

UNCOVERING PSYCHOGRAPHIC SEGMENTS IN INDONESIA'S MODEST-FASHION MARKET USING VALS AND K-MEANS CLUSTERING

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ABSTRACT

Background: The Muslim fashion industry in Indonesia continues to expand rapidly, reflecting the dynamic intersection between cultural values and global-style trends. However, many small and medium-sized enterprises (SMEs) still rely on conventional demographic segmentation, focusing on age, income, and marital status, while neglecting the deeper psychographic elements that drive purchasing behavior. Consequently, marketing initiatives often fail to capture consumers' emotional and motivational dimensions, leading to suboptimal engagement and brand differentiation.

Purpose: This study aims to uncover psychographic segments among Indonesian modest-fashion consumers by analyzing their lifestyle orientations and motivational patterns. The objective is to provide SMEs with sharper evidence-based insights that enable the creation of more targeted, emotionally resonant, and culturally aligned marketing strategies.

Design/methodology/approach: A structured survey was conducted among 450 Indonesian Muslim women. Applying the VALS framework, three core psychographic dimensions social status-driven, experience-seeking, and religiously motivated were identified and further analyzed through K-Means clustering. Statistical validation using ANOVA and silhouette analysis confirmed the robustness and internal consistency of the segmentation results.

Findings/Result: The analysis revealed three well-defined consumer clusters: social status-driven (32%), experience-seeking (52%), and Religiously Motivated (16%). Although these groups shared similar demographic profiles, their underlying motivations and purchasing behaviors differed markedly, highlighting the limitations of demographic segmentation.

Conclusion: Psychographic segmentation provides a richer and more actionable understanding of consumer diversity in Indonesia's modest fashion market, enabling SMEs to design marketing strategies that align with their values, aspirations, and lifestyles.

Originality/value (State of the art): This study offers one of the first applications of the VALS framework integrated with machine learning clustering within a Muslim-majority context. This produces data-driven insights that bridge theory and practice to enhance SME competitiveness and market performance.

Keywords: marketing strategy, psychographic segmentation, modest fashion, VALS, K-Means Clustering

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INTRODUCTION

Consumer segmentation has long been crucial for small- and medium-sized enterprises (SMEs) navigating fast-paced markets, where resources are often constrained. Through effective segmentation, SMEs can tailor their offerings to ensure that products meet their target customers' needs and preferences. In Indonesia's highly competitive modest fashion market, understanding the psychological motivations and values that drive consumer behavior is critical for businesses aiming to remain relevant. This approach allows SMEs to target their segments more accurately, leading to more efficient resource utilization and improved customer satisfaction. By moving beyond basic demographic data, businesses can gain deeper insights into the psychological factors that influence their purchasing decisions. Customizing offerings for different customer groups enables SMEs to respond quickly and efficiently to their needs. (Islam & Chandrasekaran, 2019; Michel et al., 2022). In the modest fashion sector, the need for precise segmentation became even more pronounced. Consumers are influenced not only by fabric, cut, or color but also by a complex mix of religious beliefs, cultural identity, and global fashion trends. (Schäfer et al., 2011). Fashion choices in this market are not solely driven by function or appearance; consumers view clothing as an expression of their identity and values.

Indonesia, home to 231 million Muslims, offers immense opportunities for this market. However, many modest fashion SMEs still use classic demographic markers, such as age, income, and marital status, to define their audience, a narrow view that misses psychological drivers. Brands such as Mugaya initially launched niche categories, but expanded in a broader fashion without adjusting their segmentation tools accordingly.

As younger Muslim women blend traditions with style expressions, their behavior becomes more layered and complex. Traditional demographic approaches fail to capture this nuance. What is needed is a psychographic lens that penetrates motivation, values, and aspirations. In this study, we applied the VALS (Values and Lifestyles) framework and clustering methods to reveal the psychological blueprint behind modest fashion choice in Indonesia.

Over the last decade, research on modest fashion and consumer behavior has gained increasing attention. However, much of the existing literature focuses primarily on surface-level demographic factors, such as age, income, and education. (Karami et al., 2017; Amine & Alexander, 2009). While these demographic characteristics offer valuable insights, they fail to account for the deeper psychological motivations that shape consumers' decisions. Studies Watkins (2010) and Schäfer et al. (2011) have begun to explore how Muslim women navigate the tension between maintaining religious modesty and expressing their fashion identities. (Schäfer et al., 2011) emphasized the complex interplay between religious beliefs and personal style choices, suggesting that fashion consumption among Muslim women is not merely functional, but deeply intertwined with cultural identity and self-expression. Despite these valuable insights, few studies have transformed these findings into actionable segmentation models that can be applied to a modest fashion market. More recently, scholars Anwar (2025) have identified identity-driven consumption as a key factor in Muslim markets, yet the application of psychographic segmentation frameworks, such as VALS, remains underexplored. Meanwhile, other sectors such as hospitality (Ahmad et al., 2024), organic skincare (Sharma & Narang, 2024), and education (Liu, 2024) have successfully integrated VALS with machine learning tools such as K-means clustering to provide actionable insights. However, the modest fashion segment in Indonesia remains relatively unexplored in these terms, presenting an opportunity to adapt psychographic segmentation techniques to a culturally specific, faith-guided market.

To address this gap in current research, this study proposes a novel approach that combines the values and lifestyle (VALS) framework with K-means clustering to uncover psychographic segments within Indonesia's modest fashion market. The VALS framework developed by SRI International classifies consumers based on their core values, motivations, and lifestyles. This study specifically focuses on three key dimensions relevant to modest fashion: social status motivation, Experience Seeking, and religious commitment (Moskowitz & Krieger, 2022). These dimensions help to capture the deeper, often-overlooked psychological drivers behind consumer choices in a modest fashion.

In conjunction with VALS, K-means clustering is employed to group consumers based on their responses to the VALS indicators without relying on predefined categories. This machine learning method allows the discovery of latent consumer segments, making it particularly suitable for this study. While similar techniques have been applied in other industries, their use in the modest Indonesian fashion context remains relatively unexplored. The novelty of this research lies in adapting both frameworks to a Muslim-majority context, offering valuable insights with real-world implications for small and medium-sized enterprises (SMEs). The hypothesis posits that integrating VALS and K-means clustering will reveal distinct and meaningful psychographic segments among Indonesian modest-fashion consumers.

This study integrates the VALS framework and k-means clustering to uncover psychographic segments in Indonesia's modest fashion market. By focusing on values, lifestyle orientations, and motivational drivers, this study seeks to identify the psychological factors that influence consumer preferences in this unique market. Three distinct segments are anticipated to emerge: status-driven, experience-seeking, and Religiously Motivated, which extend beyond traditional demographic segmentation and provide a deeper understanding of consumer behavior. These segments contribute to the literature on halal fashion and SME marketing by providing a conceptual framework for segmenting Muslim fashion consumers. Furthermore, this study offers practical insights for brands seeking to engage more effectively with these segments, enabling them to create culturally relevant, emotionally resonant marketing strategies. Ultimately, this research seeks to move beyond conventional segmentation by emphasizing the psychological motivations driving consumer decisions in a modest fashion market.

METHODS

This study used primary quantitative data from a structured online survey targeting Indonesian Muslim women. Four hundred and fifty valid responses were obtained using purposive sampling, ensuring that participants were modestly active fashion consumers. The purposive sampling method was specifically chosen for its ability to select respondents who fit specific criteria and Muslim women who regularly purchase modest fashion. To ensure relevance, participants had

to make at least one modest fashion purchase in the past three months and actively engage with online fashion-related content. While purposive sampling limits generalizability, it offers profound insights into the psychographic profiles of informed and engaged consumers, aligning with the study's primary objective. The survey was crafted based on the VALS (Values and Lifestyles) framework, which assessed three key psychographic dimensions: Social Status Driven, Experience Seeking, and Religiously Motivated. Each dimension was represented by three carefully worded items rated on a 7-point Likert scale. For instance, items included statements like "Modest fashion reflects my social status," "I enjoy shopping for modest fashion," and "I choose clothing based on religious norms." (Sari et al., 2024).

Data were collected between March 14 and April 27, 2025, through online platforms commonly used by the target demographic, including Instagram, WhatsApp, and various modest fashion forums. These platforms were selected because of their popularity among Indonesian Muslim women, who actively engage with modest fashion content. Participants were informed of the study's purpose and voluntarily consented to participate according to the ethical guidelines for digital data collection. This method allowed efficient access to a broad sample of respondents, capturing the digital habits and preferences of the target audience.

The data analysis was conducted in six sequential stages. First, the normality of the data was confirmed using the skewness and kurtosis tests. Next, K-means clustering was applied using Python's scikit-learn library on Google Colab. The optimal number of clusters was determined using the elbow method, and the results were validated through silhouette analysis. Statistical tests, including ANOVA and Tukey's post-hoc tests, were conducted using SPSS version 23 to ensure the robustness and reliability of the findings. The segmentation results were then interpreted to understand the distinct characteristics of each consumer group, thus providing actionable insights for marketers in the modest fashion industry.

As illustrated in Figure 1, the analysis begins by identifying the need for psychographic segmentation, especially when demographic profiling is inadequate. The VALS framework is used to capture three underlying consumer dimensions: Social Status Driven (SS), Experience Seeking (ES), and Religiously

Motivated (RM). These psychological factors were quantified and served as inputs for k-means clustering, which produced three distinct consumer segments. The outcome of this segmentation forms the basis for a tailored marketing strategy and leads to practical recommendations targeted at the modest-fashion SMEs.

Cluster interpretation was conducted using the VALS framework to assess the motivational traits within each group. The study employed analysis of variance (ANOVA) followed by Tukey’s post hoc test for cluster differences. Cross-tabulation analysis also explored associations between psychographic clusters and selected demographic variables. This mixed-method approach allows for a more holistic understanding of Muslimah consumer behavior and offers valuable insights into market targeting and strategy development. The integration of VALS and K-Means was selected for its ability to reveal the psychological drivers behind consumer behavior beyond surface-level traits. K-means efficiently identifies data patterns, whereas VALS offers a deeper interpretive value. To ensure internal validity, cluster reliability was confirmed using the elbow method and silhouette analysis.

RESULTS

This study aimed to segment Modest fashion consumers based on psychographic characteristics using the VALS framework combined with K-Means Clustering. The results and discussion are presented in an integrated manner, following the stages of the analysis.

Respondent Profile

The survey involved 450 respondents—all Indonesian Muslim women who were actively engaged in a modest fashion market. The profile of respondents reveals that the majority are between the ages of 25 and 40, with a high level of education and a consistent history of

online fashion purchases. This demographic profile suggests that the sample represents core consumers of Indonesia’s modest fashion market. The data also show a strong correlation between social media engagement and purchasing behavior, indicating that digital platforms are key drivers shaping consumer choices in this sector. The complete respondent profile is presented in Table 1.

Validity Test and Reliability Test

Validity and reliability tests were conducted to ensure the accuracy and consistency of the survey instruments. Validity assesses whether items reflect the intended concept, while reliability confirms the measurement stability. A factor loading ≥ 0.7 indicates good validity, and a Cronbach’s alpha ≥ 0.7 denotes acceptable reliability (Hair et al., 2019). The Table provides detailed validity and reliability findings, indicating the fit of each item to its construct and measurement consistency. The results in Table 2 confirm the item fit and internal consistency.

The validity test shows that all three variables, namely, Social Status Driven (SS), Experience Seeking (ES), and Religiously Motivated (RM), have strong factor loadings, confirming the validity of their respective indicators. For example, SS items such as ‘modest fashion add social status’ exceeding 0.9, while all ES and RM indicators load above 0.7. These results align with those of Rehman et al. (2022), who note that factor loadings above 0.7, reflect strong construct validity. A reliability test was then performed, and the results are presented in Table 3.

Reliability was also confirmed and all three constructs met the accepted reliability standards. Social Status Driven and Experience Seeking showed Cronbach’s alpha values of 0.942 and 0.961, respectively, while Religiously Motivated scores were 0.776. All values exceed the 0.7 threshold, indicating that the constructs were reliable for further analysis.

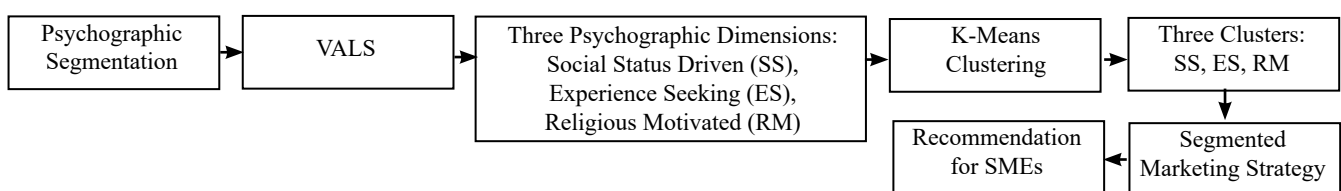


Figure 1. Analytical framework linking psychographic dimensions and segmented marketing strategy for modest fashion SMEs

Normality Test of Data

Normality was tested prior to the clustering analysis. The skewness value of 0.224 and kurtosis value of -0.442, both within the acceptable range of -1.96 to +1.96, indicate that the data are approximately normally distributed. This result supports the validity of the clustering process. Detailed normality test results are provided in Table 4, which further confirm the normal distribution of the data.

Table 1. Demographic and behavioral profile of muslimah respondents in the modest fashion market

Variable	Criteria	Total
Demographic Profile		
Age	16 – 20 years old	10
	21 – 25 years old	66
	26 – 30 years old	69
	31 – 35 years old	64
	36 – 40 years old	81
	>40 years old	160
Occupation	Student	41
	Housewife	93
	Employee	219
	Entrepreneur	97
Education	High School	68
	Diploma (D1/D2/D3)	45
	Bachelor’s Degree (S1)	279
	Master’s Degree (S2)	53
	Doctoral Degree (S3)	5
Purchasing Behavior		
Expenditure (IDR)	<1000.000	34
	1000.000 – 2000.000	166
	2000.000 – 3000.000	137
	>3000.000	113
Purchase price (IDR)	<1.000.000	71
	1000.000 – 2000.000	215
	2000.000 – 3000.000	98
	>3000.000	66
Decision Factor	Suitability with personal style	138
	Fabric quality	241
	Price Consideration	44
	Latest fashion trends	27
Purchase Pattern		
Purchase Frequency	Regular purchases	80
	As needed	305
	During special offers	65
Last Purchase	Within the last 7 days	158
	Within the last 30 days	227
	Within the last 6 months	63
	Within the last 1 year	2

Based on the skewness value of 0.224 and kurtosis value of -0.442, both of which fall within the acceptable range of ± 1 , the residuals appear to follow an approximately normal distribution. Therefore, the normality assumption was satisfied, and the data were appropriate for further analysis using parametric statistical techniques.

Table 2. Validity and test results for social status driven, experience seeking, and religiously motivated constructs

Variabel	Factor Loading	Remarks
Social Status Driven (SS)		
SS 1 – Modest fashion enhances one’s classy appearance	0.952	Valid
SS 2 – Modest fashion reflects social status	0.948	Valid
SS 3 – Modest fashion design is unique and not mainstream	0.942	Valid
Experience Seeking (ES)		
ES 1 – Shopping for Modest fashion is enjoyed	0.960	Valid
ES 2 – Self-confidence is increased by wearing Modest fashion	0.973	Valid
ES 3 – A sense of pride is felt when attractive Modest fashion is worn	0.958	Valid
Religiously Motivated (RM)		
RM 1 – Modest fashion is aligned with religious norms	0.792	Valid
RM 2 – Religiosity is reflected through Modest fashion	0.874	Valid
RM 3 – Modest fashion is consistent with religious values	0.828	Valid

Table 3. Reliability test results for social status, experience seeking, and religious motivation constructs

Construct Variable	N	Cronbach’s Alpha	Remarks
Social Status Driven (SS)	3	0.942	Reliable
Experience Seeking (ES)	3	0.961	Reliable
Religiously Motivated (RM)	3	0.776	Reliable

Table 4. Results of normality test for residual data using Skewness and Kurtosis

Statistic	N	Skewness	Kurtosis
Residual	450	0.224	-0.442

Determination of the Number of Clusters

The number of clusters was determined using Elbow and Silhouette methods. As shown in Figure 2, the elbow plot displays a sharp drop in the third cluster, indicating that the optimal number before further divisions yields minimal improvement.

The Elbow method revealed that the ideal number of consumer segments was three, beyond which adding more clusters offered minimal additional insight. This suggests that the three clusters provided an optimal balance between model simplicity and explanatory power.

The Silhouette method is used to validate the optimal number of clusters. As shown in Figure 3, the silhouette score of 0.581 exceeded the commonly accepted

threshold of 0.5, indicating that the clusters were well-structured, clearly separated, and meaningful. This result supports the selection of three clusters as the most appropriate segmentation, providing a strong foundation for further targeted marketing strategies and consumer behavior analysis.

Number and Composition of Clusters

The K-means algorithm produced three consumer clusters in the Modest fashion market: Cluster 1 (144 respondents), Cluster 2 (232 respondents), and Cluster 3 (74). Cluster 2 represents the largest group, indicating a dominant tendency toward experience seeking in purchasing behavior. This distribution serves as the foundation for further analysis and targeted segmentation. Table 5 summarizes the respondent counts and key psychographic traits in each cluster.

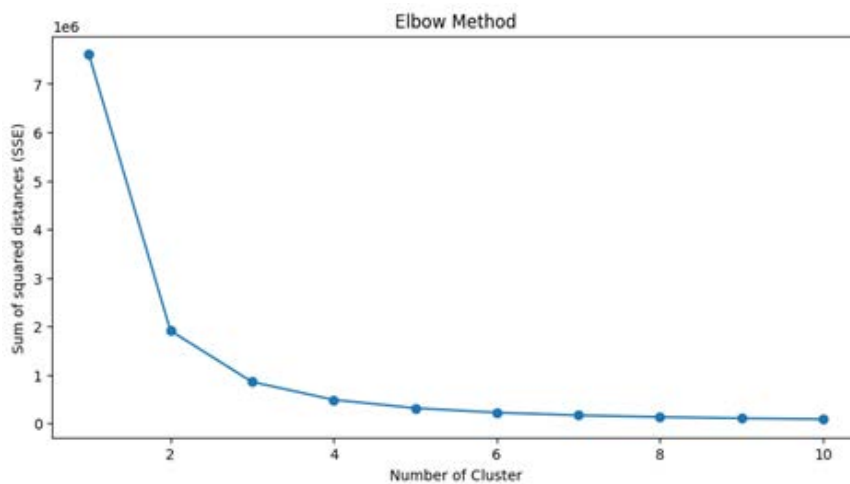


Figure 2. Optimal cluster selection using the elbow method

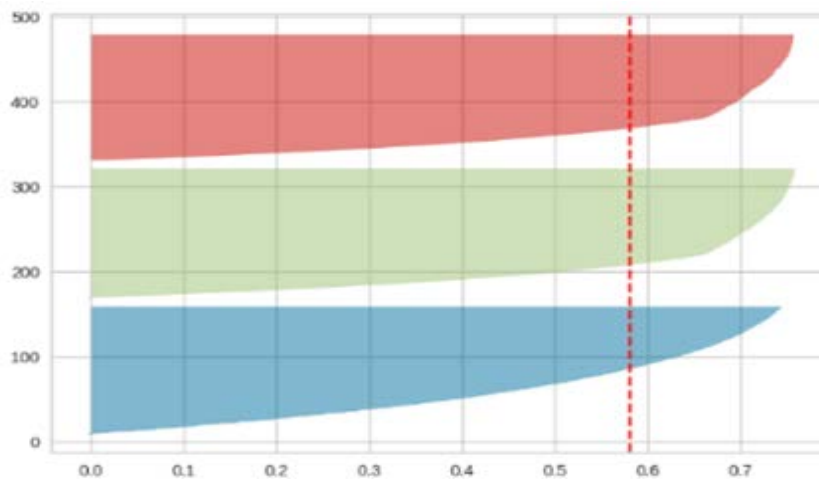


Figure 3. Silhouette analysis of consumer segments

Table 5. Cluster distribution and dominant psychographic traits

Cluster	N of Members	Dominant Psychographic
1	144	Social Status Driven
2	232	Experience Seeking
3	74	Religiously Motivated

Table 5 reveals that Cluster 2 is the largest segment, indicating that Experience-Seeking is the most prevalent psychographic trait among consumers in Modest fashion. Cluster 1 highlights consumers driven by social status, and Cluster 3 represents a niche group motivated by religious values. This diversity in dominant traits suggests that each cluster requires distinct marketing strategies, emphasizing the importance of tailored positioning, messaging, and product offering.

ANOVA Test

An ANOVA test was used to assess the differences in consumer attributes across clusters formed by K-means. All clusters showed p-values below 0.05, with values <0.000 indicating statistically significant differences in psychographic traits. The high F-values in clusters 1 (1169.01) and 3 (134.85) confirm that the between-cluster variation exceeds the within-cluster variation, supporting the effectiveness of segmentation using the VALS framework.

Tukey's Test

A post hoc analysis using Tukey's Honest Significant Difference (HSD) test was conducted to examine the statistical significance of the differences between clusters. This test compares the mean scores across psychographic factors to determine statistically meaningful differences. The results are summarized in Table 6.

For Cluster 1, the Social Status Driven (SS) and Religiously Motivated (RM) factors fall within the same grouping, indicating similar levels of influence on consumer decisions. By contrast, the Experience Seeking (ES) factor is placed in a different group with a much lower mean, suggesting that hedonic or experiential motives are less relevant for this segment. For Cluster 2, Social Status Driven and Religiously Motivated factors form one group (A), distinct from the Experience Seeking factor. For Cluster 3, the three factors (SS, RM, and ES) each belong to a separate

statistical grouping (A, B, and C), indicating that all three motivations are present but at significantly different levels, forming a unique psychographic profile in which religious motivation is dominant but distinct from both status and experience-seeking.

These findings confirm that each cluster has a distinct psychographic profile and therefore requires tailored marketing strategies to effectively engage each segment.

Segmentation Results and Consumer Characteristics

Following clustering analysis and post hoc comparisons, the distinct characteristics of each psychographic segment were further examined in relation to demographic and behavioral variables. Table 7 presents the three consumer clusters segmented using the VALS and K-means. Although all groups share similar demographics, such as being female, over 40 years old, employed, and holding a bachelor's degree, their purchase motivations differ. Cluster 1 prioritizes social status, Cluster 2 seeks personal experiences, and Cluster 3 drives religious values. These distinctions emphasize the importance of psychographic segmentation in uncovering deeper behavioral insights. Understanding these drivers enables brands to adjust their products and communication strategies, thereby enhancing satisfaction, loyalty, and long-term consumer engagement.

The analysis identified three distinct consumer clusters with unique characteristics, preferences, and decision-making patterns when purchasing Modest Fashion products. Cluster 1 emphasizes social image and fabric quality; Cluster 2 prioritizes personal experience and fashion trends; and Cluster 3 drives religious values and price sensitivity. These differences demonstrate that, although the clusters share similar demographic profiles, their underlying motivations and purchasing triggers vary significantly.

Cluster 2 showed the highest expenditure and trend-seeking behavior, indicating a more aspirational and lifestyle-oriented segment. By contrast, Cluster 3 exhibits the most recent purchase frequency and stronger value orientation, suggesting a more pragmatic and faith-driven segment. On the other hand, Cluster 1 balances quality perception and social status concerns, positioning it between prestige and practicality. These findings highlight that each cluster requires

tailored product offerings, pricing strategies, and communication approaches to enhance engagement and loyalty effectively.

Based on the clustering results and segment characteristics, the model (Figure 4) maps the relationship between psychographic motivations, consumer segments, and tailored marketing strategies, providing a practical bridge between analytical insights and managerial decision making.

This conceptual model depicts the logical relationships between the primary constructs examined in this study. It begins with the psychographic dimensions derived from the values and lifestyle (VALS) framework, which

captures the underlying motivations of Social Status Driven (SS), Experience Seeking (ES), and Religious Motivation (RM). These psychological traits are foundational inputs that shape consumer preferences and behaviors within a modest fashion market.

Through K-means clustering, psychographic attributes were grouped into three consumer segments, each with distinct lifestyles and motivational patterns. This segmentation forms the basis for targeted marketing strategies: aspirational branding for status-driven consumers, experiential engagement for experience seekers, and ethical, Sharia-aligned storytelling for relatively motivated buyers.

Table 6. Post hoc analysis of psychographic factors across clusters using tukey's HSD Test

Cluster	Factor	N	Mean	Grouping
1	T_SS	144	18,708	A
	T_RM	144	18,243	A
	T_ES	144	8,632	B
2	T_SS	232	18,198	A
	T_RM	232	17,828	A
	T_ES	232	18,694	B
3	T_SS	74	7,622	A
	T_RM	74	15,554	B
	T_ES	74	9,189	C

Table 7. Results of demographic and psychographic segmentation

Variables	CLUSTER		
	1	2	3
Demographics			
Age	>40 Years Old	>40 Years Old	>40 Years Old
Occupation	Employee	Employee	Employee
Education	Bachelor's Degree	Bachelor's Degree	Bachelor's Degree
Purchasing Behavior			
Purchase Price (IDR)	1000,000 – 2000,000	1000,000 – 2000,000	1000,000 – 2000,000
Last Purchase	Last 30 days	Last 30 days	Last 7 days
Expenditure (IDR)	1000,000 – 2000,000	1000,000 – 2000,000	>3000,000
Frequency	As needed	As needed	As needed
Decision Factors	Fabric Quality	Latest Fashion Trends	Price Consideration
Psychographic Characteristics			
Dominant Aspect	Social Status Driven	Experience Seeking	Religiously Motivated

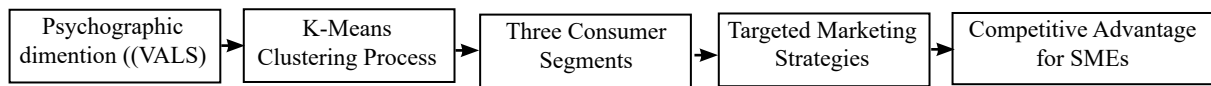


Figure 4. Conceptual model of psychographic segmentation and strategic implications for modest fashion SMEs

By aligning strategies with consumer psychology, modest-fashion SMEs can improve their competitive edge, enhance brand relevance, and foster long-term loyalty in dynamic markets. This model connects theory with practical strategies, demonstrating how psychographic insights can drive market differentiation and business growth.

Cluster 1: Social Status Driven

This group aligns with Bourdieu's concept of symbolic capital, which uses fashion as a means of social expression. For these consumers, clothing is more than fabric; it symbolizes status, success, and sophistication. They gravitate toward exclusive, high-end items, and are influenced by elite endorsements. This highlights the importance of premium branding, storytelling that reflects upward mobility, and a curated sense of exclusivity for SMEs.

Cluster 2: Experience Seeking

Here, modest fashion becomes an emotional outlet and a form of personal joy. These consumers are motivated by the creativity, exploration, and excitement of self-expression. They embrace variety, love digital interaction, and respond to immersive experiences. Brands targeting this segment should invest in omnichannel engagement, combining social media, influencer collaboration, and interactive features, such as AR try-ons or style quizzes, to create a rich, lifestyle-driven narrative.

Cluster 3: Religiously Motivated

This segment stands out for its values-first mindset, where religious beliefs consistently shape fashion preferences and purchasing behavior. Religious principles act as a moral compass, guiding every decision from fabric selection to brand trustworthiness. However, far from being conservative or static, these consumers actively engage in fashion, provided it aligns with their spiritual convictions. Ethical sourcing, modest design, and halal certification remain non-negotiable aspects of their consumption patterns, reflecting the desire to integrate faith and modernity.

Building trust through authentic communication and collaboration with religious figures or communities is essential for SMEs to strengthen their credibility and foster lasting consumer relationships.

This study looks at Muslimah consumer behavior in Indonesia by using the VALS framework and the K-Means algorithm for psychographic segmentation. It divides the market into three main segments: Social Status Driven (SS), Experience Seeking (ES), and Religiously Motivated (RM). These segments show that values and lifestyles are more influential than just age or income in shaping fashion choice. Rather than focusing only on traditional demographics, understanding these deeper motivations can help brands cater to specific consumer needs. These findings highlight that marketing strategies need to evolve based on these psychographic insights.

A detailed analysis of the clustering results revealed distinctive characteristics. Digging deeper into the segments, we see that each group has unique characteristics. The SS group viewed fashion as a way to showcase status, prioritizing exclusivity, and high-quality materials. This aligns with previous research by Kartajaya et al. (2019) and Ali & Dahana (2023), who noted that fashion serves as a symbol of emerging markets. Meanwhile, the ES group was driven more by emotional comfort and the sensory experience of shopping, as emphasized by Kusumawati et al. (2020) and Sandıkcı (2024). For the RM segment, despite strong religious convictions, fashion is actively consumed as long as it aligns with spiritual values, confirming that faith channels consumption toward more ethical and meaningful choices Dekhil et al. 2017; Osanlou & Rezaei, 2024).

This study confirms that combining the VALS framework with K-means clustering is an effective way to identify distinct consumer groups in Indonesia's modest fashion market. This study shows that these segments, each with their own unique set of motivations, can guide brands in their marketing efforts. This finding supports the idea that psychographic

segmentation provides valuable insights into consumer behavior, especially in niche markets. By applying this methodology, brands can tailor their strategies more precisely, ensuring that they meet consumer needs more effectively. Ultimately, this study validates the power of psychographic insights in shaping business strategies within the modest fashion sector.

Advantages of the Integration of VALS and K-Means

Integrating the VALS framework with the K-means algorithm strengthens market segmentation by combining psychographic insights with behavioral clustering. VALS identifies core consumer values and motivations, whereas K-means organizes consumers based on observed behavior patterns. This integration enhances segmentation precision, enabling businesses to tailor products and marketing strategies according to the specific characteristics of each segment. In the Modest fashion market, where religious, emotional, and social factors influence purchasing decisions, this method improves the ability to anticipate consumers' needs. It also allows companies to track changing preferences, detect emerging segments, and deliver more personalized communication, ultimately providing a competitive advantage through adaptive and targeted marketing.

Managerial Implications

The psychographic segmentation revealed in this study offers modest Indonesian fashion SMEs a strategic roadmap for targeted market engagement. By aligning business strategies with the distinct motivational drivers of each consumer segment, companies can optimize resource allocation and enhance marketing effectiveness in this competitive sector.

Marketing initiatives should emphasize exclusivity and sophisticated branding through carefully curated approaches for the social-status-driven segment. Developing limited-edition collections creates artificial scarcity that appeals to status-conscious consumers, whereas strategic partnerships with influential figures who embody aspirational lifestyles generate compelling social proof. Premium packaging, VIP early access programs, and high-end retail environments further reinforce the exclusive positioning that resonates with this demographic, creating a comprehensive brand experience that satisfies their need for social distinction and recognition.

Addressing the Religiously Motivated segment requires the authentic integration of Islamic values throughout business operations rather than superficial marketing claims. Beyond obtaining formal halal certification, companies should implement transparent supply chain documentation that verifies the Sharia-compliant production processes from raw materials to finished garments. Developing educational content that clarifies the Islamic foundations of modest fashion choices and collaborations with respected religious organizations builds enduring trust and positions the brand as genuinely aligned with consumers' spiritual values, fostering long-term loyalty in this faith-driven segment.

The experience-seeking segment values immersive shopping experiences, which turn transactions into memorable journeys. Augmented reality fitting rooms and AI-driven style recommendations offer personalized discoveries. Gamified loyalty programs with style quizzes and rewards encourage continued engagement. Social commerce, such as Instagram Shopping and pop-up retail locations, aligns with their desire for unique brand interactions and digital connectivity, keeping the brand relevant to their lifestyle.

Modest fashion SMEs can boost marketing ROI by aligning product development, marketing, and distribution with their psychographic profiles. This approach allows for better resource allocation, increased consumer loyalty, and a competitive edge in Indonesia's modest fashion market, driving business growth while staying culturally and religiously relevant.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This investigation establishes that merging VALS with K-means clustering generates a rigorous analytical methodology for charting the intricate psychographic topography of Indonesian Muslim fashion consumers. Identifying three discrete segments—social status-driven, experience-seeking, and religiously motivated—from a demographically uniform sample highlights the constraints of traditional segmentation approaches. This structural arrangement corroborates Kartajaya et al. (2019) documentation of status-aware consumption behaviors while building upon Kusumawati et al. (2020) investigations of experiential drivers through

the methodical incorporation of religiosity as a fundamental, measurable psychographic component within the segmentation paradigm.

Theoretically, this research advances segmentation by adapting the VALS to include religious orientation, bridging a critical gap in the existing literature. It delivers a data-driven, culturally grounded approach that SMEs can apply to improve marketing relevance and customer engagement.

The managerial implications of this study, including premium branding for status-driven segments, experiential marketing for experience seekers, and Sharia-compliant messaging for Religiously Motivated consumers, are grounded in this adapted theoretical model. This demonstrates how methodological refinement enables more precise targeted marketing strategies.

Although this study provides valuable insights, several limitations should be acknowledged. The findings are based on a purposive sample of 450 middle-to upper-class Muslim women, and the online data collection method may introduce certain biases. Consequently, the generalizability of the results should be considered within these constraints. Future research should validate the adapted model across diverse socioeconomic groups and cultural contexts to enhance its robustness and applicability.

Recommendations

These findings provide a strong basis for Mugaya to design marketing strategies that align with its distinct consumer values. By understanding clusters such as Social Status Driven, Religiously Motivated, and Experience Seeking, the brand can tailor campaigns ranging from spiritual narratives to prestige and comfort appeals. This framework also offers broader guidance for other model fashion brands to adapt to the changing values in culturally rooted markets. Beyond research, the model connects data with practical actions, supporting digital innovation while preserving emotional connections. Mugaya offers a path to build lasting, meaningful relationships with Muslimah consumers, both locally and globally.

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