6. How often do you shop for groceries? (Single answer)

- ☐ Daily
- ☐ 2–3 times per week
- ☐ Weekly
- ☐ Less than once per week

7. Where do you usually buy your food? (Select all that apply)

- Supermarkets
- Local markets
- Organic stores
- Online stores
- Specialty stores (e.g., vegan, gluten-free)
- Convenience stores

8. How often do you consume organic food products? (Single answer)

- Always
- Often
- Sometimes
- Rarely
- Never

9. What type of food do you buy most often? (Select up to 3)

- Fresh fruits and vegetables
- Meat and fish
- Dairy products
- Packaged/processed foods
- Organic food
- Frozen food
- Snacks and sweets

- Plant-based/vegan products
- Bakery items
- Beverages (juice, water, soda, etc.)

10. What influences your food choices the most? (Sort by importance from 1 to 9)

- Price
- Health benefits
- Taste
- Environmental impact
- Product origin (local/international)
- Brand reputation
- Family preferences
- Packaging and design
- Certifications (e.g., organic, fair trade)

Section 3: Dietary Habits

11. Do you or your family follow any specific dietary style? (Single answer)

- Omnivore
- Vegetarian
- Vegan

- ☐ Flexitarian
- ☐ Pescatarian
- ☐ Other: _____

12. How important is healthy eating to you? (Single answer)

- ☐ Not important
- ☐ Slightly important
- ☐ Moderately important
- ☐ Very important
- ☐ Extremely important

13. How often do you read food labels (ingredients, nutrition facts, certifications)?

(Single answer)

- ☐ Always
- ☐ Often
- ☐ Sometimes
- ☐ Rarely
- ☐ Never

Section 4: Additional Input

14. What motivates you the most to buy a product labelled "organic"? (Select all that apply)

- ☐ Health benefits
- ☐ Environmental protection
- ☐ Better taste
- ☐ Trust in certification
- ☐ Trend/social image
- ☐ I don't buy organic products

Thank you!

Your answers help us understand how packaging and consumer psychology influence food choices in urban environments like Paris.

4.6 Experiment guide

Target Group:

- **Age:** 18–44 years
- **Location:** Paris, France
- **Profile:** Individuals involved in grocery purchasing decisions, and aware of food consumption.

Sample Size:

- **Total Participants:** 400
- **Recruitment Method:** Google Forms pre-registration & screening
- **Eligibility Screening:** Age, food awareness, and role in household shopping decisions

Pre-Experiment Phase**Participant Registration (Google Form)**

Purpose. Register interest, confirm eligibility, provide experiment information.

- **Questions include:**
 - Age
 - Role in food purchasing
 - Frequency of organic food consumption
 - Consent to participate and be recorded for facial emotion analysis

Informed Consent

- Participants are informed about:

- The study's purpose and structure
- Their anonymity and data protection
- The voluntary nature of participation
- Their right to withdraw at any time

4.7 Experiment Structure

Test 1: Packaging Design Influence

Objective: Evaluate how packaging elements affect perception, emotion, and taste evaluation.

Materials Needed: One food product (e.g., organic snack bar) presented in:

Version A (Control). Plain packaging (no claims, logos, or certifications).

Version B (Experimental). Visually enhanced packaging (eco-materials, fonts, certifications like EU organic).

Procedure

Introduction (5 min). Brief the participant without revealing research intent.

Exposure (5 min). Show both versions of the product side by side.

Tasting (5 min). Participants may taste the same product from both packages.

Survey (5–7 min). Ask participants to rate both versions on:

- Attractiveness
- Perceived quality
- Trustworthiness
- Taste
- Purchase intention

Test 2: Emotional Response to Food Stimuli

Objective: Identify emotional reactions to various food-related images/videos to understand underlying food attitudes.

Materials Needed:

- Projector or screen setup
- Visual stimuli (images/videos), including:
- Processed food with Nutri-Score
- Organic farms
- Conventional agriculture (e.g., pesticides, large masses)
- Lifestyle influencers promoting organic products
- Certification symbols (e.g., EU organic, Fair Trade)

Technology:

- **Facial Emotion Recognition Software** to capture:
 - Joy
 - Surprise
 - Disgust
 - Sadness
 - Anger
 - Neutral

Procedure:

Calibration (2 min). Ensure facial detection software is aligned.

Stimulus Exposure (10–15 min). Present randomized images and videos, each for 10–20 seconds.

Facial Tracking. Software automatically captures micro-expressions in real time.

Written Feedback (5–10 min). Ask participants:

- Which image/video made you feel most positively or negatively? Why?
- Which one felt most “trustworthy” or “unpleasant”?
- How do you relate these visuals to your food choices?
- How would you describe your emotional relationship with food?
- Do you associate certain foods with specific emotions (e.g., happiness, guilt, nostalgia)?
- How often do you read labels before purchasing food?

5. Conclusion

With people nowadays becoming increasingly ethical, healthy and emotion-driven, the packaging has evolved from simple protection to an important communication and influence tool. The research has provided a rich, multi-faceted understanding of how

packaging elements (visual, affective, informational, and structural) are linked with psychological drivers to influence consumer behavior.

Through an extensive literature review and a carefully designed mixed-method approach, the research would confirm that packaging design is a critical instrument in attention capture, trust generation, and brand reinforcement. Color psychology, material selection, typography, imagery, and symbolic markers were all found to affect consumers' perceptions of product quality, healthiness, sustainability, and authenticity. The appearance of certifications like "organic", or "EU organic certification" are strong trust indicators that contribute directly to the consumer's willingness-to-pay.

Moreover, emotional cues in packaging, such as references to nature, family farms, tradition, and sustainability, challenge the psychological connection between consumer and product. Such cues connect with deeper human aspirations, such as self-expression, sense of responsibility, and emotional satisfaction, particularly among consumers who see organic products as an extension of their identity and lifestyle. Packaging that can relate these connections will likely create loyal customers and long-term interest.

The findings of the research also reveal that visual consistency across a brand's product line enhances brand recognition and recall. Visual consistency creates a visual language that encourages familiarity and ease of cognitive effort, making customers more likely to purchase again. In competitive retail environments, visual branding can be the difference between customer loyalty and indifference towards a brand.

From a sales perspective, the study reinforces that packaging is not a static or secondary concern. Instead, it is a dynamic marketing method that can have a direct impact on business performance. Packaging strategies that have both senses and information aspects to them, pleasant taste while validating health worthiness, successfully solve consumers' traditional duality between indulgence and responsibility. This dual appeal not only increases initial interest but also serves to enhance product evaluation and purchase intention.

The research also indicates the meaning of simplicity and transparency. In a market full of complex claims and confused graphics, consumers like packaging that communicates its message clearly and sincerely right away. Simple design, transparent language, and ethical messaging remove consumer doubt and create confident buys. These are particularly called for in the organic market, where credibility is a key factor in decision-making.

Beyond product performance, packaging also constructs total brand equity. Packaging that sustains a firm's ethical and moral commitments, e.g., sustainability, or local procurement, assembles a congruent brand message that crosses consumer touchpoints. This ethically based congruency disproportionately resonates among younger consumers and LOHAS (Lifestyle of Health and Sustainability) segments, who prioritize social responsibility at the top of their buying list.

Using surveys, emotional analysis via facial recognition, and predictive modeling via machine learning (clustering, sentiment analysis, random forest), this research provides robust empirical support for the hypothesis that well-designed packaging can drive consumer engagement and sales growth. The results will provide practical strategic advice for organic

food companies, particularly small and medium-sized enterprises seeking to compete on values, not price.

Overall, this study demonstrates that packaging design is not merely an art or compliance function. It is an emotionally charged, psychology-driven, and economically relevant component of brand strategy. For organic food producers and marketers, using consumer psychology in package design is not only beneficial, but also necessary. It is they who invest in emotionally intelligent, morally grounded, and visually appealing packaging who will succeed in a market increasingly shaped by trust, values, and meaningful engagement.

6. DECLARATION OF AI USE

I have used AI while undertaking my dissertation or thesis in the following ways

	YES	NO
To develop research questions on the topic		X
To create an outline of the topic	X	
To explain concepts		X
To support my use of language	X	
To summarise the following articles/resources: 1. 2. 3. 4. 5. 6.		

In other ways, as described below

- Structure the quotations and annotations did about the articles read.
- Structure the questionnaire sample for the methodology proposed.
- Structure the experiment guide for the methodology proposed.

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