

BUCHAREST UNIVERSITY OF ECONOMIC STUDIES
Doctoral School of Marketing



DOCTORAL THESIS

Presented and publicly defended by:

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The Use of Neuromarketing Techniques in
Consumer Behavior Analysis

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Prof. Univ. Dr. Ștefan-Claudiu Căescu

Doctoral Thesis Defense Committee:

Bucharest, 2025

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Abstract

The dissertation investigates how online marketing, branding, and consumer behavior converge in the purchase decision, highlighting packaging design as the critical moment where the brand promise meets the actual choice. In a digital environment marked by fragmented attention and information overload, packaging remains the “last-meter medium”: it condenses brand identity, clarifies functional benefits, and reduces cognitive effort at the shelf or on the product page. The approach is twofold: on the one hand, a theoretical grounding of the role of online marketing and branding; on the other, an applied demonstration—based on neuromarketing (eye-tracking)—that compares two packaging variants for a bread with a clean recipe and a high sourdough content.

The chapter on online marketing argues that digital tools are not merely new channels, but an infrastructure of visibility and relevance in which strategic consistency is decisive. The main mechanisms are presented—from search optimization and editorial content to the paid–organic mix and content governance. What matters is not just presence, but coherence: operationalized objectives, performance indicators, iteration, and a faithful translation of the brand promise in every format. In this logic, online channels provide the stage—high exposure, granular targeting, fast feedback—yet also intense competition for attention, which increases the pressure on clarity, readability, and memorability.

The next chapter shifts the focus to social media and the transformation of the consumer’s decision journey. Platforms require native content, cadence, and dialogue, and results come from the fine match between segmentation, message, and the media-consumption context. The path from exposure to choice is no longer linear: perceptions, emotions, social norms, visual cues, and processing fluency intertwine in a course with revisits, comparisons, and micro-decisions. Packaging thus becomes both a filter and a catalyst of meaning: it can quickly activate identity, structure essential information, and create a credible first step toward purchase intention.

The chapter on branding and packaging design treats packaging as a positioning vector and semiotic medium. It discusses the roles of color, typography, front-of-pack architecture, symbols, and micro-texts (claims), as well as the principle of information hierarchy that orders the gaze and facilitates understanding. “Ease of processing” is argued to be the discreet mediator between aesthetics and decision: a readable design, with sound contrast and controlled information density, is easier to encode in memory and more likely to generate preference. Demographic and cultural differences matter (e.g., different tolerances for information density or color palettes), which calls for segment-level testing and data-guided iterations.

The theoretical part on neuromarketing introduces instruments that complement declarative methods. Eye-tracking is valued for capturing the distribution of attention in real time (fixations, areas of interest, scan paths), offering an objective counterpoint to what respondents report after the fact. The paper candidly discusses limitations: small samples, the risk of over-interpreting fixation duration (interest versus difficulty), ecological-validity challenges in lab or online tests, and ethical imperatives regarding informed consent and data confidentiality. The chapter’s conclusion is balanced: neuromarketing has maximum value when integrated in a triangulated way with questionnaires, interviews, or behavioral tests.

The applied chapter translates theory into a comparative study between two packages (A and B) for a bread with a clean recipe and high sourdough content. The research design is pre-post, conducted online, with four stages: an initial questionnaire (C1) for profile and attitudes; a directed eye-tracking test on key elements (logo, product name, sourdough mentions, information boxes); a 30-second free-viewing session; and a final questionnaire (C2) for attractiveness, readability, differentiation, memorability, and purchase intention. Eye-tracking was performed via webcam, and the exposure order of the packages was randomized. The sample ($n \approx 25$), although young and small, allowed comparisons between consumers familiar with sourdough bread and non-consumers, precisely to capture the potential for market expansion.

The results converge toward a “division of roles” between the two packages. Variant A concentrated the first fixation in the identity area (the central product name and the logo), signaling rapid anchoring in the brand and easy recall. Variant B, consistently, drew attention to the fields that explain the differentiators (the clean recipe, types of flour, sourdough mentions), indicating superior readability of functional value. In free viewing, A activated mostly brand cues (the brand’s chromatics), while B captured attention through blue fields and explanatory boxes. This attention

pattern aligns with the declarative results: overall attractiveness was relatively balanced between A and B, but purchase intention tilted toward A, whereas information clarity was attributed more to B. In terms of spontaneous memory, respondents retained the name and logo for A, and the explicit sourdough mentions and distinctive visual fields for B.

Segmentation adds managerial nuance. Consumers already familiar with sourdough bread preferred A, showing high alignment between declared preference and simulated choice; for them, the brand anchor and rapid visual narrative appear decisive. Non-consumers, by contrast, were more receptive to B, where the clarity of functional differentiators lowers the entry barrier and turns curiosity into potential intention. Mirroring this, color supported the positions: A was primarily associated with green and warm tones (naturalness, vitality), B with blue and light neutral tones (trust, simplicity). Regarding the hypotheses, the first is differentially confirmed (A excels in identity and conversion among the familiar audience, B in functional clarity), and the second is validated (B shows potential to recruit non-consumers).

The discussion integrates the paper's two planes. Theoretically, the purchase decision is shaped by the congruence between the brand promise, the expectations formed online, and the ease with which packaging compresses the message into a readable experience. Applied-wise, the data suggest a hybrid solution: keep the strong brand cues of package A (anchor, recognition, memory) and integrate the informational architecture of B (visible differentiators, clear statements about "sourdough" and the clean recipe). Such a synthesis could maximize both the retention of current audiences and the recruitment of new segments. In parallel, the dissertation recommends omnichannel alignment: the same visual and semantic cues (logo, chromatics, claims) should be reflected in digital communication to enable effortless transfer of recognition between platforms and shelf.

The limitations are handled rigorously: a small and relatively homogeneous sample, online webcam testing, and the absence of the full shelf context (price, promotions, visual competitors). The author proposes realistic extensions: a larger and more diverse sample; multimodal instrumentation (eye-tracking combined with EEG/GSR or implicit-association tests); shelf simulations and in-market A/B testing; and the evaluation of sustainable materials and accessibility for people with different types of color-vision deficiency. Beyond method, the general recommendation is clear: the winning design will balance emotional promise with functional

clarity, in a visual language that is easy to process and authentically sustained in online communication.

In conclusion, the paper convincingly shows that, in the digital age, branding effectiveness depends on how packaging translates a coherent story in a few seconds: who we are, why we matter, and what tangible value we offer. When identity is visible, differentiators are explicit, and attention is guided without friction, the probability of choice increases. In the analyzed case, a hybrid A+B approach emerges as a pragmatic direction for launch and scale—combining recognition with understanding, that is, emotion with function—right where the consumer decides.