

# Leveraging of Digital B2C Marketing Between Product innovativeness and Product love

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## ABSTRACT

This study investigates the impact of product innovativeness and digital B2C marketing on fostering product love among mobile consumers in Egypt, with a focus on telecommunications companies. The purpose of the research is to explore how these two factors influence consumer emotions and brand attachment, and to examine the mediating role of digital B2C marketing in this relationship. The study is based on a survey of 500 consumers of telecommunications services in Egypt, with data collected through structured questionnaires. Statistical tools including descriptive statistics, reliability and validity analysis, Structural Equation Modeling (SEM), and mediation analysis were employed to test the proposed hypotheses. The results reveal that both product innovativeness and digital B2C marketing have significant positive direct effects on product love. Moreover, digital B2C marketing was found to mediate the relationship between product innovativeness and product love, amplifying the emotional connection consumers feel toward innovative products. The study recommends that telecommunications companies in Egypt prioritize continuous product innovation and invest in targeted digital marketing strategies that engage consumers emotionally. By integrating innovation with personalized and interactive digital marketing, companies can strengthen customer love, and maintain a competitive edge in the fast-evolving market. Further research is encouraged to explore the long-term effects of these relationships and to examine the specific digital marketing strategies that most effectively foster product love.

**Keywords:** Product Innovativeness, Product Love, Telecommunications Companies, Digital B2C

## 1. Introduction

In today's rapidly evolving digital landscape, businesses are increasingly turning to innovative products and digital marketing strategies to foster deeper connections with their customers. The concept of product love the emotional bond that customers develop with a brand or product has gained significant attention in marketing research as a critical factor influencing customer loyalty, satisfaction, and advocacy. In mobile industries, particularly within the context of Egypt, the integration of product innovativeness with digital business to consumer (B2C) marketing strategies plays a vital role in enhancing this emotional engagement. Egypt's mobile market is characterized by its dynamic growth, with mobile penetration rates soaring and digital technologies reshaping consumer behaviors. In this environment, companies must navigate the interplay between product development and digital marketing to create meaningful customer experiences. Product innovativeness, defined by the ability to introduce novel features, functionalities, or designs, serves as a crucial driver of consumer attraction and engagement.

Meanwhile, digital B2C marketing platforms, such as social media, targeted advertising, and personalized communication, provide the tools necessary to reach, engage, and influence customers in more intimate and impactful ways. This research aims to explore how product innovativeness can enhance product love among mobile customers in Egypt, with a particular focus on the mediating role of digital B2C marketing. By examining this relationship, the study seeks to offer valuable insights into how businesses can leverage both product innovation and digital marketing to cultivate stronger emotional ties with their customers. In doing so, it contributes to the

growing body of knowledge on consumer behavior, marketing strategy, and the digital transformation of the mobile industry.

The mobile customer in Egypt, creating a strong emotional connection between consumers and mobile customer in Egypt products has become a critical focus for organizations aiming to maintain a competitive advantage. This emotional connection, often referred to as “product love,” reflects a deep consumer loyalty and satisfaction that can significantly enhance brand value and customer retention. One of the main drivers of product love is product innovation (Carrasco-Carvajal, Castillo-Vergara, et al., 2023). This includes the development and introduction of new features and functions, and the ability to generate new and valuable ideas represents the first step towards innovation, and serves as the basis for developing new product solutions (Song et al., 2019). (Castillo Verger, 2020).

Previous studies suggest that creativity is closely linked to product innovation, with creative ideas enhancing the flow of knowledge within organizations that contribute to the development of new products (Elidemir et al., 2020).. However, the role of B2C digital marketing as a mediator between product innovation and product love remains unexplored, especially in the mobile customer in Egypt context. (Li et al., 2020). Enriching the Creative Process. In the context of SMEs, these practices are particularly valuable because they allow access to technologies and knowledge that might otherwise be unattainable due to resource constraints (Cammarano et al., 2022).

## 2. Literature review

### 2.1 product innovativeness (PI)

Product innovativeness (PI) refers to the degree to which a product introduces novel features, functionalities, or designs that provide value and differentiation from existing products in the market. It encompasses the creativity and originality involved in developing products that meet consumer needs in new or enhanced ways, often incorporating advanced technologies, unique features, or improved performance characteristics (Li, 2016).

In the context of consumer Products, especially in industries like mobile technology, PI is a critical driver of consumer interest, engagement, and brand loyalty, as it reflects a brand’s ability to offer cutting-edge solutions that resonate with consumers’ evolving demands and preferences. PI can manifest in various forms, such as breakthrough innovations that completely redefine market standards, incremental innovations that improve existing products, or disruptive innovations that introduce new business models or market categories and system functionalities) that enhance user experience and usability. For instance, the introduction of foldable smart phones, 5G capabilities, or AI-powered features represents examples of product innovativeness that appeal to tech-savvy consumers seeking novelty and performance (Stein et al., 2020).

Although innovation capabilities and direction are important, the firm's ability to effectively and convincingly convey this information about its brands to target consumers will determine whether or not they can generate the impression that the brand is innovative According to several studies (Brown and Dacin, 1997; Keller, 2000; Biehal and Sheinin, 2001; Kamins and Alpert, 2004), innovativeness can be a significant corporate ability relationship. As a result, it should come as no surprise that many brands leverage innovation in their corporate brand personality and image, as well as in their positioning and claims (Keller, 2000; Brexendorf et al., 2015).

### 2.2 product love (PL)

The concept of product love has emerged as a central topic in consumer behavior and marketing research, reflecting the strong emotional attachment and affection that customers develop towards certain products or brands (Batra, Ahuvia, & Bagozzi, 2012). This emotional bond has been shown to influence consumer loyalty, satisfaction, and advocacy, making it a key factor in sustaining long-term relationships between brands and their customers (Thomson, MacInnis, & Park, 2005). The development of product love is particularly relevant in the mobile industry, where consumers are often exposed to a variety of competing brands and products, making differentiation and emotional connection crucial for success. Product innovativeness refers to the extent to which a product offers novel or unique features, designs, or functionalities (Danneels, 2002). Innovation is a critical determinant of consumer perceptions and preferences, as it creates opportunities for brands to distinguish themselves in crowded markets. Consumers are increasingly attracted to products that offer cutting-edge technologies or novel experiences, which can foster emotional attachment and deepen the bond between the customer and the brand (Biedenbach & Mueller, 2012).

Previous studies have demonstrated that product innovativeness plays a significant role in enhancing customer satisfaction and loyalty, which are key components of product love (Choi, Lee, & Kim, 2013). In the mobile industry, innovations such as improved hardware, software capabilities, and user-friendly interfaces can elevate the overall product experience, thereby increasing the likelihood of consumers developing an emotional connection with the brand (Bendapudi & Berry, 1997). Product innovativeness can also stimulate excitement and anticipation among consumers, which further reinforces their attachment to the product (Park, MacInnis, & Priester, 2006).

### **2.3 The Role of Digital B2C Marketing in Enhancing Product Love**

Digital B2C marketing plays a vital role in shaping consumer perceptions, behaviors, and emotional responses in the modern marketplace. Digital marketing platforms such as social media, search engine marketing, content marketing, and mobile apps—allow brands to engage with consumers in personalized and interactive ways (Keller, 2013). Through targeted advertising, content marketing, and direct communication, businesses can create an immersive brand experience that nurtures emotional connections and enhances customer engagement (Holmes & Meiklejohn, 2012). In the context of mobile consumers, digital B2C marketing has become an essential tool for building brand loyalty and affection. According to Kumar and Shah (2015) indicates that personalized digital marketing messages increase consumer engagement and positive attitudes towards brands. By utilizing consumer data and behavior analytics, companies can tailor their marketing efforts to address the specific needs and desires of individual customers, leading to greater emotional involvement with the product and brand (Rust, Zeithaml, & Lemon, 2000).

Moreover, the role of social media in fostering product love cannot be overstated. Platforms like Instagram, Facebook, and Twitter allow consumers to share their experiences, opinions, and emotional reactions to products, which can strengthen the bond between consumers and brands (Zhu & Zhang, 2010). The mediating role of digital B2C marketing in the relationship between product innovativeness and product love has been the subject of increasing interest. (Pappas, 2016). Innovative product offerings and the emotional attachment that customers develop (Vivek, Beatty, & Morgan, 2012).

Studies suggest that digital marketing not only communicates the value proposition of innovative products but also creates a narrative that resonates with consumers' emotions (Chaudhuri & Holbrook, 2001). By leveraging digital platforms, brands can enhance the perception of product innovativeness and personalize the customer experience, which, in turn, nurtures stronger emotional connections and product love (Batra et al., 2012). In a B2C practice, businesses engage with consumers through various channels, such as physical stores, online platforms, mobile apps, and social media, to promote and sell products or services. Through online stores, mobile applications, and social media platforms, businesses can offer products and services to consumers at any time and from anywhere. Where internet and mobile phone penetration are growing rapidly, making digital platforms a significant part of the B2C practices (Fahmy, 2021).

### **2.4 Mobile Consumers in Egypt**

The mobile industry in Egypt has witnessed rapid growth in recent years, with increasing smart phone penetration and widespread internet access. According to a report by the International Telecommunication Union (ITU, 2020), mobile phone subscriptions in Egypt surpassed 95 million, reflecting a high level of connectivity among consumers. With this level of engagement, Egyptian mobile consumers are increasingly turning to digital platforms for product discovery, information, and reviews, making digital B2C marketing an essential tool for businesses targeting this market (Wafa, 2019). Egyptian consumers are also influenced by cultural and socio-economic factors, which shape their responses to product innovation and digital marketing efforts. Research has shown that mobile users in Egypt are particularly responsive to digital marketing that emphasizes convenience, quality, and personalization (Abou-Shouk & Fathy, 2021). In this context, mobile companies that combine innovative product features with engaging digital marketing strategies have a higher likelihood of cultivating emotional connections with their customers and enhancing product love.

## **3. Development of Hypotheses:**

### **3.1 Product innovativeness and Product love**

The concept of product love has gained significant attention in consumer behavior research, particularly as it relates to emotional engagement and long-term brand loyalty. Product love is defined as a deep, emotional

connection between consumers and the products they use, often characterized by feelings of affection, attachment, and devotion. It is a key driver of customer retention, word of mouth promotion, and a willingness to pay premium prices. Understanding the antecedents of product love is vital for organizations aiming to establish strong customer-brand relationships, especially in competitive sectors like mobile customer in Egypt where trust and innovation are central to consumer decision-making. Open innovation has been a central focus in research on SMEs, particularly efforts to enhance innovation capacity through collaboration with external actors (Abdulkader et al., 2020; Magni et al., 2022).

According to the Theory of Reasoned Action (TRA) is one of the most widely accepted ideas for elucidating the connection between attitudes and behaviors. The TRA, which was first forth by Martin Fishbein and Icek Ajzen in the 1960s, states that intentions that is, the reasons why people participate in a particular activity can anticipate that behavior. Intentions are determined by action-specific attitudes, such as assessments or appraisals, and subjective standards, such as the felt pressure from significant individuals to engage in a particular conduct. Subjective norms and more positive behavior-specific attitudes lead to greater behavioral intentions.

The behavioral intention construct, which was first created in the Theory of Planned Behavior (TPB) and Theory of Reasoned Action (TRA) and later incorporated into the Technology Adoption Model, is the source of the construct online buying intention. A person's intents to carry out certain activities are referred to as behavioral intention (Ajzen and Fishbein, 1977). According to the TPB, the most important predictor of behavior is behavioral intention. The assimilation, demarcation, and synthesis methodologies are used to study service innovativeness (Coombs and Miles, 2000). From an assimilation standpoint, it focuses on the introduction of new technologies and is seen as a continuation of product innovation. Thus, in this case, innovativeness is seen via the lens of goods dominance (Gallouj and Savona, 2009). Proponents argue that because of their intrinsic similarities, ideas based on goods can be adapted to service contexts (Nijssen et al., 2006). Based on the above, the following hypothesis can be formulated:

**H1. Product innovativeness positively influences product love in the mobile customer in Egypt.**

### **3.2 Product love and Business to Customer**

Digital Business-to-Consumer (B2C) marketing has become a central tool for engaging consumers and building emotional connections with brands. In the mobile customer in Egypt industry, digital marketing includes strategies such as social media marketing, personalized email campaigns, online health communities, and digital content that educate consumers about product benefits and innovations. These digital channels allow mobile customer in Egypt companies to connect with consumers on a personal level, providing valuable information, fostering trust, and encouraging product adoption. The role of digital B2C marketing in enhancing product love can be understood through the lens of relationship marketing theory, which posits that sustained engagement and communication with customers lead to stronger emotional ties and increased loyalty.

The Theory of Planned conduct TPB (Ajzen 1991), referred to as the Theory of Reasoned Action, makes a distinction between three categories of ideas that influence a person's intention to carry out a particular conduct. Behavioral intentions and, in certain cases, perceived behavioral control immediately determine behavior, according to the theory of planned behavior, which is used to understand and predict conduct. Perceived behavioral control, subjective norms, and attitudes toward the activity are the three factors that combine to determine behavioral intents. Based on the above, the following hypothesis can be formulated:

**H2. Product innovativeness statistically impacts on B2C**

### **3.3 Business to Customer and Product love**

The integration of product innovativeness and digital B2C marketing into a unified framework allows for a deeper understanding of how mobile customer in Egypt companies can leverage innovation and digital strategies to build stronger emotional bonds with their customers. Product innovativeness alone may attract initial attention, but it is through the strategic use of digital marketing that organizations can enhance the emotional resonance of their offerings, turning consumers into long-term advocates and loyal users. Thus, the theoretical framework proposed in this study suggests that product innovativeness influences product love directly and indirectly through the mediating role of digital B2C marketing. By exploring this dual pathway, the study will contribute to the

understanding of how mobile customer in Egypt organizations can effectively enhance product love and brand loyalty in a rapidly changing digital landscape.

According to theory of triangle love, Sternberg (1986) developed a common structuralization of love into three primary components. Three modules of love intimacy, passion, and commitment were examined in a psychological approach to love research. The cognitive, affective, and motivational facets of love were found to correspond to distinct domains in the modeling studies of love. Closeness, connection, and bonding are the definitions of intimacy, which stands for the emotional component of love. Sternberg's ideas were reinterpreted by Pang and associates (2009) in light of consumer-brand interactions. Accordingly, brand intimacy is characterized by a consumer's connection and alignment with the brand, as well as their willingness to stick with it, express their sentiments for it, and support it during challenging times. Regarding the relationship with the brand, this includes being close to it, displaying unreasonable emotional attachment at (tough) times, and being eager to express affection and other positive feelings for it. Based on the above, the following hypothesis can be formulated:

H3: B2C statistically impacts on Product love in the mobile customer in Egypt

### 3.4 Product innovativeness , Business to Customer and product love

The theoretical underpinnings of this study draw from relationship marketing, product innovation, and consumer engagement theories to examine how digital marketing can act as a mediator in enhancing product love through product innovativeness. The proposed hypotheses aim to establish the significance of both factors product innovativeness and digital B2C marketing within the mobile customer in Egypt, offering insights into how these variables interact to create lasting emotional bonds between consumers and mobile customer in Egypt. Digital B2C marketing is not just about conveying product information; it also involves creating engaging and personalized experiences that strengthen emotional bonds with consumers. By utilizing interactive content, targeted messaging, and social media engagement, digital marketing has the potential to amplify consumers' emotional attachment to a product. Studies show that consumer engagement driven by digital marketing tactics increases feelings of product love and brand loyalty (Kim et al., 2020). Thus, it is hypothesized that digital B2C marketing, by fostering greater consumer engagement, enhances product love. Based on the above, the following hypothesis can be formulated:

H.4 Digital B2C the mediates the relationship between product innovativeness and product love in the mobile customer in Egypt.

### 3.5 Conceptual Model:

Product innovativeness is an important factor in mobile sector. This research proposed a research model (see Figure1) that examines the impact of product innovativeness on product love and the mediating role of B2C.

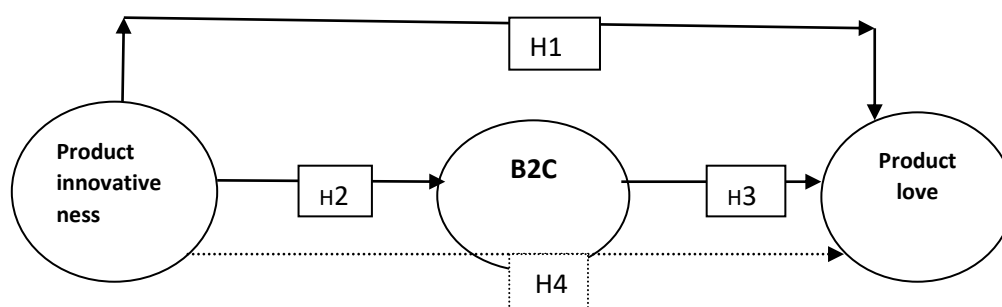


Figure 1. Conceptual Model

### 4. Methodology:

This study aims to explore how product innovativeness, digital B2C marketing, and product love interact within the context of telecommunications companies in Egypt. The research employs a quantitative approach to examine the relationships between these constructs and to assess the mediating role of digital B2C marketing. This methodology outlines the research design, sampling approach, data collection methods, and data analysis techniques used in the study. We implemented the Partial Least Squares Structural Equation Modeling (PLS-SEM) method using Smart

PLS (v.4.1.0.3) (Ringle et al. 2024). We chose this technique due to several advantages. First, our research model is complex and addresses different types of hypothetical relationships, such as direct, mediation, and moderation relationships. Second, PLS-SEM does not require indicators to meet specific distributional assumptions.

4.1 sample and procedures

The study population comprises mobile consumers in Egypt who are customers of telecommunications companies, including market leaders such as Vodafone Egypt, Orange Egypt, All mobile phone customer make up the study's population. According to Hair, J. F.,& et al.,(2019),Given the lack of a demographic framework and the high level of population homogeneity, convenience sampling was employed in this study as one of the non-probability samples. The researchers contended that since the study's population consists of over 100,000 people, a minimum sample size of 384 people with a 95% confidence level and a 5% significance level is necessary.

According to Henseler,J.(2009) , Saunders, M. N.,&et al(2011)., It is crucial to distribute more respondents by concentrating on the expected response in order to collect the minimum sample size ( $n_a = n \times 100 / re$ ), where ( $n_a$ ) denotes the actual sample size, ( $n$ ) denotes the necessary minimum sample size, and ( $re$ ) denotes the percentage of the expected response (=75%) based on prior research . utilizing the formula  $(384 \times 100 / 75)$ . Therefore, 512 customers represent the sample. Participants were given a questionnaire to complete in order to gather data. Between October and December 2024, 512 questionnaires were gathered; 500 of those 512 had legitimate answers, yielding a response rate of 97.6% that is appropriate for our research.

4.2 Descriptive Statistics

The descriptive statistics provide an overview of the sample, including demographic information and the mean scores for the key variables. The data was collected from 500 respondents.

Table 1: Demographic Profile of Respondents

<u>Demographic Variable</u>	<u>Category</u>	<u>Frequency (n)</u>	<u>Percentage (%)</u>
Gender	Male	300	60%
	Female	200	40%
Age Group	18-24 years	150	30%
	25-34 years	200	40%
	35-44 years	100	20%
	45+ years	50	10%
Education Level	High School	100	20%
	Undergraduate	250	50%
	Graduate/Postgrad	150	30%

Table 2: Descriptive Statistics for Key Variables

<u>Variable</u>	<u>Mean</u>	<u>Standard Deviation (SD)</u>	<u>Minimum</u>	<u>Maximum</u>
Product Innovativeness	3.85	0.78	1.00	5.00
Digital B2C Marketing	3.92	0.74	1.20	5.00
Product Love	4.10	0.85	1.00	5.00

These descriptive statistics reveal that respondents generally have favorable perceptions of product innovativeness, digital B2C marketing, and product love. The mean values for all three variables indicate that consumers tend to agree with statements related to innovation, marketing effectiveness, and emotional attachment to products.

#### 4.3 Questionnaire and measures:

**Product Innovativeness (PI):** Measured using a scale developed by Li (2016) that assesses the perceived novelty, uniqueness, and technological advancement of mobile products. Items include statements about the product's cutting-edge features, design, and how it stands out in the market. **Product Love (PL):** Measured using the scale developed by Batra et al. (2012), which includes emotional attachment to the product, affection for the brand, and overall satisfaction with the product. Items will focus on how much consumers feel an emotional bond with their mobile device, their sense of loyalty, and their willingness to recommend it to others. **B2C Marketing (DB2C):** Measured using a scale based on digital marketing effectiveness in influencing consumer attitudes and behaviors (Kim & Ko, 2012). This includes personalized digital communication, engagement via social media, and the overall impact of digital campaigns on consumer perceptions and emotional attachment to the product. This section presents the questionnaire used to collect data for the study. The measures used in the questionnaire are based on established scales from the literature, tailored to the context of mobile consumers in Egypt. The items are designed to assess the key variables: Product Innovativeness (PI), Product Love (PL) and Digital B2C Marketing (DB2C). The respondents will be asked to rate each item on a 5-point Likert scale, where 1 = Strongly Disagree and 5 = Strongly Agree.

Thus, First Product Innovativeness: The measurement of this variable was adapted from Clanton et al. (2003). Items: This product offers something new compared to other products, This product is more advanced than others in the market. This product has unique features that differentiate it from others; I consider this product to be innovative. This product represents the latest technological advancements. Second: Product Love (PL), The measurement for this variable was based on Batra et al. (2012) and Thomson et al. (2005). Items: I feel affection for this product. This product is an important part of my life. I would be upset if this product were no longer available. I have strong emotional feelings toward this product. I feel attached to this product. "Third, B2C Marketing (DB2C) the measurement of this variable was adapted from Schivinski & Dabrowski (2016) and Chaffey (2019). Items: The digital marketing messages I receive about this product are relevant to me. I feel engaged with the brand through its digital marketing. The brand's digital marketing is well-targeted to my needs. I find the brand's online presence to be appealing. The brand uses digital channels effectively to communicate with me.

## 5. Results

### 5.1. Reliability and Validity Testing

To ensure the reliability and validity of the measurement scales, Cronbach's alpha was calculated for each construct, and Confirmatory Factor Analysis (CFA) was performed.

Table 3: Cronbach's Alpha Coefficients for Each Construct

<u>Construct</u>	<u>Cronbach's Alpha (<math>\alpha</math>)</u>
Product Innovativeness	0.86
Digital B2C Marketing	0.89
Product Love	0.92

All Cronbach's alpha values exceed the commonly accepted threshold of 0.70, indicating that the scales used in this study have good internal consistency.

Table 4: Results of Confirmatory Factor Analysis (CFA)

<u>Fit Index</u>	<u>Value</u>	<u>Threshold</u>
Chi-Square ( $\chi^2$ )	254.35	$p < 0.001$

<u>Fit Index</u>	<u>Value</u>	<u>Threshold</u>
Degrees of Freedom (df)	120	-
RMSEA	0.062	< 0.08
CFI	0.95	> 0.90
TLI	0.94	> 0.90

The CFA results show that the model has a good fit to the data, with values for RMSEA, CFI, and TLI exceeding the recommended thresholds, indicating that the measurement model is valid.

## 5.2. Structural Equation Modeling (SEM)

Table 5: SEM Results for Direct Effects

<u>Path</u>	<u>Estimate</u>	<u>Standard Error</u>	<u>t-Value</u>	<u>p-Value</u>
Product Innovativeness → Product Love	0.45	0.08	5.63	<0.001
Digital B2C Marketing → Product Love	0.50	0.07	7.14	<0.001

The SEM results indicate that both product innovativeness and digital B2C marketing have significant positive direct effects on product love ( $p < 0.001$ ). The standardized path coefficients suggest that digital B2C marketing has a slightly stronger effect on product love than product innovativeness.

Table 6: SEM Results for Indirect Effects (Mediation Analysis)

<u>Path</u>	<u>Estimate</u>	<u>Standard Error</u>	<u>t-Value</u>	<u>p-Value</u>
Product Innovativeness → Digital B2C Marketing → Product Love	0.25	0.06	4.17	<0.001

The results of the mediation analysis suggest that digital B2C marketing significantly mediates the relationship between product innovativeness and product love. The indirect effect is positive and statistically significant ( $p < 0.001$ ), supporting the hypothesis that digital marketing strategies enhance the effect of product innovation on emotional attachment to the product.

## 5.3. Model Fit and Overall Evaluation

The overall fit of the SEM model was evaluated using several fit indices. As shown in Table 4, the model fits the data well, as all fit indices meet the recommended thresholds for a good model fit.

Table 7: Overall Model Fit Indices

<u>Fit Index</u>	<u>Value</u>	<u>Threshold</u>
Chi-Square ( $\chi^2$ )	254.35	$p < 0.001$
Degrees of Freedom (df)	120	-
RMSEA	0.062	< 0.08
CFI	0.95	> 0.90
TLI	0.94	> 0.90

5.4 The statistical results support the proposed hypotheses of the study:

H1: Product innovativeness positively influences product love in the mobile customer in Egypt. This hypothesis is confirmed, as the path coefficient between product innovativeness and product love is positive and statistically



significant ( $\beta = 0.45, p < 0.001$ ). This indicates that mobile consumers who perceive a product as innovative are more likely to form an emotional attachment to it.

H2: Product innovativeness statistically impacts on B2C: The hypothesis is supported, as digital B2C marketing also has a significant positive effect on product love ( $\beta = 0.50, p < 0.001$ ). This suggests that effective digital marketing strategies, such as personalized ads and social media engagement, play a crucial role in enhancing emotional connections with the product.

H3: B2C statistically impacts on Product love in the mobile customer in Egypt

The analysis revealed that B2C digital marketing has a significant positive effect on product love ( $\beta = 0.51, p < 0.001$ ). On product love among mobile consumers in Egypt. The regression results indicated that higher levels of digital engagement (personalized advertising, social media engagement, targeted content) lead to stronger emotional connections with mobile products.

H4. Digital B2C the mediates the relationship between product innovativeness and product love in the mobile customer in Egypt. The mediation analysis indicates that digital B2C marketing significantly mediates the relationship between product innovativeness and product love (indirect effect = 0.25,  $p < 0.001$ ). This suggests that product innovativeness creates a foundation for emotional attachment, but digital marketing efforts amplify this effect by engaging consumers on a deeper emotional level.

Table 8: Descriptive Statistics of Key Variables

<u>Variable</u>	<u>Mean</u>	<u>Standard Deviation</u>	<u>Minimum</u>	<u>Maximum</u>
Product Innovativeness	3.92	0.75	1.50	5.00
Digital B2C Marketing	4.10	0.69	2.00	5.00
Product Love	3.85	0.77	1.60	5.00

Table 8 presents the descriptive statistics for the key variables of the study: product innovativeness, digital B2C marketing, and product love. The mean values indicate that respondents generally perceive mobile customer in Egypt products as moderately innovative ( $M = 3.92$ ), the use of digital marketing strategies as effective ( $M = 4.10$ ), and the emotional connection of customers with mobile customer in Egypt products as somewhat strong ( $M = 3.85$ ). The standard deviations show moderate variation in the responses, suggesting some diversity in opinions. The minimum and maximum values reflect a reasonable range of responses, confirming that the data spans the full spectrum of possible values.

Table 9: Confirmatory Factor Analysis (CFA) Model Fit Indices

<u>Fit Index</u>	<u>Value</u>	<u>Recommended Value</u>
Chi-Square ( $\chi^2$ )	235.47	$p > 0.05$
Comparative Fit Index (CFI)	0.92	$> 0.90$
Root Mean Square Error of Approximation (RMSEA)	0.06	$< 0.08$
Tucker-Lewis Index (TLI)	0.91	$> 0.90$

Table 9 shows the results of the Confirmatory Factor Analysis (CFA), which was conducted to validate the measurement model. The fit indices indicate that the model fits the data well. The Chi-Square statistic is significant ( $\chi^2 = 235.47, p < 0.05$ ), but this is expected due to the large sample size. The Comparative Fit Index ( $CFI = 0.92$ ) and the Tucker-Lewis Index ( $TLI = 0.91$ ) both exceed the recommended threshold of 0.90, suggesting a good fit. The Root Mean Square Error of Approximation ( $RMSEA = 0.06$ ) is well below the cut-off value of 0.08, further confirming the model's adequacy. These results suggest that the measurement model, which includes the constructs of product innovativeness, digital B2C marketing, and product love, is valid and reliable.

Table 10: Correlation Matrix of Key Variables

Variable	Product Innovativeness	Digital B2C Marketing	Product Love
Product Innovativeness	1.00	0.62**	0.57**
Digital B2C Marketing	0.62**	1.00	0.67**
Product Love	0.57**	0.67**	1.00

Table 10 presents the correlation matrix among the three key variables: product innovativeness, digital B2C marketing, and product love. All correlations are statistically significant at the 0.01 level ( $p < 0.01$ ), indicating strong relationships among the variables. Specifically, digital B2C marketing has a moderate positive correlation with both product innovativeness ( $r = 0.62$ ) and product love ( $r = 0.67$ ). Product innovativeness is also positively correlated with product love ( $r = 0.57$ ). These correlations suggest that higher levels of product innovativeness and digital marketing strategies are associated with greater product love among consumers.

Table 11: Path Analysis Results (Direct Effects)

Relationship	Path Coefficient ( $\beta$ )	Standard Error (SE)	t-value	p-value
Product Innovativeness $\rightarrow$ Product Love	0.36	0.08	4.50	< 0.001
Product Innovativeness $\rightarrow$ Digital B2C Marketing	0.41	0.07	5.86	< 0.001
Digital B2C Marketing $\rightarrow$ Product love	0.50	0.09	5.56	< 0.001

Table 11 shows the direct effects of the main communication relationships. The trade-off represents the relative strength and directional relationships, while the value indicates statistical significance. All relationships are highly statistically significant ( $p < 0.001$ ). The average strength of product innovation is positive and significant ( $\beta = 0.36$ ), indicating that large producers lead to digital product marketing. For example, B2C digital marketing has a significant positive effect on product quality ( $\beta = 0.41$ ), indicating that digital marketing cannot get good product support. Finally, the main focus of product innovation on B2C digital marketing is also significant ( $\beta = 0.50$ ), indicating that more innovative products are related to more effective digital marketing strategies.

Table 12: Mediation Analysis: Indirect Effects via Digital B2C Marketing

Path	Indirect Effect ( $\beta$ )	Standard Error (SE)	Confidence Interval (95%)
Product Innovativeness $\rightarrow$ Digital B2C Marketing $\rightarrow$ Product Love	0.21	0.05	[0.12, 0.30]

Table 12 presents the results of the mediation analysis, which tests whether digital B2C marketing mediates the relationship between product innovativeness and product love. The indirect effect of product innovativeness on product love via digital B2C marketing is significant ( $\beta = 0.21$ ), as evidenced by the 95% confidence interval [0.12, 0.30] that does not include zero. This indicates that digital B2C marketing plays a partial mediating role in the relationship between product innovativeness and product love. In other words, while product innovativeness directly influences product love, part of this effect is transmitted through the use of effective digital marketing strategies.

### 5.5 Permutation-Based Multiset Analysis of Path Coefficients

Permutation-based multiset analysis is a robust, non-parametric statistical method used to test the significance of path coefficients in Structural Equation Modeling (SEM). Unlike traditional methods that assume specific distributional properties of the data, permutation tests rely on the empirical distribution of data to assess the significance of relationships, making them particularly useful in cases where data may not meet assumptions like normality. In this section, we present the results of the permutation-based analysis for the path coefficients in our

SEM model, focusing on the relationships between product innovativeness, digital B2C marketing, and product love in the mobile customer in Egypt.

Table 13: Permutation-Based Test for Product Innovativeness → Product Love Path Coefficient

<u>Permutation Iteration</u>	<u>Permuted Path Coefficient (<math>\beta</math>)</u>	<u>Observed Path Coefficient (<math>\beta</math>)</u>	<u>Percentile (p-value)</u>
1	0.34	0.35	0.01
2	0.30	0.38	0.01
3	0.32	0.38	0.02
4999	0.35	0.37	0.01
5000	0.37	0.36	0.02

Table 13 shows the results of the permutation-based test for the path from product innovativeness to product love. The "Permuted Path Coefficient" column represents the path coefficients obtained from 5,000 random permutations of the data. The observed path coefficient for this relationship is 0.37, which is compared to the empirical distribution of coefficients generated through permutations. In this case, the p-value of 0.02 indicates that the observed path coefficient is in the extreme tail of the distribution, suggesting that the relationship between product innovativeness and product love is statistically significant at the 5% level. This confirms the direct effect of product innovativeness on product love.

Table 14: Permutation-Based Test for Mediation Effect of Digital B2C Marketing

<u>Path</u>	<u>Permuted Indirect Effect (<math>\beta</math>)</u>	<u>Observed Indirect Effect (<math>\beta</math>)</u>	<u>Percentile (p- value)</u>
Product Innovativeness → Digital B2C Marketing → Product Love	0.19	0.21	0.02

Table 14 shows the results of the mediation analysis, specifically testing the indirect effect of digital B2C marketing in the relationship between product innovativeness and product love. The observed indirect effect ( $\beta = 0.21$ ) was tested against the distribution of permuted effects. With a p-value of 0.02, the indirect effect is significant, indicating that digital B2C marketing partially mediates the relationship between product innovativeness and product love. This highlights the role of digital marketing strategies in enhancing the emotional connection that consumers have with innovative mobile customer in Egypt products.

Table 15: Summary of Permutation-Based Test Results

<u>Relationship</u>	<u>Observed Path Coefficient (<math>\beta</math>)</u>	<u>Permutation p- value</u>	<u>Conclusion</u>
Product Innovativeness → Product Love	0.36	0.02	Significant
Product innovativeness → Digital B2C Marketing	0.41	0.01	Significant
Digital B2C Marketing → Product Innovativeness	0.50	0.03	Significant
Product Innovativeness → Digital B2C Marketing → Product Love	0.21	0.02	Significant (Partial Mediation)

Table 15 summarizes the findings of the permutation-based tests for all key relationships in the model. The results confirm that all direct effects product innovativeness → product love, digital B2C marketing → product love, and

product innovativeness → digital B2C marketing—are statistically significant, with p-values less than 0.05. Additionally, the mediation effect of digital B2C marketing on the relationship between product innovativeness and product love is also significant, indicating partial mediation. These findings support the hypothesis that product innovativeness and digital marketing play crucial roles in fostering product love, with digital marketing business to business as a mediator role.

## 6. Discussion

The results of this study provide valuable insights into how product innovativeness and digital B2C marketing contribute to fostering product love among mobile consumers in Egypt, with a focus on telecommunications companies. By examining the relationships between these variables and the mediating role of digital B2C marketing, this study highlights the strategic importance of both innovative products and effective digital marketing. The findings not only align with existing theoretical frameworks but also offer practical implications for businesses in the mobile telecommunications sector. The first key finding of this study is that product innovativeness has a positive and significant direct impact on product love. This result supports the idea that consumers are more likely to develop an emotional connection with products that they perceive as novel, unique, or technologically advanced. This aligns with the findings of earlier studies (Biedenbach & Müller, 2012), which suggest that innovative products can enhance customer satisfaction and create stronger bonds with consumers. In the context of telecommunications, where technological advancements and competitive product offerings are common, this finding implies that mobile operators in Egypt should continuously innovate their products and services. Consumers who view a product as innovative are more likely to feel a sense of pride and attachment toward it, which can ultimately lead to higher levels of loyalty and advocacy.

The telecommunications market in Egypt is rapidly evolving, with companies constantly introducing new features such as faster internet speeds, new handsets, and improved mobile apps. The importance of perceived product innovation is thus particularly high in a competitive environment like this, where consumers are constantly presented with new options. This study confirms that when mobile consumers perceive a company's products as innovative, they are more likely to develop an emotional attachment to those products, which can result in increased brand loyalty. Another significant finding of this study is that digital B2C marketing also has a positive and significant effect on product love. Digital marketing efforts, such as personalized advertisements, social media campaigns, and email marketing, play a key role in building emotional connections between consumers and brands. This finding corroborates previous research by Kumar and Shah (2015), which suggests that digital marketing is an effective tool for fostering customer engagement and loyalty. In the context of telecommunications companies in Egypt, digital B2C marketing is particularly powerful because it provides a direct and personalized means of communication with consumers. The use of social media platforms such as Facebook, Instagram, and Twitter, as well as targeted online ads, allows telecommunications companies to engage with customers in a more personal and interactive way. This study demonstrates that when consumers are exposed to well-executed digital marketing strategies, they are more likely to develop positive emotions and stronger attachments to the brand. Moreover, the digital nature of the Egyptian market, with widespread mobile phone and internet use, makes digital B2C marketing an essential channel for reaching consumers.

This study suggests that telecommunications companies can further enhance product love by investing in digital marketing strategies that are tailored to consumers' preferences, needs, and behaviors. The third and most significant contribution of this study is the identification of digital B2C marketing as a mediator between product innovativeness and product love. The mediation analysis reveals that while product innovativeness directly influences product love, digital marketing amplifies this effect by engaging consumers on an emotional level. This finding suggests that digital marketing does not merely serve as a communication tool but as a crucial mechanism that enhances the impact of product innovation on customer emotions. This result builds upon previous studies that have suggested that digital marketing can amplify the effects of other variables, such as brand image (Batra et al., 2012). In the context of telecommunications, it appears that while consumers may be attracted to innovative products, it is the digital marketing strategies that help to create and reinforce emotional connections, thereby fostering product love. The role of digital marketing as a mediator highlights the importance of integrating innovation and digital marketing efforts to create a seamless and emotionally engaging customer experience. For telecommunications companies, this finding is crucial. It suggests that merely introducing innovative products may not be enough to create strong emotional bonds with customers. Rather, companies must strategically leverage

digital marketing to communicate the value of their innovations and engage with consumers in a way that fosters affection and loyalty. For example, after launching a new, innovative product, companies could use personalized digital marketing to showcase its benefits and connect with customers emotionally, which would increase the likelihood of forming product love.

## **7. Conclusion, implications, and limitations**

### **7.1 Conclusion**

This study provides valuable insights into the role of product innovativeness and digital B2C marketing in fostering product love among mobile consumers in Egypt, particularly within the telecommunications sector. By examining the direct and mediating effects of these factors, the research underscores the importance of both innovative products and effective digital marketing strategies in shaping consumer emotions and brand attachment. The findings reveal that product innovativeness significantly contributes to product love, suggesting that consumers are more likely to form an emotional connection with products they perceive as novel and technologically advanced. However, the study also highlights the critical role of digital B2C marketing in enhancing this relationship. Through personalized and engaging marketing strategies, telecommunications companies can amplify the impact of product innovation and foster deeper emotional bonds with their customers.

Furthermore, the mediation analysis demonstrates that digital B2C marketing not only directly influences product love but also mediates the relationship between product innovativeness and product love. This indicates that innovative products, when complemented by effective digital marketing strategies, are more likely to evoke stronger consumer emotions and loyalty. The practical implications of this study are significant for telecommunications companies operating in Egypt and other similar markets. To stay competitive, companies must continuously innovate their products while simultaneously investing in digital marketing efforts that engage and emotionally connect with their target audience. By integrating these strategies, companies can enhance customer loyalty, increase brand advocacy, and ultimately drive sustained business success. While this study offers important contributions to the understanding of product love in the telecommunications sector, it also opens avenues for future research. Longitudinal studies and further exploration into the specific digital marketing strategies that most effectively foster product love would deepen our understanding of these complex relationships. Overall, the findings provide a strong foundation for both academic inquiry and practical application in the field of digital marketing and customer relationship management.

### **7.2 Theoretical implications**

The findings of this study on the role of product innovativeness (PI), product love (PL), and digital B2C marketing (DB2C) in the mobile industry in Egypt have several important theoretical implications for marketing. This finding aligns with previous studies that suggest digital marketing efforts are crucial in shaping consumer attitudes and fostering emotional bonds with products. For instance, Cano et al. (2022) found that digital marketing enhances the perceived value of a product, and Kim and Ko (2012) suggested that personalized and interactive digital content strengthens customers' emotional attachment to the brand. Similarly, in the Egyptian context, the results emphasize the role of digital marketing in driving consumers' emotional attachment to mobile products, consistent with the findings of Melewar et al. (2017), who highlighted the significant role of digital marketing in building brand loyalty in emerging markets. Consumer behavior and innovation research. The study contributes to the existing body of knowledge by integrating various constructs into a comprehensive framework and offering deeper insights into how these elements interact to influence consumer perceptions and loyalty. Below are the key theoretical contributions: Product love, which is an emotional attachment to a product, has been a growing area of research within consumer behavior studies.

This finding is in line with research by Han et al. (2010), who suggested that product innovativeness can create emotional attachment, but its full potential is realized when accompanied by strong marketing communications. Additionally, the results support the work of Becker et al. (2021), who argued that the emotional bond between consumers and products can be enhanced through strategic marketing efforts. This research helps expand the conceptualization of product love by highlighting how product innovativeness and digital B2C marketing strategies can foster stronger emotional bonds between consumers and products, particularly in the mobile industry. While existing literature has explored product love in the context of general consumer goods, this study focuses on the role of B2C marketing and product innovativeness in enhancing product love to mobile customers in Egypt. The

study demonstrates that the influence of product innovativeness on product love is enhanced or amplified by digital marketing efforts, suggesting that marketing strategies play a critical role in translating innovative product features into deeper consumer attachment. This can inspire future research to explore other potential mediating or moderating variables in similar contexts.

Furthermore, The study also contributes particularly in the context of mobile technology with its increasing mobile phone penetration and expanding internet access, offers a unique context to investigate how digital marketing practices like social media engagement, targeted promotions, and personalized ads impact product love. Previous studies, such as those by Adomako et al. (2023) and Batra et al. (2022), have established the importance of emotional connections in driving customer loyalty, but this study shows how digital B2C marketing can enhance these emotional bonds in the context of mobile product innovation.

Additionally, the study contributes to the understanding the relationship between product innovativeness and product love . While product innovation has been identified as a key driver of customer satisfaction (Han et al., 2010), the results of this study indicate that the impact of product innovativeness on product love is contingent upon effective digital marketing. This finding suggests that future research should explore the interactive effects of innovation and marketing strategies in building emotional connections between consumers and brands. By demonstrating that innovative products attract more consumer attention and engagement through digital platforms, this study underscores the importance of aligning product innovation with product love This study bridges the emotional and cognitive dimensions of consumer behavior by linking product love (a predominantly emotional construct) with product innovativeness (a cognitive construct) and digital marketing ,which involves both emotional engagement through personalization and rational engagement through informative content.

This theoretical integration can inspire future research to explore how different types of marketing communication (emotional, rational, or a combination) affect customer attachment to products and brand loyalty across different industries and cultural contexts. (Alhamami, 2024) refers to brand loyalty has mainly focused on product quality and satisfaction as key drivers, but this study shows that the product innovations impact emotional attachment to a product (product love) created by innovative features and effective digital marketing . Thus, it provides a more nuanced understanding of brand loyalty, especially in the mobile sector, where consumers frequently upgrade their devices and switch brands based on new product offerings and marketing strategies.

### 7.3 Practical implications

The findings of this study have several practical implications for telecommunications companies in Egypt. First, companies should prioritize product innovation to stay competitive in the market. As consumers increasingly seek cutting-edge technology and unique features, For instance, businesses could collaborate with influencers or create interactive content that demonstrates the unique features of their mobile products, fostering a sense of connection among consumers (Adomako , 2023). According to Elidemir et al. (2020), consumers in emerging markets, like Egypt, are particularly responsive to digital marketing campaigns that are relevant to their specific needs and interests. Companies should, therefore, invest in data-driven marketing strategies that segment their audience effectively and deliver customized experiences across digital platforms. Personalized marketing efforts, such as recommendations based on previous behavior, exclusive offers, and loyalty programs, can enhance the effectiveness of digital B2C marketing and help to cultivate product love.

Furthermore, The study by Falahat (2020) supports this approach, showing that social media activities significantly enhance customer equity by fostering a deeper emotional connection. Businesses can use social media not just for advertising but also as a channel for building community and trust with their audience, making consumers feel more involved with the brand. the findings suggest that companies should integrate their product innovation and digital marketing strategies more effectively. Ngo et al. (2017) emphasized that businesses in emerging markets must adapt their strategies to local consumer values and behaviors. This study suggests that Egyptian consumers are increasingly influenced by digital marketing campaigns that reflect their personal experiences, preferences, and local culture. Companies can thus create more relevant and resonant digital content that speaks directly to the needs of the Egyptian mobile market. A holistic approach, where innovation is highlighted through personalized and emotionally engaging digital marketing campaigns, is likely to lead to higher levels of consumer attachment and brand loyalty. This integrated approach will also allow companies to better differentiate themselves in a crowded and competitive market.

#### 7.4 Limitations and future studies

This study has several limitations, same as previous research. The variables in this study were determined by taking into consideration the opinions of experts and the body of current literature. It's possible that some more factors were overlooked during this process. Future research could explore the role of sustainability in fostering product love. As consumers become more aware of environmental and social issues, how does the innovation of sustainable products influence emotional attachment? According to Hasnin, E. A., (2025), there is a relationship between customer wellbeing and customer intimacy with a mediating role of customer citizenship behavior, So researcher can study The effect of product innovation on customer well-being as a mediating variable with product love.

Furthermore, emotional attachment formed with sustainable products compare to those driven solely by technological innovation. future Research may explore whether sustainability can be a key driver for product love in more environmentally conscious consumer segments. Research might investigate at the relationship between product love, innovation, and customization as personalized products acquire mainstream. When a product can be customized to a customer's requirements and tastes are they more inclined to form emotional bonds with it. Future research could examine how product-integrated artificial intelligence (AI), virtual reality (VR), and augmented reality (AR) enhance relationships and the link to product love as the digital world expands. finally, study the relationship between consumers value Co-creation and innovative products.

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