



Research article

The effect of mobile marketing antecedents on the purchase intention of staple products: A case of the bottom of the pyramid (BoP) market segment in Khayelitsha, South Africa

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ABSTRACT

Purpose: This research seeks to ascertain the impact of mobile marketing antecedents on the purchase intention of staple products among BoP consumers to create a viable digital-commerce channel that serves this segment. To achieve this, the paper proposes that mobile marketing antecedents, such as service quality and price sensitivity, influence trust and satisfaction, which, in turn, influence the purchase intention of staple products.

Design/methodology/approach: A questionnaire was collected from 385 BoP consumers. Smart PLS 4 was used to analyse data using Structural equation modelling (SEM).

Findings: Service quality positively influences trust towards mobile marketing. In contrast, a similar positive trend was observed for satisfaction, price sensitivity, service quality, and purchase intentions. Surprisingly, satisfaction and trust did not influence purchase intentions.

Originality/value: Through the Value-Based Adoption Model (VAM), original contributions to the literature have been established, which have received little attention from consumer behaviour researchers, particularly in the context of emerging economies, to explore several mobile marketing antecedents that motivate or demotivate BoP consumers, who are mainly untapped, to make online purchases.

1. Introduction

Mobile marketing and wireless technology have provided direct marketing a previously unheard-of-chance to connect with clients instantly, interactively, and individually [1]. There are currently close to 9 billion mobile subscribers worldwide. Of these, two-thirds are from emerging nations, where mobile device penetration and services proliferate [2]. Suppose we consider consumers from developing countries in the economic pyramid. In that case, more than 50 per cent of consumers are considered BoP with constrained wages and use only a few products and services or use them insufficiently [3]. Notwithstanding the lower per capita income, most BoP consumers are covered by mobile networks [4]. This signalled that an entirely different universe of possibility would be possible if we did not consider the underprivileged casualties of responsibility and identified them as strong and inspired entrepreneurs and value-aware consumers. Mobile marketing services are crucial to tying BoP consumers, regardless of time or place, to conveniently correct information. With specific attention paid to BoP consumers, this study examines the effect of mobile marketing antecedents on

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purchase intention.

Over the last ten years, the social demands of BoP consumers in emerging markets have highlighted them as untapped business opportunities [5,6]. The 4 billion people who are underprivileged worldwide are seen as having enormous unrealised economic potential [7]. The so-called “BoP method” addresses the issues faced by underrepresented groups in society while generating new economic prospects and sources of income for companies [8,9]. For instance, the development of mobile phones in Africa has seen a scaling of marketing efforts to benefit BoP customers through creative mobile marketing services [10]. The advantages of mobile marketing services may extend beyond business profitability to less obvious societal benefits, such as empowering customers and enhancing access to information and essential goods (termed *staple products* in this study) [10].

As a result of mobile phone access and subscriptions, BoP customers in Africa can now access the entire world through their fingertips [11]. In this study, consumers who make less than R6000 (US\$325.02) before taxes are part of the BoP [12]. [13] assert that more than 4 billion people live on \$2 or less or R36.92 per day (conversion as per average rand-dollar conversion for November 14, 2023) in the BoP market, which comprises underprivileged individuals who predominantly transact business in the informal market economy. According to [14], who is credited with developing the idea of marketing to people in need and coining the term B24B (business-to-4-billion), about two-thirds of the world’s population lives at the base of the economic pyramid, with a large amount of untapped purchasing power. This study is grounded on the idea that marketers may now efficiently establish strategies for the BoP market, specifically purchasing essential household items.

The BoP requires attention to expand knowledge and improve a thorough understanding of consumer behaviour [15]. In the BoP segment, mobile phones are highly prioritised and employed to reinforce personal security and social bonds. They are starting to enhance job and business opportunities [16]. This phenomenon helps marketers effectively target the BoP through mobile marketing [17]. The particular focus of this study on promoting the purchase of staple goods through online marketing and its importance to the “BoP market” within an emerging economy is what makes it distinctive.

The development of mobile technologies has been a critical success for BoP business strategies [16]. However, since non-African markets were the focus of the majority of research on mobile service business models, a more thorough investigation of their financial viability in the BoP market is yet to be conducted in South Africa and throughout the region [18–20]. Mobile marketing is a significant field in which mobile technologies fuel economic growth in South Africa. Even though it is frequently underlined that mobile marketing could significantly contribute to finding answers to social challenges, the literature not only addresses the needs of consumers in emerging markets who belong to the low-income segment but also [21–23] offers little theoretical or practical guidelines for its contributions towards the purchase intentions of staple products in the BoP context. Thus, mobile marketing has yet to find its footing in the South African BoP market, let alone realise its potential. Therefore, adequate research is necessary to raise awareness and recognition of mobile marketing among BoP consumers. Theoretically, to adequately explore the sophisticated behaviour of consumers in the BoP retail market, this study shifts away from the commonly used innovation theories, for instance, the Technology Acceptance Model [24], Innovation Diffusion Theory [25], the Theory of Reasoned Action [26], the Theory of Planned Behaviour [27] and the Unified Theory of Acceptance and Use of Technology [28] and calls for the use of alternative theories of technology adoption which best address the BoP characteristics and market needs. Although the theories above are pertinent, they need to be sufficiently developed to provide a firm platform to analyse the phenomenon examined in this study, which will be covered in the subsequent section. The current study was conducted to fill these gaps by examining how mobile marketing antecedents affected BoP customers’ intentions to purchase essential items in South Africa, learning from the Trust Transfer Theory, the Value-Based Adoption Model and the Task-Technology Fit Theory.

Considering the research gap above, this study attempts to ascertain the influence of mobile marketing antecedents on the purchase intention of staple commodities among BoP consumers to build a sustainable digital commerce channel that serves this market. The following research question support the research aim:

How does service quality, price sensitivity, satisfaction, and trust, jointly affect the purchase intention of staple products among BoP customers?

It is apparent from examining research on BoP customer behaviour in mobile marketing and the desire to purchase staple items that this developing consumer group needs to be studied further. Largely, a comprehensive model that investigates the impact of service quality, price sensitivity, satisfaction, trust and purchase intention of staple items among BoP customers in developing countries from the standpoint of mobile marketing—an area of study that has not yet been thoroughly examined—needs to be experimentally tested. This study explores the impact of mobile marketing on BoP consumers, which has yet to be established in the South African BoP market. Moreover, mobile services research has focused on non-African countries. This study employs non-common innovative theories, such as the Unified Theory of Acceptance and Use of Technology and Technology Acceptance Model, to more alternative theories, such as the Value-Based Adoption Model. This study highlights the factors that affect mobile marketing on the purchase intention of household essential items in South Africa, including price sensitivity, satisfaction, service quality, and trust. This will aid practitioners and policymakers in developing innovative strategies to raise awareness and advance the use of mobile marketing in South Africa and expand the literature from the perspective of BoP consumers.

The rest of the paper examines the theoretical framework, research gaps, and appropriate hypotheses—an outline of the methodology, data analysis procedure, and results. Finally, the comprehensive discussion covers the broader implications of the empirical findings, acknowledges the study’s limitations, and suggests directions for future research.

1.1. Theoretical background

The Value-Based Adoption Model (VAM) was this study's leading guide for research purposes [29]. However, the Trust Transfer Theory (TTT) and the Task-Technology Fit Theory (TTF) substantiated the theoretical background. When experiencing new technology, customer perceptions influence behaviour, whether it is trust (TTT) [30], perceived value (VAM) [29], or task compatibility (TTF) [31]. In mobile marketing, consumers are likely to engage in and make purchases of staple products if they perceive value in the information and offerings presented through compatible mobile channels [31]. Customers can better judge the value they receive, which is possible through the fit between the technology and user needs. The aim is to increase perceived worth and build long-term trust [32], which leads to more precise intentions to switch to new technology. As mobile marketing evolves from its infancy, many BoP customers assess the pros and cons of new technologies to choose the one that best suits their needs and sense of value [33]. Accordingly, the TTF theory emphasises task fit [33], when value fit is highlighted by the VAM model and the customer experience is improved when technology and task are well matched [29], where individuals' need to use technology is deeply influenced by perceived value.

Although customers build trust from different angles, reputation and data privacy form the foundation of trust [34], which customers, through a cognitive process, transfer from one known entity to another related but unknown entity (30). If consumers trust a mobile platform or brand [35], it may positively influence their purchase intention. Learning from the TTF, functionality, ease of use, and customer services determines how customers decide when experimenting with new technologies [33]. Furthermore, customers analyse the relevance and compatibility between the features and functions of a technology and the tasks it is intended to support [36]. In mobile marketing, if the features and capabilities of the mobile platform align well with the functions of providing information about staple products [37], it may positively impact purchase intention. Based on the VAM, trust is a direct perceived value factor [32]. In mobile marketing, consumers are likely to engage in and purchase staple products if they perceive value in the information [29] and offerings presented through mobile channels [31]. Thus, TTT, TTF and VAM emphasise the position of trust in customers' usage behaviour rather than the trade-off between benefits, costs, and risks.

The Value-Based Adoption Model captures how customers make decisions when experimenting with new technology [38]. The Value-Based Adoption Model asserts that customers' sense of value or benefit over cost is crucial to successfully adopting new technologies. The key element of the VAM is perceived value [29]. Customers can better judge the value they receive, leading to more precise intentions to use the new technology. Consistent with prior research, a distinct relationship exists between the need to employ new technology, such as mobile marketing, and perceived value [39]. Before deciding wisely to accept new technology, customers analyse a trade-off measure between the advantages and costs that VAM considers [40]. They aim to increase the perceived value of greater rewards [29]. As previously mentioned, some additional widely used models exist in this area. However, since mobile marketing is still a relatively new technology for the majority of BoP consumers, we have employed the VAM [39].

The most widely accepted theories (IDT, TAM, TRA, TPB, and UTAUT) are based on perceived technological characteristics and presuppose a link between behavioural intention and attitude, whereby emotional and normative beliefs form attitudes [41–43]. This, in contrast to VAM's balancing of perceived advantages and costs, affects behavioural intention and actual usage behaviour. This study explores how risk and benefit trade-offs affect BoP consumers' intentions to purchase staple products and how risks (linked with the trust construct) and advantages (service quality, lower prices, and satisfaction) are connected with mobile marketing to close this gap. Therefore, VAM is an appropriate framework for examining how mobile marketing affects BoP consumers' purchasing decisions. Additionally, the BOP segment's daily decision-making process heavily relies on the crucial roles that society and various family members play [44], making society one of the critical factors influencing BoP consumers' decisions regarding the adoption of mobile marketing and their purchase intentions.

1.2. Research model and hypotheses development

Based on the framework of [45], this study suggests that price sensitivity and service quality influence satisfaction and trust, ultimately influencing the intention to purchase staple products. In the research by [45], the predictors included information quality, service quality, system quality, privacy and security. In the present study, only service quality is retained as a predictor, given its high

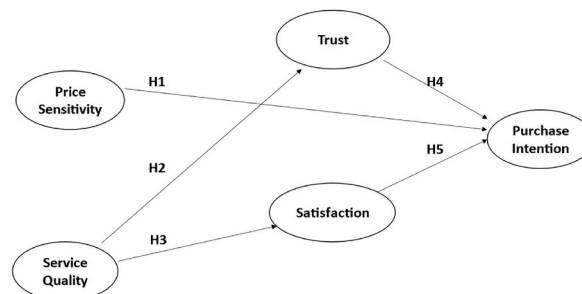


Fig. 1. Proposed conceptual model.

Source: Developed for the study

relevance to the BoP context. This study addresses the socioeconomic factors specific to BoP consumers, whereas earlier studies focused on customer satisfaction factors. Previous research has demonstrated that purchase intention can serve as a proxy for actual purchases in online environments [46]. Purchase intention is reflected in behaviour by aligning factors such as price, customer satisfaction, trust, and brand loyalty [47].

Purchase intention, the main dependent variable in this study, is a consumer's desire to purchase goods [48]. It is also characterised as a consumer's tendency to consider buying or planning to buy in the future [49]. Additionally [50], defined purchase intention as the probability determined by consumers who intend to buy a specific product. A study by [51] on purchase decision-making within families at the BoP found that buying patterns among BoP market families are continually evolving and influenced by the constraints of lower disposable income. To investigate and visually depict the relationships between the study constructs, we proposed the conceptual model shown in Fig. 1.

Our study's primary constructs and associated hypotheses are detailed below based on the general contours of the conceptual model depicted in Fig. 1.

1.3. Price sensitivity

Price sensitivity is a crucial factor in marketing. It is demarcated as the degree of reaction and awareness exhibited by customers when confronted with price changes in products or services [52]. According to [53], purchase decisions are influenced by the overall cost and the information source. Research indicates that price sensitivity decreases among low-income earners using m-commerce because of the trust factors involved [54]. Additionally, price sensitivity is higher when purchasing staple products, attributed to a strategy known as range reduction, which is employed due to the extensive range of staple products accessible to consumers [55]. Given the sensitivity of the BoP consumers, there has been a gradual structural transformation in the retail sector. Some retailers have progressively developed strategies to offer better-quality products at affordable prices, specifically for BoP customers [56]. In South Africa [57], states that, unlike luxury products, staple food price inflation, such as maize meal, is relatively lower because of the excellent local production afforded by most BoP consumers. If the price is within the range that BoP consumers can afford, it positively impacts their intention to buy [58]. Therefore, the following hypothesis is suggested:

H1. Price sensitivity positively influences the purchasing intention of staple products among BoP consumers.

1.4. Service quality

Customer-brand service quality represents indicators of reliability, responsiveness, and assurance to the customer [59]. High-quality services from mobile vendors signify their competence and goodwill, fostering customer trust [60]. Conversely, lack of transparency, unreliable customer service, and slow response times from mobile vendors hinder the development of customer trust [61]. Research has demonstrated that neglecting service quality can significantly impact customer trust and long-term profitability and retention [59]. Additionally, service quality is considered a multidimensional construct crucial for building customer satisfaction [62]. A study by [63] found that the perceived system and service quality are essential for customer satisfaction. Expected service levels shape service quality, and when services meet these expectations, they are deemed satisfactory [64]. Due to low income and poor living, businesses have historically neglected BoP consumers, so service quality should have been prioritised. Nevertheless [39,65], state that, due to digital commerce and the availability of cheaper mobile smart devices, BoP consumers are now less passive as they can also search for information on the go at the click of a button. For BoP consumers, digital technology has enabled social connections and the ability to obtain market services and information, which would otherwise have been difficult [66]. This has increased their need for service quality, which, as observed in [56], also increases satisfaction. Based on these arguments, the following hypotheses were formulated:

H2. Service quality positively affects trust in products among BoP consumers.

H3. Service quality positively affects product satisfaction among BoP consumers.

1.5. Trust

Trust refers to the tendency to be exposed based on the optimistic expectation of another person's potential behaviour [67]. Additionally, trust is often said to encompass three key principles: ability, integrity, and benevolence [68]. Ability pertains to users having the necessary skills and information to perform their daily tasks [45]. Integrity means mobile vendors stay honest with their customers and keep their promises. Benevolence indicates that mobile retailers prioritize their consumers' interests over their own [45]. Trust is crucial in the BoP market fragment, as customers seek reliable information to make purchasing decisions [67]. When consumers find trustworthy information about a product they are interested in, they base their purchasing decisions on that trusted opinion. This led to the formation of the ensuing hypothesis:

H4. Trust positively affects the purchase intent of BoP consumers regarding staple products.

1.6. Satisfaction

Customer satisfaction is gauged through customers' evaluations of the calibre of service they receive. If customers are content with

service quality, their inclination to make purchases escalates; conversely, if they are dissatisfied, their purchase intent diminishes [69]. The widespread increase in mobile device usage and the uptick in online service subscriptions have compelled businesses to enhance and sustain elevated levels of customer satisfaction by actively monitoring and addressing customer concerns [70]. Despite this mounting emphasis, consumers still depend on reviews and feedback to ascertain businesses' attainment of satisfactory levels [71].

Previous studies [72] indicated that customer satisfaction results from multiple interactions with a mobile retailer. Achieving satisfaction through mobile marketing involves understanding the essential characteristics of the target demographics and staying informed about their concerns and preferences. Previous research suggests that satisfaction significantly influences long-term consumer behaviour [72]. Based on the evidence presented above, we propose the following hypothesis:

H5. Satisfaction positively affects the purchase intent of staple products among BoP consumers.

2. Methodology

2.1. Data collection

This study was conducted in Khayelitsha in the Western Cape Province of South Africa. A low-income distribution or no income characterises Khayelitsha, which is one of Cape Town's poorest areas, with average income levels below R3000 monthly (US\$162,51), and roughly over half of the 389,373 estimated households of Khayelitsha live in informal dwellings [73]. As such, Khayelitsha was selected for this study owing to its predominantly BoP consumer population. All the participants provided informed consent prior to their participation.

The University of Cape Town Research in Ethics Committee granted approval for this study under the reference REC 2018/002/012. Data collection involved the convenient selection of participants near the taxi rank, chosen due to the significant foot traffic, especially during peak morning and evening hours. A taxi rank is a public place where taxis park while awaiting passengers. Four field researchers were appointed at different strategic points within the taxi rank.

Data were collected using a questionnaire completed by participants. To ensure that the sample met the study's criteria, they needed to fulfil specific requirements: (1) be residents of Khayelitsha; (2) earn less than R6000 (US\$408) per month at the time of the study; (3) be above 18 years; and (4) own a mobile phone. The current study did not receive funding, rendering the data collection process resource-intensive. Thus, we considered balancing the desire for a larger sample size and the available budget, time, and logistical constraints. The research assessed a minimum sample size essential for conducting meaningful statistical analysis, particularly when employing multivariate data analysis methods. It is recommended that studies utilizing such techniques have a minimum of 300 respondents [74]. Therefore, the study involved a total of 385 participants.

2.2. Study instrument

The survey was created in English, incorporating scales borrowed from previous studies. Each scale spanned from 1 (indicating strong disagreement) to 5 (signifying strong agreement). Price sensitivity was also measured based on the "Price sensitivity" scale by [75], who used three measurement items: "Before making a selection, I consistently compare prices across various brands."

Three measurement items adapted from [45], such as "I am inclined to buy maize meal from a specific online store that promptly answers my inquiries.", were used to measure Service quality. Three items were adapted from the "Trust" scale previously used by [45] to measure trust. A sample item is: "Seeing a mobile advertisement designed with customer interests in focus increases the likelihood of my purchasing maize meal." The Satisfaction scale by [45] was adapted to measure the satisfaction variable. An example of the three items derived from the satisfaction scale is "If I am satisfied with the services offered, I will keep patronizing the same store."

Last, three measurement items, such as "I plan to utilize mobile marketing for buying essential items like maize meal." were adapted from the purchase intention scale by [76] to measure support intentions.

2.3. Measurement accuracy statistics

Based on their reliability and validity, this section discusses the measurement instrument's variables: satisfaction, trust, service quality, purchase intention, and price sensitivity.

Table 1
Construct reliability and validity.

Variable	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average Variance Extracted (AVE)
Price Sensitivity	0.772	0.991	0.861	0.676
Purchase intention	0.897	0.920	0.937	0.832
Satisfaction	0.817	0.887	0.892	0.738
Service Quality	0.871	0.877	0.922	0.797
Trust	0.726	0.831	0.846	0.657

2.4. Construct reliability

According to [77], a scale may be deemed reliable if it demonstrates consistent outcomes upon repeated measurements. The investigation evaluated the reliability of the composite scales pertaining to service quality, price sensitivity, satisfaction, trust, and purchase intentions by analyzing their levels of internal consistency reliability. This concept is “a method for evaluating the internal coherence of the set of items when multiple items are combined to generate a total score for the scale” [77]. Cronbach’s alpha and composite reliability are conventional statistical metrics utilized to ascertain internal consistency reliability, with values typically ranging between 0 and 1. The adequate internal consistency reliability threshold for this model included the Factor Loading (≥ 0.7), Cronbach’s Alpha (≥ 0.7), rho_a (≥ 0.7), Composite Reliability (≥ 0.7), and Average variance extracted (AVE ≥ 0.7): 0.5 [76].

As indicated in Table 1, the Cronbach Alpha, rho_A, and Composite Reliability values for the scales significantly surpassed the recommended internal consistency threshold of 0.7 proposed by the [77]. In addition, the associated Convergent validity, as AVE measured, was above the benchmark of 0.5, as suggested by [78].

The variance inflation factor (VIF) is frequently employed to calculate the collinearity of the formative indicators [78]. VIF values of 5 or higher imply serious collinearity issues with the indicators of formatively measured constructs [78].

The measure of multicollinearity depicted in Table 2 by VIF shows a low level of multicollinearity (VIF < 5) [79], indicating that price sensitivity, service quality, trust and satisfaction do not have any issues with multicollinearity. However, Purchase Intention ($5 < \text{VIF} < 10$) suggest a moderate level of multicollinearity [79]. While this may not necessarily cause severe issues, it indicates that there might be some correlation among the predictor variables.

2.5. Construct validity

Construct validity tests assess whether a measurement tool accurately measures the intended objectives [80]. Evaluating a method’s overall validity is essential. Construct validity is attained through the establishment of discriminant and convergent validity. Convergent validity was evaluated by analyzing the correlations between each item and the total score, as well as the factor loadings of the items. The results showed values ranging from 0.726 to 0.897 for service quality, price sensitivity, satisfaction, trust, and purchase intention. Factor loading values ranged from 0.557 to 0.959 for the same variables. Loadings greater than 0.50 that are statistically significant are deemed relevant [81].

2.6. Discriminant validity

The assessment of discriminant validity employed the cross-loading of indicator approach, specifically the Fornell-Larcker criterion [82]. This method compares the square root of the Average Variance Extracted (AVE) with the correlations among latent constructs. For each construct, the square root of its AVE should exceed the correlations with other constructs.

Discriminant validity refers to the extent to which a particular construct within the structural model is distinct from other constructs [78]. To evaluate the Fornell-Larcker criterion, the combined variance for constructs should not be greater than their AVEs [78]. Essentially, the Fornell-Larcker criterion evaluates each construct’s Average Variance Extracted (AVE) with the square of its inter-construct correlation [78]. Table 3 presents the outputs of this measure.

Table 3 aids in assessing the discriminant validity of the study. Each value on the x and y axes in the table should be less than the highlighted values. The bold values denote the variables on the x-axis and the measurement items on the y-axis. As shown in Table 3, all the variable values are lower than the bold values, indicating a strong measure of discriminant validity. To reduce the sensitivity of assessing discriminant validity between constructs, the *Heterotrait-Monotrait Ratio* (HTMT) scores were further established, and the findings are depicted in Table 4.

Table 2
Collinearity statistics (VIF) and factor loadings.

	VIF	Factor loadings
PI1	1.767	0.813
PI2	8.263	0.957
PI3	8.372	0.959
PS1	1.428	0.767
PS2	2.144	0.941
PS3	1.769	0.745
S1	3.984	0.934
S2	4.156	0.946
S3	1.308	0.669
SQ1	3.518	0.929
SQ2	3.334	0.915
SQ3	1.749	0.831
T1	2.426	0.896
T2	2.493	0.927
T3	1.136	0.557

•PI=Purchase intention; S=Satisfaction; SQ=Service quality; T = Trust.

Table 3
Discriminant validity (fornell-larker criterion).

	Price Sensitivity	Purchase intention	Satisfaction	Service Quality	Trust
Price Sensitivity	0.822				
Purchase intention	0.218	0.912			
Satisfaction	0.203	0.061	0.859		
Service Quality	0.058	0.172	0.422	0.893	
Trust	0.188	0.123	0.417	0.379	0.811

Table 4
Discriminant validity (heterotrait-monotrait ratio – HTMT).

	Price Sensitivity	Purchase intention	Satisfaction	Service Quality	Trust
Price Sensitivity					
Purchase intention	0.225				
Satisfaction	0.267	0.074			
Service Quality	0.094	0.193	0.489		
Trust	0.230	0.204	0.520	0.445	

Table 3 aids in examining the discriminant validity of the research. Each value within the table, both on the horizontal (x-axis) and vertical (y-axis), should be less than the bolded values. The values align with the variables depicted on the x-axis, while the measurement items are represented on the y-axis. Based on Table 3, the values of the variables are all below the emphasized values, indicating a satisfactory level of discriminant validity. To mitigate the sensitivity in evaluating discriminant validity among constructs, additional analysis was conducted using the *Heterotrait-Monotrait Ratio* (HTMT) scores, with the results presented in Table 4. According to [78], a threshold value of 0.90 is recommended.

Table 4 indicates discrimination by demonstrating that the values do not exhibit a flawless correlation with the y-axis variables. A perfect correlation would yield a value of 1 or -1. However, examination of the HTMT score outcomes reveals that they exhibit varied values, indicating an imperfect correlation. Consequently, the research can infer that there exists satisfactory discriminant validity.

2.7. Data analysis and results

The data analysis utilized Smart-PLS 4 software, which employs the structural equation modelling (SEM) technique. As stated by [81], Smart-PLS is a valuable resource for computing, constructing, and confirming research models. This tool enables the exploration of causal relationships and the validation of theoretical propositions. Smart-PLS has gained significant prominence as an effective instrument, particularly in investigating causal models comprising multiple constructs and numerous indicators, as noted by [83]. Smart-PLS 4 can model intricate relationships, such as formative and reflective constructs. Its adaptability is especially beneficial when dealing with constructs that a single indicator cannot easily represent. Nevertheless, Smart-PLS 4 is primarily intended for single-level modelling and may not be suitable for studies involving intricate multilevel configurations [78].

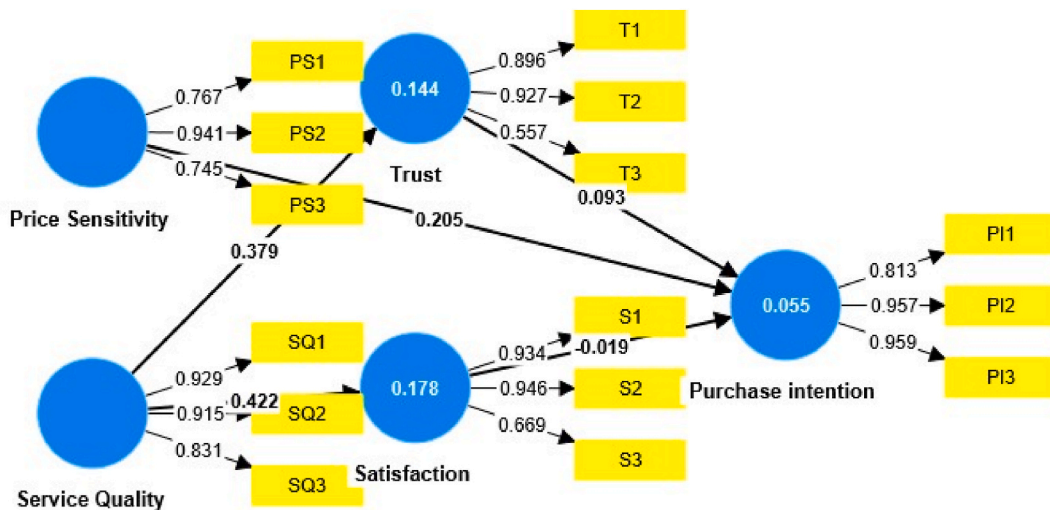


Fig. 2. Structural PLS-SEM model.

2.8. Structural model path analysis and model fit

The goodness of the model (predictive capability), reflected by R square, is presented in Fig. 2.

Fig. 2 illustrates the structural PLS-SEM model, showcasing its capacity to forecast the variability in the dependent variables examined through an analysis of determination coefficients (R^2), the statistical significance, and the significance of path coefficients (β), along with effect sizes (f^2) [78]. The R^2 value spans from 0 to 1, denoting levels of explanatory power ranging from minimal to substantial. Fig. 2 shows these values: 0.144 for trust, 0.178 for satisfaction, and 0.055 for purchase intention. An R^2 value as low as 0.10 is considered satisfactory [78]. This suggested that there is satisfactory predictive power and could clarify the variances of the dependent variables.

Values exceeding 0.02, 0.15, and 0.35 represent small, medium, and large effect sizes for f^2 [78]. As seen in Table 5, the effect size ranges between small and medium. This would explain why trust and satisfaction do not mediate between price sensitivity, service quality and purchase intention. This is further supported by the specific indirect effects between Service Quality - > Satisfaction - > Purchase intention (t -test = 0.384) and Service quality - > Trust - > Purchase intention (t -test = 1.145).

2.9. Path coefficients and hypotheses testing

In Partial Least Squares Structural Equation Modelling (PLS-SEM), the relationship between the dependent and independent variables is demonstrated by the path coefficients (β) and t -values. A bootstrap approach using 5000 sample estimates, which produced the t -values for each path estimate, was used to determine the significance of these coefficients. Bootstrapping involves randomly resampling one dataset to create thousands of simulated datasets to produce robust and meaningful results [84]. Along with path estimates and t -values, the results of the PLS analysis carried out on the structural model are displayed in Fig. 2 and Table 6. Suppose the study's hypotheses are supported and labelled on their separate routes in Fig. 2. In such instances, the determination could hinge on the path coefficients' directionality (positive or negative) and the significance of the t -values. Ideally, the standardised path coefficients should be higher than 0.3 and at least 0.2 [85].

Table 6 presents a summary of the findings from the hypotheses examined in this study, illustrating the connections, hypotheses, path coefficients, and t -values. For a hypothesis to be validated, this research employs a t -value threshold of 1.96, with a significance level set at 5 per cent.

About the association between price sensitivity and purchase intentions, the t -value of **H1** is 4.273, and $p = 0.000$, proposing a substantial association between the variables. Thus, **H1** is supported, implying that price sensitivity influences BoP consumers' purchase intention in mobile marketing strategies in the purchase of maize meal.

In terms of the relationship between service quality and trust, a positive and significant relationship was established ($\beta = 0.384$; $t = 7.314$; $p = 0.000$), thus accepting **H2**. As a result, it became evident that the quality of service played a role in shaping the trust of BoP consumers in mobile advertising tactics when purchasing maize meals. Regarding the relationship between service quality and satisfaction (**H3**), a positive significant association ($p = 0.000$) between the two variables was confirmed, with a path coefficient of $\beta = 0.424$ and a t -value of 10.152. As such, we may conclude that customer satisfaction is positively impacted by service quality among BoP consumers in South Africa, hence confirming **H3**.

In contrast, a negative relationship between trust and purchase intentions was established, yielding an insignificant path coefficient of $\beta = 0.085$ and a t -value of 1.171. This relationship is not supported. There is no evidence to conclude that trust in mobile marketing strategies in purchasing maize meal will positively impact BoP consumers' purchase intentions, thus rejecting **H4**. A similar pattern of results was found for the effect of customer satisfaction and purchase intentions. The direct effect (*satisfaction* → *purchase intentions*) was not significant ($\beta = -0.016$; $t = 0.727$), indicating that a higher degree of customer satisfaction with mobile marketing will not have a positive impact on purchase intentions of maize meal among BoP consumers. As a result, **H5** is rejected.

3. Discussion

The objective of this research was to examine how mobile marketing influences the intention to purchase staple goods among consumers from the Bottom of the Pyramid (BoP). Previous conceptual and qualitative research [86,87] corroborated the findings of this study, suggesting that recommendations from fellow customers regarding products or services can enhance trust. To enhance mobile marketing trust [88], suggests that ensuring the social-commerce platform emphasises authentic user experiences and feedback is crucial for building credibility in reviews. Additionally, [89] states that online retailers should implement measures to identify and prevent fake or paid reviews, as users tend to trust platforms that maintain the integrity of customer feedback. Thus, transparency in

Table 5
f-Square.

	f-square
Price sensitivity - > Purchase intention	0.042
Satisfaction - > Purchase intention	0.000
Service quality - > Satisfaction	0.217
Service quality - > Trust	0.168
Trust - > Purchase intention	0.007

Table 6
Path modelling hypotheses testing.

Hypothesis	Relationship	Std Beta	Std Error	t-value	p values	Decision
H ₁	Price Sensitivity - > Purchase Intention	0.216	0.048	4.273	0.000	Supported and Significant
H ₂	Service Quality - > Trust	0.384	0.052	7.314	0.000	Supported and Significant
H ₃	Service Quality - > Satisfaction	0.424	0.042	10.152	0.000	Supported and Significant
H ₄	Trust - > Purchase Intention	0.085	0.079	1.171	0.242	Not Supported
H ₅	Satisfaction - > Purchase Intention	-0.016	0.055	0.350	0.727	Not Supported

the review process contributes to the perceived authenticity of the platform [90].

Concerning the paper's second hypothesis, a direct correlation was found between sensitivity to prices and intent to purchase staple items among BoP consumers in Khayelitsha. This finding aligns with prior research conducted by [74], indicating that the pricing of products and services holds significant importance for individuals with limited financial means, as they are keenly aware of prices and, when content with them, are likely to return to the establishment for future purchases. To effectively target low-income consumers [91], advise that businesses comprehend this demographic's price sensitivity from a market standpoint. For instance, pricing strategies must consider these consumers' economic challenges and balance affordability and sustainability [17]. Implementing tiered pricing models, offering discounts, and launching targeted promotional campaigns are some ways that [91] suggested can help businesses align their products and services with the budgetary constraints of low-income consumers.

The research also indicated that the quality of mobile marketing services has a positive impact on trust. Researchers like [92] have investigated how service quality, trust, and perceived value influence customer loyalty in Malaysia, highlighting that the crucial link between these factors lies in service quality and trust. Additionally, there is an indication that high service quality can lead to customer trust [92]. The service quality construct, as evident from the study's findings, positively influences consumer satisfaction. A prior study [85] found that recognising the significance of service quality, especially in terms of website design and navigation, is vital in improving the overall mobile marketing experience, enabling customers to search and share information easily. In support [93], advances that investing in navigational features that promote convenience on a social-commerce website contributes to positive user experiences. Interactive elements, such as live chats, personalised recommendations, and responsive customer support, contribute to a positive user experience, often linked to service quality [94].

Contrary to the study postulation, no significant impact of the trust and satisfaction constructs on the purchase intentions of staple products was established, despite previous studies finding them as antecedents of relationship commitment in mobile commerce. Satisfaction during initial interactions with online retailers often results in trust establishment [95]. Likewise, website satisfaction positively affects trust, with the two envisaged to stimulate purchase intentions. To our knowledge, more empirical findings are needed to clarify the study findings adequately. Nevertheless, the results from the study could be attributed to the nature of the product explored (i.e., maize meal), which is mainly consumed by lower-income, price-sensitive consumers in South Africa almost daily [96]. Thus, there could be information saturation relating to maize meal, thereby making BoP consumers not evaluate it much online and offset the common effects of trust and satisfaction on purchasing intentions.

4. Implications of the study

Our study has several important implications for both marketers and academics. Mobile marketing initiatives should be appealing and tailored to meet the requirements of the Bottom of the Pyramid (BoP) market segment to boost purchasing intentions within the social circles of the BoP demographic. From the standpoint of social policy, measures that support network marketing (by operators, i.e., "friends and family" type packages and promotions or rewarding users for referring new users to the network) will aid in advertising within the BoP market.

As the purchasing power of the BoP consumer is relatively lower, it becomes essential for mobile marketers to mitigate price sensitivity issues by persuading BoP consumers to purchase their brands through an assortment of offers, such as freebies, discounts, trial sachets, and extra quantity incentives. According to the management's preference and strategy, these bargains may be available at any time of the year, on special occasions, during the festive season, or under other conditions. Mobile retailers catering to the BoP market segment should prioritize the quality of service they provide, as this will foster trust among their intended customer base. Strengthening this connection is likely to boost the uptake of mobile marketing within the BoP market segment. To drive the acceptance of mobile marketing among the BoP, marketers should recognise the importance of creating micro-content and infographics to cater to online users' fast-paced and convenient consumption habits. These visual elements can effectively convey information to BoP consumers in a brief and captivating way. Online retailers can guarantee that users swiftly comprehend crucial messages and data by concentrating on making visually appealing content.

The proposed study theoretically fills a research void because most current scholarly work focuses mainly on the BoP marketing of luxury or aspirational goods to third-world, developing, or non-Western countries [97]. This study looked at BoP spending on staple products through mobile marketing in a nation with more significant income disparities, which may impact the factors that drive such consumption. Finally, the marketing literature should have considered the BoP category as potential internet customers. However, using the Value-Based Adoption Model, we have added to the marketing literature by identifying particular benefits and risks that influence BoP consumers to make online purchases. It is clear to the body of knowledge that alternative, largely overlooked theories of technology adoption play a crucial role in understanding the sophisticated consumer behaviour of the BoP segment. Lastly, researchers

can draw parallels and contrasts between Khayelitsha and other low-income communities, while acknowledging the importance of context-specific findings. The aim is not to claim universal applicability but to enrich the international literature with diverse perspectives and promote a deeper comprehension of the intricate relationship between socioeconomic elements and consumer behaviour. For example, studying low-income consumers in Khayelitsha provides insights into global economic disparities, as many regions worldwide face similar challenges related to poverty, limited access to resources, and unequal distribution of wealth. Research in Khayelitsha can serve as a case study reflecting broader global issues relevant to low-income communities.

5. Limitations and directions for future research

This research adds to the current body of knowledge concerning the influence of mobile marketing on purchase intentions. However, it has some drawbacks, notably the use of a structured five-point Likert scale in the measurement instrument, which limited participants to a fixed set of responses. Incorporating qualitative methods like interviews could offer deeper insights into the underlying motivations, beliefs, and emotions driving the purchasing behaviour of Base of the Pyramid (BoP) consumers. Furthermore, qualitative research would generate in-depth insights into the findings related to the insignificant impact of the mobile marketing antecedents of trust and satisfaction on the purchase intentions of staple products among BoP consumers. Due to the sampling strategy and sample size utilized in this study, the results cannot be generalised because we chose a convenient sample. As a result, sample bias might be a problem. Further research with a larger sample size and a more random sample is required to attain the generalisability of the findings. Additionally, the study was restricted to Khayelitsha in South Africa's Western Cape province. While consumers are becoming more homogeneous in the globalised economy, similar research conducted in other provinces is necessary to assert the results' universal validity. Therefore, research in this domain could aid in formulating a practical plan for mobile marketers to achieve and sustain loyalty among the BoP market. Another limitation of the present study is its failure to treat the varied demographic backgrounds of the BoP market in this study. Thus, future similar studies must consider such variation and its mobile marketing effects on the purchase intentions of staple products.

Notwithstanding this study's drawbacks, it has isolated what seem to be some very powerful influences of mobile adoption that will be useful in understanding and adopting mobile marketing services among the BoP market. These results will be crucial since they will either help justify or disprove how BoP mobile marketing/spending operates in South Africa compared to other developing countries outside of Africa. While conceptually intriguing to marketing academics, the study's findings can inform industries about the effectiveness of mobile marketing for members of the BoP who need essential goods and services. Additional investigation could delve deeper into examining the household or family as the primary unit of analysis, given that most studies in marketing literature have predominantly focused on individual perspectives. However, such research would serve as an essential initial phase in exploring mobile marketing and expenditure patterns on essential commodities among the BoP segment in South Africa. Last, to fully realise the transformative potential of mobile marketing at the BoP, future research must delve deeper into the intricate aspects of this rapidly evolving field. As technology shapes BoP communities' economic and social fabric, researchers are encouraged to explore innovative methodologies, cutting-edge technologies, and culturally sensitive approaches to bridge the gap between businesses and consumers. By examining the intersections of affordability, accessibility, and acceptability in mobile marketing, we can enable sustainable, inclusive growth. The untold stories of BoP consumers are waiting to be discovered, and rigorous, future-focused research is essential to unlock the insights needed to empower businesses, policymakers, and communities.

6. Conclusion

Over nearly two decades, the BoP research has uncovered numerous aspects of consumer behaviour in that market. However, more research needs to be done in South Africa regarding how mobile marketing affects the BoP's rising need for purchasing necessities. This research represents an initial endeavour to investigate how mobile marketing influences the buying behaviour of essential goods among BoP consumers in Khayelitsha, situated in South Africa. Conversely, a comparable favourable pattern was noted regarding the correlation among price sensitivity, purchasing intentions, service quality, and contentment. Nevertheless, there was no identified connection between trust, satisfaction, and purchasing intentions. The study's findings offer useful guidance for marketing managers as they create a mobile marketing mix to support the BOP market's purchase of staple products. As outlined in the study's implications, managers can use various tactics to improve their interactions with clients in the BOP market. By exploring this expanding research field at the BOP, particularly within emerging economies, the findings of this study can also contribute to the body of literature on consumer behaviour and the BOP. This is the silver lining of our research study.

Ethics statement

The University of Cape Town's research ethics committee gave this project the green light with permission number REC 2018/002/012.

Data availability statement

Dlamini, Sipiwe; Donga, Gift; Mvula, Wandile (2023), "The effect of mobile marketing on the purchase of staple products among Bottom of the Pyramid (BoP) consumers", Mendeley Data, V1, <https://doi.org/10.17632/mj8htbs8h2.1>.

CRedit authorship contribution statement

Siphiwe Dlamini: Writing – review & editing, Supervision, Software, Formal analysis, Conceptualization. **Wandile Mvula:** Project administration, Methodology, Investigation, Data curation. **Gift Donga:** Writing – review & editing, Writing – original draft, Validation.

Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Siphiwe Dlamini reports article publishing charges was provided by University of Cape Town. None If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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