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EDITORIAL

ON PEUT FAIRE DU NEUF AVEC DE L'ANCIEN SI CELUI EST FONDATEUR !

YOU CAN CREATE SOMETHING NEW FROM SOMETHING OLD—IF THAT OLD CONCEPT REFLECTS THE 'FOUNDERS' !

Parce qu'il est une science (n'en déplaise à certains) profondément ancrée dans la Société, le marketing est en perpétuelle régénération. Du marketing managérial des années 60, au marketing relationnel des années 80, à la *Consumer Culture Theory* des années 90, au marketing digital des années 2000 et au marketing IA actuellement, nombre de « révolutions académiques » ont ponctué son parcours. Pourtant, loin de renier son passé, le marketing n'oublie pas ses identités originelles, ses concepts fondateurs qui ont façonné son histoire, et contribue toujours à construire son avenir.

Parce qu'il s'intéresse aux nouvelles tendances du marketing, le *Journal of Marketing Trends*, ne peut ignorer ce renouvellement perpétuel de notre discipline inspiré, nourri, et même de fait suscité par ses propres fondements. A la différence de la chanson de Guy Béart, pas besoin d'attendre le second pour avoir raison !

Ce numéro montre comment des concepts fondateurs anciens peuvent toujours être mobilisés pour comprendre le marketing d'aujourd'hui et de demain. Ainsi en est-il du terme de marketing-mix introduit par Neil Borden lors de son discours en tant que président de l'AMA en 1953 et formalisé autour des 4P par McCarthy en 1960, du concept d'atmosphère qui remonte aussi aux années 60 et de celui de prosommation (*prosumption*) introduit par Alvin Toffler en 1980.

S'il existe une abondante littérature sur les effets des variables d'atmosphère, l'interaction des indices de l'environnement physique avec ceux de l'environnement en ligne est peu documentée. Dans leur article intitulé "*How do the characteristics of the physical environment impact online consumption behavior? The effect of ambient scents on e-commerce experience*", Cindy Caldara et Soffien Bataoui s'intéressent justement à l'effet des variables d'atmosphère de l'environnement physique sur les comportements des internautes lors de leur navigation en ligne. Les résultats des deux expérimentations en conditions réelles montre que la présence d'un parfum d'ambiance, qu'il soit congruent ou non avec la nature du site marchand visité, n'a pas d'impact direct sur les intentions d'achat. Cependant, la présence d'un parfum d'ambiance incongru a un impact sur les interprétations d'intention manipulatrice, les répondants ayant tendance à déduire que l'entreprise cherche à manipuler leur comportement par la présence d'un parfum dans leur environnement lorsqu'ils naviguent sur le site web du commerçant.

La plupart des recherches sur la formation à la vente se sont traditionnellement concentrées sur les résultats et le retour sur investissement, tandis que la promotion de la formation est restée peu explorée. Dans leur article intitulé "*Optimizing the Promotion of Sales Training Programs: Strategic and Tactical Approaches for a Leading Agricultural Machinery Manufacturer in Europe*", Simon Fauser et Nicoleta Monul étudient l'impact des approches de communication et des tactiques promotionnelles sur la notoriété et l'inscription aux programmes de formation à la vente au sein d'un réseau de concessionnaires. S'appuyant sur une approche mixte, ils mettent en évidence des inefficacités dans les stratégies promotionnelles actuelles des programmes de formation à la vente, soulignant la nécessité d'une optimisation et d'une personnalisation. Ces résultats sont conformes aux modèles de marketing des services qui mettent l'accent sur la valeur fonctionnelle, émotionnelle et culturelle.

Malgré la visibilité croissante des phénomènes liés à la prosommation (*prosumption*) dans la recherche en marketing, le concept reste peu théorisé et consolidé au sein de la discipline. Le développement des plateformes interactives digitales (DIP) offre aux clients et aux entreprises de nouvelles possibilités de co-créer grâce aux interactions rendues possibles par la plateforme (Ramaswamy et Ozcan, 2018). S'appuyant sur une approche combinant bibliométrie et analyse de contenu, Wyssal Abbassi et Leyla Jaoued Abassi proposent une cartographie de la recherche sur la prosommation dans le domaine du marketing. Si la présence de quatre groupes bien définis suggère une maturation et une spécialisation thématiques, le couplage limité entre ces groupes indique que la recherche sur la prosommation en marketing reste intellectuellement segmentée. Les résultats révèlent également un recours important à des mesures fondées sur les intentions et une relative rareté des données comportementales et longitudinales. Au final, si la recherche sur la prosommation a atteint un stade de maturité dans les domaines techniques et liés à l'énergie, elle reste sous-exploitée en marketing, ouvrant ainsi la voie à une plus grande structuration de ses fondements intellectuels.

Sheth et Parvatiyar soulignaient déjà en 2000 la nécessité de repenser en profondeur le concept de marketing : « *il faut un nouveau paradigme du marketing, un paradigme capable de rendre compte de la nature continue des relations entre les acteurs du marketing* » (p. 140). Dans le dernier article de ce numéro, Jean Dufer et Frédérique Orticoni présentent le concept de marketing mix interactif (IMM), conçu pour dépasser les limites du marketing mix traditionnel, en plaçant la réciprocité, l'équilibre et l'interaction au cœur du concept. Si la cohérence est le principe organisateur des 4P classiques, c'est bien l'équilibre entre les acteurs qui régit l'IMM. En rétablissant le respect mutuel dans la pensée marketing, l'IMM concilie efficacité managériale et légitimité sociale. Il s'agit moins d'une adaptation que d'une réorientation paradigmatique, intégrant la performance dans l'équité et la durabilité relationnelle.

Because it is a science (whether some people like it or not) deeply rooted in society, marketing is constantly evolving. From managerial marketing in the 1960s to relationship marketing in the 1980s, Consumer Culture Theory in the 1990s, digital marketing in the 2000s, and AI marketing today, numerous "academic revolutions" have marked its evolution. Yet, far from denying its past, marketing does not forget its original identities nor the founding concepts that have shaped its history, and it continues to help build its future.

Because it focuses on new trends in marketing, the Journal of Marketing Trends cannot ignore this perpetual renewal of our discipline—inspired, nourished, and indeed driven by its very foundations.

This issue shows how long-standing foundational concepts can still be drawn upon to understand the marketing of today and tomorrow. Such is the case with the term "marketing mix," introduced by Neil Borden during his speech as president of the AMA in 1953 and formalized around the 4Ps by McCarthy in 1960; the concept of "atmosphere," which also dates back to the 1960s; and the concept of "prosumption," introduced by Alvin Toffler in 1980.

While there is a wealth of literature on the effects of environmental variables, the interaction between indicators of the physical environment and those of the online environment has been little studied. In their article titled "How do the characteristics of the physical environment impact online consumption behavior? The effect of ambient scents on e-commerce experience," Cindy Caldara and Soffien Bataoui examine precisely the effect of atmospheric variables in the physical environment on the behavior of internet users as they browse online. The results of two real-world experiments show that the presence of an ambient scent—whether or not it is congruent with the nature of the e-commerce site being visited—has no direct impact on purchase intentions. However, the presence of an incongruent ambient scent does influence perceptions of manipulative intent, as respondents tend to infer that the company is attempting to manipulate their behavior through the use of scent in their environment while they are browsing the retailer's website.

Most research on sales training has traditionally focused on outcomes and return on investment, while the promotion of training has remained largely unexplored. In their article titled "Optimizing the Promotion of Sales Training Programs: Strategic and Tactical Approaches for a Leading Agricultural Machinery Manufacturer in Europe," Simon Fauser and Nicoleta Monul examine the impact of communication approaches and promotional tactics on brand awareness and enrolment in sales training programs within a dealer network. Using a mixed-methods approach, they highlight inefficiencies in the current promotional strategies for sales training programs, emphasizing the need for optimization and personalization. These findings are consistent with service marketing models that emphasize functional, emotional, and cultural value.

Despite the growing visibility of prosumption-related phenomena in marketing research, the concept remains poorly theorized and consolidated within the discipline. The development of digital interactive platforms (DIPs) offers customers and companies new opportunities for co-creation through the interactions enabled by the platform (Ramaswamy and Ozcan, 2018). Using an approach that combines bibliometrics and content analysis, Wyssal Abbassi and Leyla Jaoued Abassi present a mapping of prosumption research in the field of marketing. While the presence of four well-defined groups suggests thematic maturation and specialization, the limited overlap between these groups indicates that prosumption research in marketing remains intellectually fragmented. The results also reveal a significant reliance on intention-based measures and a relative scarcity of behavioural and longitudinal data. Ultimately, while research on prosumption has reached a stage of maturity in technical and energy-related fields, it remains underdeveloped in marketing, thereby paving the way for a more structured intellectual foundation.

As early as 2000, Sheth and Parvatiyar emphasized the need for a fundamental rethinking of the concept of marketing: "We need a new marketing paradigm—one capable of accounting for the ongoing nature of relationships among marketing stakeholders" (p. 140). In the final article of this issue, Jean Dufer and Frédérique Orticoni present the concept of the interactive marketing mix (IMM), designed to transcend the limitations of the traditional marketing mix by placing reciprocity, balance, and interaction at the heart of the concept. While coherence is the organizing principle of the classic 4Ps, it is the balance among stakeholders that governs the IMM. By restoring mutual respect to marketing thought, the IMM reconciles managerial effectiveness with social legitimacy. It is less an adaptation than a paradigmatic reorientation, integrating performance with equity and relational sustainability.

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COMITÉ DE LECTURE - READING COMMITTEE

How do the characteristics of the physical environment impact online consumption behavior? The effect of ambient scents on e-commerce experience

Abstract :

The present research examines how ambient olfactory atmospheric cues affect consumers' responses while browsing on a merchant website. Building on the DAST model, scent congruence with the product category is manipulated and its effect on purchase intentions is explored. Possible underlying mechanisms, either affective (pleasure) or cognitive (inferences of manipulative intent), are also studied. The results of two experiments demonstrate no direct effect of the presence of an (in)congruent ambient scent on purchase intentions, but an improvement of pleasure while exploring the website and an increase of inferences of manipulative intent when an incongruent scent is present, extending knowledge on offline and online atmosphere.

Keywords: *atmosphere; DAST; (in)congruent ambient scents, affective reactions, inferences of manipulative intent*

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INTRODUCTION

Whether in managerial practices or in academic works, the concept of atmosphere has been widely used to respond to an increasingly dense competitive context and to offer consumers enjoyable experiences. Retailers know in-store atmospheric sensory cues influence customer behavior (Garlin and Owen 2007; Krishna 2012, 2013) and thus manipulate them to improve experience (Berry, Carbone and Haeckel 2002; Varley 2005).

The way offline atmosphere cues impact consumer behavior is abundantly documented, as well as how online atmosphere plays a role on consumers' online behavior. Interestingly, most of the work focuses on the study of a specific, lone factor, even though atmosphere is, by essence, multifactorial (Spence et al. 2014) and perceived holistically by the consumers (Bitner 1992).

Still, a few studies have focused on atmosphere cues interactions, offline (e.g., music and scent, Mattila and Wirtz 2001; Morrison et al. 2011) and online (e.g., ambient factors and design, Bouchetara 2017; Lemoine and Charfi 2022; Zafri 2019). Nevertheless, when it comes to the interaction between offline and online atmospheres, only scarce work exists (Flavián, Ibáñez-Sánchez and Orús 2021; Vinitzky and Mazursky 2011). This observation is central here, as long as an online experience necessarily takes place in a non-neutral offline environment: either while shopping on a computer, a smartphone or in a connected store, the consumers' senses are grounded in the surrounding atmosphere during the online experience, so the "physical" atmosphere in which the Internet users evolve can impact also their online behavior.

The aim here is therefore to study how the physical (offline) atmosphere impacts web users' behaviors during their visit to an e-commerce site. In order to address this question embedded at the border of sensory and digital marketing, the DAST (design–ambient–social–trialability) model, described as based "on two related streams of research that conventionally have been investigated independently: retail atmospherics (…) and sensory experiences" (Roggeveen, Grewal and Schweiger 2020), is adopted here.

Regarding atmosphere, the overall website atmosphere will be taken under consideration, and the ambient atmosphere will be considered through the influence of ambient scents. This specific cue of offline atmosphere was picked first for its undeniably well documented effects in the retailing literature (Krishna 2012, 2013; Roschk and Hosseinpour 2020; Spence et al. 2014). Second, for retailers, the use of ambient scents should be considered seriously as a part of their central marketing levers, as "it is probably among the least expensive techniques to enhance shoppers perceptions" (Chebat and Michon 2003, p.537). To this day, olfactory marketing is still considered as one of the most powerful sensory ways to improve consumer experience across contexts, as even unconsciously processed scents can do so (Oberwegner et al. 2025). Third, managers are increasingly interested in "digital olfaction[1]", either with the many developments of technologies[2] linking the online experience to an offline scented atmosphere or with the examples of cross canal distributing strategies developments where retailers seek out the support of online devices to create a full experience for consumers instore, (see the scented Sephora connected stores for example[3]) that will soon be made possible (Szocs et al. 2023) by the progressive development of sensory enabling technologies (Petit and Velasco and Spence 2019).

Through a literature review, the development of a conceptual framework and the presentation of the results of two studies, this research aims at answering the following question: to what extent and how the ambient scent of the offline atmosphere impacts the consumers' online behavior?

LITERATURE REVIEW

Atmosphere at points-of-sale: interaction effects and theoretical frameworks

From the offline atmosphere to the online atmosphere

An important literature span exists on the concept of atmosphere, since the 1960's. It began with a focus on physical environments such as restaurants or grocery stores (Kotler 1973; Mattila and Wirtz 2001; Sharma and Stafford 2000). Many definitions exist, starting with Kotler's (1973 p.50): atmosphere is the « effort to design buying environments to produce specific emotional effects in the buyer that enhance his purchase probability ». Later, Eroglu and Machleit (1993

1 https://digital-olfaction.com

2 https://sloanreview.mit.edu/article/business-scents-the-rise-of-digital-olfaction/

3 https://www.retaildive.com/ex/mobilecommercedaily/sephora-blends-mobile-with-bricks-and-mortar-for-first-connected-boutique-experience p.34) broadened the definition: “all of the physical and non-physical elements of a store that can be controlled in order to enhance (or restrain) the behaviors of its occupants, both customers and employees”. Throughout the years, atmosphere was demonstrated as able to elicit varied consumer responses, either cognitive, affective and/or conative. While the study of atmosphere components effects on purchase intentions remains the majority (Baker, Levy and Grewal 1992; Chen, Hsu and Lin 2010; Hausman and Siekpe, 2009; Lazaris et al. 2022), other dependent or mediating variables have been studied, for instance: affective reactions (Babin, Levy and Grewal 2004; Chebat and Michon 2003; Ha and Lennon 2010; Pantano and Viassone 2015) or time spent in the store (Morrison et al. 2011; Spangenberg, Crowley and Henderson 1996), brand choice and satisfaction (Turley and Milliman 2000), etc.

In the beginning of the 2000’s the concept of atmosphere was transposed to merchant websites and defined by Dailey (2004, p.796) as: “the conscious designing of web environments to create positive effects (e.g., positive affect, positive cognitions, etc.) in users in order to increase favorable consumer responses (e.g., site revisiting, browsing, etc.)”. When it came to classifying the atmospheric cues, either in marketing or in information systems, many authors adapted Baker’s typology (1986) to the digital environment (store atmospheric elements rely on Design, Ambient and Social cues), while others proposed new typologies (e.g: Eroglu, Machleit and Davis 2001, 2003; Hausman and Siekpe 2009; Lemoine 2008; Vrechopoulos, O’Keefe, Doukidis and Siomkos2004). Recently, Roggeveen, Grewal and Schweiger (2020) proposed an evolution of Baker’s model (DAST model) by integrating a new dimension to atmosphere: Trialability factors, including virtual and augmented reality. These latter enable customers to try out a product using technology, rendering the model as fit for offline and online atmospheres’ study, along with their interactions.

In the study of how web atmosphere factors impact internet users’ behavior, research shares the specificities observed in the studies devoted to physical retail: they consider only one atmospheric cue (Ben Mimoun and Poncin 2015; Cherif and Lemoine 2019; Gefen and Straub 2003, 2004; Lu, Fan and Zhou 2016; Wang et al. 2007) and studies of more comprehensive settings are relatively rare.

Study of atmospheric cues: from a single-factor approach to an approach advocating the study of interaction effects

Either offline or online, almost all of the studies have examined the specific role of an atmospheric factor on behavior, as we have seen in the previous paragraphs. Although this approach makes it possible to establish experimental protocols that are relatively simple to implement, it does not correspond to the reality in the field, given the presence of a significant number of atmospheric factors in both physical and digital environments.

Offline, a few attempts to study the effects of the interactions of the atmosphere components were published (Mattila and Wirtz 2001; Morrison et al. 2011; Spangenberg, Grohmann and Sprott 2005), clearly disclosing the relevance of engaging in a more comprehensive understanding of atmosphere (Mattila and Wirtz 2001; Spence et al. 2014).

Online, Bouchetara (2017) studies the interaction between ambient factors (background color, type and rhythm of music), and Zafri (2019) focused on the interaction effects of design factors by studying the font size and layout of the products, but all in the same component of Baker’s (1986) typology. The recent work of Lemoine and Charfi (2022) goes further as it does not simply study an interaction effect between tools belonging to the same atmosphere component, but carries out an inter-components study: the authors study the combined effects of the presence of a virtual agent (social factor), a control command (design factor) and a 3D environment (ambiance factor) on the user’s environment (ambiance factor) on the user’s immersion. The results show that a shopping environment simultaneously made of these three atmospheric components generates more immersion than a site that displays only one of these dimensions. Lemoine (2022) actually calls for further research on atmosphere, and more specifically by apprehending it in a more holistic, non-atomized way.

It so appears that the literature is abundant in both contexts (offline and online), but the interaction of several cues or the interaction offline and online atmospheres is scarcely documented. Nonetheless, recent works developed an interested in the customer journey and consider that the study of atmosphere needs to be broadened as to consider the various touch points with the company and thus comprehend more than the only in-store experience. Thus, experiences outside the stores, such as the website, flyers or social networks are to be considered (Roggeveen, Grewal and Schweiger 2020), especially because, from an ecological and managerial point of view, it is difficult to conceive an online consumer experience taking place in a totally neutral offline environment, especially when it comes to ambient scents.

From this perspective, the DAST theoretical framework is entirely relevant to the hereby studied issue. Compared to Baker’s model, the authors of the DAST model emphasize the opportunities available to retailers to take control of elements present at the point of sale, but also outside the point of sale, such as the company’s website, social media accounts and catalogues. The model thus places the shopping experience within a more holistic and omnichannel approach.

Consumers are also able to use their devices within the point of sale. For example, while the social dimension, in its more traditional considerations (Baker, 1986), considers the possible presence of other actors within the point of sale, new technologies are expanding the possibilities for social interaction, as individuals can 'shop with their friends and family, even if they are not physically present in the store, by connecting with them via Facetime to get their opinions' (Roggeveen, Grewal and Schweiger, 2020, p.132). Thus, this model fits to the study of offline and online atmospheres and is fit for the study of their interactions.

The influence of offline atmosphere on online consumer behavior: how ambient scents impact Internet user behavior?

Ambient scents and the central role of congruence

Ambient scents are defined as present in the environment but not emanating from a particular object, being present in the background but not actively contributing to the main activities of the setting (Krishna 2013) and having a significant effect on consumers' emotional state, attitudes and behaviors (Spangenberg et al. 2006; Vinitzky and Mazursky 2011). It potentially creates positive mood states that in turn produce positive overall consumer responses, such as more favorable product/store evaluations and higher sales (Morrin in Krishna, 2011), because of the nonconscious influence that olfactory cues have on thinking and doing (Holland, Hendriks and Aarts 2005). Overall, the effect of offline pleasant ambient scents has been widely documented (Pappu et al. 2022), with positive results over a variety of consumer behavior outcomes (see appendix A for an overview).

Nevertheless, several authors claim that the mere presence or the pleasantness of the scent may not suffice to generate improved effects on consumer behavior (Schifferstein, and Blok 2002; Spangenberg, Grohmann and Sprott 2005), and a large set of studies on ambient scent resorts to the concept of cue congruence, that is actually central to sensory marketing (Krishna 2012). Congruence, defined as the fit between concepts, and more precisely "[…] the degree of fit among the characteristics of a stimulus" (Krishna, Elder and Caldara 2010, p. 410), is thus the degree of fit, correspondence, or level of appropriateness of cues with each other in a given context or cue (Caldara 2010; Helmefalk and Hultén 2017). Several types of cues were attached to the study of pleasant scent congruence over the decades, through varied operationalizations and in the end, with overall converging results (see appendix A). Basically, the effect of scents is highly dependent on congruence to elicit positive responses (Flavián, Ibáñez-Sánchez and Orús 2021; Helmefalk and Berndt 2018; Morrin in Krishna 2011), and moreover, if the scent is perceived as incongruent, it would not affect consumer evaluations, rendering the use of ambient scents irrelevant or even become counterproductive (Flavián, Ibáñez-Sánchez and Orús 2021; Schifferstein, and Blok 2002; Spangenberg, Grohmann and Sprott 2005). Roschk and Hosseinpour (2020) actually show in their meta-analysis that effect sizes determined by the presence of ambient scents are related positively to scent congruence, this being explained by the fact that consumers might misattribute the effects of liked ambient scents to the products being evaluated (Bosmans 2006), and tend to prefer experiences that convey similar messages to the senses because of prior experience and learning (Helmefalk and Berndt 2018). Overall, ambient scents congruence hence plays a decisive role on the impact of ambient scents on consumer responses on a wide variety of consumer behavior outcomes and contexts (see appendix A for more details).

The influence of ambient congruent scents on online consumer behavior

Considering that offline congruent ambient scents have a widespread impact on a variety of contexts, it is here assumed that it can impact consumers responses when they visit a website, in accordance with Petit, Velasco and Spence's (2019), stating that the positive impact of the sensory atmospherics in store, facilitated by cue congruence, are likely to hold in the online environment. Regarding the impact of offline ambient scents on online shopping behaviors, Vinitzky and Mazursky's (2011), and Flavián, Ibáñez-Sánchez and Orús's (2021) works are of interest. The first one studied the effect of the interaction between cognitive variables and presence of scent on online search motivation, purchase characteristics and telepresence in a virtual store, and showed a positive impact of the presence of ambient scents on online behaviors. The second one, in virtual reality settings, added the idea that ambient scent congruence also has an impact on online behaviors.

CONCEPTUAL FRAMEWORK AND HYPOTHESES

In the study of atmosphere, the Stimulus-Organism-Response (SOR) paradigm (Mehrabian and Russel 1974) is the most common framework employed to study the effect of the shopping environment on behavior, offline (Doucé and Janssens 2013; Spangenberg et al., 2006; Vinitzky and Mazursky 2011), and online (Fei et al. 2021; Friedrich, Schlauderer and Overhage 2019; Kamboj et al. 2018; Lyu, Krasonikolakis and Vrontis 2022).

However here, where the aim is to combines characteristics of the retail atmosphere with elements of sensory experience, it is relevant to rely on Roggeveen, Grewal and Schweiger's (2020) DAST model that broadens existing conceptualizations by comprehending both in-store and out of store experiences the retailers can control. This expansion of view offers a way to include the multiple touchpoints the consumers will meet in their experience, thus offering a more dynamic and contemporary view of atmosphere.

Furthermore, pleasant scents are a critical component of the physical environment (Chebat and Michon 2003; Pappu et al. 2022) and their congruence is suggested to be an essential condition to lead to positive outcomes offline and online (Flavián, Ibáñez-Sánchez and Orús 2021; Spangenberg, Crowley and Henderson 1996; Spangenberg, Grohmann and Sprott 2005; Vinitzky and Mazursky 2011). Scent congruence is even important enough to deem the scent as pleasant (Leenders, Smidts and El Haji 2019; Helmefalk and Hultén 2017), and it is proven to hold independently of its operationalization or context of application (Morrin in Krishna 2011; Vinitzky and Mazursky 2011). In other words, the presence of a congruent ambient scent is supposed to lead to more positive outcomes than the absence of an ambient scent, especially regarding purchase intentions:

H1a: the presence of a congruent ambient scent (vs no ambient scent) with a website's product categories will lead to higher purchase intentions.

However, the presence of an incongruent ambient scent might cancel or even reverse the positive effects of a congruent ambient scent (Mitchell, Kahn and Knasko 1995; Schifferstein and Blok 2002; Spangenberg, Grohmann and Sprott 2005; Spangenberg et al. 2006). Krishna (2013) clearly posits that the cost of identifying a congruent ambient scent might be "worth the pain" as, otherwise, the benefits of an ambient congruent scent can easily be lost when the scent is incongruent within the atmosphere. Accordingly, in the interaction of the offline and online atmospheres, incongruent ambient scents could present the same harming results:

H1b: the presence of a congruent ambient scent (vs incongruent) with a website's product categories will lead to higher purchase intentions on the website.

Regarding ambient scents, the literature also establishes a link between scent and affect (Ardelet et al. 2022), as olfaction is more connected to emotions than any other sensory modality (Krishna 2013). In the brain, smell is closely linked to experiencing emotions (Bosmans 2006; Herz and Engen 1996; Herz in Krishna 2011), and in offline retailing, scents were showed to have an effect on consumers behaviors through their emotions (Petit and Velasco and Spence 2019), hence the scent might activate thoughts related to pleasure (Vinitzky and Mazursky 2011):

H2: the presence of a congruent ambient scent congruent (vs no ambient scent) with a website's product categories will lead to higher pleasure.

Moreover, previous research not only validates a mediating role of emotions in this context (Lyu et al. 2022; Pappu et al. 2022; Roschk and Hosseinpour 2020) but also shows that the emotional responses elicited by ambient scents can influence subsequent judgments (Bosmans 2006) and that the affective dimension can explain most of the variance (Spangenberg, Crowley and Henderson 1996), thus:

H3: higher pleasure will lead to higher purchase intentions on the website.

Ambient scents would also induce not only affective responses but also cognitive ones (Doucé et al. 2014). Specifically, regarding incongruent ambient scents (Morrin in Krishna 2011), the underlying induced mechanisms can be more cognitive than affective (Roschk and Hosseinpour 2020), as the emotional route does not always emerge (Chebat and Michon 2003). Offline, Lunardo and Mbengue (2013) compared the effect of congruent and incongruent ambient scents and identified that consumers exposed to incongruent ambient scents would infer that, by using scents, the retailer intends to manipulate their reactions. It is thus expected that another possible, more cognitive, route would emerge in the exposition of incongruent ambient scents:

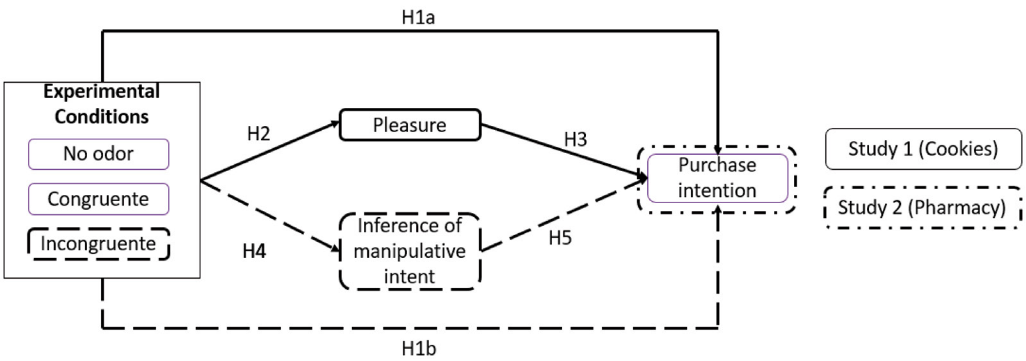
H4: the presence of an incongruent ambient scent (vs congruent ambient scent vs no scent) with a website's product categories will lead to higher inferences of manipulative intent.

The effect of the inferences of manipulative intent caused by the exposition to an incongruent ambient scent is demonstrated to have a negative impact on the outcome variables (Lunardo and Mbengue 2013):

H5: higher inferences of manipulative intent will lead to lower purchase intentions on the website.

Figure 1 summarizes the conceptual framework studied:

Figure 1
theoretical framework



METHOD

Two studies with similar protocols were conducted. Study 1 (no scent vs congruent ambient scent) tests hypotheses H1a, H2 and H3, and thus explores the "affective route" of the model (direct effects and mediating role of pleasure). Study 2 (no scent vs congruent ambient scent vs incongruent ambient scent) tests hypotheses H1b, H4 and H5, or the "cognitive route" (direct effects and mediating role of inference of manipulative intent).

Studies protocol

The studies were developed on different product categories (online cookies store and para-pharmaceutical products store) to ensure external validity and avoiding cognitive dissonance out of the mere presence of a scent ("smells like bakery" or "smells like drugstore"). Ambient scent congruence is thus operationalized through its fit with the product category sold.

Two fictitious websites were designed, aligned with the practices of each market regarding merchant websites developments (see Appendix B for screenshots). For each study, data collections took place in a major French university. On the same day and the same time slot, to control for outside atmosphere conditions (light, temperature, etc.), two (study 1) or three identical computer rooms (study 2) (in terms of size, number of desks and computers) were simultaneously used. This also ascertained the presence of the same computer models and the same screen settings were set up before by the researchers at the beginning of the sessions (definition, brightness, etc.) ensuring identical visual web atmosphere. A scent diffuser was installed in all the rooms and the intensity and frequency of the scent diffusion was equally calibrated beforehand. To make sure that the scents were detected, about a dozen random students, not taking part to the final study, were asked to enter the rooms and to declare whether they smelled something and whether it was overwhelming. The intensity of the scent was thus established in both studies.

In both studies, the participants were recruited in the school lobby and offered to take part to a study in exchange for a food incentive they obtained after leaving the room (small candy packs). The respondents (if not allergic to essential oils or prone to epilepsy) were assigned randomly to the experimental conditions. They sat in front of a computer and were instructed to browse the online shop. Once this visit was complete, they answered an online questionnaire, that included the variables measures and checked on whether they had perceived a scent in the room. In study 2, involvement with the product category was measured and showed no differences between the three experimental cells (p = 0.719).

Measures

In study 1, pleasure was measured using a French scale for measuring emotions experienced in a distribution context (Lichtlé and Plichon 2014) adapted to online distribution (Bataoui 2022), along with Pelet's (2010) French measure of purchase intentions. Constructs were measured using seven-point Likert scales (all measures' psychometric qualities presented in Appendix C).

FINDINGS

Study 1 data analysis

The study final sample was 71 respondents, with 29 respondents in the no scent condition and 42 in the congruent scent condition (wherein a "cookies" essential oil was diffused; the average perceived congruence, adapted from the Fleck-Dousteyssier (2006) was 4.62).

Regarding convergent validity, standardized indicators share more variance with their constructs than with their measurement errors (Fornell and Larcker 1981). AVE averages are above 0.5 for each construct and the minimum CR value is greater than 0.7, confirming the quality of the latent variables (Henseler, Ringle and Sinkovics 2009). With regard to discriminant validity, crossloading (see Appendix D) is used to check that items belonging to one construct do not contribute significantly to another construct present in the model. The heterotrait-monotrait ratio of correlations (HTMT) approach of Henseler, Ringle and Sarstedt (2015), specifying that the integrality of the corresponding indices must be less than 0.85 to ensure that the concepts mobilized in the model are empirically distinct, is also verified (see Appendix C).

Factor scores were calculated for each measure. Table 1 summarizes the main results:

Table 1
study 1 - main results

/	Homogeneity Test		ANOVA		Descriptive statistics		
Purchase intention	**Leven Stat**	**p**	**F (68 ; 1)**	**p**	**Experimental cell**	**$\bar{x}$**	**St. Dev**
	0.012	0.913	0.251	0.618	No scent (n=29)	0.071	0.949
					Congruent scent (n=42)	-0.049	1.012
Pleasure	**Leven Stat**	**p**	**F (68 ; 1)**	**p**	**Experimental cell**	**$\bar{x}$**	**St. Dev**
	0.035	0.852	7.538	0.008	No scent (n=29)	0.309	0.807
					Congruent scent (n=42)	-0.214	0.825

ANOVAs show no significant difference in purchase intentions ($F=0.251$; $p=0.618$) with the participants assigned to the control group ($\overline{x}_{no\ scent}=0.071$; SD = 0.949; $\overline{x}_{congruent\ scent}= -0.049$; SD=1.0123), invalidating hypothesis 1a. Regarding experienced pleasure, a significant difference exists: $F=7.538$, $p= 0.008$, ($\overline{x}_{no\_scent}=0.310$; SD=0.807 vs $\overline{x}_{congruent\_scent}=-0.214$; SD= 0.825), validating H2 and a linear regression analysis invalidates H3: $F = 10.328$; $p= 0.002$; $R = 0.361$; $R^2 = 0.130$. Moreover, a mediation analysis was carried out (process macro, model 4) and showed the absence of any direct or total effect, as showed in table 2:

Table 2

study 1 - mediation tests

Cookies (no scent vs congruent) n = 71	Variables			Effects decomposition			
	IV.	Mediator	DV.	X → M		M → Y	
	X	M1	Y	Effect	p	Effect	p
	Scent	1Pleasure	Intentions	0.262	0.006	0.350	0.206

Total effect			Direct effect		
Effect	p	[LLCI - ULCI]	Effect	p	[LLCI - ULCI]
0.100	0.3730	-0.229 - 0.602	-0.031	0.889	-0.477 - 0.415

The results from study 1 show that the presence of a congruent ambient scent has no direct impact on purchase intentions, even though the respondents experience more pleasure during their browsing time.

Study 2 data analysis

The aim of study 2 was threefold: 1) replicating study 1 results on the dependent variable (purchase intentions), 2) exploring the effect of an incongruent ambient scent and, 3) considering the cognitive route through inferences of manipulative intent (measured with Lunardo and Mbengue's 2013 items). To this end, three experimental conditions were developed (no scent, congruent scent, incongruent scent) with a para-pharmaceutical online store, to test hypotheses H1b, H4 and H5. The experimental protocol was the same as in study 1.

The selection of the diffused congruent and incongruent scents was pretested. 7 essential oils were first selected (from the same brand, ensuring a stable level of quality). A panel of fellow marketing experts was briefed on the purpose of the study and pre-selected the two scents that could correspond to the experimental conditions. The final selected scents were eucalyptus (congruent) and orange-cinnamon (incongruent) essential oils. 40 business school students were asked to evaluate both scents, presented in random order to the respondents. They renewed their olfactory palette by smelling coffee grounds before and between samples (Krishna, Elder and Caldara 2010). Seven-point scales were used to measure each of the constructs and the calculated factor scores for perceived congruence with a para-pharmaceutical retail store exhibited a significant difference ($\overline{x}_{eucalyptus} = 5.51$; $\overline{x}_{orange\text{-}cinnamon} = 4.11$; $p<0.001$), whereas the scents did not differ on perceived pleasantness, natural dimension, perceived quality, familiarity and overall likeability.

106 respondents took part to the study ($n_{no\ scent}=33$, $n_{congruent\ scent}=37$, $n_{incongruent\ scent}= 36$). The convergent and divergent validity criteria are also met for this second study (see appendix C). Table 3 summarizes the main results:

Table 3
study 2 - main results

/	Homogeneity Test		ANOVA (103 ; 2)		(I) Website	(J) Website	$\bar{x}$ Difference	p
Intentions	Leven Stat	p	F Value	p	A ; $\bar{x}$ = -0.095	B ; $\bar{x}$ = -0.166	0.057	0.967
	0.131	0.877	0.660	0.519		C ; $\bar{x}$ = 0.247	-0.193	0.687
					B ; $\bar{x}$ = -0.166	C ; $\bar{x}$ = 0.247	0.251	0.518
Inferences of manipulative intent	Leven Stat	p	F Value	p	A ; $\bar{x}$ = -0.346	B ; $\bar{x}$ = 0.338	-0.685	0.008
	2.857	0.062	4.665	0.011		C ; $\bar{x}$ = -.0202	-0.326	0.313
					B ; $\bar{x}$ = 0.338	C ; $\bar{x}$ = -.0202	-0.359	0.232

A = control group (no scent) - n = 33; B = incongruent scent, n = 36; C = congruent scent, n = 37.

The perceived congruence of the scent with the website's product categories was checked on the final sample and showed significant difference ($\bar{x}_{congruent\_scent}$=0.642 vs $\bar{x}_{incongruent\_scent}$=0.188; p < 0.001). Gender, age and involvement with the product category[4] were also checked and no significant differences were found in the three experimental conditions (respectively: $X^2_{Pearson}$ = 1.496, p = 0.473; F = 2.347, p = 0.103; F = 0.332p = 0.719).

An ANOVA on purchase intentions showed no statistically significant difference between the conditions: F=0.660; p=0.519 ($\bar{x}_{no\_scent}$=-0.095; SD = 0.953; vs $\bar{x}_{congruent\_scent}$= -0.166; SD=0.991; $\bar{x}_{incongruent\_scent}$ =0.257; SD=0.980). Post-hoc tests confirm the absence of differences between the three experimental conditions (see table 3). Hypothesis 1b is thus not validated, replicating study 1 results on the dependent variable. Regarding inferences of manipulative intent, a significant difference was found: F=4.665, p= 0.011 ($\bar{x}_{no\_scent}$=-0.346; SD=0.826, $\bar{x}_{congruent\_scent}$=-0.202; SD=0.959; $\bar{x}_{incongruent\_scent}$=0.338; SD=0.993), therefore validating H4. More specifically, the post-hoc test (table 3) shows that a significant difference is observed between the control group and the incongruent scent group ($\bar{x}_{difference}$=0.685; p=0.008). A regression analysis was performed to test hypothesis H5: F= 0.056; p= 0.813; R=0.023; R²=0.001, invalidating it. Finally, a mediation analysis was carried out (process macro, model 4) to check on a possible mediating role of inferences of manipulative intent between the factor (scents) and purchase intentions. The mediation analysis showed no direct and total effect, as showed in table 4:

Table 4
study 2 - mediation tests

Pharmacy (no scent vs congruent vs incongruent) n = 105	Variables			Effects decomposition			
	IV.	Mediator	DV.	X → M		M → Y	
	X	M	Y	Effect	p	Effect	p
	Scent	Manip.	Intentions	0.153	0.186	0.013	0.899

Total effect			Direct effect		
Effect	p	[LLCI - ULCI]	Effect	p	[LLCI - ULCI]
0.100	0.395	-0.132 - 0.331	0.098	0.410	-0.137 - 0.332

4 *Involvement with product category: measure from Pelet (2008), based on the work of Strazzieri (1994).*

This study replicates the results of study 1 regarding the dependent variable: the presence of an (in)congruent ambient scent has no effect on purchase intentions. However, the presence of an incongruent ambient scent impacts inferences of manipulative intent, where respondents tend to infer the company intends to manipulate their behavior over the presence of a scent in their environment while browsing the merchant website. Interestingly though, contrary to our expectations, this assessment has no effect on the purchase intentions either. The results from both studies tend to show that the presence of a scent, while potentially pleasurable to consumers, may, when incongruent, raise defiance towards the merchant, but still fail to harm or be beneficial to the web companies in terms of sales.

DISCUSSION

This research focusing on how the characteristics of the offline atmosphere influence online purchasing behavior is one of the first aiming at partially responding to Lemoine's (2022) and Roggeveen, Grewal and Schweiger's (2020) calls to extend the study of combined offline (and/or) online atmospheric factors. In this study, the DAST model (Roggeveen, Grewal and Schweiger, 2020) was used to assess the extent to which the offline environment (hereby, driven by a scent) influences online behaviors, through the use of (in)congruent ambient pleasant scents. The expected direct effects on purchase intentions were not found, but the relevance of considering the (in)congruence of ambient scents for the online consumer was identified. Our two studies showed that a congruent scent can increase pleasure when browsing a website, while an incongruent scent can increase the inferences of manipulative intent. Interestingly, in contrast with our expectations, neither of these variables have an impact on purchase intentions. Our findings thus make theoretical contributions to two streams of research (sensory and digital marketing) regarding the use of ambient scents, exhibiting it is relevant to explore the intertwining of offline and online atmospheres.

The fact that no direct effects were found on the intention of behavior, rather counterintuitively regarding past findings on both the DAST model and offline ambient scent findings, opens up to several possible explanations. First, although the literature specific to atmosphere invites consideration to the interaction effects between offline and online factors (Lemoine 2022; Roggeveen, Grewal and Schweiger 2020), consumers may distinguish between these two settings, leading to limited 'transfers' from a physical to a virtual environment, and vice versa. This could also explain why variations in pleasure levels and manipulative inferences were observed, without affecting behavior, even though these two variables have been identified in the literature as key factors in atmosphere and ambient scent usage (e.g. Leenders, Smidts and El Haji 2019; Lichtlé et Plichon 2014; Lunardo and Mbengue 2013). In addition, even if cognitive and affective routes triggered by ambient scents play an important role in the buildup of the consumers' experience, they contribute very little on actual spending (Chebat and Michon 2003), and may need to be completed by other variables to better explain actual behavior (Vinitzky and Mazursky 2011).

Second, the DAST model aims to "better reflect the multifaceted contemporary retail environment" (Roggeveen, Grewal and Schweiger 2020 p.135). To this end, the authors emphasize that the shopping experience is completely different, as the consumers themselves can "import" their own atmospheric factors by wearing perfume (ambience), using their app to find their way around (design), or even asking a friend for advice via video call (social). Here, the respondents were never told where the scent came from. They could have made inferences, as the scent could have come directly from the website via the computer, been worn by someone present in the room, or been diffused directly into the experimental room. It is therefore possible that these modalities, although presenting the same scent, could generate different behaviors. In other words, the source of the atmospheric factor (generated by the distributor vs. by the consumer themselves or by a third party) was not considered in our study and could be the cause of specific behaviors.

Third, a few past findings suggest a more nuanced view of the supposed positive effect of the presence of a pleasant (in)congruent scent itself, as it is not always sufficient to affect specific dependent variables such as intentions of behavior and effective sales (Knasko, 1989; Schifferstein and Blok 2002). It finally seems that the impact of ambient scents can differ in strength depending on the studied outcomes. For instance, in Spangenberg, Crowley and Henderson's (1996) offline work, even if the presence of pleasant ambient scents led generally to more positive outcomes than their absence, the effect was found to be stronger on the store environment evaluations than on product judgements. Interestingly, the same observation was made by Vinitzky and Mazursky in 2011, as they found that the scent has an effect on online behaviors, but only on some of the behavioral variables considered in their model. It is thus probable that purchase intentions were not influenced as expected, but the evaluation of the website and actual behavior may be impacted positively, both by the factor and the hereby considered mediators. Moreover, the mere fact that the consumer is determined to purchase the product or not plays a significant role in the intention to do so, independently from the presence of a scent (Schifferstein and Blok 2002).

In the end, our results align with the few past research crossing the offline and online atmospheres (Flavián, Ibáñez-Sánchez and Orús 2021; Vinitzky and Mazursky 2011) in contributing to the idea that (in)congruent olfactory ambient cues play a role on online consumer responses. They build up on past findings while tending to open perspectives on the use of ambient scents where (in)congruence with the product category displayed online has to be thoroughly manipulated in order to trigger specific underlying mechanisms possibly able to improve the overall consumers' shopping experience.

Managerial implications

In terms of managerial inputs, our research confirms the use of ambient scents is crucial even in contexts where it might not be seen as central such as online shopping: the offline sensation impacts online experience. Thus, when aiming at immersing the consumers in meaningful environments, ambient scents can play a relevant role. This would be a claim for retailers to develop trademark signature scents (Szocs et al. 2023), congruent with the products sold, in order to create overall shopping experiences, coherent for offline and online settings. For instance, Krishna (2013) recalls that in matters of retail and the development of sensory signatures, it is crucial to build coherent strategies in any of the companies' distribution canals.

More specifically, managers should keep in mind the centrality of scent congruence. It was showed here that pleasant scents congruent with the product category could elicit pleasure, whereas incongruent scents could elicit inferences of manipulative intent. In line with past research, it is central that the congruence with the store or even the department level (Chebat and Michon 2003; Szocs et al. 2023), is maintained to support the development of positive perceptions over risking negative ones, such as inferences of manipulative intent. This way, in line with retailers well known for their strong olfactive identity in store (such as Sephora, Abercrombie and Fitch, The North Face Soho), companies will be able to develop omnichannel approaches congruent with their products and positioning online too. In the future, scent will be brought by technologies such as scent cartridges stored in the electronic devices, filled with oils and aromatic gels[5], or other means, as scent technologies will be available by 2030 (Szocs et al. 2023), giving retailers opportunities to develop new ways to engage their customers offline and online.

Limitations and further research

The results of this research need to be broadened by following a few paths, starting with addressing its limits and following the DAST model. First, regarding the stimuli, here we worked on the manipulation of the perceived congruence of only one variable of the offline atmosphere (ambient scents). It would be next interesting to explore the possible cue congruence interactions between the offline and online settings, such as, for instance, manipulating the congruence of one variable of the offline ambient elements (scents) with one variable of the ambient elements of the websites, to see if multisensory cue congruence effects acknowledged in the literature hold in the interaction of the real and virtual worlds, and in order to create a holistic multisensory experience. In turn, regarding the overall atmospheres, the optimum stimulation level (Helmefalk and Hultén 2017) could be then studied as it would lead to the exploration of how many variables of both atmospheres should be manipulated in both offline and online to create a positive experience for customers, finding the optimal balance (Petit, Velasco and Spence 2019). Second, regarding the underlying mechanisms, other affective variables over pleasure need to be considered, such as arousal, along with other cognitive routes, such as perceived fluency, for example, in order to deepen the exploration of the phenomenon at play here. As it was showed by past research, pleasure fails to play as an actual mediator in some models and the cognitive route should rather take into account the meaning of the ambient for the shopper (Chebat and Michon 2003). Third, in an attempt to improve relevance for practitioners, future research needs to imply the use of other dependent variables, such as actual sales, evaluation of the website and products, approach and avoidance behaviors, and overall customer experience.

Regarding scent characteristics a few complementary elements need to be checked as the only congruence might not be enough to explain our findings: its perceived quality, arousing nature, intensity and detection thresholds (Leenders, Smidts and El Haji 2019; Spangenberg, Crowley and Henderson 1996), its complexity (Helmefalk and Berndt 2018), the aroma structure, or the familiarity of a scent (Rosch and Hosseinpour 2020) can also play a role.

Moreover, a few studies demonstrate that the positive effect of (in)congruent ambient scents might be moderated by a set of variables (Bosmans 2006; Leenders, Smidts and El Haji 2019; Sandell 2019; Spangenberg, Grohmann and Sprott 2005). It is thus crucial to place the consumer as "the processor of the scent" (Vinitzky and Mazursky 2011), and to include potential moderators, through the inclusion of individual differences (Morrin in Krishna 2011). Need for Smell differences (Pappu et al. 2022), the determination to purchase the products (Schifferstein and Blok 2002), the motivation to correct for extraneous influences (Bosmans 2006), or the perceived diagnosticity of the scent (Schifferstein, Talke and

5 https://emotions.market/blog/digital-scents-how-technology-is-bringing-smell-to-the-digital-world/

Oudshoorn 2011), for instance, might play a role in the offline and online settings as well.

In any case, the future of digital olfaction will be thoroughly impacted by the developments of sensory enabling technologies (Petit, Velasco and Spence 2019) by 2030 (Szocs et al. 2023), as the future personal computers and smartphones could soon be improved with olfactory devices. The practitioners will be then able to develop their own olfactory identity to be displayed at every touchpoint with the customers, raising more avenues for study about this very important sensory modality in its impact on offline and online atmosphere.

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APPENDICES

APPENDIX A

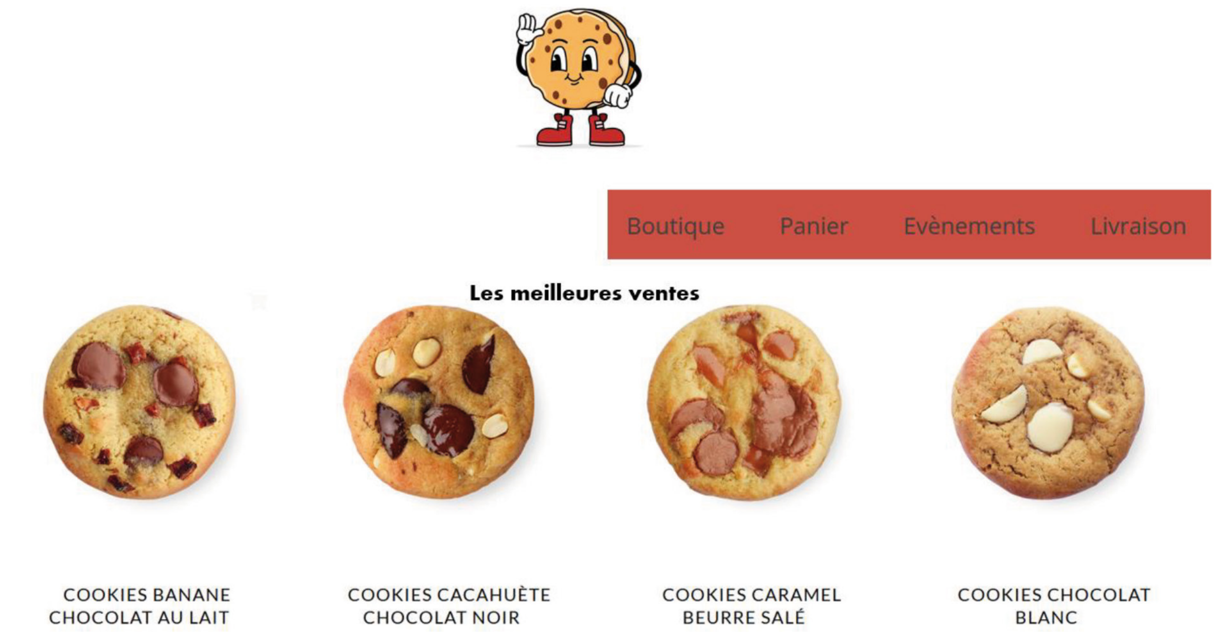
Overview of offline ambient scent references

Reference	Consumer Behavior studied outcomes	Scent characteristics	Congruence cue	Main results
Ardelet, Fleck and Grobert 2022	Service space sharing with strangers	Cleanliness evocating scent	*Perceived appropriateness of the scent*	More positive attitudes towards space sharing (vs no ambient scent)
Biswas and Szocs 2019	Healthy food choices in store	Indulgent food-related scent	*Relatedness with indulgent food*	Lower purchases of unhealthy foods for indulgent food-related ambient scent (vs no ambient scent or a non-indulgent food–related ambient scent)
Bosmans 2006	Product evaluation	Pleasant ambient scent	(In)Congruence with the product category	Positive effect (vs no scents or incongruent scents)
Chebat and Michon 2003	Perceived retail environment, product quality spending behaviors	Pleasant ambient scent	Congruence with the product category	Positive effect (from pleasant ambient scents and particularly congruent scents)
Doucé et al. 2014	Product, store environment and store evaluations	Neatness-evocating pleasant scent	*(Un)Relatedness with the perceived neatness/messiness of the layout*	Better evaluation of the tidy store (negative effect of the mismatch between the pleasant scent not associated with neatness and a messy store)
Helmefalk and Hutlén 2017	Emotions and purchase behavior	Pleasant ambient scent	Congruence with the retail setting and other sensory cues	Positive effects of multi-sensory congruent cues (olfactory and auditory)
Holland, Hendriks and Aarts 2005	Cleaning concept, lexicon and cleaning behavior	Cleaner (pleasant) scent	N.A.	Increased mental accessibility to cleaning concept and lexicon, increased cleaning behavior of the direct environment
Leenders, Smidts and El Haji 2019	Perceptions of time spent in the store and increase of actual time spent	Pleasant ambient scent	Congruence with the supermarket ambient	Improved store evaluation, time spent and sales (depending on the scent intensity level)
Madzharov, Block and Morrin 2015	Need for power and preference for premium products and brand purchase	Perceived temperature of the scent	N.A.	Higher perceived social density, power compensatory preferences, increased purchasing of premium products, multiple-item purchases and overall spending (for warm vs cool scents)
Mattila and Wirtz 2001	Approach and impulse behavior, overall experience and store perception	Arousing pleasant ambient scent	(in)Congruence with the level of arousal of the music	Positive perception of the environment, increased approach, impulse buying behaviors and enhanced experience satisfaction for congruent cues
Mitchell, Kahn and Knasko 1995	Information processing, variety seeking	Pleasant ambient scent	(In)Congruence with the product category	Increased processing time, more holistic processing, higher willingness to go beyond given information, increased variety seeking for congruent scents (over incongruent)
Morrin and Ratneshwar 2000	Brand evaluation, attention and memory	Pleasant ambient scent	N.A.	Increased brand name memory and brand evaluation (vs no scent)
Morrin and Chebat 2005	Unplanned and impulsive purchase, store evaluation	Pleasant ambient scent	Congruence with shopping styles	Positive effects for contemplative shoppers (over no scent)
Schifferstein, and Blok 2002	Instore purchase	Pleasant ambient scent	(In)Congruence with product thematic (magazines)	No direct effect on sales (neither for incongruent scents)
Schifferstein, Talke and Oudshoorn 2011	Dancing activity, evaluation of the evening, music and mood	Pleasant ambient scent	Congruence with nightclub environment	Increased dancing activity and improved evaluations (over no scent)
Spangenberg, Crowley and Henderson 1996	Evaluation of department store, store environment and assortment	Inoffensive ambient scent	N.A.	Positive effect of the presence of the scent
Spangenberg, Grohmann and Sprott 2005	Evaluation of department store, store environment and assortment	Thematic pleasant ambient scent (Christmas)	(In)Congruence with music	More positive evaluations of the store, its merchandise, its environment and improved intentions to visit (vs incongruent scent and music)
Spangenberg et al. 2006	Evaluation of department store, store environment, assortment and actual sales	Pleasant ambient scent	(In)Congruence with gender associated with the sold items	Overall positive effects (vs incongruent scent)

Overview of offline ambient scent references exhibiting studied outcomes, scent characteristics, congruence cue and overall mains results (N.A. = “Not applicable”, congruence related concepts = *italic font*) and main results

APPENDIX B

used sites designs for studies 1 & 2.[6]



6 *Cookies images used for the first site were taken from Vectorportal.com*

APPENDIX C

measurement scales psychometric qualities

Scales	Items	Study 1 - Cookies							Study 2 - Pharmacy						
		KMO	Bartlett	Exp.Var.	α	L	AVE	CR	KMO	Bartlett	Exp.Var.	α	L	AVE	CR
Pleasure (Lichtlé and Plichon, 2014; Bataoui 2022)	On this site, I feel happy	0.666	<0.001	60.95 %	0.680	0.749	0.590	0.812							
	On this site, I am enthusiastic					0.754									
	On this site, I feel pleased					0.829									
Purchase intentions (Pelet 2010; Bataoui 2022)	I plan to purchase on this site	0.853	<0.001	81.62 %	0.924	0.960	0.864	0.962	0.813	<0.001	84.09 %	0.937	0.872	0.834	0.955
	I intend to buy on this site					0.960							0.944		
	I would certainly buy products from this site					0.917							0.905		
	It is likely that I buy products from this site					0.937							0.931		
Inferences of manipulative intent (Lunardo and Mbengue 2013):	The way this atmosphere tries to persuade people does not seem acceptable to me								0.743	<0.001	70,98 %	0.861	0.706	0.708	0.906
	The elements present in this room try to manipulate the participants in a manner I do not like												0.909		
	The atmosphere in this room annoys me because it tries to control the participants in a manner I do not find appropriate												0.894		
	I think the atmosphere of this room is deceptive												0.841		
Perceived congruence (Fleck-Dousteyssier 2006; Caldara 2010)	For a store that sells cookies/para-pharmaceutical products, this olfactory ambient is appropriate								0.849	<0.001	89.63 %	0.961	0,949		
	For a store that sells cookies/para-pharmaceutical products, this olfactory ambient is adequate												0,966		
	For a store that sells cookies/para-pharmaceutical products, this olfactory ambient corresponds												0,932		
	For a store that sells cookies/para-pharmaceutical products, this olfactory ambient fits perfectly												0,94		

APPENDIX D

crossloading and HTMT approach

Crossloading study 1 (Cookies)		
Items	Pleasure	Intentions
Pleasure1	**0,829**	0,321
Pleasure2	**0,749**	0,152
Pleasure3	**0,754**	0,349
Intention1	0,345	**0,960**
Intention2	0,245	**0,917**
Intention3	0,294	**0,937**
Intention4	0,421	**0,960**

HTMT (study 1, cookies):

Pleasure		
Intentions	0.457	
	Pleasure	Intentions

Crossloading study 2 (Para-pharmacy)		
Items	Inference manipulative	Purchase intent
InferencesManipulativeIntent1	**0,707**	0,023
InferencesManipulativeIntent2	**0,910**	0,027
InferencesManipulativeIntent3	**0,894**	0,107
InferencesManipulativeIntent4	**0,841**	-0,098
Intention1	-0,022	**0,873**
Intention2	-0,005	**0,944**
Intention3	0,042	**0,905**
Intention4	0,029	**0,931**

HTMT (study 2, Para-pharmacy):

Inference		
Intentions	0.011	
	Inference	Intentions

Optimizing the promotion of sales training programs: strategic and tactical approaches for a leading agricultural machinery manufacturer in Europe

Abstract :

Sales training is widely recognized as essential for salesforce performance. How sales training programs are promoted, however, remains largely overlooked. The study investigates how communication and promotional tactics, specifically digital and personalized methods, shape awareness, perception, and enrolment in a global agricultural machinery manufacturer's (GAMM) dealer network. Using a mixed-method design, shortcomings in promotional practices caused by unclear ROI communication, unclear internal responsibilities, and limited role-based personalization are revealed. The study contributes to sales education and marketing literature by reframing sales training as internal B2B service marketing and advertising.

Key words: *B2B, agricultural machinery, digital promotion, sales training, Europe*

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INTRODUCTION

A global survey by McKinsey found that 71-90% of companies report positive impacts of large-scale training on both employee performance and revenue growth (McKinsey.com 2021). Likewise, 86% of HR leaders identify the improvement of learning and development as a priority (Deloitte.com 2019). A study on agricultural sector employees found a strong positive relationship between training and employee performance, confirming that training significantly improves outcomes in agribusiness (Ahmad et al. 2023).

Even though these benefits are unmistakably proven, a recurring challenge lies not in the effectiveness of training programs themselves, but in how these programs are promoted and communicated to potential participants. As services are inherently intangible, their value can be overlooked or poorly understood, making effective marketing more important than ever (Honeycutt Hodge Attia 2015; Wirtz Lovelock 2016). Within larger dealer networks such as a GAMM (global agricultural machinery manufacturer), where multiple internal and external stakeholders, are involved, training communication often competes with other operational and corporate messages.

The study was conducted within the European region of a GAMM that supports approximately 3,000 dealer outlets across 16 countries, employing around 30,000 dealer staff. Sales training is delivered in multiple formats, including web-based training (WBT), instructor-led training (ILT), regional training programs (RTP), and virtual instructor-led training (vILT).

Internal stakeholders include employees such as corporate staff, sales teams, field teams, and those in manufacturing and engineering. The board of directors is responsible for the strategic vision. External stakeholders are a broader network, including dealers (and their sales teams), customers (primarily farmers supported through the company's network), suppliers (providing parts and materials for production), and shareholders (investors directly impacted by the company's financial performance).

Most of the research on sales training has traditionally focused on outcomes and ROI, while the promotion of training has remained underexplored. Cummins et al. (2020), in their review of sales education literature, found that most papers concentrate on practical learning, career development, and assessments, leaving areas such as technology integration, organizational behaviours, and promotion largely unaddressed. This directly reveals a substantial academic gap: little is known about how organizations build and market training programs to their own employees and dealer networks, and how such promotional strategies influence participation.

The primary research problem centres on the current promotional strategies within the GAMM dealer network, which are underperforming in driving enrolments for sales training programs. The study seeks to investigate the direct impact of these strategies on sales training awareness of the dealers.

The research attempts to show how each level of the dealership structure impacts the success of sales training promotions. By acknowledging the collective influence these roles have, the research tries to demonstrate that the promotional tactics take a coordinated, multi-level approach. It also simultaneously addresses the literature gap by expanding the discussion of sales training beyond learning initiatives to its promotion as a marketed service. This study advances research in sales education and training while also linking it to broader discussions of B2B marketing and advertising.

CONCEPTUAL FRAMEWORK

The GAMM strives to improve the participation of dealer and sales managers in its training programs. Although prior studies have examined the effectiveness and ROI of sales training, little is known about how such programs are promoted within B2B dealer networks. The research tackles this through the following question:

Q1: How do communication approaches and promotional tactics, particularly digital and personalized marketing strategies, shape perception, awareness, and enrolment in sales training programs within a GAMM's dealer network?

Sub-questions:

Q1a: Which promotional strategies are most effective in increasing dealer and sales manager participation in training programs?

Q1b: How does the personalization of messages (role-based, ROI-focused) affect stakeholder engagement and motivation to enrol?

Q1c: How can the integration of digital tools and corporate communication structures improve the clarity and impact of training promotion?

This results in the following hypothesis:

H1: A restructured approach to personalized marketing, value communication, motivational incentives, and internal engagement is expected to positively influence awareness and enrolment in sales training programs.

LITERATURE REVIEW

Sales training is an educational service aimed at enhancing the performance and skills of salespeople. Within the academic community, it is recognised that the intangible nature of such services presents greater challenges in terms of delivery and quality assessment compared to physical products (Honeycutt Hodge Attia 2015). Nonetheless, the effective training of salespeople is an important factor in a company's success. Complete training programs transform salespeople into high performers (Wiseman et al. 2022). The need to evolve skills and competencies of the sales force is part of the ongoing transformation of the B2B market. Understanding customer needs and sharing knowledge about the products being sold is essential (Corsaro Maggioni 2021).

Research in sales education reinforces this shift. Cardinali et al. (2025) use a competency-based perspective to understand emerging competencies required for B2B selling. Their work contributes to training content effectiveness but assumes that stakeholders are already aware of training initiatives. This is indicative of a larger trend in sales education research to concentrate on what should be taught and how effective it is rather than how such training is promoted.

Recent studies also highlight that the success or failure of an organization largely depends on the training it provides to its employees (Ampadu Varga Bruder 2022). Surveys conducted on private sector sales employees demonstrate a strong correlation between implemented training programs and increased employee performance (Mustafa Ismajli Velijaj 2022).

Beyond the traditional feature-advantage-benefit approach, customers now place greater emphasis on relationship building (Bradford Rutherford Friend 2017). The proactive engagement, using customer feedback to improve offerings and personal relationships, helps the B2B environment thrive (Fauser et al. 2023).

The challenge is that salespeople are reluctant to dedicate time to training, or when Dealer Managers hesitate to allocate budget due to the often-high net amount of such programs. This resistance is common within the sales demographic, as their time is directly tied to sales commissions (Boe 2024). Salespeople may view training as a potential loss of income, while Dealer Managers might be cautious about investing in programs (Serapiglia Gias 2020)

These challenges are not limited to corporate settings. Ballestra et al. (2017) mention in their findings, though through the prism of higher educational spaces, that training value alone is insufficient if the role, relevance, and outcomes of sales education are not clearly communicated.

Sales training assessment also has a role in evaluating how effectively salespeople learn and apply their knowledge in real-world business situations. In some cases, even when salespeople apply what they learned, it does not result in improved performance. This issue often stems from the training's quality, such as focusing on soft skills while neglecting topics like product benefits and technical knowledge (Sager et al. 2014).

To address challenges such as reluctance to enrol in training programs, low retention rates among participants, limited awareness of offerings, etc., companies use a Service Marketing Communication mix to engage their target audience (Wirtz Lovelock 2016). Selecting a fitting design for the Services Marketing Mix is also a big part of the process (Hawari Sudhartio 2020). According to prominent theories of Berry Leonard (1986), the focus should always shift from simply moving services "from producer to consumer" to a more consumer-oriented approach (Tansuhaj Randall McCullough 1988).

Extensive research effort in recent years focused on training promotion has concluded that digital marketing is one of the most effective and cost-efficient promotional methods (Khan Mishra 2021). Going a step further, digital technologies are also consistently being integrated into marketing plans (Crittenden Biel Lovely 2018).

The role of salespeople evolves not only from a socio-economic point but also a digital one. The same is applied to B2B organizations, where companies provide training to other entities (Bongers Schumann Schmitz 2021). Companies that implement the most effective training programs for their employees and networks are more likely to remain competitive (Mustafa Ismajli Velijaj 2022).

After a thorough literature review on sales training, most of these studies are quantitative (57%), utilizing surveys and assessments to evaluate the ROI of sales training. (Singh Manrai Manrai 2015). This is **Training Effectiveness**, which indicates and defines how well a training program improves knowledge, skills, behaviours, and performance ROI.

Cummins et al. (2020) reviewed 30 years of research and noted that most studies focus on practical learning and career development, while overlooking the organizational and promotional dimensions of training. Sales education has clearly historically been under-researched, especially outside classroom contexts. Peltier and Deeter-Schmelz (2020) further argue that despite the expansion of university sales centres and formalized curricula, the field has “only tapped the surface” and requires broader conceptual and managerial research methods.

In contrast, **Training Promotion Effectiveness** refers to the ability of organisations to communicate and market their training offers. This means that even highly effective trainings cannot generate value if they are poorly promoted to the target audience. Unfortunately, to our knowledge, no dedicated stream of research has examined sales training promotion, whether within sales education or the broader promotion of educational services. The academic literature remains sparse on how organizations promote their training programs internally. Existing work, like Wilson Strutton Farris (2013) on perceptual transfer and Mehta (2019) on sales management training availability, suggests major gaps. This absence is particularly notable given the growing demand for training, especially in industrial sectors such as agricultural machinery.

RESEARCH MODEL

This paper is conceptually anchored in the view of sales training as internal service marketing. Training programs are treated as intangible services that require marketing within the organization and its dealer network. This implies the use of service marketing principles, particularly the expanded Marketing Mix of Services (7Ps). Supporting theories strengthen this view. Organizational Buying Behaviour (OBB) is used to understand the stakeholder decision logic and Servitization Theory explains why training is a strategic service extension in B2B spaces. Meanwhile CRM (Customer Relationship Management) personalization and Digital Marketing function as methods that improve promotion, value communication, and engagement. Together, these lenses specify sales training as a service where its awareness, perceived value, and enrolment depend on coordinated promotional activities, role-based communication, and clearly articulated ROI.

This paper builds on the main theory of services marketing (7Ps), which views employees as customers who need to see the value of what the organization offers. Supporting theories strengthen this view: OBB explains why different internal stakeholders must be addressed; servitization research shows why industrial firms increasingly rely on service-like offerings such as training; and CRM/personalization offers tools for promoting these services. Together, these theories tie together sales training as a form of internal service marketing.

The traditional marketing mix suggested by McCarthy (1964) comprises strictly the 4Ps (product, price, promotion, and place). Despite it becoming one of the most recognized frameworks in marketing theory, it faced heavy criticism from the services marketing perspective. Booms and Bitner (1981) argued that services, due to their unique and dynamic nature, cannot be represented under the 4Ps. To address this, they expanded the mix by adding “people, process, and physical evidence,” transforming it into the 7P model (Akroush 2011). Because of this, service marketing research has been increasingly focused on quality as a pillar of necessary competitive advantage. Fauser (2017) mentions that without service quality, competitive positioning is unimaginable in the current market dynamics.

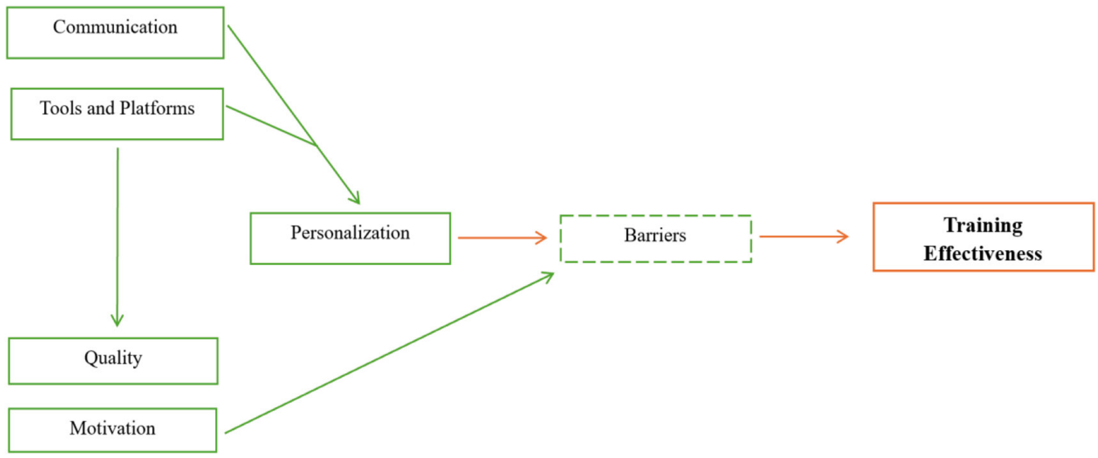
In contrast to B2C approaches, B2B marketing involves organizations promoting their products or services to other businesses rather than individual consumers (Hall 2022). A distinguishing factor in B2B is servitization, which builds closer customer relationships and strategic partnerships. In manufacturing, this shift moves companies from a product-centric to a service-centric model (Wirtz Kowalkowski 2023).

Organizational Buying Behaviour (OBB), on the other hand, differs from consumer behaviour as it involves complex decision-making processes with multiple stakeholders (Mohan et al. 2022). Decision-making involves multiple managers, including sales and HR (Lilien 2014). Research highlights a shift towards value over price, with 49% of business consumers preferring personalized service over a generic B2B approach (Corsaro Maggioni 2021; Miller Heiman Group 2019; Salesforce 2016).

Personalized marketing focuses on customer data to deliver tailored services by providing the right service at the right time. In B2B, dealers and sales managers receive customized training communications based on their preferences and past interactions, rather than a one-size-fits-all approach (Chandra et al. 2022). CRM systems are the main drivers of data-based personalization, tracking customer behaviour and predicting future actions (Saura Ribeiro-Soriano Palacios-Marques 2021). Behavioural targeting personalization checks promotions based on past trainings, sales performance, and engagement patterns (Ozcelik Varnali 2019).

Figure 1

Relationships between promotional attributes



METHOD

For this paper, mixed-method research (MMR) was chosen. MMR integrates quantitative (numerical, measurable) and qualitative (descriptive, non-numerical) data, addressing research questions from multiple perspectives (Malina Norreklit Selto 2011). By combining both, MMR improves analysis by offering both statistical validation and explanatory depth (Wasti et al. 2022). Despite its strengths, MMR faces challenges, such as balancing subjectivity and objectivity, differences in sampling methods, and philosophical divides between research paradigms (Bergman 2011).

This study employs a Convergent Parallel Design to analyse promotional strategies' impact on sales training awareness within the GAMM's dealer network. It utilizes two primary quantitative methods. First, a **Survey** was distributed to external stakeholders. The survey, specifically designed for this research, collected primary data over 10 days to identify promotional pain points. The dataset was collected via Netigate. The survey data was exported to Excel, processed using chi-square tests, correlation, and regression analysis, and visualized through charts and tables.

Second, qualitative data was gathered through **1:1 interviews** and a **focus group**, conducted over a period of 30 days (November 11 - December 11, 2024). Transcriptions were initially generated via Microsoft Teams' speech-to-text feature, then manually refined for accuracy. Frequently mentioned topics were used to create coding categories. For analysis, MAXQDA software was used to code, categorize, and visualize themes. Interview transcripts were structured as individual documents, while the focus group transcript was analysed separately.

Participation in this research was voluntary, with verbal and written consent obtained from participants. Data collection followed GDPR regulations and company confidentiality standards. Identifying details were anonymized, and raw data access was restricted.

> *Several* internal organizational documents were used as data sources in this study. To maintain confidentiality, the organization's name has been anonymized and it is referred to as "GAMM" throughout the text and reference list. These documents are cited following academic standards as unpublished internal reports. survey. The survey reached approximately 50 participants from the relevant target group, comprised of dealers, salespeople, and employees directly engaged with dealership operations. Among the sample, a total of 21 participants partially completed the survey. With an engagement rate of 42% and a completion rate of 32%, these results are considered higher than the average observed in other surveys previously distributed within GAMM.

Table 1
Survey initial data screening

Data Collected	% Results
Product Specialists and Dealer Instructors	*42.86%*
Over 7 years of work experience	61.90%
Have enough and good materials for promotions	61.11%
Believe promotional strategies to be effective	55.56%
Lack clarity of information in promotions	66.67%
No other major issues identified	68.78%
Recognize importance of personalized marketing	56.25%
Job-relevant emails as preferred method of comms.	68.75%
Motivation: Job performance and Sales	**87.50%**
Best training = relevant to job	56.25%
Aware of all training programs upon release	**81.25%**
Acknowledge the value of training	56.25%
Best communication method: Emails	**75%**
Communication tools are well balanced	*43.75%*
Communication tools are insufficient or irregular	*31.25%*

1:1 interviews. The interviews were conducted with 12 participants - nine males and three females – who represented a range of roles. Some were directly involved in dealer
training and fieldwork, while others operated within the corporate environment, focusing on organizational and strategic decisions.

focus group discussion (FGD). The focus group interview was conducted with eight participants - five males and three females – who represented various roles. All participants had connections to the training department and worked within a corporate office setting. The FGD was planned to last around 60 minutes.

FINDINGS

survey. Survey data underwent regression analysis, correlation analysis, and chi-square tests to examine the impact of promotional strategies, personalized marketing, and enrolment motivations. Due to Netigate's anonymization protocols, individual responses could not be tracked, making job role and experience data primarily descriptive.

Table 2
Descriptive statistic for survey

Analysis Type	Variables Analysed	Statistical Test/Measure	Results	Significance (p-value)
Chi-square Test	Perceived promotional strategy effectiveness vs. Availability of marketing materials	$\chi^2 = 7.61$	Statistically significant relationship	$p = 0.0058$
Regression Analysis	Promotional strategy improvements (clarity, personalization)	Multiple R = 0.884	Strong positive correlation	$p < 0.05$
Correlation Analysis	Personalized messages vs. Enrolment rates	$r = 0.87$	Strong positive correlation	-
Descriptive Statistic	Influence of job-relevant emails on enrolment	Weighted average	35.09	-
Correlation Analysis	Career motivation factors vs. Enrolment	$R = 0.696$	Moderate correlation	$p = 0.001$
Correlation Analysis	Awareness of training programs vs. Enrolment motivations	$R = 0.771$, $F = 0.1374$	No significant correlation	$p > 0.05$
Correlation Analysis	Understanding of training benefits vs. Motivational factors	-	No significant correlation	$p = 0.835$
Chi-square Test	Communication timing/frequency vs. Training quality	χ^2	No meaningful association	$p = 1.60$ (non-significant)

1:1 interviews. effectiveness of promotional strategies and preferred channels. The Training Catalogue was consistently viewed as the most effective promotional tool and a clear reference point for available training paths. “The catalogue works well because it helps them track their progress through the training path” (P3). In contrast, other tools were seen as outdated. The sales-enabling IT tools DealerPath and HighSpot were underutilized for training promotion, and awareness of their content was inconsistent across dealerships and the corporate offices.

impact of personalized marketing. Personalized communication was limited and not systematically implemented. Interviewees reported that most tailored messaging relied on field teams rather than structured processes, indicating low integration of personalization into standard promotional strategies.

engagement with training programs and perceptions of training. Dealers struggled with enrolment processes, prerequisites, and financial constraints, which reduced engagement despite generally positive perceptions of training quality. Unclear ROI made dealers hesitant to invest, particularly when additional costs were involved and not very well justified. “Dealers don’t clearly see the return on investment for doing a good training” (P7). At the same time, interviewees mentioned that dealers value career relevance, hands-on and in-field training, and expect clear evidence of value before committing.

Table 3
The 5 themes and 16 sub-themes from interview analysis

1. Promotions	**(154 citations)**
1.1 Communication Tools	58
1.2 Personalized Communication	29
1.3 Effectiveness of Current Strategies	49
1.4 Frequency of Communication	18
2. Challenges	**(124 citations)**
2.1 Prerequisite troubles	33
2.2 Financial Constraints	20
2.3 Dealer Hesitancies	17
2.4 Internal Communication Gaps	54
3. Push Factors	**(72 citations)**
3.1 Financial Incentives	17
3.2 Relevance to career or job	25
3.3 Career Development	10
3.4 Hands-on training	20
4. Program Features	**(33 citations)**
4.1 Curriculums	19
4.2 Training Quality	14
5. Recommendations	**(124 citations)**
5.1 Dealer Needs vs Trainings	19
5.2 Tools improvement	25
5.3 Communication improvement	50
5.4 Personalization improvement	30

focus group. communication quality. Focus group participants stressed that training promotion must be clear, relevant, and explicitly linked to business objectives and ROI to demonstrate tangible value. “We need to speak the language they understand - business language” (P1). Role-based personalization and proactive communication were identified as most needed for engagement improvement.

centralized communication platform. GAMM’s University was identified as the central system for training management, while DealerPath, HighSpot, and Teams were seen as supporting tools. However, participants showed a strong need for a centralized communication hub to improve visibility of training offerings.

financial incentives. Participation was described as strongly influenced by career relevance, skill development, and financial incentives, while budget constraints and unclear benefits remained as direct and considerable barriers to enrolment.

defined roles and responsibilities. Task ownership was viewed as unclear between technology business managers (TBM), design to cost managers (DTC), and certified dealer instructor managers (CDI). In particular, the DTC role was described as lacking sufficient authority to effectively influence dealer participation and coordinate promotional efforts.

Table 4
The 5 themes and 10 sub-themes from FGD analysis

1. Sales Training	**(28 citations)**
1.1 Impact and Behaviour	10
1.2 Value and Engagement	18
2. Communication Strategies	**(33 citations)**
2.1 Challenges	15
2.2 Personalized Messages	18
3. Dealer Engagement	**(17 citations)**
3.1 Barriers	10
3.2 Motivations	7
4. Tools and Platforms	**(33 citations)**
4.1 Centralized Hub	17
4.2 Existing Tools	16
5. Roles and Responsibilities	**(18 citations)**
5.1 Improvements for TBMs, DTCs and CDIs	10
5.2 Existing Attributes	8

DISCUSSION

The study identified inefficiencies in current promotional strategies for sales training programs, emphasizing the need for optimization and personalization. The main barriers included poor targeting, unclear ROI, logistical issues, and misaligned developmental goals, all of which contributed to low enrolment rates. Each promotional attribute influenced others, with communication directly affecting personalization, motivation, and the emergence or removal of barriers (as seen in Figure 1. “Relationships between promotional attributes”).

Given the limited survey sample size, the quantitative analyses should be interpreted as exploratory rather than confirmatory. Regression, correlation, and chi-square analyses indicate patterns that suggest the importance of communication clarity, personalization, and the availability of marketing materials in promotional effectiveness. On the other hand, they do not allow for strong statistical inference.

Role-specific emails emerged as the most preferred format for personalized outreach, especially among dealers motivated by career development. Qualitative findings reinforce these patterns by mentioning outdated tools (HighSpot, DealerPath, DBS), inconsistent personalization, and underused face-to-face contact by the field teams. Financial concerns, unclear ROI, and internal role overlap are further seen as recurring barriers that diminish the promotional strength.

Anchored in the perspective of sales training as internal service marketing, the results demonstrate that training must be treated as a service that requires targeted promotion. Communication is not merely informational but strategic, shaping motivation, personalization, and the removal of participation barriers. Much like service marketing models emphasize functional, emotional, and cultural value (Fauser Agola 2021), sales training promotion must highlight both the tangible ROI and the intangible benefits of participation.

From an academic standpoint, this research contributes to sales training and sales education literature by filling a neglected gap. Whereas prior studies have focused on training design, effectiveness, or ROI measurement (Bolander Bonney Satornino 2014; Lassk et al. 2012; Singh Manrai Manrai 2015), no dedicated body of research has examined the promotion of sales training within organizations (Cummins et al., 2020). By conceptualizing sales training as internal service marketing, this study extends services marketing theory (Berry 1986; Booms Bitner 1981) into a new organizational domain, combining insights from OBB and personalization research. This reframes training as more than an educational measure, positioning it as a marketed service whose success, awareness, enrolment, and ROI rely on effective internal communication.

These findings support the research hypothesis, indicating that a restructured approach to personalized marketing, value communication, and internal stakeholder coordination can improve awareness and enrolment rates for sales training programs.

Previous trends in the direct selling industry (Klein Rouziou 2024), personalization, relationship-building, and human-centred communication remain relevant in the B2B sector. Just as direct selling thrives on customized advice, trust-building, and up-to-date digital tools, so too must internal promotions use segmentation, role-based targeting, and engagement on all corporate levels to overcome participation barriers.

Moreover, like luxury sales staff, whose success depends on emotional engagement and knowledge personalization (Chandon Maalej Poujol 2021), sales training promotions must move beyond simplistic emails to emotionally pull and affect communication flows. In both sectors, the value of services must be made tangible through trust, relevance, and results. This reveals quite evidently that service marketing can bridge perception gaps and transform awareness into sales.

To effectively promote sales training services, companies must treat training as a strategic marketing product rather than an internal offering. This study introduces a structured approach centred around the Dealer Behaviour Cycle (DBC) as an emergent managerial tool similar than the Customer Behavior Cycle. The DBC is derived from the findings, which link promotional tactics to the needs and motivations of salespeople at different stages of their decision-making process.

Personalized communication, supported by CRM data, role-specific messaging, and ROI evidence, has been found to be the most impactful. Using the efforts of TBMs, DTCs, and CDIs, backed by standardized toolkits and KPI-based assessment frameworks, will provide message clarity and ease participation barriers.

This research addresses both a practical need for improved training promotion in dealer networks and contributes to academic debates by offering a new conceptual anchor. Sales training, when treated as internal service marketing, becomes not only a tool for skill development but also a case for understanding how internal services can be promoted, personalized, and measured within B2B environments.

CONCLUSIONS

This paper examined how sales training programs are promoted within GAMM's B2B dealer network. The research found and pointed to the literature gap in sales education that overlooks training promotion in favour of training effectiveness and ROI measurements. While prior research has extensively explored what salespeople should be taught and how training improves performance, very little attention has been given to how training services are communicated and advertised to the dealer network. Anchored in the perspective of service marketing, the findings establish that low enrolment is caused less by training quality and more by promotional inefficiencies. Lack of targeting and personalization, unclear ROI and overlapping internal responsibilities collectively weaken awareness, reduce perceived value, and discourage participation.

Quantitative analysis indicated that communication clarity, the availability of marketing assets, and role-based personalization are the main drivers of awareness and perception. Personalized, role-specific emails were identified as the most effective, particularly for dealers motivated by career development. Qualitative findings reinforce these results by showcasing inconsistent personalization practices, outdated tools, unclear ROI messaging, and internal role overlap.
From a theoretical standpoint, the study supports the application of service marketing theory (7Ps) in internal B2B environments, where training functions as an intangible service. The findings also connect with Organizational Buying Behaviour. It shows that training decisions involve multiple corporate levels with distinct roles and informational needs. This also connects well with servitization theory. CRM-supported personalization and digital marketing emerge as supporting mechanisms.

To integrate these findings, the paper proposes the Dealer Behaviour Cycle (DBC). The DBC focuses on the dynamic dealer engagement at various stages for promotional effectiveness. This reinforces the need for coordinated internal roles, standardized promotional tools, and clearly communicated ROI for better enrolments.

Overall, this research contributes to sales education and B2B marketing literature by shifting attention from training performance to the mechanisms through which training services are promoted, perceived, and adopted. The study advances understanding of how internal services can be effectively marketed within a GAMM dealer network. From this point of view, training promotion becomes strategic and not just an administrative activity.

LIMITATIONS

This study focuses on organizational-level variables that are fully within the control and compliance of the organization itself. Due to the scarcity of literature specifically addressing sales training promotion, as most existing studies focus on its effectiveness and ROI assessment, this research takes an exploratory approach. Survey sample size was limited, affecting the accuracy of regression and correlation analyses, particularly due to the lack of cross-tabulation data and anonymization protocols under GDPR compliance. As the research was conducted within a single company and not across the agricultural sector, the findings may reflect certain biases, limiting the generalizability of the results.

FURTHER RESEARCH

The sales training promotion topic is quite specific and has not been widely studied, as most of the attention has been on value and ROI assessments (Cummins et al. 2020; Singh Manrai Manrai 2015). This study provided a stronger theoretical foundation for future research, such as connecting ROI more directly with promotional activities and integrating service theories into training assessment frameworks.

One area worth exploring is whether there are other inefficiencies within the corporate structure, such as overlapping roles in HR or among specialists, and how these might be affecting training program promotions. Another focus could be research into CRM systems, including how they can be integrated smoothly into existing platforms and used for promotion (investigating how to enable preferences across demographics). More research could also be done on optimizing hybrid learning methods and their impact on training quality. It could dive deeper to fix current gaps, improve satisfaction levels, and the overall training experience.

Finally, with the evolving use of Artificial Intelligence (AI), future studies could investigate deeper into AI dashboards and analytical tools that generate real-time recommendations, personalize training promotions, and enhance managerial decisions by helping identify participation patterns and barriers.

MANAGERIAL IMPLICATIONS

Sales training promotion carries high managerial risk due to the intangible nature of the offering and the financial investment demanded from dealerships. Because training quality cannot be evaluated when it is promoted, correct targeting of the dealer network is quite important for the overall success in enrolment.

The findings clearly indicate that dealers are frequently treated as static participants in the information rounds, despite exhibiting cyclical behaviours and changing needs. Therefore, managers should consider promotional activities within the Dealer Behaviour Cycle (DBC) concept. Different stages of the cycle require different communication: early stages benefit from problem recognition, later stages require clear proof of value through ROI and KPIs, while post-training stages depend on assessment and follow-up. Generic, untimed communication limits promotional effectiveness.

To make training value tangible, managers should implement structured assessments before and after training, linking learning results to behavioural change, operational KPIs, and ROI. Digitizing these results and storing them at the dealership level can help personalize the follow-ups and encourage enrolment decisions.

The study also shows that adding more platforms does not improve awareness. Instead, managers should consolidate existing tools, remove outdated materials, and maintain a clear central hub for training information. Managers need to continue investing in hybrid learning formats and track communication effectiveness using tools like CRM platforms. This would minimize redundant communication platforms and prioritize only the most popular digital touchpoints.

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APPENDIX. INTERVIEW AND FOCUS GROUP DATA

TABLE A.1

interview data and general demographics

Number	Date / Duration	Gender	Role
P1	11.11.2024 / 15:10 min.	Male	Instructor & Promotion Specialist
P2	11.11.2024 / 18:20 min.	Male	Instructor & Promotion Specialist
P3	13.11.2024 / 21:50 min.	Male	Manager Tactical Marketing
P4	13.11.2024 / 32:25 min.	Male	Training Centre Manager
P5	18.11.2024 / 40:30 min.	Male	Future Training Strategy Manager
P6	19.11.2024 / 17:25 min.	Male	Manager Tactical Marketing
P7	21.11.2024 / 24:50 min.	Male	Precision Ag Specialist
P8	21.11.2024 / 27:30 min.	Male	Marketing Representative
P9	22.11.2024 / 28:10 min.	Male	Sales Services Manager
P10	26.11.2024 / 14:44 min.	Female	Product Sales Specialist
P11	28.11.2024 / 25:45 min.	Female	Training and Support Manager
P12	28.11.2024 / 15:17 min.	Female	Training Centre Manager

TABLE A.2

focus group data and general demographics

Participant	Date / Duration	Gender	Role
P1	11.12.2024 - - - - - - - - 69 minutes	Male	Sales Services Manager
P2		Male	Curriculum Architect
P3		Male	Tactical Marketing Manager
P4		Female	Training Centre Manager
P5		Male	Training Manager
P6		Male	Training Developer
P7		Female	Training Coordinator
P8		Female	Training Project Lead

Mapping the Landscape of Prosumption Research: A Bibliometric Investigation and Research Agenda

Abstract :

Prosumption, referring to situations in which consumers actively participate in the creation of goods and services for their own use, remains insufficiently systematized within management and marketing research. This study maps the intellectual and thematic foundations of prosumption through a combined bibliometric and content analysis of publications indexed in Web of Science and Scopus. Bibliometric techniques and VOSviewer visualizations identify influential journals, authors, and research clusters, while the TCCM framework (Theory, Context, Characteristics, and Methodology) synthesizes the main theoretical, empirical, and methodological trends. Findings show a growing research interest in prosumption, despite its still-emerging stage of development. The analysis highlights key theoretical gaps, emerging research contexts, and methodological imbalances, providing directions for future research. By clarifying the structure of the field, this study advances prosumption theory and offers managerial insights into engaging consumers as active value co-creators.

Keywords: *Prosumption; Prosumer; Performance analysis, Bibliometric analysis; TCCM Framework*

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INTRODUCTION AND OBJECTIVES

The emergence of Web 2.0, social media, and the mobile web reduced spatial and social boundaries, enabling new forms of interaction and marketing practices. Collaborative consumption and peer-to-peer platforms have further redefined market exchanges, giving rise to new consumer roles and responsibilities. These shifts have fundamentally altered the boundary between producers and consumers, bringing the concept of the prosumer back to the forefront of marketing research. Beyond the traditional view of the consumer as a passive recipient, contemporary markets increasingly rely on consumers who are actively involved in the creation and production of what they consume. Prosumption refers to this simultaneous involvement in production and consumption. Originally coined by Toffler (1980), the concept has expanded to emphasize value creation not only for oneself but also for other consumers, firms, and broader ecosystems (Xie, Bagozzi and Troye 2008; Ritzer and Jurgenson 2010).

Despite its growing visibility, prosumption remains insufficiently theorized within marketing: its conceptual distinctiveness from related constructs such as co-creation and co-production is still debated, and prior studies differ markedly in theoretical lenses, empirical settings, and methodological choices, limiting cumulative theory development.

To address this gap, the present study adopts a dual methodological approach combining bibliometric analysis with a systematic content analysis structured around the Theory, Context, Characteristics, and Methodology (TCCM) framework (Paul and RosadoSerrano 2019). A broad bibliometric overview first maps the evolution and intellectual structure of prosumption research across disciplines; building on this foundation, the study then focuses specifically on the marketing literature to examine its thematic development, theoretical grounding, methodological approaches, and future research opportunities. The study addresses five research questions:

- ***RQ1:*** *What research has been undertaken regarding prosumers and prosumption?*
- ***RQ2:*** *What are the bibliometric trends in prosumption research within the marketing field?*
- ***RQ3:*** *What are the emerging research themes related to prosumption?*
- ***RQ4:*** *What theories, contexts, characteristics, and methodologies are examined in the literature?*
- ***RQ5:*** *What are the main research opportunities and hotspots within the field of marketing?*

By combining a cross-disciplinary bibliometric overview with an in-depth TCCM analysis, this review bridges the broader evolution of the prosumption concept with its specific development within marketing scholarship, identifies theoretical and methodological gaps, and proposes a structured agenda for future research.

BACKGROUND

Foundations and origins of prosumption:

The prosumption concept originates with the sociologist Alvin Toffler (1980), who identified three waves of societal development. The first wave, associated with the agrarian revolution, was characterized by widespread prosumption, as individuals simultaneously held the roles of producers and consumers. The second wave, triggered by the Industrial Revolution, introduced a structural separation between production and consumption, giving rise to mass production and a consumerist society in which individuals primarily consumed goods and services without participating in their creation. In anticipation of a “third wave,” Toffler (1980), later echoed by Kotler (1986) and Ritzer and Jurgenson (2010), envisioned the emergence of a new type of consumer: the prosumer. The prosumer actively engages in both production and consumption, thereby blurring previously rigid role boundaries and influencing broader economic and social systems. This third wave has been intensified by Web 2.0, which has emphasized user-generated content (UGC), collective intelligence, and participatory exchange, progressively converging production and consumption into a unified sphere. Digital platforms such as YouTube, Instagram, and TikTok have further reinforced prosumption by enabling individuals to create, distribute, and monetize content, both online through the participatory affordances of digital infrastructures and offline through the “McDonaldization” of organizations (Ritzer and Jurgenson 2010). Prosumers are thus no longer passive consumers but active contributors and co-creators, performing productive activities that have led some scholars to characterize them as “consumer workers” (Cova and Dalli 2009).

Participation dynamics in prosumption

Prosumption foregrounds the active role of consumers in both production and consumption processes (Xie, Bagozzi and Troye 2008; Ritzer and Jurgenson 2010; Shah et al. 2019). As a consumption behavior, it reflects individuals’ active involvement in shaping their own experience: consumers are no longer passive recipients of goods or services but participate in configuring their purchasing and usage trajectories. As a productive act, prosumption extends beyond traditional consumption by incorporating consumers into the creation of products, services, or content. As the phenomenon has grown more complex, the literature has identified multiple levels of participation, ranging from minimal involvement to highly active engagement (Žilinskaitė 2025). Some forms correspond to passive participation, such as consenting to data collection or inadvertently sharing computational resources, practices that resonate with gift-economy logics (Buhler et al. 2024). In contrast, active participation requires intentional and structured actions on the part of users (Žilinskaitė 2025). Ritzer's (2014) prosumption continuum captures this variability by positioning practices along a spectrum from "prosumption-as-production" to "prosumption-as-consumption," acknowledging the varying degrees of involvement embodied by prosumers.

The multidimensional nature of prosumption

Beyond participation levels, prosumption encompasses experiential, social, emotional, and socio-technical dimensions. Xie, Bagozzi and Troye (2008) describe prosumption as a process that integrates physical activities, mental effort, and socio-psychological experiences. They define it as "a value-creating activity by the consumer, resulting in the production of goods that he or she eventually consumes, and which become his or her consumption experience" (p. 110). Beyond its economic implications, prosumption thus generates subjective experiences that yield personal benefits and social value for prosumers. This experiential foundation has progressively expanded toward collective and relational forms: prosumers increasingly create value for their communities by leveraging digital infrastructures to collaborate and participate in the design and use of products and services (Shah et al. 2019; Tapscott and Williams 2006; Seran and Izvercian 2014). By engaging in online discussions, reviewing products, and offering feedback, prosumers play an active role in shaping market trends and informing firms' strategic decisions.

More recent studies demonstrate that prosumption unfolds through broader and more diverse configurations. It can be socio-technical, when platforms structure or constrain productive activities (Bajde 2015; Zeng et al. 2022); emotional, when consumers' affects become productive inputs captured by firms (Bonsu and Darmody 2010); collective, when value emerges from peer interactions or co-presence in service settings (Bouncken and Tiberius 2021); or community-based, structured by shared norms, identities, or solidarities (Chan et al. 2022). In some contexts, prosumption also functions as identity work, cultural resistance, or political expression (Chen 2018). However, prosumption is not always voluntary or empowering: under conditions of economic precarity or ecological stress, the fusion of production and consumption may constitute a necessity rather than a choice, potentially reinforcing vulnerability instead of autonomy (Sundstrom 2013; Rocha et al. 2020; Steinfield et al. 2020).

Collectively, these perspectives portray prosumption as a multidimensional construct mobilizing skills, emotions, social relations, technological infrastructures, and political imaginaries. Although most consumption activities involve some productive dimension through appropriation or transformation, contemporary prosumption is distinguished by the explicit integration and institutionalization of these productive contributions within business models, particularly those supported by digital platforms that organize, make visible, and capture consumer-generated value.

Emergence of related concepts and distinction from prosumption

As the boundaries between production and consumption have blurred, prosumption has been reinterpreted across disciplines. In marketing, it has been reframed through value cocreation (Prahalad and Ramaswamy 2004) and co-production (Ostrom 1996); in sociology, through the "working consumer" (Cova and Dalli 2009); and in the digital economy, through the "prosumer 2.0," a connected user capable of creating and circulating content within online communities (Tapscott and Williams 2006). These reinterpretations have stimulated a constellation of related but distinct concepts such as user innovation (von Hippel 2005), collaborative consumption (Botsman and Rogers 2010), DIY and craft consumption (Campbell 2005), and Pro-Am practices (Leadbeater and Miller 2004), each describing a different modality of consumer participation (Table 1). While they share the underlying principle of blurring producer–consumer roles, these concepts differ in context (firm–consumer interaction, community dynamics, sharing mechanisms), purpose (value creation versus redistribution), and the degree of autonomy, expertise, or involvement required from consumers. *Coproduction* refers to structured collaboration between users and organizations in the design or delivery of products and services (Ostrom 1996). Unlike prosumption, it presupposes explicit coordination and complementary contributions among actors. *User innovation*, by contrast, refers to the process by which users develop, modify, or improve products and services to meet their own needs (von Hippel 2006). Often driven by lead users who anticipate emerging needs (Urban and von Hippel 1988; Wang and Huang 2025), these innovations are frequently shared within user communities and may evolve into collaborative forms of innovation involving both users and producers (Henkel and von Hippel 2004; Baldwin and von Hippel 2011). While prosumption broadly describes the integration of production and consumption roles, user innovation represents a specific form of prosumption in which users create novel solutions to address unmet needs. *Do-It-Yourself* (DIY) and *craft consumption* (Campbell 2005) denote forms of self-production oriented toward personal use. These practices involve consumers fabricating goods or stylized ensembles by mobilizing their skills, judgment, and creativity. They constitute an individual and autonomous form of prosumption focused on self-expression and personalization, without necessarily involving broader social or collaborative dimensions. *Pro-Am practices* describe highly skilled amateurs capable of producing outputs approaching professional standards without necessarily combining production and consumption (Leadbeater and Miller 2004). Although such amateurs contribute significantly to the creation of goods, services, or content, their production does not necessarily involve the consumption component or production–consumption fusion characteristic of prosumption. *Collaborative consumption* emphasizes the redistribution and shared use of existing resources rather than the creation of new value (Hamari et al. 2016), although developments such as peer-to-peer energy exchange increasingly illustrate networked forms of prosumption. Similarly, *value co-creation* is often associated with prosumption in marketing, but the two concepts are not interchangeable. Prosumption distinguishes itself through the depth of effort and expertise involved (Wolf and McQuitty 2011; Alhashem, Moraes and Szmigin 2021), as well as through elevated levels of involvement, engagement, and creativity (Seran and Izvercian 2014). Whereas co-creation presupposes explicit collaboration with an organization, prosumption may unfold autonomously, without institutional mediation. Although prosumption may serve as an antecedent to value co-creation (Prahalad and Ramaswamy 2004; Chandler and Chen 2015), value exchange is not central to prosumption, making it conceptually distinct.

Taken together, these concepts share a common foundation, namely the active contribution of consumers to value creation processes, but differ in the degree of participation required, the level of autonomy afforded to consumers, and the nature of the value generated. Participation may range from minimal involvement to highly creative engagement, autonomy may vary from structured collaboration to individual self-production, and value may be oriented toward creation, exchange, or redistribution.

Table 1

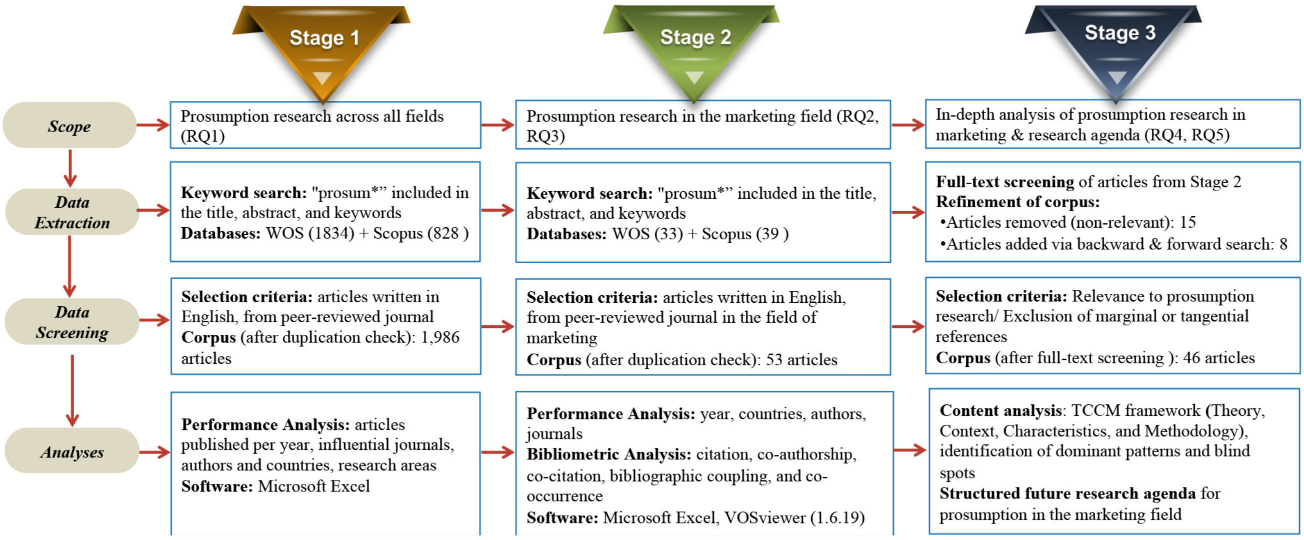
Prosumption-related concepts

Concept	Disciplinary field	Definition	Dimensions of prosumption mobilized	Concept specificities
Co-production	Public administration, service marketing	A process in which users, clients, or citizens actively participate alongside an institutional or organizational producer in the design, production, or improvement of a good or service.	Active participation; contribution of resources, skills, and actions by users.	Requires explicit collaboration with an organization; implies structured interdependence between producer and user; does not involve autonomous self-production.
Value co-creation	Marketing, innovation management	A collaborative process in which firms and consumers interact to jointly generate value.	Active engagement; creativity; contribution to value creation.	Necessarily requires interaction with a firm; centered on value exchange; production and consumption are not fused in the same individual.
User innovation	Innovation, engineering, management	A process in which users design, modify, or improve products or services to meet their own needs, often led by *lead users*.	Creative and expert involvement; user-driven production.	Focuses primarily on production and innovation, not on the fusion of production and consumption; the user does not necessarily consume what they create.
Do-It-Yourself (DIY) & Craft consumption	Sociology of consumption, cultural studies	Self-production of goods or stylized ensembles for personal use, relying on personal skills, judgment, and creativity.	Individual production used by the consumer; autonomy and creativity.	A closed, individual form of prosumption; lacks broader social or collaborative dimensions; does not require interaction or value circulation.
Pro-Am	Sociology, innovation studies	Activities of highly skilled amateurs who produce at near-professional standards through sustained engagement and expertise.	Non-professional production; strong consumer competence.	Does not necessarily combine production and consumption; oriented toward expert production rather than hybrid producer–consumer activity.
Collaborative consumption	Sharing economy, digital economy	Practices of sharing, exchanging, lending, or pooling existing goods or services between peers, often facilitated by online platforms.	Active participation; peer interaction; transformation of access and use.	Does not create new value; based on redistribution of existing resources; prioritizes access over ownership or self-production.
Self-consumption	Energy economics, sustainability	Individuals produce goods or energy exclusively for their own use.	Combines production and consumption within one activity; personal autonomy.	Very narrow form of prosumption; strictly individual and functional; lacks any social, communal, or collaborative dimension.

MATERIALS AND METHODS

This study combines bibliometric analysis with qualitative content analysis to systematically map prosumption research. The search strategy followed three stages,summarized in Figure 1.

Figure 1
Search Strategy



Data collection for the bibliometric analysis was conducted using Web of Science (WOS) and Scopus, selected for their complementary coverage and established indexing standards. The integration of both databases ensured broader and more reliable literature retrieval across disciplines (Kumpulainen and Seppänen 2022). **Stage 1** involved a broad search using the keyword prosum* across all disciplines, covering publications from 1980 to January 2023, yielding 1,834 articles from WOS and 828 from Scopus. This stage provided a macro-level mapping of the literature. **Stage 2** restricted the corpus to marketing journals using the same search logic, covering 1986 to March 2023. Inclusion criteria required peer-reviewed, English-language articles containing prosum* in the title, abstract, or keywords. After duplicate removal and abstract screening for relevance, 53 articles were retained. These were analyzed using WOS analytics and VOSviewer (v.1.6.19; Van Eck and Waltman 2010, 2017) to extract performance indicators and examine co-authorship patterns, citation structures, and keyword co-occurrence networks. **Stage 3** applied the Theory–Context–Characteristics–Methodology (TCCM) framework (Paul and Rosado-Serrano 2019; Paul et al. 2021) through full-text screening of the 53 articles, excluding 15 due to limited relevance to prosumption as a central construct. Backward and forward citation searches added 8 studies published after the initial window, yielding a final corpus of 46 articles spanning up to November 2025. Each article was systematically coded across the four TCCM dimensions to synthesize theoretical foundations, empirical contexts, key variables, and methodological approaches, providing the basis for identifying research patterns and gaps.

FINDINGS AND DISCUSSION

Performance Analysis of Prosumption Research Across all Fields (RQ1)

The first stage analysis yielded a corpus of 1,986 articles after deduplication across both databases, revealing a strong and sustained growth of prosumption research across disciplines.

As shown in Figure 2a, academic output remained marginal until the mid-1990s before accelerating sharply, exceeding 480 publications in 2022 alone. This evolution signals the consolidation of prosumption as an established interdisciplinary research stream shaped by technological and socio-economic transformations. Geographically, research is concentrated in advanced industrial economies, with the United States and China leading (15% and 12%, respectively), followed by Germany, the United Kingdom, Spain, and Italy (Figure 2b). Authorship patterns reflect the field's disciplinary skew (Figure 2c): the most prolific contributors, including Liu N, Vale Z, and Catalao JPS, are affiliated with energy and power systems, whereas foundational social science contributors such as Ritzer appear less prominently despite their conceptual influence. This disciplinary skew is equally reflected at the journal level (Figure 2d): energy-related sources represent over 60% of top outlets, with business and marketing journals nearly absent, the European Journal of Marketing being the sole exception.

Figure 2

Trend analysis of prosumption research across all fields

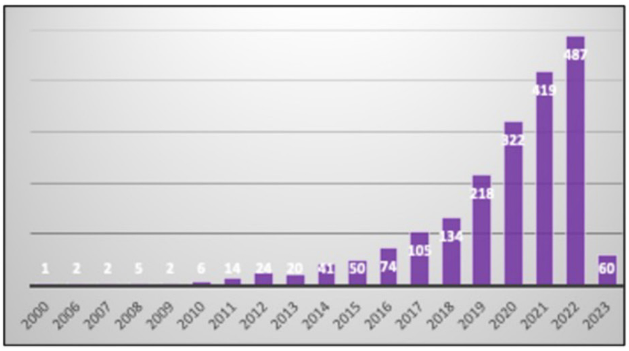


Figure 2 a: Publications by year

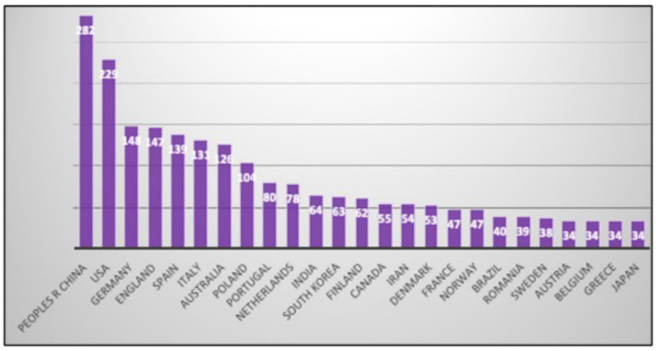


Figure 2 b: Publications by Country

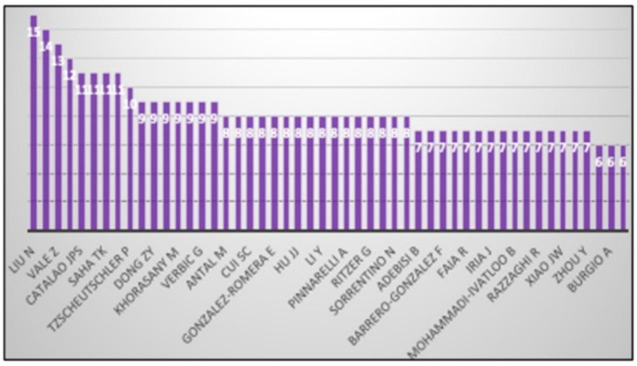


Figure 2 c: Publications by Author

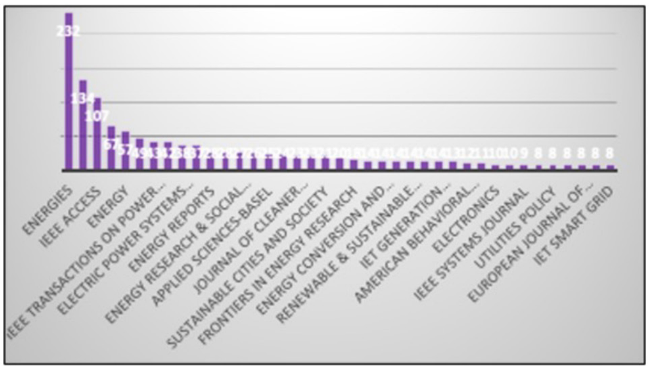


Figure 2 d: Publications by Journal

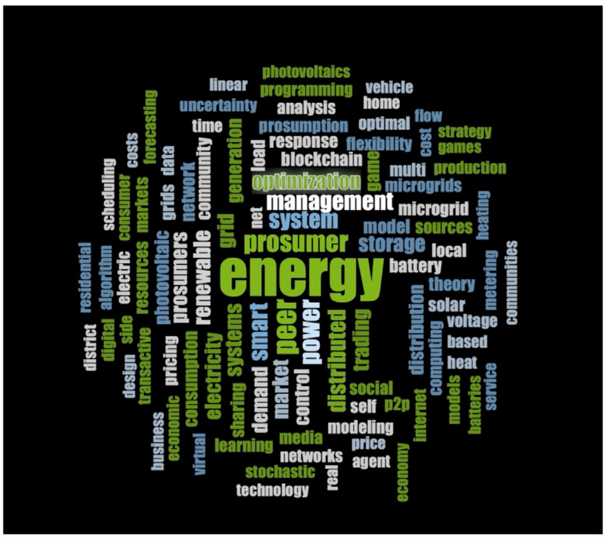
Classification by research area reinforces this orientation (Table 2), as nearly one-third of prosumption studies fall within energy, ecology, and environmental research, followed by engineering (25%) and computer science (8%), while management, economics, and social sciences collectively account for only ~12%. These findings align with prior reviews (e.g., Shah et al. 2020).

Table 2
Research Areas

Research Area	Number of Publications
Energy, Ecology and Environment	998
Engineering	794
Computer Science	267
Social Sciences	190
Science Technology Other Topics	189
Business Economics	181
Telecommunications	151
Thermodynamics	76
Automation Control Systems	50
Chemistry	49
Physics	43
Materials Science	39
Construction Building Technology	37
Others	112

The keyword analysis (Figure 3) confirms the thematic dominance of energy-related constructs such as distributed systems, renewable energy, and smart grids. The higher frequency of "prosumer(s)" relative to "prosumption" further indicates a predominance of actor-level analyses over process-level theorization, suggesting that existing research emphasizes individual behaviors rather than systemic market dynamics.

Figure 3
Citation Report



Collectively, RQ1 findings reveal that prosumption has historically been framed as a technological and infrastructural phenomenon, exposing a significant gap between its crossdisciplinary diffusion and its limited theorization within marketing, motivating a closer examination of prosumption research within the field.

Bibliometric Analysis of Prosumption Research in the Marketing Field (RQ2, RQ3)

The marketing-focused bibliometric analysis combines citation analysis, co-authorship analysis, co-citation analysis, and bibliographic coupling to address RQ2, with keyword cooccurrence analysis used to identify dominant thematic patterns (RQ3). Overall, the performance analysis reveals that marketing-oriented prosumption research grew fourfold between 2017 and 2022, from 12 to 48 articles (Figure 4a), reflecting a delayed but accelerating engagement. The literature is geographically concentrated, led by the United States (19 publications), England (9), and Australia and Canada (7 each), confirming the dominance of Anglo-Saxon research traditions (Figure 4b). Ritzer leads in productivity with 5 publications, followed by Dolan with 3; a second tier of seven two-publication authors suggests gradual diffusion beyond founding contributors (Figure 4c). The Journal of Consumer Culture dominates publication venues (17 articles), followed by the European Journal of Marketing (7), positioning prosumption primarily as a socio-cultural phenomenon, with partial integration into traditional marketing scholarship (Figure 4d).

Figure 4

Trend analysis of prosumption research in the marketing field

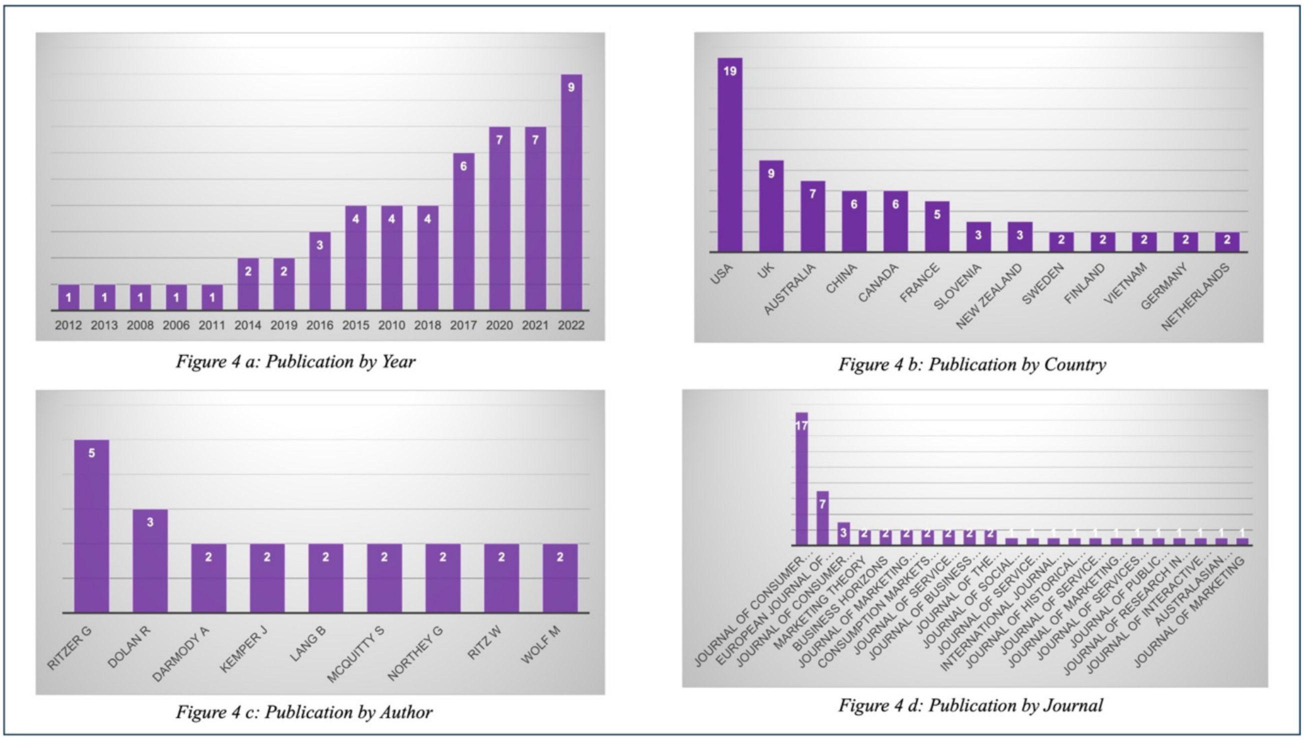


Figure 4 a: Publication by Year

Figure 4 b: Publication by Country

Figure 4 c: Publication by Author

Figure 4 d: Publication by Journal

Citation Analysis

The citation structure of the field reveals a strongly centralized intellectual core (Table 3). A single foundational work (Ritzer and Jurgenson 2010) dominates the literature with 1,101 citations (78.6/year), far exceeding all other contributions and establishing a key conceptual anchor for understanding prosumption in digital capitalism. A second tier of influential works appears at a considerable distance. Xie, Bagozzi and Troye (2008) accumulate 345 citations (21.6/year) as the field's most influential consumer psychology model, while Eckhardt et al. (2019) show a notably high annual rate (51.6/year), reflecting the rapid rise of platform and sharing-economy research. Beyond these, citation counts drop sharply, revealing a long tail of specialized contributions across consumer culture, marketing theory, and digital consumption.

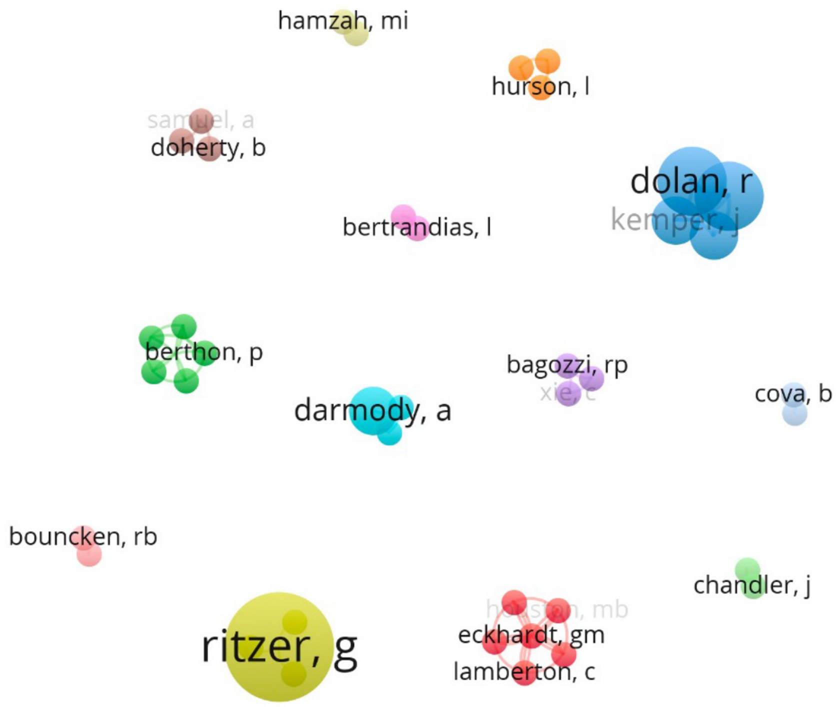
Table 3
Citation Report

Authors	Title	Source Title	Total Citations	Average per Year
Ritzer and Jurgenson (2010)	Production, Consumption, Prosumption The nature of capitalism in the age of the digital 'prosumer'	Journal of consumer culture	1101	78,64
Xie, Bagozzi and Troye (2008)	Trying to prosume: toward a theory of consumers as co-creators of value	Journal of the Academy of Marketing Science	345	21,56
Eckhardt et al., (2019)	Marketing in the Sharing Economy	Journal of Marketing	258	51,6
Ritzer (2014)	Prosumption: Evolution, revolution, or eternal return of the same?	Journal of consumer culture	145	14,5
Pitt et al. (2006)	The Penguin's window: Corporate brands from an open-source perspective	Journal of the Academy of Marketing Science	123	6,83
Cova B and Cova V (2012)	On the road to prosumption: marketing discourse and the development of consumer competencies	Consumption Markets and Culture	91	7,58
Zukin, Lindeman, and Hurson (2017)	The omnivore's neighborhood? Online restaurant reviews, race, and gentrification	Journal of consumer culture	74	10,57
Dujarier (2016)	The three sociological types of consumer work	Journal of consumer culture	43	5,38
Morreale (2014)	From homemade to store bought: Annoying Orange and the professionalization of YouTube	Journal of consumer culture	42	4,2
Chandler and Chen (2015)	Prosumer motivations in service experiences	Journal of service theory and practice	40	4,44
Andrews and Ritzer (2018)	Sport and prosumption	Journal of consumer culture	35	5,83
Zhang (2017)	Fashioning the feminine self in prosumer capitalism: Women's work and the transnational reselling of Western luxury online	Journal of consumer culture	35	5
Cochoy (2015)	Consumers at work, or curiosity at play? Revisiting the prosumption/value cocreation debate with smartphones and two-dimensional bar codes	Marketing Theory	34	3,78
Zajc (2015)	Social media, prosumption, and dispositives: New mechanisms of the construction of subjectivity	Journal of consumer culture	34	3,78
Eden (2017)	Blurring the boundaries: Prosumption, circularity and online sustainable consumption through Freecycle	Journal of consumer culture	33	4,71
Busca and Bertrandias (2020)	A Framework for Digital Marketing Research: Investigating the Four Cultural Eras of Digital Marketing	Journal of Interactive Marketing	30	7,5

Co-Authorship Analysis:

The co-authorship network (Figure 5) examines scientific collaboration patterns among researchers in the field (Reyes-Gonzalez, Gonzalez-Brambila and Veloso 2016). Of the 41 authors meeting the inclusion thresholds (a minimum of 20 citations and a Total Link Strength (TLS) greater than zero), the network reveals a fragmented collaboration structure characterized by weak interconnections between research groups. Ritzer (yellow cluster) constitutes a single dominant node with the highest co-authorship links and citations, yet without dense ties to other clusters. Emerging groups around Eckhardt et al. (red cluster) and Dolan et al. (blue cluster) show internal cohesion but limited cross-cluster connectivity, and the absence of brokerage actors constrains cumulative knowledge development and interdisciplinary exchange. This pattern indicates that prosumption research in marketing is intellectually influential but organizationally dispersed.

Figure 5
Co-authorship analysis

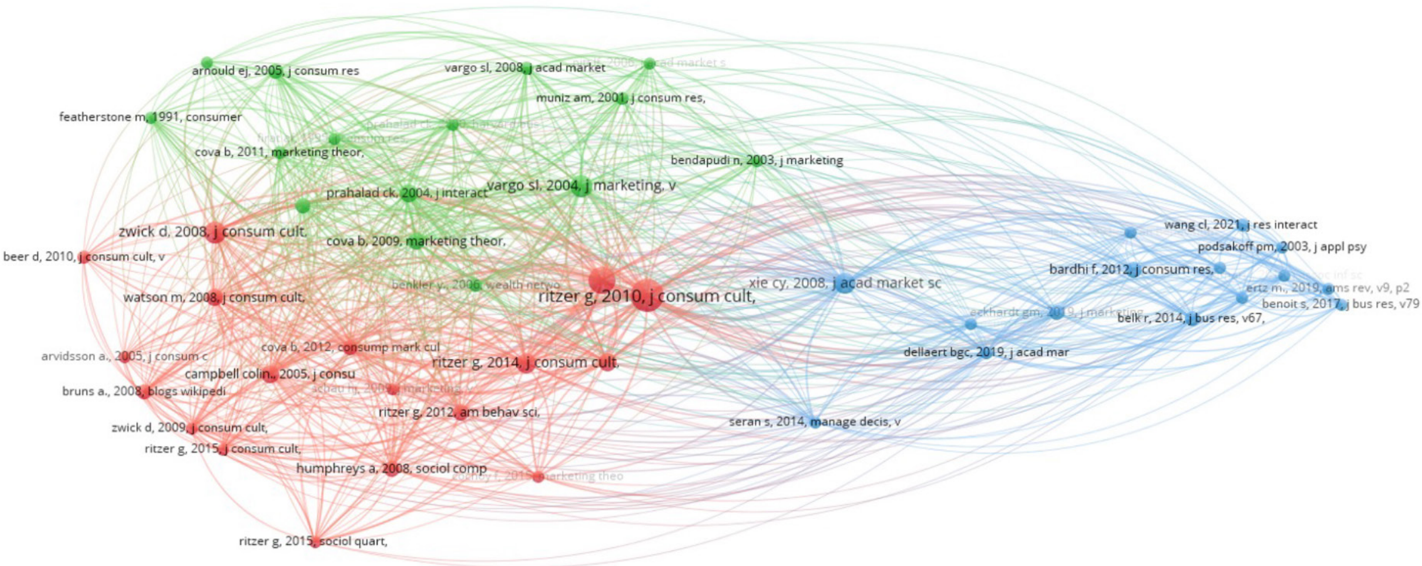


Co-Citation Analysis:

Co-citation is based on the notion that when two articles are cited together by another article, a mutual relationship is created among them (Small 1973; Leung, Sun and Bai 2017).

The co-citation map (Figure 6) reveals three partially overlapping clusters: a foundational sociological cluster (shown in red) theorizing prosumption at a macro level; a marketing-oriented cluster (marked in green) drawing on consumer culture theory and servicedominant logic; and a more recent cluster (shown in blue) centered on the sharing economy and digital platforms. The substantial overlap across clusters indicates that marketing prosumption research continues to draw on interdisciplinary foundations rather than a fully autonomous theoretical core.

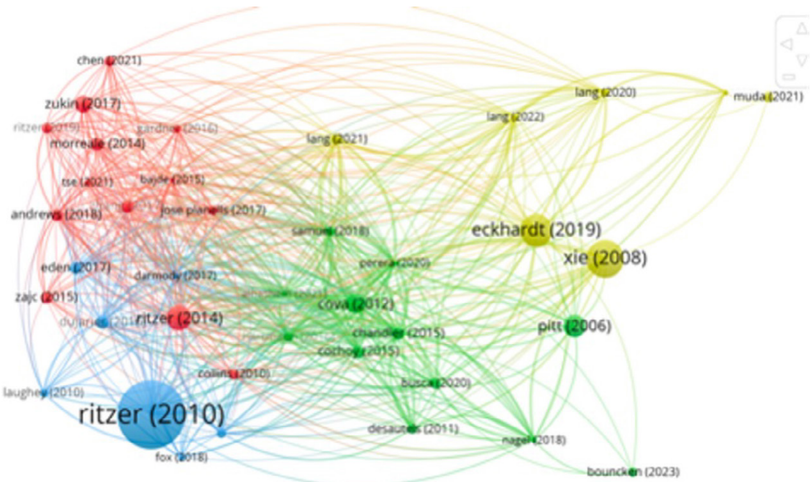
Figure 6
Co-citation analysis



Bibliographic Coupling:

This indicator identifies publications that share common reference bases (Kessler 1963). Four distinct but interconnected thematic clusters emerge from the bibliographic coupling network (Figure 7). The blue cluster, anchored by Ritzer (2010), reflects classical sociological perspectives on consumer–producer hybridity. The red cluster groups more recent empirical contributions and focuses on platform capitalism and digital labor. The green cluster converges around sustainability, value co-creation, and institutional arrangements. The yellow cluster, centered on Eckhardt et al. (2019) and Xie, Bagozzi and Troye (2008), and Pitt et al. (2006), captures a managerial and strategic perspective emphasizing service systems, consumer participation, and innovation outcomes. Limited inter-cluster coupling confirms that prosumption research in marketing remains intellectually segmented, with a small number of seminal works providing common grounding across otherwise divergent theoretical traditions.

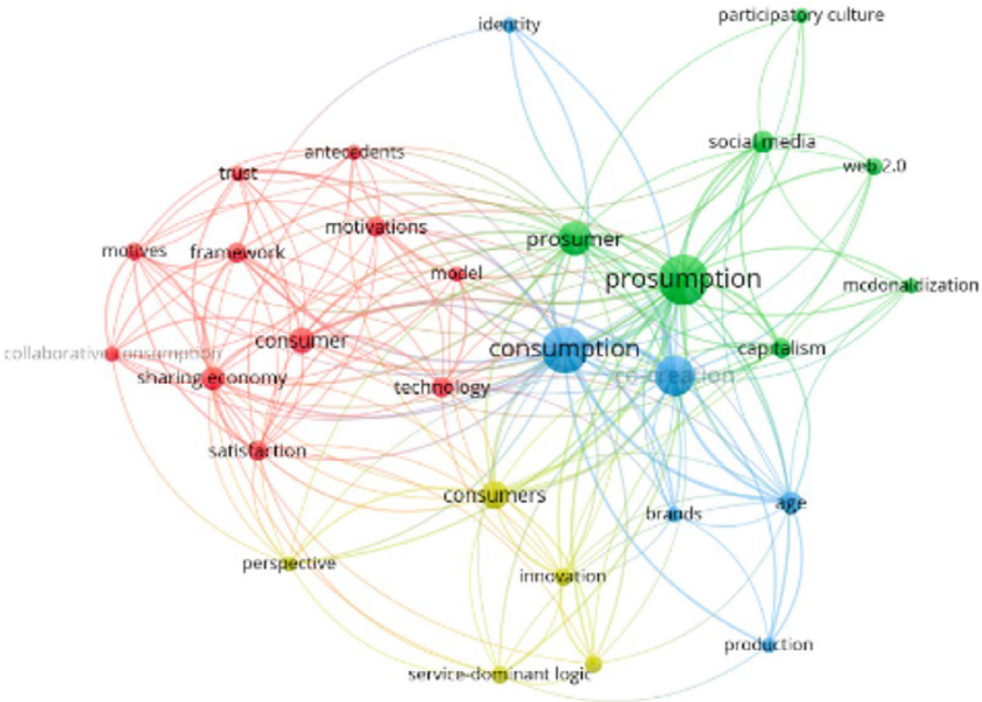
Figure 7
Bibliographic coupling of documents



Co-Occurrence Analysis (RQ3):

Keyword co-occurrence analysis identifies research hotspots within a domain (Zupic and Cater 2015). Using a minimum threshold of three occurrences, the network reveals four interrelated thematic clusters (Figure 8), with prosumption emerging as the dominant keyword, followed by closely associated terms such as consumption, co-creation, prosumer, and sharing economy. The first and largest cluster (marked in red) captures behavioral and managerial perspectives on prosumption, focusing on antecedents, motivations, and outcomes, often situated in sharing economy and collaborative consumption contexts. This stream reflects a predominantly micro-level orientation concerned with individual engagement, participation, and value outcomes in platform-mediated environments. The green cluster links consumption, production, co-creation, and branding, capturing prosumption as embedded in consumer–firm interactions. In contrast, the blue cluster adopts a critical macro-social lens drawing on themes such as digital capitalism, participatory culture, McDonaldization, and unpaid labor. Rooted largely in sociological traditions, this stream situates prosumption within broader systemic transformations associated with platformization and digital economy structures. The yellow cluster reflects a service and innovation-oriented perspective, linking prosumption to servicedominant logic. Within this view, prosumers are conceptualized as active contributors to value creation within service ecosystems (Vargo and Lusch 2004).

Figure 8
Co-Occurrence Analysis



Overall, marketing prosumption research is structured around two dominant orientations: a micro-level focus on motivations and engagement, and a meso-level emphasis on platforms, brands, and service systems. Critical macro-theoretical approaches remain peripheral. Notably, sustainability, responsibility, and pro-environmental keywords are underrepresented, suggesting that responsible prosumption has yet to be fully integrated into the field's core conceptual agenda.

Framework-based content analysis (TCCM, RQ4)

Theories (T)

The 46 reviewed articles mobilize over 25 theoretical frameworks and 60 distinct constructs, reflecting the field's strongly interdisciplinary nature and fragmented theoretical landscape (Table 4). **Prosumption Theory** is the most frequently used lens (~24% of studies), framing the blending of production and consumption in relation to free labor and digital capitalism (Ritzer and Jurgenson 2010; Ritzer 2014). **Service-Dominant Logic (SDL)** is the second dominant stream (~19%), repositioning prosumption as value co-creation within service ecosystems (Xie, Bagozzi and Troye 2008; Chandler and Chen 2015). In contrast to both critical and SDL perspectives, **Practice Theory** (5 studies) shifts focus from platforms to everyday, embodied practices such as gardening, freecycling, and guitar playing, conceptualizing prosumption as routinized rather than strategically orchestrated (Hartmann 2016; Eden 2017; Fox 2018). **McDonaldization Theory** (4 studies) applies Weberian rationalization principles to explain how consumers become standardized unpaid producers, while also acknowledging that prosumption can destabilize such systems depending on context (Andrews and Ritzer 2018; Ritzer and Miles 2019). Beyond these dominant frameworks, the prosumption literature displays considerable theoretical fragmentation. Self-Determination Theory (SDT), Consumer Culture Theory (CCT), Social Identity Theory, and Social Exchange Theory (SET) each appear in two studies, functioning as complementary lenses for specific motivational or relational dynamics rather than holistic explanations. Similarly, additional frameworks including Actor-Network Theory (ANT), Transaction Cost Analysis (TCA), and the Theory of Planned Behavior (TPB) are applied in isolated contexts, reflecting a lack of cumulative theoretical integration. Emerging frameworks include the Motivation– Opportunity–Ability (MOA) model for platform participation (Xiang et al. 2022) and Flow Theory in metaverse contexts (Noor et al. 2025).

Temporally, the theoretical landscape has evolved in three phases: SDL and foundational prosumption frameworks dominated early work (2008–2015); practice-based and critical orientations emerged in a second phase (2016–2020); and recent work (2021–2025) integrates advanced psychological theories alongside adaptations to digital and platform environments.

Table 4
Theories employed in prosumption literature.

Theories	No. of articles	Use/Application	Selected articles
Prosumption theory	11	Blends production and consumption. Discusses exploitation, free labor, and the emergence of a new capitalist model	Ritzer and Jurgenson (2010); Ritzer (2014, 2017); Darmody, Yuksel and Venkatraman (2017); Chan, Zeng and Yang (2022).
Service-Dominant Logic (SDL)	9	Frames prosumers as co-creators of value	@Xie, Bagozzi and Troye (2008); Chandler and Chen (2015); Nagel, Cronin and Utecht (2018).
Practice theory	5	Focuses on the routines and behaviors that constitute prosumption in daily life.	Hartmann (2016); Eden (2017); Fox (2018); Busca and Bertrandias (2020).
McDonaldization	4	Analyzes the rationalization and standardization of prosumer activities	Sundstrom (2013); Ritzer (2017); Ritzer and Miles (2019).
Social Exchange Theory	2	Explores the reciprocal relationships in sharing economy platforms	Xiang et al. (2022); Casidy et al. (2022).
Social Identity Theory	2	To understand prosumer motivations and segmentations in collaborative consumption	Malecka, Mitrega and Pfajfar (2022); Muda and Hamzah (2021).
Self-Determination Theory (SDT)	2	Explores intrinsic and extrinsic motivations for role-switching	Lang et al. (2020); Ertz et al. (2022).
Consumer Culture Theory (CCT)	2	Symbolic meaning and cultural embeddedness of prosumption practices within everyday life	Hartmann (2016); Fox (2018).
Emerging theories: *Actor-Network Theory (ANT), Transaction Cost Analysis (TCA), Intersectionality Theory, Flow Theory, Motivation–Opportunity–Ability (MOA) Model, Persuasion Knowledge Model*			

Context (C)

Prosumption is examined across a heterogeneous set of contexts (Table 5), with approximately 60% of studies situated in digitally mediated environments, where participation is enabled and structured by platforms, algorithms, and governance mechanisms. The **sharing economy** and collaborative consumption constitute the most prominent context (11 studies, ~24%), framing prosumption as role fluidity between consumer and provider across platforms such as Airbnb, Uber, and P2P markets (Lang et al. 2020; Casidy et al. 2022; Xiang et al. 2022). **Social media and UGC ecosystems** form a closely related stream (8 studies, ~17%), where prosumption is conceptualized as content creation on platforms such as YouTube, Facebook, and review communities, tightly coupled with algorithmic design and platformization dynamics (Muda and Hamzah 2021; Chan, Zeng and Yang 2022). Together, these studies reflect the increasing platformization of prosumption research and the central role of digital infrastructures in shaping participation and value creation. Counterbalancing platform-centric views, **offline and everyday prosumption** (8 studies, ~17%) situates value creation in identity work, skill development, and material practices, notably homebrewing, fiber crafts, and food preparation, rooted in social relations rather than market logics (Wolf, Ritz and McQuitty 2020; Maciel 2025). While largely grounded in offline practices, this stream increasingly acknowledges the pressures of platformization, as prosumers adapt craft identities to algorithmic visibility on marketplaces such as Etsy (Scaraboto and Fischer 2024). **Sustainability-oriented prosumption** (5 studies) addresses green prosumers, circular economy practices, and the structural vulnerability of nature-dependent prosumers to climate disruptions, while also aligning food prosumption with degrowth principles (Perera, Hewege and Mai 2020; Vicdan et al. 2024; Steinfield et al. 2021). Community-based initiatives such as Fairtrade Town are further conceptualized as collective spaces of value and brand co-creation, where prosumption becomes a vehicle for civic engagement and ethical market participation (Samuel et al. 2018). More recently, an **emerging technology context** (3 studies) explores how AI and the metaverse reshape prosumptive practices, raising questions about creativity, access, and digital domestication (Noor et al. 2025). Additional specialized contexts extend the lens to crises, health communication, and live sports fandom (Sundstrom 2013; Lang et al. 2021; Davis and Gibbons 2023).

Geographically, the literature is heavily Western-centric, with the United States dominating (10 studies), suggesting that existing knowledge is shaped by a relatively narrow set of institutional, cultural, and economic conditions, highlighting important opportunities for future research in underrepresented contexts. Temporally, the field progresses from traditional DIY and community settings (2008–2015), through digital platforms and the sharing economy (2016–2020), toward the metaverse, AI, and sustainability (2021–2025), reflecting broader societal transformations.

Table 5

Research contexts in prosumption literature.

Context	Count (approx.)	Representative papers
Sharing economy and collaborative consumption	11	Darmody, Yuksel and Venkatraman 2017; Lang et al. (2020, 2022); Casidy et al. (2022); Klein et al. (2022); Xiang et al. (2022); Zeng et al. (2022); Chatterjee, Mariani and Wamba (2023); Culiberg et al. (2024)
Digital platforms and online communities	8	Ritzer and Jurgenson (2010); Alhashem, Moraes and Szmigin (2021); Muda and Hamzah (2021); Chen (2021); Malodia et al. (2024)
*DIY, **craft and food prosumption***	8	Xie, Bagozzi and Troye (2008); Hartmann (2016); Wolf, Ritz and McQuitty (2020, 2023); Chatterjee, Mariani and Wamba (2023); Vicdan et al. (2024); Maciel (2025)
Sustainability and Green prosumers	5	Eden (2017); Perera, Hewege and Mai (2020); Steinfield et al. (2021); Vicdan et al. (2024)
Technology and AI	3	Fox (2018); Noor et al. (2025); Vicdan et al. (2024)
Emerging contexts	*Sport/fandom (Davis and Gibbons 2023); Platform markets (Scaraboto and Fischer 2024); Prosumption in emerging markets*	

Characteristics (C)

Characteristics refer to the key constructs and variables studied in prosumption studies.

Only 15 of the 46 reviewed articles adopt a formal variable-based modeling approach (Table 6), confirming that theory testing through structured causal models remains selective relative to conceptual and qualitative work.

Antecedents of prosumption: Independent variables cluster around four categories. *Psychological motivations* constitute the most prominent cluster, encompassing self-efficacy, attitudes toward prosumption, trust, social identity, flow consciousness, and intrinsic motivation, typically positioned as direct antecedents of prosumption intention or as mediators translating platform stimuli into behavioral outcomes (Xie, Bagozzi and Troye 2008; Lang et al. 2022; Malecka et al. 2022; Noor et al. 2025). *Consumer traits* capture stable individual attributes such as innovativeness, DIY orientation, domain affinity, prior experience, and prosumer vulnerability that function primarily as moderators conditioning the intensity of prosumer role enactment (Casidy et al. 2022; Wolf, Ritz and McQuitty 2023; Chatterjee, Mariani and Wamba 2023; Culiberg et al. 2024; Noor et al. 2025). *Platform and service attributes* have become increasingly prominent in recent work, treating design choices, transparency, reward structures, and service flexibility as primary causal forces rather than contextual background (Zeng et al. 2022; Xiang et al. 2022; Sarkar et al. 2022). Their growing prominence reflects an increasing platform-centric perspective in which prosumption is shaped not only by individual motivations but also by technological design and governance mechanisms. *Economic and transaction-related factors*, such as perceived benefits, risks, ownership burdens, and opportunistic concerns, frame prosumption as a cost–benefit decision, typically combined with psychological variables rather than used in isolation (Nagel, Cronin and Utecht 2018; Klein et al. 2022; Xiang et al. 2022).

Table 6

Frequently Studied Characteristics

Variable	Key Variables and Representative Studies
Antecedents (15 studies)	
Motivational and psychological drivers	Self-efficacy, attitudes toward prosumption, attitudes toward trying and succeeding, and perceived behavioral control (Xie, Bagozzi and Troye 2008), trust and gratitude toward platforms (Lang et al. 2022), social identity factors (Malecka et al. 2022), flow consciousness and social presence (Noor et al. 2025), enjoyment/intrinsic motivation (Nagel, Cronin and Utecht 2018).
Consumer traits and role-related characteristics	Customer innovativeness (Casidy et al. 2022), affinity (Noor et al. 2025; Wolf, Ritz and McQuitty 2023), self-efficacy (Xie, Bagozzi and Troye 2008). DIY orientation and self-identification (Nagel, Cronin and Utecht 2018; Chatterjee, Mariani and Wamba 2023), prior platform experience (Malecka et al. 2022), and prosumer vulnerability (Culiberg et al. 2024).
Platform interaction and service attributes	Platform transparency and number of participants (Zeng et al. 2022), advergame format and reward type (Sarkar et al. 2022), service flexibility and service knowledge (Xiang et al. 2022), digital media usage intensity (Chatterjee, Mariani and Wamba 2023).
Economic drivers	Perceived economic benefit, perceived risk (Nagel, Cronin and Utecht 2018), asset price, and burdens of ownership (Klein et al. 2022), economic motivation of service providers (Xiang et al. 2022), perceived risks related to privacy, security, and health (Culiberg et al. 2024).
Outcomes (15 studies)	
Role intention and switching	Intention to prosume, become provider (Xie, Bagozzi and Troye 2008; Nagel, Cronin and Utecht 2018; Lang et al. 2022; Ertz et al. 2022)
Engagement and participation	Co-production, engagement behaviors (Casidy et al. 2022; Chatterjee, Mariani and Wamba 2023)

Market outcomes	Purchase intention, satisfaction, eWOM (Muda and Hamzah 2021; Klein et al. 2022; Casidy et al. 2022)
Creative/value outcomes	Creative performance, brand sacredness (Zeng et al. 2022; Sarkar et al. 2022).
Experiential values	Fun, control, self-improvement (Wolf, Ritz and McQuitty 2023)
Mediators (10 studies)	
Psychological Processes	Attitude (Muda and Hamzah 2021), arousal and constraint on idea expression (Zeng et al. 2022).
Behavioral Mechanisms	Co-production (Casidy et al., 2022), intention to prosume (Sarkar et al. 2022).
Relational Mechanisms	Brand Relationship Quality (Sarkar et al. 2022), affinity (Wolf, Ritz and McQuitty 2023).
Moderators (9 studies)	
Individual Differences	Customer innovativeness (Casidy et al. 2022), user type (consumer vs. provider) (Lang et al. 2020), affinity for technology, e-trust, (Noor et al. 2025).
Role/ Contextual Factors	Asset price (Klein et al. 2022), shared property management (Xiang et al. 2022); perceived difficulty (Lang et al. 2020; Xiang et al. 2022).
Design Factors	Platform transparency, reward type (Sarkar et al. 2020; Zeng et al. 2022)
Control Variables (5 studies)	
Demographic Controls	Age, gender, income, and education (Nagel, Cronin and Utecht 2018; Xiang et al. 2022; Chatterjee, Mariani and Wamba 2023; Culiberg et al. 2024).
Experience Controls	Prior experience with the platform/ service (Culiberg et al. 2024); past experience with collaborative consumption (Malecka et al. 2022); pre-existing identity (Nagel, Cronin and Utecht 2018).
Context-Specific Controls	Project type (landscaping vs. tile) (Nagel, Cronin and Utecht 2018); service seniority (Xiang et al. 2022).

Prosumption Outcomes: Turning to the consequences of prosumption, dependent variables predominantly capture behavioral and attitudinal consequences: intention to prosume or role-switch, engagement, participation, and value creation (Xie, Bagozzi and Troye 2008; Lang et al. 2020; Malecka et al. 2022). A secondary category encompasses creative and expressive outputs such as creative performance and brand sacredness (Zeng et al. 2022; Sarkar et al. 2022), while experiential outcomes like enjoyment, self-improvement, and quality of life, appear in hobbyist and craft contexts (Wolf, Ritz and McQuitty 2023).

Mediators, Moderators, and Control Variables: Mediators and moderators play a pivotal role in advancing explanatory depth in prosumption research, shifting the field away from simple direct-effect models toward more nuanced, process-oriented explanations (Table 6). Mediation is tested in 10 of the 15 quantitative studies, positioning psychological mechanisms (e.g., self-efficacy, flow consciousness), relational processes (e.g., coproduction), and experiential constructs (e.g., affinity) as the primary conduits through which motivations and structural features convert into prosumptive value (Xie, Bagozzi and Troye 2008; Casidy et al. 2022; Noor et al. 2025). Moderators appear in 9 studies and fall into three categories: individual differences (innovativeness, e-trust, affinity for technology interaction), role and context factors (user type, task difficulty), and design features (platform transparency, reward type) — collectively demonstrating that prosumption is fundamentally contingent on prosumer identity, role, and system architecture (Lang et al. 2020; Zeng et al.

2022; Noor et al. 2025). Control variables are used more selectively and mainly include demographic characteristics, prior experience, and task-related factors. While they contribute to methodological rigor, they remain only weakly integrated into broader theoretical explanations.

Overall, quantitative prosumption research has matured toward multi-variable, processoriented models that integrate psychological, economic, and sociological perspectives. The dominance of intention-based outcomes signals a focus on predicting engagement over capturing realized behavior. A key limitation remains the reliance on self-reported measures; notable exceptions using platform booking data (Xiang et al. 2022) or experimental designs (Klein et al. 2022) point to a critical avenue for future research.

Methods (M)

The methodological landscape reflects prosumption research's exploratory character, with a strong presence of qualitative and conceptual approaches indicating that theorizing has preceded systematic causal testing (Table 7). **Qualitative studies** constitute a substantial share of the corpus, employing interviews, ethnography, netnography, and discourse analysis to examine prosumption as embedded in everyday life and socio-cultural contexts. Practiceoriented work investigates gardening, freecycling, and DIY consumption as routinized, materially grounded activities (Hartmann 2016; Eden 2017; Fox 2018), while critical qualitative studies interrogate power relations and unpaid labor through interviews and document analysis (Andrews and Ritzer 2018; Ritzer and Miles 2019). Digital and physical ethnographies capture prosumption in naturalistic online and offline settings (Alhashem, Moraes and Szmigin 2021; Maciel 2025), and case study or grounded theory designs support longitudinal and inductive theory-building (Samuel et al. 2018; Bouncken and Tiberius 2023).

Table 7
Distribution of paper types

Paper type	Number	Approx. share	Example References
Qualitative	17	~36%	Sundstrom (2013); Chandler and Chen (2015); Eden (2017); Alhashem, Moraes and Szmigin (2021).
Quantitative	13	~28%	Xie, Bagozzi and Troye (2008); Casidy et al. (2022); Zeng et al. (2022); Culiberg et al. (2024).
Mixed methods	3	~6%	Hartmann (2016); Nagel, Cronin and Utecht (2018); Klein et al. (2022).
Conceptual / Literature-based	13	~16%	Pitt et al. (2006); Ritzer (2014); Eckhardt et al. (2019); Kelleci (2025).

Quantitative studies rely primarily on survey-based designs with SEM or regression analysis, drawing on online panels (Chatterjee, Mariani and Wamba 2023; Culiberg et al. 2024), platform-linked surveys (Muda and Hamzah 2021; Lang et al. 2022), or household surveys with samples of 300–500 respondents (Xie, Bagozzi and Troye 2008). Early contributions operationalized prosumption intentions and value outcomes to test causal relationships (Xie, Bagozzi and Troye 2008); more recent work models complex mediated and moderated structures in platform and sharing-economy contexts (Casidy et al. 2022; Lang et al. 2022; Ertz et al. 2022).

Experimental designs represent a smaller but increasingly visible stream, reflecting a growing interest in isolating causal mechanisms and design effects. These studies are often scenario-based or rely on multi-experiment designs, particularly in research on platforms, creativity, and brand-related outcomes (Zeng et al. 2022; Ertz et al. 2022; Sarkar et al. 2022). Although they strengthen internal validity, they generally offer less contextual realism than qualitative approaches.

Mixed-method approaches occupy an intermediary position, combining the exploratory strengths of qualitative inquiry with the generalizability of quantitative analysis. Such designs are typically adopted when studying under-theorized phenomena such as DIY value co-creation or ownership burdens in sharing platforms (Nagel, Cronin and Utecht 2018; Klein et al. 2022).

Conceptual and literature-based contributions play a structuring role by synthesizing fragmented findings, revisiting foundational theories, and proposing integrative frameworks that shape subsequent empirical research (Cova and Cova 2012; Eckhardt et al. 2019; Kelleci 2025).

As summarized in Table 8, early reliance on qualitative and conceptual approaches laid the groundwork for understanding prosumption as a social and cultural phenomenon. Over time, the growing use of survey-based, experimental, and mixed-method designs signals a shift toward theory testing, mechanism identification, and boundary specification. Nonetheless, the relative separation between rich qualitative insights and statistically rigorous quantitative models points to ongoing opportunities for more integrative methodological designs that better connect everyday prosumption practices with causal explanation.

Table 8

Dominant methodological techniques in prosumption research

Method Category	Number of Studies (n)	Representative Studies (Author(s), Year)
Survey	13	Xie, Bagozzi and Troye (2008); Lang et al. (2020); Muda and Hamzah (2021); Casidy et al. (2022); Malecka et al. (2022); Chatterjee, Mariani and Wamba (2023); Culiberg et al. (2024); Noor et al. (2025).
Interview	12	Hartmann (2016); Eden (2017); Darmody, Yuksel and Venkatraman (2017); Samuel et al. (2018); Perera, Hewege and Mai (2020); Busca and Bertrandias (2020); Scaraboto and Fischer (2024).
Ethnography / Netnography	7	Hartmann (2016); Eden (2017); Kviat (2022); Davis and Gibbons (2023); Maciel (2025).
Experiment	5	Klein et al. (2022); Zeng et al. (2022); Sarkar et al. (2022); Xiang et al. (2022).
Literature Review / Conceptual	4	Cova and Cova (2012); Fox (2018); Eckhardt et al. (2019); Lang et al. (2021).
Case Study	3	Samuel et al. (2018); Busca and Bertrandias (2020); Kviat (2022).
Focus Group	2	Nagel, Cronin and Utecht (2018); Klein et al. (2022).

Across its four dimensions, the TCCM analysis reveals a field in transition, one that is progressively diversifying its theoretical foundations, expanding its empirical contexts, refining its variable-based models, and moving from exploratory toward causal methodological designs, setting the stage for the research agenda developed in the following section.

Research gaps and future research directions (RQ5)

Marketing research on prosumption reveals a rich but fragmented body of knowledge, which has prevented the field from developing a coherent and cumulative theoretical core. Four major limitations warrant particular attention. First, the multiplicity of frameworks mobilized confirms the interdisciplinary nature of the concept but simultaneously weakens its coherence, as prosumption is frequently used as an umbrella term referring to heterogeneous realities such as coproduction, participation, digital labor, creativity, and moral engagement, rather than as a rigorously delimited construct. Second, although the literature establishes a distinction between prosumption and value co-creation (e.g., Chandler 2015; Alhashem et al. 2020), this distinction remains unevenly stabilized. While existing studies generally differentiate the two concepts, the nature of their relationship and their respective boundaries remain insufficiently theorized.

Third, marketing research overwhelmingly focuses on digital and platform-based environments, privileging technologically mediated forms of prosumption at the expense of non-digital, embodied, or community-based manifestations. Yet these latter forms remain central to the conceptual development of prosumption. Fourth, empirical studies remain limited, with few explicitly operationalizing prosumption through measurable variables, and a tendency to overemphasize motivational antecedents while neglecting their interaction with contextual conditions and role identities. These four limitations collectively point to a critical gap: marketing research still lacks a sufficiently unified and theoretically robust model capable of conceptualizing prosumption as a distinct construct, one that can traverse contexts, explicate its underlying mechanisms, and clearly differentiate it from adjacent forms of consumer participation. On this basis, several research avenues appear particularly promising. These avenues can be organized around three overarching challenges: (1) the conceptual clarification and integration of prosumption, (2) the analysis of its forms, contexts and trajectories, and (3) the exploration of its critical, social, and political dimensions.

Challenge 1 – Clarifying and conceptually integrating prosumption

Developing an integrated theoretical model of prosumption: The bibliometric analysis highlights a high degree of theoretical dispersion characterized by the juxtaposition of partial and weakly articulated frameworks. Future research should prioritize developing an integrative model capable of articulating prosumption’s individual, relational, sociotechnical, and systemic dimensions within a unified framework, more clearly delineating its conceptual boundaries visà-vis neighboring notions and situating its various forms (e.g., autonomous, collaborative, sociotechnical, emotional) within a coherent conceptual structure.

Conceptually clarifying prosumption beyond co-creation: A second avenue consists of clarifying the conceptual relationship between prosumption and co-creation, two notions frequently mobilized interchangeably despite their distinct theoretical foundations. Future research would benefit from developing frameworks capable of distinguishing situations in which prosumption is embedded in co-creation logics from those in which it diverges, drawing on criteria such as governance mechanisms, recognition of prosumers’ labor, value-sharing arrangements, and organizational control. Such clarification would help reduce the current conceptual and terminological confusion and better capture the diversity of prosumptive arrangements.

Strengthening interpretive approaches and empirical validation: The conceptual stability of prosumption also depends on the ways in which the construct is empirically operationalized and tested**.** Existing research is dominated by qualitative and conceptual approaches, more recently complemented by quantitative surveys and mixed-method designs. While this diversity has enabled rich analyses of prosumptive practices, it has also contributed to fragmentation. A promising avenue lies in integrative research designs that combine the interpretive depth of qualitative approaches with the rigor of quantitative testing, strengthening the operationalization of prosumption’s core dimensions and supporting more cumulative theory development.

Challenge 2 – Analyzing the forms, contexts, and trajectories of prosumption

Moving beyond the techno-centric bias: *The bibliometric analysis reveals a marked dominance of digital and platform-based contexts,* which strongly shape contemporary conceptualizations of prosumption. Future research should examine prosumption in nondigital, analog, or hybrid contexts to assess the transferability of existing frameworks.
Comparative studies could help distinguish the general constitutive mechanisms of prosumption, such as the fusion of productive and consumptive roles, from mechanisms specific to platform architectures, including algorithmic control and data extraction.

Examining sustainable prosumption and the empowerment of consumers: A fourth avenue situates prosumption within debates on sustainability, circularity, and degrowth. While many studies portray prosumption as a lever for sustainability through repair, DIY, reuse, or sharing, few critically examine associated trade-offs. Future research could investigate how prosumption may reduce environmental footprints without shifting risks or moral burdens onto consumers, with particular attention to green prosumers’ motivations, moral fatigue, and the risks of organizational greenwashing.

Studying profiles, trajectories, and temporal dynamics of prosumption: Although the literature conceptually distinguishes different forms and figures of prosumers (Xiang et al. 2020; Ertz et al. 2022; Scaraboto and Fischer 2024), the results of the analysis reveal the absence of robust and validated empirical typologies, as well as the dominance of static approaches in the study of prosumption. Future research could develop prosumption profiles through processual and longitudinal designs, capturing the diversity and evolution of prosumptive practices over time, from initial engagement through intensification to disengagement or burnout. Such a dynamic typology would illuminate the cumulative effects of prosumption on identity, skill development, and platform attachment, while enabling examination of variations across sociodemographic, cultural, and technological contexts.

Challenge 3 – Interrogating the critical, social, and political dimensions of prosumption

Exploring ambivalence, vulnerability, and psychosocial effects: While a substantial body of literature emphasizes prosumption's benefits, including empowerment, creativity, and engagement (e.g., Xie, Bagozzi and Troye 2008; Alhashem et al. 2020; Chatterjee, Mariani and Wamba 2023; Wolf, Ritz and McQuitty 2023), a critical stream highlights that it may also be imposed through economic, social, or technological constraints, particularly in contexts of platformization and algorithmic dependence (e.g., Ritzer and Jurgenson 2010; Culiberg et al. 2024; Scaraboto and Fischer 2024). Future research would benefit from examining conditions under which prosumption shifts from a voluntary and empowering practice to a constrained or precarious activity, jointly modeling benefits and costs to move beyond celebratory narratives and offer a more nuanced understanding of prosumption's effects. While existing studies emphasize positive outcomes such as engagement, creativity, and value creation, issues related to stress, overload, emotional fatigue, and loss of control remain underexplored. Exploring how empowerment and autonomy coexist with vulnerability and precarity would provide a more balanced understanding of prosumption.

Conceptualizing prosumer-consumer exploitation: A related but underexplored avenue concerns the explicit conceptualization of exploitation in prosumptive contexts. While prosumption entails increasing transfers of labor, data, skills, and affect to consumers, the literature rarely analyzes these dynamics through the lens of exploitation, favoring instead more neutral notions such as participation, engagement, or risk. Future research could identify the conditions under which prosumption shifts from value sharing and empowerment toward consumer exploitation by firms.

Studying intercultural and societal differences: These critical dimensions are further compounded by significant cross-cultural variations that remain largely unexplored. Future research would benefit from comparative approaches analyzing variations in prosumption across collectivist and individualist cultures, stable and precarious economies, and social groups differentiated by socioeconomic position, resource access, and digital capital, distinguishing in particular between forms of prosumption that are chosen and empowering and those that are imposed or associated with precarious situations.

CONCLUSIONS

This study provides a multi-layered synthesis of prosumption research by combining a cross-disciplinary bibliometric performance analysis with a focused bibliometric and TCCMbased review of the marketing literature. The three-stage design maps prosumption's overall diffusion, clarifies its uneven development within marketing, and structures the intellectual foundations upon which future research can build.

The cross-disciplinary analysis confirms prosumption as a well-established and rapidly expanding research theme, driven by digitalization, decentralized production, and sustainability transitions. Yet it also reveals a pronounced disciplinary imbalance: energy, engineering, and technology-oriented domains have overwhelmingly shaped the field, leaving marketing and business scholarship at the margins despite prosumption's profound implications for consumer roles, value creation, and market structures. The bibliometric mapping of marketing publications exposes a fragmented and still-emerging field, while the TCCM analysis reveals theoretical pluralism and methodological diversity alongside persistent weaknesses such as limited theoretical integration, a strong reliance on intention-based measures, and a scarcity of behavioral and longitudinal data.

Methodologically, the study demonstrates the value of sequencing bibliometric performance analysis with theory-driven content analysis. Bibliometric techniques effectively map intellectual structures and research trajectories but remain constrained by citation-based temporal effects. TCCM-based content analysis compensates by enabling deeper interpretation of theoretical foundations, contexts, and methodological choices, supporting cumulative knowledge development.

From a managerial perspective, the findings suggest that prosumption can no longer be treated as a simple engagement tool or a cost-free resource. It requires differentiated governance: formalizing decision rights and value-sharing arrangements, designing platforms that balance transparency and oversight while preserving voluntary participation, and acknowledging prosumption's ambivalent nature, which may foster empowerment and creativity while potentially transferring labor, data, or responsibility in ways that generate vulnerability or inequality. Segmenting prosumer profiles and managing participation temporality are critical to preventing fatigue and disengagement. When embedded in sustainability strategies, prosumption must be aligned with measurable organizational commitments rather than used as a mechanism for delegating environmental responsibility to consumers.

Notwithstanding its contributions, this study is subject to several limitations. The analytical focus on marketing journals, while ensuring theoretical coherence, may have overlooked relevant contributions from adjacent disciplines. The prosum* keyword criterion enhances replicability but may exclude studies addressing similar phenomena under labels such as co-creation or user innovation. Restriction to English-language peer-reviewed articles further limits coverage. Finally, despite citation searches extending to November 2025, the rapid evolution of digital participation practices calls for periodic updates of this mapping effort.

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The Interaction Marketing Mix: A balanced framework to defining commercial policies.

Abstract :

The marketing mix has long served as a central framework for structuring marketing strategy. Despite its enduring influence, the traditional 4P model has been widely criticised for its rigidity and its predominantly firm-centred perspective. This article introduces the Interaction Marketing Mix (IMM), a conceptual framework designed to integrate transactional and relational perspectives within a unified structure centred on exchange. The IMM conceptualises marketing exchanges as reciprocal interactions between two entities – typically a firm and its customers – organised around three categories of action factors: offering factors, relationship factors and contribution factors. By emphasising balance and reciprocity within exchange relationships, the model provides a framework capable of reflecting contemporary marketing environments characterised by customer participation, value co-creation and digital interaction. The article presents the theoretical foundations of the IMM, describes its structure and components, and discusses its implications for marketing strategy and research.

Key words: *marketing mix, marketing mix models, interaction marketing mix.*

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INTRODUCTION

The marketing mix is traditionally defined as the optimal combination of controllable variables available to a firm in order to influence market demand. Although widely recognised in both academic literature and managerial practice, scholars have long debated the number and nature of the variables composing the mix.

The terminology marketing mix was first introduced by Neil Borden in 1953 (Wood 1963). His initial framework comprised twelve variables, intended to guide commercial policy. Shortly afterwards, alternative classifications were proposed by Frey (1956), Howard (1957), Kelley and Lazer (1958), and Lazer and Kelley (1962).

The concept gained widespread recognition following the simplified formulation proposed by McCarthy (1960), who organised marketing decision variables into four categories: Product, Price, Place and Promotion. Popularised by Kotler (1967), this framework rapidly became the dominant reference model in marketing management.

While the model's elegance and pedagogical clarity contributed to its widespread adoption, it has also attracted sustained criticism. Scholars have frequently argued that the framework reflects a transactional and firm-centred conception of marketing, that does not fully capture the complexity of contemporary market interactions.

In response to these limitations, numerous attempts have been made to revise or extend the traditional marketing mix. Notable examples include the 7P framework for services marketing (Booms & Bitner 1981) and the SAVE framework developed for industrial markets (Ettenson et al. 2013). These initiatives reflect broader transformations in marketing thought, particularly the growing importance of relational perspectives – challenging the transactional paradigm and inspiring models such as Gummesson's 30R framework (1994) – as well as customer participation in value creation. More recently, digital transformation has intensified interactions between firms and consumers, enabling new forms of engagement and collaboration.

Despite these conceptual advances, their practical impact on McCarthy's quadrilogy remains limited. Kotler (2013) himself acknowledged that the 4P model continues to dominate both academic teaching and managerial practice. According to Constantinides (2006, p. 407), "few topics in commercial theory have so intensively inspired as well as divided the marketing academia as the 4Ps Marketing Mix framework." The model continues to stimulate scholarly debate, as evidenced by recent reviews highlighting ongoing efforts to revise and compensate for its limitations (Orticoni & Dufer 2022).

Contemporary marketing aspires to be less mechanistic and more humanistic – less firm-centered and more attuned to the Other, who is no longer viewed as a passive consumer but as an active participant in value creation. Marketing thus evolves toward a participatory and interactive orientation. As Wichmann et al. (2022, p. 1) note, "the marketing mix has reached a crossroads, with opposing scenarios for its future."

In this context, there is a clear opportunity to propose a model grounded in a more inclusive, holistic, and balanced framework – one capable of integrating multiple perspectives, while remaining generalisable. The purpose of this article is therefore to introduce and develop the Interaction Marketing Mix (IMM), designed to address these challenges by embedding reciprocity, balance, and interaction at its conceptual core. The paper is structured as follows: Section 1 outlines the model and its genesis; Section 2 offers a critical discussion; Section 3 explores its scope and potential applications; and the final section presents its theoretical and managerial implications, identifies its limitations, and suggests avenues for future research.

THE INTERACTION MARKETING MIX (IMM)

The Interaction Marketing Mix (IMM) is an integrative framework that reconciles transactional and relational logics. It reasserts exchange as the core element of marketing strategy, while incorporating the co-creation mechanisms that underpin contemporary marketing.

1 - Genesis of the model

The conceptual foundations of the IMM date back to the 1990s – a particularly prolific decade for marketing and the marketing mix.

The early 1990s marked a turning point in marketing theory with the advent of the market orientation paradigm, notably through the seminal contributions of Narver and Slater (1990) and Kohli and Jaworski (1990). Building on these works, new formulations of the marketing mix emerged – more consumer-oriented and seeking to move beyond the productcentric logic inherent in the 4P model (e.g. Lauterborn 1990; Bennet 1997).

Customer relationships came to be regarded as the firm's key strategic resource (Webster 1992). The notions of satisfaction and loyalty regained prominence (Moulins 1997), with loyalty increasingly conceived in relational rather than transactional terms (Vavra 1993).

Relationship marketing subsequently gained traction, with several schools of thought critically challenging the dominant marketing management paradigm and its traditional 4P foundation – most notably the Nordic School (Grönroos 1994). Holistic and strategic perspectives on marketing emerged, redefining it not as a mechanism for manipulating consumers, but as a process of genuine engagement (McKenna 1991).

Taken together, these developments reveal the intellectual vitality and conceptual richness of marketing in the 1990s, while also shedding light on the context in which the idea of the IMM emerged. As Dominique Crié (2002, p. 2) observed, “the last decade of the twentieth century witnessed an evolution – if not a revolution – both conceptual and praxeological, in marketing thought and practice.”

Inspired by this intellectual effervescence, our aim was to elaborate a conceptual model that reconciles the perspectives of firms and customers, by integrating transactional and relational dimensions within a coherent and unified framework. At a time when marketing theory was marked by increasing fragmentation, this endeavour also sought to advance a more integrative and generalist approach – one applicable across contexts involving physical goods, services, and social marketing. This effort culminated in the development of the IMM model, which was initially introduced at a conference of the French Marketing Association (Dufer 1997) and afterwards validated through ongoing consultancy work with the Inter Service CAM (ISC) consortium, which brought together representatives of the Crédit Agricole Mutuel Group (the European Union’s leading local retail bank), including several Directors from its 39 regional banks.

Since then, the marketing mix has continued to stimulate substantial academic research, and its relevance remains undiminished. In light of recent developments in marketing theory and practice, it now seems timely to reintroduce the IMM to the academic community – having considerably refined and expanded it – and to make it available to practitioners as a tool tested and validated through our consulting and fieldwork. The following section presents the structure and core components of the IMM, together with the guiding principles underlying its design.

2. Presentation of the IMM

The primary characteristic of the IMM lies in the close symbiosis it establishes between the firm and its clientele – a form of coupling that generates mutual benefit for both parties. At the heart of this association stands a principle that, although some authors have questioned its primacy in favour of value creation (Sheth & Uslay 2007), remains one of the foundational pillars of marketing: exchange. Such reciprocity has already been highlighted by R. Cialdini (2024), according to whom one must “give in order to receive”.

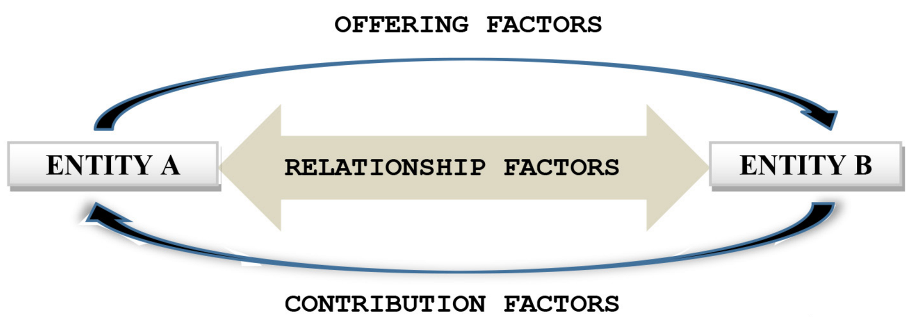
Accordingly, the IMM can be defined as follows:
“A COMBINATION OF INTERACTING FACTORS, ESTABLISHED FOR THE MUTUAL BENEFIT OF TWO ENTITIES (A AND B), WITHIN AN EXCHANGE RELATIONSHIP”.

Its basic expression is deliberately simple:

- A and B are engaged in a relationship;
- A provides a set of offerings to B;
- B, in return, provides contributions to the exchange with A.

Figure 1 and table 1 illustrate this principle.

Figure 1
Representation of the IMM



The IMM assumes that mutual benefit must actively pursued between the interacting entities.

Table 1

Example of a food brand (A) to a consumer (B)

A provides to B	Quality products, nutritional information campaigns, new recipes, product innovation, limited editions, broad distribution.
B contributes to A	Monetary compensation, repeated purchases, participation in surveys, social media engagement, feedback, positive word-of-mouth.
Relationship between A and B	Engagement through loyalty programmes and sharing platforms initiated by A.
Mutual benefit	A strengthens its reputation and customer base, while B enjoys enhanced value, exclusive advantages, and satisfaction.

A (the provider) initiates the exchange, while B (the buyer) is initially the recipient. However, these roles are not fixed: both can alternately act as sender or receiver. The IMM framework therefore encourages adopting the other's perspective – particularly that of B, the customer.

Within the IMM, interaction between the two entities manifests through flows of actions composed of various action factors, distributed according to the direction of the exchange.

3. The components of the IMM

The IMM combines two types of actions – transactional and relational – that operate in opposite directions (A→B or B→A). Each is driven by what we term action factors, the core analytical units of the model.

3.1 The notion of action factors

Action factors (also referred to as associated or intervening factors) stem from an analytical process aimed at identifying the underlying drivers of marketing actions, beyond their observable forms. They represent the conditions, constraints, and resources that make action possible and shape its outcomes. They occupy an intermediary position between means and results:

MEANS → ACTION FACTORS → RESULTS.

This bidirectional structure (A → B and B → A) can be examined through three key dimensions:

- The offering dimension (O):
  Offerings provided by A → Offering factors → Benefits perceived by B
- The relationship dimension (R):
  Relations deployed by A → Relationship factors A/B → Relations experienced by B
  Relations experienced by A ← Relationship factors B/A ← Relations deployed by B
- The contribution dimension (C):
  Benefits obtained by A ← Contribution factors ← Contributions provided by B

The framework can be illustrated through two examples drawn from various industries.

Example 1 – Consumer Goods: A Soft Drink Manufacturer

O: Natural flavours → health benefit → serene pleasure
O: Multiple formats → choice → adaptation to needs

R: Creative marketing → playful advertising → emotional connection
R: Brand stores → atmosphere creation → proximity
R: Brand awareness ← visibility ← positive word-of-mouth
R: Loyalty ← privileged relationship ← club membership

C: Engagement ← participation ← recipe forums
C: Stable revenue ← recurring demand ← regular purchases

Example 2 – Services: A Hotel Establishment

O: Booking centre → online purchase → time saving
O: Downtown location → accessibility → reduced effort

R: Staff motivation → warm welcome → pleasant atmosphere
R: Service improvement ← feedback ← call centre interaction

C: Cash flow ← advance revenue ← card payment
C: Capacity optimisation ← occupancy programme ← booking compliance

This analytical structure allows for either a factor-based or a means-based approach. If the former appears too complex, the analysis can be simplified to a means-based correspondence, provided it systematically links the firm's actions to the customer's outcomes, and vice versa:

- MEANS of A → RESULTS for B
- RESULTS for A ← MEANS of B

Example:
. A promotional campaign by A at the point of sale → modifies perceptions of B .
. A's database enrichment ← B's participation in a survey.

The factor-based reasoning helps assess how specific actions, implemented through given means, affect their targets – an essential approach, since the same variable can serve multiple purposes. For instance, at the point of sale, a sales promotion – typically transactional – can also serve relational goals (Mussol et al. 2013). Likewise, merchandising may aim to boost sales or enhance the consumer experience, and a contest may foster loyalty or simply update a customer database.

Similarly, while all communication fosters connection, not all communication is relational. The ligative dimension of communication must be distinguished from its informational function. Persuasive and narrative advertising may transmit product information, whereas symbolic communication may build brand meaning and emotional resonance. One may therefore distinguish between functional communication (which supports performance) and relational communication (which strengthens or repairs trust). For instance, a personalised response to a complaint can restore confidence and reinforce loyalty.

3.2 The three categories of factors

As mentioned earlier, while the traditional 4P model is based on four classes of marketing variables, the IMM framework is structured around three categories of action factors. Each category constitutes a composite set, that warrants closer examination.

Offering Factors (OF)

The term offering refers to the full range of what a company provides to consumers, which may include tangible products as well as intangible services. It represents the core object of exchange and the foundation of the business relationship. Only part of these actions translates directly into perceived benefits for the customer, as not all initiatives are targeted at them and their yield is never perfect. Broadly speaking, offering factors constitute the main source of satisfaction and, consequently, the core of value creation. They can also be referred to as performance factors.

Within the offering factors, distribution plays a crucial role, since the product and its delivery are no longer separate spheres. While firms may internally distinguish between these two sets of activities, the buying experience occurs at their intersection. From the customer's standpoint, the delivery mode – including both channel and context – is inseparable from the offering itself. This is particularly evident in services, where production and consumption often occur simultaneously (Eiglier & Langeard 1987), and service appreciation depends directly on how it is provided.

This logic equally applies to tangible goods. The purchase of a product in a specific outlet fuses both dimensions into a single aggregate – the delivered product or service. For instance, the perceived quality of a toothpaste bought in a supermarket may differ from the same product purchased in a pharmacy. Likewise, an ice cream eaten in a Häagen-Dazs café evokes a different consumption experience than the same product bought in a supermarket.

Thus, commercialization modalities merge, in the consumer's perception, with the offer itself: the experience of the offer is inherently composite, integrating both product and context.

Relationship Factors (RF)

Every offer is embedded within a relationship, which may be explicit or implicit depending on the context. Relationship factors refer to the various forms of connection linking the firm and its market in a bilateral perspective.
A relationship is both an outcome – the bond uniting two parties – and a process – the construction of that bond. Relationship factors therefore encompass all elements that create, maintain, strengthen, or repair this link. With the rise of social media, they also include connections among consumers who share experiences with a product or brand.
These factors generate relational benefits and, consequently, relational value. The relational domain is broad and may be analysed across several key distinctions: collective vs. individual, vertical vs. horizontal, and interpersonal vs. institutional relationships.

- **Collective–individual:** distinguishes mass communication from personalised interaction. Impersonal communication – often media-based – contrasts with individual connection relying on human interfaces (e.g. front-line staff) or technological ones (e.g. digital platforms). Access to branded retail outlets enhances atmosphere and proximity: by opening its own stores, L'Oréal strengthens direct ties with consumers, while personalised digital offers and social media engagement extend this connection.
- **Vertical–horizontal:** with the rise of social media, the traditional top-down communication flow from companies to consumers has been increasingly complemented by horizontal communication processes, in which consumers actively generate content and construct relationships, notably through the online sharing of experiences. This shift calls for new skills and tools; for example, micro-stories on social networks increasingly complement traditional meta-narratives, relying instead on storytelling capabilities.
- **Interpersonal–institutional:** yields two levels of trust. In an era of declining institutional credibility, firms emphasise direct human interfaces to foster individualised relationships. The bank Crédit Agricole, for example, organises its operations around a multichannel advisor, who connects customers to multiple contact points within a single "relational space", allowing engagement through the customer's preferred channel.

Introducing relationship factors makes it possible to assign specific purposes to each of these forms of interaction – such as to disseminate, welcome, assist, inform, persuade, reassure, reward, remind, repair, or compensate. A TV spot (means) builds an image (factor) that reassures (outcome). A physical store (means) creates an atmosphere (factor) that enhances proximity (outcome). A phone call (means) provides attention (factor) that fosters recognition (outcome). An online forum (means) facilitates choice (factor) that supports decision-making (outcome). A commercial gesture (means) provides a benefit (factor) that rewards (outcome).

Contribution Factors (CF)

This third category encompasses the actions and resources mobilised by the customer – aside from the relational dimension – as compensation for the benefits received. To properly assess these contributions, they must be considered within a broader perspective than mere monetary payment. As noted by authors such as Zeithaml (1988), it is necessary to take into account all costs incurred by the consumer beyond purely financial expenses. The range of elements involved is therefore extensive. In the pursuit of a comprehensive understanding, these resources – many of which lie outside the firm's direct control – may be:

- **monetary contribution** (price paid and financing arrangements as forms of economic participation in the exchange)
- **material contribution** (equipment and resources mobilised by the customer in order to access and engage with the service)
- **temporal contribution** (time invested, including duration, waiting, and delays – reflecting trade-offs between financial and temporal commitments)

• **physical contribution** (travel and physical effort involved – participating in the coproduction of the service outcome)
• **psychological contribution** (attention, interest, and decision-making processes mobilised – contributing to relationship co-production and the disclosure of personal data)
• **informational contribution** (pre-purchase: expression of needs, projects, and orientations, including possible disclosure of personal data; post-purchase: word-of-mouth, online evaluations, forum-based recommendations, and ex post communication of the customer experience)
• **ecological contribution** (choices related to recycling, limitation, exclusion, or renunciation – reflecting the customer's engagement with environmental options).

Taken together, contribution factors represent the full spectrum of customer inputs that complement the firm's offer, shaping both perceived value and the overall experience. A comprehensive understanding of these contributions enables firms to better evaluate the customer's total cost of participation and to design more equitable exchanges.

4. Building the IMM

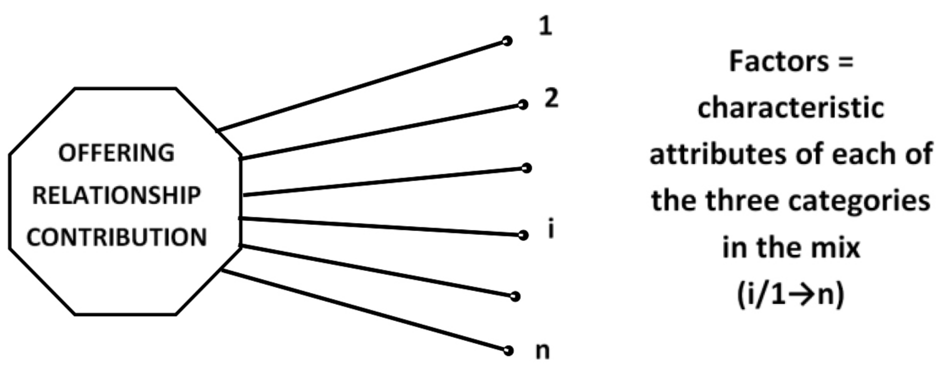
A central feature of the IMM lies in the principle of balance governing the combination of action factors.

The construction of the IMM unfolds on two levels: first, the identification and prioritisation of each factor; and second, the determination of the most appropriate combination among them.

4.1 Defining the factors

The identification of each factor can rely on established commercial research methods. These methods help assess both the salience of factors (through qualitative exploration) and their importance (via quantitative surveys). A thorough understanding of customer needs – across a full spectrum of factors – and of the relative weight assigned to each attribute enables firms to design comprehensive offers and emphasise the dimensions most valued by their customers.

Figure 2
Factors determination

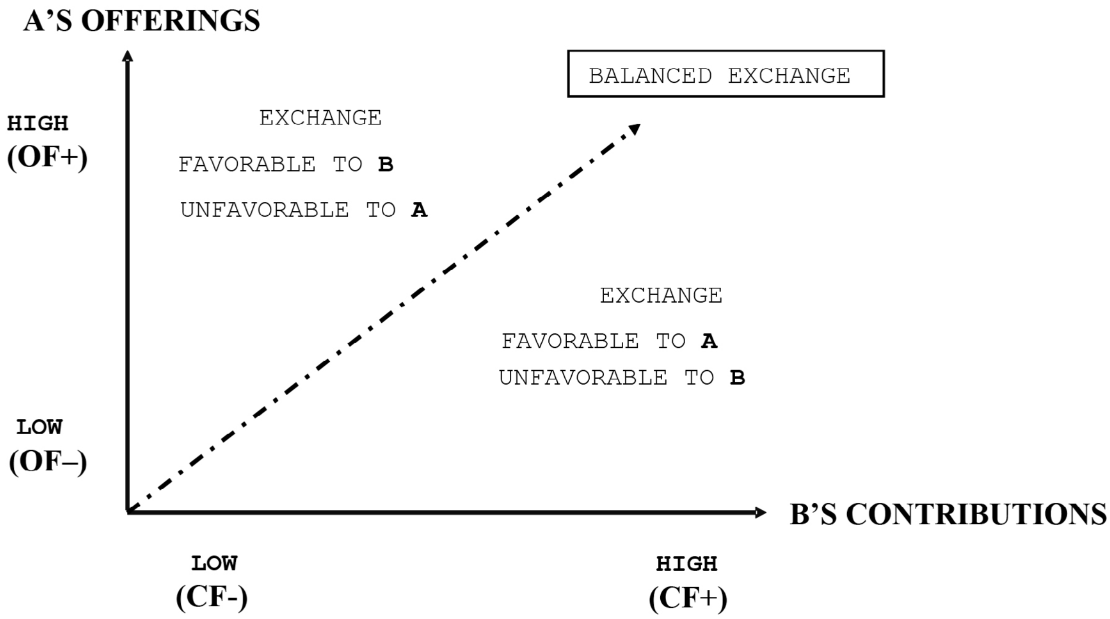


4.2 Combining the factors: the search for balance

Combining factors within the same category poses little difficulty, as a simple ranking by importance can guide prioritisation. However, integrating factors across the three categories – offerings, relationship, and contribution – is more complex.

Traditionally, marketing mix design relies on a principle of coherence, according to which the various elements of the mix must align consistently. This coherence, however, remains approximate: its objective is mainly to avoid major contradictions among components. In contrast, the IMM focuses on the balance between what the firm provides and what the customer contributes.

Figure 3
Offerings / Contributions



From the outset, trade-offs must be made between offerings and contributions, echoing the quality–price ratio (Tassinari 1985) and grounded in equity theory (Walster, Walster & Berscheid 1978). In the IMM, customer benefit results from a favourable combination of action factors, achieved through comparison and compensation among them. A deficit in one factor may be offset in two ways:

1) Direct mitigation:

- When a high contribution is required from the consumer – for example, a high selling price (CF+) – the effect can be reduced by lowering the latter (CF–).
- When an offer fails to meet expectations – such as a product poorly suited to its target audience (OF–) – the situation can be corrected by improving the offer (OF+).

2) Compensatory enhancement:

- Lower prices (CF–) but slower delivery and no free returns (OF–).
- High selling prices (CF+) legitimised by exceptional offer quality (OF+).
- Customer participation (CF+) or data disclosure (CF+) offset by a more personalised offer (OF+).

When compensation occurs within a single category, it is still governed by the search for balance. For instance, within contribution factors, greater customer effort (CF+) can be offset by a lower price (CF–); high selling prices (CF+) can be balanced by credit or deferred payment options (CF–). Similarly, the ecological cost of disposable products (CF+) can be mitigated through recycling programmes involving consumers in the return process (CF+), thereby reducing the psychological cost (CF–) through a mechanism of guilt alleviation.

The integration of relational factors enriches this dynamic. Within the IMM, relationships – and the trust they foster – can compensate for asymmetries such as information deficits or perceived risk. Often, it is precisely the relational dynamics of trust and perceived value that help re-equilibrate the exchange.

The IMM's adjustment mechanisms are inherently flexible: firms can add, modify, or remove factors with a reasonably predictable impact on outcomes. As customer expectations evolve or competitive conditions change, the mix can be adapted to maintain alignment with its environment. This adaptability is one of the defining features of the model.

Furthermore, by incorporating relational factors, marketing actions can follow either a transactional logic – aimed at short-term sales increases – or a relational logic, oriented toward longer-term engagement. Unlike the 4P model – where a retail outlet would be categorised under the variable "Place" – the IMM allows the same action to serve a relational purpose.

For instance, when L'Oréal – historically a mass-distribution brand – opened its first proprietary stores, the initiative was not merely distributive but relational. The goal was to establish a direct link with consumers, eliminate intermediaries, and deliver a personalised experience – including beauty advice, diagnostics, and exclusive services – while collecting data, through loyalty programmes and strengthening brand capital through proximity and trust.

5. A practical illustration of the IMM: the case of Nespresso

Table 2 illustrates how Nespresso strategically combines performance, contribution, and relationship factors through a coherent set of mutually reinforcing actions. The interplay of these factors sustains a balanced value proposition, where deficits in one domain are offset by strengths in another.

A high price (CF+) is legitimised by an unparalleled premium offer (OF+) and reinforced by personalised relationships and a superior customer experience (RF+). The use of aluminium (OF–) is justified by its exceptional aroma-preserving properties (OF+). The ecological cost for the consumer (CF+) is mitigated through a recycling system that allows consumers to offset environmental guilt (CF–) by returning used capsules (CF+). The potential moral cost associated with perceived health concerns linked to aluminium (CF+) is neutralised by reassuring information on product safety (OF+) and compensated by brand trust (RF+). Finally, customer engagement in a structured consumption model (CF+) is balanced by the symbolic benefit of belonging to a luxury universe and an exclusive brand community (RF+).

Table 2

Synthesis of IMM factors within Nespresso's strategy

IMM factors	Key Actions Implemented	Objective / Expected Outcomes
Offering (OF+/-)	**OF+**: Premium capsules with consistent quality, wide flavour range, and limited editions; capsules ensuring aroma preservation and safety (with recyclability emphasised). Design-driven machines and accessories. Exclusive distribution network (boutiques, e-commerce, mobile application); boutique experience (tastings, personalised service); Premium after-sales service (repair, loan, recycling).	Guarantee controlled quality across the value chain. Deliver a premium and consistent experience. Reinforce differentiation and premium positioning.
	OF-: Aluminium capsules	Ensure aroma preservation and safety.
Relationship (RF)	Nespresso Club (personalised interaction; recommendations, loyalty). Premium advertising (George Clooney) with a refined, humorous tone; ongoing storytelling and personalised communication. Consistent omnichannel experience; experiential retail environments. Sustainability commitments (AAA Sustainable Quality™ programme, recycling).	Build a direct, emotional, and rewarding connection. Strengthen loyalty. Promote responsible consumption and community belonging. Develop brand trust.
Contribution (CF+/-)	**CF+**: Financial contribution – acceptance of premium price. Behavioural effort – purchasing through exclusive channels and engaging in structured consumption (subscriptions). Moral cost acceptance (aluminium) Ecological contribution – capsule recycling.	Ensure the profitability of the premium model. Encourage active participation. Promote responsible behaviour.
	CF-: Environmental guilt mitigated through capsule recycling	Reduce guilt.

JUSTIFICATIONS / DISCUSSION

Following the presentation of the IMM, this section clarifies and justifies the key choices that guided its construction.

1. Exchange as the foundation of the model

IMM reinstates exchange at the cornerstone of marketing strategy, warranting closer examination of this foundational concept.

Social exchange theory – introduced into marketing largely through Bagozzi (1975) – was gradually overshadowed by the rise of the value-creation paradigm. The removal of "exchange" from the AMA's 2004 definition of marketing illustrated this shift; its reinstatement three years later reaffirmed its centrality to the discipline.

In traditional perspectives, exchange occurs at the end of the process: the firm offers, the customer buys, and the transaction concludes – a clearly transactional vision. Contemporary views, however, conceive exchange as continuous and relational, involving ongoing interactions and significant customer participation. The customer is no longer as malleable as models such as the 4Ps once assumed, but an active co-creator and co-producer of value (Marion 2016; Grönroos 2013), sometimes even reversing the producer–consumer roles (Firat et al. 1995). Consumption thus becomes a form of production, and the customer an active interlocutor.

The IMM incorporates this circular view of exchange, where roles are fluid: A (the supplier) and B (the buyer) alternately act as sender and receiver. Marketing is not a one-way process directed from firm to consumer but a network of mutual interactions operating before, during, and after the transaction. This structure promotes enduring relationships and positions marketing as an interactive system of reciprocal engagement, rather than a unilateral mechanism of persuasion.

2. A model guided by the search for balanced exchange

At the heart of the IMM lies the principle of balance, in sharp contrast with the asymmetrical, firm-dominant orientation of traditional transactional marketing. This notion, with deep theoretical roots (Blake & Mouton 1971; Barnard 1974), has long been recognised as a unifying concept in business strategy (Doyle 1994). The IMM highlights this principle by placing at the core of entrepreneurial activity a central objective: optimising exchanges between the firm and its customers. Temporary imbalances simply reflect the natural dynamics of market power.

Among the key criticisms of the 4Ps is its unidirectional and hierarchical view of exchange, depicting a sovereign firm and a passive consumer, with clearly delineated roles for buyer and seller and an unbalanced relationship favouring the former. In contrast, the IMM seeks equitable reciprocity, aiming for mutual benefit: when the offer meets the buyer's expectations, the latter rewards the seller in ways that also benefit the firm – through payment, positive word of mouth, or repeat purchase. The market thus becomes a mechanism of transformation, that generates mutual satisfaction.

The IMM perspective grounds firm performance in a win–win relationship with the customer rather than dominance. This orientation is especially relevant today, as consumer contributions are not always matched by proportional benefits, leading to imbalances favouring firms (Derobert 2016; Assens & Gerber 2023). In a balanced exchange, by contrast, the customer perceives fair value while the firm earns a just return – a foundation for durable, ethical, and profitable relationships. Transparency and respect reinforce trust and loyalty, while the firm enhances its legitimacy through responsible behaviour. A notable illustration is provided by the French brand C'est qui le Patron?! ("Who's the Boss?!"), which invites consumers to pay slightly higher prices for ethically produced goods co-designed with consumers, to ensure fair income for farmers and sustainable practices (Renault 2019).

Finally, balance replaces coherence (the organising principle of the 4Ps) as the IMM's governing mechanism. Balance is easier to assess – term by term – whereas coherence requires holistic evaluation.

3. The relationship as an adjustment variable: rebalancing transactional and relational logics

Beyond balance, the IMM introduces the relationship as a key adjustment variable, that integrates transactional and relational perspectives, within a single conceptual framework.

The dichotomy between transactional and relational marketing has long structured marketing thought. The former emphasises discrete, short-term transactions between dominant firms and passive consumers; the latter stresses continuous, mutually beneficial relationships. While some view relationship marketing as an evolution of marketing management, others regard it as an alternative paradigm (e.g. Grönroos 2004). With the inclusion of relationship management in the AMA's latest definition of marketing, however, the relational dimension can no longer be treated as peripheral but must be regarded as integral to all exchanges.

In the IMM, the relationship functions as a social bond that both enables and sustains transactions. Its intensity varies by context – from minimal (self-service purchases) to substantial (personal consultations). It contributes to value creation by enhancing experience and trust, or by compensating for structural asymmetries (e.g. high prices offset by perceived quality).

The model encompasses a continuum of relationships, ranging from anonymous, transactional exchanges to socially embedded, co-creative partnerships. This flexibility allows firms to align marketing actions with strategic intent: transactional logics favour short-term efficiency, while relational logics foster long-term engagement, loyalty, and trust.

Even in low-involvement categories, relational mechanisms can operate before or after purchase. Examples include Lay's "Do Us a Flavour" campaign (2024–25), which engaged consumers in co-creation and voting; or Colgate's educational campaigns and social media initiatives. Such actions transform routine consumption into opportunities for interaction and community-building, even for utilitarian products. Some campaigns extend relationality further, by linking purchases to social or environmental causes, reinforcing brand legitimacy.

By positioning the relationship as both variable and mechanism, the IMM integrates transactional and relational logics within a unified structure. It demonstrates that even transactional actions can serve relational purposes – such as learning, visibility, experience, and connection. The systematic inclusion of relationship factors thus promotes a more customercentric and sustainable approach to marketing practice.

4- A broad approach extending beyond the boundaries of marketing action

Because the IMM integrates overlapping capabilities and covarying synergies, it offers a broader and more transversal perspective than the 4Ps. For instance, customer service can foster loyalty as effectively as a marketing campaign. A relational approach to service recovery helps prevent the "double deviation" effect – where failure to repair a problem worsens dissatisfaction – making relational management essential for restoring trust (Belhour et al. 2023).

Similarly, sales teams can build loyalty by providing personalised follow-up and anticipating needs. Satisfaction and retention become shared responsibilities across the organisation, not the exclusive domain of marketing. Beyond core product performance, loyalty arises from a constellation of perceived benefits cultivated over time.

Another example of synergy concerns marketing research and customer insight. The IMM repositions market research – originally among Borden's twelve mix variables – as both a relational and contributive factor: surveys, feedback loops, and co-design processes become not only tools for data collection but also moments of engagement that create awareness and relational value.

In this way, the IMM encourages an integrated, de-siloed organisational logic, aligning marketing, operations and management around the shared objective of balanced exchange.

Scope and fields of application of the IMM

The question of whether marketing mix frameworks can be transposed beyond their original commercial domain has long been debated. Despite numerous extensions – such as the 7P or SAVE models – the traditional mix has struggled to accommodate the diversity of market contexts. By contrast, the IMM offers a structure capable of achieving such integration. Its adaptable architecture naturally extends to a wide range of marketing forms, as outlined below.

• "Traditional" Marketing

In conventional marketing – focused on exchanges between a firm and its target market – operations directed at a given customer segment rely on a combination of factors, guided by the following questions:
Which offerings should be emphasised – the core benefit or peripheral attributes? How credible is the value proposition? How can the prospect's interest be aroused? What type of relationship should be established, and how can it be sustained over time? What contributions can reasonably be expected from the consumer? Is the transaction perceived as fair? Which variables can be adjusted?

• Competitive Marketing

In a competitive context, the IMM serves as a powerful analytical tool for strategy formulation, prompting questions such as:

What actions are competitors taking – are their efforts concentrated on offering, relationship, or contribution factors? Should these be neutralised, bypassed, or countered? What positioning should be adopted?

The IMM thus helps to generalise key strategic options: seeking competitive advantage through quality (offering factors) or through cost (contribution factors), in line with Porter's well-known typology (1982); and increasingly, through relationships, which may constitute a decisive differentiator (Langlois & Tocquer 1992).

• Relationship Marketing

The IMM places relationship marketing at the forefront. By combining transactional and relational logics of commercial action, it clarifies the positioning of various marketing strategies. The model contrasts three main approaches.

. Transactional: purchase decisions are primarily driven by offer-related or cost-related factors (quality, price, value for money).

. Relational: the long-term relationship itself becomes the key determinant of loyalty, emphasising relationship factors.

. Hybrid: seeks to meet immediate market needs, while cultivating enduring relational ties.

While the IMM reconciles these orientations, its approach – through factor arbitration, client-centric continuity, and pursuit of balance – is particularly suited to relational strategies.

• Personal selling/Negotiation

When applied to sales and negotiation, the IMM helps salespeople better understand counterpart positions and identify opportunities by asking: What are the needs of my counterparts? Are there implicit needs or specific projects? What do they value in our offering? Are they satisfied with performance? What contributions are we requesting in return? Is the exchange perceived as fair? What resources do they allocate elsewhere? What kind of relationship exists, and does it suit them? How is the broader organisation involved? This approach was successfully employed by customer advisers, after they had been trained in it.

This framework enables a relational, client-centred approach to negotiation that enhances mutual understanding and perceived fairness.

• Internal Marketing

Applying marketing logic within the organisation involves extending externally proven principles to employees, thereby strengthening internal alignment and reinforcing the logic of exchange. Internal marketing thus appears as both a success factor for external marketing (Dufer 1988) and a driver of organisational commitment (Zekri & Zaiem 2024).

Nevertheless, several reservations have slowed its diffusion. As Soulez and Pujol (2022) note, “human resources marketing” may still sounds like an oxymoron: the tools used by HR practitioners remain largely rooted in internal communication, whereas a broader, crossfunctional perspective is needed.

A literal application of the 4P mix often reinforces this limitation – questions such as “Who is the product?” or “What is the price?” quickly reach their conceptual limits. By contrast, the Interaction Marketing Mix offers a more appropriate framework. The firm provides employees with various offerings: job content, remuneration, training, rewards, career opportunities, and self-enhancement. In return, employees contribute commitment, engagement, flexibility, and mobility. These exchanges occur within a network of internal relationships that shape the organisational climate.

The IMM proves particularly fruitful here, as it enables personalised approaches tailored to specific employee segments and needs. Observing the effectiveness of this concept, the management of a banking institution appointed one of its top performers as Director of Internal Marketing. In collaboration with the Human Resources Department and the Sales Department, his role is to identify and develop synergies between the bank’s internal and external approaches.

Internal marketing also encompasses internal client–supplier relationships, as described by Zardet (1995). These relationships form an internal value chain (Schonberger 1992), in which each department acts simultaneously as a client of one unit and a supplier to the next.

The IMM provides a structured framework that applies readily to such varied professional contexts, supporting a culture of reciprocity and service throughout the organisation, as illustrated by the following two examples we have encountered in a company :

Internal relationship	Offerings (A → B)	Contributions (B → A)	Mutual benefits
Computing (A) ↔ Commercial (B)	Provision and maintenance of CRM tools, technical support.	User feedback, reporting of malfunctions, expression of needs.	High-performance tools for B; continuous improvement of services for A.
Human Resources (A) ↔ Managers (B)	Recruitment, training, legal and regulatory advice.	Definition of competency requirements, validation of profiles,performance monitoring.	Well-matched and motivated teams for B; better HR alignment for A.

This approach had been systematically implemented across the company's various units, as part of a "Total Customer Satisfaction" programme.

Contributions, limitations and research avenues

Having presented the model and discussed its underlying principles, this section outlines the main contributions of the Interaction Marketing Mix (IMM). As both a conceptual framework and a managerial tool, the IMM offers significant theoretical and practical advances. The discussion below highlights these contributions, followed by its limitations and avenues for future research.

1. Theoretical contributions

This work proposes and explores a conceptual model that contrasts with existing frameworks. Compared with the numerous reformulations of the marketing mix – of which Booms and Bitner's 7P model remains the most operationally comprehensive – the IMM stands out for its logic of reciprocity. Whereas most models remain anchored in an instrumental and unidirectional view of marketing, positioning the firm as sender and the market as receiver, the IMM introduces a bilateral dynamic in which both parties – the company (A) and the customer (B) – alternately act as sender and receiver, within a balanced exchange relationship.

By allowing A and B to interchange the roles of provider and requester, the interactive structure underpinning the IMM transcends the traditional divide between supply-driven and demand-driven marketing. Marketing thus becomes not a set of actions directed at the market, but a system of reciprocal interactions pursuing mutual benefits. The IMM places exchange once again at the core of marketing strategy.

Conceptually, the model replaces traditional instrumental variables (Product, Price, Promotion, Place, etc.) with three categories of action factors: offering factors (representing what the firm offers); relationship factors (encompassing the social and symbolic ties structuring the exchange); and contribution factors (referring to the resources – monetary or otherwise – that customers invest). This third category explicitly recognises the customer's active role in value creation, not only through purchase but also through time, attention, coproduction, data sharing, or word-of-mouth. Value co-creation is therefore fully integrated into the structure of the IMM, rather than treated as a peripheral principle.

The model replaces the traditional principle of internal coherence, with the search for a dynamic balance between offerings and contributions. This equilibrium – enriched by relational components – becomes the new criterion for assessing exchange quality, from both actors' perspectives.

By restoring mutual respect to marketing thought, the IMM reconciles managerial efficiency with social legitimacy. It represents less an adaptation than a paradigmatic reorientation, embedding performance within fairness and relational sustainability. Its principle of reciprocity aligns with contemporary ethical expectations and with the definition of marketing proposed by the French Marketing Association (AFM 2015): "Marketing is a concept of exchange and a set of practices that aim to create sustainable value for all stakeholders (individuals, businesses, or organisations)."

The guiding concept of balance gives the IMM particular relevance today, allowing bridges to be built between approaches that might otherwise appear incompatible. It also addresses certain internal limitations of the 4P framework. For instance, the "Promotion" variable – often criticised for its excessive focus on persuasion – finds renewed meaning within the IMM's bilateral and participatory logic. The model also clarifies long-standing ambiguities (e.g. the place of sales force or branding) by shifting the analytical focus from variables to action factors.

Finally, the universal and ethical orientation of the IMM extends its relevance beyond commercial sectors to domains such as internal, competitive, and negotiation marketing.

2. Managerial implications

For marketing practitioners, organisational leaders and entrepreneurs, the IMM provides a practical and flexible framework for implementing customer-oriented strategies. It encourages systematic consideration of the recipient's perspective when defining operational elements: How is the offer perceived? What type of relationship is expected? What contributions are required in return?

The contribution factors highlight the need to account for non-monetary efforts – such as time, attention, data, and engagement – when evaluating exchange value. The IMM also invites firms to adopt a relational mindset, even when products naturally lend themselves to transactional management. It supports strategic planning by integrating relational and ethical dimensions across several parameters: customer orientation, buyer type (relational or transactional), product nature (durable good, consumable, or service), and level of corporate social responsibility.

The model thus contributes to more responsible business practices and to a fairer economy. Its emphasis on interactivity aligns with the goals of sustainable development, promoting harmony and mutual understanding among stakeholders.

Furthermore, the IMM avoids the "marketing myopia" denounced by Levitt (1960), by focusing on performance factors rather than on products themselves. It recognises that value creation extends both before and after the transaction, integrating activities such as market research and after-sales communication into the mix.

Finally, the IMM's dual adaptability – commercial and organisational – constitutes one of its distinctive strengths. It can be adjusted to evolving environments, while remaining applicable across a variety of contexts beyond traditional marketing.

3. Limitations

Although the IMM is well suited to core marketing activities – such as interpersonal negotiation – it remains primarily strategic rather than operational. Field applications often require more concrete tools than those offered by conceptual models. By emphasising the customer's perspective and focusing on the final outcome (the delivered offer), the IMM may appear less practical for tasks such as pricing or logistics management. It is arguably easier for managers to set a price or an advertising budget, than to analyse the range of contributions and relational factors involved in a transaction. Yet, while traditional approaches may be simpler to apply, they are not necessarily more effective: the IMM offers a more demanding but more relevant framework.

By distinguishing between offering and relationship factors, the model also clarifies two forms of loyalty – one based on the offer, the other on the relationship. While its interactive structure may create virtuous feedback loops of mutual satisfaction, maintaining this equilibrium can be difficult. The IMM may therefore prove more effective for retention than for acquisition.

Lastly, its high adaptability represents both a strength and a weakness. While it allows application across diverse contexts, excessive flexibility might lead to suboptimal outcomes compared with more targeted approaches. In certain situations, strategic withdrawal may prove wiser than constant adjustment.

4. Research avenues

The IMM opens up a wide range of opportunities for future research. Chief among them is the need for empirical validation across different sectors to assess its robustness and applicability, particularly in the context of physical goods. Comparative studies with traditional marketing mix models (4P, 7P, SAVE, etc.) could further evaluate its conceptual relevance and operational effectiveness.

Future research should also examine relationship and contribution factors in greater depth, especially regarding the customer's role as a co-creator of value and the mechanisms that sustain balance in exchanges. Both the compensatory mechanisms underpinning the model, and the underlying pursuit of equilibrium that guides them, may be of particular interest to scholars investigating perceived value and its operationalization.

Finally, the transformations brought about by digitalization and the rise of artificial intelligence invite research into how the interaction mix can be adapted to hybrid environments, where physical interactions, digital platforms, and online communities converge. The observation of emerging practices in these settings could refine the model, highlight its limitations, and suggest new avenues for application.

CONCLUSION

By linking managerial applicability with theoretical coherence, the IMM offers a renewed foundation for marketing thought and practice. Beyond its conceptual contribution, it promotes a responsible and human-centred vision of marketing – one that reconciles managerial performance with fairness and mutual respect. In doing so, it opens promising avenues for research and innovation, towards sustainable and balanced value creation. In this respect, the paper serves as an invitation to both scholars and practitioners, to further explore and validate the IMM across diverse marketing contexts.

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