



Building Customer Loyalty through Brand Equity in an Emerging Telecommunications Market: Evidence from Southwest Cameroon

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Research Article

Abstract

Purpose: Low switching costs, multi-SIM usage, and recurring service challenges make customer retention difficult in Cameroon's mobile telecommunications market. This study examined how brand awareness, brand association, and perceived quality influence customer loyalty to telecommunications operators in Fako Division, Southwest Cameroon.

Methods: A quantitative cross-sectional survey used an online Google Forms questionnaire distributed through snowball sampling between April and May 2026. Of the 384 targeted respondents, 374 valid responses were analyzed, representing a usable-response rate of 97.4%. Binary logistic regression estimated the effects of the three brand-equity dimensions on customer loyalty while controlling for age, gender, and educational attainment.

Results: Brand awareness ($B = 0.989$, $OR = 2.689$, $p < 0.001$), brand association ($B = 1.003$, $OR = 2.728$, $p = 0.004$), and perceived quality ($B = 0.760$, $OR = 2.138$, $p = 0.002$) each had a positive and statistically significant effect on customer loyalty. Age had a significant joint effect, whereas gender and educational attainment were statistically insignificant.

Implications: Telecommunications operators should connect brand communication with dependable service delivery. Consistent brand visibility, favorable customer experiences, reliable networks, transparent service recovery, and targeted engagement can strengthen loyalty, while regulators can support these outcomes through effective quality-of-service monitoring and consumer-protection standards.

Originality: The study distinguishes the effects of three customer-based brand-equity dimensions within an under-researched emerging African telecommunications market and shows that brand association produced the largest estimated loyalty effect, marginally exceeding brand awareness.

Limitations: The cross-sectional design limits causal inference, while online snowball sampling and the focus on Fako may limit representativeness and broader generalizability. Longitudinal, probability-based, and multi-region studies are recommended.

Keywords: brand equity, brand awareness, brand association, perceived quality, customer loyalty, mobile telecommunications.

1. Introduction

In increasingly competitive service markets, customer loyalty has become an important source of organizational survival, profitability, and sustainable competitive advantage. Loyal customers are more likely to continue purchasing from a company, resist competing offers, recommend the brand, and contribute to long-term financial performance. Rapid technological change, increased access to market information, and a growing range of competing services have nevertheless made customer retention more difficult. Firms have therefore been compelled to look beyond functional attributes by developing brands that create distinctive and lasting value for consumers. Consequently, brand equity has emerged as a strategic marketing asset that can strengthen consumer preferences, purchase intentions, and loyalty (Kaur & Mahajan, 2011; Saputra et al., 2020).

Brand equity represents the additional value that a brand name and its associated meanings confer on a product or service. Early research examined brand equity from a financial perspective by focusing on the value a brand contributes to organizational performance (Farquhar, 1989). Subsequent studies shifted attention towards customer-based brand equity, which explains how consumers' knowledge, perceptions, and experiences influence their responses to a brand's marketing activities. Aaker (1991, 1996) and Keller (1993) provided the main foundations for this perspective by showing that strong brands occupy favorable and distinctive positions in consumers' minds. Brand equity is consequently treated as a multidimensional construct commonly represented by brand awareness, brand association, perceived quality, brand loyalty, and, in some models, brand trust (Atilgan et al., 2009; Yoo & Donthu, 2001).

Brand equity is particularly relevant in telecommunications, where competing operators often offer services with similar functional characteristics. When consumers see few differences among providers, their choices may depend on whether they recognize a brand, associate it with favorable attributes, and view its services as reliable and superior. Brand awareness increases the likelihood that an operator will be recalled and considered during purchase decisions; favorable associations strengthen the meanings and emotions attached to it; and perceived quality reflects customers' overall assessment of its service reliability and superiority. Together, these dimensions can reduce uncertainty, differentiate competing operators, and encourage continued patronage.

Cameroon provides an important setting for examining this relationship. An earlier national survey documented network-access difficulties, service interruptions, poor transmission quality, and relatively high communication costs among individual and business users (National Institute of Statistics & Telecommunications Regulatory Board, 2014). Although the survey predates the present investigation, it illustrates the persistent service-quality concerns that have shaped consumers' experiences in the sector. These challenges may weaken confidence in an operator and encourage customers to seek alternatives.

Low switching barriers further complicate customer loyalty. Consumers can keep multiple subscriber identity module (SIM) cards and switch between networks based on price, promotions, service quality, and geographical coverage. This behavior enables customers to benefit from competing offers without developing an exclusive relationship with one operator. High brand recognition may therefore fail to generate sustained loyalty when customers experience comparable service failures across providers. The resulting tension raises an important marketing question: can customer-based brand equity encourage loyalty in a market characterized by service challenges, low switching costs, and widespread multi-SIM usage?

Although the relationship between brand equity and customer loyalty has received considerable scholarly attention, evidence from emerging African telecommunications markets remains limited and sometimes inconsistent. Studies that treat brand equity as a composite construct may also conceal the distinct effects of awareness, association, and perceived quality. Evidence concerning these dimensions among telecommunications customers in Fako, Southwest Cameroon, is particularly scarce. Establishing their

separate effects is therefore necessary to determine whether favorable brand perceptions can overcome service-related dissatisfaction and consumers' tendency to alternate between operators.

Against this background, this study examined the effect of customer-based brand equity on customer loyalty in the telecommunications industry in Fako. Specifically, it evaluated the effects of brand awareness, perceived quality, and brand association. The study tested the null hypothesis that these dimensions have no statistically significant effect on customer loyalty. By examining the dimensions separately, the study contributes context-specific evidence to brand-equity and relationship-marketing research and identifies the aspects of brand building most relevant to customer retention in an emerging telecommunications market.

2. Literature Review

2.1 Conceptual Foundations

Brand equity has traditionally been examined from firm-based and customer-based perspectives. Firm-based brand equity focuses on the financial value that a brand adds to an organization beyond its tangible assets. Farquhar (1989) conceptualized it as the additional value a brand confers on a product, while Simon and Sullivan (1993) associated it with the incremental cash flows generated by branded products relative to equivalent unbranded products. Although this perspective demonstrates the financial importance of branding, it offers limited insight into the consumer perceptions and attitudes through which such value is created.

Customer-based brand equity provides a more suitable framework for explaining responses to telecommunications brands. Aaker (1991) viewed brand equity as assets and liabilities associated with a brand name or symbol that increase or reduce the value delivered to customers and firms. Keller (1993), in contrast, emphasized the differential consumer response produced by brand knowledge. Positive brand equity therefore exists when consumers are familiar with a brand and hold favorable, strong, and distinctive associations with it. Christodoulides and de Chernatony (2010) further described customer-based brand equity as perceptions, attitudes, knowledge, and behaviors that increase consumer utility and allow branded offerings to generate superior market outcomes.

Brand equity is consequently multidimensional. Aaker's framework identifies brand awareness, brand association, perceived quality, and brand loyalty as its principal dimensions, while related models incorporate brand trust and other consumer perceptions (Atilgan et al., 2009; Yoo & Donthu, 2001). In this study, customer-based brand equity is represented by brand awareness, brand association, and perceived quality. Brand awareness denotes consumers' ability to recognize and recall an operator; brand association encompasses the ideas, experiences, and meanings connected with it; and perceived quality represents the overall assessment of its service reliability and superiority.

Customer loyalty refers to a consumer's enduring commitment to a brand or service provider. It is reflected in continued patronage, repurchase intentions, resistance to competing offers, positive word-of-mouth, and willingness to maintain the relationship despite alternatives (Lam et al., 2004; Pan et al., 2012). Behavioral loyalty focuses on actual repeat patronage, whereas attitudinal loyalty captures psychological attachment, preference, and intention to continue using a brand. The present study adopts an attitudinal orientation because telecommunications customers may remain committed to an operator even when network availability, pricing, or promotions occasionally lead them to use competing networks.

2.2 Empirical Evidence and Research Gap

Early telecommunications research established that loyalty is shaped by both service evaluations and switching barriers. Kim et al. (2004) found that customer satisfaction and switching barriers influenced loyalty in Korean mobile telecommunications services. Aydin and Özer (2005) subsequently demonstrated that service quality, corporate image, trust, and switching costs were important antecedents of loyalty in the

Turkish mobile market. Lai et al. (2009) similarly showed that quality, value, image, and satisfaction jointly created customer loyalty in Chinese telecommunications. These studies positioned perceived quality and favorable corporate meanings as central elements of telecommunications loyalty.

Evidence from other markets extended these findings. Dlačić and Kežman (2014) reported that brand awareness and perceived quality significantly influenced loyalty in the pharmaceutical market. Alkhawaldeh et al. (2017) found that brand awareness positively affected loyalty in Jordanian Islamic banking, with brand commitment mediating the relationship. Vijayakumar et al. (2018) also established that perceived quality and commercial image influenced retail customer loyalty, although brand trust was insignificant. Mixed effects across dimensions suggested that industry conditions and how consumers experience brands could alter the brand equity-loyalty relationship.

More recent African evidence has emphasized the relevance of customer-based brand equity in telecommunications. Mudanganyi et al. (2019) found that brand awareness, brand association, and perceived quality positively influenced satisfaction and loyalty in South Africa's mobile telecommunications industry. In Nigeria, Kunle et al. (2020) linked brand-equity dimensions with the retention of postpaid telecommunications subscribers. During the same period, Thanushan and Kennedy (2020) reported that brand-equity dimensions influenced loyalty, with customer satisfaction partially mediating the effect. Lesmana et al. (2020), however, found that brand awareness and perceived quality had positive but statistically insignificant effects on loyalty among Xiaomi users, indicating that favorable brand perceptions do not generate uniform loyalty outcomes across sectors.

Subsequent studies provided further support while highlighting contextual differences. Ayesh et al. (2021) found that brand awareness and brand image significantly increased customer loyalty in Jordan's Starbucks chain. Julius and Batonda (2022) reported significant effects of brand awareness, brand association, perceived quality, and brand loyalty among telecommunications users in Tanzania. Most recently, Desta and Amantie (2024) demonstrated a relationship between brand equity and loyalty in telecommunications, with customer satisfaction serving as a contextual mechanism. Collectively, this chronological evidence suggests that brand-equity dimensions generally promote loyalty, but their relative influence varies with service experiences, competitive conditions, and market context.

Despite this growing evidence, the separate effects of brand awareness, brand association, and perceived quality remain under-examined in Cameroon's telecommunications sector. Findings from Asian, Middle Eastern, and other African markets cannot automatically be generalized to Fako, where multi-SIM use, promotional competition, low switching costs, and network-quality challenges may alter loyalty formation. This study addresses that contextual and empirical gap by estimating the direct effects of the three brand-equity dimensions while accounting for selected demographic characteristics.

3. Conceptual Framework

The conceptual framework explains how selected dimensions of customer-based brand equity influence customer loyalty in telecommunications. It is derived primarily from Aaker's (1991) customer-based brand equity model and Keller's (1993) brand-knowledge framework. These models propose that consumers' awareness, perceptions, and associations shape their responses to a brand. Accordingly, the framework represents customer-based brand equity through brand awareness, perceived quality, and brand association. Brand awareness reflects consumers' ability to recognize or recall an operator when considering available providers. A highly recognizable brand is more likely to enter the consumer's consideration set and benefit from familiarity, which can reduce perceived risk and encourage continued patronage. Perceived quality represents the customer's overall assessment of an operator's reliability and superiority. In telecommunications, this assessment may be influenced by network coverage, service consistency, transmission quality, and the provider's ability to meet expectations. Dependable and superior services are therefore expected to strengthen loyalty.

Brand association captures the ideas, experiences, images, and meanings consumers connect with an operator. These associations may arise from advertising, service experiences, corporate reputation, promotions, and interactions with employees or other customers. Positive and distinctive associations can differentiate an operator from competing networks and strengthen consumers' emotional and psychological attachment. Brand awareness, perceived quality, and brand association are therefore expected to positively affect customer loyalty.

Customer loyalty is the dependent variable and reflects commitment, preference, intention to continue using an operator, willingness to recommend it, and resistance to competing offers. Although brand loyalty is a component of Aaker's original model, it is not included as an explanatory dimension because customer loyalty is the principal outcome. This distinction avoids conceptual overlap between the independent and dependent variables. Age, educational attainment, and gender are included as controls because demographic differences may influence attitudes towards telecommunications operators.

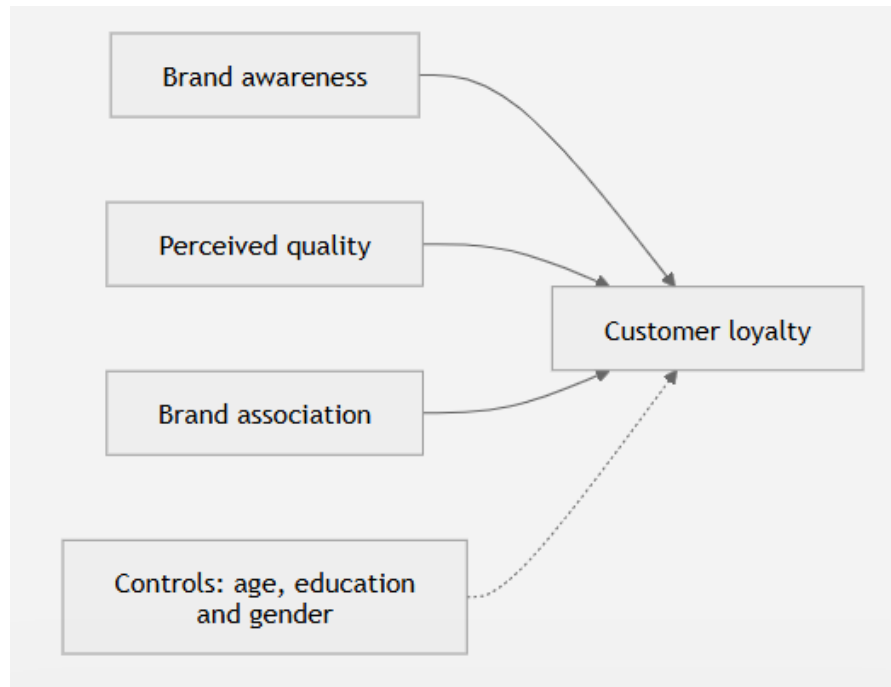


Fig. 1: Conceptual framework linking brand-equity dimensions to customer loyalty
Source: Authors' conceptualization, adapted from Aaker (1991) and Keller (1993)

4. Methodology

4.1 Research Design and Data Collection

The study adopted a quantitative cross-sectional survey design to examine the effect of customer-based brand equity on customer loyalty among telecommunications users in Fako, Southwest Cameroon. This design was appropriate because it collected data on respondents' perceptions and behavioral intentions at a single point in time and analyzed them quantitatively.

The target population comprised telecommunications service users in Fako. Because the population was large and no complete sampling frame was available, the minimum sample size was determined using Cochran's (1977) formula for a large or unknown population, expressed as follows:

$$n_0 = Z^2 p(1 - p) / e^2 \quad (1)$$

where n_0 represents the required sample size, Z is the standard normal value corresponding to the selected confidence level, p is the estimated proportion of the population possessing the characteristic of interest, and e is the acceptable margin of error. At a 95% confidence level, $Z = 1.96$. We set the population

proportion at 0.50. We set the margin of error at 5%. Substituting these values into Equation (1) produced the following result:

$$n_0 = [(1.96)^2 \times 0.50 \times (1 - 0.50)] / (0.05)^2$$

$$n_0 = 384.16 \approx 384 \text{ (2)}$$

Accordingly, the study targeted 384 telecommunications users. The study collected primary data between April and May 2026 using a structured, self-administered questionnaire developed in Google Forms. Because an accessible sampling frame of telecommunications users in Fako was unavailable, the study used non-probability snowball sampling. The questionnaire link was initially distributed to eligible telecommunications users within the study area, who were subsequently encouraged to share it with other eligible users in their personal and professional networks. Of the 384 targeted respondents, 374 submitted complete, usable questionnaires, for a usable-response rate of approximately 97.4%.

The questionnaire was developed specifically for this study rather than adopted in its entirety from a single published measurement scale. Nevertheless, its constructs and items were informed by the established customer-based brand-equity frameworks of Aaker (1991) and Keller (1993), together with relevant empirical studies on brand equity and customer loyalty. The items were adapted and contextualized to reflect customers' experiences with telecommunications operators in Cameroon.

The instrument comprised two main sections. The first section collected demographic and service-use information, including gender, age, educational attainment, preferred telecommunications operator, and service-use duration. The second section measured the principal study variables: brand awareness, brand association, perceived quality, and customer loyalty.

Brand awareness was measured using five items that assessed respondents' ability to recognize the operator's logo and jingle, recall the operator when telecommunications companies were mentioned, identify its products through advertising campaigns, and recognize it as the first operator that came to mind when considering telecommunications services. Brand association was measured using six items relating to trust in the operator, network coverage and speed, value for money, affordability of tariffs, the status associated with using the operator, and feelings of confidence and safety. Perceived quality was measured using four items that assessed the overall quality, reliability, consistency, standards, timeliness, and accuracy of the operator's services.

Respondents rated the 15 items measuring the three brand-equity dimensions on a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Responses to the items associated with each construct were combined to generate composite scores for brand awareness, brand association, and perceived quality. Higher composite scores indicated more favorable customer evaluations of each brand-equity dimension.

Customer loyalty, the dependent variable, was measured with a direct question asking whether respondents intended to continue purchasing and using their preferred telecommunications operator's services. Responses were coded dichotomously, with "Yes" coded as 1 and "No" coded as 0. The binary measurement of customer loyalty informed the subsequent use of binary logistic regression.

Content validity was addressed by aligning each questionnaire item with the conceptual definitions of brand awareness, brand association, perceived quality, and customer loyalty established in the brand-equity literature. We also reviewed the questionnaire before administration to ensure the items were clear, relevant, and appropriate to the telecommunications context. Using multiple items for each brand-equity dimension strengthened construct coverage by capturing different aspects of the underlying concepts.

We assessed the reliability of the three multi-item brand-equity measures using Cronbach's alpha. Each construct attained an alpha coefficient of at least 0.70, demonstrating acceptable internal consistency among its constituent items. Cronbach's alpha was not computed for customer loyalty because it was measured using a single dichotomous item. The submitted questionnaires were screened for completeness and validity

before analysis, and only the 374 questionnaires containing usable responses on the study variables were retained.

4.2 Model Specification

The empirical model was derived from the customer-based brand equity framework. Customer loyalty was specified as a function of brand awareness, brand association, and perceived quality, while age, educational attainment, and gender were included as demographic controls. The functional relationship was expressed as:

$$LOY_i = f(BAW_i, BAS_i, PQ_i, AGE1_i, AGE2_i, EDU1_i, EDU2_i, GEN_i) \quad (3)$$

The linear predictor underlying the binary logistic regression model was specified as:

$$Z_i = \beta_0 + \beta_1 BAW_i + \beta_2 BAS_i + \beta_3 PQ_i + \beta_4 AGE1_i + \beta_5 AGE2_i + \beta_6 EDU1_i + \beta_7 EDU2_i + \beta_8 GEN_i \quad (4)$$

LOY_i denotes customer loyalty, coded 1 for loyal respondents and 0 otherwise. BAW_i , BAS_i , and PQ_i represent brand awareness, brand association, and perceived quality, respectively. $AGE1_i$ identifies respondents below 30 years and $AGE2_i$ those aged 30–40 years, with respondents above 40 years as the reference category. $EDU1_i$ identifies respondents with secondary education and $EDU2_i$ those with undergraduate education, with postgraduate education as the reference category. GEN_i equals 1 for female respondents and 0 for male respondents. β_0 is the constant, β_1 – β_8 are the estimated parameters, and Z_i is the logit index.

Based on the conceptual framework and previous evidence, brand awareness, brand association, and perceived quality were expected to increase the probability of loyalty; hence, $\beta_1 > 0$, $\beta_2 > 0$, and $\beta_3 > 0$. We imposed no predetermined signs on the demographic controls.

4.3 Estimation Technique

We used binary logistic regression because customer loyalty was measured as a dichotomous outcome. The technique estimates the probability that a respondent is loyal while constraining predicted probabilities between zero and one. Let P_i represent the probability that respondent i is loyal:

$$P_i = \Pr(LOY_i = 1 | X_i) = 1/[1 + \exp(-Z_i)] \quad (5)$$

The corresponding log-odds model was expressed as:

$$\ln[P_i/(1 - P_i)] = \beta_0 + \beta_1 BAW_i + \beta_2 BAS_i + \beta_3 PQ_i + \beta_4 AGE1_i + \beta_5 AGE2_i + \beta_6 EDU1_i + \beta_7 EDU2_i + \beta_8 GEN_i \quad (6)$$

Parameters were estimated by maximum likelihood. We assessed statistical significance using Wald statistics and p-values at the 5% level. Exponential coefficients, reported as odds ratios, indicated how the explanatory variables changed the odds of customer loyalty while holding other factors constant. An odds ratio above one indicated higher odds of loyalty, whereas a value below one indicated lower odds.

5. Results and Discussion

5.1 Presentation of Findings

Table 1 presents the binary logistic regression estimates for the effects of brand awareness, brand association, and perceived quality on customer loyalty, with age, educational attainment, and gender included as controls. The analysis used 374 valid responses.

Table 1. Binary logistic regression results

Variable	B	SE	Wald χ^2	p	OR
Brand awareness	0.989	0.262	14.213	<0.001	2.689
Brand association	1.003	0.350	8.217	0.004	2.728
Perceived quality	0.760	0.250	9.212	0.002	2.138
Age: below 30 years	-0.555	0.564	0.969	0.325	0.574
Age: 30–40 years	-1.688	0.628	7.224	0.007	0.185
Education: secondary	0.312	0.569	0.301	0.583	1.366
Education: undergraduate	0.352	0.456	0.598	0.439	1.422
Gender: female	0.481	0.381	1.592	0.207	1.617
Constant	-7.413	1.182	39.306	<0.001	0.001

Notes: N = 374. Dependent variable: customer loyalty (1 = loyal; 0 = otherwise). Reference categories: age above 40 years, postgraduate education, and male. The joint effects of age and education produced Wald statistics of 8.890 ($p = 0.012$) and 0.607 ($p = 0.738$), respectively. B = logit coefficient; SE = standard error; OR = odds ratio.

Brand awareness had a positive and statistically significant effect on customer loyalty ($B = 0.989$, $p < 0.001$). Its odds ratio of 2.689 indicates that, holding the other variables constant, a one-unit increase in brand awareness multiplied the odds of loyalty by approximately 2.69. Customers who could recognize, recall, and distinguish their preferred telecommunications brand were therefore more likely to remain loyal. Brand association also positively and significantly influenced customer loyalty ($B = 1.003$, $p = 0.004$). Its odds ratio of 2.728 indicates that a one-unit improvement in favorable association multiplied the odds of loyalty by approximately 2.73. Brand association produced the largest estimated effect among the three dimensions, although it was only marginally greater than the effect of brand awareness.

Perceived quality recorded a positive and statistically significant coefficient of 0.760 ($p = 0.002$). Its odds ratio of 2.138 indicates that a one-unit increase in perceived quality multiplied the odds of loyalty by approximately 2.14, controlling for the other variables. Customers who considered their operator's services reliable, consistent, and superior were therefore more likely to maintain the relationship.

Age had a statistically significant joint effect on customer loyalty ($p = 0.012$). Respondents aged 30–40 years had significantly lower odds of loyalty than those above 40 years ($B = -1.688$, $p = 0.007$); their odds were approximately 81.5% lower. Respondents below 30 years also had lower estimated odds than the reference group, but the difference was not statistically significant ($B = -0.555$, $p = 0.325$). Educational attainment was jointly insignificant ($p = 0.738$), and neither education category differed significantly from the postgraduate reference group. Female respondents recorded higher estimated odds than males, but gender was also insignificant ($B = 0.481$, $p = 0.207$).

5.2 Discussion

The positive effect of brand awareness demonstrates that familiarity plays an important role in customer retention. Telecommunications customers repeatedly encounter competing providers, promotional packages, and advertising messages. Under these conditions, an easily recognizable and memorable brand is more likely to enter the customer's consideration set and remain a preferred choice. Consistent advertising, distinctive visual identities, memorable slogans, and regular engagement can therefore strengthen recall and reduce uncertainty during service selection.

This result agrees with Mudanganyi et al. (2019), Ayesh et al. (2021), and Julius and Batonda (2022), who found that brand awareness strengthened loyalty in their respective markets. It also supports the positive evidence reported by Alkhawaldeh et al. (2017) and Dlačić and Kežman (2014). Nevertheless, this finding contrasts with Lesmana et al. (2020), whose estimates for brand awareness were statistically insignificant. The divergence suggests that awareness is more likely to produce loyalty when brand familiarity is reinforced by meaningful service experiences and distinctive market positioning.

Brand association emerged as the strongest predictor based on the odds ratios. Awareness alone was therefore insufficient; the meanings and experiences customers connected with an operator were equally important. Customers who associated a provider with convenience, credibility, fair value, safety, and positive experiences were more likely to remain committed. Such associations provide psychological and symbolic differentiation in a market where competing services may appear functionally similar and switching costs are low.

The brand-association result is consistent with Mudanganyi et al. (2019), Kunle et al. (2020), Julius and Batonda (2022), and Desta and Amantie (2024), whose evidence connected favorable brand meanings or broader brand-equity dimensions with telecommunications loyalty and retention. It also supports Aaker's (1991) framework, which treats strong and favorable associations as an important source of brand value. Operators should therefore align advertising, corporate image, customer service, and actual delivery around a consistent identity.

The significant effect of perceived quality confirms that service reliability remains central to loyalty. Customers experience telecommunications services through network availability, call clarity, internet speed, customer support, and consistency. When customers perceive these services as dependable and superior, they are more likely to trust the operator and continue using it. Persistent failures, by contrast, can weaken favorable perceptions and encourage customers to keep multiple SIM cards or switch to competing networks.

This result confirms the quality-loyalty evidence reported by Aydın and Özer (2005), Lai et al. (2009), Dlačić and Kežman (2014), Vijayakumar et al. (2018), Mudanganyi et al. (2019), and Julius and Batonda (2022). This contrasts with Lesmana et al. (2020), who found an insignificant relationship. The present evidence suggests that perceived quality is especially influential in telecommunications because customers evaluate the service continuously through daily network experiences.

The significant age effect indicates that loyalty varied across customer age groups. Respondents aged 30–40 years were less likely to remain loyal than those above 40 years. They may be more inclined to compare offers, respond to promotions, or alternate between operators, although these mechanisms were not measured directly and should be examined in future research. The insignificant education and gender effects suggest that the principal brand-equity dimensions operate across relatively broad demographic categories.

6. Conclusion and Policy Implications

6.1 Conclusion

This study examined how customer-based brand equity influences customer loyalty in the telecommunications industry in Fako, Southwest Cameroon. It focused on brand awareness, brand association, and perceived quality while controlling for age, educational attainment, and gender. All three brand-equity dimensions had positive and statistically significant effects on loyalty. Brand association produced the largest estimated effect, followed closely by brand awareness and then perceived quality. The null hypothesis that the dimensions have no significant effect on customer loyalty was therefore rejected.

The findings show that telecommunications loyalty extends beyond price, promotions, and basic functional attributes. Customers are more likely to remain committed to operators they can readily recognize, associate with favorable experiences, and perceive as offering dependable services. Brand association was

particularly influential, indicating that the meanings, emotions, and experiences attached to an operator can create differentiation even when consumers can switch networks easily or maintain multiple SIM cards. Age also influenced customer loyalty: respondents aged 30–40 were less likely to remain loyal than those above 40. Educational attainment and gender were insignificant. Overall, the evidence reinforces the relevance of customer-based brand equity in an emerging African telecommunications market. It also demonstrates that visibility must be supported by favorable associations and credible service-quality experiences; communication alone is unlikely to sustain loyalty when actual performance fails to meet the expectations created by the brand.

6.2 Managerial and Policy Implications

The findings provide clear marketing implications by showing that customer loyalty develops through a sequence of brand knowledge, brand meaning, and service evaluation. Brand association produced the strongest effect on loyalty ($BAS = 2.728$), followed by brand awareness ($BAW = 2.689$) and perceived quality ($PQ = 2.138$). These dimensions should therefore be managed as complementary components of the consumer decision process rather than as isolated marketing activities.

Brand awareness strengthens loyalty by increasing brand recognition, recall and salience when consumers evaluate competing telecommunications providers. Operators should maintain consistent brand names, colors, symbols, and messages across advertising, social media, mobile applications, and retail outlets. Communication should also link the brand to relevant consumption situations, including reliable connectivity, affordable data, and convenient digital services. This reduces information-search effort and encourages repeat choice.

Brand association matters because it shapes what the brand represents in consumers' minds. Firms should cultivate distinctive associations with reliability, credibility, innovation, convenience, responsiveness, and fair value. Firms must reinforce these meanings through advertising, employee conduct, sponsorships, customer support, and effective service recovery. Strong functional and emotional associations differentiate otherwise similar providers, strengthen attachment, reduce responsiveness to competitors' promotions, and stimulate favorable word-of-mouth.

Perceived quality converts marketing promises into loyalty when actual service performance confirms expectations. Managers should improve network availability, internet speed, call clarity, billing accuracy, and complaint resolution while ensuring promotional claims remain credible. Reliable performance reduces perceived risk, builds trust, and discourages switching. Taken together, awareness places the brand in the consideration set, associations create preference, and perceived quality validates the choice. Marketing performance should therefore be assessed through brand recall, customer retention, repeat usage, recommendations, and switching behavior.

7. Limitations and Directions for Further Research

The study was limited by its cross-sectional design, which captured customer perceptions at one point and did not permit firm causal conclusions. Online snowball sampling may have reduced representativeness by favoring respondents with internet access and stronger social-network connections, while restricting the investigation to Fako limits generalization to other regions of Cameroon. Self-reported responses may also be affected by social-desirability and common-method biases. Future studies should employ probability sampling and longitudinal or experimental designs across multiple regions. Mixed-method research could further examine brand trust, customer satisfaction, switching costs, promotional sensitivity, service recovery, and multi-SIM behavior as mediators or moderators of the brand equity-loyalty relationship.

Authors' Contributions: Kedju Lionel Nembo conceived the study and developed the data-collection instrument. Akwo Kelvin Ndofo drafted the introduction and literature review. Both authors contributed to the methodology, data collection, analysis, manuscript review, and approval of the final version.

Conflict of Interest: The authors declare no conflict of interest.

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APPENDIX QUESTIONNAIRE

SECTION A: DEMOGRAPHIC INFORMATION OF RESPONDENT

1. Gender?
A) Female ☐ b) Male ☐
2. Age group?
Less than 21 ☐ 21-30 ☐ 31-40 ☐ above 40 ☐
3. Educational level?
Secondary Education ☐ HND ☐ first degree ☐ Master's degree ☐ PhD ☐
4. What is your preferred telecommunication service provider?
MTN ☐ ORANGE ☐ NEXTEL ☐ CAMTEL ☐
5. How long have you been using the service of your preferred telecommunication service provider?
less than 1year ☐ 1-5years ☐ 6-10years ☐ above 10years ☐

SECTION B: BRAND EQUITY

Please tick the response that satisfies you for the following statements, where: Strongly Disagree (SDA), Disagree (DA), Neutral (N), Agree (A), and Strongly Agree (SA)

	BRAND EQUITY DIMENSIONS					
	BRAND AWARENESS	SDA	DA	N	A	SA
7	I can easily identify the logo and jingle of the chosen company					
8	When asked about a telecommunication company, the chosen company comes first to your mind					
9	I can easily identify the company's products based on their advertising campaigns					
10	When I think about making use of a telecommunication service, the company comes to mind first					
11	I chose the brand because I am very familiar with it services and products					
	BRAND ASSOCIATION					
12	I believe and trust in the services of the company					
13	The network coverage and speed are attractive enough					
14	The services rendered are a fair return for the price paid					
15	The tariffs on the services rendered are comfortable for me					
16	Using the company's services gives me pride and status					
17	I feel confident and safe using the company's services					
	PERCEIVED QUALITY					
18	The company's products are of better quality					
19	The company offers reliable and consistent services and products					
20	The services rendered are of a better standard					
21	They provide timely and accurate services					

CUSTOMER LOYALTY

1. Do you wish to keep purchasing and using the company's services in the future?
YES ☐ NO ☐