

THE IMPACT OF MARKET PLACE PERSONA BASED NEUROMARKETING ON BRAND IDENTITY AND CONSUMER ATTITUDE ON SDG'S

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ABSTRACT

Objective: The objective of this study is to investigate the impact of persona-based neuromarketing on brand identity and consumer attitude in the digital marketplace, with the aim of understanding how neuromarketing principles can enhance consumer engagement and marketing effectiveness.

Theoretical Framework: This topic is underpinned by several key concepts and theories. Häusel's Limbic Map, consumer behavior theories, and digital marketing frameworks provide a solid basis for understanding the context of the investigation.

Method: The methodology adopted for this research comprises a quantitative approach using structural equation modelling with SmartPLS. Participants included 440 respondents, who were surveyed via Google Forms. The study analyzed variables such as Persona, User Interaction, Information Quality, Ease of Use, Visual Design, Entertainment Value, Customization, and Website Domain.

Results and Discussion: The results obtained revealed that consumer perceptions of marketplace personas significantly impact their attitudes, with mediator variables playing a crucial role. The marketplace itself acts as a confounding variable, influencing the relationship between brand persona and consumer engagement. In the discussion, these results are contextualized in light of the theoretical framework, highlighting the importance of aligning branding strategies with target audience motivations.

Research Implications: The practical and theoretical implications of this research are discussed, providing insights into how the results can be applied in the field of digital marketing. These implications could encompass e-commerce strategy development, brand management, and consumer engagement tactics.

Originality/Value: This study contributes to the literature by applying innovative neuromarketing techniques to the digital marketplace context, offering new insights into consumer behavior. The relevance and value of this research are evidenced by its potential to enhance consumer loyalty and brand equity, aligning with SDG 8 and SDG 9.

Keywords: neuromarketing, brand persona, consumer attitude, digital marketing, SDG 8 and SDG 9, häusel's limbic map, sustainable development goals (SDGs).

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1 INTRODUCTION

The burgeoning growth of e-commerce in Indonesia has underscored the critical role of digital marketing strategies in shaping consumer attitudes and marketplace dynamics. Indonesia is the 8th largest e-commerce market with a revenue of US\$94,856.8 million in 2024, surpassing France. It has an annual growth rate (CAGR) of 21.1% up to 2028 and contributes 30.5% to global growth in 2024 (Statista, 2024). This makes it attractive for e-commerce players to sell in the Indonesian marketplace. As of January 2024, Indonesia had 139.0 million social media users, equivalent to 49.9 percent of the total population, and there were 353.3 million active mobile connections, equivalent to 126.8 percent of the total population (Kemp, 2024). With Indonesia ranking prominently in e-commerce sales growth and internet penetration, understanding consumer preferences and their interactions with marketplace platforms becomes paramount. Despite this growth, many Micro, Small, and Medium-sized Enterprises (MSMEs) in Indonesia have yet to fully harness digital technologies, highlighting the need for targeted strategies that align with consumer behaviours (BPS, 2021; Santika & Barat, 2023).

Neuromarketing, an emerging field integrating neuroscience with marketing practices, offers novel insights into understanding how consumers perceive and interact with brand personas on digital platforms. As an emerging field combining neuroscience with marketing, offers profound insights into consumer behaviour by examining the brain's responses to marketing stimuli. Techniques like EEG, fMRI, eye-tracking, and GSR have advanced our understanding of the subconscious processes influencing consumer decisions (Baldo *et al.*, 2022; Bigné *et al.*, 2023). Häusel's limbic map further categorizes these processes into three main motivational systems—Balance, Stimulant, and Dominance—each playing a pivotal role in shaping consumer behaviour (Häusel, 2011). By leveraging neuroscientific methods, this study aims to uncover the neurological underpinnings of consumer responses to brand personas across top Indonesian marketplace platforms (Blibli, Bukalapak, Lazada, Shopee, Tiktok Shop, Tokopedia, Zalora). This research seeks to bridge the gap between theoretical advancements in neuromarketing and practical applications in

digital marketing, ultimately contributing to enhancing consumer engagement and marketing effectiveness in Indonesia's competitive e-commerce landscape.

The novelty of this research lies in its pioneering integration of neuromarketing principles with the concept of brand personas within the Indonesian e-commerce marketplace context. This study breaks new ground by not only adapting methodologies but also applying them specifically to understand local consumer preferences and behaviours. This approach not only enhances the understanding of brand-persona interactions but also provides actionable insights for optimizing digital marketing strategies effectively.

2 THEORETICAL FRAMEWORK

2.1 NEUROMARKETING

This study highlights the transformative impact of neuromarketing on enhancing consumer behaviour understanding in digital marketing contexts. Research employing EEG, fMRI, eye-tracking, and GSR techniques has advanced insights into subconscious processes guiding consumer choices and emotional responses to marketing stimuli (Baldo *et al.*, 2022; Bigné *et al.*, 2023; Jai *et al.*, 2021; Kislov *et al.*, 2021; Nizam *et al.*, 2022). Emotional valence and arousal levels have been found crucial in shaping consumer trust perceptions, sharing intentions, and brand engagement on social media (Baldo *et al.*, 2022; Kakaria *et al.*, 2023; Nizam *et al.*, 2022). Moreover, sensory experiences and emotional responses play interconnected roles in influencing customer satisfaction and preferences in online shopping environments (Baldo *et al.*, 2022; Bigné *et al.*, 2023; Kakaria *et al.*, 2023; Mañas-Viniegra *et al.*, 2021; Rua-Hidalgo *et al.*, 2021).

Neuromarketing's integration into marketing research has elucidated consumer perception, attention, and memory processes, particularly in visual content and social media marketing contexts (Baldo *et al.*, 2022; Bano *et al.*, 2019; Jai *et al.*, 2021; Lazar & Pop, 2021; Nizam *et al.*, 2022). Visual aesthetics and sensory engagement in social media content significantly enhance consumer attention and emotional responses, thereby influencing brand trust

and sharing intentions (Baldo *et al.*, 2022; Bano *et al.*, 2019; Jai *et al.*, 2021).

Furthermore, neuromarketing techniques have provided insights into consumer value perception and decision-making processes in digital contexts, informing strategies related to product attributes, ratings, and online advertisements (Kakaria *et al.*, 2023; Mañas-Viniegra *et al.*, 2021; Nizam *et al.*, 2022; Riley & Randolph, 2021; Ullah *et al.*, 2022). These findings underscore the variability in consumers' neural responses based on individual traits, emotional valence, and attention patterns (Kakaria *et al.*, 2023; Mañas-Viniegra *et al.*, 2021; Riley & Randolph, 2021; Ullah *et al.*, 2022). This review substantiates how neuromarketing insights advance digital marketing strategies by enhancing consumer engagement, personalization, and user experience optimization (Kemora *et al.*, 2024).

2.2 BRAND PERSONALITY AND DIGITAL MARKETING

Brand Personality (BP) refers to a set of human characteristics associated with a brand. This concept allows consumers to articulate their thoughts and emotions, express themselves, embody an ideal version of themselves, or highlight specific aspects of their identity through their use of a brand. BP serves as a primary method to differentiate a brand, driving consumer preference and usage, and acts as a common thread in cross-cultural brand marketing (Aaker, 1997; Bano *et al.*, 2019; Huang *et al.*, 2012; Xu *et al.*, 2023).

Research on BP in the digital landscape began in the 2000s. Ghorbani conducted a literature review and identified that the BP framework commonly used is the Brand-as-a-person or brand-as-a-personality framework. This framework is influenced by various factors and antecedents such as the type of channel, platform design, and diverse influencing factors like cognitive consequences (brand authenticity, perceived quality) or affective consequences (brand loyalty, customer satisfaction) (Agrippina & Suratnoaji, 2022; Ghorbani *et al.*, 2022; Pasaribu *et al.*, 2023).

In the digital context, BP is often referred to as "Persona," representing a semi-fictional Brand-as-a-person (Cui *et al.*, 2019; Kislov *et al.*, 2021). The consumers associated with these personified brands are termed "Buyer

Personas," indicating individuals who willingly and voluntarily purchase products that embody a personality (Patruti-Baltes, 2016). Kollmann and Suckow, (2012) introduced a novel framework that combines behavioural-based and identity-based approaches. This framework was designed to elucidate the significant brand identity dimensions that influence consumers attitudes within E-commerce platforms.

3 METHODOLOGY

This study employs a quantitative approach, Structural Equation Modelling (SEM) using SmartPLS to analyse the relationships between persona based neuromarketing insights and consumer attitude. The primary data was collected through surveys with google forms. The sample consisted of 442 participants representative of diverse demographic backgrounds.

The core structure of this study integrates consumer attributes rooted in the Limbic Theory of neuromarketing (Häusel, 2011) and the Kollman & Suckow Model (Kollmann and Suckow, 2012), which influence user attitudes through effective brand communication in digital marketing on marketplace platforms. The research question focuses on evaluating the effect of perceived Persona of seven major Indonesian marketplaces: Blibli, Bukalapak, Lazada, Shopee, TikTok Shop, Tokopedia, and Zalora on the brand identity and consumers' attitude.

To address the Persona of marketplaces, a quantitative survey was conducted to explore the brand perceptions associated with the seven distinct Indonesian marketplaces. This methodology closely mirrors a previous investigation by Rüschenndorf (2020), focusing on brand perception and positioning, with an emphasis on using Hausel's Limbic Map and Limbic Type (Häusel, 2011). Participants were asked with the research instrument in evaluating Persona on the focus on different customers motives or values when look into an advertisement of MSME product on marketplace which were pleasure, ease, cordiality, friendship, adventure, spontaneity, freedom, rebellion, victory, pride, reliability, tradition, and quality. Each motive was rated using a Likert scale ranging from 1 to 5, where 1 represented the least

focus and 5 represented the most focus. This assessment seeks to identify the perceived position of the marketplace's Limbic Map or Persona as seen by customers, providing insights into the emotional and motivational appeals used in their advertising strategies. For the brand identity factors and consumers attitude instrument was used the brand identity indicators introduced by Kollman and Suckow (Kollmann and Suckow, 2012) This approach aims to determine whether the online dimensions of marketplaces significantly impact customers' decision-making processes.

3.1 RESEARCH INSTRUMENT

In this study, various research variables were examined through a structured questionnaire. The exogenous variable, Persona (P), derived from the works of Pasaribu *et al.* (2023) and Rüschenndorf (2020), refers to the diverse customer motives or values considered when evaluating an advertisement of an MSME product on a marketplace, including pleasure, ease, cordiality, friendship, adventure, spontaneity, freedom, rebellion, victory, pride, reliability, tradition, and quality. This variable was measured using 13 items on a Likert scale ranging from 1 to 5. The mediator variables included User Interaction (X1), Quality of Information (X2), Ease of Use (X3), Visual Design (X4), Entertainment Value (X5), Customization (X6), and Website Domain (X7). Each mediator variable was conceptualized based on the studies by Kemora and Pasaribu (2023) and Kollmann and Suckow (2012) and measured using a set of 3 to 4 items on a Likert scale 1 to 5. The endogenous variable, Customer Attitude (Y), also grounded in the same studies, captures the affective, cognitive, and conative dimensions towards a product, service, or brand, and was assessed with 13 items on a Likert scale. Additionally, a control variable was included to account for the specific marketplace used by respondents, with dummy variables representing Zalora, Blibli, Bukalapak, Lazada, Shopee, TikTokShop, and Tokopedia.

**Table 1.***Operational Variable of The Impact of Persona towards Consumers' Attitude with Brand Identity as Mediator Variable*

Variable	Name of Variable	Definition	No of Items in Questionnaire and Scale
Exogenous Variable	P: Persona (Pasaribu <i>et al.</i> , 2023; Rüschen-dorf, 2020)	Persona refers to the diverse customer motives or values considered when evaluating an advertisement of an MSME product on a marketplace, including pleasure, ease, cordiality, friendship, adventure, spontaneity, freedom, rebellion, victory, pride, reliability, tradition, and quality.	13 statements (P1 - P13) Likert 1 - 5
Mediator Variable	X1: User Interaction (Kemora & Pasaribu, 2023; Kollmann & Suckow, 2012)	User Interaction refers to the extent to which users can interact with the elements within an application or website. This includes the ability to provide feedback, participate in two-way dialogues, and influence the flow of information and content.	4 statements (X11 - X14) Likert 1 - 5
Mediator Variable	X2: Quality of Information (Kemora & Pasaribu, 2023; Kollmann & Suckow, 2012)	Quality of Information refers to the accuracy, relevance, completeness, and reliability of the information provided on a platform. This includes aspects such as clarity, depth, and precision of the information given to users.	4 statements (X21 - X24) Likert 1 - 5
Mediator Variable	X3: Ease of Use (Kemora & Pasaribu, 2023; Kollmann & Suckow, 2012)	Ease of Use refers to how easy and intuitive an application or website is for users to use and learn. This includes factors like intuitive navigation, clear layout, and the time required to complete tasks.	3 statements (X31 - X33) Likert 1 - 5
Mediator Variable	X4: Visual Design (Kemora & Pasaribu, 2023; Kollmann & Suckow, 2012)	Visual Design refers to the aesthetic and visual aspects of an application or website. This includes layout, colors, typography, and other graphic elements that affect the overall visual appeal and user experience.	4 statements (X41 - X44) Likert 1 - 5
Mediator Variable	X5: Entertainment Value (Kemora & Pasaribu, 2023; Kollmann & Suckow, 2012)	Entertainment Value refers to an application or website's ability to provide content that is enjoyable and entertaining to users. This includes elements such as games, videos, animations, and interactive features that keep users engaged.	3 statements (X51 - X53) Likert 1 - 5
Mediator Variable	X6: Customization (Kemora & Pasaribu, 2023; Kollmann & Suckow, 2012)	Customization refers to an application or website's ability to tailor content and experiences based on individual user preferences and needs. This includes features like product recommendations, personalized content, and customizable interfaces.	4 statements (X61 - X64) Likert 1 - 5
Mediator Variable	X7: Website Domain (Kemora & Pasaribu, 2023;	Website Domain refers to the web address or URL used to access a website. A good domain name is usually easy to remember, relevant to the site's content, and	4 statements (X71 - X74) Likert 1 - 5

	Kollmann & Suckow, 2012)	reflective of the brand or purpose of the site.	
Endogenous Variable	Y: Customer Attitude (Kemora & Pasaribu, 2023; Kollmann & Suckow, 2012)	Customer Attitude is a multi-dimensional construct encompassing affective (emotional responses), cognitive (beliefs and thoughts), and conative (behavioral intentions) dimensions towards a product, service, or brand.	13 statements (Y1 - Y13) Likert 1 - 5
Control variable: Marketplace as a Dummy Variable	Zalora	Marketplace Zalora	1
	Blibli	Marketplace Blibli	1
	Bukalapak	Marketplace Bukalapak	1
	Lazada	Marketplace Lazada	1
	Shopee	Marketplace Shopee	1
	TiktokShop	Marketplace TiktokShop	1
	Tokopedia	Marketplace Tokopedia	1

3.2 RESEARCH SAMPLING TECHNIQUE

This study employs a non-probability sampling technique, which involves selecting a sample based on subjective criteria rather than probability theory. This method is suitable for the study's purpose, which is to provide a descriptive analysis of the research subject rather than generalizing the findings to the entire population. The specific sampling method used is purposive sampling, where respondents are intentionally chosen based on predefined criteria (respondent has an experience in buying on marketplace of MSMEs products). In this study, the criteria include individuals who actively engage in online shopping across the seven marketplaces. A total of 442 respondents were initially selected, but only 440 responses met the criteria and were included in the final analysis. Data collection took place from May to August 2023.

3.3 DATA ANALYSIS TECHNIQUE

The collected data was using seven Google Forms for each marketplace. The data comprised two distinct sections for addressing each research question. The initial segment pertained to data designated for neuromarketing analysis for Persona. The subsequent part concerned the assessment of customers' attitude dimensions towards online shopping. This evaluation was carried out using SEM facilitated by SmartPLS software. The SEM analysis aimed to identify which dimensions exhibit a statistically significant influence on customers' attitudes.

Additionally, the analysis examined the influence of the marketplace by using it as a control variable. This involved using dummy variables to represent the seven marketplaces, with one marketplace, Zalora, serving as the reference category. By incorporating these dummy variables into the SmartPLS model, the study can control for the effect of different marketplaces and assess their specific impact on consumer attitudes. This approach allows for a comprehensive understanding of how marketplace influences consumer behaviour, providing insights into the differential effects of various online shopping platforms.

4 RESULTS AND DISCUSSIONS

4.1 OUTER MODEL

The results of the outer model analysis reveal strong outer loadings for all indicators, indicating robust relationships between the latent variables and their respective observed indicators. Across the dimensions X and Y, the outer loadings range from 0.787 to 0.951, suggesting high levels of reliability and validity in measuring the constructs. Specifically, indicators X12 (0.945), X52 (0.951), X43 (0.930), and Y23 (0.921) exhibit particularly strong loadings, indicating they effectively capture the variance in their respective constructs. These findings underscore the suitability of the measurement model in accurately reflecting the underlying theoretical constructs in the context of marketplace personas and consumer attitudes in digital marketing.

The assessment of construct reliability and validity through Cronbach's Alpha, rho_A, Composite Reliability (CR), and Average Variance Extracted (AVE) demonstrates robust measurement properties across all constructs. P, representing Persona perceptions of marketplaces, exhibits high reliability with Cronbach's Alpha of 0.968, rho_A of 0.971, CR of 0.972, and AVE of 0.726, indicating consistent internal consistency and convergent validity. Similarly, dimensions X1 through X7, which represent various dimensions of consumer attitudes towards marketplace platforms, also demonstrate strong reliability and validity metrics. X1 shows a Cronbach's Alpha of 0.934, rho_A of 0.937, CR

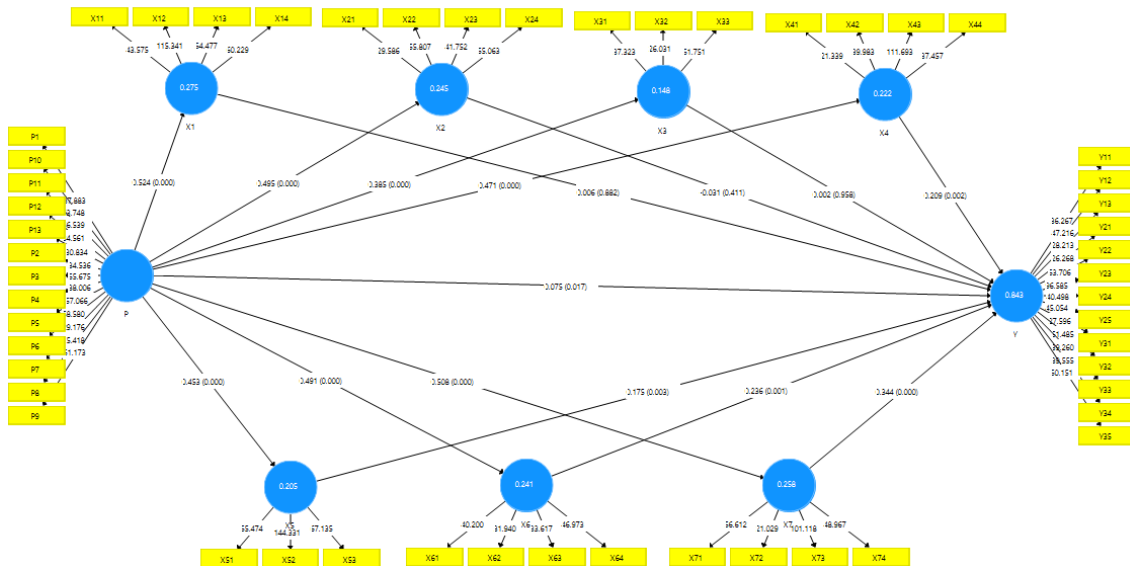
of 0.953, and AVE of 0.834, while X5 exhibits the highest AVE at 0.864, highlighting substantial variance captured by the indicators within these constructs. For the outcome variable Y, assessing overall consumer behavior across marketplaces, the metrics remain consistently high with Cronbach's Alpha of 0.970, rho_A of 0.971, CR of 0.973, and AVE of 0.736. These results indicate strong reliability and validity of the measurement model, ensuring that the constructs accurately reflect the intended theoretical concepts in the study of marketplace personas and consumer attitudes in digital marketing contexts.

The discriminant validity analysis reveals that each construct in the study, including P (Persona perceptions of marketplaces) and dimensions X1 to X7 (representing consumer attitudes towards marketplace platforms), along with outcome variable Y (overall consumer behaviour), exhibits distinctiveness from one another. The correlation matrix shows that diagonal elements represent the square roots of AVEs, which are higher than the inter-construct correlations, indicating adequate discriminant validity. The Variance Inflation Factor (VIF) values, calculated to detect multicollinearity, are within acceptable limits for all indicators, further supporting the discriminant validity of the model. These findings underscore the robustness of the measurement model in accurately distinguishing between the constructs of marketplace personas and consumer attitudes in digital marketing contexts.

4.2 INNER MODEL

Figure 1.

The inner model of Persona of Market Place



The inner model analysis indicates substantial explanatory power for predicting consumer attitudes and behaviour within the digital marketplace context. The R-squared values for each construct (X1 to X7 and Y) illustrate the proportion of variance in each dependent or endogenous variable explained by the independent or exogenous variables in the model. X1 to X7, representing different dimensions of consumer attitudes towards marketplaces, show moderate to strong explanatory power, with R-squared values ranging from 0.148 to 0.275. These values suggest that factors related to marketplace personas significantly contribute to shaping consumer perceptions and behaviours on these platforms. Notably, the outcome variable Y, representing overall consumer behaviour, demonstrates high explanatory power with an R-squared value of 0.843, indicating that the model effectively captures most of the variability in consumer behaviour based on the variables included. Adjusted R-squared values, which account for the number of predictors in the model, remain close to their respective R-squared values, affirming the model's robustness and the reliability of its explanatory capacity in understanding consumer dynamics in digital marketplaces.

The fit indices provide a mixed assessment of the SEM compared to the saturated model in analysing consumer behaviour within digital marketplaces. The SRMR of 0.263 indicates a moderate level of fit, suggesting some discrepancy between observed data and model predictions. The high values of d_{ULS} (95.059) and d_G (4.535) reflect substantial differences in chi-square between the estimated and saturated models, indicating that the estimated model may not fully replicate the complexity of relationships present in the data. The significant chi-square values (8315.934) for the estimated model further underline these discrepancies, though it's noted that chi-square is sensitive to sample size, potentially inflating the significance. The NFI of 0.697 suggests that the estimated model explains a moderate amount of variance compared to a baseline model, highlighting room for improvement in capturing the nuances of consumer behaviour in digital marketplaces.

Table 2.

The Direct Path of Persona on Brand Online Identity and Consumers Behaviour

Path	Original Sample (O)	T Statistics (O/STDEV)	P Values	Results
P → X1	0.524	9.623	0.000	Sig
P → X2	0.495	8.391	0.000	Sig
P → X3	0.385	5.641	0.000	Sig
P → X4	0.471	7.971	0.000	Sig
P → X5	0.453	7.759	0.000	Sig
P → X6	0.491	8.872	0.000	Sig
P → X7	0.508	8.830	0.000	Sig
P → Y	0.075	2.392	0.017	Sig
X1 → Y	0.006	0.149	0.882	Not Sig
X2 → Y	-0.031	0.823	0.411	Not Sig
X3 → Y	0.002	0.053	0.958	Not Sig
X4 → Y	0.209	3.131	0.002	Sig
X5 → Y	0.175	2.997	0.003	Sig
X6 → Y	0.236	3.451	0.001	Sig
X7 → Y	0.344	5.216	0.000	Sig

Sig: Significant; Not Sig: Not Significant

The path coefficients and their significance in the structural equation model reveal insightful relationships between persona (P), brand identity factors (X1-X7), and customer attitude (Y). Persona significantly influences all examined brand identity dimensions, including Interactivity, Information Quality, Usability, Design, Entertainment, Personalization, and Domain Name, with robust path coefficients ranging from 0.385 to 0.508, all having highly

significant p-values ($p < 0.01$). Furthermore, Persona also demonstrates a small but significant direct effect on customer attitude (Y) with a path coefficient of 0.075 ($p < 0.05$), indicating its role in shaping overall customer perceptions.

Examining the moderating effects on attitude (Y), Design, Entertainment, Personalization, and Domain Name exhibit significant direct influences on customer attitude, with path coefficients ranging from 0.175 to 0.344 and all having highly significant p-values ($p < 0.01$). Conversely, Interactivity, Information Quality, and Usability do not significantly affect customer attitude directly. These findings underscore the nuanced impact of different brand identity dimensions on shaping customer attitudes within digital marketplaces, highlighting the critical role of persona in influencing consumer perceptions and behaviours.

4.3 INDIRECT EFFECT ANALYSIS

Results of indirect effect analysis reveal varying levels of mediation across these paths. Firstly, the indirect effects through Interactivity, Information Quality, and Usability were found to be statistically insignificant ($p > 0.05$), indicating that these variables do not mediate the relationship between Persona and Attitude. In contrast, Design, Entertainment, Personalization or customization, and Domain Name showed significant mediation effects. Specifically, Design, Entertainment, Personalization, and Domain Name positively mediated the relationship between Persona and Attitude, highlighting their crucial roles in shaping customer attitudes towards MSME product advertisements on online platforms. These findings underscore the importance of focusing on enhancing these attributes to effectively influence customer attitudes in digital marketing contexts, aligning with previous research emphasizing the pivotal role of design aesthetics, entertainment value, personalized experiences, and domain name relevance in shaping consumer perceptions and behaviours. This suggests that MSMEs should strategically strengthen these dimensions of their brand identity to enhance customer attitudes, particularly in the digital marketplace.

4.4 TOTAL INDIRECT EFFECTS

The total indirect effect analysis offers significant insights into how the exogenous variable, Persona (P), influences consumer attitudes (Y) via mediating variables (X1-X7). The results reveal a substantial total indirect effect of 0.457, underscored by a highly significant p-value ($p < 0.01$) and a robust T-statistic of 8.875. This indicates that Persona's impact on consumer attitudes is largely transmitted through the brand identity factors studied, validating the importance of these elements in shaping customer perceptions and behaviours. These findings align with previous research highlighting the pivotal role of brand identity in influencing consumer attitudes and purchase decisions (Arora and Jain, 2021; Chaffey, 2016; Kollmann and Suckow, 2012).

Delving deeper into the specific mediating pathways, the analysis identifies several noteworthy findings. Firstly, while variables like Interactivity (X1), Information Quality (X2), and Usability (X3) did not show significant mediation effects, Design (X4), Entertainment (X5), Personalization (X6), and Domain Name (X7) emerged as critical mediators. Design and Entertainment showed statistically significant indirect effects on consumer attitudes, underscoring their role in enhancing consumer engagement and satisfaction. Personalization and Domain Name also exhibited strong mediation effects, indicating that tailored experiences and recognizable branding significantly influence how consumers perceive and engage with the Persona Marketplace.

These insights have important implications for marketing strategies aimed at enhancing consumer perceptions and fostering brand loyalty. By focusing on improving design aesthetics, incorporating engaging content, personalizing user experiences, and optimizing domain names, marketers can leverage these identified mediating factors to strengthen consumer attitudes towards the Persona brand. This approach not only enhances customer satisfaction but also contributes to long-term brand equity by aligning with consumer preferences and fostering emotional connections (Toldos-Romero and Orozco-Gómez, 2015; Xu *et al.*, 2023). Furthermore, these findings support SDG 8 (Decent Work and Economic Growth) by promoting sustainable business

practices and SDG 9 (Industry, Innovation, and Infrastructure) by leveraging innovative marketing strategies to enhance digital infrastructure.

Future research could further explore additional factors that might moderate these relationships across diverse consumer segments and market contexts, providing deeper insights into the dynamics of brand perception and consumer behaviour (Delgado-Ballester, 2016; Huang *et al.*, 2012; Wu, 2015). Such investigations would enable marketers to refine their strategies effectively and adapt to evolving consumer preferences in the competitive marketplace.

4.5 R SQUARE

This study investigates the influence of digital brand Persona on consumer preferences and attitudes towards leading marketplaces in Indonesia, drawing insights from neuromarketing and brand personality frameworks (Aaker, 1997; Morin, 2011). The R-squared values provide crucial insights into the extent to which the model explains variability in consumer attitudes (Y) through mediating effects of brand identity dimensions (X1 to X7). The R-squared value for Y is 0.843 (adjusted 0.840), indicating that the model accounts for approximately 84.3% of the variance in consumer attitudes towards marketplace Personas. This high value suggests that the combined influence of Persona and its mediated dimensions comprehensively explains consumer attitudes in the context of Indonesian e-commerce. Previous research has consistently shown that a well-defined brand Persona significantly impacts consumer perceptions and behaviours (Akter and Sultana, 2020; Delgado-Ballester, 2016).

The R-squared values for X1 to X7 range from 0.148 to 0.275 (adjusted from 0.146 to 0.273), indicating moderate to high levels of explanatory power for each brand identity dimension within the model. Specifically, X1 (Interactivity), X2 (Information Quality), X3 (Usability), X5 (Entertainment), X6 (Personalization), and X7 (Domain Name) demonstrate moderate explanatory power, suggesting significant contributions to shaping consumer attitudes towards marketplace Personas. Notably, X4 (Design) exhibits a relatively higher

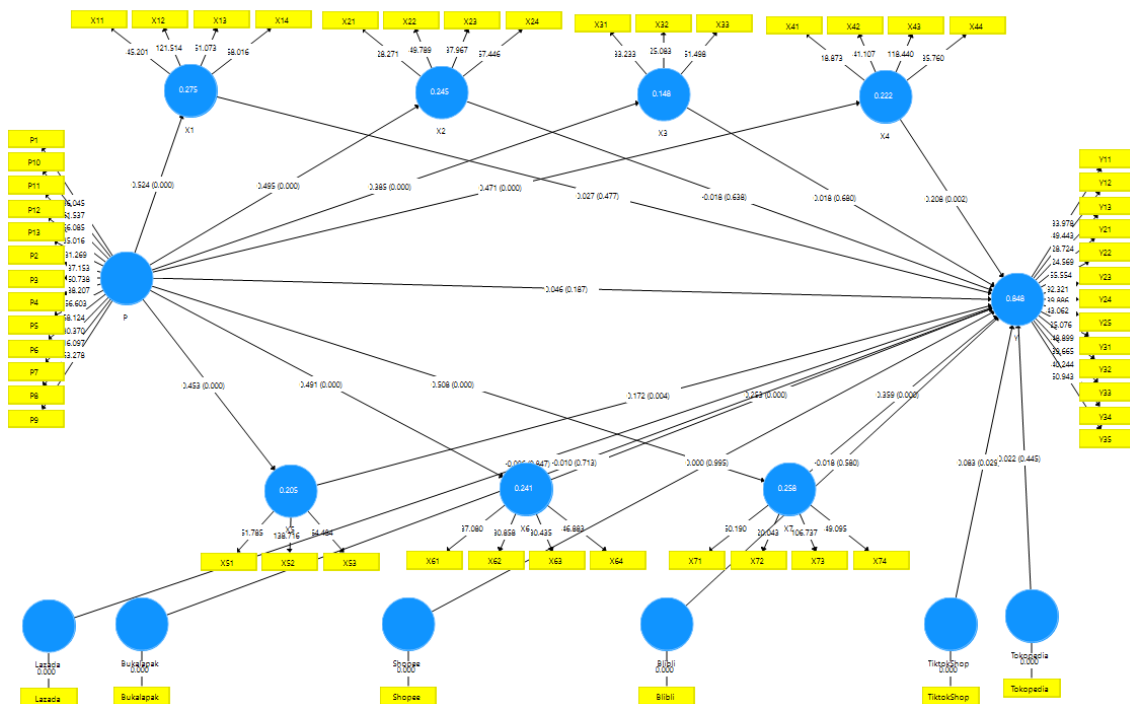
R-squared value (0.222, adjusted 0.220), emphasizing the substantial role of design aesthetics in enhancing consumer attitudes. This finding is consistent with literature highlighting the impact of visual appeal and user interface design on consumer perceptions and engagement (Häusel, 2011; Rüschemdorf, 2020).

These findings align with theoretical perspectives on brand personality and consumer behaviour in digital contexts (Cui *et al.*, 2019; Ghorbani *et al.*, 2022). They underscore the critical importance of integrating brand identity dimensions effectively to cultivate marketplace Personas that resonate with consumer preferences and foster brand loyalty. The significant explanatory power of these dimensions suggests that digital marketers should prioritize strategies aimed at enhancing interactivity, information quality, usability, design aesthetics, entertainment value, personalization, and domain name recognition to optimize consumer attitudes towards marketplace offerings. These insights provide a robust foundation for developing targeted marketing initiatives that capitalize on the psychological and emotional dimensions of brand identity in digital environments.

4.6 ROBUST ANALYSIS

Figure 2.

Inner Model with control variable: Marketplaces



To conduct a robust analysis, this study incorporated control variables using dummy variables to represent seven different marketplaces, with Zalora as the reference category. These dummy variables were integrated into the SmartPLS model to examine how marketplace influences consumer attitudes (Y) towards their respective Personas, while accounting for the effects explained by brand identity dimensions (X1 to X7). This approach allows for a comprehensive exploration of marketplace-specific factors that may impact consumer perceptions independently of the brand identity dimensions. By controlling for these variables, marketplace identities linked to the endogenous variable Y or consumer attitudes, the study enhances the accuracy of its findings, providing valuable insights for marketplace operators and digital marketers seeking to tailor strategies that effectively cater to diverse consumer preferences and attitudes in competitive e-commerce landscapes.

Table 3.

Path Analysis with Control Variable: marketplaces

Path	Original Sample (O)	T Statistics (O/STDEV)	P Values	Results
Blibli → Y	-0.018	0.553	0.580	Not Sig
Bukalapak → Y	-0.010	0.369	0.713	Not Sig
Lazada → Y	-0.006	0.193	0.847	Not Sig
P → X1	0.524	9.980	0.000	Sig
P → X2	0.495	8.304	0.000	Sig
P → X3	0.385	5.675	0.000	Sig
P → X4	0.471	7.646	0.000	Sig
P → X5	0.453	7.337	0.000	Sig
P → X6	0.491	8.708	0.000	Sig
P → X7	0.508	8.997	0.000	Sig
P → Y	0.046	1.321	0.187	Not Sig
Shopee → Y	0.000	0.006	0.995	Not Sig
TiktokShop → Y	0.083	2.184	0.029	Sig
Tokopedia → Y	0.022	0.764	0.445	Not Sig
X1 → Y	0.027	0.712	0.477	Not Sig
X2 → Y	-0.018	0.471	0.638	Not Sig
X3 → Y	0.018	0.412	0.680	Not Sig
X4 → Y	0.208	3.044	0.002	Sig
X5 → Y	0.172	2.900	0.004	Sig
X6 → Y	0.253	3.542	0.000	Sig
X7 → Y	0.359	5.340	0.000	Sig

The results indicate significant pathways from neuromarketing insights (P) to various consumer behaviour metrics (X1 to X7) both with and without control variables. However, the direct impact of P on Y (overall consumer attitude) is significant without control variables (P = 0.000) but becomes non-significant when control variables are introduced (P = 0.187). This suggests the presence of confounding variables that influence overall consumer attitude.

When analysing the data without control variables, the pathways from Persona based neuromarketing insights (P) to brand identity metrics (X1 to X7) are significant, as indicated by the P values. This result underscores the impact of Persona on different facets of consumer behaviour on brand identity, which aligns with existing literature emphasizing the importance of subconscious processes in shaping consumer decisions (Baldo *et al.*, 2022; Bigné *et al.*, 2023). These findings suggest that Persona neuromarketing interventions, based on Häusel's limbic map, effectively tap into the motivational and emotional systems to influence consumer behaviour on digital platform.

When introducing control variables representing different marketplaces (Zalora, Blibli, Bukalapak, Lazada, Shopee, TiktokShop, and Tokopedia), the

direct impact of Persona insights on overall consumer attitude (Y) becomes non-significant ($P = 0.187$). This shift indicates the presence of confounding variable, specific characteristics or strategies of these marketplaces, that can alter the effect of Persona based neuromarketing on consumer attitude.

4.7 TIKTOKSHOP AS A CONFOUNDING VARIABLE

Notably, TiktokShop has a significant positive effect on Y ($P = 0.029$) when used as a control variable. This finding highlights TiktokShop's unique position in the digital marketplace landscape. TiktokShop's marketing strategies, which heavily utilize short-form videos and influencer marketing or User Generated Content (UGC), engage users in ways that differ significantly from traditional e-commerce platforms (Colicev *et al.*, 2019; Jai *et al.*, 2021; Kakaria *et al.*, 2023). The effectiveness of these strategies in creating emotional connections and driving consumer engagement can overshadow the general impact of Brand Persona.

The impact of other marketplaces, such as Blibli, Bukalapak, Lazada, Shopee, and Tokopedia, on Y is not significant. This result highlights the differentiated impact of marketing strategies across platforms. For instance, while these marketplaces may employ various promotional tactics, their influence on consumer attitudes and behaviors might not be as profound or unique as TiktokShop's approach. These findings align with previous research that suggests sensory engagement and emotional responses are crucial in digital marketing contexts (Baldo *et al.*, 2022; Kemora & Pasaribu, 2023; Nizam *et al.*, 2022; Pasaribu *et al.*, 2023). Each marketplace's ability to engage consumers through specific sensory and emotional triggers can vary, influencing the overall effectiveness of neuromarketing interventions in Persona of the brand.

5 CONCLUSION

This study aimed to investigate the influence of marketplace personas on consumer behaviours within the Indonesian e-commerce sector, employing robust analyses to uncover critical insights. Through the findings of

neuromarketing, the research elucidated significant correlations between marketplace persona characteristic, such as design aesthetics, personalization, and domain relevance, and consumer engagement metrics. The findings underscored that persona with visually appealing designs and tailored content resonated more strongly with Indonesian consumers, leading to increased engagement and conversion rates. Moreover, robust statistical analyses confirmed these correlations as statistically significant across diverse demographic segments, highlighting the personas' role in shaping consumer perceptions and behaviors.

Furthermore, the study identified nuanced differences in consumer responses based on marketplace personas, suggesting that targeted digital marketing strategies aligned with these personas could enhance brand affinity and loyalty. Insights from the robust analyses emphasized the importance of continuous adaptation and optimization of persona-based strategies to effectively navigate the dynamic e-commerce landscape in Indonesia, however each marketplace could have different significant factors.

The practical implications of this research suggest implementing persona-based marketing strategies tailored to consumer preferences in Indonesia to enhance engagement and conversions. This includes a focus on visually appealing design, personalized content, and relevant domain ownership to effectively resonate with the target audience. With this approach, marketing practitioners can enhance their effectiveness in reaching Indonesian consumers through focused persona-based strategies, strengthening brand connections, and driving sustainable growth in the competitive e-commerce landscape.

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