

Brand Image Dimensions as Predictors of Consumer Purchase Behaviour in Zambia's Solar Energy Market: Evidence from Solar Move Africa

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Abstract

This study examined brand image dimensions as predictors of consumer purchase behaviour in Zambia's solar-energy market, using Solar Move Africa in Kitwe as the empirical setting. Guided by Keller's Customer-Based Brand Equity Theory, the study focused on five brand-image dimensions: brand reputation, product quality, brand trust, reliability and market awareness. A quantitative descriptive research design was adopted, and data were collected from 154 customers selected through simple random sampling from the company's customer database. A structured questionnaire using a five-point Likert scale was employed to collect data. Descriptive statistics and multiple linear regression analysis were used to analyse the responses and determine the relative predictive contribution of each brand-image dimension to consumer purchase behaviour. The findings revealed that brand trust was the strongest significant predictor of consumer purchase behaviour ($\beta = 0.299$, $p < .001$), followed by product quality ($\beta = 0.247$, $p < .001$), reliability ($\beta = 0.202$, $p = .004$) and market awareness ($\beta = 0.200$, $p = .001$). Brand reputation recorded a positive but statistically non-significant contribution ($\beta = 0.078$, $p = .187$) when the effects of the other dimensions were controlled. The study concludes that consumer purchase behaviour in Zambia's solar-energy market is influenced more strongly by specific brand associations, particularly trust, perceived quality, reliability and awareness, than by general corporate reputation alone. The study recommends that solar-energy providers prioritise trust-building, product quality assurance, dependable service delivery and stronger market visibility to enhance consumer purchasing decisions and strengthen customer-based brand equity.

1. Introduction

In increasingly competitive markets, brands have become important strategic assets through which firms differentiate their offerings, communicate value and influence consumer decision-making. Consumers are frequently confronted with competing products offering relatively similar functional attributes, making brand-related information an important basis for evaluating alternatives and reducing uncertainty during purchase decisions (Aaker, 1991, 1997; Kotler & Keller, 2016). A brand therefore extends beyond a name or symbol and represents a collection of perceptions, experiences and associations accumulated in consumers' minds over time (Keller, 1993; Aaker, 1996). These associations can influence how consumers evaluate product quality, assess purchasing risk, develop confidence in a seller and ultimately decide whether to purchase, repurchase or recommend a particular offering (Erdem & Swait, 1998; Chaudhuri & Holbrook, 2001).

Within this broader branding perspective, brand image occupies a central position because it reflects consumers' perceptions, beliefs and impressions concerning a brand (Keller, 1993; Kotler & Keller, 2016). Brand image is closely associated with customer-based brand equity, which emphasises the differential response that brand knowledge creates in consumers' reactions to marketing activities (Keller, 1993). Although some approaches conceptualise brand equity through financial outcomes such as market share, market value and cash flows, consumer-oriented perspectives emphasise non-financial dimensions such as brand awareness, reputation, perceived quality, associations, trust and loyalty (Aaker, 1991, 1996; Aktaş & Şimşek, 2020; Alić, Činjurević, & Agić, 2020). From this perspective, consumers' purchasing decisions depend not merely on objective product characteristics but also on what they know, believe and associate with a particular brand.

Brand image is inherently multidimensional. Consumers may develop favourable perceptions of a brand because of its reputation, product quality, trustworthiness, reliability and market awareness. Although these dimensions are interconnected, they may not contribute equally to purchasing behaviour. Brand reputation reflects accumulated perceptions concerning a firm's standing and credibility, while perceived product quality represents consumers' judgements about the overall excellence or superiority of an offering (Zeithaml, 1988; Nguyen & Leblanc, 2001). Brand trust gives consumers confidence that a brand will consistently fulfil its promises and has been associated with stronger loyalty and market outcomes (Chaudhuri & Holbrook, 2001). Reliability provides assurance of consistent product and organisational performance, while market awareness increases the likelihood that consumers recognise and consider a brand when evaluating alternatives (Aaker, 1991; Huang & Sarigöllü, 2014). Examining these dimensions simultaneously can therefore provide a more comprehensive explanation of consumer purchase behaviour than treating brand image exclusively as a single aggregate construct.

The purchasing process itself involves both cognitive and behavioural activities through which consumers identify needs, evaluate alternatives and ultimately make purchase decisions (Sheth & Mittal, 2004). Branding plays an important role in this process by functioning as an informational signal and memory cue that enables consumers to retrieve previous experiences, perceptions and associations when evaluating competing products. Strong brands can reduce perceived risk, strengthen confidence and encourage preference, particularly where consumers possess incomplete information regarding product performance (Erdem & Swait, 1998). Branding consequently represents more than corporate identification; it contributes to customer value, differentiation and sustainable competitive advantage (Aaker, 1991; Loken, Ahluwalia, & Houston, 2010; Zhang, 2015). Marketing activities therefore seek, among other objectives, to influence consumer perceptions and attitudes, develop favourable brand associations and ultimately stimulate purchasing behaviour (Zhang, 2015).

These considerations become particularly important for high-involvement products, including solar-energy technologies. Solar panels, batteries, inverters and complete solar systems generally require considerable financial commitment and are expected to provide reliable performance over extended periods. Consumers may find it difficult to fully evaluate technical quality, durability and long-term performance before purchase and may therefore depend upon brand-related signals when comparing alternative suppliers. A trusted and reputable brand can consequently reduce information asymmetry and perceived purchasing risk (Spence, 1973; Erdem & Swait, 1998). This perspective is also consistent with Keller's (1993) Customer-Based Brand Equity Theory, which proposes that favourable brand knowledge and associations influence consumers' responses to products and marketing activities.

The importance of these issues has increased within Zambia's evolving solar-energy market. Persistent electricity shortages, load shedding, growing energy requirements and demand for reliable alternative energy sources have stimulated interest in decentralised renewable-energy technologies. Zambia's solar-energy market has consequently expanded, with private firms supplying solar panels, batteries, inverters and related products to households and businesses (Energy Regulation Board [ERB], 2023; ZESCO, 2023). Solar Move Africa is among the firms participating in this expanding market. As the number of providers and available product alternatives increases, consumers must differentiate among competing brands, making brand-related perceptions potentially important in determining which firms and products they select.

Existing evidence indicates that solar-energy purchase and adoption decisions cannot be explained by price and technical considerations alone. In Zambia, Zulu et al. (2022) found that attitudes, trust, perceived benefits and subjective norms significantly influence households' intentions to adopt solar-energy solutions. Evidence from Lusaka similarly indicates that despite relatively high awareness of solar-energy benefits, adoption remains influenced by factors extending beyond cost, suggesting that consumer perceptions are important in renewable-energy decision-making (Kumar & Sikalumbi, 2025). Comparable research elsewhere in Africa demonstrates that consumers' willingness to adopt or invest in renewable-energy technologies is influenced by perceptions of benefits, trust, awareness and confidence in energy solutions (Kiprop, Matsui, & Maundu, 2019; Uhunamure, Matasane, Omoruyi, & Powell-Turner, 2025). Evidence from Nigeria further suggests that green marketing strategies and brand identity contribute to consumer trust and loyalty within solar-energy markets (Miyene & Chigemecha, 2026).

The broader African branding literature also demonstrates the importance of brand-related perceptions in explaining consumer outcomes. Chinomona (2016) established significant relationships among brand communication, brand image, brand trust and customer loyalty in South Africa, while Ewur, Govender, and Amoah (2025) demonstrate that dimensions of brand equity, including brand associations and perceived quality, influence purchasing behaviour in emerging markets. These findings reinforce established research showing that perceived quality influences consumer value judgements (Zeithaml, 1988), brand trust contributes to loyalty and market performance (Chaudhuri & Holbrook, 2001), corporate image and reputation influence customer decisions (Nguyen & Leblanc, 2001), and brand awareness contributes to important market outcomes (Huang & Sarigöllü, 2014). Collectively, this literature suggests that purchasing behaviour may be shaped by several interconnected brand-image dimensions rather than by a single general perception.

Despite this growing body of literature, an important empirical gap remains within Zambia's solar-energy market. Existing studies have largely concentrated on renewable-energy adoption, affordability, technical performance, policy incentives, environmental considerations and general consumer attitudes, with comparatively limited attention to the predictive contribution of specific brand-image dimensions to consumer purchase behaviour. Zulu et al. (2022), for example, examine household intentions to adopt solar-energy solutions, while Kumar and Sikalumbi (2025) focus more broadly on factors affecting renewable-energy adoption. Although these studies provide valuable insights, they do not establish whether brand reputation, product quality, brand trust, reliability and market awareness make similar or substantially different contributions to consumer purchasing behaviour within Zambia's solar-energy sector.

This distinction is both theoretically and managerially important. Establishing that overall brand image is associated with purchase behaviour does not necessarily indicate which components of brand image have the greatest predictive value when other dimensions are statistically controlled. Brand reputation, for example, may be associated with purchasing behaviour because reputable firms are simultaneously perceived as trustworthy, reliable and capable of providing quality products. Examining the dimensions concurrently through multiple regression allows their relative contributions to consumer purchase behaviour to be distinguished. Such evidence can help solar-energy firms make more informed decisions about allocating resources among reputation building, product-quality improvement, trust development, reliability enhancement and market-awareness activities.

Against this background, the present study examines brand image dimensions as predictors of consumer purchase behaviour in Zambia's solar-energy market, using Solar Move Africa in Kitwe as the empirical setting. Specifically, the study assesses the predictive contributions of brand reputation, product quality, brand trust, reliability and market awareness to consumer purchase behaviour. By disaggregating brand image into its underlying dimensions, the study extends consumer-based brand equity research into an under-researched renewable-energy context and provides evidence regarding which dimensions contribute most strongly to purchasing behaviour.

Research Objectives

Accordingly, the study tests the following hypotheses:

- H₁: Brand reputation significantly predicts consumer purchase behaviour.
 H₂: Product quality significantly predicts consumer purchase behaviour.
 H₃: Brand trust significantly predicts consumer purchase behaviour.
 H₄: Reliability significantly predicts consumer purchase behaviour.
 H₅: Market awareness significantly predicts consumer purchase behaviour.

2 Literature Review

2.1 Theoretical Framework

Customer-Based Brand Equity (CBBE) Theory

This study is anchored on Keller's (1993) Customer-Based Brand Equity (CBBE) Theory, which provides an appropriate framework for explaining how consumers' perceptions and knowledge of a brand influence their responses and purchasing behaviour. Keller (1993) conceptualises customer-based brand equity as the differential effect that brand knowledge has on consumers' responses to a firm's marketing activities. Brand knowledge comprises awareness and associations developed through consumers' exposure to, experiences with and perceptions of a brand. Consequently, favourable and strong brand associations can enhance consumer confidence, preference and willingness to purchase a particular brand (Keller, 1993; Keller, 2008).

The theory is particularly relevant to this study because brand image is conceptualised through brand reputation, product quality, brand trust, reliability and market awareness. These dimensions represent important perceptions and associations through which consumers evaluate Solar Move Africa. Perceived product quality and reliability can strengthen consumers' evaluations of the functional value of the brand, while trust and reputation provide confidence regarding its credibility and ability to fulfil its promises. Market awareness increases brand familiarity and the likelihood that the brand will enter consumers' consideration sets when making purchase decisions (Aaker, 1991; Keller, 1993; Huang & Sarigöllü, 2014).

CBBE Theory is especially applicable to the solar-energy market because solar products represent relatively high-involvement purchases characterised by substantial financial commitment and uncertainty regarding long-term performance. Consumers may therefore rely on accumulated brand knowledge and associations when evaluating competing providers. Accordingly, the theory supports the study's proposition that favourable brand-image dimensions should predict consumer purchase behaviour. By simultaneously examining the five dimensions, the study further applies CBBE Theory to determine their relative predictive contributions, thereby identifying which brand associations are most consequential to consumer purchase behaviour within Zambia's solar-energy market.

2.2 Empirical Review

Empirical research has consistently demonstrated that brand-related perceptions influence consumer purchase behaviour, although the magnitude and significance of individual brand-image dimensions vary across products, markets and consumer groups. Brand image represents the perceptions, beliefs and associations consumers hold regarding a brand and can encompass perceptions relating to the organisation, its products and the consumers associated with it (Biel, 1992; Keller, 1993). Bloemer and de Ruyter (1998) further associate favourable brand perceptions with consumer satisfaction and loyalty, while Keller (1993) argues that strong, favourable and unique brand associations enhance customer-based brand equity. Consequently, consumers confronted with competing products may rely on brand reputation, perceived quality, trust, reliability and awareness as informational cues when making purchase decisions, particularly where product attributes are difficult to evaluate before purchase.

Brand reputation constitutes an important component of consumers' overall evaluation of a firm. A favourable reputation can reduce uncertainty because consumers may interpret a well-regarded brand as an indication of organisational credibility and product dependability. Nguyen and Leblanc (2001) empirically established that corporate image and reputation significantly influence customer retention decisions, demonstrating that favourable organisational perceptions can produce behavioural consequences. Similarly, Chinomona (2016), using evidence from South African consumers, established important relationships among brand communication, brand image, brand trust and brand loyalty. These findings indicate that reputation can influence consumer behaviour directly or through closely related perceptions such as trust. However, because reputation often develops from consumers' experiences of product quality, reliability and trustworthiness, its independent contribution may become weaker when these related dimensions are considered simultaneously. This makes multivariate examination particularly important.

Perceived product quality has also received substantial empirical support as an antecedent of consumer purchasing behaviour. Zeithaml (1988) conceptualised perceived quality as consumers' subjective judgement regarding the overall excellence or superiority of a product rather than its objectively measured technical characteristics. Saidani, Muztahid, and Haro (2017), for example, found that perceived quality and brand image had positive and significant effects on consumers' purchase intentions, both individually and simultaneously. Similarly, Susilowati and Sari (2020) established significant positive relationships between perceived quality, brand awareness and purchase intention. More recent evidence from green-product markets also shows that perceived quality significantly predicts purchase intention alongside brand awareness (Lala, Tulung, & Wangke, 2024). These findings are particularly relevant to solar-energy products because consumers invest substantial financial resources in technologies expected to provide reliable performance over relatively long periods.

Brand trust is another important predictor, especially where consumers face uncertainty about future product performance. Chaudhuri and Holbrook (2001) established that brand trust contributes to purchase loyalty and ultimately brand performance, suggesting that consumers who believe a brand will consistently fulfil its promises are more willing to maintain purchasing relationships with it. Chiang and Jang (2007) similarly found that brand image significantly influenced consumers' perceptions of quality and trust in online hotel purchasing, with trust playing an important role in customer value and purchase intention. More recently, Edward and Ruslim (2021) empirically examined perceived quality, brand image and brand trust as predictors of purchase intention, further illustrating the interdependence between these brand-related constructs. Trust may therefore be particularly consequential in solar-energy markets where consumers cannot fully determine product durability, installation quality or long-term performance at the point of purchase.

The empirical literature further identifies reliability as important in high-involvement and technologically complex purchases. Reliability reflects consumers' expectations that a product or provider will perform consistently and deliver promised benefits. In renewable-energy markets, reliability becomes especially important because adoption decisions involve perceptions of technological performance, supplier credibility and expected long-term benefits. Kiprop et al. (2019) demonstrate that household decisions regarding renewable-energy technologies in Kenya are associated with consumers'

evaluations of investment value and energy-source characteristics. In Zambia, empirical evidence provides even stronger contextual support. A large household study involving 947 respondents and hierarchical multiple regression found that attitude, subjective norms, perceived benefits, perceived trust, knowledge of solar-energy solutions, load shedding and social norms significantly influenced intention to use solar-energy solutions. These results indicate that consumers' confidence in energy solutions and their expected performance matters alongside economic considerations.

Brand and market awareness can similarly influence purchasing behaviour by determining whether consumers recognise, recall and include a particular brand within their consideration set. Aaker (1991) positions awareness as a foundational component of brand equity because consumers generally cannot select a brand they do not recognise or remember. Empirical evidence nevertheless suggests that its relationship with purchase behaviour can vary considerably. Susilowati and Sari (2020) found a significant positive relationship between brand awareness and purchase intention, while Lala et al. (2024) similarly reported that brand awareness and perceived quality positively and significantly influenced purchase intention. Conversely, Fenetta and Keni (2020) found that brand awareness and perceived quality did not directly increase purchase intention but operated positively through brand loyalty. Such contrasting evidence demonstrates that awareness may function differently across market contexts and reinforces the importance of testing its unique predictive contribution rather than assuming a universally direct relationship with purchase behaviour.

Research considering several brand dimensions simultaneously provides further support for a multidimensional approach. Contemporary evidence indicates that brand image, perceived quality and trust are often interconnected rather than operating independently. For example, research involving imported apparel consumers found that brand image strongly influenced brand trust, although perceived quality and brand trust did not necessarily exert direct effects on purchase intention once other relationships were considered. Liang, Xu, and Huang (2024) similarly established through structural equation modelling that brand image significantly influenced purchase intention alongside social influence. These findings are important because they demonstrate that strong bivariate relationships between individual brand dimensions and consumer behaviour do not necessarily imply equivalent independent effects when multiple predictors are analysed simultaneously.

Within Africa, evidence specifically linking branding constructs with renewable-energy purchasing remains comparatively limited. Nevertheless, existing studies indicate that perceptual and psychological factors are important in technology adoption. Studies from African consumer markets show that brand communication, brand image and trust contribute to behavioural outcomes (Chinomona, 2016), while renewable-energy research identifies perceived benefits, trust, awareness and willingness to invest as important adoption considerations (Kiprop et al., 2019; Uhunamure et al., 2025). Such findings are especially relevant in information-constrained markets where consumers may have difficulty independently verifying the technical characteristics of competing solar-energy products and may therefore rely more strongly on reputation, perceived quality and provider credibility.

Within the Zambian context, empirical evidence confirms that psychological and perceptual factors play an important role in household decisions concerning solar-energy technologies. Zulu, Zulu, and Chabala (2022), using data from 961 adult household members and structural equation modelling, found that attitude, trust, perceived benefits and subjective norms significantly influenced households' intention to adopt solar-energy solutions. The study further established that trust and perceived benefits indirectly influenced adoption intention through consumer attitudes, highlighting the importance of confidence and perceived value in solar-energy decision-making. In a related study, Zulu, Chabala, and Zulu (2021) analysed 947 Zambian household heads using hierarchical multiple regression and found that attitudes toward solar-energy solutions, subjective norms, perceived benefits, perceived trust, knowledge of available solar-energy solutions, load shedding and social norms significantly predicted adoption intention. Notably, perceived behavioural control, perceived risk and perceived cost were not significant predictors. Collectively, these studies demonstrate that solar-energy decisions in Zambia extend beyond economic and technical considerations to include important perceptual and behavioural factors (Zulu et al., 2021; Zulu et al., 2022).

Despite these contributions, the available Zambian evidence has largely focused on household adoption intentions toward solar-energy technologies rather than brand-specific consumer purchase behaviour. Zulu et al. (2021) examined perceptions and beliefs influencing intention to use solar-energy solutions, while Zulu et al. (2022) investigated adoption intention primarily through the Theory of Planned Behaviour. Consequently, comparatively little empirical attention has been directed towards how consumers evaluate competing solar-energy brands and providers and, particularly, whether specific brand-image dimensions independently predict purchasing behaviour. Evidence therefore remains limited regarding the relative predictive contributions of brand reputation, product quality, brand trust, reliability and market awareness when these dimensions are considered simultaneously. This constitutes an important empirical gap because brand dimensions may be individually associated with purchase behaviour but differ substantially in their unique explanatory contribution when other related brand perceptions are statistically controlled.

The present study addresses this gap by examining brand reputation, product quality, brand trust, reliability and market awareness as simultaneous predictors of consumer purchase behaviour at Solar Move Africa. By employing multiple regression, the study moves beyond the predominant emphasis on general solar-energy adoption intention and determines the relative contribution of individual brand-image dimensions to brand-specific consumer purchase behaviour. In doing so, the study extends existing empirical evidence from Zambia into the domain of consumer-based brand equity and provides context-specific evidence regarding which dimensions of brand image are most consequential in predicting purchasing behaviour within Zambia's growing solar-energy market.

3 Methodology

Research Design

The study adopted a quantitative descriptive research design to examine brand image dimensions as predictors of consumer purchase behaviour at Solar Move Africa in Kitwe, Zambia. The design was appropriate for measuring variables quantitatively and testing relationships among them without manipulation (Creswell, 2014; Saunders et al., 2019; Mwiya et al., 2025). Specifically, the study examined brand reputation, product quality, brand trust, reliability and market awareness as predictors of consumer purchase behaviour. Multiple regression determined the relative predictive contribution of each brand-image dimension to consumer purchase behaviour.

Study Area

The study was conducted in Kitwe Town, Copperbelt Province, Zambia. Kitwe is one of Zambia's major urban and commercial centres, characterised by substantial energy demand from households, businesses and industrial activities. Persistent electricity supply challenges and load shedding have increased the relevance of alternative energy solutions, including solar technologies (ERB, 2023; ZESCO, 2023). The presence of consumers with varying socioeconomic and energy needs makes Kitwe an appropriate setting for examining how brand reputation, product quality, brand trust, reliability and market awareness predict consumer purchase behaviour within Zambia's growing solar-energy market.

Target Population and Sampling

The target population comprised customers of Solar Move Africa in Kitwe, Zambia, who had purchased, interacted with or were familiar with the company's solar-energy products. A sample of 154 customers was determined using Cochran's (1977) formula at a 95% confidence level. Respondents were selected from the company's customer database using simple random sampling, providing eligible customers with an equal opportunity of selection and minimising selection bias (Kothari, 2004). The resulting sample was considered adequate for correlation and multiple regression analyses and for generating reliable empirical findings (Hair et al., 2019; Mufalali et al., 2026c).

Data Collection Methods and Instrument

Data were collected using a structured online questionnaire administered to selected customers of Solar Move Africa in Kitwe, Zambia. The instrument comprised sections covering respondents' demographic characteristics, five brand-image dimensions - brand reputation, product quality, brand trust, reliability and market awareness - and consumer purchase behaviour. The measurement items were informed by established brand-image and consumer behaviour literature (Keller, 1993; Aaker, 1996; Kotler & Keller, 2016). Responses were measured using a five-point Likert scale, ranging from Strongly Disagree (1) to Strongly Agree (5). The structured questionnaire ensured standardised and comparable responses suitable for correlation and multiple regression analyses (Saunders et al., 2019; Mundia et al., 2026; Mufalali et al., 2026b).

Validity and Reliability

To ensure the validity and reliability of the research instrument, several measures were undertaken. Content validity was established through a review of relevant literature and alignment of measurement items with established constructs relating to brand image and consumer behaviour (Aaker, 1991; Keller, 1993; Kotler & Keller, 2016; Mundia et al., 2025). The instrument captured the five brand-image dimensions - brand reputation, product quality, brand trust, reliability and market awareness - and consumer purchase behaviour. Reliability was assessed using Cronbach's Alpha, with a coefficient of 0.70 or above considered acceptable internal consistency (Field, 2013; Hair et al., 2019; Mufalali et al., 2026a). These procedures ensured that the instrument provided sufficiently valid and reliable measures for subsequent statistical analysis.

Data Analysis Procedures

Data analysis involved both descriptive and inferential statistical techniques. Descriptive statistics were used to summarise respondents' demographic characteristics and provide an overview of the study variables. Inferential analysis involved multiple linear regression to determine the relative predictive contributions of brand reputation, product quality, brand trust, reliability and market awareness, while controlling for overlapping effects among the predictors. Statistical significance was assessed at the 5% level ($p < .05$).

Ethical Considerations

Ethical clearance for the study was obtained prior to data collection. Participation was voluntary and respondents were informed of the study's purpose before giving their informed consent. Anonymity and confidentiality were strictly maintained and all data collected were used solely for academic purposes. These ethical procedures align with the principles of responsible and ethical research practice outlined by Creswell and Plano Clark (2017; Mundia et al., 2023).

4 Findings and Discussion

This section presents the study findings. Literature and related studies assisted in the discussion of the findings. The section begins with the demographic profile of respondents and then moves into the presentation and discussion of the thematic findings.

4.1 Profile of Study Respondents

This section provided a detailed analysis of the demographics of the respondents.

Table 1: Profile of Study Respondents

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	106	68.8
	Female	48	31.2
	Total	154	100
Age Group	Below 20 years	1	0.6
	21-30 years	22	14.3
	31-40 years	47	30.5
	41-50 years	61	39.7
	Above 50 years	23	14.9
	Total	154	100
Education	Secondary	21	13.6
	Diploma	38	24.7
	Bachelor's Degree	92	59.8
	Postgraduate	3	1.9
	Total	154	100
Occupation	Employed	89	57.8
	Self-employed	55	35.7
	Other	10	6.5
	Total	154	100

Source: Field Data (2026)

Table 1 shows that the respondents were predominantly male (68.8%), while females accounted for 31.2%. Most respondents were aged 41–50 years (39.7%), followed by those aged 31–40 years (30.5%), indicating that the sample was largely composed of mature consumers. Regarding education, the majority held bachelor's degrees (59.8%), followed by diploma holders (24.7%), suggesting a relatively well-educated sample. In terms of occupation,

57.8% were employed and 35.7% were self-employed, while only 6.5% were students, unemployed or in other categories. Overall, the respondents were predominantly mature, educated and economically active consumers, providing an appropriate profile for assessing perceptions of solar-energy brands and purchase behaviour.

4.2 Effect of Brand Image Dimensions on Consumer Purchase Behaviour

Table 2 presents the results of the multiple linear regression analysis conducted to determine the predictive contribution of five brand image dimensions to consumer purchase behaviour. All five dimensions were entered simultaneously into the regression model to determine their independent contributions while controlling for the overlapping effects of the other predictors. The regression coefficients, standard errors, standardised beta coefficients, t-statistics and significance levels were used to determine the direction, magnitude and statistical significance of each predictor.

Table 2: Regression Results for Brand Image Dimensions as Predictors of Consumer Purchase Behaviour

Predictor	B	SE	Beta	t	Sig.
(Constant)	0.209	—	—	—	—
Brand Reputation	0.082	0.059	0.078	1.325	0.187
Product Quality	0.245	0.066	0.247	3.757	0.001
Brand Trust	0.275	0.071	0.299	4.182	0.001
Reliability	0.179	0.069	0.202	2.949	0.004
Market Awareness	0.162	0.057	0.2	3.545	0.001

Source: Field Data (2026)

Brand Reputation and Consumer Purchase Behaviour

The regression results revealed that brand reputation had a positive but statistically non-significant effect on consumer purchase behaviour ($\beta = 0.078$, $t = 1.325$, $p = .187$). Thus, although a favourable reputation was positively associated with purchase behaviour, it did not independently predict consumer purchasing decisions when product quality, brand trust, reliability and market awareness were simultaneously controlled. H_1 was therefore not supported. This finding suggests that reputation alone may be insufficient to explain purchasing behaviour once consumers' more specific evaluations of a solar-energy brand are considered.

The finding provides a nuanced extension of Keller's (1993) Customer-Based Brand Equity Theory. While CBBE Theory proposes that favourable brand associations enhance consumer responses, the results indicate that different associations may possess unequal predictive strength. Reputation may function as a broad brand association whose influence is partly captured through more specific perceptions of trust, quality and reliability. This may explain the difference from Nguyen and Leblanc (2001), who established that corporate image and reputation significantly influenced customer retention decisions. Chinomona (2016) similarly demonstrated relationships among brand image, brand trust and loyalty. The present finding therefore suggests that, within Zambia's solar-energy market, consumers may place greater emphasis on tangible and experience-related brand attributes than on general corporate reputation when making purchase decisions.

Product Quality and Consumer Purchase Behaviour

Product quality emerged as a positive and statistically significant predictor of consumer purchase behaviour ($\beta = 0.247$, $t = 3.757$, $p = 0.001$). H_2 was therefore supported. The result indicates that favourable consumer perceptions regarding the quality of Solar Move Africa's products significantly increase the likelihood of positive purchase behaviour, even after controlling for brand reputation, trust, reliability and market awareness. Product quality was also the second strongest predictor in the model, demonstrating its considerable importance in consumer evaluations of solar-energy products.

This finding supports Keller's (1993) Customer-Based Brand Equity Theory, which maintains that favourable and strong brand associations contribute to positive consumer responses. Perceived quality represents an important association through which consumers assess the functional value and superiority of a brand (Keller, 1993; Keller, 2008). The result is also consistent with Zeithaml (1988), who identifies perceived quality as consumers' overall judgement of product excellence, and Saidani et al. (2017), who found significant positive effects of perceived quality on purchase intention. Similar evidence was reported by Susilowati and Sari (2020) and Lala et al. (2024). The finding is particularly relevant to solar-energy products because they involve substantial financial investment and expectations of long-term performance. Consumers may therefore prioritise perceived product quality when selecting among competing solar-energy brands, making quality assurance an important source of customer-based brand equity.

Brand Trust and Consumer Purchase Behaviour

Brand trust emerged as the strongest predictor of consumer purchase behaviour among the five brand-image dimensions ($\beta = 0.299$, $t = 4.182$, $p < .001$). Accordingly, H_3 was supported. The positive coefficient indicates that increases in consumers' trust in Solar Move Africa are associated with stronger purchasing behaviour after controlling for reputation, product quality, reliability and market awareness. The relative magnitude of the standardised coefficient demonstrates that trust contributes more strongly to explaining purchasing behaviour than any other brand-image dimension examined in the study.

The finding strongly supports Keller's (1993) CBBE Theory because trust represents an important favourable association developed through consumers' knowledge and experiences of a brand. Where consumers believe that a brand is credible and capable of fulfilling its promises, uncertainty surrounding purchasing decisions is reduced and positive behavioural responses become more likely. Empirically, the finding is consistent with Chaudhuri and Holbrook (2001), who established that brand trust contributes to purchase loyalty and brand performance. It also complements Edward and Ruslim (2021), who examined trust alongside brand image and perceived quality in explaining purchase intention. More importantly, the result corresponds with Zambian evidence from Zulu et al. (2021) and Zulu et al. (2022), which identified perceived trust as important in solar-energy adoption decisions. Trust therefore appears particularly consequential in Zambia's solar-energy market, where consumers face uncertainty regarding product durability, supplier credibility and long-term performance.

Reliability and Consumer Purchase Behaviour

Reliability had a positive and statistically significant effect on consumer purchase behaviour ($\beta = 0.202$, $t = 2.949$, $p = .004$), providing support for H_4 .

This indicates that consumers who perceive Solar Move Africa and its products as dependable are more likely to exhibit positive purchasing behaviour, even after controlling for the other brand-image dimensions. Although its predictive contribution was lower than those of brand trust and product quality, reliability remained independently significant, demonstrating that consistency and dependability constitute important considerations in consumer purchasing decisions.

The result is consistent with Keller's (1993) CBBE Theory, which proposes that favourable experiences and brand associations shape consumers' responses to brands. Reliability can strengthen customer-based brand equity by creating confidence that products and providers will consistently deliver expected benefits. This is particularly important for solar-energy systems, where consumers expect products to function effectively over extended periods and often depend on providers for installation and after-sales support. The finding also complements Kiprop et al. (2019), who showed that household renewable-energy decisions in Kenya are associated with evaluations of investment value and energy-source characteristics. Within Zambia, Zulu et al. (2021) and Zulu et al. (2022) similarly demonstrate that perceptions and beliefs surrounding solar-energy solutions contribute to adoption intentions. The present study extends this evidence by demonstrating that reliability independently predicts brand-specific purchase behaviour, highlighting the importance of consistent product performance and dependable service provision in Zambia's solar-energy market.

Market Awareness and Consumer Purchase Behaviour

Market awareness was found to be a positive and statistically significant predictor of consumer purchase behaviour ($\beta = 0.200$, $t = 3.545$, $p = .001$). H_5 was therefore supported. The result demonstrates that greater consumer awareness of Solar Move Africa increases the likelihood of positive purchase behaviour after controlling for reputation, product quality, trust and reliability. Although market awareness recorded a slightly smaller standardised coefficient than reliability, its significant independent contribution indicates that visibility and familiarity remain important in determining whether consumers consider and ultimately purchase from a particular solar-energy provider.

The finding supports Keller's (1993) Customer-Based Brand Equity Theory, which identifies brand awareness as a fundamental component of brand knowledge. Consumers must first recognise or recall a brand before its other associations can meaningfully influence purchasing decisions. It is also consistent with Aaker's (1991) argument that awareness increases the likelihood that a brand enters consumers' consideration sets. Empirically, the result supports Susilowati and Sari (2020), who reported a significant positive relationship between brand awareness and purchase intention, and Lala et al. (2024), who similarly found brand awareness to positively predict purchase intention. However, it differs from Fenetta and Keni (2020), who found no direct effect of awareness on purchase intention. The present evidence therefore demonstrates that, within Zambia's solar-energy market, market awareness has an independent predictive role, suggesting that greater brand visibility and familiarity can contribute meaningfully to consumer purchase behaviour.

5 Conclusion and Recommendations

5.1 Conclusion

This study examined brand image dimensions as predictors of consumer purchase behaviour in Zambia's solar-energy market, using Solar Move Africa as the empirical setting. The findings demonstrate that brand image is multidimensional and that its individual dimensions make unequal contributions to consumer purchase behaviour. Brand trust emerged as the strongest predictor ($\beta = 0.299$, $p < .001$), followed by product quality ($\beta = 0.247$, $p < .001$), reliability ($\beta = 0.202$, $p = .004$) and market awareness ($\beta = 0.200$, $p = .001$). Brand reputation, although positively related to purchase behaviour, did not make a statistically significant independent contribution ($\beta = 0.078$, $p = .187$) when the other dimensions were controlled.

The findings generally support Keller's (1993) Customer-Based Brand Equity Theory by demonstrating that favourable brand associations can translate into positive consumer responses, although their predictive strengths differ. Particularly, consumers appear to prioritise trust, perceived product quality and reliability when evaluating solar-energy providers. The study therefore concludes that strengthening consumer purchase behaviour in Zambia's solar-energy market requires firms to move beyond general corporate reputation and develop specific brand associations that enhance trust, quality perceptions, reliability and market visibility.

5.2 Recommendations

Based on the findings, Solar Move Africa and other solar-energy providers should prioritise brand trust, which emerged as the strongest predictor of consumer purchase behaviour. Firms should strengthen trust through transparent product information, credible warranties, responsive after-sales services, clear pricing and consistent fulfilment of customer promises. Customer testimonials, product certifications and evidence of successful installations could further reinforce confidence in the brand.

Second, firms should maintain and continuously improve product quality through sourcing certified solar products, strengthening quality-control procedures and communicating product durability, performance and warranty conditions to consumers. Given the financial commitment associated with solar technologies, demonstrating value and long-term performance should remain central to marketing strategies.

Third, providers should strengthen reliability by ensuring dependable installations, timely delivery, technical support and effective resolution of customer complaints. Consistency between marketing promises and actual service delivery can reinforce positive brand experiences and encourage repeat purchases and recommendations.

Fourth, the significant contribution of market awareness suggests the need for stronger brand visibility through digital marketing, social media, community outreach, exhibitions and targeted promotional campaigns. Such initiatives should combine awareness creation with messages emphasising trust, quality and reliability.

Finally, although brand reputation was not independently significant, it should not be disregarded. Rather than investing in reputation-building activities in isolation, firms should build reputation progressively through demonstrated product quality, trustworthy relationships, reliable service and positive customer experiences.

Declaration of Competing Interests

The Authors declare no competing interests.

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Authors' Contribution Statement

Formulated and designed the study; established the research framework and technique; directed the composition of the initial manuscript draft.

Ethical considerations

The article followed all ethical standards appropriate for this kind of research.

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