

Determinants of Brand Identification in Pasteurized Milk Products: Evidence From Msmes in Indonesia

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Abstract

MSMEs faces structural challenges related to business competition, threatening their sustainability and growth due to their vulnerability to the market volatility. Additionally, low brand awareness of MSMEs produced pasteurized dairy milk reduces consumer preference. This research was conducted to analyze and map the factors of attractiveness in pasteurized milk products of MSMEs that influence consumer brand identification. The research was conducted during January 2026 in Indonesia with a sample of 884 respondents who fit with the research criteria. This research used a quantitative approach with a descriptive method from primary and secondary data. Quantitative data analysis was performed using Structural Equation Modeling - Partial Least Squares (SEM-PLS). The variable with the greatest influence on consumers' brand identification is customer satisfaction. When customers' expectations of a brand are met or exceeded, those with stronger brand identification experience higher levels of satisfaction. This satisfaction not only leads to a positive evaluation of the product but also fosters customer loyalty, thereby encouraging repeat purchases.

Keywords: brand awareness, brand identification, consumer satisfaction, functional risk, pasteurized milk, perceived value, MSMEs.

1. Introduction

The consumption average of milk in Indonesia is 17.76 liters/capita/year (Ministry of Industry of the Republic of Indonesia, 2025). This figure represents an increase from the previous year. Pasteurized milk consumption has tended to increasing alongside the increase of milk consumption in Indonesia (62%) (Beghin, 2006; Ratni et al., 2024). Pasteurized milk products from Small Medium Enterprises (MSMEs) and manufacture have an impact on increasing milk demand and sales volume. Consumer's purchase decisions regarding pasteurized milk products are influenced by brand identification of a product. Brand identification is an important element of marketing strategy that defines a brand's image and helps foster long term customer loyalty (Anselmsson et al., 2014). Brand identification is a fundamental requirement that plays a crucial role in customer loyalty toward a product (Rubio et al., 2014a). The difference between customer's perceptions of brand identification of pasteurized milk from MSMEs and Manufactured are influence by the products (Rubio et al., 2014a). The consumer's preference while purchasing a product is determined by their trust in the product (Chaudhuri & Holbrook, 2001). Consumer trust in a brand is a key factor that affects their purchasing decisions, related to their perception of the product (Ling et al., 2023). Potential customers are willing to pay more for products which have a strong brand image (Anselmsson et al., 2014).

Pasteurized milk produces in the MSMEs face several challenges, including inconsistent product quality and continuity (Astuti et al., 2025; Astuti et al., 2026). This evident from the limited sales volume of the pasteurized milk products, which rely solely on pre-orders. These challenges are among the factors contributing to business competition between MSMEs and other pasteurized milk producers, particularly within the manufacturing industry. This factor can affect the market competitiveness of MSMEs. To response to these challenges, MSMEs must competitive advantage through product differentiation strategies that establish a distinct identity in consumers' minds (Wilopo et al., 2026).

In today fast paced world, brand awareness is something that MSMEs need to be focus on in order to win the market competitiveness (E. Susanti et al., 2023). Consumers perceive that the functional risks associated MSMEs pasteurized dairy product are higher than manufactured pasteurized dairy products (Secer et al., 2025; Hojjati et al., 2025). This causes consumers to choose manufactured pasteurized dairy products. Consumer will choose pasteurized milk products manufactured because

consumers believe that manufactured pasteurized milk products have guaranteed quality according to consumers needs and a longer shelf life (Vernando & Vivi, 2024).

This research was conducted to analyze and map the factors of attractiveness in pasteurized milk products of Micro, Small, and Medium Enterprises (MSMEs) that influence consumer brand identification. This findings of this research are expected to serve as an additional source of information for MSMEs producing pasteurized milk, enabling them to compete and achieve sustainable survival amidst intense business competition with pasteurized milk products from the manufacturing industry. This perspective is grounded in consumer viewpoints regarding price offered, product quality, brand image, and consumer trust in the product.

This research was conducted in Semarang, considering that Semarang ranks third after Bandung and Jakarta in terms of milk and dairy product consumption. As the regional center of Central Java, Semarang has a more heterogeneous mix of urban and semi-urban consumers compared to Jakarta and Bandung. The population of Semarang is 1,702,768 (Ministry of Home Affairs, 2025). This research was conducted in Semarang to provide geographic variation and broaden the generalizability of the findings, thereby enhancing the contribution of the research.

This research employs brand awareness, functional risk, perceived value, and consumer satisfaction as a independent variable. Meanwhile, brand identification serve as dependent variable. This research aimed to analyze the the factors influencing functional risk, perceived value, consumer satisfaction, and consumer identification with pasteurized dairy products from MSMEs. These results are expected to become an additional source of information regarding brand awareness, functional risk, and customer trust for pasteurized milk products, enabling MSMEs to compete successfully and sustain in the market competition. The research problem addressed in this research is as follows:

RQ 1: What causal relationships exist among the constructs Brand Awareness (BA), Functional Risk (RF), Perceived Value (PV), Consumer Satisfaction (CS), and Brand Identification (BI)?

RQ 2: Do Functional Risk (RF), Perceived Value (PV), Consumer Satisfaction (CS) act as full or partial mediators in the relationship between Brand Awareness (BA) and Brand Identification (BI)?

This study is organized into eight sections. The first section presents the introduction and the research questions. The second section provides a review of the literature and outlines the research model. The third section describes the research methodology. The fourth section reports the statistical analysis. The fifth section offers a discussion of the findings. The sixth section covers the theoretical and managerial implications. The seventh section presents the conclusions of the study, and the eighth section discusses the research limitations and suggests directions for future research

2. Literature review, hypotheses formulations, and research framework

The concept of brand identification evolved from Social Identity Theory (SIT), first proposed by Tajfel and Turner (1979). n the marketing context, this concept has been expanded to encompass consumer relationships with brands, leading to the introduction of the Consumer-Brand Identification (CBI) model (Stokburger-Sauer et al., 2012) (Elbedweihy & Jayawardhena, 2014). Consumer-Brand Identification (CBI) can be defined as a psychological state in which consumers perceive, feel, and appreciate a sense of belonging to a brand (Lam et al., 2010). This model explains that consumers see brands not only as external entities but also as part of their self-identity (Elbedweihy et al., 2016). Consumers use brands to build their self-image and fulfill self-verification needs, as well as to express themselves and maintain their self-concept through the purchase and consumption of a brand (Escalas & Bettman, 2003; Elbedweihy et al., 2016).

The integrative theoretical framework of the Consumer-Brand Identification (CBI) model comprises six main components, including brand-self similarity, brand distinctiveness, brand prestige, brand social benefits, brand warmth, and memorable brand experiences (Stokburger-Sauer et al., 2012). Furthermore, these five drivers were found to have a stronger causal relationship with CBI when consumers exhibit higher involvement with the brand's product category (Stokburger-Sauer et al., 2012). Ultimately, CBI is linked to two significant firm-beneficial outcomes, namely brand loyalty and brand advocacy (Stokburger-Sauer et al., 2012).

The Consumer-Brand Identification (CBI) model is highly relevant to this study, as it directly establishes a link between the investigated variables and the formation of brand identification for pasteurized milk products offered by MSMEs (Stokburger-Sauer et al., 2012). Brand awareness serves as a fundamental prerequisite for the development of brand identification in consumers' minds. The inference from brand awareness to perceived quality negatively affects consumer identification with store brands, owing to the heightened perceived functional risk associated with the brand (Rubio et al., 2014a). Perceived value exerts a positive influence on CBI, with prior research demonstrating that it significantly enhances brand identification (Rubio et al., 2014a). Furthermore, consumer satisfaction functions as a direct antecedent within the CBI model, given that consumers are likely

to identify with a brand when they experience satisfaction and positive consumption encounters (Kuenzel & Vaux Halliday, 2008). Therefore, grounded in Social Identity Theory, the CBI framework is particularly applicable to this study, as it offers a comprehensive lens for examining how brand awareness, functional risk, perceived value, and consumer satisfaction, both directly and via mediating mechanisms shape the development of brand identification in the context of MSME pasteurized milk products.

2.1. Linkage of brand awareness and brand identification

Brand awareness constitutes a foundational prerequisite for Consumer-Brand Identification (CBI) (Stokburger-Sauer et al., 2012; Paschina, 2025). By enabling consumers to recognize and recall a brand, it facilitates the initiation of the identification process. Consumers are unlikely to identify with a brand that they neither recognize nor remember. Within the framework of Social Identity Theory by Tajfel & Turner, 1979, brand awareness represents the initial stage of the social categorization process, during which consumers become cognizant of a brand before evaluating its congruence with their self-identity (Amani, 2025). Consumer-Brand Identification (CBI) is defined as “the perceived overlap between one’s own self-concept and the brand’s identity,” implying that in the absence of brand identity awareness, consumers cannot progress to the stage of perceiving such an overlap between themselves and the brand (Rather, 2018). Thus, brand awareness provides the essential basis upon which consumers can establish an identification relationship with a brand (Loureiro et al., 2014).

Furthermore, the relationship between brand awareness and brand identification is not invariably positive or linear (Prabhu & Ganapathi, 2026). For store brands, inferences based on brand awareness and perceived quality can adversely affect consumer identification with the brand, owing to the heightened functional risk that consumers associate with such brands (Rubio et al., 2014a). Stated differently, brand awareness unaccompanied by positive quality perceptions may counteract brand identification; as consumers become more aware of the brand, they tend to perceive elevated functional risks, which in turn impedes the identification process.

The relationship between brand awareness and brand identification is further moderated by various contextual factors, such as the level of consumer involvement with the product category. Notably, the antecedents of the CBI model exert a stronger causal influence on CBI when consumers exhibit higher involvement with the brand's product category (Stokburger-Sauer et al., 2012; Correia et al., 2024). In the context of pasteurized milk products, which represent everyday consumer goods characterized by varying degrees of perceived functional risk, consumer involvement plays a pivotal role in determining the extent to which brand awareness translates into brand identification. Value congruence and customer-to-customer similarity drive CBI both directly and indirectly through brand attractiveness, which, in turn, paves the way for developing a deep relationship with the brand, encompassing brand loyalty and resilience to negative information (Elbedweihy et al., 2016). Thus, brand awareness serves as an initial catalyst, its effectiveness in shaping brand identification depends largely on the degree of perceived congruence between the brand's values and consumers' personal values, as well as the extent to which consumers perceive the brand as fulfilling their self-verification needs.

2.2. Linkage of functional risk and perceived value

Functional risk refers to consumers' perception of the likelihood that a product will fail to perform as expected or will not meet their desired needs. Within the Consumer-Brand Identification (CBI) framework, which is rooted in Social Identity Theory (Islam, 2014), functional risk plays a significant role in shaping the extent to which consumers are willing to identify with a brand (Rubio et al., 2014; Dong et al., 2026). From a Social Identity Theory perspective, perceived functional risk can be explained through a self-protection mechanism, wherein consumers employ brands to build and sustain a positive self-image. Consequently, they tend to eschew brands carrying high functional risk, as such risk could threaten the positive self-concept they aim to preserve. Thus, perceived functional risk serves as an inhibiting mechanism in the brand identification process, whereby consumers will identify only with brands they believe are capable of consistently meeting functional expectations (Stokburger-Sauer et al., 2012).

The relationship between functional risk and perceived value exhibits complex dynamics and carries significant implications for the formation of CBI (Rubio et al., 2014; Namkung & Park, 2021). Consumers who become aware of functional risk in a brand tend to undertake a more thorough evaluation of other product attributes, such as price and quality, to offset this risk (Jin, 2021). Accordingly, perceived value serves as a mediating mechanism that enables consumers to continue considering a brand despite the presence of functional risk, provided that the brand's perceived value is deemed comparable to, or greater than, the risk incurred (Tezer et al., 2021). Consequently, consumers must strike a balance between perceived functional risk and the value offered, wherein the decision to identify with an MSME brand will materialize only if the perceived value is considered sufficient to compensate for the existing functional risk.

2.3. Linkage of perceived value and consumer satisfaction

The relationship between perceived value and consumer satisfaction has long occupied a central position in marketing literature, particularly because perceived value functions as a cognitive-affective judgment that consumers form by weighing the benefits received against the sacrifices incurred when consuming a product or service (Blut et al., 2024). Perceived value is considered a critical antecedent of customer satisfaction, representing the customer's overall assessment of the utility of a product or service based on perceptions of what is received and what is given (Yum & Kim, 2024). Building on this foundation, it has been argued that perceived value should be examined as a multidimensional construct rather than a one-dimensional one, encompassing functional, social, emotional, and economic dimensions that each contribute uniquely to the satisfaction-formation process (Sevilmiş et al., 2022). When the present discussion is extended into the domain of branding, this value-satisfaction linkage becomes inseparable from the construct of consumer brand identification (CBI), since the social dimension of perceived value is precisely the channel through which consumers come to see a brand as an extension of who they are (Bai et al., 2021). Social Identity Theory (Islam, 2014) provides the theoretical scaffolding for this extension, positing that individuals derive part of their self-concept from the social groups and symbolic objects, including brands with which they associate themselves; consequently, when a brand is perceived to deliver high social and symbolic value, consumers are more inclined to identify with that brand, and this identification in turn amplifies the satisfaction that flows from the value-judgment process (Kuo, 2022). Brand identity and brand identification exert significant direct and indirect effects on the traditional antecedents of brand loyalty, namely perceived value, satisfaction, and trust, thereby confirming that the value-satisfaction relationship cannot be fully understood without accounting for the identity-based mechanisms that consumers apply when relating to brands (He et al., 2012).

Empirical evidence across diverse consumption contexts further substantiates the proposition that perceived value, consumer satisfaction, and brand identification operate as an integrated psychological sequence rather than as isolated constructs. A positive brand image, when mediated by high perceived quality, leads to greater brand loyalty because consumers trust that the brand will consistently meet their quality expectations, and this mediation process strengthens loyalty through brand trust and continued consumer satisfaction (García-Salirrosas et al., 2024). Importantly, the social dimension embedded within perceived value has been shown to operate through identity-related mechanisms: consumers who perceive that a brand improves their social status tend to hold a more favorable image of that brand, which in turn strengthens their loyalty, indicating that brand image serves as a bridge connecting social value to long-term consumer commitment (García-Salirrosas et al., 2024). This pattern is consistent with the broader theoretical claim that social identity theory interprets brand-related social perception as a process whereby consumers communicate their social identity to others through the products and brands they consume (Xi et al., 2022), thereby reinforcing that consumer brand identification is not a peripheral outcome but a core psychological mechanism mediating the pathway from perceived value to consumer satisfaction. Taken together, these findings justify the present study's theoretical framework, which positions perceived value as a multidimensional antecedent that operates partly through consumer brand identification as explained by Social Identity Theory to produce sustained consumer satisfaction, rather than treating value and satisfaction as a simple, identity-free, linear cause-and-effect relationship (Blut et al., 2024).

2.4. Linkage of functional risk, perceived value, consumer satisfaction, and brand identification

Functional risk represents a distinct dimension within the broader construct of perceived risk, referring specifically to the uncertainty consumers experience regarding whether a product or service will perform as expected or deliver the functional benefits it promises (Jacoby & Kaplan, 1972). This concept becomes theoretically significant once it is connected to perceived value, because functional value defined as the perceived utility acquired from an alternative's capacity for functional, utilitarian, or physical performance has traditionally been presumed to be the primary driver of consumer choice (Sheth et al., 1991). When functional risk is high, the functional value a consumer expects to extract from a brand becomes correspondingly uncertain, and this uncertainty does not remain isolated within the cognitive evaluation stage, rather, it propagates downstream and disrupts the value-satisfaction sequence that has been well established in marketing literature (Rather et al., 2018). This propagation effect is empirically substantiated in the food-retail context, where it has been shown that the risk entailed in purchasing a brand conditions significantly the entire process of the consumer's evaluation and comparison between manufacturer brands and store brands, and that this risk affects perceived value and consumer satisfaction, which is consequently very likely to affect the consumer's identification with the brand as well (Rubio et al., 2014a). What this finding implies theoretically is that functional risk does not merely suppress satisfaction directly, it does so partly by degrading the perceived value upon which satisfaction is built, and this degraded value-satisfaction pathway subsequently weakens the bond of identification between the consumer and the brand a bond that Social Identity Theory frames as central to how consumers integrate brands into their self-concept (Rather et al., 2022).

The pivotal role of brand identification within this risk-value-satisfaction chain is further clarified when the construct is examined as both an outcome and a moderating mechanism of consumer evaluation. Brand identification is recognized as a fundamental

antecedent of brand loyalty and consequently plays a crucial role in shaping the consumer's brand choice and buying behavior (Rather et al., 2018), yet this identification process can itself be eroded when functional risk is salient, since empirical findings reveal that a negative effect of brand inference on consumer identification with a brand emerges as a result of the greater functional risk perceived for that brand, with this erosive effect being substantially greater among quality-conscious consumers (Rubio et al., 2014a). This pattern indicates that the consumers who identify most strongly with brands precisely those for whom Social Identity Theory would predict the deepest self-brand connection are also the ones whose identification is most vulnerable to functional-risk perceptions, since they hold the brand to a higher standard of performance congruence with their self-concept. Consequently, the linkage among functional risk, perceived value, consumer satisfaction, and brand identification should not be treated as four separate bivariate relationships but as a single sequential mechanism: functional risk diminishes perceived value, diminished perceived value undermines consumer satisfaction, and the resulting dissatisfaction, compounded by unresolved risk, ultimately attenuates the social-identity-based bond of brand identification that would otherwise translate satisfaction into long-term brand commitment (Rubio et al., 2014; Rather et al., 2022). The conceptual framework of variables consumer decision-making styles shown in **Figure 1**.

In this context, we conceptualize the following framework (Figure 1) and research postulate:

- H1 : Brand Awareness (BA) has a positive impact on Functional Risk (RF).
- H2 : Functional Risk (RF) has a positive impact on Perceived Value (PV).
- H3 : Functional Risk (RF) has a positive impact on Consumer Satisfaction (CS).
- H4 : Functional Risk (RF) has a positive impact on Brand Identification (BI).
- H5 : Perceived Value (PV) has a positive impact on Consumer Satisfaction (CS).
- H6 : Perceived Value (PV) has a positive impact on Brand Identification (BI) mediating through Consumer Satisfaction (CS).
- H7 : Consumer Satisfaction (CS) has a positive impact on Brand Identification (BI).
- H8 : Brand Awareness (BA) has a positive impact on Perceived Value (PV) mediating through Functional Risk (RF).
- H9 : Brand Awareness (BA) has a positive impact on Consumer Satisfaction (CS) mediating through Functional Risk (RF) and Perceived Value (PV).
- H10 : Functional Risk (RF) has a positive impact on Consumer Satisfaction (CS) mediating through Perceived Value (PV).
- H11 : Functional Risk (RF) has a positive impact on Brand Identification (BI) mediating through Perceived Value (PV) and Consumer Satisfaction (CS).
- H12 : Brand Awareness (BA) has a positive impact on Brand Identification (BI) mediating through Functional Risk (RF), Perceived Value (PV), and Consumer Satisfaction (CS).

3. Research methodology

3.1. Measures

The data for this study came from two sources, including primary data collected through a questionnaire administered to 884 respondents, and secondary data drawn from literature studies relevant to the research topic. The questionnaire was designed using the Consumer-Brand Identification (CBI) framework. A 7-point Likert scale was used, ranging from 1 to 7. A 7-point Likert scale offers a high degree of accuracy and lower measurement error (Hair & Alamer, 2022). Response options on the Likert scale ranged from "strongly agree" to "strongly disagree."

3.2. Data

Data for this study were collected by distributing questionnaires to 884 respondents. The respondents met specific research criteria and came from diverse social, economic, and cultural backgrounds to represent the broader population. The questionnaire was administered online via the Google Forms platform. In terms of gender, 82% of respondents were female and 18% male. The largest group of respondents consisted of students (100%), with the majority being 20 years of age (37%).

3.3. Statistical analysis

This study employed a quantitative approach with descriptive analysis. A quantitative approach refers to a research method that relies on numerical data and statistical techniques for data collection and analysis (Hair et al., 2017). The quantitative data analysis was performed using Structural Equation Modeling with Partial Least Squares (SEM-PLS). The SEM-PLS analysis proceeded through

three stages: measurement model evaluation, structural model evaluation, and hypothesis testing. All analyses were conducted using SmartPLS version 4.1.1.6. Evaluation of the measurement model with validity and reliability tests shown in **Table 1**.

4. Data analysis and results

4.1. Measures

The results of the measurement model assessment indicated that convergent validity was achieved, as every indicator's factor loading was recorded above the 0.70 threshold (Garg et al., 2023). To determine construct reliability, Cronbach's alpha was employed, and the resulting values for all variables exceeded 0.70. According to Hair & Alamer (2022), Cronbach's alpha serves as a measure of indicator consistency within a variable, with 0.70 generally accepted as the minimum acceptable threshold for research constructs. Furthermore, each variable's average variance extracted (AVE) score surpassed 0.50. This aligns with the criterion proposed by Ghozali (2014), who noted that a PLS model demonstrates convergent validity once the AVE value for each construct is above 0.50. Collinearity was also examined through variance inflation factor (VIF) values, all of which stayed under 3.5, suggesting that the structural model's outcomes were not compromised by multicollinearity issues (Mittal et al., 2023).

4.2. Evaluation of Structural model

The measurement model statistics shown in Figure 2 and the bootstrapping results in Figure 3. The bootstrapping results revealed several significant paths. Brand Awareness (BA) had a significant effect on Functional Risk (RF) ($p = 0.000$). RF significantly influenced Perceived Value (PV) ($p = 0.000$). RF showed a significant effect on Consumer Satisfaction (CS) ($p = 0.000$). Additionally, RF had a direct and significant effect on Brand Identification (BI) ($p = 0.000$). PV had a significant effect on CS ($p = 0.000$). PV significantly influenced BI through CS ($p = 0.000$). CS also had a significant effect on BI ($p = 0.000$). BA had a significant indirect effect on PV through RF ($p = 0.000$). The indirect effect of BA on CS through RF and PV was significant ($p = 0.000$). RF had a significant effect on CS through PV ($p = 0.000$). RF also had a significant effect on BI through PV and CS ($p = 0.000$). BA had a significant indirect effect on BI through RF, PV, and CS ($p = 0.000$). Consequently, all proposed hypotheses were supported. Regarding the coefficient of determination, BA explained 48.4% of the variance in RF. RF accounted for 30.4% of the variance in PV. PV also explained 59.3% of the variance in CS. Together, PV and CS explained 68.3% variance in BI. The remaining variance in each case is attributable to factors outside the research model.

As shown in Table 3, all proposed hypotheses were supported, with p-values below 0.05 and t-statistics exceeding 1.96. Specifically, Brand Awareness (BA) exerted a positive and significant direct effect on Functional Risk (RF) ($\beta = 0.696$, $t = 18.063$, $p = 0.000$). RF also had a positive and significant direct effect on Perceived Value (PV) ($\beta = 0.552$, $t = 9.628$, $p = 0.000$). RF showed a significant direct effect on Consumer Satisfaction (CS) ($\beta = 0.017$, $t = 9.221$, $p = 0.000$). RF had a direct and significant effect on Brand Identification (BI) ($\beta = 0.378$, $t = 6.682$, $p = 0.000$). Additionally, PV had a significant direct effect on CS ($\beta = 0.760$, $t = 17.472$, $p = 0.000$). The indirect effect of PV on BI through CS was significant ($\beta = 0.579$, $t = 9.681$, $p = 0.000$). CS also had a significant effect on BI ($\beta = 0.579$, $t = 9.681$, $p = 0.000$). CS had a positive and significant direct effect on BI ($\beta = 0.762$, $t = 11.834$, $p = 0.000$). BA had a significant indirect effect on PV through RF ($\beta = 0.384$, $t = 7.329$, $p = 0.000$). The indirect effect of BA on CS through RF and PV was significant ($\beta = 0.292$, $t = 7.121$, $p = 0.000$). Moreover, RF showed a significant indirect effect on CS via PV ($\beta = 0.419$, $t = 9.221$, $p = 0.000$). The indirect effect of RF on BI through PV and CS was also significant ($\beta = 0.319$, $t = 6.961$, $p = 0.000$). BA had a significant indirect effect on BI through RF, PV, and CS ($\beta = 0.222$, $t = 5.672$, $p = 0.000$).

The findings of this study support all proposed hypotheses. Brand Awareness (BA) exerts a significant direct influence on Functional Risk (RF). Furthermore, RF significantly affects Perceived Value (PV) and Consumer Satisfaction (CS). PV and CS significantly affects Brand Identification (BI). The mediation analysis further reveals that RF, PV, and CS mediate the relationship between BA and BI, both partially and in combination. Consequently, raising BA not only strengthens BI directly but also indirectly through improvements in the mediating variables, including RF, PV, and CS.

5. Discussion and findings

This study aims to examine the factors that influence consumers' brand identification (BI) with a particular brand. To address a gap identified in previous research, this study incorporates functional risk (RF), perceived value (PV), and consumer satisfaction (CS) as mediating variables between brand awareness (BA) and brand identification (BI). The discriminant validity analysis derived from the confirmatory factor analysis (CFA) is presented in **Table 2**, while the results of the hypothesis testing are shown in Table 3. As summarized in **Table 3**, all proposed hypotheses were supported. The findings indicate that, in identifying a brand, consumers do not rely solely on the product with which they are already familiar. Rather, they also take into account the overall

aspects of the product, including the functional risk involved, the alignment between the product's value and consumer expectations, and their satisfaction with the product.

Based on the analysis conducted, it can be concluded that brand awareness has a direct effect on functional risk. Brand awareness significantly influences functional risk because consumers tend to assume that a product originating from a well-known or trusted brand carries a lower level of functional risk (Erdem & Swait, 1998; Rubio et al., 2014). In the context of consumer behavior, the level of brand awareness is inversely related to the functional risk perceived by consumers (Rubio et al., 2014a). When consumers' perceived brand awareness is high, this indicates that they believe the product to be safe and of guaranteed quality (Erdem & Swait, 1998).

Functional risk has a direct effect on perceived value. Functional risk exerts a negative effect on perceived value, meaning that when the functional risk posed by a product is high, it leads to a decline in consumers' subjective assessment of the product's quality (L. Kim et al., 2025). The possibility that consumers fail to perceive an alignment between product benefits and the sacrifices made in terms of price, time, or effort may result in a decrease in perceived value (Blut et al., 2024). This occurs because consumers are concerned that the product will not function properly or will not meet their expectations when used (Rubio et al., 2014a).

Functional risk directly influences consumer satisfaction. Perceived risk is associated with the level of customer satisfaction, such that the higher the risk consumers perceive, the lower their tendency to feel satisfied (Johnson et al., 2008). This is attributable to the discomfort arising from uncertainty, whether functional, emotional, or time-related in nature (Bettman, 1973). Such uncertainty gives rise to doubt during the post-purchase evaluation process, thereby causing the consumption experience to become less than optimal (Sweeney et al., 2000). A high level of perceived risk can lower the level of satisfaction, as consumers feel that the outcomes obtained do not fully correspond to their initial expectations. Conversely, when perceived risk is low, consumers tend to hold more stable expectations and undergo a more consistent experience, thereby increasing their overall level of satisfaction (Casidy & Wymer, 2016).

Based on the analysis conducted, it is concluded that functional risk exerts a significant and negative effect on brand identification. Functional risk significantly influences the consumer purchase decision process, which includes the brand identification stage (Lăzăroiu et al., 2020). The higher the consumer's concern regarding a product's functional risk, the lower the consumer's level of identification with that brand (Rubio et al., 2014a). This indicates that consumers tend to evaluate product alternatives based on the level of trust and the perception of safety they hold toward the brand (Lăzăroiu et al., 2020). When functional risk is perceived to be high, consumers become more cautious in recognizing and considering the brand as their primary choice (Lee et al., 2016). This condition can hinder the formation of brand preference, as consumers tend to favor brands perceived to carry lower risk and a more trustworthy reputation.

Perceived value has a significant effect on consumer satisfaction (Sebastián-Morillas et al., 2024; Uzir et al., 2020). The congruence between the benefits received and consumers' expectations is one of the factors that shapes their satisfaction with a given product (Rao et al., 2025). This is reflected in the fact that when customers feel they have obtained commensurate benefits, their satisfaction increases correspondingly (Shih et al., 2024). The greater consumers' perception that the benefits obtained are commensurate with, or even exceed, the costs they have incurred, the more positive their evaluation of the product becomes (Blut et al., 2024). This condition indicates that perceived value plays a critical role in shaping a satisfying consumption experience.

Perceived value has a significant effect on brand identification through customer satisfaction. The greater customers' satisfaction with a store brand, the stronger their identification with it, likewise, the greater the perceived value they attribute to the store brand, the higher their level of identification with it (Rubio et al., 2014b). This occurs because store brands can express and enhance consumers' personal identity through the experience of consuming a brand (Cătălin & Andreea, 2014).

Based on the results of the analysis conducted, it can be concluded that customer satisfaction has a significant direct effect on brand identification. Customer satisfaction influences brand identification (Haumann et al., 2014). This indicates that the emotional and psychological relationship between consumers and a brand can strengthen the impact of perceived satisfaction (Popp & Woratschek, 2017). When customer expectations of a brand are met or exceeded, customers with stronger brand identification will experience higher satisfaction (Schiebler et al., 2026).

Brand awareness influences perceived value through functional risk. Consumer trust in a product is influenced by several factors, such as brand recognition (brand awareness) and perceived benefit value (perceived value) (Ling et al., 2023). Therefore, brand awareness indirectly influences perceived value, which in turn affects consumer trust (Monfort et al., 2025). This gives rise to a positive consumer perception of the product's functional attributes (Coelho et al., 2020).

Brand awareness has a significant influence on consumer satisfaction through functional risk and perceived value. Brand awareness can reduce perceived functional risk by increasing consumer familiarity and trust toward a brand (Rubio et al., 2014;

Tasci, 2016). When consumers recognize a brand and hold positive associations with it, they tend to feel more confident about the product's functional performance, which diminishes the perceived risk of unsatisfactory outcomes (Park & Le, 2023).

Functional risk has a significant influence on consumer satisfaction through perceived value. Perceived quality and perceived value, which encompass functional value, emotional value, and social value, influence consumer satisfaction (Slack et al., 2020; Susanti et al., 2020). The possible risk perceived by consumers will also have an impact on consumer satisfaction and can indirectly affect the purchase intention toward a brand (Khasbulloh & Suparna, 2022; Scridon et al., 2019). This is because consumers have expectations regarding the value of product attributes that provide utility and are directly related to the function of the product or service (Rubio et al., 2014a).

Functional risk has a significant influence on brand identification through perceived value and consumer satisfaction. The functional risk perceived by consumers is one of the important factors in shaping the perceived value of MSME products and influences the level of consumer satisfaction (Scridon et al., 2019; Kim et al., 2019). When consumers have a low perception of functional risk, for instance regarding quality, performance, or product conformity with expectations, they tend to assess the product as having higher value (Rubio et al., 2014; Slack et al., 2020). The management of functional risk becomes an important aspect for MSMEs in enhancing perceived value and building sustainable consumer satisfaction.

Brand awareness influences brand identification through functional risk, perceived value, and consumer satisfaction. Brand communication serves as the initial process in forming brand awareness embedded in consumers' minds (Rajagopal, 2020; Rubio et al., 2014). Consumers will use brand awareness as an opportunity to select a product or service that they perceive as having the best quality and the lowest risk (Rubio et al., 2014a). This indicates that the higher consumers' awareness of a brand, the greater the likelihood that the brand will be considered and chosen in purchasing situations (Scridon et al., 2019). Brand awareness plays an important role in influencing consumers' perceptions of product quality and risk level (Rubio et al., 2014; Scridon et al., 2019).

6. Implications of the study

6.1. Theoretical implications

This study offers a theoretical contribution to the evolving body of consumer brand identification literature, specifically concerning the relationships among Brand Awareness (BA), Functional Risk (RF), Perceived Value (PV), Consumer Satisfaction (CS), and Brand Identification (BI). The findings demonstrate that the brand awareness not only affects consumer brand identification directly but also exerts an indirect influence through functional risk, perceived value, and consumer satisfaction. These results extend current understanding of consumer brand identification theory by illustrating how the effectiveness of brand awareness, functional risk, perceived value, and consumer satisfaction in forming brand identification.

6.2. Managerial implications

Concrete steps are necessary for MSME operators to meet consumers' functional expectations, thereby enabling them to compete with companies producing similar products. Conducting educational initiatives regarding the benefits of milk consumption through social media represents one such concrete step that MSME can undertake to raise awareness of these advantages; this is expected to have a positive impact on increasing the number of milk consumers. Furthermore, strategic measures are required for MSMEs to contribute to mitigating the functional risks perceived by consumers. This can be accomplished by updating product packaging to include comprehensive information, such as ingredient composition, production dates, expiration dates, and other details that must be clearly stated on the label, thereby serving as an effort to enhance both brand image and consumer satisfaction.

7. Conclusions

Based on the research findings, brand awareness, functional risk, perceived value, and consumer satisfaction influence brand identification, both directly and through mediating variables. Among these, consumer satisfaction emerges as the variable with the strongest influence on brand identification. When customer expectations of a brand are met or exceeded, customers with stronger brand identification tend to experience higher levels of satisfaction. The resulting satisfaction not only contributes to positive evaluations of the product but also fosters consumer loyalty, thereby encouraging repeat purchase behavior.

8. Limitations and future scope of research

This study has several limitations. First, the research was confined to a single geographic setting. Second, there are limitations concerning the choice of research variables and the contextualization of the product under investigation. It is hoped that future

research will incorporate variables not analyzed in the present study to further refine the research. Variables that could be utilized in future studies include lifestyle, purchase intention, and willingness to pay.

Ethics statement

The authors declare that their Institutional Ethics Committee confirmed that no ethical review was required for this study. Written informed consent for participation was not required because all participants' data was anonymized before the statistical analyses were done. The authors used Grammarly for grammar checking and language refinement.

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Declaration of Conflicting Interest

The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

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Figure 1. The conceptual framework of variables

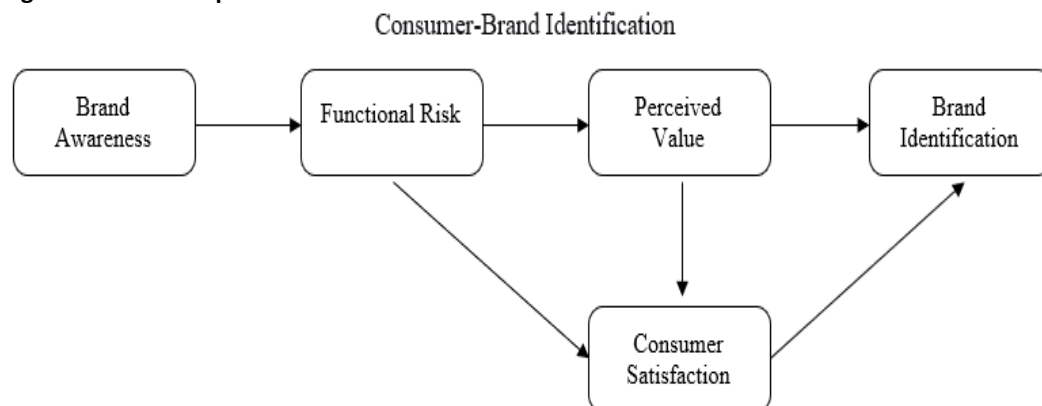


Figure 2. Measurement Model Statistics

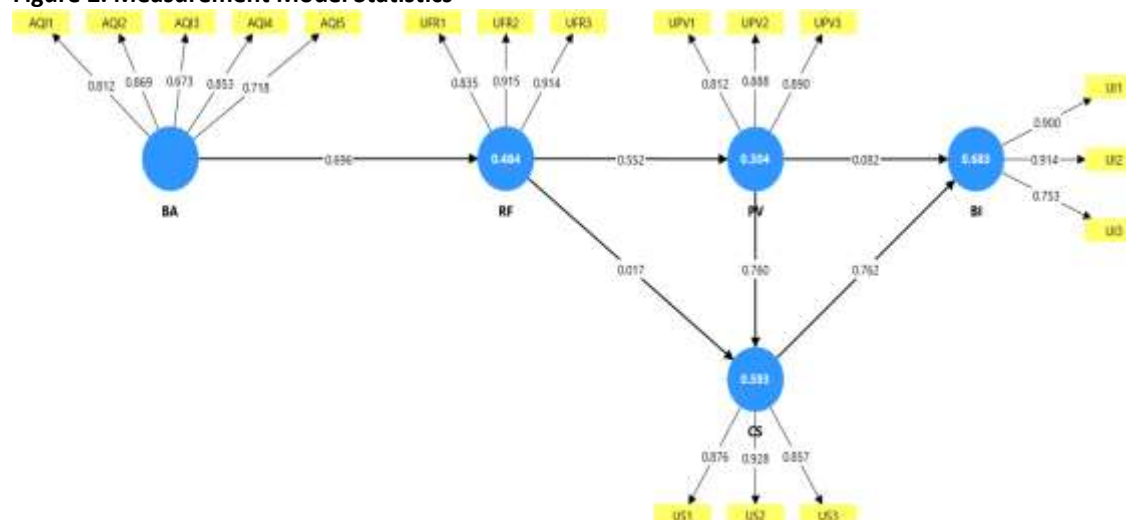


Figure 3. The Structural Model

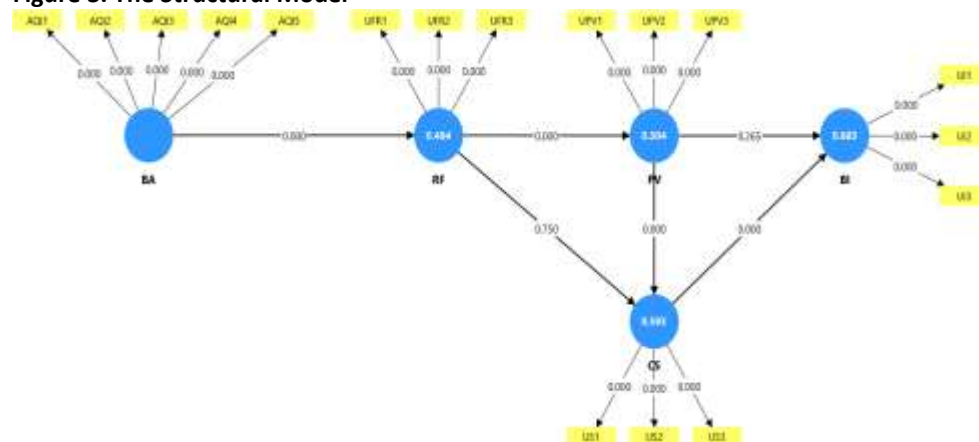


Table 1. Evaluation of the measurement model with validity and reliability tests

	CR	Factor Loading	Mean	SD	AVE	Reliability (α)	VIF
BA	0.891		4.871	1.559	0.622	0.851	
BA1		0.812	4.063	1.885			1.864
BA2		0.869	4.964	1.476			2.460
BA3		0.673	5.471	1.228			1.634
BA4		0.853	4.588	1.539			2.272
BA5		0.718	5.271	1.129			1.877
RF	0.918		4.457	1.609	0.790	0.867	
RF1		0.835	4.778	1.462			1.920
RF2		0.915	4.090	1.721			2.615
RF3		0.914	4.502	1.556			2.621
PV	0.898		4.843	1.319	0.746	0.829	
PV1		0.812	4.792	1.363			1.588
PV2		0.888	4.756	1.320			2.237
PV3		0.89	4.982	1.258			2.323
CS	0.917		4.901	1.266	0.917		
CS1		0.876	4.738	1.326			2.226
CS2		0.928	4.941	1.248			2.986
CS3		0.857	5.023	1.201			2.088
BI	0.893		5.212	1.258	0.737	0.825	
BI1		0.9	4.923	1.286			2.100
BI2		0.914	5.081	1.245			2.486
BI3		0.753	5.633	1.120			1.613

Table 2. Discriminant validity analysis from CFA

	BA	BI	CS	PV	RF
BA					
BI	0.418				
CS	0.516	0.940			
PV	0.640	0.771	0.904		
RF	0.764	0.309	0.494	0.643	

Table 3. Hypothesis result

Hypothesis	Relationship	Estimates (β)	SE.	t-value	p-value	Result
H1	BA > RF	0.696	0.039	18.063	0.000	Supported
H2	RF > PV	0.552	0.057	9.628	0.000	Supported
H3	RF > CS	0.017	0.055	9.221	0.000	Supported
H4	RF > BI	0.378	0.057	6.682	0.000	Supported
H5	PV > CS	0.760	0.043	17.472	0.000	Supported
H6	PV > CS > BI	0.579	0.060	9.681	0.000	Supported
H7	CS > BI	0.762	0.064	11.834	0.000	Supported
H8	BA > RF > PV	0.384	0.052	7.329	0.000	Supported
H9	BA > RF > PV > CS	0.292	0.041	7.121	0.000	Supported
H10	RF > PV > CS	0.419	0.045	9.221	0.000	Supported
H11	RF > PV > CS > BI	0.319	0.046	6.961	0.000	Supported
H12	BA > RF > PV > CS > BI	0.222	0.039	5.672	0.000	Supported