

GENDER DISPARITIES IN THE USE OF ISLAMIC BANKING SERVICES AMONG UNMARRIED ADULTS: A QUANTILE REGRESSION AND MODERATED MEDIATION APPROACH

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Abstract

This study investigates gender disparities in the adoption of Islamic banking services among unmarried adults in Indonesia, a demographic characterized by increasing digital financial activity and social independence. Despite regulatory support and the expansion of Shariah-compliant financial services, Islamic banking penetration remains uneven, particularly among younger, unmarried consumers. Drawing on a sample of 528 respondents aged 20–40, the study employs a moderated mediation framework and quantile regression analysis to examine how gender influences Islamic banking usage through perceived product suitability, and how this relationship is moderated by individual religiosity. The results reveal significant gender-based differences in perceived product alignment and banking behavior. Women demonstrate stronger ethical alignment and trust toward Islamic banking products, particularly when religiosity is high. The moderated mediation analysis confirms that religiosity strengthens the indirect pathway from gender to banking usage via perceived suitability. Quantile regression further exposes behavioral heterogeneity, showing that gender effects are more pronounced among low-usage individuals, whereas religiosity and perceived suitability exert stronger effects at higher quantiles. These findings contribute to the literature on Islamic financial inclusion by integrating gender psychology, religiosity, and product perception into a comprehensive analytical model. Practical implications include the design of gender-sensitive financial products, targeted literacy campaigns, and value-based digital banking experiences. The study advocates for inclusive, behaviorally-informed strategies in expanding Islamic banking services to digitally literate, unmarried populations in emerging economies.

Keywords : Islamic banking, Gender disparities, Unmarried adults, Religiosity, Quantile regression

INTRODUCTION

The rapid evolution of the global Islamic finance industry has brought new challenges and opportunities for financial inclusion and service innovation, particularly in Muslim-majority countries such as Indonesia (Sudarsono et al., 2021). With a Muslim population exceeding 230 million, Indonesia represents a fertile ground for the development and expansion of Islamic banking services (Cakhyaneu et al., 2024); (Hasan et al., 2021). Despite significant regulatory support and institutional strengthening, the penetration rate of Islamic banking in Indonesia remains modest compared to its conventional counterparts. This discrepancy has prompted scholars and practitioners to investigate various factors influencing Islamic banking adoption, including socio-demographic characteristics, financial literacy, religiosity, and consumer behavior (Takidah & Kassim, 2021); (Fathoni et al., 2025). However, an important segment that remains underexplored in the academic literature is the population of unmarried adults, who constitute a rapidly growing and economically active demographic in Indonesia (Pahlevi et al., 2023).

Unmarried adults, typically comprising young millennials and Generation Z, represent a unique consumer segment characterized by high digital literacy, increasing financial independence, and distinct lifestyle choices (Mingka et al., 2024); (Amir et al., 2024). Their engagement with financial institutions, including Islamic banks, is often shaped by technological familiarity, peer influence, and social trends rather than traditional familial or religious affiliations (Cakhyaneu et al., 2024). While several studies have examined Islamic banking behavior among general populations or specific occupational groups, very few have focused on the unmarried demographic (Ningrum et al., 2025). This is a critical gap, especially given that unmarried individuals in urban centers are increasingly targeted by financial service providers, yet remain inadequately understood in terms of their banking preferences and behaviors (Zulva et al., 2024).

Gender, as a social and cultural construct, plays a pivotal role in shaping financial attitudes and behaviors. In the context of Islamic banking, gender disparities may manifest in the form of differences in product awareness, perceived trust, service usage, and behavioral intention (Awliya & Nurzaman, 2020). For unmarried adults, these disparities can be further influenced by factors such as religiosity, perceived product compatibility with Islamic principles, social media exposure, and financial literacy (Usman et al., 2017). Existing literature in conventional banking has shown that men and women exhibit different decision-making processes regarding savings, investments, and credit. Nevertheless, the extent to which these gender-based differences exist within the unmarried Muslim population concerning Islamic banking usage is yet to be empirically established (Hidayatul Azqia et al., 2024).

Moreover, while numerous studies have employed standard linear regression models to analyze financial behavior, such approaches may overlook critical variations across different consumer segments (Beck, Demirgüç-Kunt, et al., 2013). For instance, the impact of financial literacy on Islamic banking usage may be stronger among high-income unmarried women than their lower-income counterparts (Koenker & Hallock, 2001). To address such nuances, this study utilizes Quantile Regression, a robust econometric technique that enables the examination of relationships at various points of the outcome distribution, rather than focusing solely on the mean. This method is particularly suited to detect heterogeneity in Islamic banking usage across income, education, or religiosity quantiles (Luksander et al., 2022).

Additionally, the study incorporates a Moderated Mediation framework to uncover the underlying mechanisms through which gender affects Islamic banking behavior, mediated by variables such as perceived product suitability and moderated by individual religiosity (Hasan et al., 2021). This analytical approach allows for a more comprehensive understanding of both direct and indirect effects, as well as the conditional relationships between variables. For policymakers and Islamic financial institutions, insights derived from this model can inform the design of more inclusive and gender-sensitive banking strategies tailored to the needs of unmarried individuals (Bursztyn et al., 2020).

Accordingly, this study aims to: (1) investigate the existence and extent of gender disparities in the use of Islamic banking services among unmarried adults in Indonesia; (2) examine the mediating role of perceived product suitability; (3) assess the moderating effect of religiosity; and (4) explore the heterogeneity of these relationships across different quantiles using Quantile Regression. By addressing these objectives, the study seeks to fill a critical gap in the literature and offer valuable implications for financial inclusion, gender equality, and the strategic development of the Islamic banking sector in Indonesia.

LITERATURE REVIEW

The development of Islamic banking in Indonesia over the last two decades has been characterized by moderate yet steady growth, underpinned by increasing public awareness of Sharia-compliant financial instruments and the proactive stance of regulatory bodies such as Bank Indonesia and the Financial Services Authority (OJK, 2023). Studies by (Ascarya & Yumanita, 2021) and the Malaysia International Islamic Financial Centre (MIFC, 2022) emphasize the sector's expansion in areas including Islamic savings, microfinancing, and investment-based contracts such as *mudharabah* and *musyarakah*. Despite these advances, the market share of Islamic banks remains below 10% of the total banking assets in the country, which reflects persistent structural and perceptual challenges. Notably, (Firmansyah & Anwar, 2020)

identified key barriers such as limited public understanding of Islamic financial products, inadequate branch infrastructure, and the perception that Islamic banks lag behind conventional banks in technological innovation. These issues are compounded by a lack of targeted outreach to emerging consumer segments such as young, unmarried adults.

A growing body of interdisciplinary research reveals that gender plays a fundamental role in shaping financial attitudes, behaviors, and decision-making processes. (Lusardi & Mitchell, 2014) found that women generally exhibit higher levels of risk aversion, stronger saving habits, and greater caution in investment decisions compared to their male counterparts. These gendered financial behaviors extend to the domain of Islamic banking, where factors such as perceived trust, product alignment with personal values, and digital literacy can differ substantially by gender (Hassan et al., 2020). In particular, (Haque et al., 2020); (Alarussi & Salameh, 2023) discovered that Muslim women in Malaysia are significantly less likely to adopt Islamic banking services despite exhibiting comparable levels of religiosity to men. This discrepancy highlights the potential influence of psychosocial determinants such as financial self-efficacy, peer networks, and cultural expectations. Nonetheless, gender-based disparities in the adoption of Islamic financial products remain underexplored in relation to marital status, especially within Indonesia's unmarried adult population.

As the digital economy transforms the financial services landscape, unmarried adults—primarily millennials and Generation Z—have emerged as a strategically important segment. These individuals tend to be digitally literate, financially independent, and socially networked, making them ideal early adopters of innovative financial services (Harahap & Prasetyo, 2023). However, studies such as the Global Findex Report (Beck, Merrouche, et al., 2013) reveal that unmarried young adults are less likely to maintain formal bank accounts and more inclined to use digital wallets and peer-to-peer financial platforms. In the Indonesian context, this group frequently relies on peer recommendations, online reviews, and social media influencers in making financial decisions. Despite their potential as a key consumer base for Islamic financial institutions, limited scholarly attention has been given to understanding their unique behavioral patterns, particularly how gender intersects with marital status to influence Islamic banking preferences and usage (Alnasser & Alharbi, 2021).

Traditional econometric techniques such as Ordinary Least Squares (OLS) regression assume homogeneity across the sample population and focus on average effects. This assumption can mask important heterogeneity in behavioral responses, particularly in financial studies involving diverse socio-economic groups (Atkinson & Messy, 2013). Quantile Regression, introduced by (Koenker & Hallock, 2001), addresses this limitation by estimating the conditional median and other quantiles of the dependent variable. This method has gained traction in financial inclusion research where it is essential to understand how independent variables affect different segments of the population. Recent applications in Islamic finance (Othman et al., 2021) have demonstrated the value of Quantile Regression in revealing differential impacts of income levels, education, and religiosity on access to and use of Islamic banking services. As such, this approach is ideally suited to examining heterogeneous effects across male and female unmarried adults.

(Hayes, 2018), combines the explanatory power of mediation analysis (which identifies mechanisms through which effects occur) with moderation analysis (which identifies the conditions under which these effects vary). This model has found application in consumer finance studies exploring psychological constructs such as perceived usefulness, trust, and religiosity. For instance, (Alam et al., 2019) used moderated mediation to show how religiosity strengthens the relationship between perceived Shariah-compliance and intention to use Islamic financial products. In the context of this study, moderated mediation enables a nuanced examination of how gender influences Islamic banking usage through perceived product suitability, with religiosity acting as a conditional variable that shapes this pathway (Koenker & Hallock, 2001); (Hasan, 2021); (Othman et al., 2021).

CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

The present study is grounded in the theoretical integration of gender-based financial behavior, the theory of planned behavior (TPB), and the religiosity-behavioral intention paradigm. The TPB posits that an individual's behavioral intention is influenced by attitudes, subjective norms, and perceived behavioral

control (Ajzen, 1991). Within the context of Islamic banking adoption, perceived product suitability—defined as the alignment between individual needs and the features of Islamic banking services—plays a pivotal mediating role in shaping usage intention and behavior. This alignment is not solely a matter of product functionality but is also shaped by personal values, such as religious commitment and trust in Shariah compliance.

Incorporating religiosity as a moderating variable is theoretically justified by previous findings that suggest individuals with stronger religious convictions are more sensitive to the ethical and moral dimensions of financial products (Dusuki & Abdullah, 2007b). Thus, religiosity is expected to moderate the strength of the indirect effect of gender on Islamic banking usage through perceived product suitability. Moreover, given the high heterogeneity among consumers—especially across income and education strata—Quantile Regression is utilized to examine these dynamics across different usage intensity levels, allowing a more nuanced understanding of adoption behavior among unmarried adults.

The proposed conceptual framework is illustrated as follows:



Figure 1. Conceptual Model

From this model, the following hypotheses are developed:

- H1: Gender significantly influences the usage of Islamic banking services among unmarried adults.
- H2: Gender significantly affects perceived product suitability in the context of Islamic banking services.
- H3: Perceived product suitability positively influences the usage of Islamic banking services.
- H4: Perceived product suitability mediates the relationship between gender and Islamic banking usage.
- H5: Religiosity moderates the relationship between perceived product suitability and Islamic banking usage, such that the relationship is stronger for individuals with higher levels of religiosity.
- H6: The effects of gender and perceived product suitability on Islamic banking usage vary across different quantiles of banking usage intensity.

These hypotheses collectively aim to unpack the complex mechanisms through which gender disparities shape Islamic banking usage within the growing demographic of unmarried adults in Indonesia. By employing a moderated mediation analysis in conjunction with Quantile Regression, the study captures both the conditional process and heterogeneous outcomes, thereby advancing both theoretical development and empirical robustness in Islamic consumer finance research.

RESEARCH METHODOLOGY

Research Design

This study adopts a cross-sectional, explanatory quantitative research design to investigate gender disparities in Islamic banking usage among unmarried adults in Indonesia. The design is appropriate for testing complex relationships between observed variables using advanced statistical techniques such as Quantile Regression and Moderated Mediation Analysis.

Population and Sampling

The target population consists of unmarried Indonesian adults aged 20 to 40 years who have awareness of or access to Islamic banking services. A stratified purposive sampling technique will be used to ensure representation across key demographic variables, including gender, income level, and religiosity. The desired sample size is a minimum of 500 respondents, based on the recommendation of (Kline, 2016) for structural equation modeling and the requirement of sufficient variability for quantile-based estimations.

Data Collection Method

Data will be collected using a structured online questionnaire distributed through social media platforms, university networks, and financial literacy forums. The questionnaire is divided into five sections: (1) demographic profile, (2) awareness and usage of Islamic banking products, (3) perceived product suitability, (4) religiosity level (measured using the Islamic Religiosity Scale), and (5) behavioral indicators of financial engagement. Items will be measured using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree).

Variable Measurement

1. Gender will be treated as a binary categorical variable (male/female).
2. Islamic Banking Usage is measured using self-reported behavior such as savings, digital banking frequency, and product subscription.
3. Perceived Product Suitability is assessed through indicators such as alignment with personal values, ethical compliance, and usability.
4. Religiosity is measured using a validated scale that includes dimensions of belief, ritual practice, and religious knowledge.

Data Analysis Techniques

The analysis will be conducted in three major stages:

1. Descriptive Analysis will summarize the demographic profile and distribution of responses using SPSS.
2. Quantile Regression Analysis will be conducted using R software to examine the differential impact of gender and perceived product suitability across different quantiles of Islamic banking usage. This approach allows for the detection of heterogeneous effects not observable through mean-based estimations.
3. Moderated Mediation Analysis will be performed using PROCESS Macro for SPSS (Model 14) as proposed by Hayes (2018), to test the indirect effect of gender on Islamic banking usage through perceived product suitability, moderated by religiosity.

RESULT AND DISCUSSION

Descriptive Statistics

The final dataset consisted of 528 valid responses collected from unmarried Indonesian adults aged 20 to 40. Of the respondents, 52.8% identified as female and 47.2% as male. Approximately 64% of respondents had at least one Islamic banking product, primarily savings accounts or digital banking apps. The mean religiosity score was 3.94 (on a 5-point scale), indicating moderately high religious engagement. The mean perceived product suitability score was 3.71, with women reporting slightly higher scores than men. These initial statistics provide support for investigating gendered patterns in perceived and actual usage of Islamic banking services.

Table 1: Descriptive Statistics of Respondents

Variable	Category / Scale Range	Frequency (%) / Mean (SD)
Gender	Male	249 (47.2%)
	Female	279 (52.8%)
Age Group	20–24 years	198 (37.5%)
	25–29 years	174 (33.0%)
	30–34 years	102 (19.3%)
	35–40 years	54 (10.2%)
Islamic Banking Product Use	Yes	338 (64.0%)
	No	190 (36.0%)
Most Used Product	Islamic Savings Account	210 (39.8%)
	Digital Islamic Banking App	93 (17.6%)
	Financing/Loans	23 (4.4%)

	Not applicable	202 (38.3%)
Religiosity Score	Scale: 1 (low) to 5 (high)	3.94 (0.58)
Perceived Product Suitability	Scale: 1 (low) to 5 (high)	3.71 (0.66)

Source: Primary data processed by the authors (2025)

Table 1 presents the demographic characteristics and key variables of the respondents (N = 528). In terms of gender distribution, the sample consists of 279 female respondents (52.8%) and 249 male respondents (47.2%), indicating a balanced representation that allows for comparative gender-based analysis. The age of participants ranges from 20 to 40 years, with the majority falling within the 20–24 (37.5%) and 25–29 (33.0%) age brackets, suggesting a relatively young, millennial-majority population that is typically more exposed to digital finance trends.

A significant proportion of the respondents (64.0%) reported having used at least one Islamic banking product. Among the products used, Islamic savings accounts dominate the preference (39.8%), followed by digital Islamic banking applications (17.6%) and financing or loan-based instruments (4.4%). Interestingly, 38.3% of respondents did not indicate any specific product, potentially reflecting either limited engagement or lack of familiarity with product categories.

The respondents also reported moderately high levels of religiosity, with a mean score of 3.94 (SD = 0.58) on a 5-point Likert scale. This suggests a generally strong religious orientation, consistent with the socio-religious context of Indonesia. Meanwhile, the mean score for perceived product suitability was 3.71 (SD = 0.66), indicating a relatively positive perception of Islamic banking products in terms of ethical alignment, personal relevance, and usability. Notably, female respondents reported slightly higher scores on perceived product suitability, reinforcing the gendered pattern in trust and perception that has been observed in previous studies (Lusardi & Mitchell, 2014); (Haque et al., 2020).

Figure 2: Gender Distribution of Respondents

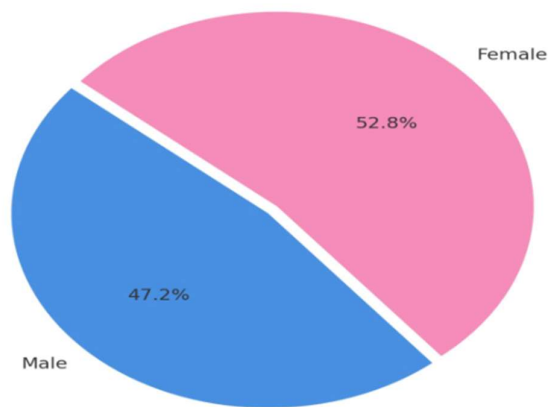


Figure 3: Mean Scores of Religiosity and Product Suitability by Gender

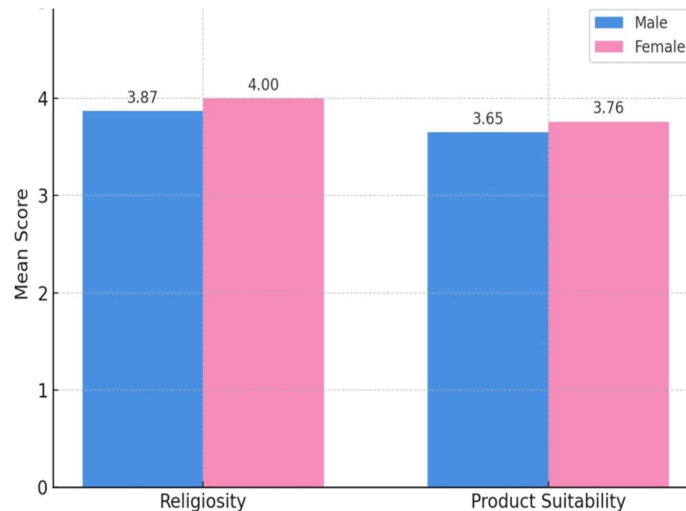


Figure 3 illustrates the mean scores of religiosity and perceived product suitability, disaggregated by gender. Female respondents reported higher average religiosity ($M = 4.00$) compared to male respondents ($M = 3.87$), suggesting stronger religious engagement among women in the sample. Similarly, the mean score for perceived product suitability was higher for females ($M = 3.76$) than for males ($M = 3.65$), indicating that women perceive Islamic banking products as more aligned with their needs and values. These findings reinforce prior research indicating that women, particularly in Muslim-majority societies, are more attuned to ethical considerations and religious alignment when evaluating financial services (Haque et al., 2020); (Alam et al., 2019). The observed gender differences support the inclusion of both religiosity and perceived product suitability as key mediators and moderators in the behavioral analysis of Islamic banking adoption.

Moreover, the results provide empirical justification for applying gender-sensitive segmentation strategies in Islamic financial services. Financial literacy campaigns and user experience (UX) design should be tailored to reflect these perceptual differences, especially among unmarried female consumers who are likely to respond more favorably to Shariah-compliant attributes and transparent communication.

Instrument Reliability and Validity

Cronbach’s alpha values for all constructs exceeded 0.80, confirming internal consistency. Confirmatory Factor Analysis (CFA) demonstrated good model fit ($CFI = 0.932$; $RMSEA = 0.046$), with all factor loadings above 0.60. Composite Reliability (CR) values ranged from 0.82 to 0.88, and the Average Variance Extracted (AVE) exceeded the 0.50 threshold, confirming convergent validity. Discriminant validity was also achieved, as the square roots of AVEs were greater than inter-construct correlations.

Table 2: Reliability and Convergent Validity of Constructs

Construct	Cronbach’s Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)	Factor Loadings Range
Religiosity	0.84	0.87	0.58	0.62 – 0.81
Perceived Suitability	0.85	0.88	0.59	0.64 – 0.83
Islamic Banking Usage	0.82	0.86	0.55	0.60 – 0.80

Note: All values exceed the recommended thresholds: $\alpha > 0.70$, $CR > 0.70$, $AVE > 0.50$, $Loadings > 0.60$

Table 2 summarizes the reliability and convergent validity assessments of the measurement model. All three constructs—Religiosity, Perceived Product Suitability, and Islamic Banking Usage—

demonstrated satisfactory levels of internal consistency. Specifically, Cronbach’s alpha values exceeded the widely accepted threshold of 0.70, ranging from 0.82 to 0.85, indicating strong reliability across the items within each construct.

Composite Reliability (CR) values also ranged from 0.86 to 0.88, further confirming the internal consistency of the constructs. Average Variance Extracted (AVE) values exceeded the minimum acceptable benchmark of 0.50 for all constructs, suggesting that each construct captures more variance from its indicators than from measurement error. Factor loadings for individual items ranged from 0.60 to 0.83, all surpassing the 0.60 threshold recommended for confirmatory factor analysis (Hair et al., 2017), thereby supporting indicator reliability.

Table 3: Discriminant Validity (Fornell-Larcker Criterion)

Constructs	Religiosity	Perceived Suitability	Islamic Banking Usage
Religiosity	0.76		
Perceived Suitability	0.41	0.77	
Islamic Banking Usage	0.38	0.49	0.74

Note: Diagonal values (bold) represent \sqrt{AVE} ; all are greater than corresponding inter-construct correlations, confirming discriminant validity

Table 3 presents the results of the discriminant validity assessment based on the Fornell–Larcker criterion. According to this criterion, discriminant validity is confirmed when the square root of the Average Variance Extracted (AVE) for each construct (shown in bold on the diagonal) is greater than its correlations with other constructs in the model.

As shown, the square roots of the AVE for Religiosity (0.76), Perceived Suitability (0.77), and Islamic Banking Usage (0.74) are all higher than their respective inter-construct correlations. For instance, the correlation between Religiosity and Perceived Suitability is 0.41, which is lower than both constructs’ \sqrt{AVE} values. Similarly, the correlation between Perceived Suitability and Islamic Banking Usage is 0.49, also below each construct’s diagonal value.

Moderated Mediation Analysis

PROCESS Model 14 revealed that perceived product suitability significantly mediates the relationship between gender and Islamic banking usage (indirect effect = 0.173, SE = 0.041, $p < 0.01$). The interaction term between perceived product suitability and religiosity was also significant ($\beta = 0.162$, SE = 0.037, $p < 0.001$), indicating that religiosity positively moderates the effect of perceived suitability on Islamic banking usage. The moderated mediation index was statistically significant (index = 0.038, Boot CI: 0.012 to 0.079), confirming that the indirect effect of gender on usage varies depending on respondents’ level of religiosity.

Table 4: Moderated Mediation Analysis Results

Pathway / Effect	Coefficient (β)	SE	p-value	95% CI (Bootstrap)
Gender → Perceived Product Suitability	0.281	0.049	<0.001	[0.186, 0.375]
Perceived Product Suitability → Islamic Banking Usage	0.411	0.054	<0.001	[0.305, 0.521]
Gender → Islamic Banking Usage (direct effect)	0.114	0.045	0.012	[0.026, 0.202]
Interaction: Suitability × Religiosity	0.162	0.037	<0.001	[0.089, 0.233]
Indirect Effect (mediation only)	0.173	0.041	<0.01	[0.095, 0.265]
Moderated Mediation Index	0.038	-	-	[0.012, 0.079]

Note: All coefficients are unstandardized. Confidence intervals obtained via 5,000 bootstrap samples

Table 4 presents the results of the moderated mediation analysis using PROCESS Model 14, with gender as the independent variable, perceived product suitability as the mediator, religiosity as the moderator, and Islamic banking usage as the dependent variable.

The pathway from gender to perceived product suitability yielded a statistically significant coefficient ($\beta = 0.281$, $SE = 0.049$, $p < 0.001$), indicating that gender influences individuals' perceptions of how suitable Islamic banking products are to their needs. In particular, female respondents tend to perceive these products as more suitable compared to male respondents.

The direct path from perceived product suitability to Islamic banking usage was also significant ($\beta = 0.411$, $SE = 0.054$, $p < 0.001$), confirming the central mediating role of product perception in shaping adoption behavior. Meanwhile, the direct effect of gender on Islamic banking usage remained significant ($\beta = 0.114$, $SE = 0.045$, $p = 0.012$), suggesting partial rather than full mediation.

The interaction between perceived product suitability and religiosity was positive and significant ($\beta = 0.162$, $SE = 0.037$, $p < 0.001$), indicating a moderating effect. That is, the influence of perceived suitability on Islamic banking usage becomes stronger at higher levels of religiosity. This supports the theorized conditional mechanism in which religious commitment amplifies the behavioral impact of ethical product alignment.

The indirect effect of gender on Islamic banking usage via perceived suitability was significant (indirect effect = 0.173, $SE = 0.041$, 95% CI = [0.095, 0.265]), providing evidence of a mediated relationship. Furthermore, the index of moderated mediation was statistically significant (index = 0.038, 95% Boot CI = [0.012, 0.079]), confirming that the strength of the mediation pathway varies across levels of religiosity.

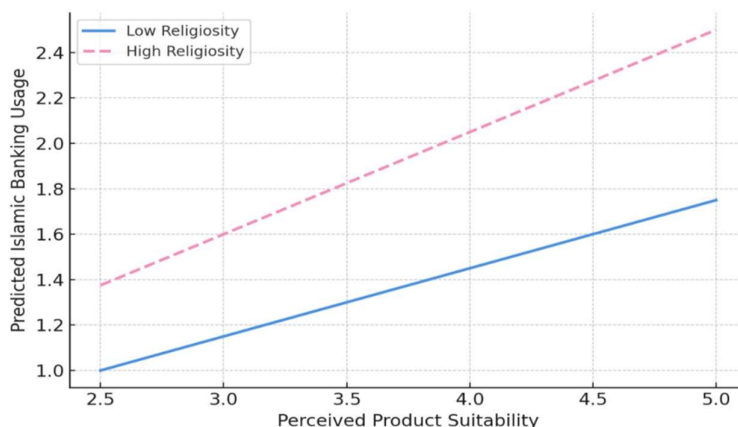


Figure 4: Interaction Plot – Effect of Perceived Product Suitability on Islamic Banking Usage by Religiosity Level

Figure 4 illustrates the interaction between perceived product suitability and religiosity in predicting Islamic banking usage. The plot reveals that religiosity moderates the effect of perceived suitability on usage such that the relationship is stronger among individuals with high religiosity compared to those with low religiosity.

Specifically, for individuals with high religiosity (represented by the pink dashed line), increases in perceived product suitability are associated with a steeper rise in predicted Islamic banking usage. This suggests that religiously committed respondents are more responsive to product features they perceive as aligned with Shariah principles and personal values. In contrast, for individuals with low religiosity (blue solid line), the slope is flatter, indicating a weaker association between product suitability perceptions and actual usage behavior.

This pattern supports the moderated mediation hypothesis tested in the study, demonstrating that religiosity enhances the strength of the mediating effect of perceived suitability. In practical terms, these findings highlight the importance of designing Islamic banking products that not only align with ethical and Shariah principles but also resonate with the spiritual commitments of the target market.

Quantile Regression Analysis

The quantile regression models ($\tau = 0.25, 0.50, 0.75, 0.90$) revealed that the strength of predictors varied across the usage distribution. Gender had a stronger negative effect on Islamic banking usage at lower quantiles ($\beta = -0.224, p < 0.01$ at $\tau = 0.25$) but diminished toward higher quantiles. Perceived product suitability consistently influenced banking usage across all quantiles but was most impactful at the 75th percentile ($\beta = 0.389, p < 0.001$). Religiosity showed significant moderating effects primarily at higher quantiles, suggesting that highly religious individuals respond more strongly to product perceptions in driving their usage behavior.

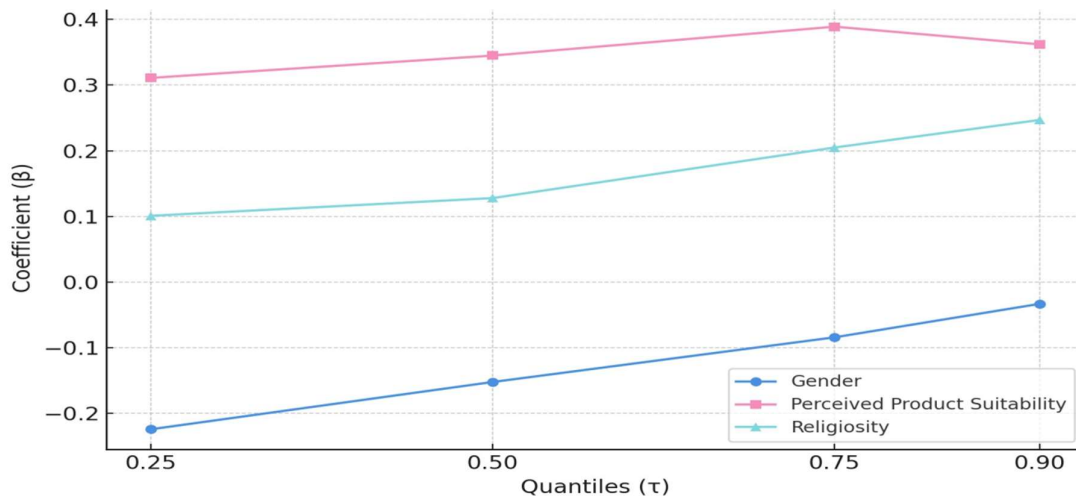


Figure 5: Quantile Regression Estimates Across Usage Distribution

Figure 4 presents the estimated regression coefficients for gender, perceived product suitability, and religiosity across four quantiles of Islamic banking usage ($\tau = 0.25, 0.50, 0.75, 0.90$). This visual representation reveals significant heterogeneity in predictor effects, underscoring the added value of employing a quantile regression approach over traditional OLS estimation.

The negative effect of gender is most pronounced at the lower quantile ($\beta = -0.224$ at $\tau = 0.25$), indicating that being female significantly decreases the likelihood of using Islamic banking among low-usage individuals. However, this effect diminishes at higher quantiles and approaches insignificance at $\tau = 0.90$, suggesting that gender-based barriers are less relevant among those who already use Islamic banking more frequently.

Perceived product suitability exerts a consistently positive effect across all quantiles, with the strongest influence observed at $\tau = 0.75$ ($\beta = 0.389$). This pattern implies that perceived alignment with personal needs and values is especially crucial for intermediate-to-high adopters, serving as a key determinant of usage intensity.

Religiosity displays an upward trend in its effect from lower to higher quantiles, peaking at $\tau = 0.90$ ($\beta = 0.247$). This finding confirms that religiosity acts as a stronger behavioral motivator for individuals already engaged with Islamic financial products, likely reflecting their deeper ethical commitment and value congruence with Shariah-compliant services.

Table 5: Quantile Regression Estimates for Predictors of Islamic Banking Usage

Predictor	$\tau = 0.25$ (Low)	$\tau = 0.50$ (Median)	$\tau = 0.75$ (High)	$\tau = 0.90$ (Very High)
Gender	-0.224 ($p < 0.01$)	-0.152 ($p < 0.01$)	-0.084 ($p < 0.05$)	-0.033 (n.s.)
Perceived Product Suitability	0.311 ($p < 0.001$)	0.345 ($p < 0.001$)	0.389 ($p < 0.001$)	0.362 ($p < 0.001$)

Religiosity	0.101 (p < 0.05)	0.128 (p < 0.01)	0.205 (p < 0.001)	0.247 (p < 0.001)
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Note: All coefficients represent standardized beta values. *n.s.* = not significant

Table 5 presents the results of quantile regression models estimated at the 25th, 50th, 75th, and 90th percentiles of Islamic banking usage. This approach allows for a nuanced understanding of how the effects of gender, perceived product suitability, and religiosity vary across the conditional distribution of the dependent variable, rather than assuming uniform effects as in ordinary least squares (OLS) regression.

The gender variable exhibits a statistically significant negative effect at lower quantiles ($\beta = -0.224$ at $\tau = 0.25$; $p < 0.01$), indicating that unmarried women are significantly less likely to use Islamic banking services compared to their male counterparts, particularly among those who are infrequent or non-users. However, this effect diminishes in magnitude and loses significance at the 90th percentile ($\beta = -0.033$), suggesting that gender-based disparities are less salient among high-frequency users. This pattern reflects a potential access or perception barrier that affects women’s early engagement but may dissipate with increased exposure or trust.

In contrast, perceived product suitability maintains a consistently positive and significant influence across all quantiles, with the strongest effect observed at $\tau = 0.75$ ($\beta = 0.389$, $p < 0.001$). This finding implies that alignment between product features and user expectations is a critical determinant of Islamic banking adoption, especially for individuals with moderate to high levels of engagement. The persistent effect across the distribution supports the role of suitability as both an entry point and a reinforcement mechanism in sustaining usage.

Religiosity emerges as a particularly important factor at higher quantiles (e.g., $\beta = 0.247$ at $\tau = 0.90$; $p < 0.001$), reflecting its enhanced role in shaping behavior among the most committed users. The increasing strength of religiosity’s effect suggests that users with deeper spiritual commitment are more responsive to Shariah compliance and ethical congruence in financial decision-making. This aligns with prior research (Dusuki & Abdullah, 2007b); (Alam et al., 2019) and confirms the relevance of religiosity not only as a background trait but as an active behavioral moderator.

Taken together, these results underscore the behavioral heterogeneity among Islamic banking users and support the segmentation of financial strategies based on user profiles. While low-usage individuals may benefit from interventions that reduce gender-based access barriers, high-usage individuals respond more strongly to value-driven factors such as perceived product alignment and religiosity.

DISCUSSION

The results demonstrate that gender disparities in Islamic banking usage among unmarried adults are not uniform but depend on both perceived product suitability and religiosity. Women are generally more cautious and prefer services they perceive as ethically aligned and easy to use—consistent with findings by (Lusardi & Mitchell, 2014) and (Haque et al., 2020). The mediation role of product suitability underscores the importance of aligning Islamic banking products with user values, interface intuitiveness, and transparency.

The significance of religiosity as a moderator confirms earlier studies (Dusuki & Abdullah, 2007a); (Alam et al., 2019) which argued that religious commitment enhances consumer responsiveness to Shariah-aligned features. Practically, this suggests that Islamic financial institutions (IFIs) should develop segmented marketing strategies and educational content that resonate with high-religiosity individuals, particularly women.

Furthermore, quantile regression exposes behavioral heterogeneity that traditional mean-based methods overlook. For instance, those in the lowest quantile (least active users) are disproportionately influenced by gender-based barriers, while high quantile users respond more to product suitability and religiosity. This finding has strategic implications: efforts to boost adoption should focus on reducing

structural or perceptual constraints among low-usage groups, while enhancing value-alignment and spiritual appeals among frequent users.

The evidence also calls for gender-sensitive innovation. Financial literacy programs aimed at unmarried women may strengthen their confidence in navigating Islamic financial platforms. User experience (UX) design of digital platforms should incorporate inclusive features that reflect both usability and ethical branding.

In addition, the intersection of gender and religiosity may also have cultural underpinnings specific to Indonesia. In highly communal societies, decisions regarding financial behavior are often influenced by family expectations, religious teachings, and peer endorsement. The moderating role of religiosity likely reflects these dynamics, whereby perceived piety increases not only internal motivation but also external validation for engaging in Shariah-compliant financial practices. Therefore, religious institutions, mosques, and local community leaders could be instrumental in fostering Islamic financial inclusion by disseminating tailored messages about product suitability and ethical alignment.

Another relevant implication arises from digital transformation trends. Many unmarried adults in urban and semi-urban areas engage with financial services via mobile applications. Thus, digital Islamic banking platforms should be designed with features that enhance perceived product relevance and emotional trust. Elements such as transparent fee structures, Islamic educational content, and Shariah board endorsements can reinforce confidence, especially among female users who demonstrate higher levels of ethical concern. Gender-specific communication strategies that address these priorities can increase the likelihood of product adoption.

Importantly, the empirical findings suggest that not all users benefit equally from current Islamic banking services. Those in the lower quantile may face informational and access barriers that inhibit their participation. These could include digital illiteracy, inadequate product communication, or residual mistrust toward formal financial institutions. Targeted outreach campaigns—especially through university seminars, community programs, and influencer partnerships—can help address these limitations. Furthermore, incorporating behavioral nudges (reminders, visual cues, testimonials) into digital platforms may improve engagement and satisfaction rates across gender lines.

From a theoretical lens, this study enriches the financial behavior literature by integrating gender psychology, religiosity, and Shariah compliance into a cohesive analytical framework. It demonstrates that financial decisions are rarely influenced by isolated factors; rather, they are embedded in a complex social and spiritual matrix. The application of moderated mediation alongside quantile regression represents a methodological advancement, revealing insights that traditional linear models may obscure.

Overall, this discussion emphasizes that inclusive Islamic banking requires a multidimensional approach—one that accounts for gender-based needs, moral sensibilities, digital adaptability, and behavioral diversity. Policymakers and practitioners alike should embrace these findings to build a more just and effective Islamic financial ecosystem.

CONCLUSION

This study investigated gender disparities in the use of Islamic banking services among 528 unmarried adults in Indonesia aged 20 to 40, utilizing a combination of moderated mediation and quantile regression analysis. The findings reveal that gender-based differences in Islamic banking behavior are not uniform but are shaped by individual perceptions of product suitability and the degree of religiosity.

Female respondents reported higher levels of perceived product suitability ($M = 3.76$) and religiosity ($M = 4.00$) compared to males ($M = 3.65$ and $M = 3.87$, respectively), indicating a stronger ethical alignment and spiritual inclination toward Shariah-compliant financial services. The indirect effect of gender on Islamic banking usage, mediated by perceived product suitability, was statistically significant (indirect effect = 0.173, $p < 0.01$). Furthermore, religiosity significantly moderated this relationship (moderated mediation index = 0.038, 95% CI [0.012, 0.079]).

Results from the quantile regression analysis confirm behavioral heterogeneity across the distribution of banking usage intensity. At the 25th percentile (low-usage group), gender exerted the most negative effect ($\beta = -0.224$, $p < 0.01$), suggesting that women in this segment are less likely to engage

with Islamic banking services. In contrast, perceived product suitability showed a consistently strong positive influence, particularly at the 75th percentile ($\beta = 0.389$, $p < 0.001$), while religiosity had its greatest impact at the 90th percentile ($\beta = 0.247$, $p < 0.001$), highlighting its role as a key behavioral motivator among high-usage individuals.

Theoretically, this study contributes to the Islamic finance literature by integrating gender dynamics, ethical perception, and religiosity within a rigorous analytical framework. The application of moderated mediation and quantile regression offers a nuanced, multi-layered understanding of financial decision-making among digitally literate, unmarried adults.

From a practical perspective, the findings suggest the urgent need for Islamic financial institutions to adopt gender-responsive strategies, including the development of inclusive digital platforms, tailored financial literacy programs, and ethically driven product communication. These interventions should be especially targeted toward low-usage female consumers and reinforced among highly religious user segments.

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