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Exploring the Influence of Intelligent Personal Assistants on Brand Perception and Purchase Intentions Across Generations of Greek Consumers for Technology Products

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Abstract
Our study is based on Social Presence Theory and Youn and Cho's (2023) model, investigating how Intelligent Personal Assistants (IPAs) influence consumer behavior. It specifically looks at how the humanized naming of IPAs affects the acceptance of recommendations through parasocial interaction and how these recommendations impact brand evaluation and purchase intentions, moderated by brand generation and credibility. We used an online self-administered questionnaire distributed via Google Forms, with convenience sampling from students at the Hellenic Open University and colleagues. The sample included 307 IPA users who bought technology products. Six of the nine tested hypotheses were supported ($p < 0.05$). The Spearman rank correlation test evaluated the relationships between variables, while the polynomial equation provided more profound insights. Box plots identified outliers, and linear regression analysis showed that humanized naming positively affected IPA adherence, with parasocial interaction mediating. Positive IPA interactions also enhance brand evaluation and increase technological product purchase intentions. The discussion highlights theoretical, managerial, and practical implications, along with future research opportunities to explore the impact of AI marketing on consumer behavior.

Keywords: Intelligent Personal Assistants (IPAs), brand evaluation, purchase intentions, generations, technology products, Social Presence Theory.

JEL classification: M31, M39.

Introduction
Research aim and research problem

Scholars highlight the importance of anthropomorphic marketing in understanding consumer behavior, as it manipulates and satisfies consumers' anthropomorphic tendencies, influencing their attitudes, behaviors, and psychological perceptions (e.g., Zhang & Wang, 2023). However, research on the impact of anthropomorphic products on customer behavior remains insufficiently thorough. The generation cohort theory suggests notable disparities in user behavior and expectations among various generations when using intelligent personal assistants (IPAs) (Guo & Luo, 2023). AI's superior suggestion quality, based on social presence theory, has led to positive consumer responses to AI recommendations (Youn & Cho, 2023).

To clarify how IPA humanized naming affects brand evaluation and purchase intentions, we adopt a survey method to analyze responses from consumers in major Greek cities. We examine the impact of IPA humanized naming on the intention to accept recommendations via parasocial interaction. Additionally, we test the effect of intention to accept IPA recommendations on brand evaluation and purchase intention, considering brand credibility as a moderating variable (Guo & Luo, 2023). Our research model also considers generation as a moderating variable in these relationships.

Research objectives and initial assumptions

The research objectives of this article are to investigate (1) the impact and relationships (strength and direction) between humanized naming and Greek consumers' intention to accept IPA recommendations for technology products; (2) the intermediate effect of parasocial interaction on these intentions; (3) the relationships among intention to accept IPA recommendations, brand evaluation, and purchase intentions; and (4) the moderating role of different generations (Gen X, Y, Z) and brand credibility on these relationships in the context of Greek consumers and technology products.

This study outlines initial assumptions to evaluate the reasoning in the domain of IPA recommendations:

(1) IPA enhances recommendation quality, leading consumers to react positively to suggestions for technology products.

(2) Consumers perceive IPAs as more human-like when given anthropomorphic cues, such as a human name, increasing their sense of sociality.

(3) IPA anthropomorphism boosts user engagement, interaction satisfaction, recommendation quality, and trust while enhancing brand likability through parasocial interaction and perceived dialogue.

Importance of the topic expected contributions and justification for the focus of the study

The global market for Intelligent Personal Assistants (IPAs) was valued at USD 8.5 billion in 2023 and is expected to grow to USD 88.6 billion by 2032, with a CAGR of 32.10% (Market Research Future, 2025). Another report estimates the AI-powered personal assistants' market at USD 108.60 billion in 2023, reaching USD 242.30 billion by 2030, with a CAGR of 17.3% (Future Data Stats, 2025). The growth of IPAs is driven by increasing smartphone adoption and advancements in natural language processing (NLP) and machine learning, with AI projected to contribute up to USD 15.7 trillion to the global economy by 2030 (PwC, 2023).

The advancement of artificial intelligence has transformed consumer behavior literature (Spais & Jain, 2025; Spais et al., 2024). This study is important because it explores how intelligent personal assistants (IPAs) can connect across generations (Gen X, Y, and Z). Through parasocial interaction, it investigates how IPA humanized naming affects acceptance of recommendations. Additionally, it investigates how generational perceptions and brand credibility influence brand evaluation and purchase intention for technology products. Our research aims to assist marketers in using IPAs to improve brand perception and sway consumer choices. Businesses can enhance campaign targeting, optimize product recommendations, and enhance the user experience for technology products by comprehending how IPAs affect behavior. The impact of Intelligent Personal Assistants (IPAs) on consumer attitudes and tech product purchases is examined in this article to provide a more complete understanding of consumer behavior, we examine how humanized IPA naming affects brand evaluation and purchase intentions. Future IPA innovations are guided by the findings, which will assist marketers in enhancing consumer experiences and executing more successful marketing campaigns.

1. Theoretical framework, research model and literature support

1.1 Frame of reference

Some academics interchange "presence" and "immersion," but they have distinct meanings. Slater and Wilbur (1997) define immersion as a medium's ability to create lifelike experiences that transport viewers from their physical reality. A medium that offers a rich view of reality is considered more immersive. Presence is the subjective perception of genuinely existing in a virtual environment, distinct from immersion (Slater & Wilbur, 1997). It is crucial for user engagement in virtual reality (Cummings et al., 2012). There are three subcategories of presence: social presence, self-presence, and telepresence. Self-presence focuses on the authenticity of the virtual self and the connection to one's virtual body and identity (Aymerich-Franch et al., 2012). Early research on computer-mediated communication (CMC) suggested that technology influences social presence (Walther & Parks, 2002). Media richness theory (Daft & Lengel, 1986) claims that different media vary in their ability to convey social information, affecting their effectiveness for specific tasks. Walther (1996) argued that the interactants, not the medium, shape social presence. Social information processing theory posits that text-based CMC can foster closeness like face-to-face interactions, though at a slower pace. Users can selectively present themselves, potentially achieving a more fabulous social presence than direct interactions.

1.2 Social Presence theory

Short et al. (1976) introduced the Social Presence Theory, which examined how individuals perceive one another in mediated communication, particularly through digital interfaces. With its origins in symbolic interactionism and interpersonal communication, the theory asserts that social presence is portrayed differently in communication media (Fernback, 2019). Recent social media research shows that face-to-face interactions typically offer a more substantial social presence than online text-based communication. However, virtual reality and other technological advancements can improve social presence by enabling users to project and perceive physical and emotional connections (Oh et al., 2018). Despite improvements, measurement and implementation problems persist, even though improved social presence can lead to more meaningful digital experiences (Flavián et al., 2024). Additionally, social presence has been connected to the community online, where users display nonverbal behaviors that strengthen their ties even without face-to-face interactions (Wong & Hung, 2023).

1.3 Theoretical model of Youn and Cho

Youn and Cho (2023) draw attention to three consumer reactions impacted by anthropomorphic cues: their attitudes toward AI chatbots and their plans to use the chatbot app and heed its advice (see Figure 1). Good customer feedback is crucial for the sustainable use of this technology. Previous studies have shown a strong correlation between attitudes toward AI chatbots and the adoption and use of technology (Youn and Cho, 2023). Behavioral intentions (such as the desire to continue utilizing a chatbot) are crucial in this case. Human-like profile pictures are an example of an anthropomorphic visual cue that can improve social presence and emotional connection. By mimicking two-way communication and fostering social ties through parasocial interactions, these cues give AI chatbots a more human appearance. Building enduring relationships with AI agents requires these exchanges. These interactions are necessary to establish long-lasting relationships with AI agents. The study of human-computer interaction has recognized the significance of social presence and how parasocial interactions influence how users react to AI chatbots. Anthropomorphic cues can boost interactions with AI chatbots and encourage parasocial engagement by appealing to social, task, and physical attraction.

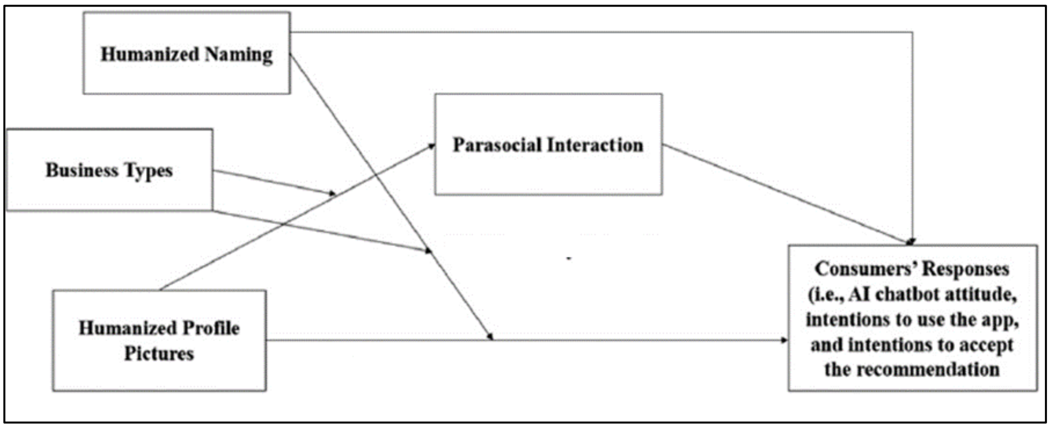

Figure 1. Theoretical model

Source: Youn and Cho (2023), p.1036

1.4 Hypotheses development

The authors define humanized naming as naming non-human entities with human-like names, voices, and characteristics, promoting social bonding, and welcoming suggestions. Examples of names that can evoke emotions and lead to more favorable evaluations are Alexa and Siri (Zhang & Wang, 2023). Human names and other anthropomorphic cues influence how people view AI chatbots as social and establish social bonding expectations (Youn & Cho, 2023). Product naming can improve attitudes and increase purchase intentions by fostering a sense of ownership (Stoner et al., 2018). Effective naming relies heavily on fit and originality, which boosts customer evaluation and acceptance (Stoner et al., 2018). Humanized naming is a flexible approach to improving interaction with technology products because these benefits hold for various products and customer demographics (Stoner et al. 2018). Therefore, we can state:

H1: Humanized naming positively influences consumer intentions for technology products to accept IPA recommendations.

As technology continues to be integrated into our lives, IPAs will play a significant role as buying and personal assistants (Liu et al., 2025). Personalized and conversational IPAs can enhance informational and emotional support, positively influencing purchase intentions. Trusted brands can leverage IPAs to boost purchase intentions (Guo & Luo, 2023). Tailored IPA recommendations can lead to higher brand attitudes and purchase intentions, as consumers trust personally relevant recommendations (Hamilton et al., 2021). High personalization quality and perceived empathy in AI recommendations significantly influence consumer behavioral intentions, enhancing acceptance and brand evaluation (Yoon & Lee, 2021). AI-powered voice assistants, like Amazon Echo, drive brand engagement through social presence and perceived intelligence, influencing brand usage intentions (Rawool et al., 2024; Maduku et al., 2024; McLean et al., 2021). Brand credibility can mitigate privacy concerns associated with IPAs, enhancing perceived value and loyalty (Maroufkhani et al., 2022). Trust in IPA recommendations results in positive brand evaluation (Flavián et al., 2023), occurring in three stages: a joyful experience, understanding customer preferences, and consistent exchanges (Obiegbu & Larsen, 2024). Therefore, we can state:

H2: Consumer intentions for technology products to accept IPA recommendations positively influence brand evaluation.

Greek consumers' intentions to purchase technology products vary, with younger consumers being more likely to purchase. Platform connectivity and pricing influence factors

(Vlachos and Ourgantzoglou, 2025). Consumer purchasing decisions are greatly influenced by brand credibility, particularly in the tech industry (Guo & Luo, 2023). Perceived quality and brand name, such as Samsung devices, strongly influence purchase choices (Mohammad et al., 2024). Brand familiarity and confidence also affect purchase intentions. Positive eWOM on platforms like Facebook impacts brand attitude and purchase intentions for electronics. Involvement with a brand's social media, driven by quality content, enhances consumer attitudes and future purchase intentions (McClure & Seock, 2020). While brand image alone may not significantly influence purchase intentions, product quality and hedonic value do, as seen with iPhone products in Indonesia. Influencers' credibility, professionalism, and satisfaction from live-streaming sales positively impact purchase intentions (Chen et al., 2024). Well-known component brands enhance perceptions of quality and influence decisions for IT products (Ghorbani & Westermann, 2025). The intention to accept IPA recommendations is crucial for our research. As technology advances, IPAs will be crucial in buying and personal assistance (Rosário & Dias, 2025). Consumers' tendency to buy tech products amid the technological explosion is described by Zhang and Wang (2023). Therefore, we can state:

H3: Brand evaluation positively influences purchase intentions of consumers of technology products.

Parasocial interaction is an individual's emotional bond with media characters and related products. Characters and the products they are linked to, particularly technology products, are generally trusted by the public (Noor et al., 2022). IPAs and other technology products with humanized names can positively impact consumers' intentions to follow recommendations (Morsello & Bonomo, 2024). Customers bond with the product through parasocial interaction, which mediates this effect (Chaturvedi et al., 2025). Product names can improve attitudes, evaluations, purchase intentions, and willingness to follow instructions, all of which contribute to psychological ownership (Lin & Chen, 2020). Because IPAs' humanized names promote parasocial interactions, consumers are more receptive to recommendations because they perceive the product as reliable and relatable. Because naming consistently improves consumer acceptance and engagement across a variety of products and consumer demographics, it is widely applicable. Parasocial interaction can increase acceptance of IPA recommendations by promoting more emotional communication between humans and machines (Ma and Huo, 2025). Therefore, a potent tool for influencing consumer acceptance of IPA recommendations is humanized naming strategies that encourage parasocial interaction. Therefore, we can state:

H4: Humanized naming positively influences consumer intentions for technology products to accept IPA recommendations through the intermediate effect of parasocial interaction.

Consumer behavior, including preferences for tech products and decisions to buy, is significantly influenced by generational differences (Ameen et al., 2021). Different generations interact with technology and accept IPA recommendations differently because they respond differently to anthropomorphic design elements and have varying degrees of comfort with them (Guo & Luo, 2023). The relationship between consumers' intentions to accept recommendations from IPAs and their humanized names may be impacted by generational differences. It has been demonstrated that human-sounding virtual assistants boost persuasiveness and allay users' fears of autonomy. By making IPA recommendations more believable and approachable, humanized naming can increase user acceptance of those recommendations (e.g., Nigbur & Chatfield, 2025; Voorveld & Araujo, 2020). Although the data does not explicitly address this issue, it is reasonable to assume that different generations may have varying levels of comfort and trust with technology. While younger generations, who are used to digital interactions, may be less impacted by such cues, older generations may be more skeptical of technology and, thus, more influenced by humanized naming. If IPA recommendations enhance decision-making and save time, customers will accept them (Guo & Luo, 2023). The idea that IPA recommendations with humanized naming should be accepted is moderated by the fact that it differs between generations. Therefore, we can state:

H5a: Generation moderates the relationship between humanized naming and consumers' intentions for technology products to accept IPA recommendations.

Significant behavioral and preference differences between Baby Boomers, Gen X, Gen Y, and Gen Z are highlighted by Guo and Luo (2023). Regarding Intelligent Personal Assistants (IPAs), Gen Z exhibits unique behaviors. They often use them for voice-activated, hands-free features that enable multitasking and customized interactions. Their purchase intentions are positively impacted by the informational and emotional support enhanced by personalization and a conversational tone in IPAs. The positive correlation between Gen Z's purchase intentions and IPA support is reinforced by brand credibility. Different generations have different perspectives on and levels of trust in brands (Lee et al., 2025), which affects how they assess brands according to IPA recommendations. Generation moderates the acceptance of IPA suggestions and brand assessments. According to recent research (Herrera, 2025), transparency in AI interactions is crucial, while Hamilton et al. (2021) emphasize the collaboration between IPAs and influencer marketing. Patel and Kumar (2025) discuss the effectiveness of digital marketing strategies across generational cohorts. Trust in IPA's recommendations is increased by brand credibility, particularly for sophisticated technological products (Zhang & Wang, 2023). Therefore, we can state:

H5b: Generation moderates the relationship between consumers' intentions for technology products to accept IPA recommendations and brand evaluation.

Current research indicates that generational differences influence the relationship between brand evaluation and intentions to purchase technology products. Recent studies have shown that generational differences affect brand evaluation and intention to purchase technology products. Mohit et al. (2025) found themes like influencer and entrepreneurial marketing relevant to younger generations, and the significance of comprehending the variations in brand perception and purchase intentions among generations is emphasized. As demonstrated by the substantial impact of brand credibility on the relationship between purchase intentions and assistance from intelligent personal assistants, Gen Z places a high value on brand credibility when using smart technologies (Guo & Luo, 2023). For Generation Y, electronic word of mouth (eWOM) affects purchase intentions through brand image, indicating that online communications and brand image influence Gen Y. Generation Y's purchase intentions are driven by self-confidence and perceived quality. In contrast, Generation Z is influenced by brand awareness and image. Guerra-Tamez et al. (2024) found that AI exposure and attitude enhance brand trust among Generation Z, positively impacting purchasing decisions. Shin and Choi (2021) explored the effect of generation on perceived source credibility and its impact on the relationship between source credibility, brand image, and purchase intention. Though focused on the hotel industry, their findings are applicable to technology products, highlighting how generational differences influence brand evaluation and purchase intentions. Therefore, we can state:

H5c: Generation moderates the relationship between brand evaluation and purchase intentions of consumers of technology products.

Brand reputation influences buying decisions through trust and beliefs, leading to customer loyalty and brand success (Zhang & Wang, 2023). Personalization enhances informational and emotional bonds, with IPAs playing a key role (Guo & Luo, 2023). High brand credibility boosts sales and evaluations, which managers should know (Guo & Luo, 2023). In our highly communicative world, it also boosts word-of-mouth, which is crucial for purchase intention (Sweeney & Swait, 2008). According to recent research, consumer intentions, brand evaluation, and IPA recommendations for technology products are all influenced by brand credibility. It significantly affects customer satisfaction and the adoption of AI-based voice services, according to Matosas-López (2025). Guerra-Tamez et al. (2024) find that AI exposure and accuracy perception boost brand trust, which affects Generation Z's purchasing decisions. These findings suggest that brand credibility affects short-term consumer intentions and long-term brand evaluation. Brand credibility moderates the relationship between consumer intentions and brand evaluation, while positive brand evaluation boosts acceptance of IPA recommendations (Liu et al., 2025). The moderating effect of brand credibility is thus highlighted by consumer intentions to adhere to IPA recommendations, which improve brand evaluation. Thus, we can state:

H6a: Brand credibility moderates the relationship between consumers' intentions for technology products to accept IPA recommendations and brand evaluation.

Customers value brand credibility highly when choosing technological products that change communication and human interaction (Keller, 2013). A trustworthy and knowledgeable brand increases feelings and purchase intention; this effect is more pronounced for complex products (Zhang & Wang, 2023). One element that may moderate the association between purchase intention and brand evaluation is consumer experience (Guo & Luo, 2023). Brand credibility significantly moderates the relationship between brand evaluation and purchase intentions, especially for technology products (Mican & Sitar-Taut, 2024). Perceived quality, risk, and trust all impact on this relationship (Phamthi et al., 2024). Brand credibility influences consumer behavior when buying technology products by improving perceived utility and usability. It mediates between brand innovativeness and purchase intention (Chen et al., 2024). Innovative and credible brands see higher purchase intentions. Trustworthy online reviews influence purchase intentions by affecting brand equity dimensions like awareness and perceived value, especially in consumer electronics. Increased purchase intentions result from brand credibility, which improves perceived quality and lowers perceived risk—two crucial factors when choosing high-tech products. Gender can moderate this relationship, indicating different perceptions among demographic groups. Brand credibility is crucial in influencing purchase decisions for high-novelty technological products, helping overcome the lack of experience with a product. Consumers trust the brand rather than the product (Guo & Luo, 2023). Trust acts as a cognitive connection between IPAs and consumer acceptance, with trusted brands' IPA recommendations seen as unbiased and reliable, leading to increased acceptance (Song & Lin, 2024). Consumers are more likely to buy from credible and trustworthy brands, especially in the technological area where products demand technical expertise (Guo & Luo, 2023). Consumers often lack personal experience with complex technological products, relying more on the brand's reputation and trustworthiness. This highlights the moderating effect of brand credibility on the relationship between brand evaluation and purchase intentions, especially for new and high-tech products with low consumer experience. Therefore, we can state:

H6b: Brand credibility moderates the relationship between brand evaluation and purchase intentions of consumers of technology products.

The operational definitions of the key constructs are presented in Table 1.

Table 1. Operational definitions of the key constructs

Constructs	***Definitions***	***Sources***
Humanized naming	A human perception of sociality toward IPA through the anthropomorphic cues manifested with a human name, where sociality refers to the desire to achieve social bonding with others and elicit the expectations of social interaction by triggering cues to nonhuman entities using human names.	Youn & Cho (2023)
Parasocial interaction	The illusion of a two-way relationship with a performer or media character during communication via its personas depicted, which ultimately enhances the long-lasting relationship with the agent (either human or nonhuman) beyond the moment the antecedents of parasocial interaction, such as social, task and physical attraction, can be satisfied by anthropomorphic cues of AI agents, which are regarded as triggers for parasocial interaction with IPA.	Youn and Cho (2023); Noor et al., (2022)
Consumers Intensions for technology products to accept IPA recommendations	Consumers' propensity as a sum of attitudes toward the IPA, intentions to use the IPA and intentions to accept IPA's recommendation.	Youn and Cho (2023)
Brand evaluation	The process of evaluating a brand's value by utilizing measures that show how much of an impact it has on consumers.	Zhang and Wang (2023)
Brand credibility	Pertains to the extent to which a customer regards a brand as trustworthy and knowledgeable. It comprises two primary attributes: trustworthiness, the conviction that a business will fulfill its commitments, and expertise, which is the assurance that a business can fulfill its promises.	Guo and Luo (2023); Erdem and Swait (2001);
Purchase intentions of consumers of technology products	Consumers' propensity to buy technology products.	Zhang and Wang, 2023

Source: Authors

The hypotheses derived from the literature review that inform the research model are presented in Figure 2.

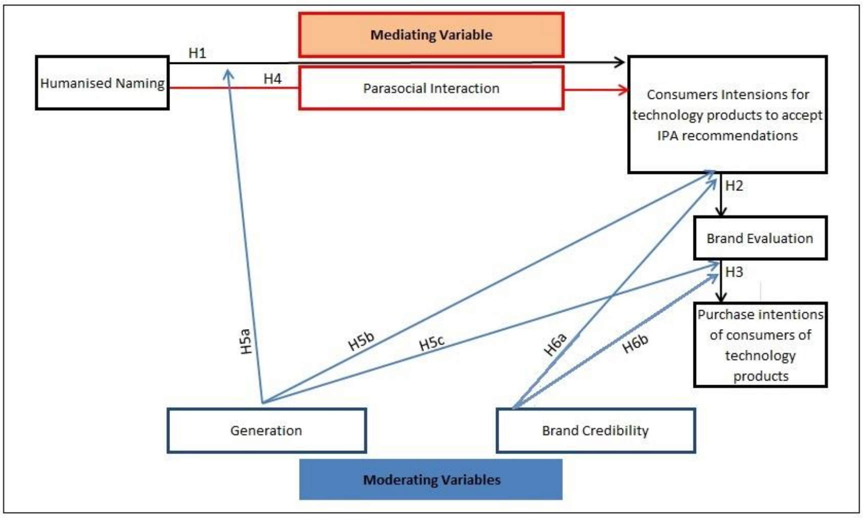

Figure 2. Research model

Source: Authors

2. Methodology

2.1 Research method, sample, sampling strategy, process and data collection

Our study used a self-administered structured questionnaire (SAQ) to collect quantitative data, ensuring no interviewer was present to minimize errors. This approach increases the quality of the surveys and allows us to collect reliable data from a large sample conveniently. This questionnaire has been distributed online using Google Forms.

This study investigates the relationship between humanized naming and Greek consumers' intention to accept IPA recommendations for technology products. It also explores the mediating role of parasocial interaction in this relationship and examines how intentions to accept recommendations relate to brand evaluation and purchase intentions. Finally, we analyze the moderating effects of different generations of Greek consumers and brand credibility on these direct relationships.

Non-probability sampling is utilized when no information about selection probability is available (e.g., Sarker & Al-Muaalemi, 2022). In our questionnaire survey, we opted for convenience sampling, which involved recruiting students from the Hellenic Open University and colleagues from the workplace who agreed to answer the online questionnaire. The sample we collected only includes consumers of technology products from different generations who use IPAs in their everyday lives.

The elements that defined the sample of this study are the following:

Element: Consumers of technology products

Sampling unit: Consumers from different generations that use IPAs daily.

Sampling area: Collection of data from major cities in Greece (Athens, Thessaloniki, Patra, Alexandroupoli, Giannitsa, and Edessa).

Period of data collection: February 15 to May 01, 2024.

2.2 Measures, measurement of variables and variables' level of measurement

We developed a structured questionnaire of sixteen closed-ended questions across eight sections. Participants indicate their level of agreement on a 5-point scale from "strongly disagree" to "strongly agree" (Taherdoost, 2019). The questionnaire includes both nominal and ordinal variables. The eight sections of the questionnaire:

- Section A: 6 questions (No. 1–6) on respondents' demographics, measured at a nominal level.
- Section B: 4 questions (No. 7–10) about the use of Intelligent Personal Assistants (IPAs), including brands and technology categories, measured at a nominal level.
- Section C: 1 question (No. 11) on humanized naming, based on studies by Youn and Cho (2023) and others, measured at an ordinal level.
- Section D: 1 question (No. 12) on parasocial interaction, based on Youn and Cho (2023), measured at an ordinal level.
- Section E: 1 question (No. 13) on consumer intentions to accept IPA recommendations, based on Youn and Cho (2023), measured at an ordinal level.
- Section F: 1 question (No. 14) on brand evaluation, based on Kim and Chao (2019), measured at an ordinal level.

- Section G: 1 question (No. 15) on brand credibility, based on Erdem and Swait (2001), measured at an ordinal level.

- Section H: 1 question (No. 16) on purchase intentions for technology products, based on Hu et al. (2022), measured at an ordinal level.

3. Research results

3.1 Reliability analysis

We examined the reliability analysis through internal consistency, the Cronbach's alpha (α) test. The outcome of each alpha test is the alpha index, which takes prices from 0 to 1 and shows the quality of the data. According to Saw et al. (2025), to claim acceptable internal consistency, we must achieve Cronbach's a > 0.6 for all questionnaire scales, while other studies accept an alpha index > 0.7. The reliability analysis of the constructs measured in the study shows high internal consistency across all variables, with Cronbach's Alpha values ranging from 0.76 to 0.94. Constructs such as "Consumers' Intentions for Technology Products to Accept IPA Recommendations" (α = 0.94), "Brand Evaluation" (α = 0.91), and "Brand Credibility" (α = 0.90) exhibit excellent reliability, indicating strong consistency in measuring the same concept. "Humanized Naming" (α = 0.81) and "Parasocial Interaction" (α = 0.76) show good and acceptable reliability, respectively. The scores for reliability show that the measurement tools are reliable, which reinforces the validity of the findings and their possible application to consumer behavior and acceptance research.

3.2 Hypothesis testing

H1: The relationship is non-linear positive monotonic, where increased consumer intentions for technology products to accept IPA recommendations lead to higher values of humanized naming ($\rho=0.219$, $p<0.001$). Initially, there is a decline, but it eventually rises, showing a positive long-term relationship. The Rho of 0.2 indicates a weak positive correlation, suggesting that while there is a connection between the two variables, the strength of that connection changes as the independent variable increases. a non-linear positive monotonic relationship, indicating that as the values of consumer intentions for technology products to accept IPA recommendations increase, the values on humanized naming also increase. The equation that explains the relationship is:

$$Y = 4.56 - 1.1*x + 0.19*x2$$

where Y represents the dependent variable humanized naming, 4.56 is the y-intercept representing the Y value when X value is zero, -1.1 is the linear effect of X on Y variable and 0.19 represents the positive effect of X. In this context, Y represents an outcome dependent on the variable x. The constant term (4.56) indicates that Y equals 4.56 when x is 0. The coefficient of x is -1.1, showing a negative relationship where Y decreases by 1.1 units for each one-unit increase in x, assuming other factors remain constant. The coefficient of x^2 is 0.19, introducing a quadratic effect, as x increases, the impact of x on Y changes. The positive coefficient indicates that at higher values of x, the impact becomes increasingly positive, counteracting the negative linear effect. Y decreases with increasing x due to the linear term but eventually increases as the quadratic term becomes dominant, creating a parabolic shape in the relationship between Y and x.

H2: The relationship shows a linear positive monotonic relationship, indicating that as the values of consumer intentions for technology products to accept IPA recommendations increase, the values on the brand evaluation also increase and overall, the positive relationship dominates in the long run (ρ=0.551, p<0.001). The Rho of 0.55 indicates a moderate positive correlation. The equation that explains the relationship is:

$$Y = 1.96 + 0.35*x + 0.03*x2,$$

where Y represents the dependent variable brand evaluation, 1.96 is the y-intercept representing the Y value when x value is zero, 0.35 is the linear effect of x on Y variable and 0.03 represents the positive effect of x. In this context, Y represents brand evaluation, predicted by the independent variable x. The y-intercept of 1.96 indicates that when x=0, Y is expected to be 1.96, serving as a baseline. The coefficient 0.35 shows that for each one-unit increase in x and Y increases by 0.35 units, highlighting a positive linear relationship. The coefficient 0.03 indicates a quadratic effect, suggesting that as x rises, the impact on Y also accelerates, resulting in a concave-up curve. The polynomial equation indicates that brand evaluation increases with x, initially at a steady rate, but accelerating as x grows larger, suggesting diminishing returns at lower levels of x.

H3: The relationship shows a linear positive monotonic relationship, indicating that as the values of consumers purchase intentions increase, the values on the brand evaluation also increase and overall, the positive relationship dominates in the long run (ρ=0.742, p<0.001). The Rho of 0.74 indicates a significant positive relationship; as consumers' purchase intentions increase, their brand evaluations also grow. The p-value ($p < 0.001$) suggests that this correlation is statistically significant, meaning that the likelihood of observing such a correlation by chance is very low (less than 0.1%). It suggests a strong and reliable relationship between the two variables, supporting that higher purchase intentions are associated with more favorable brand evaluations. The equation that explains the relationship is:

$$Y = 0.1 + 1.01*X + 0.03*X^2$$

where Y represents the dependent variable brand evaluation, 1.96 is the y-intercept representing the Y value when X value is zero, 0.35 is the linear effect of X on Y variable and 0.03 represents the positive effect of X. The y-intercept (0.1) indicates that when X is zero, the brand evaluation (Y) starts at 0.1. The linear term coefficient (1.01) shows that Y increases by 1.01 units for each one-unit increase in X, reflecting a positive relationship. The quadratic term coefficient (0.03) suggests that as X increases, the rate of increase in Y also accelerates, indicating both linear and quadratic effects. This means that while there may be diminishing returns at lower levels of X, the brand evaluation increases at an accelerating rate as X grows.

H4: The coefficient for Humanized Naming in the first model is 0.13 ($p > 0.05$), and in the second model, it rises to 0.684 ($p > 0.05$). The indirect effect of Parasocial Interaction in the second model is 0.000 ($p < 0.005$). A mediation analysis using bootstrapping revealed the direct effect b coefficient for Humanized Naming is -0.0307 ($p = 0.6843$), indicating no significant effect on consumers' intentions to accept IPA recommendations. Conversely, the b coefficient for Parasocial Interaction is 0.3938 ($p = 0.0000$), showing a significant positive effect. The indirect effect of Humanized Naming through Parasocial Interaction is 0.1492, with a significant 95% confidence interval (BootLLCI = 0.0768, BootULCI = 0.2486), as shown in Figure 3.

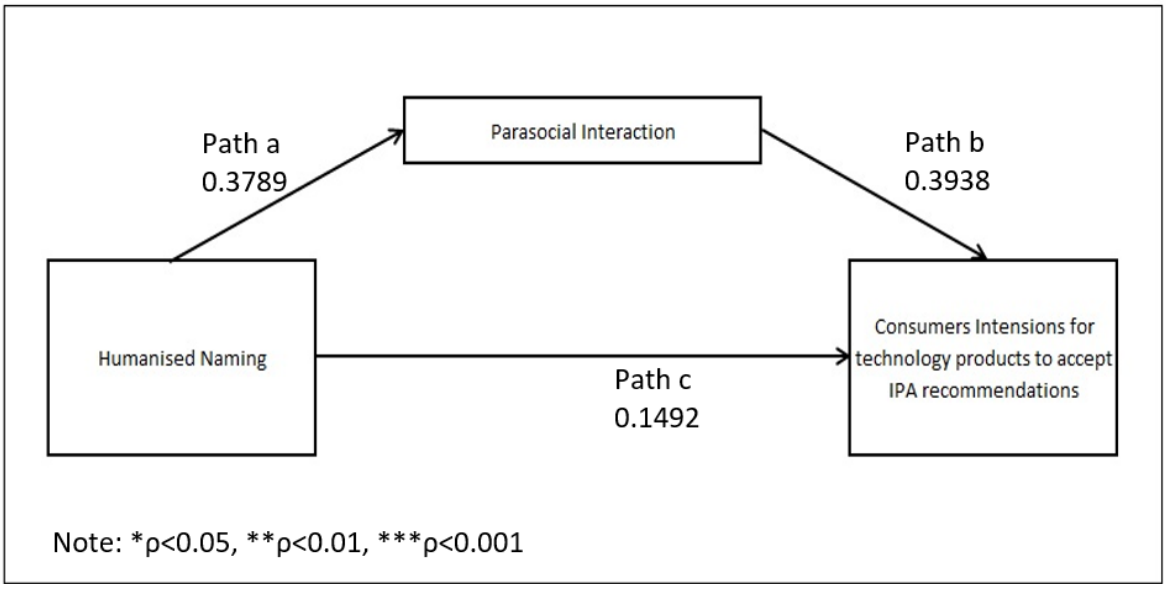

Figure 3. Indirect effect of humanized naming to consumers intentions for technology products to accept IPA recommendations through parasocial interaction

Source: Authors

H5a: Generation does not moderate the relationship between humanized naming and consumer intentions; thus, there is insufficient evidence to support the hypothesis (see Figure 4).

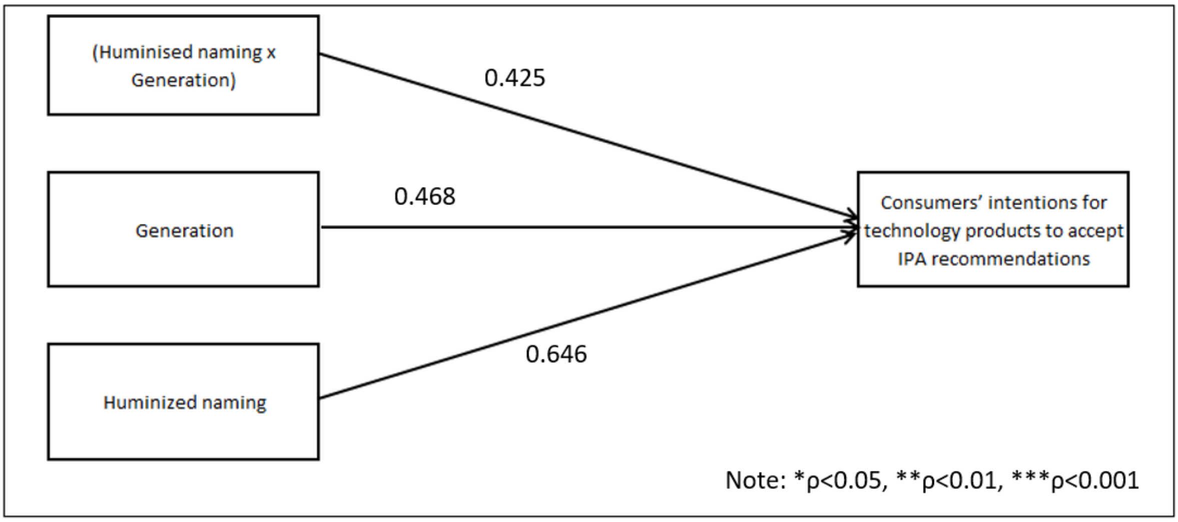

Figure 4. Moderating effect of generation between humanized naming and consumers' intentions for technology products to accept IPA recommendations

Source: Authors

The regression equation follows.

$$Y = b_0 + 0.951x_1 + 0.640x_2 - 0.57(x_1 \text{ x } x_2) + \varepsilon$$

Analytically, the interaction term (-0.57) indicates that humanized naming affects consumers' intentions differently across generations. As the generation variable increases, the positive impact of humanized naming on acceptance of IPA recommendations decreases. This suggests that younger generations may respond less positively to humanized naming than older ones, highlighting a complex relationship influenced by age. Understanding this is essential for effectively marketing technology products to various age groups.

H5b: Generation moderates the relationship between consumers' intentions for technology products to accept IPA recommendations and brand evaluation P-value (0.0001) is highly statistically significant, suggesting that generation has a significant role in moderating the relationship between consumers' intentions and brand evaluation (see Figure 5).

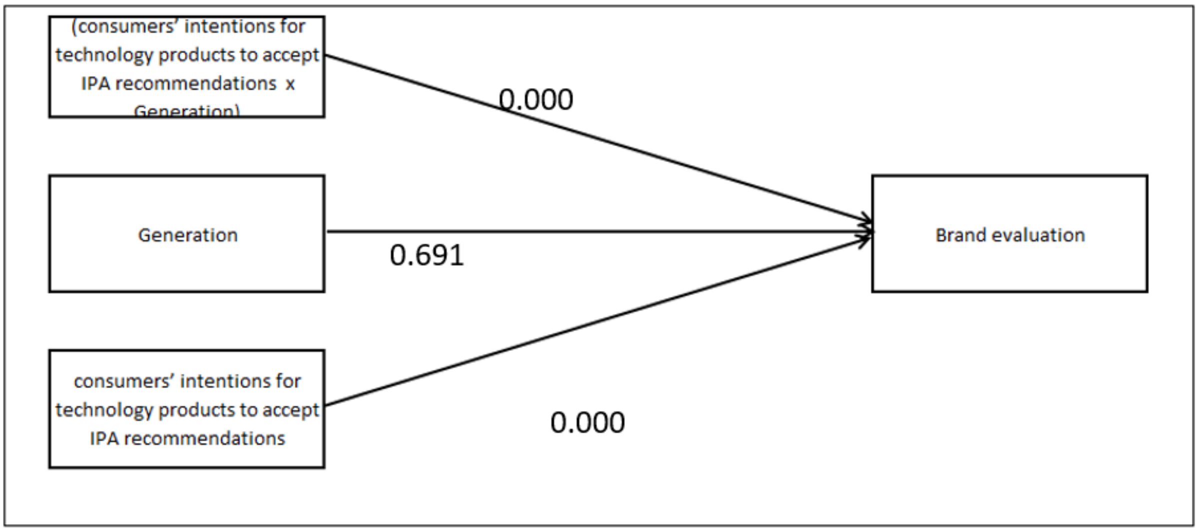

Figure 5. Moderating effect of generation between consumers' intentions for technology products to accept IPA recommendations and brand evaluation

Source: Authors

The regression equation follows.

$$Y = b_0 – 0.166x_1 - 0.311x_2 + 0.980(x_1 \text{ x } x_2) + \varepsilon$$

Analytically, the coefficient for x1 is −0.166, which indicates holding the x2 constant. A one-unit increase in x1 is associated with a decrease of 0.166 units in Y. This suggests that higher values of x1 are linked to lower intentions to accept IPA recommendations or lower brand evaluation. The coefficient for x2 is −0.311. Similarly, holding x1 constant, a one-unit increase in x2 is associated with a decrease of 0.311 units in Y. It indicates that higher values of x2 are also linked to lower intentions or evaluations. The interaction term 0.980 (x1×x2) suggests that the relationship between x1 and Y changes depending on the value of x2 (and vice versa). A one-unit increase in the product of x1 and x2 leads to a 0.980 unit increase in Y, indicating that their combined influence on consumer intentions and brand evaluation is more potent than their individual effects. The moderating role of generation suggests that the impact of x1 and x2 on Y varies across generational cohorts. Younger generations may be more open to technology and IPA recommendations, possibly diminishing or reversing the negative effects of x1 and x2. In contrast, older generations might react more negatively, resulting in a significant decrease in Y with increases in these factors.

H5c: Generation does not moderate the relationship between brand evaluation and purchase intentions of consumers of technology products, as p-value=0.506 our hypothesis is not statistically significant, suggesting that Generation is not a moderator for the relationship between brand evaluation and purchase intentions (see Figure 6).

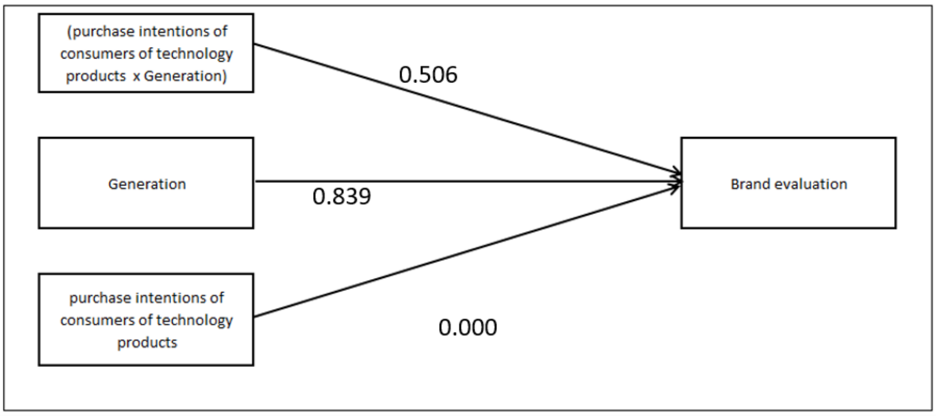

Figure 6. Moderating effect of generation between brand evaluation and purchase intentions of consumers of technology products

Source: Authors

The regression equation follows.

$$Y = b_0 + 0.951x_1 + 0.640x_2 - 0.57(x_1 \text{ x } x_2) + \varepsilon$$

Analytically, a coefficient of x1 (0.951) indicates that for every one-unit increase in brand evaluation, the consumers' purchase intentions increase by approximately 0.951 units, holding all other variables constant. The coefficient of x2 (0.640) suggests that for every one-unit increase in the generation variable, the purchase intentions increase by approximately 0.640 units, holding all other variables constant. The coefficient of the interaction term −0.57(x1×x2) −0.57(x1×x2) indicates that the relationship between brand evaluation and purchase intentions is moderated by generation. The negative sign shows that the beneficial impact of brand evaluation on purchase intentions diminishes as the generation variable rises. The fact that the interaction term is negligible indicates that the influence of brand evaluation on purchase intentions is constant across generations. In other words, this relationship holds for technology products regardless of generation.

H6a: Brand credibility moderates the relationship between consumers' intentions for technology products to accept IPA recommendations and brand evaluation., as the p-value=0.004 and statistically significant. This shows that the relationship between consumer intentions and brand evaluation is moderated by brand credibility (see Figure 7).

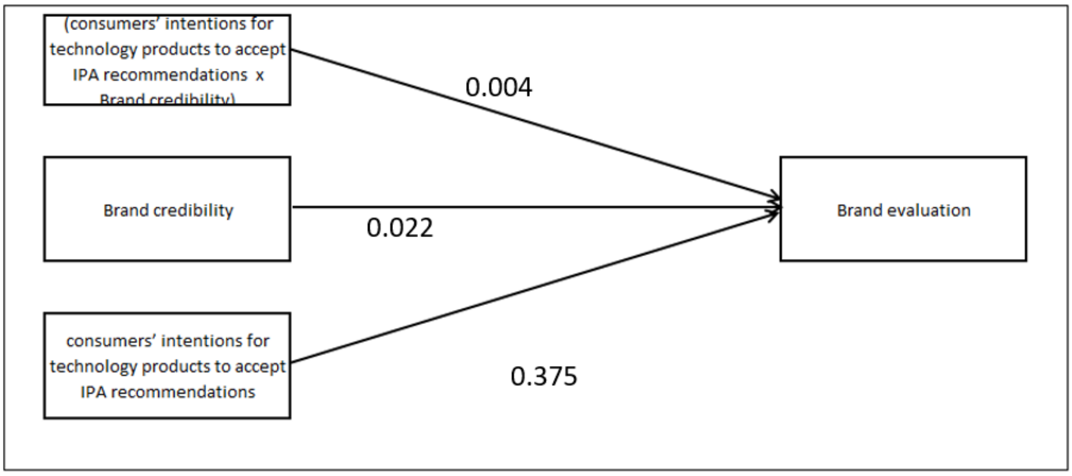

Figure 7. Moderating effect of brand credibility between consumers' intentions for technology products to accept IPA recommendations and brand evaluation

Source: Authors

The regression equation follows.

$$Y = b0 - 0.168x1 + 0.292x2 - 0.109(x1 \text{ x } x2) + \varepsilon$$

Analytically, the intercept (b0) represents the expected value of Y (brand evaluation) when both x1 (intentions) and x2 (brand credibility) are zero. While b0's specific value isn't provided, it is a model baseline. The coefficient of x1 (-0.168) indicates that a one-unit increase in intentions to accept IPA recommendations results in a 0.168 unit decrease in brand evaluation, implying a negative relationship when brand credibility is constant. Conversely, the coefficient of x2 (0.292) shows that a one-unit increase in brand credibility leads to a 0.292 unit increase in brand evaluation, indicating a positive relationship. The interaction term's coefficient (-0.109) suggests that higher brand credibility lessens the negative impact of intentions on brand evaluation. The interaction term's significance ($p = 0.004$) highlights brand credibility's crucial role in influencing how intentions affect brand evaluation.

H6b: Brand credibility does not moderate the relationship between brand evaluation and purchase intentions of consumers of technology products, since the p-value=0.154 (see Figure 8).

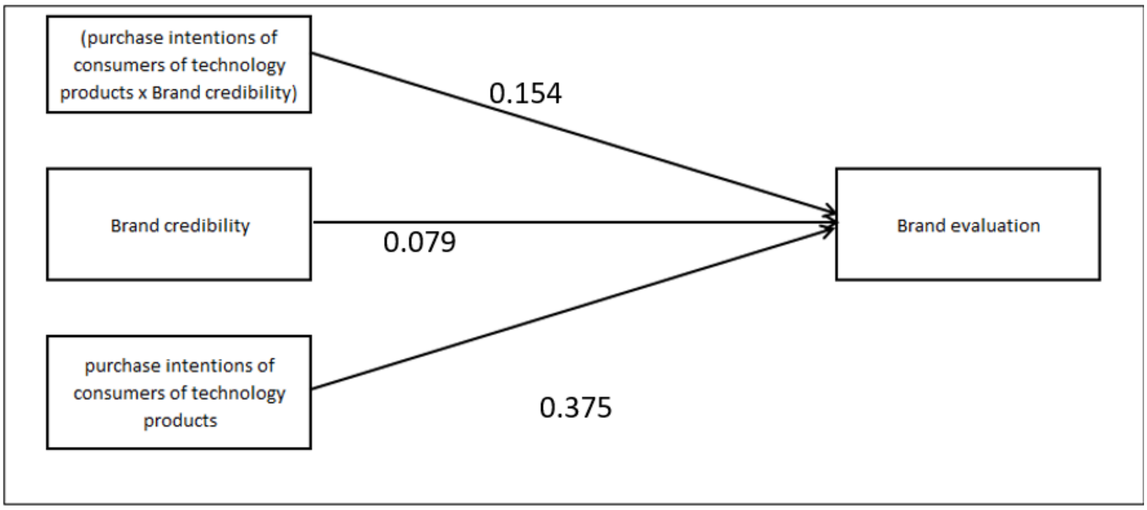

Figure 8. Moderating effect of brand credibility between brand evaluation and purchase intentions of consumers of technology products

Source: Authors

The regression equation follows.

$$Y = b0 + 0.635x1 - 0.227x2 + 0.051(x1 \text{ x } x2) + \varepsilon$$

Analytically, the coefficient 0.635 for x1 indicates that a one-unit increase in brand evaluation leads to a 0.635-unit increase in purchase intentions, assuming brand credibility remains constant. Conversely, the coefficient −0.227 for x2 shows that a one-unit increase in brand credibility results in a 0.227 unit decrease in purchase intentions, again holding brand evaluation constant. The term $0.051(x1 \times x2)$ reflects the interaction effect between brand evaluation and brand credibility, suggesting this relationship changes based on brand credibility. However, the p-value of 0.154 indicates that this interaction is not statistically significant, meaning brand credibility does not significantly moderate the effect of brand evaluation on purchase intentions. Thus, while brand evaluation positively influences purchase intentions and brand credibility negatively affects them, their interaction does not significantly impact purchase intentions.

3.3 Summary of research results

The following figure presents the research model including the research hypotheses results (see Figure 9).

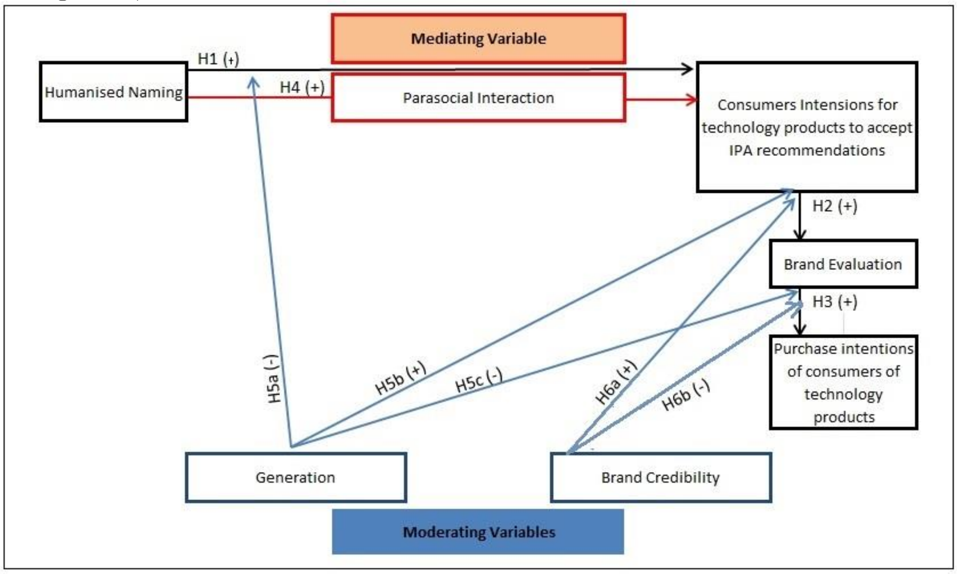

Figure 9. The research model including the research hypotheses results
Source: Authors

The hypotheses' testing results are presented in the following table including the level of significance (see Table 2).

Table 2. Hypotheses' testing results

Hypothesis	Support	Significance Level
• Research Hypothesis (H1): Humanized naming positively influences consumer intentions for technology products to accept IPA recommendations.	Supported	a=0.05
• Research Hypothesis (H2): Consumer intentions for technology products to accept IPA recommendations positively influence brand evaluation.	Supported	a=0.05
• Research Hypothesis (H3): Brand evaluation positively influences purchase intentions of consumers of technology products.	Supported	a=0.05
• Research Hypothesis (H4): Humanized naming positively influences consumers intentions for technology products to accept IPA recommendations through the intermediate effect of parasocial interaction.	Supported	a=0.05
• Research Hypothesis (H5a): Generation moderates the relationship between humanized naming and consumers' intentions for technology products to accept IPA recommendations.	Not supported	a=0.05
• Research Hypothesis (H5b): Generation moderates the relationship between consumers' intentions for technology products to accept IPA recommendations and brand evaluation.	Supported	a=0.05
• Research Hypothesis (H5c): Generation moderates the relationship between brand evaluation and purchase intentions of consumers of technology products.	Not supported	a=0.05
• Research Hypothesis (H6a): Brand credibility moderates the relationship between consumers' intentions for technology products to accept IPA recommendations and brand evaluation.	Supported	a=0.05
• Research Hypothesis (H6b): Brand credibility moderates the relationship between brand evaluation and purchase intentions of consumers of technology products.	Not supported	a=0.05

Source: Authors

3.4 Empirical tested model

Almost forty-eight percent (47.8%) of the explanation is sufficient to fulfill our research objectives and is exploratory when considering the practical applications of our study's results. Although 47.8% is a great starting point, it should be viewed in the broader context of our research objectives and industry norms.

The regression equation is as follows with the fitted line depicted in Figure 10:

INT = -0.740 + 0.469*BE + 0.106*BC – 0.091*HN + 0.296*PI + 0.275 CI (6.9)

(Where INT=purchase intentions of consumers technology products, BE = Brand evaluation, BC = Brand credibility, HN = Humanized naming, GE = Generation, PI = Parasocial interaction, CI=Consumers intentions to accept IPA recommendations)

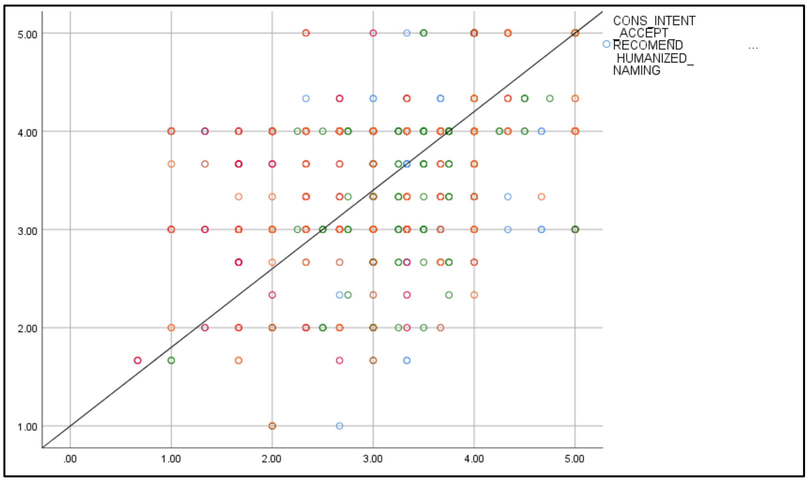

Figure 10. Regression fitted line

Source: Authors

Based on the research results and the relative interpretation, the empirical tested model forms as follows (see Figure 11):

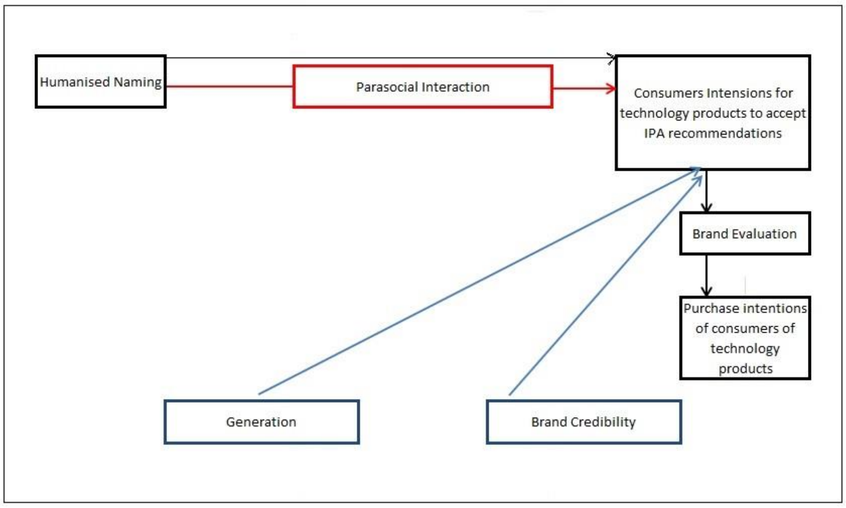

Figure 11. Empirical tested model

Source: Authors

4. Discussion

Our study reveals a non-linear positive relationship between humanized naming and Greek consumers' acceptance of IPA recommendations for technology products. We also found linear positive relationships among acceptance intentions, brand evaluation, and purchase intentions. Humanized naming positively influences acceptance through parasocial interaction, with generation and brand credibility moderating this relationship. Our findings support that IPAs enhance recommendation quality, and consumers respond favorably to them due to anthropomorphic cues, which boost engagement, satisfaction, trust, and brand likability.

According to Youn and Cho (2023), acceptance and purchase intentions are influenced by humanized naming and parasocial interaction. Positive customer experiences are fostered by humanized IPA names, which in turn promote favorable brand evaluations and loyalty (e.g., Bonomo & Morsello, 2024; Liang, 2022). Favorable brand evaluations increase purchase intentions and perceived usefulness and trustworthiness, which are important aspects of brand evaluation (Rawool et al., 2024). Our findings support Youn and Cho's (2023) findings by demonstrating that users accept AI recommendations that exhibit human-like characteristics.

Pramanik and Jana (2025) highlight that accepting AI products relies on humanized naming and perceived trustworthiness. Musa et al. (2024) emphasize the importance of perceived utility and usability in technology acceptance models. Research shows generational differences in comfort with technology (Kumar et al., 2025), and positive recommendations can enhance brand evaluations among younger, tech-savvy consumers (Youn & Cho, 2023). However, other product-related factors may play a more significant role, as there is no generational moderation between brand evaluation and purchase intention (Guo & Luo, 2023).

In conclusion, Bozkurt et al. (2024) found that brand credibility moderates how credibility affects perceptions of competence and trust, resulting in favorable assessments following the adoption of IPA recommendations. Liu et al. (2021) discovered that brand credibility amplifies the benefits of trust in technology adoption and brand evaluation.

4.1 Theoretical and research implications

It seems that SPT offers fascinating theoretical implications for humanized naming and consumer intentions, particularly for IPAs. The idea is that when people use tools that promote human interaction, they feel more socially present. IPAs can use humanized names and conversational styles to make interactions more intimate and engaging. An IPA may be more dependable and trustworthy if perceived as more human because clients may be more inclined to follow their advice (Yeboah et al., 2023; Oh et al., 2018). SPT asserts that social presence is a genuine phenomenon that shapes interaction and is a feature of the communication setting. Human traits like warmth and gregariousness can impact credibility and trust in mediated situations.

From an epistemological standpoint, SPT contends that interactions yield information about a product or brand and that the more "social" an interaction feels, the more reliable it is. Understanding social dynamics in mediated communication, such as how consumers perceive brands and products, requires understanding how they act in social settings. As stated by Attar et al. (2023), these assumptions support the idea that social media attributes can influence how consumers perceive the legitimacy of a business. The assumptions related to mistrust can result from a lack of social interaction, which affects how businesses communicate with consumers online, emphasizing the importance of having a social media presence to build credibility and trust. Since social presence is a real phenomenon that can be measured and observed, technology can help people connect even when physically separated. Because social presence has been shown to impact people's emotions and behavior, it is possible to understand and research the emotional bonds formed through mediated communication (Nass & Moon, 2000). SPT emphasizes emotional engagement and connection, suggesting that the more socially present an individual feels, the more emotionally invested they are. Interactions become more meaningful with greater interpersonal salience (Cummings & Wertz, 2023). SPT's epistemological stance is that social presence's impact on emotional commitment can be comprehended and examined to enhance communication results.

SPT examines how media perceptions impact feelings, behaviors, and thoughts. Personalization and relevance are important. Richer and more engaging media are associated with a more positive social presence (Short et al. 1976). IPAs can help users perceive themselves as personable and approachable by answering questions and tailoring interactions. This sense of connection could increase trust and receptivity to the IPA's recommendations. Relevance and personalization can be improved by an IPA that retains previous responses.

Behavioral intention reflects a user's readiness to engage in specific actions. Users who perceive the IPA positively are more likely to follow its recommendations and evaluate the brand favorably. Research indicates that factors influencing user behavior in interactions with IPAs can lead to purchasing technology products or positive engagement. Behavioral intention is essential for developing the final purchase intent.

4.2 Practical and managerial implications

Communication technologies can mimic in-person interactions, fostering social presence. Given parasocial interaction, examining the marketing effects of Intelligent Personal Assistants (IPAs) with human-like names is important. IPAs, including voice assistants like Siri and Alexa, are key to marketing strategies that influence consumer behavior. Users feel a stronger social presence when IPAs exhibit human-like communication traits such as natural language and empathy. Marketers should focus on developing anthropomorphic IPAs that enhance social presence, leading to greater consumer acceptance of recommendations. Factors like perceived parasocial interaction and effective dialogue improve user engagement, satisfaction, and brand perception (e.g., Ramya & Alur, 2025).

Humanized IPA names can boost brand likeability and trust by encouraging familiarity. When deciding on these names, Brands should consider their image and cultural context. Using engaging content to promote parasocial interactions—one-way relationships that result in positive consumer attitudes—brands can raise consumer affinity for IPAs. Marketers need to strike a balance between open dialogue and transactions. Effective IPA marketing requires parasocial communication, social presence, and humanized naming. In order to foster positive consumer intentions, brands should place a high priority on relatability, authenticity, and user experiences. Our research indicates that emotional attachment has a significant impact on decisions to buy, especially when it comes to tech products. Technology companies should use IPAs to enhance brand perception and strengthen customer relationships because social media raises brand visibility. By considering how various generations perceive influencers based on their social identities and media habits, businesses can tailor IPAs for various client segments. Because generational differences influence people's purchasing decisions, it is critical to comprehend them. Marketers should create specialized promotions, ads, and targeted social media strategies to engage various generations successfully.

Brand credibility depends on user and IPA trust (Guo and Luo, 2023; Jain et al., 2022). Strong relationships foster trust and make purchasing decisions easier, so marketers must ensure IPAs are user-friendly and satisfy customer criteria for trustworthy recommendations. Brand credibility should be developed gradually despite its complexity because it affects customer interactions. Early exposure to the brand's logo may influence customers' purchasing intentions. Because this relationship can speed up purchase intentions, marketers should increase their social media presence to establish a reputation for their brand. Brands can prosper in the rapidly changing tech landscape by leveraging appealing websites, engaging social media content, and tailored recommendations via IPAs.

4.3 Further research and limitations

In the context of IPAs making recommendations for technological products, our study emphasizes the interplay among humanized naming, parasocial interaction, consumer intentions, brand evaluation, and purchase intentions. Aspects like humor, formality, and communication style could be studied further to examine how IPAs affect purchase intention. Cultural differences, including religion and moral convictions, impact consumer interactions with IPAs. Developers and marketers can improve consumer-IPA interactions with the help of these research options.

Future research, mainly using the Social Presence Theory lens, can employ various techniques to investigate how IPAs impact consumers' brand perceptions and purchase inclinations. Descriptive information on consumer experiences and viewpoints can be obtained through qualitative research methods such as focus groups and in-depth interviews. Surveys can be used in quantitative research to gauge the relationship between purchase intentions, brand credibility, and social presence (Chaudhry et al., 2025). Researchers can change the degree of social presence in IPAs to see how it affects brand evaluation. A comprehensive understanding of IPA effects is provided by mixed-methods research, which blends quantitative and qualitative approaches. Researchers can better understand how IPAs affect brand perception by conducting qualitative interviews first, followed by the distribution of surveys to a larger sample. By examining online consumer interactions, netnography can offer important insights into consumer behavior.

Conclusions

We examine how consumer intentions, brand evaluation, humanized naming, parasocial interaction, and purchase intentions relate to IPAs recommending tech products. We examined responses from various customer generations using a questionnaire survey method. Through parasocial interaction, we aimed to evaluate the impact of IPA humanized naming on consumers' acceptance of recommendations. We also look into how purchase intention and brand evaluation affect this acceptance. Guo and Luo (2023) claim that generation is a second moderating variable, and that brand credibility is a variable that alters the relationships between purchase intention, brand evaluation, and recommendation acceptance. Our research is grounded in SPT, which maintains that media with a more fantastic perceived social presence increases trust and sales, as well as Youn and Cho's theoretical model, which examines the anthropomorphic effects of machines on consumer behavior.

Significant findings demonstrate that humanized naming improved consumers' acceptance of IPA recommendations by building a friendly relationship. Because parasocial interaction seems to mediate, consumers' social connection with the IPA is reinforced, and their brand evaluation and purchase intentions are improved. It illustrates how humanized naming favorably affects customers' decisions to buy. The findings significantly impact our research objectives since they demonstrate the relationships between humanized naming and Greek consumers' acceptance of IPA recommendations for technology products. We highlighted the parasocial interaction's intermediate effect and demonstrated the connections between purchase intentions, brand evaluation, and acceptance intentions. We also examined brand credibility and the moderating influence of various generations (Gen X, Y, and Z) in these relationships.

Understanding consumer behavior in technology products is significantly impacted by SPT's perception of social presence as a genuine phenomenon. Both marketing practitioners and scholars can benefit from the findings. To obtain more insights, future studies should use a combination of approaches to investigate how IPAs impact brand perceptions and purchase inclinations through SPT. In line with Spais et al. (2024) and Spais and Jain (2025), our study can enhance knowledge of AI marketing and its effects on consumer behavior.

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The Impact of the COVID-19 Pandemic and the Military Conflict in Ukraine on the Business Behavior of Agro-Food Producers in the South-East Area of Romania – Empirical Research

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Abstract
The COVID-19 pandemic and the war from Ukraine have caused many significant changes in people's behavior, especially regarding agro-food products. This article investigates how these two crises have affected the business behavior of farmers whose activity is producing agro-food products. The article was initiated due to the pressing need for knowledge and understanding of how the manifestation of the effects of two different crises, a medical crisis, and a military crisis, directly or indirectly disrupted, hindered, and affected the production process of agro-food products in Romania, a country that was severely affected by the COVID-19 pandemic and the war from Ukraine. This research is crucial in providing insights into the impact of these crises on agro-food production. The research method employed in this article is the focus group. This is a widely accepted and effective qualitative research method. It facilitates generating new ideas and perspectives from the information gathered, which are valuable to researchers in various fields, including marketing. The article is structured into five parts, each contributing to a comprehensive understanding of the topic. The conclusions drawn from this research provide valuable insights, particularly for marketers, aiding in their strategic decision-making and enhancing their understanding of the crisis impacts on agro-food production.

Keywords: Behaviour, Romania, COVID-19, war from Ukraine.

JEL classification: M31.

Introduction

The years 2020 and 2022 can be categorized as pivotal years in the history of the world, as they marked the onset of two extreme crises that significantly altered people's lives and behavior to varying degrees. The first crisis, which started in 2020, was the COVID-19 pandemic (March 2020 – May 2023). It produced suffering, fear, and death through its medical, economic, and social effects (Cranfield, 2020; Donthu and Gustafsson, 2020).

The second crisis was and is an ongoing military conflict or war started by Russia against Ukraine, which began in 2022. Like its predecessor, the COVID-19 pandemic, the Russian-Ukrainian war has generated similar consequences, causing suffering, fear, and death (Tong, 2024). Although the manifestation of the COVID-19 pandemic and war from Ukraine, two different crises, it is interesting that they had comune consequences.

One of the consequences of this commune was manifest in the production of agro-food products (Ben Hassen and El Bilali, 2022; Braun et al., 2023; Lin et al., 2023) because from this reason appeared the need to study and understand the behavior of people who produce agro-food products when one or two crises with distinct characteristics occur individually or simultaneously.

Understanding how the COVID-19 pandemic and the war from Ukraine have changed the behavior of food producers is a priority for protecting people and ensuring their right to life. This is also necessary and useful for the realization and initiation of initiatives that make the production of agro-food products economically profitable for producers while at the same time protecting consumers from excessive price increases for the agro-food products.

The present research aims to capture the business behavior of agro-food producers from Romania (Brăila County – South Est Region) during the COVID-19 pandemic (March 2020-May 2023) and the war from Ukraine (February 2022-August 2023). Romanian agro-food producers were chosen as subjects, which is not a coincidence. Romania's perspective is broad because the country on the edge of the European Union is in a process of change and political maturation. It's essential to remember that Romania, which shares a common land and sea border with the country under attack, Ukraine, was once part of the former communist bloc. This meant it had close political and economic ties with the aggressor, Russia.

The research on the business behavior of agro-food producers in Romania materialized by setting up a focus group. The focus group is a complex and appropriate research method for studying people's behavior. As for the research sections, after this introduction follows a section summarizing aspects related to the impact of the COVID-19 pandemic and the war from Ukraine on society and the production of agro-food products; then follows the section where the methodology used is found, and another section containing the results obtained. The final part of the research, the last section, concludes with some conclusions that can be drawn from the existing data, along with a presentation of the research's limitations and a suggestion for future research that can be prepared based on it.

1. The impact of the COVID-19 pandemic and the war from Ukraine on agro-food products

Over time, the frequency and severity of medical crises, such as epidemics or pandemics, have increased in direct proportion to society's degree of development. This can be easily observed by examining the economic, social, or political effects that emerged and manifested at the regional or global level in response to the medical crises caused, especially since the 20th century (Wang et al., 2024). Thus, the Spanish flu epidemic (1918-1919), the Asian flu (1957-1959), the Hong Kong flu (1968-1970), the Severe Acute Respiratory Syndrome-SARS (2002-2003), the swine flu epidemic (2009-2010) or the Middle East Respiratory Syndrome-MERS epidemic (2015-2018) (Jernigan, 2023; Phillips, 2020), demonstrated that the damage produced by a medical crisis is much more significant when society is more developed. Also, globalization has been a key factor in the rapid spread and impact of medical emergencies.

The outbreak of the COVID-19 pandemic in March 2020 set new records in terms of the number of adverse effects produced by a medical crisis in society. Even if it did not result in the highest number of victims compared to other medical crises throughout history, the COVID-19 pandemic has significantly altered our societal fabric, creating more serious economic, social, and political problems than previous medical crises (Sharif et al., 2020; Tison et al., 2020; Umar et al., 2021).

Viewed strictly from an economic perspective, the COVID-19 pandemic has introduced a level of uncertainty that has impacted numerous markets and critical areas. The uncertainty, coupled with rising production and distribution costs, induced panic, the creation of false needs, and unprecedented price volatility of essential commodities, including agro-food products, all contribute to the complexity of the situation (Adewopo et al., 2021; Umar et al., 2021).

Consumers and producers of agro-food products observed all the effects that appeared, including the significant disruption of the agro-food supply chain and the global food system, which inevitably led to high economic and social instability during that period (Urak et al., 2024). When the situation generated by the COVID-19 pandemic, vis-à-vis agro-food products seemed to be somewhat calm, and when it was starting to be relatively predictable, it broke out in February 2022 at the borders of the European Union and on the territory of one of the safest continents in the world, Europe, a war between Russia and Ukraine.

The reasons that led Russia's leaders to initiate a military crisis are incomprehensible. Still, the fact that Kyiv was directly attacked by missiles sent by Moscow's soldiers made the already existing problems generated by the COVID-19 pandemic not diminish but amplify and expand. These consequences have also led to new imbalances in various other fields, including agro-food production (Chang et al., 2020; Urak et al., 2022).

In the case of the COVID-19 pandemic, the production of agro-food products was affected because the human resources involved in the production and transportation processes encountered a series of problems generated by travel restrictions and protective measures imposed to minimize the spread of the SARS-CoV-2 virus (Loske, 2020). The situation was significantly altered in the context created by the outbreak of the war in Ukraine. As a result of the destruction of critical infrastructure for agro-food production, the conversion of agricultural lands into battlefields (Abay et al., 2023), and the significant enlistment of human resources into the army, the agro-food products, their producers, and consumers have suffered substantial losses, highlighting the human cost of the conflict (Urak et al., 2024).

Similar to what happened during the COVID-19 pandemic and the war from Ukraine, the supply chain of agro-food products and the global food system was affected by the actual unfolding of the military conflict and the political and economic sanctions imposed on Russia (Ben Hassen and El Bilali, 2022; Hosoe, 2023; Husain, 2022). Although the sanctions were intended to impact only Russia, their consequences also extended to countries with strong trade relations with it (Jagtap et al., 2022). All the measures taken to destabilize Russia's economy and society led to an increase in the prices of agricultural and food products, as well as many other goods. For example, in February 2022, a ton of wheat costs $281; a month later, it costs $490, representing a 57.34% increase (World Bank, 2022). This means that the price of wheat on international exchanges rose more than 50% from February 2022 to March 2022.

What is worse is that the economic effects will not subside or stabilize quickly, as was the case with the COVID-19 pandemic. Some researchers' predictions, such as those by Chishti et al. (2023), Lin et al. (2023), and Xu et al. (2023), suggest that the consequences of the war in Ukraine on the price of agricultural products are more gloomy and pessimistic than those experienced during the COVID-19 pandemic.

They argue that the military crisis in Ukraine, given the role played by the two countries as major producers of agricultural products, is a key factor in the increase in the value of agro-food prices on global markets. The situation is expected to stabilize only when the war ends, underscoring the urgency of the problem (Abay et al., 2023; Jagtap et al., 2022; Urak et al., 2024).

2. Research methodology

A focus group is a qualitative research method put into practice through a discussion led by a moderator on a specific topic. The discussion aims to obtain the most truthful and high-quality information; therefore, it involves a well-defined production process, as outlined in a conversation guide and facilitated by a moderator (Cătoiu et al., 2009).

As for the aspects related to the actual organization of the focus group, such as the place, duration, number of participants, and date, only the number of participants and the duration are known; the rest (date and place) are determined by the organizers and communicated to the participants in advance (Cătoiu et al., 2009). Thus, between 8 and 12 people who are considered respondents can participate in a focus group. Respondents are selected through an appeal process facilitated by a selection questionnaire, ensuring a fair and transparent selection process. Additionally, the actual duration of the research varies between 60 and 180 minutes, depending on the complexity of the subject and the number of respondents (Cătoiu et al., 2009).

Participation in a focus group is a voluntary and respected activity. While remuneration is sometimes offered, it is always at the discretion of the focus group organizers (Cătoiu et al., 2009). Given the distinct characteristics of the crises generated by the COVID-19 pandemic and the war from Ukraine and the fact that both occurred simultaneously for a period (February 2022 – May 2023), these critical events are notable in terms of their common consequences for those who experienced them.

One of the common consequences of both crises is the impact on the business behavior of individuals who produce agro-food products. The purpose of the research is to investigate how the two crises have impacted the business behavior of individuals who produce agro-food products, also known as "farmers."

Thus, the actual objectives of the research are the following, see Table 1.

Table 1: The research objectives

The objective number	The content of the objective
Objective 1:	observing how producers of agro-food products perceive a crisis
Objective 2:	obtaining general and specific information about the impact of the COVID-19 crisis on their activity in agro-food production
Objective 3:	obtaining general and specific information about the impact that the military conflict in Ukraine has had on their activity in agro-food production
Objective 4:	identification of crisis prevention and management measures based on previous experience

Source: author's own research

To carry out this research according to the proposed purpose and objectives, participants needed to be farmers, specifically producers of agro-food products.

Depending on the type of activity performed, farmers can be of three types: *1) farmers who cultivate cereals, legumes for grains, oleaginous plants, tuberculiferous plants etc.; 2) farmers dealing with the cultivation of vegetables, fruits, and vines or horticulturists*; *3) farmers who raise and breed animals to produce meat, milk, or other products that require raw material meat or milk*.

The research analyzed the opinions of two of the three existing categories of farmers. Thus, the focus group consisted of farmers who are in charge of cultivating cereals, legumes, grains, oil plants, and tuberculiferous plants, as well as those responsible for raising and breeding animals to produce meat. The farmers participating in the research were based in Romania, specifically in Brăila County, located in the country's southeastern region.

The recruitment process for participants in the research began with the distribution of a selection questionnaire through an announcement posted on social networks. The role of the selection questionnaire is to sort the registered people according to specific predetermined criteria (age, sex, occupation, etc.) specific to the subject being treated and the proposed objectives and to exclude people who have already participated in research similar in the last 6 months (Cătoiu et al., 2009).

After the appeal procedure was completed, the persons who met the established requirements were contacted by phone and/or by e-mail, and other information of interest (place, time, date, approximate duration) was sent to them. Eight farmers, aged 26 to 38 years old, participated in the research. All had higher education, with 6 being agronomic engineers and 2 having another specialization.

All participants are involved in the production of agro-food products. Seven of them are exclusively focused on agricultural activities, while one participant stands out for their versatility. This participant is engaged in both the agricultural and zoothenic sectors, cultivating cereals, oleaginous plants, and technical payments, as well as breeding animals for milk and meat.

The eight participants own the land that forms the agricultural holding of their farms, and the area of agricultural land within the holdings they manage ranges from 20 to 145 hectares. All farms are geographically located in Brăila County. The focus group topic aims to study motivation and the factors that determine consumer behavior, representing one of the themes that a focus group can cover (Cojocaru, 2010:47).

Regarding the research period, it took place in August 2023. The data obtained was the subject of a thematic analysis and content analysis. Additionally, no specialized software was used for data analysis, as the volume of data was relatively small.

Regarding the stages in the data analysis process, it is worth noting that there is no well-established formula for analyzing data (Patton, 2002: 431), as the approach ultimately depends on the researcher. However, even if this particularity exists, the data analysis was conducted through the following steps: *(a) transcription of the data, (b) coding of mixed data, (c) thematic organization, and (d) interpretation of the results*.

2.1. Focus group conversation guide

A focus group is a collaborative process that requires implementing a well-defined process outlined in a special document prepared by the research author, known as a conversation guide (Cătoiu et al., 2009).

The conversation guide, a critical tool in the research process, is designed to keep the discussion focused on the established topic for as long as possible. This is to ensure the fulfillment of the proposed goal and objectives (Cătoiu et al., 2009).

The conversation guide (see Table 2) includes a total of 12 questions that the moderator asks the research participants.

Table 2: The questions of the focus group

Question number	The content of the question
Question 1:	Please introduce yourself and describe your professional role and responsibilities.
Question 2:	When you hear the word "crisis", what do you think of from the perspective of the activity you carry out?
Question 3:	Do you consider that the crises generated by the COVID-19 pandemic and the Ukraine military conflict have significantly changed how you conduct your business?
Question 4:	At this moment, after the COVID-19 pandemic has been declared officially over by the World Health Organization, how do you relate to this disease? Does it still affect your work?
Question 5:	What do you think about the military conflict going on in the neighboring country, Ukraine? What does this crisis inspire you from the point of view of the operation of your business?
Question 6:	What were the most significant challenges you faced during the COVID-19 pandemic and the military conflict in Ukraine, and how did these crises impact your business?
Question 7:	Do you feel that you are also facing other crisis situations, such as the lack of labor in agriculture, climate change, and the various political crises that are happening in our country? If so, how does it affect you?
Question 8:	What preventive measures against future crises will you adopt based on your previous experience, the COVID-19 pandemic, and what you are still going through, the military conflict in Ukraine?
Question 9:	Do you think that today, if crisis situations similar to the COVID-19 pandemic and the military conflict in Ukraine arise, you will handle them differently than you did in previous cases?

Question 10:	As entrepreneurs who play a crucial role in sustaining life, how do you view the support you've received from the Government of Romania and the European Union?
Question 11:	The behavior adopted by you, especially when the pandemic broke out and when the war from Ukraine started or when the other crises caused by these two events started (the fuel price crisis, the electricity price crisis, the food price crisis, etc.) was it expected or was it influenced by fear, anxiety, dread, insecurity?
Question 12:	How do you rate your response today in terms of your behavior towards the crisis you have faced? What would you change and why?
The moderator makes a summary of the answers received to the questions asked. The discussion moderator asks for feedback from respondents about this meeting and invites participants to contribute to improving the research by contributing information about what participants would do differently if they were the moderators.	

Source: author's own research

The 12 questions of the focus group were explicitly designed to keep the discussion focused on the proposed topic, fulfill the set objectives, and facilitate a smooth transition from general to specific questions. They also play a crucial role in managing the research duration and respondent patience, ensuring the most appropriate approach. The division of questions, their roles, and the types of questions used are presented in Table 3.

Table 3: Details about the research questions

Question number	Question role	Question tipe
Question 1	The opening question that "breaks the ice";	In this research all questions are open questions
Question 2	The introductory question that introduces the topic of the discussion;	
Question 3 **Question 4** **Question 5**	This group of three questions was the transition questions; that is, through them, the moderator led the discussion to the key topic that the focus group was dealing with;	
Question 6 **Question 7** **Question 8** **Question 9** **Question 10** **Question 11**	These six questions were the key research questions;	
Question 12	The closing research question	

Source: author's own research

It should be noted that before the questions were asked and the focus group began, the research moderator introduced himself to the participants and provided them with all the details of this scientific approach, as well as the rules that such an activity entail.

3. The Results Obtained – Their Analysis And Interpretation

The results obtained from the research participants' answers to the focus group moderator's questions are of great interest and provide an interesting perspective on the subject under analysis. Thus:

1) Respondents view a crisis not only as an event that triggers economic problems but also as a window of opportunity within their activities.

More specifically, they believe that economic problems are associated with the increase in the production cost of their products, which leads to a corresponding rise in the selling price of the products, resulting in various price increases. They consider that all these economic changes are caused by financial blockages and/or blockages that appear within the actual activity, blockages generated by uncertainty, and the state of fear in people's minds specific to such moments.

Moreover, respondents see crises as more than just challenges. They believe that if managed and speculated correctly, a crisis can create a favorable environment for economic growth.

2) Regarding the consequences generated by the emergence and outbreak of the COVID-19 pandemic (March 2020-May 2023), the respondents identified three major problems, namely:

• **bureaucratic problems** from the lockdown period (March-May 2020) of the COVID-19 pandemic imposed in Romania by the authorities;

• **the medical problems** caused by the SARS-CoV-2 disease affecting human resources working in farms or the logistics sector;

• **economic problems**, such as the considerable fluctuation and instability of the prices of inputs and other materials used in the actual activity; the fluctuation of the marketing prices of the production obtained.

Regarding the consequences generated by the emergence and outbreak of the war from Ukraine, the respondents identified a significant problem, namely:

• the economic problem is generated by the increased prices of inputs and other materials used in the activity (fuels, fertilizers, spare parts, etc.) and by the decreased selling price of the treated finished product.

3) Regarding the interconnection of the COVID-19 pandemic, the war from Ukraine, and the crisis caused by climate change, all participants in the focus group stated that the drought (resulting from climate change) also contributed to changing their business behavior as producers of agro-food products. They had to invest more financial resources to produce the agro-food products. They had to adapt their crop rotation and the technology used in the production process to the effects on the agricultural land, the plants, and the production conditions (such as dry areas or irrigable or non-irrigable areas).

4) Regarding the evaluation of the behavior shown by the respondents in moments of crisis, they consider that the experiences they had following the COVID-19 crisis and the military conflict in Ukraine (2022-present) were beneficial because, in the future, they will know to some extent measure how to approach such situations. Moreover, they have also created a specific protection measures plan.

Regarding the identification of preventive measures against the future emergence of new health and/or military crises based on the experiences gained, the participants in the focus group specified a series of measures by which they can defend themselves against such events.

In this sense, the creation of a reserve fund for such situations, making a more efficient plan to optimize the final costs for obtaining the finished product, making stocks for more extended periods (6-8 months) of inputs or other necessary materials (fuels, fertilizers, spare parts and various consumables) in carrying out the activity; updating the information and consulting the indications provided by the Romanian Government and the European Union, are the most important and fast safety measures that can be adopted and implemented.

The focus group results show how the behavior of the research participants as agri-food producers in the southeastern area of Romania varied when the medical crisis caused by the COVID-19 pandemic and the military crisis caused by the war in Ukraine began. Their varied behavior generated different adaptation strategies, which can be explained by the Stress and Adaptation Theory proposed by Lazarus and Folkman (1984).

Thus, in the primary evaluation stage, the research participants perceived these two crises as threats that could cause losses or problems, particularly from an economic perspective. Subsequently, in the secondary evaluation stage, the research participants observed that the two crises could also bring them financial opportunities, as well as a unique experience that will be very useful in the future when such situations arise.

Research conclusions

Following the qualitative research, the main conclusions that can be drawn show us some fascinating aspects. After experiencing the individual and/or simultaneous manifestation of the COVID-19 pandemic and the war in Ukraine, the participants, as farmers and business managers, are aware of the impact that a crisis can have.

The participants also identified the primary sectors that are affected and that make it difficult for them to operate their businesses optimally, both economically and in terms of the production process, during crises such as medical crises and military conflicts.

At the same time, the farmers specified precisely the causes of their behavior change, fear, and uncertainty, so they knew what could cause them to make mistakes and behave irrationally. Last but not least, they identified problems that need to be improved both individually and collectively (legislative issues or bureaucratic deadlocks), as well as the fact that moments of crisis can also represent opportunities for improvement.

Research limitations and future research

No research is 100% perfect, and it has certain limitations that contribute to its imperfections. However, this does not mean that the present scientific endeavor is not relevant or worth considering. Instead, it means that there are still areas for improvement, and in the future, researchers conducting such studies must take them into account.

As for the actual limitations of the present research that used a focus group, they are the following: the generalization of the information obtained due to the small selected sample; the constraints caused by the selection of participants (it was complicated to find farmers willing to participate in such research for personal reasons); limitations related to the organization, duration, and logistics of the activity; the limitations related to the interaction within the group (the more extroverted respondents answered much more easily) and the limitations associated with the risk of confirming the opinion of one participant to the opinion of another (the respondents may adopt and use answers, attitudes or opinions similar to those stated, even if I think and see things differently).

Future research based on the results of this study may include quantitative studies on extended samples, longitudinal analyses, comparative studies between consumer segments, case study-type analyses, research using methods such as eye-tracking or biometric analyses, or in-depth qualitative analyses.

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Nexus of Value Co-Creation Dimensions: Moderating Role of Customer Trust using Mixed Methods

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Abstract
The goal of this study was to explain the relationship between customers' participatory and citizenship behaviors and the moderating effect of customer trust. Four specific objectives, four research questions, and four hypotheses were developed to explain the relationships. For the purpose of complementarity, the mixed-methods approach was adopted and 385 customer samples were randomly selected from customers of 15 commercial banks in a northeastern state in Nigeria and a questionnaire instrument was administered using a Google online form. For the qualitative stream, 7 customers who had business and utility accounts and over 15 years of banking residency were purposefully selected and interviewed. The Process Macro statistical tool was used to analyze the quantitative hypotheses, while thematic template analysis was used to analyze interview data in NVivo R20 software to triangulate findings. The findings of the study indicate a significant relationship between customer participatory behavior and customer citizenship behavior of commercial bank customers. The finding also showed that customers' trust does significantly moderate the relationship between the value co-creation dimensions. It revealed that the banks with limited employees' strength when compared with customers-ratio outweigh employees' effectiveness, thus leading to inefficiencies and unethical disposition of the employees. The study therefore recommends that commercial banks strengthen their value-creative policy by improving network efficiencies and employees' service delivery packages to encourage customers to build service trust and reciprocate in value co-creation participation.

Keywords: Value Co-creation, Customer Participatory Behavior, Customer Citizenship Behavior and Customer Trust.

JEL classification: M31.

Introduction

Extant management literature has emphasized the development of competitive advantage through company-centric value creation but gives less emphasis to customer-centric value co-creation and the relationship that exists between its various dimensions. In the customer-centric approach, value is co-created through employee and customer synergy, though the value is perceived to be critically produced by the instrumentality of customers who are active participants and collaborative partners in the exchange relationship that leads to creativity and innovation in service delivery (Ida, 2017). IGI Global (2022) argues that value co-creation remains a synergistic process in which key actors like organizations, customers, and other stakeholders produce, deliver, and exchange values in a mutually beneficial and symbiotic relationship. Value co-creation is a non-paid collaborative activity (free role, in-role, and extra-role) conducted by customers.

To co-create value, customers seek and share initiatives, engage in in-role responsible behavior, have personal interaction with the organization's employees, and give feedback to the organization (Assiouras et al., 2019; Ida, 2017; Yi & Gong, 2012). The customers are also involved in extra-role activities of advocating for the organization and helping other customers in areas of need regarding the handling of the organization's products or services (Gong et al., 2021; Choi et al., 2016; Gong & Yi, 2019). Furthermore, the exhibition of value co-creation is seen by some loyal customers who at times tolerate the organization, especially when the organization fails to deliver service efficiently.

In the customer-centric relationship, as underpinned by the service-dominant logic, the customer is supposedly a value co-creator, an active participant and a collaborative partner in relational exchange with the organization through involvement in the entire value-adding process (Hossain et al., 2020; Choi et al., 2016; Yi & Gong, 2012).

Literature has revealed the prediction of the value co-creation process in two dimensions: customer participation behavior (CPB) in-role components (information seeking, sharing, responsible behavior, and personal interaction) and customer citizenship behavior (CCB) extra-role (feedback, advocacy, helping, and tolerance) (Choi & Lotz, 2017; Gong et al., 2016). But the literature (e.g., Aljarah & Aljarah, 2021, 2020; Aljarah & Alrawashdeh, 2020; Choi et al., 2016; Gong & Yi, 2019; Woo, 2019; Revilla-Camacho et al., 2015; Hyder et al. 2024; Gong et al., 2016) has not shown the correlations that exist between the CPB's and CCB's variables as value co-creative dimensions. For instance, how does responsible behavior correlate with advocacy? How does customers' personal interaction correlate with customers' tolerance in the case of a bank service failure? Is this relationship disturbed by the customers' trust? These suppositions motivate the study. In this study, we focus on value co-creation among employees and customers of commercial banks in service production and delivery during interactive, collaborative, and reciprocal processes (IGI Global, 2022; Choi & Lotz, 2017). Similarly, this study based its argument on the social exchange theory, which states that interpersonal relationships between two parties depend on the perception of rewards and costs involved in social exchange (Hyder et al., 2024). If these rewards are favorable, co-creation will be built in the customers' minds (Aljarah & Aljarah, 2021).

Assiouras et al. (2019) opined that as customers co-create, their participation and citizenship behaviors may instill a sense of obligation and fulfillment in them, especially for 2nd generation commercial banks in Nigeria, as these expectations from customers compel organizations to pursue effective, efficient and satisfactory service delivery. In contrast to these expectations, it is observed that banks have been slow to respond and provide services that satisfy their clients due to cyber outages, inadequate cash in automated teller machines (ATMs), or customers' incomplete transactions after their accounts have been debited. This study explores the existence of value co-creation by examining the correlation between CPB and CCB variables. If a correlation exists, it further investigates how customer trust moderates this relationship, given that trust is a natural outcome of ongoing interactions between customers and the organization. Hence, this study offers a building block into the theoretical and empirical gap by explaining the relationship between customers' participatory behavior and customers' citizenship behavior and shows the interactive effect of customer trust.

Research Questions

1. How does customers' responsible behavior relate to advocacy in commercial bank services?
2. How does customers' personal interaction relate to tolerance for commercial bank services?

3. How does customers' trust moderate the relationship between customers' responsible behavior and advocacy of commercial bank services?
4. How does customers' trust moderate the relationship between personal interaction and tolerance of commercial bank services?

Research Hypotheses

H1: There is a significant relationship between customers' responsible behavior and advocacy of commercial bank services.

H2: There is a significant relationship between customers' personal interaction and tolerance of commercial bank services.

H3: Customers' trust significantly moderates the relationship between customers' responsible behavior and advocacy of commercial bank services.

H4: Customers' trust significantly moderates the relationship between customers' personal interaction and tolerance of commercial bank services.

Study Value

This study adds to the useful strategic resources of commercial banks' management and employees because it provides strategic insights into their existing value-creative structure with the aim of re-strategizing for competitiveness. On the other hand, customers are exposed to their in-role and extra-role as strategic partners in the service delivery process of the organization.

1. Review of Related Literature

1.1. Value Co-Creation

Value co-creation (VC) is an economic strategy that promotes joint production by bringing together multiple partners to generate value-added services (IGI GLOBAL, 2022; Assiouras et al., 2019). A value co-creative method incorporates customers in service production delivery, such that the organization captures customers' requirements and maintains a distinct edge, which is a crucial imperative in today's customer-centric business climate. This is based on the idea that value co-creation allows for a symbiotic interaction between important actors (organizations, customers, and other stakeholders) in service delivery to create, deliver, and exchange value for mutual benefit (IGI GLOBAL, 2022).

Customer value co-creation is mostly defined in terms of activities: the customer, capability, experience, roles, service, and value (Ida, 2017). In this study, we emphasize value co-creation as interactive, collaborative, and reciprocity processes between commercial banks and their customers in times of service delivery (IGI GLOBAL, 2022; Choi & Lotz, 2017; Ida, 2017). The unifying idea of customer value co-creation is that customers take an active role and co-create value together with the organization, employees, and other customers (Assiouras et al., 2019). Customers who are co-creators do not only co-create but also co-consume together with the organization (Ida, 2017).

To co-create value, customers seek and share initiatives, engage in in-role responsible behavior, have personal interaction with the organization's employees, and give feedback to the organization (Assiouras et al., 2019; Ida, 2017; Yi & Gong, 2012). Then, advocate for the organization and help customers in areas of need with the handling of the organization's products or services (Gong et al., 2021; Choi et al., 2016; Gong & Yi, 2019). According to the service-dominant logic (SDL), value co-creation is considered a dynamic, situational, meaning-laden, and phenomenological construct that emerges when customers use, experience, or customize marketers' value propositions in their experience contexts (Assiouras et al., 2019). The core concept of service-dominant logic is that the customer is always a co-creator of value. As active participants and collaborative partners in relational exchanges, customers co-create value with the organization through involvement in the entire service-value chain (Yi & Gong, 2012).

Value co-creation holds a bond of relationship with strategic management, customer relationship management and supply chain management because it has the imperative of making customers feel like producers of their services (Choi et al., 2016; Choi & Hwang, 2019) by allowing them to mutually understand the value co-creation relationship and also participate in the voluntary process as co-producers. For instance, an employee in a workplace relationship will need to understand the organization's operation to enable him/her to flow in the production or service delivery process. Customers seek to understand the nature of service and their roles in the value co-creation process (Assiouras et al., 2019; Gong & Yi, 2019; Delpechitre et al., 2018; Jung & Yoo, 2016; Revilla-Camacho et al., 2015; Yi & Gong, 2012). Researchers have developed a lot of value co-creation dimensions published in academic literature (Ida, 2017). While some see it as a one-dimensional construct (Hur et al., 2018), to some it is a multidimensional construct (Aljarah & Aljarah, 2021). In this study, we explicate the construct of value co-creation from the multidimensional approach in that we shed more light on customer participation behavior and customer citizenship behavior.

1.2. Customer Participation Behavior

Customers' participation behavior (CPB) as a value co-creation activity is an in-role, voluntary action that occurs between the customer and the organization's employees. In contrast to customers' citizenship behavior (CCB), CPB is an interactive discussion that borders on information seeking and sharing with the organization's employees to reduce uncertainty, thereby enabling them to understand and control their co-creation environments and to master their role as value co-creators and become integrated into the value co-creation process (Aljarah & Aljarah, 2020; Choi et al., 2016; Ida, 2017). Similarly, customers are not the only seekers of information; the organizations in the value co-creation stream also need information sharing from customers (Choi & Lotz, 2016; Yi & Gong, 2012; Yi et al., 2011). Responsible behavior occurs when customers recognize their duties and responsibilities as partial employees (Nguyen and Chiu 2023; Yi & Gong, 2012). Furthermore, since value co-creation activities involve personal interaction between an organization's employees and customers, the interaction is expected to be tactful, friendly, and courteous (Yi & Gong, 2012). When it is jeopardized, the co-creation process becomes jeopardized.

1.3. Customer Citizenship Behavior

Customer citizenship behavior (CCB) is a collection of good, voluntary, helpful, and constructive behaviors exhibited by customers that benefit the organization as a whole (Gong et al., 2021; Aljarah & Alrawashdeh, 2020; Assiouras et al., 2019; Choi et al., 2016; Ida, 2017; Tonder & Petzer, 2017; Ahn et al., 2016; Jung & Yoo, 2016; Groth, 2005). CCB is a voluntary activity of customers who do not get compensation for the services they provide but do so out of kindness (Tonder & Petzer, 2017). The CCB service is discretionary, which means it is not essential for the primary task of service development and delivery but helps the organization's overall success (Hossain et al., 2020; Assiouras et al., 2019; Choi et al., 2016; Ida, 2017; Jung & Yoo, 2016; Balaji, 2014; Yi et al., 2011). The reciprocal activities of the actors in the co-creation process provide each with a sense of belonging, which gives rise to CCB (Gong et al., 2021; Assiouras et al., 2019; Ahn et al., 2016). Customer citizenship behavior has considerable advantages for organizations, customers, and other customers. It increases organizational effectiveness by strengthening relationships among service encounter participants (Gong et al., 2021; Assiouras et al., 2019; Ahn et al., 2016). The customer's extra role in customer support increases an organization's quality service delivery, enhancing goal achievement (Choi &

Hwang, 2019; Choi & Lotz, 2017). CCB is critical in inferring the relationship between the actors in the value co-creation process. As customers become satisfied with an organization's service, they volunteer to aid other customers who use the same organization's service (Gong et al., 2021; Choi & Hwang, 2019; Choi & Lotz, 2017; Ahn et al., 2016).

Consumer behavior literature has argued that CCB follows different patterns and has different antecedents and consequences than CPB and revolves around the customers' extra roles such as feedback, advocacy, helping, and tolerance (Hu et al., 2020; Gong et al., 2016; Balaji, 2014; Yi & Gong, 2012). Assiouras et al. (2019) explicate that feedback occurs when a customer informs employees of an organization directly about any development that tends to improve service delivery. Feedback includes solicited and unsolicited information that customers provide to the employee, which helps employees and the organization improve the service creation process in the long run (Hu et al., 2020; Yi & Gong, 2012).

Another CCB indicator that matters significantly to this study is advocacy. Advocacy occurs when satisfied customers recommend the organization to another customer (Choi & Hwang, 2019). In the context of Nigeria, customers tend to publicize banks where the Internet banking platform is efficient. For instance, a Guarantee Trust Bank customer would introduce the bank's advantages to another customer as the service seems to be more user-friendly. Even though the customers providing the advocacy are not bank employees, they are performing employee duties for other customers. In the context of value co-creation, advocacy indicates allegiance to the organization and promotion of the organization's interests beyond the individual customer's interests (Yi & Gong, 2012). Positive word-of-mouth advocacy is often an indicator of customer loyalty, and it contributes greatly to the development of a positive organization reputation, promotion of the organization's products and services, higher service quality evaluations, and an increase in customer base size (Balaji, 2014; Yi & Gong, 2012). Customers in a service co-creation process typically direct helping behavior at other customers in a service encounter where the former requires assistance (Woo, 2019; Jung & Yoo, 2016; Yi & Gong, 2012). Customers can help other customers where one needs the technical assistance of another customer who is more familiar with the organization's service operation (Delpechitre et al., 2018; Ida, 2017; Tonder & Petzer, 2017; Ahn et al., 2016). CCB is indicative of customer tolerance (Aljarah & Alrawashdeh, 2020; Balaji, 2014), where a customer is ready to show patience in the case of service failure (Assiouras et al., 2019; Ida, 2017; Yi & Gong, 2012). It is the customer's willingness to be patient when the service delivery does not meet the customer's expectations of adequate service, as in the case of delays or equipment shortages (Yi & Gong, 2012). Bank internet services do fail in most cases where customers need them to complete some pressing transactions. In such a case, customers who have confidence in a particular bank's efficiency will demonstrate a CCB by showing tolerance for the bank's inability. For example, Guarantee Trust Bank was one of the most patronized commercial banks in Wukari in 2011. After the robbery attack in 2012, the branch was closed. Despite the closure and the proximity of going as far as Jalingo to rectify little account issues, many customers still maintain the bank account as their salary account (PMNewsnigeria, 2012).

1.4. Relationship of CPB and CCB

Management literature has considered CPB's role components—information seeking, sharing, responsible behavior and personal interaction—differently from CCB's extra roles—feedback, advocacy, helping, and tolerance (Choi & Lotz, 2017)—but has not shown the relationship that could exist with them as value-co-creative variables. What relationship exists between the variables of the two dimensions? How customers' trust disturbs the flow of the relationship is the focus of this empirical study.

1.5. Customers Trust

While extant research has emphasized a customer-centric approach to service delivery, the studies have not shown the moderating effect of customers' trust on the strength and direction of the value co-creative relationship with the organization. Trust is a long-term process that arises from the credibility built in a relationship between partners (Shao et al., 2020; Kaushik et al., 2019; Skvarciany, 2018; Al-Sharafi et al., 2016; Usman, 2015; Utami, 2015; Damberg, Schwaiger & Ringle, 2022; White, 2005). Customers' trust is a composite of customers' expectations of an organization, their belief in it, and the attitudes they are likely to show towards the organization in reciprocation (Utami, 2015). Satisfied customers are likely to build trust in the service delivered by an organization (Utami, 2015). This is on the basis that customers' trust informs the belief and attitude they show toward organizations. Customers in the banking industry are more likely to develop trust as a guarantee in a collaborative relationship (Utami, 2015). When services such as online banking, automated teller machines, quick tellers, SMS alerts, and financial capitalization, amongst others, are efficient and beneficial to them, customers develop reliance on that bank. According to Shaw (2007), cited in Utami (2015), customers' trust is built on the premise of physical, property, and emotional proximities. That is to buttress that customers who engage in customers' participatory behavior, such as responsible behavior and personnel interaction with the organization, will expect esteem and mutual relationships from the organization to enable them to build belief. The confidence they have based on the organization would make them show discretionary attitudes—emotional, cognitive, and conative-reactive. Thus, in this study, we hypothesize that the relationship between customers' participatory behavior and citizenship behavior is moderated by customer trust.

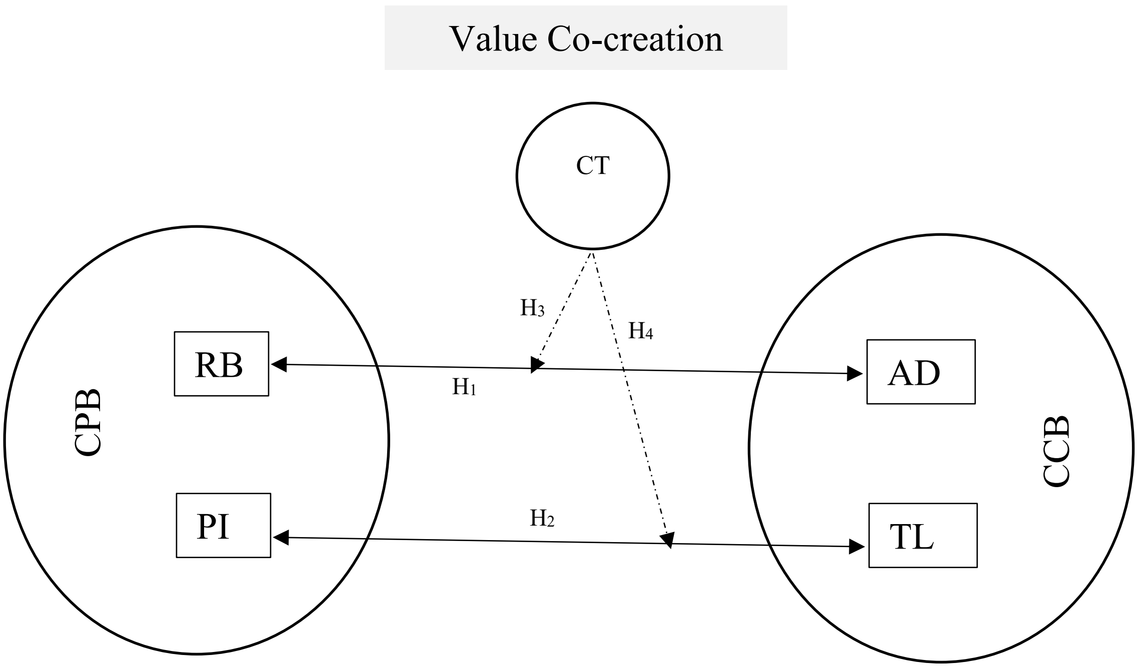

Figure 1: Model of the Conceptual Framework

Keys: Value Co-creation (VC), Customers Participation Behavior (CPB), Customers Citizenship Behavior (CCB), Responsible Behavior (RB), Personal Interaction (PI), Advocacy (AD), Tolerance (TL), Customers Trust (CT) and Hypotheses.

Source: The researchers

2. Theoretical framework

2.1. Social Exchange Theory

According to the social exchange theory proposed by George Homans in 1958, interpersonal interactions between two people are dependent on their assessment of the rewards and costs involved in a social transaction. As a result, this study uses social exchange theory as its framework for analyzing elements that elicit CCBs, as it predicts reciprocal actions prompted by a person's affective states, such as affective commitment based on perceptions of organizational efforts (Gong et al., 2021; Hur et al., 2018; Ahn et al., 2016). It is permissible for a customer in a social exchange relationship with an organization to engage in voluntary and discretionary behaviors such as giving constructive ideas to the organization, assisting employees, and providing feedback to help the organization improve its performance (Choi & Lotz, 2017). This study hypothesizes that the relationships illustrated in the conceptual framework are based on social exchange theory.

2.2. Service-Dominant Logic Theory

Similarly, in 2004, Stephen Vargo and Robert Lusch first coined the service-dominant logic to explain the exchange processes and interactions among exchange participants by stating that value is created through a collaboration among all entities in an exchange network (Choi & Lotz, 2017). Service-dominant logic (SDL) defines service as the primary aim of exchange and provides a theoretical framework for understanding how organizations, customers, and other market actors co-create value through their service offerings (Assiouras et al., 2019; Jung & Yoo, 2016). All supply chain actors are resource integrators; therefore, they are intimately linked in the value-generation process (Jung & Yoo, 2016). Each player's involvement is critical to the entire business process (Yi & Gong, 2012). In this spirit, customers are more than just responders; they are active value creators, and organizations must make judgments about them (Yi & Gong, 2012). According to Choi & Lotz (2016), the SDL means that organizations must not just create value and profit by selling items and/or services to clients; they must also co-create value with customers.

2.3. Empirical Review

Over the years, scholars have delved into various aspects of customer behavior, seeking to uncover the underlying mechanisms that drive interactions between customers and businesses. Because the dynamics of customer behavior within the realm of business, management, and marketing have long been a focal point of academic inquiry. Understanding how customers engage with organizations, contribute to their success, and advocate for their brands is essential for businesses aiming to thrive in competitive markets.

The literature has revealed a rich tapestry of studies exploring different dimensions of customer behavior, from customer citizenship behavior (CCB) to value co-creation. Balaji (2014) laid the groundwork by examining the interrelationships between value, quality, strength, and CCB, offering insights into the mechanisms through which organizations can foster positive customer engagement. Aljarah & Aljarah (2020) furthered this exploration by investigating the nexus of corporate social responsibility (CSR) and CCB, shedding light on the role of benevolence trust in mediating the relationship between CSR and customer-oriented CCB. Tonder and Petzer (2017) expanded the scope of inquiry by studying the perspectives of other roles in citizenship behavior, contributing to a more comprehensive understanding of the dynamics at play. Delpechitre et al. (2018) focused on the role of emotional intelligence in shaping customer participation and citizenship behavior, highlighting the importance of interpersonal skills in driving customer engagement. Similarly, Revilla-Camacho et al. (2015) and Assiouras et al. (2019) explored the effects of customer participation and value co-creation on turnover intention and guest satisfaction, respectively, adding nuance to our understanding of customer behavior.

Despite these valuable contributions, a literature gap persists, particularly concerning the relationship between customer participation indicators and CCB as value co-creation variables. Many of the reviewed studies did not thoroughly examine the correlation between responsible behavior and advocacy, personal interaction, and tolerance, nor did they explore the moderating effect of customer trust on CCB. This gap presents an opportunity for further research to delve deeper into these interconnected dynamics and uncover new insights that can inform theory and practice in the fields of business, management, and marketing. In light of these considerations, this paper seeks to address the aforementioned literature gap by examining the relationship between indicators of customer participation and CCB as value co-creation variables.

3. Research Methodology

For this study, the mixed-methods approach was adopted, where quantitative and qualitative data from the population of 10,000 customers of commercial banks in a northeastern state in Nigeria were concurrently collected. The reason for choosing a mixed methods technique was to overcome the weakness of a single method. 385 samples of the questionnaire were randomly administered online using the Google Form application software. 7 respondents out of 385 were purposefully selected for face-to-face interviews because they had been customers for over 15 years and had operated both business and straight utility customer accounts with these banks. The Process Macro statistical tool was used to analyze the hypotheses at the 0.05 level of significance, while the thematic template analysis was employed to analyze the qualitative data with NVivo R20 software for sorting, coding, thematic categorization and triangulation of findings.

4. Data Presentation and Analysis

The data in this study were presented in two phases. Phase one presents the results of quantitative analysis. While the phase two presents the results of qualitative analysis.

4.1. Phase One: Quantitative Analysis

Table 1: Summary of Process Macro Analysis Hypotheses One and Three

R	**R-sq**	**MSE**	**F**	**df1**	**df2**	**P**
0.89	0.80	0.06	482	3	360	0.001

Model	Coeff	Se	T	p	LLCI	ULCI
constant	13.25	0.68	19.43	0.001	11.91	14.60
RB	-4.57	0.23	-19.67	0.001	-5.02	-4.11
CT	-2.52	0.20	-12.66	0.001	-2.91	-2.12
Int_1	1.18	0.06	18.20	0.001	1.05	1.31

Model Product Terms Key: Y: AD, X: RB, M: CT Sample Size: 364

Table 1 presents the result of the process macro analysis for hypotheses 1 and 3. The result shows that the R-value is 0.89, indicating a high correlation between RB and AD; the interactive term with a coefficient of 1.18 indicates that the relationship is positively significant. The p-value of $0.001<0.05$ indicates the significant effect of moderation of CT on RB and AD.

Table 2: Summary of Process Macro Analysis Hypotheses Two and Four

R	**R-sq**	**MSE**	**F**	**df1**	**df2**	**P**
0.77	0.60	0.12	177.97	3	360	0.001
Model	Coeff	Se	T	p	LLCI	ULCI
Constant	-3.11	0.43	-7.17	0.001	-3.96	-2.26
PI	1.93	0.17	11.47	0.001	1L60	2.26
CT	1.19	0.14	8.35	0.001	0.90	1.46
Int_1	-.38	0.05	-7.71	0.001	-0.48	-0.28

Model Product Terms Key: Y: TL, X: PI, M: CT Sample Size: 364

The result of the process macro analysis in Table 2 shows that the R-value is 0.77 indicating a high correlation between PI and TL, and the interactive coefficient of -0.38 indicates that the relationship between PI and TL is negatively significant. The table also shows that the p-value of 0.001, which is less than the probability level of 0.05, indicates the significant effect of moderation of CT on PI and TL.

4.2. Phase 2: Qualitative Analysis

The thematic analysis was used to generate and categorize themes which dominated customers' experiences as shown in table 3 below.

Table 3: Emerging Themes, Coding Files and References

THEMES	FILES	REFERENCES
Customers Responsible Behavior	7	9
Customers Personal Interaction and Knowledge Sharing	5	30
Customers Advocacy	4	5
Customers Tolerance to Service Failure	7	8
Customers Satisfaction	2	2
Customers Trust	2	7
Relationship Between the Value Co creation Dimensions	4	5
Bank Policy and Ethics	2	2

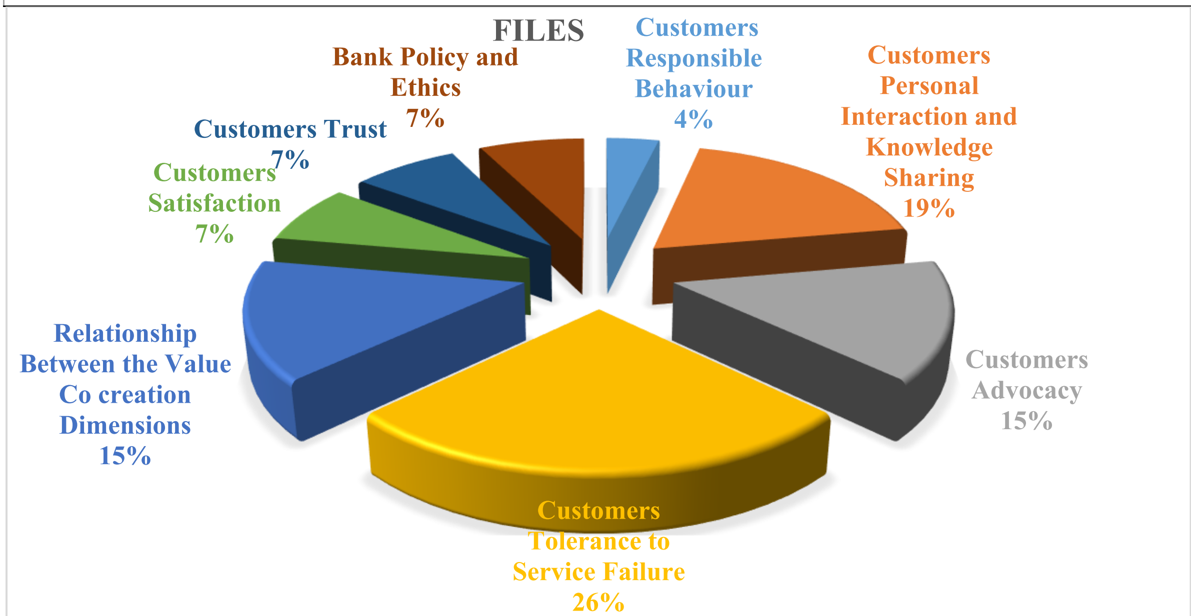

Figure 2: Pie chart of the summary of themes, files and reference

5 Thematic Definition

5.1. Theme 1: Customers Responsible Behavior

Theme 1 discusses how customers assume responsibilities while interacting in the Bank. The interviewees' explanations indicate that in terms of filling the deposit slips, withdrawal of money on the counter and the automated teller machine (ATM), they are self-guided. The interviewees also explained their level of responsible behavior as indicated in (Reference 3 - 5.41% Coverage).

> *"……Most times, I am self-guided because I am conversant with most of the transaction procedures (Reference 4 - 4.83% Coverage) "……The only thing I need from the bank employees is to show me where the bank teller is to pick up and fill out. I am self-guided (2 references coded 6.74% Coverage)." "…. However, there is nothing new in the banking services that requires much guidance from a bank agent (Reference 4 - 5.86% Coverage) "…….If I want to deposit, I pick up the deposit slip or withdrawal slip."*

Additionally, customers of commercial banks in Taraba expressed their level of responsible behavior in simple financial transactions. But when it comes to more complex activities, clarity is needed.

> *"……. Anytime I am in the bank, there are things I do not understand, so I will still need clarification. (Reference 5 - 1.83% Coverage) "I am largely self-sufficient, with the exception of a few unique applications that necessitate guidance…… (Reference 2 - 3.34% Coverage). "……Starling Bank has an application that it requires that they put you through before you can use it…. Reference 3 - 8.85% Coverage)".*

5.2. Theme 2: Customers Personal Interaction and Knowledge Sharing

Theme 2 focuses on how customers interact with the bank employees and other IT software in sharing ideas, experiences and information that are pertinent to improving the service delivery of banks. 5 files and 30 references from interviewees indicate that they do have a personal interaction with employees of the various commercial banks. And also used some of the application software to make transactions. As shown in most of the references, the personal interactions were satisfactory.

> *".....my first experience with the bank after opening an account was satisfactory" (References 2-3 - 2.23% Coverage). "…. I was directed to customer care, where they paid attention to all my needs" (Reference 4 - 2.74% Coverage). '…there were no issues with my first contact with the bank; it was excellent service delivery (Reference 5 - 4.82% Coverage). The experience was good and a cordial relationship. That was with UBA. That was when I went to NYSC. I needed to have an account for my transactions (Reference 2 - 3.02% Coverage).*

Customers also expressed that they have been interacting with bank internet and IT facilities as shown in the references below:

> *"……I have more contact with the facilities than physical presence at the bank" (2 references coded 8.43% Coverage" References 1-2 - 8.43% Coverage). I have responded to some of their surveys Reference 6 - 4.47% Coverage Reference 3 - 6.37% Coverage I have not been to the bank for a long time, but I use other bank platforms such as ATMs, mobile banking, etc. So, whatever one wants to do, directions are self-explanatory. Reference 3 - 3.24% Coverage I used the ATM, Cheque book and mobile app, and they are reliable.*

5.3. Theme 3: Customer Advocacy

Customers' advocacy was categorized as theme 3 in the thematic analysis of this explanatory study. It represents the extra roles, which customers voluntarily undertake for commercial banks they bank with. There were 4 files and 5 references coded from interviewees in the theme. The interviewees explained that recommendation has been the major aspect of advocacy practiced as they interact with customers of other banks.

> *I have recommended Access Bank to others because the bank's employees have a good understanding of their jobs (Reference 1 - 3.27% Coverage). I have recommended the bank to my siblings (Reference 1 - 1.92% Coverage). I have shared and recommended Zenith Bank to a friend who is compliant with outrageous charges from her bank and other service failures (Reference 1 - 4.13% Coverage).*

5.4. Theme 4: Customers' Tolerance to Service Failure

Customers' tolerance relates to the attitudes of liberality and patience bank customers do exhibit when encountering challenges with bank services. Customers do express their levels of sufferance when they are faced with network failures, as indicated in some of the explanations given by the interviewees:

> *"……. I have tolerated the bank in many areas because I know that they are also human beings working in the bank" (Reference 1 - 6.06% Coverage). "….I tolerate a lot of banks' flaws. So, the level of tolerance is high" (Reference 1 - 9.81% Coverage). "…I am tolerant because I understand how technology works" (Reference 1 - 2.50% Coverage). "….I have actually tolerated them recently. Transactions by the weekend are faced with network failures. I have been tolerating them for a few weeks now" (Reference 1 - 4.55% Coverage). "….Tolerance has two faces: I do tolerate when a failure occurs ignorantly, but when it is deliberate, I do not tolerate it. I do wait for the bank, but it has a level. If I am waiting, I should wait and see the result, but if I wait and do not see the result, the waiting becomes useless" (2references coded 11.04% Coverage). "…..I do not tolerate tampering with my cash, i.e., unnecessary deductions from my account" (Reference 2 - 4.98% Coverage).*

5.5. Theme 5: Customer Satisfaction

Theme 5 discusses how customers feel and react to banks' service delivery. Commercial banks are established to generate profits for the stakeholders. In achieving that, they map out strategies for satisfying their customers. In this study, the interviewees explained their levels of satisfaction experienced as they interact with banks' employees and other platforms as shown in the references below:

> *Reference 1 - 2.70% Coverage- "……There are many banks, but I have decided to use Zenith Bank, and I have been enjoying it". Reference 1 - 3.79% Coverage- "…. One of the fascinating things about the Starling bank is that it is new with few customers, so they give you optimal attention."*

5.6. Theme 6: Customers Trust

Theme 6, with 2 files and 7 references, discusses the beliefs, confidence and reliance of customers on a particular bank. The interviewees expressed that their commitments to banks are determined by the level of trust and reliance they have on a bank when it comes to financial issues.

> *"……. You know that bankers are smart; they will make you comfortable, show you they are accountable, and your money is safe with us" (Reference 1 - 3.85% Coverage). ".... they made me feel safe" (Reference 2 - 0.70% Coverage). ".... I would not have worked into an environment that was not organized and put my money in that worth ₦70000 in 2013; that was a huge amount of money to me" (Reference 3 - 4.83% Coverage). ".... The bank has been on a pace that no other bank can compete with" (Reference 4 - 2.00% Coverage). ".... They assured me that they would reverse the transaction. They took four days, but in my mind, I knew they were going to reverse it and they did" (Reference 5 - 4.43% Coverage).*

5.7. Theme 7: Relationship between the Value Co-creation Dimensions

The relationship between the two value co-creation dimensions—customers' participatory behavior and customers' citizenship behavior—is the focus of theme 5. The theme has 4 files and 5 references depicted from the customer interviews codes in this study. The customers interviewed expressed their involvements in information sharing, recommending and encouraging, and tolerance with bank employees and other bank customers. They explained that their relationship is mechanized by their satisfaction and trust they have for the bank. In this code, the interviewee expressed that *"…….if you treat the bank well, they will give you preferential treatment"* (Reference 1 - 10.99% Coverage). Similarly, the interviewees added that *"………if the customers enjoy the services of the bank employees, they improve their advocacy to others and vice versa"* (Reference 1 - 6.22% Coverage).

5.8. Theme 8: Bank Policy and Ethics

Bank policy and ethics is a theme that emerged from interviewees underpinning of their experiences in the study but was not earlier determined as a research question for the study. The theme emphasized the effect of some bank policy and unethical behaviors of some employees that affect the total standpoint of the commercial bank's existence. The interviewees expressed disheartened experiences with banks. First, they expressed that *"……. Stanbic ITBC has a policy of fewer employees-customers ratio."* When employees are few, customers will map more pressure on them, which might result in employees' stress. The problem of overtasking has been noticed in bank services. This is why interviewees said, *"……when customers are under pressure, they may not be efficient."*.

On another side of the spectrum, bank employees could be unethical in their behavioral disposition. *"……Sometimes I do have difficulty with the bank's employees, particularly their manner of approach"*. This narrative of the interviewees implies negativity that could be deleterious to the strategic goal of commercial banks. More also, if customers are ill-treated, the value co-creation intention will remain elusive and unrealistic.

6. Triangulated Results

The finding from the quantitative approach shows that there is a positive significant relationship between responsible behaviors and advocacy of customers of commercial banks in Taraba State. The finding is complemented by the finding of the qualitative approach, which says that customers of commercial banks do assume a level of responsible behavior while in the bank hall due to routine experiences they have acquired. Particularly, simple financial transactions like filling the deposit slips, withdrawing money at the counter and the automated teller machine (ATM) are self-guided. The finding of the quantitative approach is strengthened by the finding of the qualitative approach, which shows that when it comes to more complex financial transactions like the activation of online applications, the customers of commercial banks need clarity from the bank employees. Additionally, the finding of the quantitative study reveals that customers of commercial banks in Taraba State do carry out advocacy to other customers as part of their citizenship behavioral role. However, the result of the qualitative study reveals that the advocacy is mostly a recommendation to their siblings and friends, especially those that complain about network and outrageous charges.

Similarly, the finding of the quantitative study reveals that the relationship between customers' personal interaction and customers' tolerance is negatively significant. Banks should not assume that customers who share data and use their applications will be more forgiving of errors or service disruptions. The finding is similar to the result of the qualitative study, which shows that customers of commercial banks have been interacting with the Banks. Some have shared vital information through one-on-one discussions with the bank customers' care in the form of complaints, and others through online and social media platforms. Some have responded to online surveys. The qualitative result also shows that customers do express their sufferance to a degree. When employees' unethical behaviors and network failures are deliberate, the customers do not ignore or show liberality or patience.

The findings of the quantitative study show that customer trust does significantly moderate the relationship between customers' participatory behavior (responsible behavior) and customers' citizenship behavior (advocacy). The finding is strengthened by the result of the qualitative study, which indicates that the involvement of customers in value co-creation activities is determined by the degree of customers' satisfaction and trust. The more the customers enjoy the services of a bank, the more they participate in knowledge sharing with the bank and other customers and vice versa.

The findings of the quantitative study show that customer trust does significantly moderate the relationship between customers' participatory behavior (personal interaction) and customers' citizenship behavior (tolerance). Complementarily, the qualitative study also indicates that the involvement of customers in value co-creation activities is determined by the degree of customer satisfaction and trust. The result of the qualitative study further validates the findings of the quantitative study that customer trust, such as bank employees' smartness, accountability, bank organization, network efficiency and optimal attention to customers, mechanizes customer trust. The finding of the qualitative study shows that the bank policy of having a lower employee-customer ratio results in the over-pressuring of bank employees. This causes inefficiencies and unethical disposition of the employees. This deterred the value of the co-creative capability of a bank. The finding complementarily explains some of the reasons why employees exhibit attitudes that discourage value co-creation in the banking sector.

7. Discussion and Contribution

The study's first research question explores the relationship between customers' responsible behavior and their advocacy for commercial bank services. The finding shows that there is a positive, significant relationship between responsible behaviors and advocacy of customers of commercial banks in Taraba State. The finding agrees with the finding of Revilla-Camacho et al. (2015), which suggests that customers' participation behavior enhances the consolidation of the relationship with the customer. They also recommend that other customers participate in value-creating activities with their banks. The study demonstrates the theoretical underpinning of service-dominant logic, propounded by Vargo and Lusch (2004), which states that in exchange processes, participants are collaborators in the network relationship. Customers who participate in responsible behavior feel obligated to act as owners and partners of the bank.

The study's findings in research question 2 pertain to the relationship between customers' personal interaction and their tolerance for commercial bank services, which reveals that the relationship between customers’ personal interaction and customers’ tolerance is negatively significant. Even if customers do share information with the bank and use some of the online applications of the bank, that does not mean that they will at all times tolerate the bank's employees’ unethical behaviors and network failure to a greater extent because the sufferance is expressed in degrees. The finding is in accordance with the major tenet underpinning the social exchange theory propounded by Homans (1958). The social exchange theory underscores that interpersonal interactions between two people are dependent on their assessment of the rewards and costs involved in a social transaction. If the customers interact with the bank employees, share information, and receive benefits (either monetary or in-kind), they will be motivated to co-create by tolerating some of the flaws of the employees.

The finding of the study in research question 3 is how customers’ trust moderates the relationship between customers’ responsible behavior and advocacy of commercial bank services. The study reveals that customer trust positively and significantly moderates the relationship between customer participatory behavior (responsible behavior) and customer citizenship behavior (advocacy). This suggests that the involvement of customers in value co-creation activities is determined by the degree of customer satisfaction and trust. The findings are also congruent with the findings of Usman (2015). The findings suggest that the degree of trust has a significant effect on the decision to use the Islamic bank's services. The more the customers enjoy the services of a bank, the more they participate in knowledge sharing with the bank and other customers, and vice versa.

The study's findings in research question 4 relate to how customers' trust moderates the relationship between personal interaction and tolerance of commercial bank services. The study reveals that customer trust significantly moderates the relationship between customer participatory behavior (personal interaction) and customer citizenship behavior (tolerance). The finding suggests that the more customers personally interact with the bank and its employees and are not satisfied with the service delivery, the less they trust the bank; consequently, the less they participate in value co-creation. The finding concurs with the submission of Utami (2015), who posits that satisfied customers are likely to build trust in the service delivered by an organization, but if there is a continuous complaint of dissatisfaction, their citizenship behavior will be deterred. The finding of the study from the thematic analysis shows that to a greater extent, the inefficiencies and unethical disposition of the employees are influenced by the kind of policy the bank operates with. This suggests that when a bank policy is to have a lower employees-to-customers ratio, the effect is higher pressure, higher stress, and a negative behavioral disposition towards customers, which antecedently encourages value co-creation. And vice versa. The finding agrees with the findings of Delpechitre et al. (2018), which posits that a salesperson's emotional intelligence and empathy are key influencers of customer participatory and customer citizenship behavior. Similarly, the finding is supported by the finding of Skvarciany (2018), which found that one of the factors that are necessary for trust building is the network efficiencies of banks.

This study was designed to address multiple gaps that relate to value co-creation in the banking sector and contribute to theory and practice as it explains the correlation between indicators of customer participation and customer citizenship behaviors as value-co-creation variables. Most of the studies did find a causality between value co-creation and other variables. This study is one of the first to explain the relationship between the value co-creation dimensions. The study, based on the authors’ knowledge, is the first to show the moderating effect of customer trust on customer citizenship behavior. It is the first, based on the researchers’ knowledge, to employ a mixed methods research design (where both quantitative and qualitative procedures were applied for complementarity) to explain the relationship between value co-creation dimensions and also to apply a process macro for data analysis of a correlational study. The study thus concludes that there is a significant relationship between customers' participatory behavior and customers' citizenship behavior as value co-creative dimensions. Customer trust disturbs the interactive relationship between the value co-creative dimensions.

As this study reveals that customer advocacy largely takes the form of word-of-mouth referrals, commercial banks in northeastern Nigeria should strategically strengthen their value-creation policies, empowering customers to further contribute to the co-creation of value. Since customers' sufferance is expressed in degrees, depending on the levels of employees' unethical behavior and network failures, banks should improve their employees' service delivery and network efficiencies. To ensure the efficiency and ethical disposition of the employees, policymakers in these banks should formulate operational policies within the thematic areas found by this study to promote customers' value co-creative relationships.

Limitations of the Study

1. Narrow Focus: The study concentrated exclusively on commercial banks in a northeastern state of Nigeria, restricting the transferability of the findings to diverse regions or industries.
2. Risk of Response Bias: Using self-reported data may lead to response bias, as participants' perceptions may not accurately reflect objective realities.
3. Limited Moderating Factors: The study only examined customer trust as a moderating factor, overlooking other potential influences such as service quality, digital banking experience, and organizational culture.

Suggestions for Future Research

i. Broaden Research Scope: Future studies should explore value co-creation across diverse industries and regions to heighten the relevance of the findings.

ii. Long-Term Perspective: Conducting longitudinal studies could provide deeper insights into the progression of customer trust and value co-creation dynamics over time.

iii. Incorporating More Factors: Including additional moderating or mediating variables, such as technological advancements and customer satisfaction, can offer a more holistic view of value co-creation dynamics.

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Integrated Digital Marketing Strategies for Effective Communication with Customers in the Healthy Sugars Market

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Abstract
This research delves into the deployment and perceived impact of integrated digital marketing frameworks within the developing Healthy Sugar market of Romania. In an environment where a digital footprint is indispensable, comprehending how enterprises in specialized, health-focused markets utilize online instruments is essential for nurturing customer allegiance and contentment. Adopting a qualitative research design, this investigation involved comprehensive, semi-structured interviews with 18 marketing professionals possessing expertise in integrated digital marketing, especially within contexts pertinent to the health food domain. Through thematic analysis of the interview transcripts, six primary themes surfaced: (1) How consumers interpret digital communications from healthy sugar brands, highlighting the necessity for authenticity to accompany health assertions; (2) The pronounced effect of integrated approaches on cultivating brand allegiance through alignment with consumer values; (3) The utility and required adjustments of multi-channel digital outreach (encompassing SEO, social media, PPC, email); (4) The central function of personalization driven by data and informative material in boosting customer contentment; (5) The fundamental significance of data privacy assurance and GDPR adherence in establishing consumer trust; and (6) Approaches for nurturing enduring customer connections, emphasizing consistent, genuine, and tailored interactions. The outcomes accentuate the imperative for brands in this arena to carefully balance promotional content with transparency, educational value, and ethical data stewardship. Principal conclusions underscore the strategic weight of message uniformity, tailored experiences, and regulatory conformity. Constraints concerning sample dimension, potential subjective interpretation, temporal limitations, and industry focus are recognized. The paper puts forth managerial suggestions centered on augmenting transparency, refining personalization efforts, guaranteeing cross-channel harmony, championing data privacy, stimulating interactive participation, and forging authentic, lasting relationships.

Keywords: Integrated Digital Marketing, Healthy Sugar Industry, Customer Loyalty, Customer Satisfaction, Qualitative Research, GDPR.

JEL classification: M31.

Introduction

In the current commercial sphere, digital marketing has evolved significantly beyond being merely an optional asset. It now functions as a primary catalyst for organizational expansion and a non-negotiable component of customer retention frameworks. As technology perpetually progresses and consumer interconnectedness intensifies, businesses increasingly find themselves compelled to deploy integrated digital marketing systems. Such integration facilitates uniform and harmonious communication across the varied landscape of contemporary digital channels (Chaffey & Ellis-Chadwick, 2019). This strategic orientation is indispensable for forging connections that align with the expectations of today's discerning consumers. Moreover, the dynamic character of interactive online media presents unique avenues for engaging with consumers in real-time, enabling swift feedback regarding offerings (Chaudhuri, 2020).

Against this backdrop, Romania's Healthy Sugar industry emerges as an especially informative area for examination. Being a sector defined by its recent inception and continuous growth, it provides a distinct opportunity to assess the effectiveness of advanced digital marketing methods. The escalating consumer appetite for health-oriented products runs parallel to a heightened expectation for transparency within marketing discourse (Davis, 2023; Goworek & McGoldrick, 2015). Within this market dynamic, communications focusing on health characteristics represent not just a tactical maneuver but a foundational requirement for building credibility and engaging consumers who demonstrate considerable discernment in their purchasing decisions. Enterprises active in this domain must not only communicate with exceptional clarity but also educate their intended audience regarding product advantages, ensuring congruence with wider lifestyle principles like well-being and ecological awareness (Schmitt, 1999). This imposes a considerable responsibility on brands, especially newer ones, to quickly gain proficiency in complex digital tactics often refined in more mature markets, potentially while navigating resource constraints or knowledge gaps typical of an emerging sector. The strong focus on transparency and education implies a necessary transformation of the marketing role itself within this industry, demanding it fulfill informational and trust-building functions perhaps more acutely than in standard FMCG categories.

The purposeful application of integrated digital marketing—weaving together channels such as Search Engine Optimization (SEO), social media engagement, Pay-Per-Click (PPC) campaigns, and email outreach—demonstrably fosters a more cohesive brand perception and substantially reinforces customer allegiance (Chaffey & Ellis-Chadwick, 2019). Kotler and Keller (2016) further emphasize that the skillful amalgamation of these channels not only boosts brand prominence but also crucially improves customer retention figures. This viewpoint is corroborated by Bala and Verma (2018), who contend that integrated digital frameworks are progressively essential to meet the intricate demands of modern consumers seeking fluid and unified interactions across every point of brand contact.

Personalization stands out as an exceptionally critical factor in efficacious digital marketing. Contemporary, digitally-savvy consumers anticipate communications tailored specifically to their unique needs and inclinations. The judicious application of data to customize messages can markedly shape brand perception (Lemon & Verhoef, 2016). This principle is particularly relevant in the healthy sugars arena, where bespoke product suggestions and enlightening content act as potent mechanisms for cultivating consumer trust. Brands adept at delivering this level of personalization frequently achieve notable differentiation within a competitive field, as consumers exhibit greater receptivity to communications that cater to their distinct preferences (Rollins & Perri, 2016).

Data privacy constitutes another vital aspect influencing the current marketing terrain. With companies increasingly leveraging digital platforms for audience engagement, consumer anxieties about the gathering and application of personal data have escalated (Grewal et al., 2023). In this environment, conforming to data protection statutes, particularly the General Data Protection Regulation (GDPR), extends beyond simple legal compliance; it serves as a strategic lever for fostering consumer trust. As noted by Oliver (1980) previously, brands exhibiting a dedication to responsible data stewardship and openly conveying this commitment are better placed to cultivate lasting customer loyalty. This idea carries particular weight in health-related sectors, where consumer trust is an absolute prerequisite for interaction. The overarching pattern across various industries confirms an increasing inclination towards utilizing digital platforms for managing customer relationships, propelled by their recognized high efficiency and impact, often replacing traditional physical encounters (Desai, 2019).

The core objective of this inquiry is to investigate how firms within the Romanian Healthy Sugar industry employ integrated digital marketing approaches to strengthen bonds with their clientele. Utilizing a qualitative strategy centered on interviews with digital marketing practitioners, the research aims to shed light on how crucial components—namely, consistency in messaging, personalization techniques, and adherence to regulations (GDPR)—inform the development and deployment of triumphant digital marketing plans. Ultimately, this investigation strives to deliver insights capable of aiding companies in refining their marketing endeavors to establish profounder, more significant connections with consumers in this developing market niche.

1. Research Methodology

Qualitative research strategies offer clear benefits when probing complex, multi-layered subjects like the deployment of integrated digital marketing tactics within the specific milieu of the Healthy Sugar industry. Such methods enable a profound and holistic grasp of professional attitudes and practices through the acquisition of rich, detailed information. Unlike quantitative methods that often depend on standardized tools, qualitative inquiry provides inherent adaptability. This permits the modification of the research plan as new themes or subtle understandings emerge during data gathering (Aspers & Corte, 2019; Jovanovic, 2018). This flexibility is especially valuable when investigating new or complicated fields of study, such as the merging of different marketing channels for successful customer interaction.

The study adopted an exploratory research orientation. The principal technique for data acquisition involved conducting thorough interviews, guided by a semi-structured interview protocol. The central research aim was to probe the views of marketing professionals regarding the efficacy of integrated digital marketing approaches in nurturing customer allegiance and boosting satisfaction specifically within Romania's Healthy Sugar sector.

The group of participants included 18 marketing professionals with direct experience in executing integrated marketing plans, particularly in industries connected to or resembling the Healthy Sugar field. To confirm the participants' relevance and expertise, an initial screening questionnaire was employed. This tool assessed three critical factors: duration of professional practice, level of acquaintance with integrated marketing ideas and applications, and depth of understanding concerning the Healthy Sugar market or similar health-oriented consumer segments. This screening process ensured the participation of professionals possessing both theoretical knowledge and practical, real-world experience. The sample size of 18 was judged sufficient for the qualitative nature of the study, facilitating the generation of deep insights rather than aiming for statistical representation (Ta et al., 2022). It's worth noting that relying on specialists offers valuable perspectives on strategic planning and perceived effectiveness from the industry side, but doesn't directly capture consumer viewpoints, potentially leaving a gap between planned strategy and actual consumer reception.

Interviews took place remotely in November 2024, using online video conferencing platforms to enhance convenience and accommodate the participants' varied locations. A consistent procedure was followed for each interview, beginning with an overview of the research goals and a clear restatement of confidentiality guarantees. Participants were explicitly advised that their contributions would be anonymized to safeguard their identities and that they could opt out of the interview or skip specific questions at any moment. Voluntary participation after these disclosures was taken as implicit informed consent.

The semi-structured interview guide aimed to investigate several core areas: grasping the perceived effects of integrated digital marketing plans on customer loyalty in the healthy sugar context; pinpointing novel or notably effective methods for unified brand message delivery designed to heighten customer satisfaction via digital means; and understanding the significance attributed to GDPR compliance in building and preserving customer trust. While the semi-structured nature permitted adaptability and deeper exploration of pertinent subjects, it also implies that the exact level of detail explored on certain sub-topics might have varied somewhat between interviews, guided by the conversation's natural progression.

Individual interviews generally ranged from 30 to 45 minutes in duration. To guarantee precision and aid later analysis, participant statements were transcribed concurrently during the interview sessions. This technique facilitated the capture of nuanced opinions and viewpoints. Participants were actively prompted to expand on their experiences and offer context-specific illustrations, which substantially enriched the dataset and the subsequent interpretations.

Several obstacles were faced during the research implementation stage. The most notable restriction was the somewhat constrained period allocated for data gathering, potentially limiting the extent of inquiry achievable with each individual. Furthermore, the dependence on online interviews, despite practical advantages like accessibility, introduced certain constraints. As highlighted by Archibald et al. (2019), virtual interactions can bring a degree of subjectivity, as responses might be subtly shaped by the participant's surroundings or potential distractions, and technical glitches could arise. Additionally, the comparative lack of rich non-verbal signals versus face-to-face interactions might subtly impact the nuances captured, although the chosen method greatly improved the feasibility of participation.

2. Data Analysis

The qualitative information collected from the detailed interviews underwent a systematic thematic analysis. This analytical method aided in pinpointing six core themes that summarize how integrated digital marketing initiatives are understood to affect customer allegiance and contentment within the distinct setting of the Romanian Healthy Sugar industry. The understandings derived directly from the specialist interviews were methodically interpreted and placed in context by referencing pertinent scholarly works, thereby deepening the comprehension of the essential elements propelling digital communication effectiveness in this particular market.

Theme 1: Consumer Interpretation of Digital Communications from Healthy Sugar Brands

A significant discovery arising from the analysis concerns how communications from brands in the healthy sugars domain are perceived by consumers. Specialists indicated that these brands typically center their messaging around concepts of naturalness and health advantages, qualities that generally connect well with health-conscious individuals. Nevertheless, a crucial insight was the presence of a fine line; although health-oriented messaging is attractive, there's a clear danger linked to excessive claims. As one participant, Respondent 1, expressed, "While the visuals and language used are appealing, sometimes the health claims feel exaggerated, affecting their credibility." This points to an elevated level of consumer scrutiny in this market, where trustworthiness can be easily damaged. Consequently, authenticity emerges not just as preferable but as a fundamental prerequisite for impactful communication.

This observation aligns well with the importance Chaffey and Ellis-Chadwick (2019) place on transparency in digital marketing, especially for brands aiming to build authentic consumer trust. The necessity for direct, verifiable communication was a recurring point made by participants. Respondent 15, for example, observed that unambiguous messaging, backed by consistent visual identity, aids in sustaining consumer engagement. This supports Kotler and Keller’s (2016) assertion that consistent and transparent communication boosts brand trust and plays a key role in reinforcing consumer bonds. The implication is that brands need to be careful when calibrating their health assertions, possibly reinforcing them with verifiable proof or third-party validations to uphold credibility with a discerning public.

Theme 2: The Bearing of Integrated Strategies on Brand Allegiance

The interview findings strongly suggested that purposefully executed integrated digital marketing efforts significantly shape and encourage brand loyalty. Through maintaining consistency in messaging across different digital outlets and developing a brand persona that consumers find relatable, these strategies assist individuals in feeling a more profound link to the brand. Respondent 2 encapsulated this idea by remarking, "Consumers' loyalty towards a healthy sugar brand can be influenced by how we identify with that specific brand." This viewpoint corresponds with theoretical models, like the one emphasized by Cătoiu (2009), which stress that the congruence between a brand's values and those of the consumer serves as a potent driver in cultivating loyalty. Loyalty in this setting seems to go beyond simple product contentment, involving a more substantial level of identity congruence.

A brand's capability to provide uniform and relatable communications surfaced as a frequent element in participant feedback. For instance, Respondent 14 conveyed a feeling of loyalty towards the Lakanto brand, attributing it directly to its captivating communication approach, featuring clear messaging and useful suggestions like recipes – aspects that clearly meet consumer desires for value extending beyond the mere product. This real-world example backs Kotler's (2017) claim that integrated marketing initiatives can effectively boost customer retention by fostering significant, ongoing brand connections. Success appears contingent on projecting values and a character that align with the consumer's self-image as health-aware, knowledgeable, or perhaps ethically minded, indicating that market segmentation should integrate psychographic and value-based factors.

Theme 3: Assessing Integrated Digital Marketing Communication Channel Effectiveness

Participants consistently supported the use of a blend of digital channels – specifically citing SEO, social media, PPC advertising, and email marketing – as constituting an effective approach for conveying consistent brand messages and preserving visibility among target audiences. Respondent 4 characterized this multi-pronged approach as an "effective strategy" for remaining prominent in the consumer's awareness. However, this support came with a significant qualification regarding the deployment of certain channels. The same respondent proposed that diminishing the frequency or intensity of PPC ads might potentially refine the overall consumer experience and elevate engagement rates. This particular critique of PPC, within a general endorsement of multi-channel integration, hints at a possible conflict between more assertive advertising techniques and the desired brand persona (often natural, authentic, less forceful) common in the healthy goods sector.

This insight aligns with principles articulated by Bala and Verma (2018), who maintain that a skillfully managed omnichannel strategy facilitates the crafting of unified brand stories that connect more powerfully with consumers. Moreover, participants underscored the potential for enhancing the personalization of content distributed via these diverse channels.

Customizing recommendations or providing educational resources tailored to individual needs, for example, was suggested as a way to further boost consumer interaction. Rollins and Perri (2016) lend support to this perspective, observing that personalization markedly elevates consumer engagement and is instrumental in nurturing enduring brand affiliations. The essential lesson is that successful integration demands more than just employing multiple channels; it requires meticulous selection and adjustment of tactics on each channel to guarantee synergy and appropriateness for the brand's identity and the audience's expectations.

Theme 4: Factors Influencing Customer Contentment in the Healthy Sugars Arena

Within the healthy sugars domain, customer satisfaction seems notably shaped by particular digital marketing tactics. As per Respondent 6, the application of data-informed personalization and the development of captivating content on social media outlets are crucial in crafting a favorable consumer experience. Simultaneously, transparency, especially concerning product components and advantages, alongside the delivery of educational material, were frequently underscored as vital elements contributing to satisfaction, as noted by Respondent 9. This corresponds with Kotler's (2019) stress on the significance of informative communication in fulfilling and surpassing customer anticipations.

Respondents consistently showed appreciation for tailored suggestions and content that was both stimulating and informative. This further validates the stance put forward by Chaffey and Ellis-Chadwick (2019) that customer-focused digital strategies are essential for propelling both satisfaction and loyalty. It seems satisfaction in this market arises from a dual sense of fulfillment: consumers feel acknowledged when understood personally (via personalization) and empowered when given clear, dependable information (via transparency and educational content). Brands that adeptly cater to both these requirements, positioning themselves as both personalized advisors and reliable sources of knowledge within the consumer's health pursuit, are likely to attain superior levels of customer satisfaction.

Theme 5: The Indispensable Nature of Data Privacy and GDPR Adherence

Data privacy emerged distinctly as a crucial element for establishing and maintaining trust among consumers within the healthy sugars industry. A consensus existed among the interviewed specialists regarding the critical importance of adhering to GDPR statutes. Respondent 1, for instance, clearly articulated that a brand's verifiable dedication to GDPR compliance "enhances brand trust and strengthens customer relationships." This underscores the vital role that strong data privacy protocols play in preserving consumer confidence, especially in an age of increased consciousness about data utilization (Grewal et al., 2017).

Notably, the specialists mentioned encountering few negative experiences related to data privacy matters brought to their notice. While this could imply that current compliance measures in the sector are generally proficient, it doesn't necessarily negate the underlying importance of privacy concerns from the consumer's viewpoint. It might reflect effective procedures, or possibly a lack of insight into consumer-level issues among the experts interviewed. Nevertheless, the strategic consequence remains unambiguous: brands must engage in proactive and open communication about their data management policies. Merely adhering to regulations might not suffice; actively showcasing this commitment is vital for continually reinforcing trust, particularly considering the potential sensitivity around health-related information (Oliver, 1980). Assuming compliance alone fosters trust is a potentially precarious position; ongoing, transparent reassurance is likely essential.

Theme 6: Nurturing Enduring Connections with Healthy Sugar Brands

Forging lasting, long-term bonds between consumers and healthy sugar brands fundamentally relies on the consistency and genuineness of communication. Respondent 10 highlighted the considerable impact of personalization in this context, identifying customized product suggestions and exclusive offers as key strategies for cultivating brand allegiance over extended periods. Supporting this, Respondent 15 pointed out the essential function of content that is both transparent and aesthetically pleasing, aligning with Nuseir's (2016) research on the significance of authenticity as a foundation for trust in brand affiliations.

Furthermore, proactive interaction with consumers on social media platforms and the delivery of responsive, beneficial customer assistance were recognized as vital elements in reinforcing these enduring connections. These findings strongly resonate with the research by Rollins and Perri (2016), which indicated that active consumer engagement mediated through digital channels substantially strengthens the link between a brand and its clientele. Cultivating lasting loyalty seems to demand a dual approach: initially, building a trust foundation through authentic and transparent actions, and subsequently, layering personalized value and continuous, responsive interaction onto that base. Authenticity grants the brand the 'right' to personalize effectively, while ongoing relevant dialogue sustains the relationship.

Table 1 The main themes, key insights and supporting quotes

Theme	Key Insights	Supporting Quotes	Literature References
Theme 1: Perception of Communication	Natural messaging resonates but exaggeration can undermine trust	"Health claims feel exaggerated, affecting credibility" Respondent 1	Chaffey & Ellis-Chadwick (2019), Kotler & Keller (2016)
Theme 2: Brand Loyalty	Integrated strategies foster loyalty by aligning with consumer values	"Loyalty can be influenced by how we identify with the brand" Respondent 2	Cătoiu (2009), Kotler (2017)
Theme 3: Digital Channel Integration	Multi-channel approach is effective but needs optimization	"Prefer reduced PPC ads for better engagement" Respondent 4	Bala & Verma (2018), Rollins & Perri (2016)
Theme 4: Customer Satisfaction	Data-driven personalization improves consumer experiences	"Data-driven personalization is key" Respondent 6	Kotler (2019), Chaffey & Ellis-Chadwick (2019)
Theme 5: Data Privacy Compliance	GDPR compliance builds trust and consumer confidence	"GDPR compliance enhances trust" Respondent 1	Grewal et al. (2017), Oliver (1980)
Theme 6: Long-Term Relationships	Authentic and personalized communication fosters loyalty	"Transparent and visually appealing content is crucial" Respondent 15	Nuseir (2016), Rollins & Perri (2016)

Source: Authors' own research results

3. Results, discussion and implications

This investigation provides a detailed view of how integrated digital marketing approaches influence consumer views, contentment, and allegiance within the particular setting of the Romanian Healthy Sugars market. By combining qualitative understandings from expert interviews with established scholarly findings, several primary conclusions emerge:

1. Digital Communication Interpretation.

Consumers in this segment react favorably to messages emphasizing natural components and health advantages, highlighting the need for brands to synchronize their communications with dominant consumer values. Visual attractiveness and open communication are essential for trust-building; conversely, inflated or unverified health assertions represent a considerable threat to brand reputation. This aligns with the idea that genuine communication fosters more robust customer connections (Chaffey & Ellis-Chadwick, 2019).

2. *Influence on Brand Allegiance.*

Uniform and cohesive digital messaging across various channels reinforces brand recognition and nurtures loyalty. Specialists noted that integrated methods, like synchronized email marketing and social media initiatives, contribute to shaping a unified brand persona, thus promoting repeat interactions and fostering connections based on shared principles (Cătoiu, 2009; Kotler & Keller, 2016). Successful loyalty cultivation must also integrate consumer input, such as preferences concerning the obtrusiveness of advertising methods like PPC.

3. *Multi-Channel Strategy Effectiveness*.

Utilizing a calculated combination of SEO, social media, PPC, and email marketing results in a vibrant and multi-layered consumer journey. SEO offers findability, social media enables interaction, and email permits customized content delivery. These findings mirror research on the significance of channel synergy for optimizing consumer engagement (Rollins

& Perri, 2016). Fine-tuning these approaches involves tailoring content to capitalize on each platform's unique capabilities while preserving overall message unity and potentially adjusting channel deployment (e.g., PPC intensity) according to brand positioning and audience sensitivity (Bala & Verma, 2018).

4.*Customer Contentment in the Healthy Sugars Arena.*

Satisfaction is closely tied to transparency, the delivery of informative messages, and the provision of personalized encounters. Brands offering comprehensive product details and maintaining stimulating, educational updates via social media are viewed positively. This resonates with the marketing principle of providing value by addressing consumer needs for pertinent information (Kotler, 2017; Chaffey & Ellis-Chadwick, 2019). Integrating interactive features can further elevate satisfaction by cultivating a sense of community.

5.Significance *of Data Privacy and GDPR Adherence.*

Trust emerges as a fundamental pillar of consumer interaction in this industry, with GDPR conformity playing a crucial part in its preservation. The vital importance of transparent data management protocols was stressed, with ethical use of personal data perceived as directly nurturing loyalty (Grewal et al., 2017). Compliance with data protection regulations like GDPR is not just a legal necessity but a strategic imperative that bolsters consumer trust (Goffman & Joyner, 2020; Oliver, 1980).

6.*Cultivating Enduring Relationships*

Establishing lasting loyalty demands consistent and genuine digital dialogue. Brands that sustain regular, valuable interactions and exhibit transparency are better equipped for enduring success. This lends support to the notion that consumer-focused strategies emphasizing authenticity and dependability boost brand retention (Bala & Verma, 2018; Nuseir, 2016). Tailored value provision and responsive interaction are essential elements.

4. Limitations and future research directions

Despite offering significant insights, this investigation faces several constraints that require acknowledgment:

1. *Sample Dimension*. The study's foundation on a sample of 18 specialists, though suitable for qualitative exploration, limits the capacity for statistical generalization of the results to the wider industry or the entire consumer population. Subsequent research using larger, more varied samples could offer broader viewpoints and permit quantitative confirmation.

2. *Response Subjectivity*. Qualitative inquiry inherently carries subjective interpretation from both participants and researchers. Although stringent analytical procedures were applied, the possibility of subjective bias influencing the outcomes cannot be entirely dismissed. Future investigations might gain from mixed-method designs integrating qualitative depth with quantitative scope.

3. *Temporal Restrictions*. The research occurred within a specific timeframe, potentially limiting the extent of information gathered from each participant. A more extended data collection phase could potentially facilitate a more thorough examination of the intricate issues at play.

4. *Industry Confinement*. The conclusions stem solely from the Romanian Healthy Sugars market context. This focus might restrict the direct transferability of the findings to other FMCG segments or diverse geographical and cultural settings. The pronounced consumer emphasis on health, transparency, and ingredient examination likely distinguishes this market, amplifying the relevance of factors like education and data privacy compared to more general consumer goods areas.

Conclusions

Considering the findings and the market dynamics, a key challenge for brand managers in the Healthy Sugars domain involves the ongoing adaptation of their digital marketing plans to align with the precise and shifting demands of their target consumers. Based on this, the current study suggests several actionable recommendations designed to boost the efficacy of digital marketing initiatives:

1. *Augmenting Transparency*. Make clear and truthful communication about ingredient origins, manufacturing processes, and verifiable health effects a priority. Employ educational content forms like detailed blog entries, clear infographics, and explanatory videos to enlighten consumers and enhance credibility, directly tackling the need for authenticity (Chaffey & Ellis-Chadwick, 2019).

2. *Tailored Marketing Approaches*. Responsibly utilize consumer data to provide customized content, personalized product suggestions, and relevant promotions. Focused email initiatives and bespoke social media content can markedly improve the perceived relevance of the brand interaction for individual consumers.

3. *Cross-Channel Consistency (with Calibration)*. Uphold a consistent brand narrative, tone, and visual style across all digital interaction points (SEO, social media, PPC, email) to solidify brand identity. Carefully synchronize communication plans with consumer inclinations, guaranteeing a fluid experience while potentially adjusting more assertive tactics like PPC based on brand persona and audience reactions.

4. *Commitment to GDPR Compliance and Data Ethics*. Regard transparent data management procedures and clear communication regarding privacy commitments as vital elements in trust cultivation. Strict adherence to GDPR not only fulfills legal obligations but also signals respect for consumer privacy, potentially reinforcing loyalty and offering a competitive edge.

5. *Stimulating Interactive Consumer Participation*. Integrate interactive features into the digital marketing strategy, such as live Q&A forums with specialists, consumer surveys, competitions promoting user-generated contributions, and highly attentive social media engagement. Direct interaction with the audience aids in building a community feel and can substantially elevate satisfaction and loyalty.

6. *Enduring Relationship Cultivation*. Concentrate on strategies that foster lasting connections extending beyond individual purchases. This encompasses delivering regular valuable information, proposing personalized suggestions derived from past interactions or declared interests, and guaranteeing responsive and supportive customer service. Emphasize genuineness and dependability in every interaction to preserve consumer trust and allegiance over the long haul.

In summary, integrated digital marketing frameworks, when carefully conceived and skillfully implemented, hold considerable promise for favorably shaping consumer views, boosting satisfaction, and forging durable loyalty within the Romanian Healthy Sugars market. Through strategic emphasis on transparency, personalization, cross-channel uniformity, strong GDPR adherence, and authentic interactive dialogue, brands can craft a consumer-focused strategy that effectively addresses and potentially surpasses the high standards prevalent in this sector. While this investigation adds valuable qualitative understandings, further research tackling the noted limitations, especially via broader quantitative analyses and direct investigation of consumer viewpoints, can serve to further corroborate these conclusions and enrich the collective grasp of consumer dynamics in changing digital marketing landscapes.

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An in-depth Study of Non-Standard Forms of Employment Among Romanian Students

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Abstract
As of late, with the advancement of the labor showcase, but too the increment in contracted adaptability, increasingly understudies are inclined to select atypical shapes of work. Digitization, financial changes, but moreover the modern prerequisites of managers are vital variables that impact their choice of work environment. Outsourcing, part-time contracts, regular work or online collaborations are fair some illustrations of atypical business sorts. This consider appears how these diverse sorts of work impact the improvement of proficient aptitudes on the one hand and the adjust between instruction and work on the other. The results of the investigate appear that increasingly understudies select an partner work from the point of view of the fact that it offers openings construct up to construct up involvement, but moreover proficient freedom, but in spite of all this, in spite of the fact that it offers budgetary independence, this sort of business can have long-term negative impacts, affecting scholastic execution and proficient soundness.

Keywords: Atypical employment, students, flexibility, freelancing, online work, part-time contracts, education.

JEL classification: M51, M54.

Introduction

In the current economic and social context, where digitization and flexibility are the main elements around which the labor market revolves, atypical employment has become an increasingly popular option among students, with a large proportion of them choosing alternative forms of work, such as example: freelancing, part-time jobs, seasonal jobs, especially during the summer or different collaborations through Social Media platforms. Financial autonomy, professional and personal development are some of the reasons behind choosing an atypical form of employment (Stoica et al., 2015).

The flexible work schedule, the diversification of work tasks, but also the professional development represents some essential advantages that determine the choice of such a job, but this type of employment also has disadvantages such as: the instability of the workplace, the lack of certain social benefits, but also the discrepancy between professional and academic life. This study aims to highlight the impact of atypical forms of employment on Romanian students, highlighting both the opportunities and the risks associated with this new phenomenon.

1. Atypical employment in Romania – advantages and disadvantages

Agreeing to later thinks about, it is illustrated that increasingly understudies are choosing atypical shapes of business since they offer more prominent adaptability in terms of working hours and area, give a adjust between proficient, individual, and scholastic life, and make a more pleasant work involvement. Numerous understudies select this frame of business to extend their salary whereas moreover picking up proficient life involvement nearby their ponders (Ionescu & Marin, 2021).

Agreeing to a think about conducted by the INS (2024) around 40% of understudies believe that part-time business may be a appropriate choice amid their ponders, because it permits them to adjust money related pay with college participation.

Many employers require professional experience after completing studies, which is why many students choose to work in order to gain relevant professional experience in their field of interest, so that after graduation, they will have skills that are valued on the job market (Dumitrescu, 2024).

Ionescu & Marin (2021)contend that these shapes of business can have a positive effect on understudies since they offer assistance create proficient aptitudes, which can afterward be developed in several proficient areas. In any case, on the other hand, they may have a negative impact, particularly since understudies who select to work slowly lose scholastic execution due to the reality that the inspiration for gaining additional salary is higher, and the time apportioned to considering gets to be progressively restricted. Concurring to a consider conducted by the College of Bucharest in 2024, more than 45% of understudies who work more than 20 hours per week experienced a altogether lower scholarly execution due to need of time for considering (Orzan et al., 2021).

The same supposition is shared by (Păun, 2023), who, in a consider, presents the impediments of choosing such a work, with the foremost imperative one being the need of monetary soundness. Not at all like changeless business, which guarantees a steady pay and certain benefits, atypical work does not offer as numerous preferences, such as wellbeing protections, paid get-away, or benefits commitments. A consider appears that more than 35% of understudies work to pay for their ponders and to cover every day costs, particularly in huge cities where the fetched of living is much higher.

2. Atypical forms of employment in Romania

Atypical work can be characterized as a concept that incorporates any sort of work course of action that does not depend on a standard contract for an uncertain period and full-time work. More particularly, it alludes to those shapes of work that are based on adaptability in terms of working hours, area, or contract length (Mihailov, 2019). Among these atypical shapes of work, we are able list:

Part-time work

The foremost common frame of atypical work nowadays is part-time work. This alludes to working less than 40 hours a week and is directed by Romania's labor enactment, specifically the Labor Code. Increasingly understudies select part-time employments since they offer a adaptable plan that permits them to alter their working hours concurring to their college courses. Numerous of these occupations can be found in segments such as HoReCa, call centers, or different regulatory administrations. A consider conducted by the National Founded of Measurements (INS) in 2024 appears that over 40% of understudies in Romania are utilized part-time, choosing such employments to cover day by day costs, pick up proficient encounter, and, over all, increment their wage.

Freelancing

Roman et al. (2021) characterizes outsourcing as an autonomous frame of work in which the specialist gives different administrations to companies or clients without having an work contract for a decided period with an organization. It may be a developing frame of business, particularly due to the advancement of innovation and social media systems, which offer numerous preferences. Consultants can work from anywhere and have adaptable working hours. The foremost common areas for this modern frame of atypical work are IT, online showcasing, interpretations, substance composing, counseling, and photography, among others. Compared to conventional employments, outsourcing offers preferences such as expanded salary, independence in choosing ventures to work on, and the capacity to work from anyplace. In later a long time, the number of individuals choosing this work in Romania has expanded altogether, particularly as understudies practicing this calling can learn how to oversee their claim trade, creating different aptitudes such as arrangement, time administration, and promoting.

Collaborations on digital platforms

An arrangement of later considers recommend that working on computerized stages speaks to a modern frame of atypical work. Online work stages like Upwork, Specialist, Fiverr, and Beat permit understudies to offer their administrations in different areas, counting IT, advanced promoting, realistic plan, copywriting, and interpretation. These stages act as middle people between specialists and clients, empowering understudies to construct a portfolio of ventures to display to potential bosses.

A key advantage of working on computerized stages is the capacity to work from domestic or other areas, with adaptable plans. Besides, understudies have got to a worldwide showcase of buyers and can work on numerous ventures at the same time, permitting them to win more in a shorter period. Agreeing to a report by the INS (2024), the number of computerized stage clients in Romania has essentially expanded in later a long time, with dynamic utilize in divisions such as data innovation, computerized showcasing, and realistic plan.

Seasonal work

Regular work is another common frame of atypical work among understudies in Romania. This alludes to work for a constrained period amid the year, ordinarily in an industry with particular regular requests. The foremost common segments where understudies can discover regular work are tourism and neighborliness (inns, eateries, cafes), retail, and farming.

Regular work is regularly prevalent among understudies since it permits them to gain extra wage for brief periods, regularly amid the summer or winter occasions, without essentially interferometer with their ponders. Also, this sort of work offers students an opportunity to memorize approximately diverse areas, pick up encounter working with the open, lead a group, and improve their CV (Ţiclea, 2002).

Be that as it may, regular work moreover comes with challenges, such as the need of work progression and the nonattendance of the long-term benefits given by lasting business contracts. Besides, understudies entering these callings may not advantage from satisfactory legitimate security, and working conditions can be more unstable than in other areas (Ionescu & Marin, 2021).

3. The impact of atypical employment on academic performance and personal life

Research on the impact of atypical employment on academic performance suggests both positive and negative effects. On one hand, this type of work can contribute to the development of time management skills, which are essential both for academic life and future professional endeavors. Moreover, students who work in their field of study can apply the theoretical knowledge gained during their undergraduate studies and acquire valuable practical experience (Bălan & Ioniță, 2023).

At the same time, research suggests that students who work too much risk becoming overburdened. A study by Ionescu and Marin (2021) found that 38% of students who worked more than 25 hours per week reported symptoms of stress and anxiety, while overall life satisfaction and academic performance were significantly reduced.

For Romanian students, atypical employment is seen as a valuable opportunity to develop professional skills, earn money, and learn how to manage time. However, it is essential to balance work, study, and personal life to prevent negative effects on academic performance and mental health. Time management and establishing clear boundaries between work and personal life are crucial for well-being and optimal academic performance (Marica, 2019).

4. Research methodology

The purpose of this study is to analyze the forms of atypical employment adopted by students in Romania and their impact on academic performance, personal life, and professional development. To analyze the atypical forms of employment adopted by Romanian students and their impact on academic performance, personal life and professional development, a quantitative design based on the application of a survey was used.

Investigated population The study was addressed to students from various university centers in Romania, regardless of the field of study or form of education (budget/fee, frequency/ID/FR).

Sampling method: A non-probability sampling method was used, more precisely convenience sampling, due to the accessibility of the respondents and the resources available to carry out the study.

Number of participants: Over 200 students participated in the study, selected from various universities in Romania.

Data collection: Data were collected through an online questionnaire, distributed through educational platforms, social networks and student groups. The questionnaire included questions regarding the types of atypical jobs held, the number of hours worked, the impact on studies and personal life.

Study period and location: Data collection took place between October 10-30, 2024 and was carried out at the national level, involving students from various regions of Romania.

Data analysis: The collected data were analyzed using descriptive statistical methods (frequencies, percentages) and inferential methods, where appropriate, to determine correlations between the variables of interest.

Research limitations: One of the main limitations of the study is the use of convenience sampling, which may affect the generalizability of the results. Also, the use of an online questionnaire may influence the diversity of respondents, excluding students who do not frequently use digital platforms.

Future research directions: For future studies, it is recommended to expand the sample to include students from a wider spectrum of universities and fields of study. Also, a mixed approach (quantitative and qualitative) could provide a more detailed picture of the reasons and perceptions related to atypical employment. Another important aspect would be to investigate the long-term impact of these forms of employment on the careers of graduates.

4.1. Research objectives

O1. Identifying the presence of experience with atypical forms of employment among Romanian students.

O2. Identifying the main advantage of atypical employment for Romanian students.

O3. Identifying the main disadvantage of atypical employment for Romanian students.

O4. Determining the level of influence on the balance between personal and professional life among Romanian students in relation to atypical employment.

The survey serves as the basic instrument for ensuring that the inquiry is both successful and unique. It consists of a series of questions designed to collect the data required to meet the goals of the research (Cătoiu, 2009, p.327). Over 200 individuals completed the study.

4.2. Research hypotheses

H1. The majority of students have experience with atypical forms of employment.

H2. Nearly half of the respondents consider schedule flexibility to be a key advantage.

H3. More than half of the respondents consider fluctuating income to be a primary disadvantage.

H4. Over 40% of respondents believe that atypical employment influences the balance between personal and professional life.

5. Analysis and interpretation of results

The survey was distributed online using the Google Forms platform, between October 10 and October 30, 2024, and the collected data was analysed accordingly. Respondents were able to complete the survey at their convenience, and it was shared through various online channels, including Facebook, Instagram, WhatsApp, and email. The response rate is 95%.

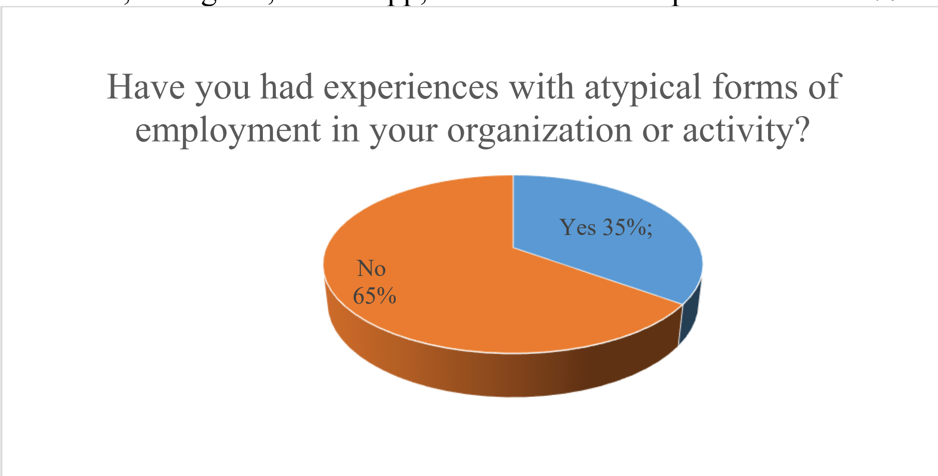

Figure 1. Experiences with atypical form of employment

35% of respondents stated that they have had experience with atypical forms of employment, while 65% have not had such experiences. These results highlight a moderate presence of atypical forms of employment, suggesting opportunities for development in this area for organizations and employers. Data are presented in Figure 1.

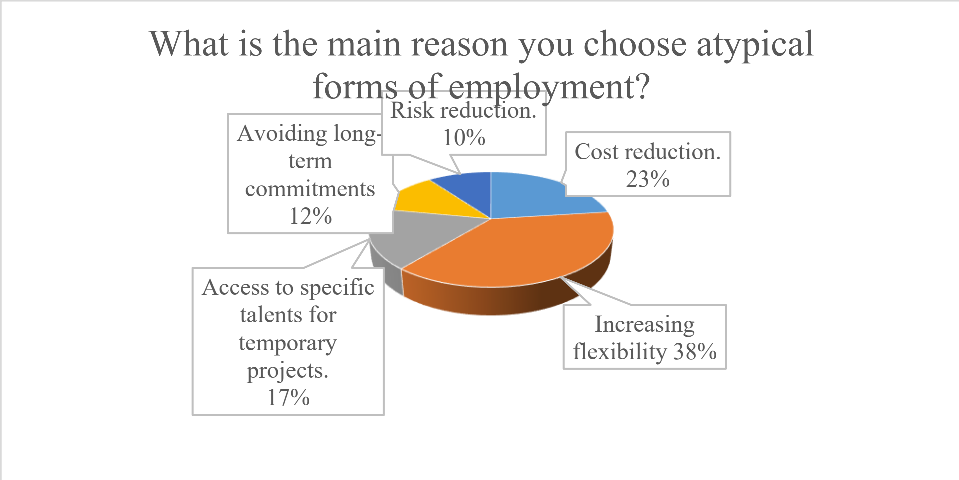

Figure 2. Choose atypical forms of employment

35% of respondents stated that they have had experience with atypical forms of employment, while 65% have not had such experiences. These results highlight a moderate presence of atypical forms of employment, suggesting opportunities for development in this area for organizations and employers. Data are presented in Figure 2.

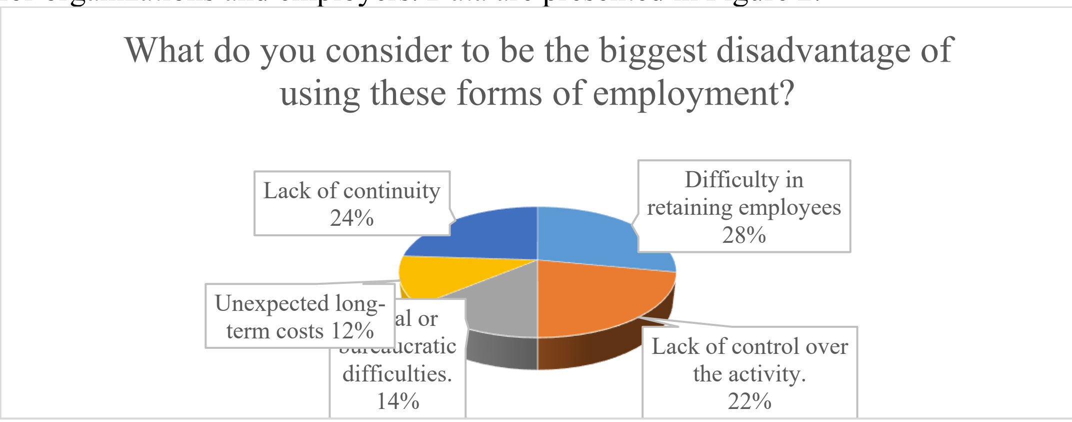

Figure 3. Disadvantage of using these forms of employment

The biggest disadvantage of atypical forms of employment is the difficulty in employee retention (28%), followed by the lack of continuity (24%) and the lack of control over activities (22%). Other disadvantages include legal or bureaucratic difficulties (14%) and unforeseen long-term costs (12%). These results highlight the challenges associated with ensuring stability and efficiency in the use of these forms of employment. Data are presented in Figure 3.

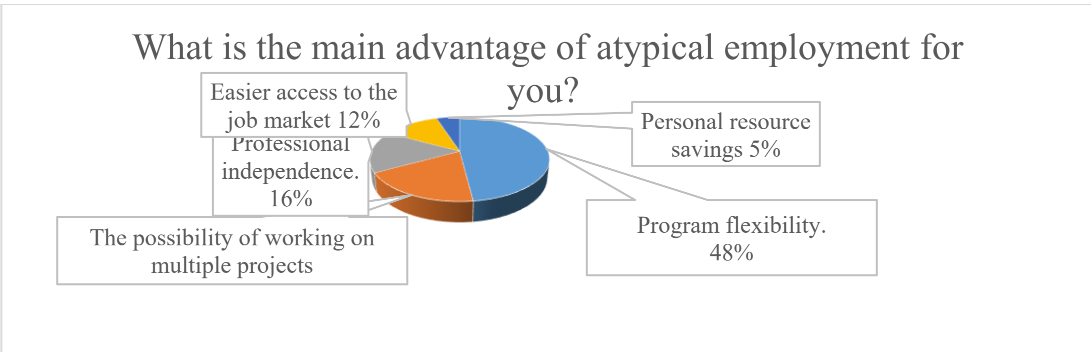

Figure 4. Advantage of using these forms of employment

The main advantage of atypical employment, according to respondents, is schedule flexibility (48%), followed by the ability to work on multiple projects simultaneously (19%). Other advantages include professional independence (16%), easier access to the job market (12%), and savings in personal resources (5%). These results highlight the preference for a diversified working style.

The majority of respondents believe that atypical employment provides employees with more professional freedom, with 36% agreeing and 17% fully agreeing. However, a significant percentage (26%) are indifferent, while 12% disapprove and 9% express total disagreement. These data reflect a predominantly positive perception of the professional freedom offered by atypical employment. Data are presented in Figure 4.

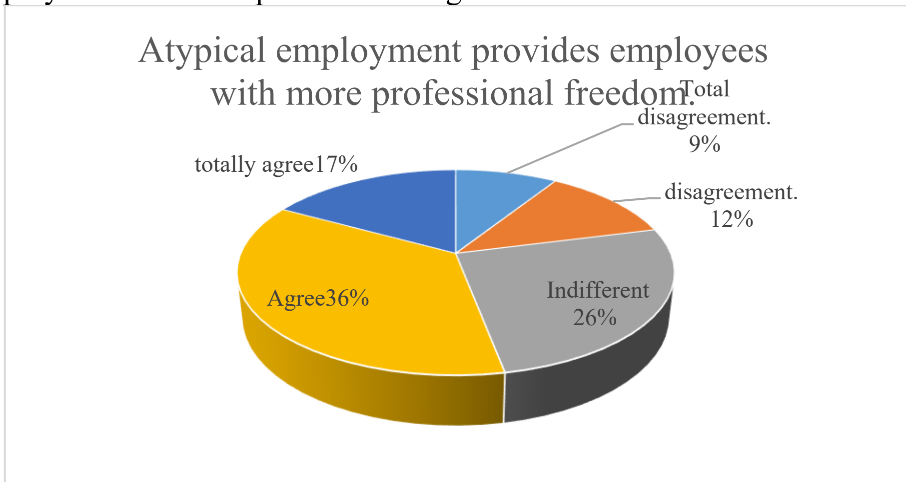

Figure 5. Atypical employment provides employees with more professional freedom.

More than half of respondents (53%) believe that an atypical job offers more professional freedom, of which 36% agree and 17% strongly agree. In contrast, 21% of respondents do not share this opinion, expressing disagreement (12%) or strongly disagree (9%). A significant percentage of 26% remain indifferent. These results suggest that the perception of the professional freedom offered by atypical work varies, but the majority of respondents consider it beneficial. The data are presented in Figure 5.

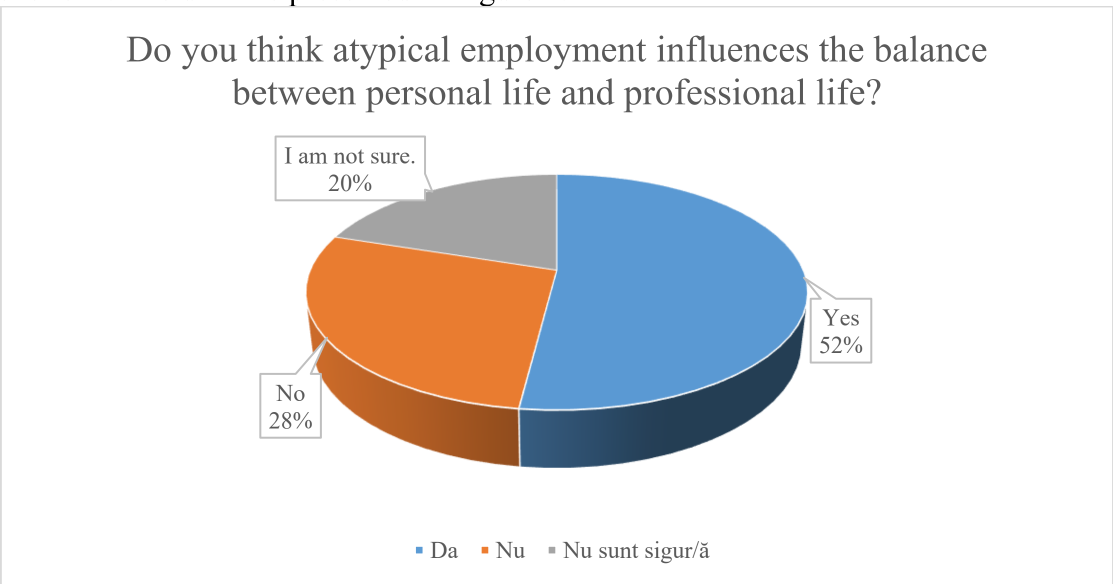

Figure 6. The balance between personal life and professional life

More than half of the respondents (52%) believe that atypical employment has an impact on the balance between personal and professional life. In contrast, 28% do not observe such an influence, and 20% are unsure. These results suggest that the majority perceive a link between the type of employment and personal-professional balance. Data are presented in Figure 6.

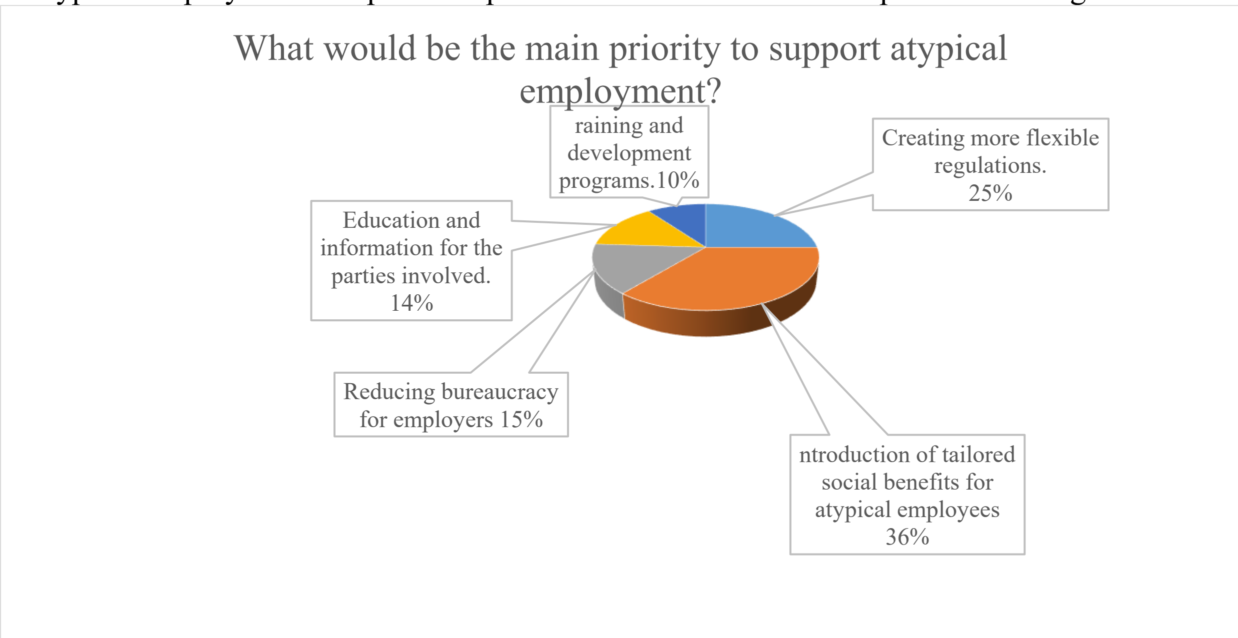

Figure 7. Atypical employment

The most significant support for atypical employment, according to respondents, would be the introduction of tailored social benefits for atypical employees (36%), followed by the creation of more flexible regulations (25%). Other suggestions include reducing bureaucracy for employers (15%), educating and informing stakeholders (14%), and implementing training and development programs (10%). The results highlight the need for regulatory adjustments and benefits to more effectively support this type of employment. Data are presented in Figure 7.

Conclusion

The investigate comes about highlight that atypical shapes of business are getting to be progressively broad and are seen as a useful arrangement for both bosses and representatives, especially in segments such as promoting and imaginative businesses. Adaptability is the key to victory – The lion's share of workers accept that atypical business offers them more prominent independence and the capacity to adjust their work plan, driving to higher efficiency and work fulfilment.

Fetched decrease is the deciding figure. Bosses are drawn to the money related investment funds they can accomplish by dodging costs related with conventional long-term work. This makes atypical business courses of action financially appealing. Execution will not be influenced – Conclusions are partitioned on this matter, but most accept that non-routine laborers perform at slightest as well as changeless representatives due to the adaptability and independence they appreciate.

Atypical business shapes are considered a useful arrangement for both companies and laborers, with adaptability and fetched diminishment being the most reasons for their appropriation. Be that as it may, the victory of this demonstrate moreover depends on favorable assess administrations and proficient execution administration of workers.

Research Limitations

One of the main limitations of the study is the use of convenience sampling, which may affect the generalizability of the results. Also, the use of an online questionnaire may influence the diversity of respondents, excluding students who do not frequently use digital platforms.

Future research directions

For future studies, it is recommended to expand the sample to include students from a wider spectrum of universities and fields of study. Also, a mixed approach (quantitative and qualitative) could provide a more detailed picture of the reasons and perceptions related to atypical employment. Another important aspect would be to investigate the long-term impact of these forms of employment on the careers of graduates.

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Towards the Sustainable Organization: Challenges and Barriers to Sustainability Integration

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Abstract
This integrative review explores primary barriers to embedding sustainability in organizational operations globally and proposes practical solutions to advance sustainable practices. It identifies key challenges and effective strategies across diverse organizational contexts. The review synthesizes insights from scholarly sources, including peer-reviewed journal articles, books, and reports, primarily sourced from databases such as Scopus, Web of Science, and JSTOR, spanning the years 2000 to 2023. Using thematic analysis, it highlights ten critical barriers: resistance to change, resource limitations, measurement challenges, insufficient leadership commitment, short-term financial priorities, unclear metrics, regulatory complexities, supply chain intricacies, limited consumer demand, and lack of expertise. Findings indicate that fragmented regulations require proactive transparency, internal resistance demands robust communication and training, supply chain issues need advanced technologies and collaborative supplier relationships, and consumer demand benefits from education and certifications. Strategic partnerships, phased implementation, and targeted training address resource and expertise gaps, while standardized frameworks and enhanced data systems overcome measurement difficulties. The review offers a conceptual model linking barriers, impacts, and solutions, recommending stakeholder engagement, analytics investment, and adoption of frameworks like the Triple Bottom Line and SDGs. This study enriches understanding of sustainability integration by clarifying obstacles and providing actionable guidance for organizations pursuing sustainable outcomes.

Keywords: Sustainability Integration, Organizational Barriers, Sustainable Leadership, Supply Chain Sustainability, Strategic Frameworks.

JEL classification: Q01, Q56, L21, M14, M16.

Introduction

In today's rapidly evolving business landscape, organizations across all sectors are under increasing pressure to integrate sustainability into their core operations. This push comes not just from tightening regulations, but also from rising expectations among customers, investors, and other stakeholders (Niinimäki et al., 2020; Seuring & Gold, 2013). Despite the urgency, much of the current research tends to focus narrowly, often examining sustainability in specific industries, such as healthcare or manufacturing. As a result, we still lack a clear understanding of the broader, cross-sector challenges that make sustainable integration so difficult (de Oliveira et al., 2023).

Some studies have begun to shed light on these obstacles. For instance, de Oliveira et al.(2023) point to persistent misconceptions among senior leaders and outdated technologies as common barriers. Adams et al. (2008) take it a step further by categorizing these barriers into strategic, operational, and cultural categories that transcend industry lines. Still, what's missing is a unified framework that brings these findings together in a way that organizations across the globe can use.

This paper aims to fill that gap. It asks two key questions: (1) What are the main challenges organizations face when trying to embed sustainability into their everyday operations? and (2) What strategies and conceptual models have proven effective in addressing these challenges?

To answer these, the study conducts an integrative review of literature from business, environmental, and social science fields—including peer-reviewed articles, reputable reports, and books. By bringing together insights from across disciplines, industries, and regions, the goal is to offer a clear and practical synthesis of both the barriers and the solutions to sustainable integration. That said, the review focuses solely on English-language sources and literature available as of December 2023. This may limit the scope of some findings, particularly those emerging after this date or in non-English contexts, as discussed further in the methodology section.

Building on earlier research that tends to focus on specific sectors or regions (e.g., de Oliveira et al., 2023), this study offers a broader contribution by introducing a new conceptual model. Unlike previous work, the model connects common sustainability barriers to their organizational consequences and aligns them with targeted strategic responses. In doing so, it provides practical insights that go beyond what sector-specific studies have typically emphasized.

The paper is structured as follows: Section 2 describes the integrative review methodology, including the literature search, selection criteria, and thematic analysis. Section 3 presents the core findings, examining key challenges such as lack of leadership commitment, difficulties in measuring sustainability outcomes, limited resources, organizational resistance to change, and complex regulatory environments. Section 3.11 introduces the proposed conceptual model, which integrates these elements into a unified framework.

Section 4 then assesses leading sustainability frameworks—including the Triple Bottom Line, the Sustainable Development Goals, the Circular Economy model, and reporting standards such as GRI and SASB—through the lens of the identified barriers. Section 5 summarizes the findings in a consolidated table of challenges and responses. Finally, Section 6 concludes with key implications, limitations, and suggestions for future research, offering a strategic roadmap for organizations seeking to embed sustainability into their core operations.

1. Methodology

This study employs an integrative review approach to examine the barriers and strategies involved in embedding sustainability within organizational practices, with a particular focus on the experiences of small and medium-sized enterprises (SMEs). Drawing on a wide range of sources—including empirical research, theoretical contributions, and practitioner-oriented literature—the review follows the framework developed by Whittemore and Knafl (2005), a widely adopted model for conducting comprehensive and methodologically sound integrative reviews.

The process began with the formulation of research questions centered on the key obstacles organizations face in sustainability integration and the strategies available to address them. Guided by these questions, the review proceeded through a structured yet flexible series of steps designed to build a robust evidence base while allowing for the inclusion of diverse perspectives.

A systematic literature search was conducted across four major academic databases—Scopus, Web of Science, JSTOR, and Sage Journals—between June and August 2023, with an update in December 2023 to include the most recent developments in this rapidly evolving field. Search queries utilized combinations of keywords, such as “organizational sustainability,” “sustainability integration,” “barriers,” “challenges,” “strategies,” and “frameworks,” connected by Boolean operators (e.g., *AND, OR*). Results were limited to English-language publications from 2000 to 2023.

To ensure a broad and balanced perspective, peer-reviewed journal articles were complemented by books, book chapters, and reputable reports from recognized organizations, such as the United Nations. Additional sources were identified through manual reference checks and expert recommendations. The review prioritized sources with a cross-sectoral or organizational-level focus on sustainability integration, and excluded those narrowly confined to a single industry or geographic region. While this approach supports generalizability, it may omit context-specific insights. Non-English works and unauthored grey literature were also excluded to maintain quality and consistency.

Each selected source was appraised using the 2018 version of the Mixed Methods Appraisal Tool (MMAT) (Hong et al., 2018), which is suitable for assessing the quality of qualitative, quantitative, and mixed-methods studies. Only sources meeting at least 80% of the MMAT criteria were included in the final analysis. Approximately 15% of initially reviewed materials were excluded based on this quality threshold.

Data were extracted using a structured template capturing bibliographic details, methodological approach, identified barriers, strategic responses, and key insights. Special emphasis was placed on sustainability challenges specific to SMEs, including limited financial and human resources, as well as gaps in leadership engagement. These issues informed the subsequent thematic analysis, conducted using Braun and Clarke's (2006) iterative process. The analysis began with the initial coding of data related to barriers and strategies, which were then organized into thematic categories, such as leadership, measurement, and supply chain complexity. Themes were refined through repeated comparisons across studies until thematic saturation was reached. Relevance to the core research questions, particularly in relation to SMEs, was validated throughout.

The findings from this analysis were used to construct a conceptual framework (Figure 1), which maps out the relationship between common sustainability barriers, their organizational impacts, and potential strategic responses. This model was developed in alignment with Whittemore and Knafl's (2005) framework and also integrates insights from a supplementary review of developments after December 2023. These additions strengthened the model's adaptability to evolving regulatory contexts, particularly through the incorporation of a resilience feedback loop.

Several limitations of the methodology are acknowledged. The decision to exclude sector-specific studies and non-English sources may have led to the omission of valuable contextual insights. While the inclusion of organizational reports added practical relevance, it introduced variability in the types of sources. Furthermore, although inter-rater reliability was high, formal metrics were calculated retrospectively. The literature cutoff in December 2023 may also exclude emerging studies from early 2024; however, an informal update suggests that these are unlikely to alter the core conclusions.

Despite these constraints, the methodology provides a rigorous and transparent foundation for exploring the integration of sustainability across sectors. It supports the paper's focus on SMEs while contributing to a broader understanding of how organizations can effectively integrate sustainability into their strategy and practices.

2. Results and Discussion

The study identified ten interconnected barriers to sustainability integration, grouped into internal, resource-related, and external or operational categories. Each set of barriers carries distinct implications for organizations and is linked to actionable strategies. Taken together, these insights offer a comprehensive understanding of the challenges and potential responses relevant to embedding sustainability, particularly in resource-constrained settings such as small and medium-sized enterprises (SMEs). The findings are based on a robust analysis of diverse sources, reflecting patterns that extend across sectors.

Internally, a lack of leadership commitment, resistance to change, and insufficient knowledge or expertise often prevent sustainability from gaining traction. When executive-level support is absent, efforts tend to be fragmented, and organizations may fall into a pattern of inertia, where employees default to established practices. This is particularly evident in environments where transformational leadership is lacking (Boeske, 2022; Avery & Bergsteiner, 2011). For example, a mid-sized retailer struggled to advance early sustainability initiatives until leadership training was implemented, resulting in renewed strategic alignment (Liao, 2022). Employee skepticism—often a result of unclear communication or uncertainty about goals—can also stall innovation. This challenge is more acute for SMEs, which frequently lack in-house sustainability expertise (Kotter & Schlesinger, 1979; Ford et al., 2008; Martins et al., 2022). Addressing these issues involves embedding sustainability into leadership performance indicators, offering targeted training programs (such as Unilever's sustainability leadership initiatives), promoting transparent communication, and involving employees in the decision-making process. Partnerships with academic institutions or non-governmental organizations (NGOs) can also help bridge capacity gaps and build organizational knowledge (OECD, 2022). These interventions collectively foster commitment, reduce resistance, and align sustainability objectives with broader organizational goals.

Resource constraints represent another major barrier. Many organizations—especially SMEs—operate under tight financial conditions and prioritize short-term returns. In such contexts, sustainability is often viewed as a cost with delayed or uncertain return on investment. This perception is compounded by limited access to capital, high borrowing costs, and a lack of available personnel (Vaquerizo & Kiss, 2023). For instance, one small manufacturing firm postponed investments in eco-efficient upgrades until it could access phased funding support (Kuzmanović, 2022). Several strategies have proven effective in overcoming these financial hurdles. Lifecycle cost analysis can help shift the focus from upfront costs to long-term value. Sustainability-linked loans, such as those used by Philips, offer a way to finance sustainability investments over time. Phased implementation enables organizations to adopt changes incrementally, thereby spreading the financial burden. In addition, resource-sharing models—such as SME consortia—enable smaller firms to collaborate and pool limited resources, making sustainability initiatives more feasible without overextending capacity (OECD, 2022).

Externally, organizations face a range of systemic barriers that complicate the integration of sustainability into operations. Key challenges include fragmented sustainability metrics, regulatory complexity, supply chain limitations, weak consumer demand, and persistent measurement difficulties. Inconsistent or incompatible metrics can undermine both internal monitoring and external credibility, especially for SMEs that may be unfamiliar with established reporting frameworks such as the Global Reporting Initiative (GRI) or the Sustainability Accounting Standards Board (SASB). One small retailer, for example, struggled to establish reliable data systems due to this lack of familiarity (de Villiers et al., 2022; Abdel-Gawwad, Rashad and Heikal, 2019). Regulatory complexity also presents a considerable hurdle, particularly as policies evolve rapidly. The European Union's Corporate Sustainability Reporting Directive (CSRD), while aimed at improving transparency, has increased compliance costs for many firms. However, some mid-sized companies have managed this burden more effectively by engaging early with policymakers and adapting their internal systems accordingly (Aguilera et al., 2021).

Supply chain transparency is another significant concern, particularly for SMEs that lack the necessary digital tools to track upstream and downstream activities. Global supply chains often operate with limited visibility, making it difficult to identify sustainability risks or validate supplier practices. At the same time, limited consumer demand—especially when customers are unwilling to pay a premium for sustainable products—can deter organizations from making long-term investments. This is particularly evident in sectors like fashion, where a gap often exists between consumer values and purchasing behavior (Saberi et al., 2019; Busse et al., 2017; McNeill and Moore, 2015; Niinimäki et al., 2020). Measuring progress also remains a persistent challenge. For instance, Scope 3 emissions—indirect emissions across the value chain—are notoriously difficult to assess, particularly for organizations lacking technical expertise or access to data (de Villiers et al., 2022).

Despite these obstacles, several strategies have shown promise. Simplified versions of GRI or SASB frameworks can help SMEs begin reporting without becoming overwhelmed, while environmental, social, and governance (ESG) software platforms can streamline data collection and analysis. Engaging third-party assurance providers also enhances credibility and transparency. On the regulatory front, voluntary disclosures and proactive engagement with policy developments allow firms to stay ahead of compliance requirements. Technological innovations, such as blockchain—exemplified by IBM's Food Trust—can enhance supply chain traceability, while partnerships with suppliers can foster shared sustainability goals. To address the consumer demand gap, clear ecolabels (such as Fair-Trade certifications), supported by targeted marketing campaigns, have proven effective in building trust and communicating value (White et al., 2019).

These external challenges, if unaddressed, can lead to inconsistent performance tracking, inflated operational costs, and strategic misalignment. However, the solutions outlined above—ranging from leadership development and innovative financing to standardized metrics and cross-sector collaboration—offer a practical path forward. These approaches align with the sustainability frameworks discussed in Section 4, including the Triple Bottom Line (TBL), which emphasizes balanced performance across social, environmental, and financial dimensions (Elkington, 1997); the Sustainable Development Goals (SDGs), which promote inclusive stakeholder engagement (United Nations General Assembly, 2015); and the Circular Economy model, which prioritizes resource efficiency and system-level redesign (MacArthur, 2013). Together, these frameworks and strategies support long-term value creation, helping organizations overcome systemic barriers to sustainability. The full set of barriers and responses is synthesized in the conceptual model presented in Section 3.11, offering a structured foundation for further analysis.

2.1. Conceptual model

Figure 1 presents the study's conceptual model, which synthesizes the key findings by linking the identified barriers to their organizational impacts and corresponding strategic solutions for sustainability integration. This model is grounded in the thematic analysis outlined in Section 2, where themes were developed through an iterative process of coding, categorizing, and comparing findings across sources until saturation was reached. The result is a structure that aligns closely with the study's research questions and offers practical relevance, particularly for small and medium-sized enterprises (SMEs) navigating resource limitations.

The model is structured in three parts. On the left, it outlines the barriers to sustainability integration, categorized as internal, resource-related, and external/operational. In the center, it illustrates the organizational impacts of these barriers. On the right, it outlines strategic responses that address these challenges in a manner that is both feasible and scalable for SMEs.

Internal barriers—such as limited leadership commitment, resistance to change, and insufficient knowledge—often result in poor prioritization and organizational inertia. In such contexts, efforts to shift away from established practices can stall (Alayón, Sáfsten and Johansson, 2022). Resource-related challenges, including a focus on short-term returns and financial or personnel constraints, contribute to delays in implementing sustainability initiatives due to concerns about delayed returns on investment (Vaquerizo & Kiss, 2023; George et al., 2016). External and operational barriers, including unclear or inconsistent metrics, regulatory complexity, supply chain limitations, weak consumer demand, and measurement challenges, lead to ineffective performance tracking, rising compliance costs, and misalignment between sustainability goals and broader organizational strategies (de Villiers et al., 2022; Grant et al., 2023). For example, inconsistent metrics can undermine stakeholder confidence, while weak consumer demand reinforces short-term thinking (Zhu et al., 2022).

The strategic responses outlined in the model directly address these impacts, with a particular focus on solutions that are realistic for SMEs. In response to internal barriers, leadership development, change management, and external partnerships are essential. Training programs and integrating sustainability into leadership KPIs can foster stronger executive commitment, especially in SMEs with limited leadership capacity (Engert et al., 2016). Transparent internal communication and staff engagement help reduce resistance, while partnerships with NGOs or academic institutions can fill knowledge gaps, as seen in collaborative supply chain initiatives (Grant et al., 2023).

To address resource constraints, innovative financing mechanisms—such as green bonds and sustainability-linked loans—can help spread out costs and make the long-term benefits of sustainability investments more visible. Phased implementation plans also make these investments more manageable, a strategy that has proven effective in SME contexts, including in adaptations of models like Unilever's sustainability-linked loans (Seuring & Müller, 2008).

External and operational barriers can be mitigated through the use of standardized frameworks, such as GRI and SASB, which enhance comparability and reduce reporting burdens. Third-party assurance further enhances credibility, and proactive regulatory engagement helps firms anticipate compliance demands (de Villiers et al., 2022; Aguilera et al., 2021). Technological tools such as blockchain platforms (e.g., IBM's Food Trust) improve supply chain visibility, while supplier partnerships build resilience. Meanwhile, clear ecolabels, supported by targeted marketing campaigns, can help bridge the consumer demand gap in ways that are financially accessible to SMEs (McNeill and Moore, 2015).

This conceptual model is closely linked to the strategic frameworks discussed in Section 4. Leadership development aligns with the principles of the Triple Bottom Line (TBL), supporting balanced performance across financial, environmental, and social dimensions (Elkington, 1997; Dyllick & Hockerts, 2002). Standardized metrics support alignment with GRI and SASB standards, while partnerships with NGOs and academic institutions reinforce progress toward the Sustainable Development Goals (SDGs). Supply chain solutions, including circular approaches and waste reduction strategies, advance Circular Economy principles and offer scalable implementation paths for SMEs (Van Zanten & Van Tulder, 2018; D'Amato & Korhonen, 2021). Finally, the model includes a feedback loop to reflect the adaptive nature of sustainability strategies.

In sum, the model offers a structured and practical roadmap for overcoming the key barriers to sustainability integration. It aligns with widely adopted strategic frameworks and supports resilient, long-term value creation—particularly for SMEs seeking to embed sustainability into their core operations.

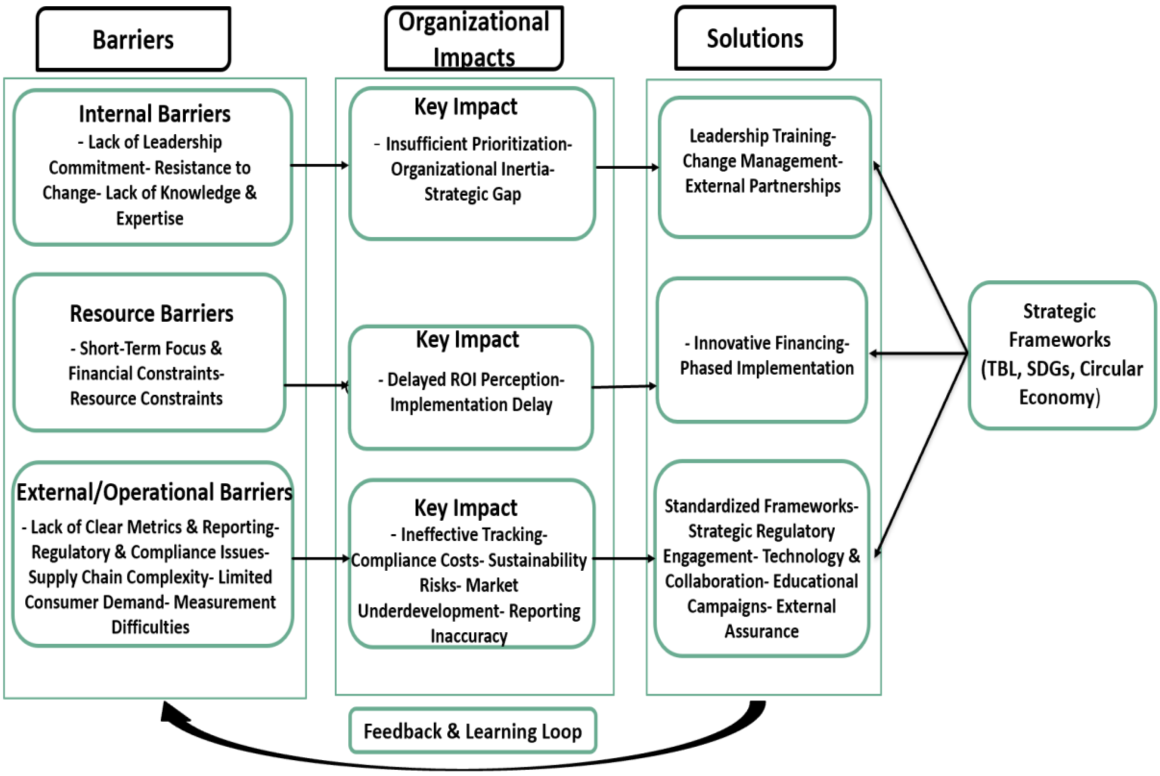

Figure 1. Conceptual Model Linking Barriers, Organizational Impacts, and Strategic Solutions for Sustainability Integration.

3. Strategic Frameworks for Sustainability Integration

Successfully embedding sustainability into organizational practices requires more than a series of isolated efforts. It calls for cohesive frameworks that align internal capacities with external expectations, helping organizations navigate the kinds of barriers identified in Section 3—such as leadership gaps, inconsistent metrics, financial constraints, and complex supply chains. These frameworks serve as practical tools for translating sustainability goals into action, while fostering resilience, building stakeholder trust, and supporting the creation of long-term value. This is especially critical for small and medium-sized enterprises (SMEs), which often face more acute resource limitations (Lozano, 2015; Bocken et al., 2014).

This section evaluates five widely used frameworks: the Triple Bottom Line (TBL), the United Nations Sustainable Development Goals (SDGs), the Circular Economy (CE), Natural Capital Accounting, and sustainability reporting standards, including GRI, SASB, and ISO 14001. Each is considered in terms of its benefits, limitations, and suitability for SMEs seeking to integrate sustainability more systematically.

The **Triple Bottom Line (TBL)** framework, introduced by Elkington (1997), promotes a balance between economic, environmental, and social outcomes. It offers a flexible foundation for organizations aiming to pursue sustainability holistically. Companies like Interface Carpets have effectively implemented TBL by setting measurable targets—such as zero carbon emissions—alongside financial performance goals, illustrating the framework's potential for practical application (Lozano, 2015). However, its broad conceptual scope can pose implementation challenges, particularly for SMEs. Without clearly defined metrics embedded in KPIs and budget processes, TBL risks being applied superficially (Norman & MacDonald, 2004; Epstein & Roy, 2001). Some SMEs have responded by simplifying their approach: one small textile company, for instance, developed a basic TBL dashboard and assigned executive accountability to ensure meaningful and transparent reporting. This allowed the company to communicate its sustainability narrative effectively while avoiding complexity that might overwhelm internal capacity.

The **United Nations Sustainable Development Goals (SDGs)**, launched in 2015, offer a globally recognized set of 17 interconnected objectives spanning environmental, economic, and social dimensions (United Nations General Assembly, 2015). These goals enhance credibility in stakeholder engagement and are increasingly used as a reference point in sustainability reporting. However, the SDGs' breadth can be daunting—especially for SMEs with limited resources (Nygaard, Kokholm and Huulgaard, 2022). In practice, selective alignment has proven to be a viable approach. One small retailer, for example, focused on SDG 12 (responsible consumption and production) by sourcing sustainable materials. The company also partnered with local organizations and adopted GRI-compatible indicators, allowing it to contribute meaningfully without spreading its resources too thin (Van Zanten & Van Tulder, 2018). This case illustrates how SMEs can prioritize goals most relevant to their operations, using strategic focus and external partnerships to scale their sustainability efforts over time.

The **Circular Economy (CE)** framework emphasizes resource efficiency by promoting closed-loop systems of design, reuse, and recycling. While initially centered in manufacturing, CE principles are increasingly being adopted across a range of industries (MacArthur, 2013). One notable example is Philips' lighting-as-a-service model, where lighting systems are leased rather than sold, reducing material waste and extending product life cycles (Geissdoerfer et al., 2017). However, the transition to circular models often involves high upfront costs and requires restructured supply chains—factors that present significant barriers for small and medium-sized enterprises (SMEs). For instance, a small electronics firm faced challenges scaling its CE initiatives due to a lack of supporting infrastructure until it joined a CE100 consortium, which facilitated access to shared resources and collaborative learning (Kirchherr et al., 2018). For SMEs, top-down commitment, cross-functional coordination, and government incentives can help offset transition costs; however, questions of scalability remain, often necessitating sustained institutional and financial support.

Natural Capital Accounting (NCA) offers another valuable framework by integrating ecosystem services—such as water purification, soil fertility, and biodiversity—into organizational decision-making processes. This approach is particularly relevant in sectors like agriculture, forestry, and resource management (Costanza et al., 1997; TEEB, 2010). Companies such as Nestlé have used NCA to assess the environmental impact of water usage, linking these insights to their broader risk management strategies (TEEB, 2010). However, the data-intensive nature of NCA poses challenges for SMEs, which often lack the technical expertise and capacity to implement such tools independently (Hörisch et al., 2014). In one example, a small agricultural cooperative partnered with a university consultant to conduct scenario analyses that translated environmental risks into financial terms, making the approach more accessible and feasible despite limited internal resources.

Reporting frameworks, including the Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB), and ISO 14001, play a critical role in enabling transparent and comparable assessments of sustainability performance (Adams & Frost, 2008; Schaltegger & Burritt, 2014). Each serves a distinct purpose: GRI supports broad stakeholder reporting, SASB emphasizes financially material information for investors, and ISO 14001 offers a standardized approach to environmental management systems. For example, a small manufacturer used ISO 14001 certification to demonstrate its commitment to environmentally responsible practices, thereby enhancing its market credibility. Similarly, a mid-sized retailer adopted simplified GRI templates to meet early-stage reporting needs, providing a foundation for more comprehensive disclosures over time (Testa et al., 2014). With the implementation of the EU's Corporate Sustainability Reporting Directive (CSRD) set to begin in 2024, reporting demands are expected to increase significantly. While these requirements may strain resource-limited SMEs, recent research suggests that early adopters who engage external support—such as consultants or industry alliances—are better positioned to meet compliance expectations (Castilla-Polo and Guerrero-Baena, 2023). Embedding these reporting tools into governance structures not only ensures accountability but also strengthens the integration of sustainability into core operations. However, ongoing guidance may be necessary for SMEs to navigate the complexity of evolving regulatory standards.

When adapted to fit organizational contexts, these frameworks can directly address the types of barriers outlined in Section 3. They offer structured pathways for SMEs and larger firms alike to align sustainability goals with strategic objectives, even in the face of financial or regulatory constraints. In doing so, they bring to life the solutions presented in Section 3.11—such as leadership development, innovative financing, and standardized metrics—reinforcing a cohesive and practical approach to sustainability integration.

4. Summary of Challenges and Solutions

This section summarizes the key barriers to sustainability integration, their organizational impacts, and corresponding solutions, as outlined in Table 1. Drawing from the conceptual model in Section 3.11, the table groups ten barriers into internal, resource, and external/operational categories, paired with practical, evidence-based strategies. Tailored especially for small and medium-sized enterprises (SMEs), the table offers a concise reference for applying the model across various organizational contexts. It complements the triadic structure by translating complex findings into actionable guidance.

Table 1. Summary of Barriers and Solutions in Sustainability Integration

Barrier	Description	Recommended Solutions	Key References
Lack of Leadership Commitment	Absence of strategic vision, resource allocation, and cultural support for sustainability.	Embed sustainability in mission; train leaders in systems thinking (e.g., Unilever's leadership programs); link KPIs to ESG goals; establish sustainability committees.	Lozano (2015); Avery & Bergsteiner (2011); Liao (2022); Bansal & Roth (2000)
Short-Term Focus & Financial Constraints	Pressure for immediate returns discourages long-term sustainability investments, especially in SMEs.	Highlight long-term ROI via lifecycle cost assessments; secure green financing (e.g., Philips' sustainability-linked loans); integrate ESG into executive incentives; use phased plans.	Hahn et al. (2010); Flammer (2015); George et al. (2016); Tumpa et al. (2019)
Lack of Clear Metrics & Reporting	Absence of standardized indicators limits monitoring, benchmarking, and stakeholder communication.	Implement GRI/SASB frameworks (e.g., simplified templates for SMEs); improve data systems; engage stakeholders in metric development; conduct third-party audits.	Adams & Frost (2008); Schaltegger & Burritt (2014); Epstein & Roy (2001); de Villiers et al. (2022)
Regulatory and Compliance Complexity	Varying national and international standards (e.g., EU CSRD) increase costs and compliance burdens.	Exceed minimum compliance; participate in policy discussions (e.g., a mid-sized firm's engagement with EU regulators); voluntarily disclose	Delmas & Toffel (2008); Kolk (2005); Hoffman (2005); Aguilera et al. (2021)

		performance; build internal regulatory capacity.	
Resistance to Change	Employee skepticism, entrenched habits, and lack of awareness undermine implementation.	Communicate purpose; offer role-specific training; empower change agents; reward sustainable behaviors (e.g., incentive programs at a small retailer).	Kotter (1995); Armenakis & Harris (2002); Ford et al. (2008); Hargreaves (2011)
Supply Chain Complexity	Lack of visibility and capacity in global supply chains prevents enforcement of standards.	Use traceability tools (e.g., blockchain, as in IBM's Food Trust); conduct supplier audits; co-develop sustainability training; foster industry collaboration.	Seuring & Müller (2008); Carter & Rogers (2008); Saberi et al. (2019); Bai & Sarkis (2010)
Limited Consumer Demand	High prices, confusion over green claims, and the intention–action gap suppress sustainable consumption.	Reframe product value; launch awareness campaigns; use credible certifications (e.g., Fair Trade labels by a small organic brand); collaborate with NGOs and influencers.	Peattie & Crane (2005); Devinney et al. (2010); White et al. (2019); Gleim et al. (2013)
Lack of Knowledge and Expertise	Insufficient internal capabilities to operationalize sustainability strategies.	Conduct targeted training; hire sustainability experts; partner with universities/NGOs (e.g., academic collaborations for a small firm); create knowledge-sharing systems.	Wiek et al. (2011); Hörisch et al. (2014); Glavič & Lukman (2007)
Resource Constraints	Limited financial, human, and technological resources delay implementation.	Access impact investing; adopt phased strategies; form cost-sharing partnerships (e.g., SME consortia); leverage external expertise.	Hillary (2017); Jenkins (2009); Nidumolu et al. (2009); Bansal (2005)
Measurement Difficulties	Sustainability's complexity complicates data collection, impact assessment, and benchmarking.	Standardize metrics with GRI/SASB; invest in integrated data systems; use third-party validation; engage in industry dialogue for benchmarking.	Bui & de Villiers (2017); Adams & Frost (2008); Hess (2008)

Note: Sources: See Reference List for full details

Conclusions

This study provides a comprehensive synthesis of the primary barriers organizations encounter when integrating sustainability into their operations, along with effective strategies and frameworks to address them—particularly for small and medium-sized enterprises (SMEs). Drawing on a wide range of academic and practitioner sources up to December 2023, and incorporating post-2023 developments such as the EU's Corporate Sustainability Reporting Directive (CSRD), the research identifies ten interconnected barriers. These span internal challenges (e.g., limited leadership commitment), resource constraints (e.g., financial pressures), and external factors (e.g., regulatory complexity and supply chain issues). These insights are consolidated into a triadic conceptual model (Figure 1), which links barriers to impacts and provides tailored solutions.

The strategic frameworks examined—Triple Bottom Line (TBL), Sustainable Development Goals (SDGs), Circular Economy (CE), Natural Capital Accounting, and reporting standards (GRI, SASB, ISO 14001)—demonstrate clear value when adapted to SME contexts. Practical examples, including Unilever's leadership programs, Philips' green financing, and IBM's blockchain tools, highlight how these frameworks can be applied effectively. The summary table provides a concise tool for applying these insights in practice.

This work has several implications. For organizations, the model and frameworks offer a structured roadmap to align sustainability with business strategy. For policymakers, the findings suggest areas for targeted support, such as SME training programs or incentives to foster collaboration. Academically, the study contributes to sustainability literature by integrating cross-sectoral findings and highlighting the need for flexible, resource-aware strategies.

Nonetheless, limitations remain. The focus on English-language sources and the December 2023 cutoff may exclude recent or region-specific developments, especially in non-Western contexts. While excluding sector-specific studies improves generalizability, it may also overlook industry-specific insights. Additionally, the use of vetted organizational reports introduces some variability, though efforts were made to ensure quality through rigorous appraisal.

Future research could extend this work by incorporating newer data, non-English sources, and longitudinal case studies, particularly in emerging markets. Further exploration of digital tools and the scalability of circular models would help refine and expand the conceptual framework. With regulatory landscapes evolving, ongoing inquiry will be essential to keep sustainability strategies aligned with real-world dynamics.

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