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DO PRODUCT RECALLS HURT BRAND IMAGE? EVIDENCE FROM EVA PREMIUM BOTTLED WATER IN ILORIN METROPOLIS, NIGERIA

ДА ЛИ ОПОЗИВ ПРОИЗВОДА НАРУШАВА ИМИЏ БРЕНДА? ДОКАЗИ ИЗ СЛУЧАЈА ЕВА ПРЕМИЈУМ ФЛАШИРАНЕ ВОДЕ У ГРАДСКОМ ПОДРУЧЈУ ИЛОРИНА, НИГЕРИЈА

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Abstract: *Product recalls represent a double-edged sword that can hurt the recalling firm's market value and create a dent in its brand image, while serving as a strategic signal of corporate responsibility when firms prioritize consumer safety over profit considerations. This study examines the effect of product recall practices on brand image, focusing on Eva Premium Bottled Water in the Ilorin metropolis. Adopting a positivist philosophy supported by a quantitative methodology, the study collected primary data through a structured and close-ended questionnaire administered to consumers and analysed using regression-based inferential statistics. The findings indicate that product recall frequency has a significant effect on brand perception, recall volume significantly influences brand positioning, and recall timing significantly impacts brand reliability. Accordingly, product recall practices significantly shape consumers' evaluation of brand image. The study concludes that, when effectively managed, product recalls can enhance brand image by reinforcing consumer trust and signalling a firm's commitment to public health and safety despite short-term reputational risks. The study recommends that brand managers adopt transparent communication strategies of timely announcements, clear explanations of recall causes, and detailed information on corrective measures during recall episodes. Aside from strengthening consumer confidence, such practices can reinforce the perception that consumer well-being takes precedence over profit maximization. While the study contributes to branding and crisis management literature, it acknowledges limitations related to geographic scope and reliance on self-reported consumer perceptions, suggesting future research incorporate multiple regions, industries, and complementary data sources.*

Keyword*: Product Recall, Brand Image, Recall Frequency, Brand Positioning, Recall Volume, Brand Reliability, Recall Timing.*

Сажетак: *Опозив производа представља мач са две оштрице који може умањити тржишну вредност компаније која га спроводи и нарушити имиџ њеног бренда, али истовремено може деловати као стратешки сигнал друштвене одговорности када*

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компаније дају приоритет безбедности потрошача у односу на профит. Ова студија испитује утицај пракси опозива производа на имиџ бренда, са фокусом на Ева Премијум флаширану воду у градском подручју Илорина. Полазећи од позитивистичке филозофије и користећи квантитативну методологију, истраживање је прикупило примарне податке путем структурираног и затвореног упитника који је дистрибуиран потрошачима, а подаци су анализирани применом регресионих инференцијалних статистичких метода. Резултати указују да учесталост опозива производа има значајан утицај на перцепцију бренда, обим опозива значајно утиче на позиционирање бренда, док правовременост опозива значајно утиче на поузданост бренда. У складу с тим, праксе опозива производа значајно обликују начин на који потрошачи процењују имиџ бренда. Студија закључује да, уколико се ефикасно управља, опозиви производа могу унапредити имиџ бренда јачањем поверења потрошача и сигнализирањем посвећености компаније јавном здрављу и безбедности, упркос краткорочним репутационим ризицима. Студија препоручује да менаџери брендова примењују транспарентне комуникационе стратегије које укључују правовремена саопштења, јасна објашњења узрока опозива и детаљне информације о корективним мерама током процеса опозива. Поред јачања поверења потрошача, овакве праксе могу додатно учврстити перцепцију да добробит потрошача има предност у односу на максимизацију профита. Иако студија доприноси литератури из области брендирања и управљања кризама, она препознаје ограничења која се односе на географску обухваћеност и ослањање на самопријављене перцепције потрошача, те предлаже да будућа истраживања укључе више региона, индустрија и комплементарне изворе података.

Кључне речи: *опозив производа, имиџ бренда, учесталост опозива, позиционирање бренда, обим опозива, поузданост бренда, правовременост опозива.*

JEL Classification: L15, D83, M31, M39, M14

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INTRODUCTION

Product recalls have become an increasingly prominent challenge for firms operating in consumer goods markets, particularly in industries where products are intended for human consumption and failures pose direct risks to public health (Martins & Pires, 2023). In such industries, recalls are not merely operational responses to product defects but critical events with far-reaching reputational implications (Jovanovic, 2021). In the bottled water industry, where safety, purity, and consumer trust are central to brand choice, product recalls represent a significant threat to brand image and long-term competitive positioning. In Nigeria, rising regulatory enforcement by the *National Agency for Food and Drug Administration and Control* (NAFDAC), coupled with heightened consumer awareness of product safety, has increased the visibility and frequency of recall events (Fidelis et al., 2024). Despite this trend, empirical evidence on how product recalls influence consumer perceptions of brand image within the Nigerian bottled water market remains limited (Olewu & Iboko, 2023). Eva Premium Bottled Water, once a market leader (Pouliot & Wang, 2018), has experienced recall incidents that coincided with a noticeable decline in its competitive positioning, raising critical questions about the extent to which recall characteristics such as frequency, volume, and timing shape brand perception, positioning, and reliability. The absence of context-specific research examining these dynamics in the Ilorin metropolis creates a significant knowledge gap, underscoring the need for systematic investigation into how product recall practices affect brand image in Nigeria's bottled water industry.

A product recall refers to the procedure of collecting defective or potentially hazardous items from consumers while offering compensation to the affected individuals (Lucas, 2022). Recalls frequently arise due to safety apprehensions regarding a manufacturing flaw in a product that could endanger its user. Companies issue product recalls when their items pose a risk to customers or do not comply with industry standards. Product recalls are ubiquitous in the marketplace. This event is regarded as a response to a crisis and may indicate that a product fails to comply with the requisite safety and quality requirements (Lee et al., 2015). A primary reason for product recall is the manufacture of defective items that were permitted to enter the market. However, bottled water and other products are items intended for human consumption, potentially arising from the manufacturing of hazardous bottled water. Between the years of 2018 and 2023, the National Agency for Food and Drug Administration and Control has disclosed that there have been recalls of fifty-one (51) distinct products, the majority of which are food items. As this phenomenon is not limited to Nigeria, Liu and Zhao (2015) indicate that the global rise in product recalls can be attributed to heightened customer awareness, improved testing capabilities, intricate supply chains, and more stringent safety standards.

Specifically, between the years 2017 and 2019, Eva Premium Bottled Water has been the market leader and has done two (2) batches of recall of its products due to public complaints of impurity in the water; this has significantly contributed to the loss of its leading brand position to *Cway Bottled Water* in the industry. Recalls are not only happening in food and beverages but also cut across other spheres of human endeavours, majorly carried out in the automotive, pharmaceutical, and food industries (Shah et al., 2017). For instance, in the United States, a recall was done on Hasbro's Easy-Bake Oven due to entrapment and burn hazards to the children. In Nigeria, NAFDAC ordered the recall of a contaminated Sprite batch (Punch, 2023). Firms can recall their products multiple times in a year, and the consequences of such an action will be several, not only on the product and firm image but also on the overall market value. A product recall is a manufacturer's decision to withdraw a dangerous product from the market due to legitimate concerns regarding potential harm to consumers, safety difficulties, or efficiency problems (Kini et al., 2017). Consumers too do appreciate it. Simultaneously, certain recalls just impact revenues, whilst others might escalate into significant public relations crises. In the eyes of customers, some boost the image of the recalling firm, as it is understood that the recalling firm prioritizes safeguarding public health above profit realization.

Against this background, the primary aim of this study is to examine the effect of product recalls on the brand image of Eva Premium Bottled Water in the Ilorin metropolis. By addressing such an objective, the study contributes to the literature on brand management and crisis response in emerging markets while offering practical insights for bottled water manufacturers and regulatory stakeholders on managing recall events to mitigate reputational damage and sustain consumer trust. The further particular objectives of this study are to:

I. Investigate the impact of product recall frequency on the brand perception of Eva Premium Bottled Water in the Ilorin metropolis.
II. Investigate the impact of product recall volume on the brand positioning of Eva Premium Bottled Water in the Ilorin metropolis.
III. Assess the impact of product recall timing on the brand reliability of Eva Premium Bottled Water in the Ilorin metropolis.

1. RESEARCH SIGNIFICANCE

The significance of research on product recalls and brand image in Nigeria aligns with broader concerns surrounding consumer protection, public health, and responsible corporate behaviour, particularly within fast-moving consumer goods markets. Since product safety is directly linked to human health, effective recall practices play a critical role in maintaining consumer trust and safeguarding societal welfare (Yu et al., 2023). Globally, product recall management is increasingly recognized as a strategic component of brand governance, integrating ethical responsibility, risk management, and stakeholder communication to address safety failures and protect brand equity (Souiden & Pons, 2009). Even though the discussion on the topic is growing and significant, empirical research on product recall practices within the local communities of developing economies remains limited and uncovered by previous studies in related contexts. As the regulatory enforcement, consumer awareness, and corporate accountability structures are still evolving (Baumann et al., 2015), this gap is particularly evident in the bottled water industry, characterized by recent growing scrutiny due to concerns over product quality, safety standards, and public health implications. Recall management requires integrating strategies that address consumer perceptions and expectations, and the provision of localized evidence on how recall practices shape brand perception, positioning, and reliability among consumers can provide insightful implications for theory and practice (Mak et al., 2020). The study's findings can offer insights into how transparent and timely recall practices can mitigate reputational damage and, in some cases, strengthen brand image by signalling a commitment to consumer safety over profit maximization. The research contributes to academic discourse by positioning product recall as a strategic tool within brand management rather than merely a crisis response mechanism. By highlighting the interaction between recall practices and brand positioning, the study provides a foundation for future research across industries, regions, and regulatory environments in Nigeria and other emerging economies.

2. BRAND EFFECTS OF PRODUCT RECALL

Product recall refers to a firm's deliberate withdrawal or correction of products from the market due to identified or potential defects that may compromise consumer safety, product quality, or regulatory compliance (Mafael et al., 2022). The recall of a product represents a critical post-market corrective mechanism that reflects a firm's response to product failure, quality lapses, or safety risks. In theory, a product recall is more than just a technical or operational action; it is a strategic and moral choice that shows how companies balance making money with being socially responsible and protecting consumers. From a managerial and branding perspective, product recall is a double-edged phenomenon that may generate negative outcomes of financial losses, reputational damage, erosion of brand equity, and declining consumer trust (Raithel et al., 2021). On the other hand, when recalls are executed proactively, transparently, and responsibly, they may enhance brand credibility by demonstrating accountability, integrity, and commitment to public welfare. Consequently, the ramifications of a product recall are contingent not only on its execution but also on the management and communication strategies implemented (Byun & Dass, 2015). In the literature, product recall is commonly conceptualized along three key dimensions: frequency, volume, and timing (Topaloglu & Gokalp, 2018; Germann et al., 2014). Recall frequency captures how often a firm initiates recall actions, reflecting the consistency of quality control and risk management practices. Recall volume refers to the scale or magnitude of products withdrawn, which may influence perceptions of severity and organizational competence. Recall timing relates to the promptness of the recall following defect detection, signalling managerial responsiveness and concern for consumer safety. Together, these dimensions shape consumer perceptions of brand reliability, responsibility, and trustworthiness (Kato, 2021).

Upon the announcement of a product recall, people scrutinize the quality of previously purchased items. In the realm of consumable products, consumers believe that information is being withheld from them, hence jeopardizing their safety (Chen et al., 2009). When information is derived from an investigative source rather than direct communication from the organization, people tend to lose trust in the items linked to it. In instances where only a single product is detrimental, all other products are subjected to a generalized classification as dangerous. The prevailing belief is that employers do not possess a suitable quality management staff, indicating the delivery of inferior products (Bian & Moutinho, 2011). Adverse word-of-mouth among customers prompts them to select alternative items, believing these options to be safer. The demand for the product has diminished due to the belief that it fails to fulfil the necessary requirements. Bortoli and Freundt (2017) assert that product recall is a crisis linked to a deficiency of confidence. When consumers lose trust in the available items, leading to a decline in demand, the market size diminishes, leading to a decrease in generated income. Organizations can utilize the recall as an opportunity to enhance quality management and inform customers about management changes and product redesigns aimed at rectifying the problems. The simplicity of returns after a product recall also affects customer impressions of other products from the same company. A product recall is conducted to adhere to established safety and quality criteria. In numerous Western and Eastern nations, governmental agencies are tasked with the formulation and oversight of standards and guidelines (Mak et al., 2020). Rebates and incentives may be offered to the impacted clients, demonstrating that the company prioritizes both profitability and the production of high-quality items (Freundt & Foschiera, 2024). This enhances consumer satisfaction by enabling corporations to influence perceptions of product quality since the views of product quality are rooted in the services provided to clients, as well as adherence to established standards.

3. STAKEHOLDER THEORY: THEORETICAL FRAMEWORK

Stakeholder theory provides a theoretically grounded framework for examining how firms manage product recalls and how such actions shape brand perception. Originating from Freeman's (1984) seminal work, stakeholder theory challenges the traditional view of the firm by arguing that organizations have responsibilities to a broad range of stakeholders whose interests can affect or be affected by corporate activities. This perspective is relevant because product recall decisions directly implicate consumers, regulators, distributors, employees, host communities, and the wider public. While recalls are commonly associated with negative publicity, recall strategies can generate positive reputational outcomes. When stakeholders perceive that a firm acts transparently, takes responsibility, and prioritizes public safety, recalls may reinforce brand values such as honesty, reliability, and care (Kim et al., 2021). This aligns with the instrumental dimension of stakeholder theory, which argues that ethical stakeholder management can lead to improved organizational performance and reputational capital. In this sense, recalls become opportunities for firms to demonstrate their commitment to stakeholder well-being and to rebuild or even strengthen brand perception. At its core, stakeholder theory posits that firms survive and prosper by effectively managing relationships with key stakeholder groups rather than by focusing solely on profit maximization. Product recalls represent moments of heightened stakeholder scrutiny, where failures in product safety threaten not only consumer well-being but also organizational credibility. The way a firm balances these competing stakeholder interests during a recall episode plays a decisive role in shaping brand perception, trust, and long-term legitimacy (Jones et al., 2018). A recall is not merely a technical and operational response to product defects but a moral and relational act that signals how much value a firm places on stakeholder welfare. Consequently, the firm's recall strategy and its timing, transparency, scope, and communication become critical determinants of brand perception.

Stakeholder theory emphasizes that firms owe consumers a duty of care, particularly when products pose potential health or safety risks (Souiden & Pons, 2009). When a firm initiates a timely and transparent recall, such action communicates respect for consumer safety and acknowledges its accountability for product failures (Ortis & Strudler, 2012). Regardless, such actions can mitigate negative brand perceptions and, in some cases, enhance brand trust by portraying the firm as responsible and ethical. Conversely, delayed recalls, denial of responsibility, or poor communication may be interpreted as prioritizing profits over consumer welfare, leading to reputational damage and long-term erosion of brand equity (Chang & Chang, 2015). Proactive engagement with regulators during a recall can strengthen perceptions of corporate integrity and reduce the risk of sanctions or public backlash (Jones et al., 2018). In contrast, adversarial or evasive behavior may damage brand perception by framing the firm as untrustworthy or irresponsible. Importantly, stakeholder theory also helps explain why product recalls can have paradoxical effects on brand perception. Stakeholder theory explains why consumer perceptions of a brand following a recall are shaped less by the existence of a defect and more by how the firm responds to that defect (Yu et al., 2023). Product recalls can be understood as a form of responsive CSR, where firms address harm caused by their operations. Stakeholder theory provides the normative justification for such actions, asserting that firms have obligations beyond contractual or legal requirements. Stakeholder theory not only offers a practical guide for identifying which stakeholders matter most during recall events and how their expectations should shape corporate responses but also bridges ethical considerations and strategic brand management.

4. EMPIRICAL REVIEW AND HYPOTHESIS DEVELOPMENT

Nadine (2015) examined product recalls as a potential opportunity for corporate reputation through a focus group study assessing German consumers' perceptions of the effects of product recalls on corporate reputation. This study examines consumer perceptions in Germany regarding the effects of product recalls on corporate reputation. Contrary to the conventional view of product recalls as detrimental to corporate reputation, the study adopts a contemporary viewpoint on recalls, viewing them as a potential opportunity for enhancing corporate reputation. The research utilized a survey design for data collection and analysis. The findings from four focus group discussions and an inductive thematic analysis indicate that emotions and associations significantly influence consumer perceptions of a corporation during a recall. The findings suggest that a recall, under specific conditions, may present an opportunity for a corporation and enhance perceived corporate reputation among a particular group of participants. It is recommended that corporations influence consumer judgment during a recall by utilizing priming and framing effects based on consumers' prior experiences with the corporation. Furthermore, they can improve perceived corporate reputation by utilizing ethical communication and complying with CSR during a recall. Luiza and Valeria (2017) conducted a study examining the effects of voluntary product recall on consumer trust. This study analyses the impact of voluntary product recalls due to product failure on consumer trust. Trust comprises integrity, competence, and benevolence; this study examined the mediating effects of these constructs on the relationship between recall and trust. An experimental study was conducted utilizing a 2 (recall: control; voluntary recall) x 2 (purchase situation: relational; transactional) between-subjects design. The findings demonstrate that voluntary recall positively influences the analysed variables. The relationship between voluntary recall and trust is fully mediated by integrity and competence, while the purchase context influences the impact of voluntary recall on perceived competence. Mehreen et al. (2018) conducted a study investigating the impact of brand recall, recognition, and price consciousness on actual purchasing behaviour. The study investigated the influence of two aspects of brand awareness, namely brand recall and brand recognition, on consumer purchasing behaviour, while also assessing the moderating role of price consciousness in the relationship between brand recognition and actual purchases. The majority of respondents in the study were female shoppers at retail stores, as they are both consumers and active participants in home budgeting. Two distinct studies were performed, one focusing on brand recognition and the other on brand recall, utilizing a total of 175 responses (125 for brand recognition and 50 for brand recall). The findings indicate a positive correlation between brand recall, brand recognition, and actual purchase behaviour.

Mak et al. (2020) conducted a study examining the influence of product recall on brand image and customer perceptions of product quality. The firms exerted significant effort to design innovative products for market sale. Improper quality assurance, design defects, and labelling defects rendered the products unsafe for customers. The findings indicate that product recalls adversely affect brand image and customer perceptions of product quality. It is recommended that the firm demonstrate best practices for handling the recall. Dond and Sajeev (2021) examined the spill-over effect of product recalls on the market value of competitors, focusing on the influence of corporate product reliability. Data were gathered from the United States automobile sector. The findings suggest that a product recall by a firm known for high corporate product reliability negatively impacts the market value of its competitor. This is mitigated by the competitor's corporate product reliability. The negative spill-over effect of a recall on a competitor's market value can be observed even when the competitor issues a positive announcement, such as a new product pre-announcement, following an industry recall. The effect is further diminished by the reliability of the competitor's corporate product. Referring back to the review of the above studies, almost all the studies above were foreign-based and showcase that there is a paucity of local studies of this nature, specifically in the Nigerian context. In addition, some of the studies reviewed above focused more on product recall communication messages and information; none of them studied product recall frequency, timing, and volume, which this current study is focusing on. To address the gaps identified in the literature that this current study set out to fill, the following hypotheses are proposed:

H_1 Product recall frequency has significant effect on brand perception of Eva Premium Bottled Water in the Ilorin metropolis.

H_2 There is a significant relationship between product recall volume and brand positioning of Eva Premium Bottled Water in the Ilorin metropolis.

H_3 Product recall timing has significant influence on the brand reliability of Eva Premium Bottled Water in the Ilorin metropolis.

5. METHODOLOGY

This study adopted a positivist research philosophy supported by a quantitative research design to examine the impact of product recalls on brand image of Eva Premium Bottled Water in Ilorin metropolis, Nigeria (Mkansi & Acheampong, 2012). The positivist paradigm is appropriate because the study seeks to establish measurable, objective, and statistically verifiable relationships between product recall dimensions and brand image constructs (Leitch et al., 2010). A cross-sectional survey design was employed, as data were collected from respondents at a single point in time to capture perceptions and attitudes regarding product recall experiences and brand image evaluation (Hamaker, 2024). The quantitative approach allows for the use of numerical data and statistical techniques to test hypotheses and draw generalizable conclusions, thereby enhancing the objectivity and reliability of the findings. This design is particularly suitable for brand and consumer perception studies where relationships between variables can be empirically tested. The study was conducted in Ilorin metropolis, the capital city of Kwara State, Nigeria. Ilorin is a rapidly growing urban centre with a diverse population and a vibrant consumer market for packaged bottled water products. Eva Premium Bottled Water is widely distributed and consumed across the metropolis, making Ilorin an appropriate and relevant setting for investigating consumer perceptions of product recall practices and their impact on brand image. Primary data were collected using a structured, close-ended questionnaire designed specifically for the study (Henriksen et al., 2022). The questionnaire was divided into three sections covering introduction, demographic and survey items. Section A: Demographic characteristics of respondents (age, gender, education, income level). Section B: Product recall frequency (e.g., awareness and recurrence of recall incidents), Product recall volume (e.g., scale and perceived severity of recalled products), Product recall timing (e.g., promptness and responsiveness of recall announcements) and Brand image dimensions, including brand perception, brand positioning, and brand reliability. Responses were measured using a five-point Likert scale, ranging from

Strongly Disagree (1) to Strongly Agree (5). The use of a Likert scale enabled the quantification of subjective perceptions, facilitating statistical analysis. The population of the study comprised consumers of Eva Premium Bottled Water residing in Ilorin metropolis. Given the absence of an official database documenting the exact number of Eva bottled water consumers in the area, the population was considered large and indefinite. A multistage sampling technique was adopted (Emerson, 2015). First, Ilorin metropolis was purposively selected due to the widespread availability and consumption of Eva Premium Bottled Water. Second, major commercial areas, residential neighbourhoods, and retail outlets were identified. Finally, convenience sampling was used to select respondents who confirmed prior consumption of *Eva Premium Bottled Water*. This approach was appropriate due to the consumer-based nature of the study and the need to capture real-time consumer perceptions (Hennink & Kaiser, 2022). Consequently, statistical sampling techniques appropriate for an infinite population were applied to determine a representative sample size. The sample size for the study was determined using Cochran's (1977) formula for estimating sample size in large or unknown populations:

$$SS = \frac{Z^2 x\ (p)\ x\ (1 - p)}{C^2}$$

Where:
SS = Sample Size,
Z = Z-Value (1.96 for a confidence level of 95%),
P = Population (0.5),
C = Confidence Interval (5%).
The calculation of the sample size yielded the following result:

$$SS = \frac{1.96^2 \text{ x } 0.5(1 - 0.5)}{0.05^2}$$

$$SS = \frac{3.8416 \text{ x } 0.5 \text{ x} 0.5}{0.0025}$$

$$SS = \frac{0.9604}{0.0025}$$

Therefore: SS = 384 sample sizes

To ensure content and face validity, the questionnaire was reviewed by experts in marketing and consumer behaviour research. Their feedback ensured that the items adequately captured the constructs of product recall and brand image and were aligned with the objectives of the study. Ambiguous and redundant items were revised or eliminated to improve clarity and relevance. The reliability of the instrument was assessed using Cronbach's Alpha coefficient, which measures internal consistency among questionnaire items (Lo et al., 2020). A pilot study was conducted using 30 respondents outside the main sample. The Cronbach's Alpha values for all constructs exceeded the recommended threshold of 0.70, indicating that the instrument was reliable and suitable for the main study. Data were collected through self-administered questionnaires, distributed physically to respondents in various locations across Ilorin metropolis, including markets, shopping centres, and residential areas. Respondents were informed of the purpose of the study and assured of confidentiality and anonymity. Participation was entirely voluntary, and questionnaires were retrieved immediately or within an agreed timeframe to maximize response rates. Data collected were coded and analysed using the Statistical Package for Social Sciences (SPSS) and both descriptive and inferential statistical techniques were employed (Maier et al., 2023). Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize respondents' demographic characteristics and general response patterns. Inferential statistics were employed to test the study's hypotheses. Specifically, multiple regression analysis was used to examine the effect of product recall dimensions (frequency, volume, and timing) on brand image components. Regression analysis is appropriate for determining the strength, direction, and significance of relationships between independent and dependent variables (Pilcher & Cortazzi, 2024). Ethical considerations were strictly observed throughout the study. Respondents were informed of the purpose of the research, and their consent was obtained prior to participation. No personal identifiers were collected, ensuring confidentiality and anonymity. The data collected were used solely for academic purposes. Despite its strengths, the methodology has certain limitations because of the reliance on self-reported data may introduce response bias (Spector, 2019). The use of convenience sampling may limit the generalizability of the findings beyond Ilorin metropolis (Monday, 2020). Still, these limitations do not undermine the validity of the study but rather provide direction for future research. In alignment with the hypothetical propositions of this study, the research was guided by the regression-based equation (see *Table 1*) as demonstrated below (Abdulsalam et al., 2024):

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \alpha + \varepsilon \text{ ………………..………equation (1)}$$

$$BI = \propto ++\beta_0 + \beta_1 RF_{it} + \beta_2 RV_{it} + \beta_3 RT \; + \varepsilon_{it} \text{ …..………………equation (2)}$$

Where: $\propto$= intercept, β_{1-6} = coefficients, ε= error term, Y = dependent variable, X = independent variable, $\beta_1 - \beta_4$ = coefficient of independent variable, α = Time-invariant individual effects, ε = error term;

Table 1. Research Variable

Variable	Variable Type	Variable Proxies	Variable Measurement
Independent (X)	Product Recall	Recall Frequency (RF)	Survey Scale Measures
		Recall Volume (RV)	
		Recall Timing (RT)	
Dependent (Y)	Brand Image	Brand Perception (BP)	Survey Scale Measures
		Brand Positioning (BPO)	
		Brand Reliability (BR)	

Source: Authors (2025)

6. RESULT

Table 2 shows that 159 respondents, which represents 41.8% of the total respondents, strongly agreed that the accumulated volume of product recalls in a calendar year makes them see the recalling firm's brand as distinguished among others, while 93 respondents, who account for 24.5% of the total respondents, also agreed with the statement. While 50 respondents, constituting 13.2% of the total respondents, were undecided, 78 (20.5%) participants strongly disagreed with the statement. Recalling the firm's brand is believed to be distinguished among others due to the huge accumulated volume of product recalls. Also, 112 (29.5%) respondents strongly agreed that quick announcement of product recalls makes me see the recalling firm's brand as reliable, while 192 respondents, which constitute 50.5% of the total respondents, also agreed with the statement. Moreover, 31 (8.2%) respondents were undecided, while 45 respondents, who represent 11.8%, had an opposite opinion and strongly disagreed with the statement. A quick announcement of product recalls makes me see the recalling firm's brand as reliable, as it was observed to be a popular opinion among almost all the respondents. Finally, 158 respondents, constituting 41.6% of the total respondents, strongly agreed that frequent product recalls make me believe the recalling firm prioritizes safeguarding public health above profit realization, while 118 respondents, which account for 31.1% of the total respondents, also agreed with the statement. While 57 respondents representing 15.0% of the total respondents were undecided, 47 (12.4%) respondents strongly disagreed. Accordingly, recalling a firm's brand reliability is positively influenced by the short time between the product recall announcement and the retrieval of defective products.

Table 2. Product Recall Practices

	Recall Volume		Recall Timing		Recall Frequency	
Options	**Frequency**	**Percentage**	**Frequency**	**Percentage**	**Frequency**	**Percentage**
Strongly Agree	159	41.8	112	29.5	158	41.6
Agree	93	24.5	192	50.5	118	31.1
Neutral	50	13.2	31	8.2	57	15.0
Strongly Disagree	78	20.5	45	11.8	47	12.4
Total	380	100.0	380	100.0	380	100.0

Source: Field Survey (2025)

H_1: Product recall frequency has significant effect on brand perception of Eva Premium Bottled Water in the Ilorin metropolis

As shown in *Table 3* presents the model summary and shows that the correlation coefficient is 0.745, which indicates that there exists a very strong relationship between product recall frequency and brand perception. The R^2, which is the coefficient of determination, is 0.556, approximately 56%, suggesting that approximately 56% of changes in brand perception are explained by the product recall frequency, while the remaining 44% are explained by other factors that are not captured in this model.

Table 3. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.745[a]	.556	.537	.733

a. Predictors: (Constant); product recall frequency
b. Dependent: brand perception

Source: SPSS Output (2025)

Table 4 gives the analysis of variance (ANOVA) with an F-calculated value of 235.248. It also shows the significant value to be (.000), which is less than the alpha value (0.05). This indicates that the result is statistically significant at the 0.05 level of significance. This conclusion implies that the relationship between product recall frequency and brand perception is positive and significant and explanatory variance of 55.6% was achieved, suggesting the acceptance of the proposed hypothesis.

Table 4. ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	61.479	4	15.369	235.248	.000[b]
	Residual	28.903	375	.079		
	Total	90.382	379			
a. Dependent Variable: brand perception						
b. Predictors: (Constant), product recall frequency						

Source: SPSS Output (2025)

Table 5 presents the coefficient of independent variables on dependent value in which the beta value of product recall frequency, which is 37.8%, implies that an increase in product recall frequency causes a 37.8% increase in brand perception. The p-value of 0.000 and t-statistic of 1.528 further suggest that the relationship between product recall frequency and brand perception is significant since the alpha level of 0.05 is greater than the p-value of 0.000. The overall significant value of 0.004, which is less than 0.05, shows that there is a significant effect of product recall frequency on brand perception. Therefore, the null hypothesis was rejected and the alternative hypothesis was accepted, and it is appropriate to argue that product recall frequency has a significant effect on brand perception.

Table 5. Correlation Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.329	.438		0.751	.004
	Product recall frequency	.601	.394	.378	1.528	.000
a. Dependent Variable: brand perception						

Source: SPSS Output (2025)

H_2: There is a significant relationship between product recall volume and brand positioning of Eva Premium Bottled Water in the Ilorin metropolis

Table 6 shows that the coefficient is 0.715, which indicates that there exists a strong linear relationship between product recall volume and brand positioning. This is further supported by the r^2, which is the coefficient of determination reported to be 0.511, suggesting that approximately 51.1% of the change in the brand positioning is accounted for by the product recall volume, while the remaining 49% can be accounted for by other factors that are not stated in this model.

Table 6. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.715[a]	.511	.505	.637

a. Predictors: (Constant), product recall volume
b. Dependent: brand positioning

Source: SPSS Output (2025)

Table 7 gives the analysis of variance with the F-calculated value of 83.491, showing the significant value to be 0.000, which is less than the alpha value of 0.05. This result indicates that the hypothetical relationship between product recall volume and brand positioning is statistically fit at the 0.05 level of significance.

Table 7. ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	43.929	4	8.482	83.491	.000[b]
	Residual	42.510	375	.113		
	Total	86.439	379			

a. Dependent Variable: brand positioning
b. Predictors: (Constant), product recall volume

Source: SPSS Output (2025)

Table 8 shows the correlation coefficient in which the beta value of product recall volume, which is 71.5%, implies that an increase in product recall volume causes a 71.5% increase in brand positioning. The overall significance of 0.025, which is less than 0.05, shows that there is a significant effect of the independent variable on the dependent variable. The t-statistic value of 9.137 and p-value of 0.000 suggest that the effect of product recall volume on brand positioning is significant and positively related. Therefore, the null hypothesis was rejected, and the alternative hypothesis that product recall volume has a significant impact on brand positioning was accepted.

Table 8. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.362	.158		2.289	.025
	Product recall volume	.787	.086	.715	9.137	.000
a. Dependent Variable: brand positioning						

Source: SPSS Output (2025)

H3: Product recall timing has significant influence on the brand reliability of Eva Premium Bottled Water in the Ilorin metropolis

Table 9 shows the model summary arguing that product recall timing has a significant impact on brand reliability, as the r value is 0.723 and the r^2 value is 0.522. Accordingly, 52.2% variation in brand reliability can be explained by product recall timing, indicating that there are other variables that influence brand reliability that are accounted for by 47.8%. Put differently, the analysis shows that a strong relationship subsists between product recall volume and brand reliability since 52.2% of changes in the dependent variable are explained by the independent variable, while the remaining 47.8% are explained by other factors that are not captured in this model.

Table 9. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.723[a]	.522	.519	.48870
c. Predictors (Constant): Product recall timing d. Dependent variable: brand reliability				

Source: SPSS Output (2025)

Table 10 provides a summary of the output of the analysis of variance, with an F-calculated value of 72.777 and a significant value of 0.000, which is less than the alpha value of 0.05. Accordingly, the result of the hypothetical relationship between brand reliability and product recall timing is statistically significant at the 0.05 level of significance.

Table 10. ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	41.264	4	10.316	172.777	.000[b]
	Residual	57.735	375	.154		
	Total	98.999	379			
a. Dependent Variable: brand reliability						
b. Predictors: (Constant), product recall timing						

Source: SPSS Output (2025)

Table 11 shows the coefficient of independent variables and the beta value of product recall timing, which is 0.812. This means that there is a strong positive link between product recall timing and brand reliability. An increase in product recall causes a 72.3% increase in brand reliability, and the t-statistic value of 1.812 along with the p-value of 0.072 shows that the relationship between brand reliability and product recall timing is significant since the alpha level of 0.05 is greater than the p-value. The overall significance of 0.004, which is less than 0.05, shows that there is a significant effect of product recall timing on brand reliability. Therefore, the null hypothesis was rejected, and the alternative hypothesis that product recall timing has a significant influence on brand reliability was accepted.

Table 11. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.549	.256		2.145	.033
	Product recall timing	.812	.062	.723	3.144	.000
a. Dependent Variable: brand reliability						

Source: SPSS Output (2025)

7. DISCUSSION

In today's highly competitive consumer goods market, brand image has emerged as a critical intangible asset that shapes consumer preference, loyalty, and long-term organizational performance. For fast-moving consumer goods, particularly products directly linked to health and well-being (e.g., bottled water), brand image is closely tied to perceptions of safety, quality, and trust. Consumers rely heavily on brand cues to make purchasing decisions, especially in contexts where product quality cannot be easily verified prior to consumption. Consequently, any event that raises concerns about product safety (e.g., product recall) has the potential to significantly influence how a brand is perceived. Product recalls have become increasingly prevalent across global consumer markets due to heightened regulatory scrutiny, complex supply chains, and growing consumer awareness of product safety standards. According to this study's linear regression analysis, product recall frequency has a significant effect on brand perception, with $R^2 = 0.556$, $R = 0.745$, P value = 0.000, and B value = 0.378. This aligns with the research on brand positioning strategy using search engine marketing conducted by Dou et al. (2010), which revealed that search engines' attitudes have a significant impact on brand positioning. Product recall volume positively impacts the brand positioning of premium bottled water, with $R^2= 0.551$, $R= 0.715$, P value= 0.004, and B value= 0.715, showing a significant relationship among the variables of examination. These results align with the proposition of Suchet (2019) on how the types of content marketing shape brand image using experimental cases and revealed content marketing has a significant impact on organizational brand image. Finally, product recall timing has a significant influence on brand reliability because the coefficient of determination (r^2) is 0.522, suggesting that a 52% change in brand reliability can be explained by a change in product recall timing. This is supported by the findings of Sushilkumar (2019) on the impact of social media marketing on brand awareness, brand preference, and purchase intention with special reference to young consumers. Overall, the study extends existing literature by demonstrating that recall dimensions exert significant and positive effects on the components of brand image. By empirically validating these relationships in the Nigerian bottled water market, the study contributes context-specific evidence to global discussions on product recalls, brand image, and consumer trust.

CONCLUSION AND RECOMMENDATION

As markets become increasingly saturated and consumers more informed, firms are no longer evaluated solely on product quality and price but also on how they respond to risk, failure, and crisis. One of the most critical crises confronting consumer goods firms is product recall, an event that exposes firms to reputational damage, financial loss, and erosion of stakeholder confidence. Product recalls occur when firms withdraw products from the market due to defects, safety concerns, or regulatory non-compliance. In the past, recalls were seen as signs of a company's failure, and they were often linked to a drop in market value and bad reviews of the brand. However, recent developments in consumer behaviour and crisis management research suggest a more nuanced interpretation. When effectively managed, product recalls may serve as signals of corporate responsibility, transparency, and ethical commitment, particularly in industries where consumer health and safety are paramount. Accordingly, product recalls, when effectively managed, function not merely as corrective actions but as strategic signals of corporate responsibility that shape distributors' perceptions of brand credibility and commitment to public health. First, the study concludes that frequent product recalls have a positive and significant effect on brand perception among distributors. Contrary to the conventional assumption that frequent recalls necessarily damage brand reputation, the findings suggest that distributors interpret consistent recall actions as evidence that the firm prioritizes consumer safety above profit maximization. Distributors perceive frequent recalls as a proactive quality assurance mechanism, not as a sign of operational failure. Distributors see Eva Premium Bottled Water as a brand that shows vigilance, accountability, and ethical responsibility in protecting public health. Second, the study found that the volume of product recalls significantly influences brand positioning. The firm's seriousness in addressing product defects is evident in the scale of recalled products. Distributors see large-volume recalls as a clear sign that the company that is recalling the products is serious about getting back all of the faulty items and making sure that end users are not at risk. This decisive action enhances the brand's perceived position in the market and strengthens its standing relative to competitors. Thus, the study concludes that high-volume recalls, rather than undermining brand image, positively reposition the brand as one that places consumer welfare and ethical conduct at the forefront of its operations. As the study reveals that product recall timing has a significant influence on brand reliability, prompt recall announcements, rapid retrieval of defective products, and timely replacement with safe alternatives collectively strengthen perceptions of brand dependability. Distributors view swift recall responses as indicators of organizational efficiency, transparency, and responsiveness, all of which are critical to sustaining trust in the bottled water industry. Consequently, the study concludes that the effectiveness and timeliness of a recalling firm's recall processes largely determine its brand reliability. The research recommendations include:

I. The management of premium bottled water should continue to communicate transparently during product recalls, share detailed information about the reasons behind recalls and the steps being taken to ensure product safety. This transparency reinforces the idea that you prioritize public health. These are important as they help mitigate the negative perception of recalling firm’s brand with frequent product recall.

II. More efforts should be put in place to capitalize on this unique positioning by actively promoting the brand's commitment to product safety and quality through recall-related messaging. Emphasis on how the brand stands out from competitors in this regard should be made.

III. Management of premium bottled water should make it a priority to announce recalls promptly once an issue is identified. Swift communication demonstrates transparency and commitment to consumer safety, enhancing brand reliability. Also, that a seamless and efficient process for replacing recalled products with safe ones is ensured. This includes not only providing replacements but also addressing any inconvenience or cost incurred by customers.

Research limitation and areas for further inquiries: Despite its contributions, this study has several limitations that should be considered when interpreting its findings. First, the study employed a cross-sectional survey design, capturing perceptions of distributors and consumers at a single point in time. While suitable for examining relationships between product recall practices and brand image, this approach limits the ability to observe how perceptions evolve before, during, and after recall events. Product recall effects may differ in the short and long term; therefore, future research could adopt longitudinal designs to track changes in brand perception, positioning, and reliability over time. Second, the study relied on self-reported questionnaire data, which may be subject to recall bias, social desirability bias, and perceptual inaccuracies. Although steps were taken to ensure reliability and validity, respondents may unintentionally misrepresent experiences or provide socially acceptable responses. Future studies could enhance empirical robustness by incorporating multiple data sources, such as sales performance data, consumer complaint records, social media sentiment analysis, or regulatory reports, to triangulate findings and reduce bias. Third, the study focused exclusively on Ilorin metropolis, which may limit the generalizability of the findings. Consumer and distributor perceptions of product recalls may vary across regions due to differences in socioeconomic conditions, regulatory enforcement, cultural norms, and consumer awareness. Future research should consider multi-city, national, or cross-country comparative studies to improve external validity, particularly within sub-Saharan Africa. The study examined only Eva Premium Bottled Water, a health-sensitive product category. While this allowed for in-depth analysis, the findings may not be directly transferable to other industries. Future studies could extend the analysis to other fast-moving consumer goods, food and beverage products, or pharmaceutical brands to assess whether similar recall–brand image relationships exist across different risk contexts. The study operationalized product recall practices using frequency, volume, and timing, which capture key dimensions but do not fully represent recall complexity. Variables such as recall communication tone, media coverage, regulatory involvement, and pre-recall brand reputation were not examined. Future research could integrate these factors into more comprehensive models. From a methodological standpoint, the use of multiple regression analysis limits examination of mediating and moderating relationships. Future studies may employ structural equation modelling (SEM) to explore complex causal pathways, including the roles of trust, brand loyalty, and risk perception. Finally, demographic and socioeconomic characteristics were not explicitly examined and should be incorporated in future research to better understand consumer heterogeneity in recall responses.

LITERATURE

1. Abdulsalam, T, A., Ogungbemi, S. S. & Tajudeen, R. B. (2024). Does CSR expenditure reward the financial performance of nigerian quoted oil and gas companies: a pooled panel regression model? *Journal Ekonomski pogledi*, 26(1), str. 1-39. https://doi.org/10.5937/ep26-51141
2. Ahyun, K. Sang-Gun, L. & Donghyuk S. (2020). An Analysis of the Impact of Product Recall on Stock Prices based on Google Trend Search Counts. *Global Business & Finance Review*, 25(4), 33-50.
3. Baumann, C., Hamin, H., & Chong, A. (2015). The role of brand exposure and experience on brand recall—Product durables vis-à-vis FMCG. *Journal of Retailing and Consumer Services*, *23*, 21–31.
4. Bian, X., & Moutinho, L. (2011). The role of brand image, product involvement, and knowledge in explaining consumer purchase behaviour of counterfeits: Direct and indirect effects. *European Journal of Marketing*, *45*(1/2), 191–216.
5. Brauer, K. (2014). Why a massive safety recall hurt toyota more than Forbes. Retrieved from K. (2014). Why a massive safety recall hurt toyota more than, Forbes, https://www.forbes.com/sites/kbrauer/2014/07/01/why-massive-safety-recall-hurt-toyota-more-than-gm/#.
6. Byun, K.-A., & Dass, M. (2015). An investigation of the effects of product recalls on brand commitment and purchase intention. *Journal of Consumer Marketing*, *32*(1), 1–14.
7. Carroll, B. (2020). Carroll's CSR Pyramid explained: Theory, Examples and Criticism. Retrieved from https://www.toolshero.com › Strategy Theories
8. Chang, S., & Chang, H. (2015). Corporate motivations of product recall strategy: Exploring the role of corporate social responsibility in stakeholder engagement. *Corporate Social Responsibility and Environmental Management*, *22*(6), 393–407.
9. Chen, Y., Ganesan, S., & Liu, Y. (2009). Does a firm's product-recall strategy affect its financial value? An examination of strategic alternatives during product-harm crises. *Journal of Marketing*, *73*(6), 214–226.
10. Dond Liu and Sajeev Varki. (2021). The spillover effect of product recalls on competitors' market value: The role of corporate product

reliability. *Journal of Business Research*, 137, 452-463. https://doi.org/10.1016/j.jbusres.2021.08.047

11. Emerson, R. W. (2015). Convenience Sampling, Random Sampling, and Snowball Sampling: How Does Sampling Affect the Validity of Research? *Journal of Visual Impairment & Blindness*, 109(2), 164–168. https://doi.org/10.1177/0145482X1510900215
12. Fidelis, E. S., Otitoju, M. A., Idisi, P. O., Anazo, U. E., & Achemu, D. O. (2024). The determinants of recall event timing of contaminated frozen poultry products in retail outlets in North-Central Nigeria. *Turkish Journal of Agriculture-Food Science and Technology*, *12*(s2), 2222–2233.
13. Freundt, V. L. M. A., & Foschiera, L. V. B. (2024). The impact of voluntary recall on the trust of loyal and first-time consumers in a high awareness brand after a functional transgression. *Corporate Reputation Review*, *27*(3), 172–184.
14. Germann, F., Grewal, R., Ross Jr, W. T., & Srivastava, R. K. (2014). Product recalls and the moderating role of brand commitment. *Marketing Letters*, *25*(2), 179–191.
15. Hamaker, E. L. (2024). The Curious Case of the Cross-Sectional Correlation. *Multivariate Behavioral Research*, 59(6), 1111–1122. https://doi.org/10.1080/00273171.2022.2155930
16. Hennink, M., & Kaiser, B. N. (2022). Sample sizes for saturation in qualitative research: A systematic review of empirical tests. Social Science & Medicine, 292, 114523.
17. Henriksen, M. G., Englander, M., & Nordgaard, J. (2022). Methods of data collection in psychopathology: the role of semi-structured, phenomenological interviews. *Phenomenology and the Cognitive Sciences,* 21(1), 9–30.
18. Jones, T. M., Harrison, J. S. & Felps, W. (2018). How applying instrumental stakeholder theory can provide sustainable competitive advantage. *Academy of Management Review*, 43(3), 371–391. https://doi.org/10.5465/amr.2016.0111
19. Jovanovic, B. (2021). Product recalls and firm reputation. *American Economic Journal: Microeconomics*, *13*(3), 404–442.
20. Kato, T. (2021). Brand loyalty explained by concept recall: recognizing the significance of the brand concept compared to features. *Journal of Marketing Analytics*, *9*(3), 185.
21. Kim, H. G., Chun, W., & Wang, Z. (2021). Multiple-dimensions of

corporate social responsibility and global brand value: a stakeholder theory perspective. *Journal of Marketing Theory and Practice*, *29*(4), 409–422.

22. Kini, O., Shenoy, J., & Subramaniam, V. (2017). Impact of financial leverage on the incidence and severity of product failures: Evidence from product recalls. *The Review of Financial Studies*, *30*(5), 1790–1829.
23. Lee, L. F., Hutton, A. P., & Shu, S. (2015). The role of social media in the capital market: Evidence from consumer product recalls. *Journal of Accounting Research*, *53*(2), 367–404.
24. Leitch, C. M., Hill, F. M., & Harrison, R. T. (2010). The philosophy and practice of interpretivist research in entrepreneurship: Quality, validation, and trust. *Organizational Research Methods*, *13*(1), 67–84.
25. Liu, A. X., & Zhao, K. P. (2015). What Drives a Firm's Choice of Product Recall Remedy? The Impact of Remedy Cost, Product Hazard, and the CEO. *Journal of Marketing*, 80(3), 79-95. DOI:10.1509/jm.14.0382
26. Lo, F.-Y., Rey-Martí, A., & Botella-Carrubi, D. (2020). Research methods in business: Quantitative and qualitative comparative analysis. *Journal of Business Research*, 115, 221–224. https://doi.org/10.1016/j.jbusres.2020.05.003
27. Luiza, V. B. & Valeria, F. (2017). Effects of Voluntary Product Recall on Consumer's Trust. *Brazilian Business Review*, 14(2). https://doi.org/10.15728/bbr.2017.14.2.4
28. Mafael, A., Raithel, S., & Hock, S. J. (2022). Managing customer satisfaction after a product recall: the joint role of remedy, brand equity, and severity. *Journal of the Academy of Marketing Science*, *50*(1), 174–194.
29. Maier, C., Thatcher, J. B., Grover, V., & Dwivedi, Y. K. (2023). Cross-sectional research: A critical perspective, use cases, and recommendations for IS research. *International Journal of Information Management*, 70, 102625. https://doi.org/10.1016/j.ijinfomgt.2023.102625
30. Mak, S. L, Fanny, W. F, Geddy, T. W and Tang, C. H. (2020). The Influence and Good Practice of Product Recall on Brand Image and Customer Perceived Product Quality. *International Journal of Business, Humanities and Technology*, 10(2), 1-6. https://doi.org/10.30845/ijbht.v10n2p2

31. Mak, S. L., Tang, F. W. F., Li, C. H., & Lee, G. (2020). The Influence and Good Practice of Product Recall on Brand Image and Customer Perceived Product Quality. *International Journal of Business, Humanities and Technology*, *10*(2).
32. Martins, A. M., & Pires, C. P. (2023). Do CEO characteristics matter in product recalls? *International Journal of the Economics of Business*, *30*(3), 207–232.
33. Mehreen, K., Faisal, Q. & Muhammad, S. (2018). The Role of brand recall, recognition and Price Consciousness in Understanding Actual Purchase. *Journal of Research in Social Sciences*, 6(2). Retrieved from https://hdl.handle.net/10419/200085
34. Mkansi, M., & Acheampong, E. A. (2012). Research philosophy debates and classifications: students' dilemma. *Electronic Journal of Business Research Methods*, *10*(2), pp132-140.
35. Monday, T. U. (2020). Impacts of interview as research instrument of data collection in social sciences. *Journal of Digital Art & Humanities,* 1(1), 15–24.
36. Olewu, J., & Iboko, C. (2023). Revaluating the Regime of Celebrity Endorsement, Product Liability and Consumer Protection in Nigeria. *Product Liability and Consumer Protection in Nigeria (July 16, 2023)*.
37. Ortis, J. R., & Strudler, A. (2012). nstitutional investors and corporate social responsibility. *Journal of Corporate Finance*, 58(3), 700-725. https://doi.org/10.1016/j.jcorpfin.2019.07.012
38. Pilcher, N., & Cortazzi, M. (2024). "Qualitative" and "quantitative" methods and approaches across subject fields: Implications for research values, assumptions, and practices. *Quality & Quantity*, 58(3), 2357–2387. https://doi.org/10.1007/s11135-023-01734-4
39. Pouliot, S., & Wang, H. H. (2018). Information, incentives, and government intervention for food safety. *Annual Review of Resource Economics*, *10*(1), 83–103.
40. Raithel, S., Mafael, A., & Hock, S. J. (2021). The effects of brand equity and failure severity on remedy choice after a product recall. *Journal of Product & Brand Management*, *30*(8), 1247–1261.
41. Shah, R., Ball, G. P., & Netessine, S. (2017). Plant operations and product recalls in the automotive industry: An empirical investigation. *Management Science*, *63*(8), 2439–2459.
42. Souiden, N., & Pons, F. (2009). Product recall crisis management: the

impact on manufacturer's image, consumer loyalty and purchase intention. *Journal of Product & Brand Management*, *18*(2), 106–114.

43. Spector, P. E. (2019). Do Not Cross Me: Optimizing the Use of Cross-Sectional Designs. *Journal of Business and Psychology*, 34(2), 125–137. https://doi.org/10.1007/s10869-018-09613-8
44. Suchet, J. (2019). The impact of the type of content marketing on brand image: An empirical study on four experimental cases. Louvain School of Management, Université catholique de Louvain,. Retrieved from http://hdl.handle.net/2078.1/thesis:21025
45. The Punch. (2023). NAFDAC Orders Recall of Contaminated Sprite Batch. Abuja: Punch.
46. Topaloglu, O., & Gokalp, O. N. (2018). How brand concept affects consumer response to product recalls: A longitudinal study in the US auto industry. *Journal of Business Research*, *88*, 245–254.
47. Yu, W., Cui, F., Han, X., & Lv, M. (2023). Does a corporation's food recall strategy affect its brand image and consumers' intention to purchase? A study in the context of cereal recall in China. *British Food Journal*, *125*(4), 1437–1452.

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