



National Pride vs. Global Brands: How Consumer Ethnocentrism, Digital Engagement, and Sustainability Shape Brand Loyalty in Côte d'Ivoire

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Abstract

This study investigates the combined influence of consumer ethnocentrism (CE), digital brand engagement (DBE), and perceived sustainability orientation (PSO) on brand loyalty (BL) in Côte d'Ivoire, the largest Francophone economy in West Africa. Despite the increasing penetration of global brands into Sub-Saharan African markets and the concurrent rise of national identity discourse, no prior study has jointly examined how these three forces interact to shape consumer allegiance in a Francophone African setting. Grounded primarily in social identity theory with the theory of planned behaviour providing a complementary attitudinal lens, this research employs a cross-sectional survey of 487 consumers across Abidjan, Yamoussoukro, and Bouaké. Data were analysed using partial least squares structural equation modelling (PLS-SEM) with all constructs specified as reflective. Consumer ethnocentrism exerts a significant positive influence on domestic brand loyalty ($\beta = 0.41$, $p < 0.001$) and a significant negative influence on foreign brand loyalty ($\beta = -0.29$, $p < 0.001$). Brand-specific digital engagement partially mediates the ethnocentrism-loyalty relationship for both domestic brands (indirect effect = 0.14, $p < 0.01$) and foreign brands (indirect effect = -0.09, $p < 0.05$). Perceived sustainability orientation positively moderates the link between digital engagement and loyalty (interaction $\beta = 0.18$, $p < 0.01$). Multi-group analysis preceded by measurement invariance confirmation via MICOM uncovers meaningful demographic variations. These findings contribute the first integrative test of CE, DBE, and PSO within a single nomological network in Francophone Sub-Saharan Africa, offering actionable guidance for domestic enterprises, multinational corporations, and policymakers.

Subject Areas

Marketing

Keywords

Consumer Ethnocentrism, Brand Loyalty, Digital Brand Engagement, Sustainability, Côte d'Ivoire, Sub-Saharan Africa, PLS-SEM, Social Identity Theory, CETSCALE

1. Introduction

The accelerating integration of Sub-Saharan African economies into the global marketplace has foregrounded an enduring tension in consumer behaviour: the pull of national identity against the allure of international brands. Nowhere is this tension more palpable than in Côte d'Ivoire, West Africa's largest Francophone economy and the world's foremost cocoa producer, where a burgeoning middle class increasingly navigates choices between homegrown products and imported alternatives [1]. The country's gross domestic product (GDP) growth averaging 6.8 percent annually between 2012 and 2023 has attracted successive multinational brand entries into sectors ranging from fast-moving consumer goods (FMCG) to telecommunications and financial technology [2]. In the FMCG sector, domestic producers such as Solibra (beverages), SIFCA Group (agri-food processing), and Cémoi Côte d'Ivoire (chocolate manufacturing) compete directly against entrenched global brands including Nestlé, Unilever, and Procter & Gamble. In telecommunications, the Ivorian subsidiary of Orange competes with MTN, while in financial technology, local mobile money operators vie with international fintech entrants. This competitive landscape activates complex ethnocentric sentiments that remain empirically underexplored.

Consumer ethnocentrism (CE), defined as the normative belief that purchasing foreign-made products is morally inappropriate because it harms the domestic economy [3], has been extensively investigated in developed-country contexts. Meta-analytic reviews confirm its negative predictive relationship with foreign product acceptance across Western and East Asian markets [4]. However, the construct's manifestation in rapidly developing Sub-Saharan African markets where colonial legacies, trade-dependent economic structures, and youthful demographic profiles create distinctive cultural dynamics remains substantially underexplored [5] [6]. Existing African evidence suggests that consumers in Ghana, Nigeria, and South Africa exhibit moderate-to-high ethnocentric tendencies, but these attitudes are frequently overridden by perceptions of superior foreign product quality [7]-[9]. A recent review argued that African consumers' ethnocentrism is contextually contingent, varying not only by product category but also by the perceived developmental capacity of the domestic economy [10], a proposition that makes Côte d'Ivoire, with its expanding industrial base, a particularly com-

elling setting. The country's Francophone colonial heritage, deep economic integration with European markets, and median population age of 18.9 years [11] create a milieu in which national pride, post-colonial identity, and globalisation coexist in productive tension.

Simultaneously, the digital transformation of the Ivorian consumer landscape has been profound. Mobile internet penetration surpassed 78 percent by late 2024, and social media platforms, particularly Facebook, WhatsApp, Instagram, and TikTok have become dominant channels through which brands interact with consumers [12]. This digital ecosystem has catalysed new forms of brand engagement (digital brand engagement, hereafter DBE) that transcend traditional advertising, enabling consumers to co-create brand narratives, participate in online communities, and exert influence through electronic word-of-mouth [13]. DBE thus constitutes a potentially powerful mediating mechanism through which ethnocentric attitudes may be translated into or attenuated from purchasing behaviour. Critically, DBE may operate differently depending on whether consumers engage with domestic or foreign brands: an Ivorian consumer with ethnocentric leanings who encounters compelling digital content from Solibra may have her existing domestic preference reinforced, whereas the same consumer engaging with Nestlé's locally adapted Instagram campaigns may find her ethnocentric resistance partially attenuated.

A third force reshaping the Ivorian consumer landscape is the growing salience of sustainability. Côte d'Ivoire's economy is deeply entwined with agricultural commodities whose production raises pressing environmental and social questions: deforestation driven by cocoa expansion, labour practices in supply chains, and the ecological footprint of resource extraction [14]. The European Union (EU) Deforestation Regulation (EUDR), which took effect in 2024, has compelled both local producers and multinational buyers to foreground traceability and environmental compliance, thereby elevating consumer awareness of sustainability perceived sustainability orientation, hereafter PSO across the value chain [15]. The Consommons Ivoirien campaign a government sponsored initiative encouraging citizens to prioritise domestically produced goods as a patriotic and economic act [16], has recently incorporated sustainability messaging, linking national pride to environmental stewardship in cocoa regions.

Despite the individual scholarly attention devoted to CE, DBE, and PSO, no prior study has examined their combined influence on brand loyalty (BL) within a single integrative framework in the Ivorian or broader Francophone West African circumstance. This study provides the first simultaneous test of ethnocentrism as a direct predictor, digital engagement as a mediator, and sustainability as a moderator of the DBE-loyalty pathway in Sub-Saharan Africa. The integration is theoretically novel because it reveals that identity-based purchasing predispositions are not static end points but are dynamically reshaped by the quality of digital brand interactions and the credibility of sustainability signals. Against this background, the present study addresses the following research questions:

RQ1: How does consumer ethnocentrism influence brand loyalty toward do-

mestic versus foreign brands in Côte d'Ivoire?

RQ2: Does brand-specific digital engagement mediate the CE-loyalty relationship, and does the mediation differ for domestic versus foreign brand loyalty?

RQ3: Does perceived sustainability orientation moderate the relationship between digital engagement and brand loyalty?

RQ4: How do these relationships vary across key demographic segments, and are such differences robust to measurement invariance?

2. Literature Review

2.1. Consumer Ethnocentrism: Conceptual Foundations and African Evidence

The concept of consumer ethnocentrism, operationalised through the Consumer Ethnocentric Tendencies Scale (CETSCALE) developed by Shimp and Sharma [3], captures the normative belief that purchasing imported goods threatens the domestic economy and the livelihoods of fellow citizens. The construct is rooted in the broader sociological concept of ethnocentrism advanced by Sumner [17], describing the tendency to view one's own group as the centre of evaluative reference. In consumer behaviour, this in-group bias translates into a moral preference for domestic products and corresponding resistance to foreign alternatives, regardless of objective quality differentials [18].

Meta-analytic evidence from predominantly Western and East Asian samples confirms that CE negatively predicts foreign product purchase intentions while positively predicting domestic brand preference, though effect sizes vary considerably across product categories, cultures, and economic development levels [4]. In Sub-Saharan Africa, the picture is more complex. Studies in Ghana [7], Nigeria [8], Kenya [19], and South Africa [9] document moderate ethnocentric tendencies frequently overridden by perceptions of superior foreign product quality, limited domestic product availability, and the status-signalling function of imported brands. Ofori *et al.* [20] found that Ghanaian consumers exhibited high survey measured ethnocentrism that translated only weakly into actual purchasing when foreign alternatives were perceived as markedly superior. Gbadamosi's [10] comprehensive review concluded that ethnocentrism in Africa is conditional and category contingent, modulated by consumers perceptions of their domestic economy's productive capacity.

In Côte d'Ivoire specifically, the post-2011 national reconciliation process and the government's Consommons Ivoirien campaign have created a political environment conducive to ethnocentric sentiment [16]. Opoku and Akorli [6] provided early evidence that Francophone West African consumers exhibit ethnocentric patterns qualitatively similar to those elsewhere in Africa, but noted that the Francophone cultural orientation with deep historical ties to French brands introduces distinctive complexities. These considerations motivate the first hypotheses:

H1a: Consumer ethnocentrism has a significant positive effect on loyalty to-

ward domestic brands in Côte d'Ivoire.

H1b: Consumer ethnocentrism has a significant negative effect on loyalty toward foreign brands in Côte d'Ivoire.

2.2. Digital Brand Engagement in the African Context

Digital brand engagement (DBE) refers to the cognitive, emotional, and behavioural investment that consumers direct toward a brand through digital media channels [13]. The construct transcends mere digital interaction, capturing the depth of the consumer brand relationship as enacted through social media participation, content co-creation, online community involvement, and digital word-of-mouth [21]. In Africa, the explosive growth of mobile internet has created digital ecosystems characterised by mobile-first usage, strong oral culture traditions adapted to audio and video formats, and the blurring of commercial and social interaction on platforms such as WhatsApp [22] [23].

Côte d'Ivoire's digital landscape is distinctively shaped by the dominance of mobile money platforms Orange Money and MTN MoMo which function not merely as payment systems but as gateways to broader digital engagement [24]. Brands that leverage these platforms for interactive marketing, personalised communication, and loyalty reward programmes create digitally embedded relationships. Duffett [25] demonstrated in South Africa that social media marketing significantly influenced young consumers attitudes, and Ndegwa [26] reported similar effects among Kenyan Generation Z consumers. Asamoah and Chovancová [27] further confirmed that social media engagement significantly predicts brand loyalty among urban consumers in Sub-Saharan Africa.

Crucially, DBE may operate differently depending on whether consumers engage with domestic or foreign brands. An ethnocentric consumer who encounters compelling digital content from a domestic brand may find her pre-existing preference reinforced through identity congruent digital interaction. Conversely, the same consumer engaging with a foreign brand's locally adapted digital campaign may experience a partial attenuation of ethnocentric resistance through positive digital experiences that humanise the foreign brand. To capture this brand-context specificity, the present study measures DBE separately for domestic and foreign brands:

H2a: Digital engagement with domestic brands positively mediates the relationship between consumer ethnocentrism and domestic brand loyalty reinforcement pathway.

H2b: Digital engagement with foreign brands negatively mediates the relationship between consumer ethnocentrism and the foreign brand loyalty attenuation pathway.

H3a: Digital engagement with domestic brands has a direct positive effect on domestic brand loyalty.

H3b: Digital engagement with foreign brands has a direct positive effect on foreign brand loyalty.

2.3. Perceived Sustainability Orientation

Perceived sustainability orientation (PSO) encompasses consumers' perceptions of a brand's commitment to environmental protection, social responsibility, and ethical business practices [28]. In Côte d'Ivoire, sustainability is inseparable from the political economy of cocoa, which accounts for approximately 40 percent of export revenues and employs over 600,000 farming households [29]. The EUDR has compelled supply chain actors to foreground traceability, raising consumer consciousness to unprecedented levels [15]. Empirical evidence from Sub-Saharan Africa indicates that while sustainability is generally less salient than price and quality, it serves as a powerful differentiator among otherwise equivalent brands and resonates strongly with educated, urban, and younger consumers [30] [31]. Mensah and Mensah [32] recently provided cross-country evidence from Kenya and Ghana confirming that sustainability perceptions significantly predict purchase intentions in African emerging markets. Green *et al.* [33] argued that sustainability functions as a trust signal, particularly in markets where brand credibility is contested. The present study measures PSO generically and tests its role as a moderator of the DBE loyalty pathway:

H4: Perceived sustainability orientation positively moderates the relationship between digital brand engagement and brand loyalty, such that the effect of DBE on BL is stronger when PSO is high. This moderation is tested for both domestic and foreign loyalty pathways.

H5a: Perceived sustainability orientation has a direct positive effect on domestic brand loyalty.

H5b: Perceived sustainability orientation has a direct positive effect on foreign brand loyalty.

2.4. Brand Loyalty in Emerging African Markets

Brand loyalty (BL), conceptualised as a deeply held commitment to repurchase a preferred brand consistently despite competitors' marketing efforts [34], operates distinctively in emerging markets. Price sensitivity, product availability constraints, and communal decision-making structures complicate the construct in ways Western-derived models may not capture [35]. In Côte d'Ivoire, brand choices are discussed within extended family networks, neighbourhood associations, and religious communities; loyalty is both an individual cognitive commitment and a socially embedded practice [36]. Boateng and Narteh [37] found further evidence in Ghana that online relationship marketing and consumer engagement significantly predict brand loyalty in retail contexts. This communal dimension has been amplified by digital platforms: WhatsApp groups and Facebook communities now function as electronic word-of-mouth channels where brand experiences are shared and collectively evaluated.

2.5. Theoretical Foundations and Their Operationalisation

The conceptual model integrates two theoretical lenses with clearly delineated

roles. Social identity theory (SIT) [38] serves as the primary theoretical framework, explaining how national identity operationalised through consumer ethnocentrism generates in-group (domestic brand) favouritism and out-group (foreign brand) derogation. SIT provides the theoretical rationale for H1a and H1b and anchors the identity based interpretation of why ethnocentric predispositions influence brand loyalty.

The theory of planned behaviour (TPB) [39] serves a complementary, rather than coequal, role. Specifically, TPB's attitude component informs the conceptualisation of CE as a summary attitudinal construct that captures evaluative orientations toward domestic versus foreign purchasing. However, the present study does not independently measure the full TPB model subjective norms and perceived behavioural control are not operationalised as separate constructs. This decision reflects three considerations. First, CE, as measured by the CETSCALE, already subsumes the normative dimension of TPB: CETSCALE items capture both the personal attitude and the perceived social norm simultaneously [3]. Second, perceived behavioural control is treated as a contextual condition rather than as a measured latent variable. Third, DBE and PSO serve functionally analogous roles to the facilitating conditions that TPB envisions as shaping the attitude behaviour link.

This integration produces a nomological network in which CE operates as an identity-based attitudinal driver, while DBE mediates and PSO moderates the translation of that attitudinal stance into loyalty outcomes. **Table 1** depicts the proposed conceptual model with all hypothesised relationships.

Table 1. Proposed conceptual model of brand loyalty antecedents in Côte d'Ivoire.

PREDICTOR	MEDIATORS	OUTCOMES
Consumer Ethnocentrism (CETSCALE – Reflective) SIT: In-group/out-group identity [primary framework] TPB: attitudinal framing of CE only — not independently operationalised H1a → BL-Dom (+) H1b → BL-For (–)	DBE-Domestic DBE-Foreign (Brand-specific, Reflective) H2a: CE→DBE-D→BL-D H2b: CE→DBE-F→BL-F H3a/b: DBE→BL (+)	BL-Domestic BL-Foreign (Reflective) H5a: PSO → BL-D (+) H5b: PSO → BL-F (+)
MODERATOR: Perceived Sustainability Orientation (PSO) Measured Generically (Reflective). H4: PSO × DBE → BL (tested for both domestic and foreign loyalty paths). Controls: Age Gender Income Education City Product Category.		

Note. DBE-D = Digital Brand Engagement with domestic brands; DBE-F = Digital Brand Engagement with foreign brands; BL-Dom = Brand Loyalty Domestic; BL-For = Brand Loyalty Foreign. Solid arrows = direct effects; PSO = moderating role. All constructs reflective.

3. Research Methodology

3.1. Research Philosophy and Design

This study adopts a positivist research philosophy, a deductive approach, and a cross sectional survey design. The quantitative methodology is appropriate for testing theory derived hypotheses about relationships among latent constructs using a large, urban-sampled sample [40]. The unit of analysis is the individual consumer.

3.2. Population and Sampling Strategy

The target population comprised adult consumers (aged 18+) residing in Côte d'Ivoire who had purchased at least one branded product in the preceding six months. A multi-stage stratified sampling procedure was employed across three cities selected for geographic and socioeconomic variation: Abidjan the economic capital, population approximately 5.6 million, Yamoussoukro (the political capital, 362,000), and Bouaké the second-largest city, 832,000. Within each city, neighbourhoods were stratified by socioeconomic classification and respondents recruited proportionally. Within each neighbourhood, systematic random sampling identified households, and within each household the adult with the most recent birthday was invited. Data collection occurred between January and March 2025 through face-to-face administration supplemented by an online option. Of the 550 distributed questionnaires, 378 (68.7%) were completed face-to-face by trained enumerators and 172 (31.3%) via the online platform. Independent-samples t-tests revealed no significant differences between administration modes on any of the six latent construct mean scores (all $p > 0.12$), nor on composite CE, DBE-D, DBE-F, or BL means. Response mode was therefore not a meaningful source of variance, and both sub-samples were pooled for all subsequent analyses.

A total of 550 questionnaires were distributed. After removing 41 incomplete responses and 22 that failed embedded attention checks, 487 usable responses were retained effective response rate: 88.5%. This exceeds the 200 observation minimum for structural equation modelling [41] and satisfies PLS-SEM's ten-times rule the maximum number of paths directed at any endogenous construct being seven, requiring 70 observations.

A limitation of this sampling frame is the exclusion of rural areas, which constitute a substantial share of Côte d'Ivoire's population. Rural consumers are characterised by lower internet penetration estimated at 34% versus 78% urban [12], greater reliance on traditional retail channels, and potentially stronger ethnocentric orientations rooted in community based economic solidarity. Future research extending the sample to semi-urban and rural settings would enhance generalisability; this limitation is discussed further in Section 6.

3.3. Measurement Instruments and Brand-Specific Assessment

All constructs were measured using established, peer-reviewed scales adapted to the Ivorian environment. Digital brand engagement (DBE) was measured separately for domestic and foreign brands. Respondents identified one domestic and one foreign brand they purchase regularly, and the DBE items were administered twice once per brand. Perceived sustainability orientation (PSO), by contrast, was measured as a generic consumer-level disposition. Brand loyalty (BL) was measured separately for the named domestic and foreign brands.

To ensure consistent classification, a brand was operationally defined as domestic if it was majority-owned by Ivorian nationals or registered and headquartered in Côte d'Ivoire, regardless of input sourcing. It was classified as foreign if

majority-owned by a non-Ivorian entity, even where local subsidiaries or manufacturing plants were present. Brands with ambiguous ownership for example, Orange Côte d'Ivoire, which is a foreign-owned operator with dominant local market presence were classified according to ultimate beneficial ownership and disclosed to respondents. Respondents were guided by a pre-classified reference list spanning seven product categories: beverages, personal care, fast-moving consumer goods (FMCG), telecommunications, financial services, apparel, and food processing.

The most frequently nominated domestic brands were Solibra (beverages, 21.4%), SIFCA agri-food products (18.9%), and Ivoire Coton/local apparel brands (14.2%). Among foreign brands, Nestlé (FMCG, 24.6%), MTN (telecommunications, 19.3%), and Unilever personal care (16.1%) were most commonly selected. Product category was retained as a covariate in all structural models. Preliminary multi-group comparisons across the seven categories confirmed that category did not significantly moderate the primary CE→BL paths (all category × CE interaction terms: $|\Delta\beta| < 0.05$, $p > 0.10$), supporting the pooled cross-category analysis.

The questionnaire was drafted in English, translated into French by a certified bilingual translator, and back-translated by an independent linguist to ensure conceptual equivalence [42]. A pre-test with 45 consumers in Abidjan resulted in minor wording refinements.

3.4. Analytical Approach: Justification for PLS-SEM

Data were analysed using partial least squares structural equation modelling (PLS-SEM) through SmartPLS 4.0. The choice of PLS-SEM over covariance based SEM (CB-SEM) is justified by four considerations [43]. First, the study's objective is both explanatory and predictive, aligning with PLS-SEM's prediction-oriented philosophy [41]. Second, the model is relatively complex, incorporating six endogenous constructs, two mediating pathways, and a moderating interaction, which can create convergence difficulties in CB-SEM [44]. Third, the data exhibit non-trivial departures from multivariate normality, favouring PLS-SEM's distribution-free estimation. Fourth, PLS-SEM's bootstrap-based inference (5,000 resamples) provides robust significance tests without distributional assumptions.

The analysis followed the two-stage approach: measurement model assessment followed by structural model assessment. Mediation was evaluated using bootstrap confidence intervals, and moderation was tested via the product-indicator approach. Prior to multi-group analysis (MGA), measurement invariance was assessed using the MICOM procedure [45].

3.5. Common Method Bias and Ethical Considerations

Common method bias (CMB) was addressed through procedural remedies item randomisation, varied scale anchors, guaranteed anonymity and statistical diagnostics. Harman's single-factor test revealed that the first unrotated factor explained 23.7% of total variance, below the 50% threshold [46]. Full collinearity

assessment confirmed all inner VIF values below 3.3, indicating CMB is unlikely to distort results [47]. Ethical clearance was obtained from the Université Félix Houphouët-Boigny Ethics Committee; informed consent was obtained from all participants.

3.6. Demographic Profile

Table 2 provides the demographic profile.

Table 2. Demographic profile of respondents (N = 487).

Variable	Category	n	%	M(CE)	SD(CE)
Age	18 - 24	148	30.4	4.21	1.18
	25 - 34	151	31.0	4.38	1.14
	35 - 44	98	20.1	4.87	1.06
	45 - 54	58	11.9	5.24	0.97
	55+	32	6.6	5.51	0.91
Gender	Female	257	52.8	4.56	1.12
	Male	230	47.2	4.63	1.15
City	Abidjan	330	67.8	4.31	1.19
	Yamoussoukro	78	16.0	4.92	1.03
	Bouaké	79	16.2	5.07	0.98
Education	Primary or below	62	12.7	5.18	0.94
	Secondary (Lycée)	142	29.2	4.74	1.08
	Vocational/Technical	96	19.7	4.52	1.11
	University degree+	187	38.4	4.19	1.21
Income (FCFA/mo.)	<100,000	103	21.1	4.82	1.04
	100k - 300k	178	36.6	4.61	1.10
	300k - 600k	126	25.9	4.42	1.15
	>600,000	80	16.4	4.18	1.22

Note. M(CE)/SD(CE) = Mean and standard deviation of consumer ethnocentrism by subgroup (7-point scale). FCFA = West African CFA Franc.

4. Findings

4.1. Descriptive Statistics and Data Diagnostics

Table 3 presents descriptive statistics. Several indicators exhibit skewness exceeding $|1.0|$ and kurtosis above 1.5, confirming non-trivial departures from normality and supporting PLS-SEM's bootstrap-based inference [41]. No construct exhibited floor or ceiling effects.

Table 3. Descriptive statistics for latent constructs (N = 487).

Construct	M	SD	Skew	Kurt	Min	Max	α	CR/AVE
CE	4.59	1.14	-0.42	-0.31	1.20	7.00	0.912	0.928/0.587
DBE-Dom	4.87	1.08	-0.56	0.18	1.36	7.00	0.918	0.933/0.610
DBE-For	4.42	1.21	-0.33	-0.47	1.00	7.00	0.924	0.938/0.618
PSO	4.71	1.09	-0.61	0.24	1.29	7.00	0.884	0.909/0.642
BL-Dom	4.93	1.05	-0.68	0.42	1.50	7.00	0.876	0.905/0.660
BL-For	4.36	1.18	-0.29	-0.52	1.00	7.00	0.841	0.874/0.714

Note. All outer loadings > 0.708 (lowest: 0.721). All α > 0.70, CR > 0.70, AVE > 0.50.

4.2. Measurement Model Evaluation

All composite reliability (CR) values exceed 0.70 range: 0.874 - 0.938 and all average variance extracted (AVE) values exceed 0.50 range: 0.587 - 0.714, confirming convergent validity. Cronbach's alpha values range from 0.841 to 0.924. All individual outer loadings surpass the 0.708 threshold [41]. Discriminant validity was assessed using the heterotrait-monotrait (HTMT) ratio [48]. Table 4 presents the HTMT matrix. All values fall below the conservative 0.85 threshold, confirming empirical distinctness. The HTMT between DBE-Domestic and DBE-Foreign is 0.487, confirming that brand-specific measurement captures genuinely distinct constructs.

Table 4. Discriminant validity: HTMT ratio matrix.

	CE	DBE-D	DBE-F	PSO	BL-D	BL-F
CE	—					
DBE-D	0.418	—				
DBE-F	0.324	0.487	—			
PSO	0.298	0.541	0.523	—		
BL-D	0.634	0.557	0.312	0.472	—	
BL-F	0.387	0.341	0.618	0.531	0.356	—

Note. All HTMT values < 0.85 (conservative threshold [48]).

4.3. Structural Model Results

Collinearity was assessed prior to structural model evaluation; all inner VIF values ranged from 1.28 to 2.67, well below 5.0. The model explained 47.3% of domestic brand loyalty variance ($R^2 = 0.473$) and 39.6% of foreign brand loyalty variance ($R^2 = 0.396$) both moderate-to-substantial [49]. Stone-Geisser Q^2 values of 0.312 (BL-D) and 0.267 (BL-F) exceeded zero, confirming predictive relevance. SRMR values (0.058 and 0.062) fell below 0.08. Table 5 presents the full structural results.

Table 5. Structural model: path coefficients and hypothesis testing (bootstrap N = 5000).

H	Path	β	SE	t	95% CI	p	f ²	Result
H1a	CE → BL-D	0.41	0.052	7.82	[0.31, 0.51]	<0.001	0.21	✓
H1b	CE → BL-F	-0.29	0.056	5.14	[-0.40, -0.18]	<0.001	0.11	✓
H2a	CE→DBE-D→BL-D	0.14	0.038	3.67	[0.06, 0.22]	<0.01	—	✓
H2b	CE→DBE-F→BL-F	-0.09	0.031	2.84	[-0.16, -0.03]	<0.05	—	✓
H3a	DBE-D → BL-D	0.34	0.052	6.51	[0.24, 0.44]	<0.001	0.15	✓
H3b	DBE-F → BL-F	0.31	0.054	5.74	[0.21, 0.41]	<0.001	0.13	✓
H4	PSO × DBE-D→BL-D	0.18	0.046	3.89	[0.09, 0.27]	<0.01	0.05	✓
H4	PSO × DBE-F→BL-F	0.12	0.048	2.51	[0.03, 0.21]	<0.05	0.03	✓
H5a	PSO → BL-D	0.22	0.051	4.28	[0.12, 0.32]	<0.001	0.07	✓
H5b	PSO → BL-F	0.19	0.053	3.58	[0.09, 0.29]	<0.001	0.05	✓

Note. f² effect sizes: 0.02 small, 0.15 medium, 0.35 large [49]. ✓ = Supported.

All hypotheses received empirical support. Consumer ethnocentrism demonstrated a medium-to-large positive effect on domestic brand loyalty (H1a: $\beta = .41$, $f^2 = 0.21$) and a small-to-medium negative effect on foreign brand loyalty (H1b: $\beta = -0.29$, $f^2 = 0.11$). The brand-specific mediation results reveal an important asymmetry: the indirect effect through DBE-Domestic is positive and substantial (H2a: $\beta = 0.14$, $p < 0.01$), indicating that digital engagement with domestic brands reinforces ethnocentrism's positive loyalty effect. Conversely, the indirect effect through DBE-Foreign is negative but smaller (H2b: $\beta = -0.09$, $p < 0.05$), suggesting that while ethnocentrism dampens digital engagement with foreign brands, the mediating attenuation pathway is weaker than the reinforcement pathway. Both mediation effects represent partial mediation, as direct CE→BL paths remain significant.

The two a-paths of the mediation chains clarify the sign and magnitude of the indirect effects. CE exerted a significant positive effect on DBE-Domestic ($\beta = 0.33$, $SE = 0.049$, $t = 6.73$, $p < 0.001$, 95% CI [0.23, 0.43]), confirming that ethnocentric consumers engage more intensively with domestic brand digital content. Conversely, CE exerted a significant negative effect on DBE-Foreign ($\beta = -0.22$, $SE = 0.051$, $t = 4.31$, $p < 0.001$, 95% CI [-0.32, -0.12]), indicating that ethnocentrism suppresses engagement with foreign brand channels. These opposing a-path signs directly account for the opposing directions of the two indirect effects reported above: a positive CE→DBE-D→BL-D chain and a negative CE→DBE-F→BL-F chain.

The moderating role of PSO was confirmed for both loyalty outcomes, though with different magnitudes. The PSO × DBE-D interaction was stronger ($\beta = 0.18$, $p < 0.01$) than the PSO × DBE-F interaction ($\beta = 0.12$, $p < 0.05$), suggesting that sustainability amplifies digital engagement's loyalty effect more powerfully for domestic brands perhaps because sustainability and national pride are perceived as

aligned values in the Ivorian context. PSO also exerted significant direct effects on both domestic (H5a: $\beta = 0.22$) and foreign brand loyalty (H5b: $\beta = 0.19$).

4.4. Measurement Invariance and Multi-Group Analysis

Prior to multi-group comparisons, measurement invariance was assessed using the MICOM procedure [45]. Configural invariance was established by confirming identical model specification across all sub-groups. Compositional invariance was confirmed through permutation testing (5000 permutations): all original correlation values exceeded the 5% quantile. Step 3 showed significant differences for some constructs (e.g., CE means differed between age groups), establishing partial measurement invariance sufficient for MGA [45]. Table 6 reports MGA results.

Table 6. Multi-group analysis: differential path coefficients (MICOM-Validated).

Path	Comparison	β (G1)	β (G2)	$ \Delta\beta $	p (perm)	Interpretation
CE→BL-D	18 - 34 vs 35+	0.36	0.52	0.16	0.024*	Stronger older
DBE-D→BL-D	18 - 34 vs 35+	0.42	0.21	0.21	0.008**	Stronger youth
PSO→BL-D	Univ vs Non-U	0.31	0.14	0.17	0.017*	Stronger educated
CE→BL-F	Abidjan vs Other	-0.22	-0.41	0.19	0.012*	Weaker Abidjan
PSO × DBE→BL	Female vs Male	0.24	0.11	0.13	0.041*	Stronger women
CE→BL-D	Low vs High Inc.	0.49	0.33	0.16	0.031*	Stronger low-inc.

Note. * $p < 0.05$; ** $p < 0.01$. All comparisons meet minimum invariance requirement [45].

4.5. Model Fit Summary

Table 7 consolidates model performance.

Table 7. Model fit and predictive performance.

Indicator	BL-D	BL-F	DBE-D	Threshold
R ²	0.473	0.396	0.214	>0.26 subst.
R ² Adjusted	0.466	0.388	0.210	—
Q ² (Stone-Geisser)	0.312	0.267	0.148	>0
SRMR	0.058	0.062	—	<0.08
GoF (Tenenhaus)	0.528	0.491	—	>0.36 large

5. Conclusions

This study investigated the interplay of consumer ethnocentrism (CE), digital brand engagement (DBE), and perceived sustainability orientation (PSO) as determinants of brand loyalty (BL) in Côte d'Ivoire. The revised empirical model, which measures DBE separately for domestic and foreign brands, yields several conclusions.

First, consumer ethnocentrism is a genuine and statistically significant force in Ivorian consumer behaviour. National pride translates into measurable loyalty to-

ward domestic brands ($\beta = 0.41$) and measurable resistance to foreign alternatives ($\beta = -0.29$). This dual finding validates social identity theory's applicability to urban Francophone West African contexts and is consistent with the Consommons Ivoirien discourse resonating with tangible purchasing predispositions particularly among older and lower-income urban consumers within the three sampled cities [10].

Second, and constituting the study's most important theoretical contribution, digital brand engagement functions as a partial mediator that reshapes ethnocentric predispositions through brand-specific pathways. The finding that mediation operates differently for domestic brands (reinforcement: $\beta = 0.14$) and foreign brands (attenuation: $\beta = -0.09$) is novel. It demonstrates that the digital arena is not merely a channel but a transformative mechanism: a domestic brand generating compelling digital content amplifies the ethnocentric loyalty advantage, while a foreign brand that engages Ivorian consumers through culturally localised digital interaction can partially neutralise ethnocentric resistance. This extends Hollebeek *et al.*'s [13] engagement framework by revealing that engagement's effects are conditioned by identity congruence between the consumer and the brand's origin. This finding aligns with Osei-Frimpong *et al.* [50], who demonstrated among Ghanaian millennials that digital brand communications strengthen loyalty through social identity mechanisms.

Third, sustainability is not a peripheral concern but a meaningful moderating force. The $PSO \times DBE$ interaction is significant for both domestic ($\beta = 0.18$) and foreign brands ($\beta = 0.12$), though stronger for domestic brands suggesting that sustainability and national pride are perceived as aligned values in the Ivorian cocoa-economy context. This is the first empirical test of PSO as a moderator of the DBE–loyalty pathway in Sub-Saharan Africa.

Fourth, the MICOM-validated multi-group analysis reveals that the Ivorian market is demographically segmented in ways that carry direct strategic implications. The digital engagement pathway dominates among younger consumers, while ethnocentric effects dominate among older and non-urban consumers. Sustainability effects are strongest among university-educated women. These patterns suggest that Côte d'Ivoire's consumer landscape is transitional: the forces shaping brand loyalty are shifting generationally toward digital engagement and sustainability, even as ethnocentric sentiment retains substantial influence among older cohorts.

6. Limitations and Future Research

Several limitations warrant acknowledgement. First, the cross-sectional design precludes causal inference; future research should employ longitudinal panel designs or experimental manipulations to establish temporal precedence. Second, the sample is limited to three urban centres; rural Ivorian consumers approximately 47% of the national population [11] may exhibit different patterns given lower internet penetration and stronger communal purchasing norms. Third,

while DBE was measured brand-specifically, PSO was measured generically; future research could operationalise brand-specific PSO to test whether sustainability's moderating effect differs for domestic versus foreign brands. Fourth, CE was treated as unidimensional per the CETSCALE tradition; future research should explore whether it captures distinct facets economic nationalism, cultural protectionism, and social identity defence. Fifth, product category was included as a control rather than a focal variable; category-specific models would enhance precision. Sixth, the role of language merits investigation: whether brands communicating in Nouchi generate stronger youth engagement, or whether French-language sustainability messaging is more persuasive to educated consumers, are tractable questions. Finally, comparative research across Francophone West Africa Senegal, Cameroon, Burkina Faso would test regional generalisability, and the implementation of the African Continental Free Trade Area (AfCFTA) may reshape ethnocentric dynamics.

7. Recommendations

7.1. For Domestic Ivorian Brands

Domestic brands possess a natural competitive advantage rooted in consumer ethnocentrism, but this advantage is maximised when accompanied by strategic investments in digital engagement and sustainability storytelling. Firms such as Solibra, SIFCA, and Ivoire Coton should develop integrated digital strategies that bring national pride narratives to life through interactive social media content, producer storytelling, and mobile-based loyalty programmes integrated with Orange Money and MTN MoMo. The Consommons Ivoirien movement provides a collective branding platform that individual firms can amplify digitally to reach younger consumers where ethnocentric sentiment alone is insufficient but digital engagement effects are strongest ($\beta = 0.42$ for youth vs. 0.21 for older consumers).

7.2. For Multinational Corporations

The negative CE–foreign loyalty relationship ($\beta = -0.29$) is real but modulable. Foreign brands should pursue a dual strategy of digital localisation and sustainability authenticity. Digital localisation means employing Ivorian content creators, producing content in French and Nouchi, and integrating with domestic mobile money platforms. Sustainability authenticity means demonstrating verifiable commitments within the Ivorian environment deforestation-free cocoa sourcing, fair farmer pricing, local processing investment rather than generic global CSR messaging. The $\text{PSO} \times \text{DBE-F}$ interaction ($\beta = 0.12$) suggests that when foreign brands combine credible sustainability with strong digital engagement, they can partially convert ethnocentric scepticism into sustainability-anchored trust.

7.3. For Policymakers

The Consommons Ivoirien campaign would benefit from digital infrastructure integration: a government-supported platform aggregating domestic brand op-

tions with sustainability and quality certifications, and investment in digital literacy programmes for domestic SMEs. The finding that ethnocentrism's negative effect on foreign brand loyalty is weaker in Abidjan ($\beta = -0.22$) than in other cities ($\beta = -0.41$) suggests that policymakers seeking to protect domestic industry should focus support on secondary cities and rural areas.

7.4. For Academic Research

Scholars should invest in longitudinal, multi-country, mixed-method designs with culturally grounded instruments. The field needs African-origin measurement scales rather than perpetual adaptation of Western instruments.

Conflicts of Interest

The authors declare no conflicts of interest.

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