



Online-Shopping of Muslim Customers: Mapping Potential and Examining the Effects of Islamic Consumer Behavior

Hesi Eka Puteri^{1*}, Baginda Parsaulian², Cahya Agung Mulyana³, Niyara Arinda⁴

^{1,2,*}State Islamic University of Bukittinggi, West Sumatera, Indonesia; hesiekaputeri@gmail.com (H.E.P.).

⁴University of Selangor (UNISEL), Shah Alam, Selangor, Malaysia.

Abstract. This study aims to map the online shopping potential of Muslim customers and estimate the effect of Islamic consumers' behavior on the level of that potential. This study also proves further about what are the driving factors of Muslim customers in doing online shopping in Islamic perspective. This research is quantitative with cross-sectional data based on a survey of 977 Muslims in Indonesia who actively shopped online in 2023. The findings found that 54.66% of respondents in this study were in the high-potential category. Personal and social aspects are strong predictors for the online shopping potential of Muslim customers. The increase in personal and social aspects causes the tendency of Muslim customers to be in the high potential group in online shopping by 0.522 times and 0.670 times than the customer group in the low potential group. This study highlights the significance of Islamic religiosity choosing online shopping by Muslims, whose conviction values are coordinated into their behavioral dimensions. Practically, this study contributes to e-commerce development policies particularly, for regulators, digital businesses, and also financial practices in planning market-driving strategies for digital business.

Keywords: Digital business, E-commerce, Islamic consumer behavior, Religiosity.

1. INTRODUCTION

The rapid development of the digital business industry over the past decade has significantly influenced consumption patterns in society which shifted from conventional patterns to digital transactions. Digital transformation, characterized by the integration of digital technologies into all aspects of business operations, has emerged as a pivotal catalyst for fostering business model innovation and providing opportunities for the development of marketplaces. There are top five marketplaces that dominate e-commerce platforms such as Amazon, Alibaba, Pinduoduo, Meituan, and Shopify, with the fashion and cosmetics industry as the group with the largest buyer segment. Similar conditions are also observed in Indonesia as the country with the largest population in Southeast Asia, Indonesia is in the top ten countries in the world that use the internet for online shopping, at 59.3%. Shopee is the most popular e-commerce platform used, at 89%, and the most popular products purchased are fashion and accessories (<https://databoks.katadata.co.id/>, 2024).

This change in shopping trends provides space for consumer behavior studies, especially about the digital economy and digital business. In the basic concept of marketing, the buyer decision process refers to activities such as need recognition, searching for information, evaluating alternatives, purchasing, and evaluating products and services that they expect will satisfy their needs (Engel et al., 1995; Kotler & Armstrong, 2004; Schiffman et al., 2010). In the case of online shopping behavior, the buyer decision process is already biased from the original concept of consumer behavior theory. As proposed by (Smith & Rupp, 2003), some basic determinants in making decisions in online shopping refer more to external influences (such as the website's marketing effort and socio-cultural influence). Louvieris et al., (2003) even claim that the decision-making process in online shopping is already further biased from its main concept which usually follows cognitive, affective, and purchasing decision patterns. Decision-making models in digital commerce are greatly influenced by the attributes of e-commerce within UTAUT (the Unified Theory of Acceptance and Use of Technology) framework, such as the intensity of website quality (Saoula, Shamim, Mohd Suki, et al., 2023), e-privacy (Lee et al., 2018), e-trust (Saoula, Shamim, Mohd Suki, et al., 2023), e-security (Bare et al., 2021; Hoque et al., 2023; Zaheer et al., 2024), and others. In adopting online shopping, some predictors such as perceived ease of use, perceived usefulness, intention to use, subjective norm, and perceived enjoyment have become important things in the acceptance (Driediger & Bhatiasevi, 2019; Puteri, Arinda, et al., 2022).

Further exploring the consumer decision-making model for online shopping behavior from the perspective of Islamic economics provides a much more interesting view. The large number of Muslim customers in a country does not automatically indicate a high potential for online shopping. Shopping patterns depend heavily on behavior and also local characteristics, such as digital literacy, access to technology, and the community's understanding of e-commerce. Even among Muslims, this shopping behavior is also related to emotional motives such as their religiosity. Islam is not only religious teachings but a way of life (Choudhury, 2019; Tibi, 2020) and Islam does not separate religion and socio-economic life. There is integration in science and religion, and there is an indication of the importance of Islamic Religiosity in consumer behavior. Islamic Religiosity is principally part of the Emotional motives that differentiate Muslim and non-Muslim behavior, and this concept of integration is rarely analyzed in digital marketing studies. Agarwala et al., (2019) concluded that religious rituals, religious beliefs, religious values, and also religious communities are antecedents that differentiate Muslim consumer behavior from others.

Referring to the initial concept of consumer behavior which groups shopping motives into rational and

emotional motives (Schiffman et al., 2010), in choosing online shopping both of these things also occur. Online-shopping decisions are influenced by a combination of cultural (Li et al., 2022; Salem & Baidoun, 2022; Wang et al., 2023), Social (Arief et al., 2023; Kacprzak & Hensel, 2023; Kalia et al., 2022), personal (Prabowo & Nugroho, 2019; Saoula, Shamim, Suki, et al., 2023; Susanto et al., 2023; Zaheer et al., 2024), economic and Psychological characteristic (Baidoun & Salem, 2024; Llach et al., 2023; Santo & Marques, 2022). Studies of the relationship between religiosity and consumer behavior have indeed become a topic that has attracted the attention of researchers, and implicitly by tracing previous studies (Muflih & Juliana, 2021; Puteri, Parsaulian, et al., 2022; Shahid et al., 2022) revealed that predictors of online shopping decisions indeed operate within an integrative framework rather than endogenous. The features of digital technology that dominate the reasons why people doing shopping in e-commerce are part of the most varied personal reasons. Likewise, a person's belief in their religious teachings is also part of the emotional motive which is then reflected in the personal and psychological aspects of consumers.

This study points to map the potential of Muslim consumers in online shopping and examines how Islamic consumer behavior influences their potential online shopping. It offers a theoretical contribution by developing a consumer behavior instrument from an Islamic perspective, which is not well established. Methodologically, the study applies multinomial logistic regression as a tool to build more accurate models in uncovering the influence of the dimensions of Islamic consumer behavior on the levels of online shopping potential, categorized as low, medium, or high. The results will end up with the conclusion what the key determinants that most significantly affect the online shopping potential of Muslim consumers, and uncover the specific behaviors that drive them to engage with. The findings will contribute valuable insights to stakeholders, online businesses, and industries from upstream to downstream, highlighting the importance of understanding consumer behavior for strategic decision-making. The decision to focus on Indonesian Muslims as the case study is rooted in the unique research context. Indonesia, as a country with a Muslim-majority population, has a long history of cultural and religious acculturation, which has shaped societal behaviors in various aspects. This makes it an ideal setting for examining how Islamic values intersect with consumer behavior, particularly in online shopping.

2. LITERATURE REVIEW

The pattern of people's behavior in deciding to shop in e-commerce is always changing along with changes in economic conditions, socio-demographics, socio-culture, and other motivations in the individual itself. In the basic concept of marketing, consumer behavior refers to the actions carried out by individuals, groups, or organizations related to the decision-making process in consuming goods and services (Engel et al., 1995; Schiffman et al., 2010), which is displayed in activities: need recognition, searching for information, evaluation of alternatives, purchase decision, and post-purchase behavior. Unlike the conventional purchase decision-making process which follows patterns through learning (cognitive), evaluation (affective), and purchasing decisions, online shopping behavior is already biased from these main concepts. The decision-making process in online shopping is more influenced by some external aspects such as the intensity of Web pages and concerns over the e-security of online payments (Louvieris et al., 2003; Smith & Rupp, 2003).

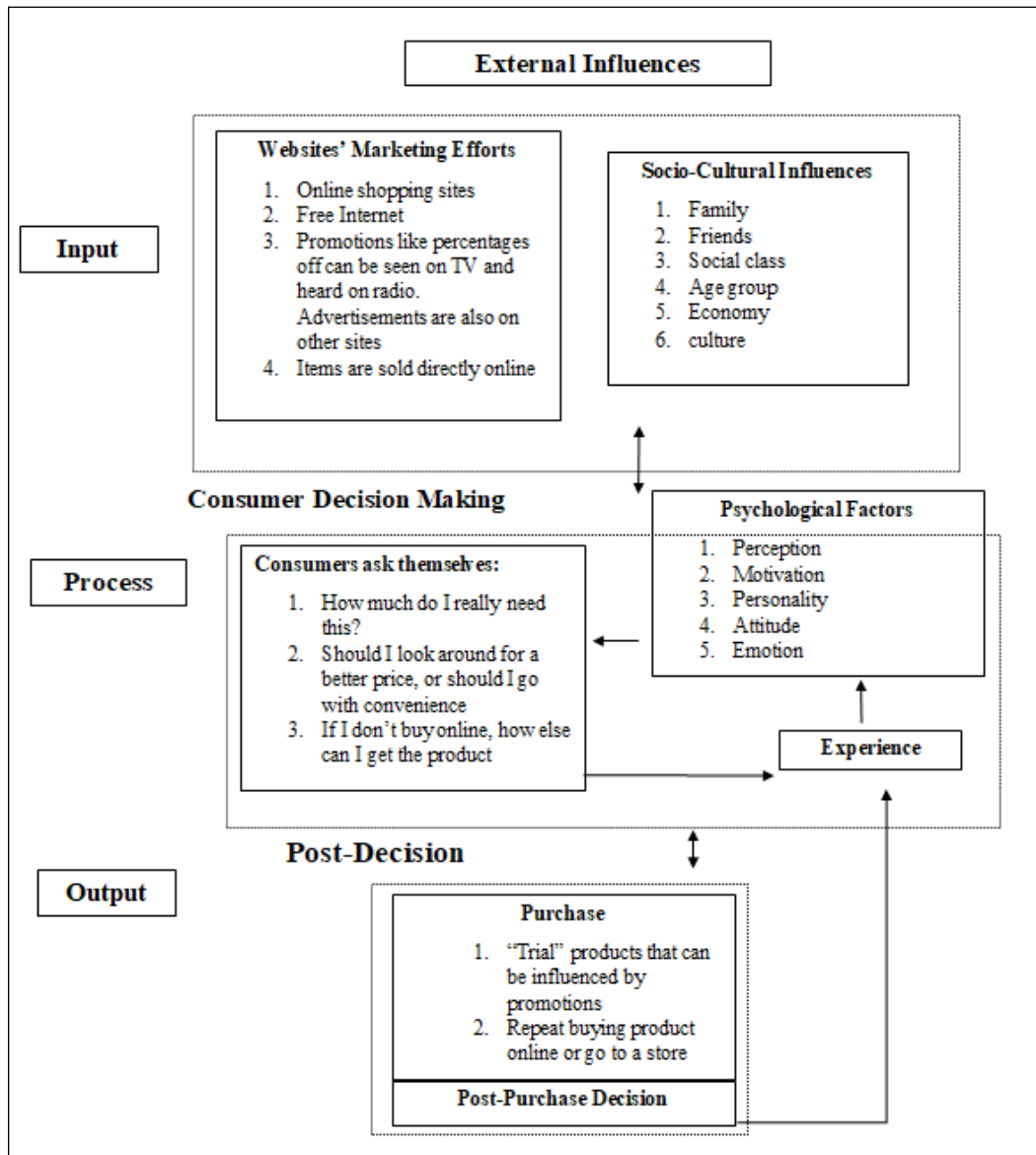


Figure 1: Consumer decision-making model for online shopping.
Source: Smith and Rupp, 2003.

Figure 1 shows the proposed consumer decision-making model for online shopping behavior, which was initiated by Smith & Rupp (2003). The input stage is influenced by the consumer's recognition of a product need through two major sources of information such as the Web site marketing efforts, and socio-cultural influences. The website lets the consumer know what the product is, where to get it, and how to financially secure it. Socio-cultural influences can occur through consumer product reviews if the website does not provide perfect information. Before a consumer decides to do online shopping, they often ask themselves a few questions about what they need, price, and the convenient shopping scheme whether conventional or online. This psychological aspect influences consumer decisions based on experience gained from previous shopping activities or other people's experiences. Thus, it can be concluded that purchase decisions are influenced by marketing efforts, socio-cultural influences, psychological factors, personal considerations, post-decision behavior, and experience. As digital technology develops, the online purchasing model depends more on many other things such as intensity of Website Quality (Saoula, Shamim, Mohd Suki, et al., 2023), e-privacy (Lee et al., 2018), e-trust (Saoula, Shamim, Mohd Suki, et al., 2023), e-security (Bare et al., 2021; Hoque et al., 2023; Zaheer et al., 2024) and others. Within the UTAUT (Unified Theory of Acceptance and Use of Technology) framework, several factors such as Perceived Ease of Use, Perceived Usefulness, Intention to Use, Subjective Norm, and Perceived Enjoyment are important determinants in adopting online shopping (Driediger & Bhatiasevi, 2019).

Theoretical expansion of consumer behavior in Islamic framework for online shopping provides a unique perspective. Islamic Consumer Behavior refers to the patterns, preferences, and habits of consumers whose choices are shaped by Islamic thought and values. Islam is a way of life that governs all aspects of life and Islam does not want a separation between religion and the economy or other aspects of life. Islam does not view religious teachings as merely religious doctrines, but Islam is a view of life (Choudhury, 2019; Tibi, 2020) and Islamic Religiosity which refers to the degree of belief in religious values (Delener, 1990), is also part of consumption behavior. However, The exploration of the theory of Islamic consumer behavior has so far not provided a crucial difference except for the expansion of normative values such as ethical considerations,

adherence to halal principles, and the prohibition of haram activities.

Schiffman et al., (2010) already distinguish between rational motives and emotional motives in deciding to adopt goods and services. Rational motives are driven by the basis of logical analysis and proper evaluation and also cost benefit, whereas emotional motives refer to feelings or emotions such as pride, fear, affection, obedience, or status. Religiosity is part of the emotional motive and is a strong psychological attachment to everything. Karoui & Khemakhem, (2019) emphasized that halal consumption is not only related to religion but also a product of various factors such as social, cultural, and psychological. Agarwala et al., (2019) have found that religious rituals, religious beliefs, religious values, and also religious communities are the antecedents that distinguish Muslim consumer behavior from others, in the case of online shopping, (Muflih & Juliana, 2021) found that the spirituality of Muslim customers had a significant effect on online-purchase decisions. (Puteri, Parsaulian, et al., 2022) have also developed the concept of conventional consumer behavior through Islamic religiosity in measuring the potential demand for Islamic banking. Normative predictors such as religious knowledge, religious commitment, and halal certification are proven to affect consumers' actual purchase behavior of halal cosmetics (Shahid et al., 2022).

By Identifying the development of theoretical concepts and also previous studies about online shopping behavior, it can be concluded that there are four large groups of predictors in online shopping. *First*, Culture. This idea relates to the beliefs, values, and habits that influence how consumers act and can be measured at the level of age, personality, and lifestyle (Stankevich, 2017). Empirically, online-shopping decisions are motivated by shopping culture, because smart shoppers with a strongly individualistic culture tend to spend time on multi-channel shopping to make the right purchase the first time, while shoppers with a weak individualistic culture prefer to be careful in shopping (Wang et al., 2023). In the case of Muslim consumers, (Salem & Baidoun, 2022) who conducted a study in Arab countries found a positive relationship between consumption patterns, lifestyle, level of income, and also payment methods on consumer attitudes towards online shopping. While in the case of non-Muslims, other findings confirmed that Chinese individual cultural characteristics have an impact on perceived shopping values (Li et al., 2022). Actually, online shopping is a lifestyle for modern Muslim customers and is sometimes influenced by pre-influencers or YouTubers that cause impulse buying (Thelwall, 2021).

Second, social. Advice from friends, neighbors, and family members sometimes has a strong influence on consumer decisions in purchasing goods and services, as well as a person's Role and Status in their social environment (Kotler & Armstrong, 2004). Someone is affiliated with some groups such as family, associations, and organizations, which then influence their behavior in consumption. In line with the development of e-commerce with all the problems in it, studies in this field have uncovered the role of social influence, social media, or reference group opinion in online purchase intention of online shopping (Doan, 2020; Le-Hoang, 2020). Almost all e-commerce platforms place customer reviews as testimonials for their products and this is also considered a form of social influence because it provides references from previous customers to new customers (Arief et al., 2023; Kalia et al., 2022). Online customer experience (OCE) is an important thing that buyers consider when deciding to shop online (Kacprzak & Hensel, 2023). Based on gender categories, it can be seen that social aspects have a positive impact on online purchase intentions which are greater in women than men (Kanwal et al., 2022).

Third, psychological. It refers to things related to motivation, perception, learning, beliefs, and attitudes (Stankevich, 2017), and is important to be analyzed by sellers because marketing strategies can be manipulated from this side. Perceived trust and perceived value are psychological aspects that have been widely studied (Athapaththu & Kulathunga, 2018; Baidoun & Salem, 2024; Le-Hoang, 2020), and other studies also found that Brand image and consumers' trust have a significant effect on intention to behave in online-purchase by Muslims (Koc et al., 2024; Mardhatillah, 2020; Yuliani et al., 2023). Santo & Marques, (2022) revealed that hedonic motivations, prices, information, and trust are predictors of intention to continue purchasing in online shops. In the case of the online second-hand market, it was found that perceived product quality, and perceived vendor quality, were the two dimensions that most influenced satisfaction, and also satisfaction with the website contributed most to loyalty (Llach et al., 2023).

Fourth, Personal. This factor is the most diverse thing that drives individuals in deciding online shopping because it refers to personal considerations that are different for each person depending on their internal conditions, such as economic conditions, lifestyle, personality, age, and life cycle stages, or job. Convenience is the most common reason for deciding to shop online (Driediger & Bhatiasavi, 2019; Le-Hoang, 2020). It is easy to sit down in front of a computer with your credit card and make a few clicks with the mouse, it looks very impersonal. Convenience motivation and post-usage usefulness are two significant aspects that impact online purchase intentions in the context of the fast food industry (Prabowo & Nugroho, 2019). The convenience of online shopping is related to the attributes of e-commerce, such as the intensity of website quality (Saoula, Shamim, Mohd Suki, et al., 2023), e-privacy (Lee et al., 2018), e-trust (Saoula, Shamim, Mohd Suki, et al., 2023), e-security (Bare et al., 2021; Hoque et al., 2023; Zaheer et al., 2024) and others. Sumarliah et al., (2021) also found that place accessibility, store environment, and shopper's attitude are strong predictors of online hijab purchase intention by Muslims.

From various cases and perspectives in previous studies, it can be seen that psychological aspects are integrated with personal or social culture. For example, in the case of purchasing halal-friendly cosmetic products, it was found that the attitudes of Muslim Generation Z consumers are related to the influence of the Halal label, halal awareness, and product knowledge (Irfany et al., 2023; Md Saad & Maulani, 2023). Likewise, in the case of the online second-hand market which questions what antecedents contribute most to loyal behavior?,

it was found that perceived product quality and perceived vendor quality as things most influenced satisfaction and loyal behavior (Llach et al., 2023). Based on the understanding of the literature on Islamic consumer behavior and the diversity of previous studies about online shopping behavior, the following hypotheses were developed: H_0 = None of the dimensions of Islamic consumer behavior, including social, cultural, psychological, and personal significantly affect the potential online shopping.

H_a = There is at least one dimension of Islamic consumer behavior including social, cultural, psychological, and personal which significantly influences the potential online shopping.

3. METHODOLOGY

3.1. Research Design

This study is exploratory research that points to mapping the online shopping potential of Indonesian Muslims and examining the influence of Islamic consumer behavior on the potential online shopping of Muslims. This quantitative research was carried out by executing Multinomial Logistic Regression as an analytical method.

3.2. Data

The primary data in this study were obtained from distributing questionnaires to active customers of online shopping in Indonesia via Google Form in 2023. Ten major cities in Indonesia were selected purposively so that they could represent the existence of people's behavior in conducting online shopping activities. Because the population does not have a specific count, the number of samples was decided based on the guidelines of (Rao, 2012) which specified the need for at least 97 respondents for each chosen case (Sig.5% with a 10% maximum margin of errors). A total of 977 active online shoppers participated in this research who were active buyers in online purchases in the last month.

3.3. Variables and Instruments

The potential of online shopping is the dependent variable in the model and four other independent variables consist of social, cultural, psychological, and personal, which are dimensions of Islamic consumer behavior. Each variable is measured with instruments from the Islamic economics perspective, which refers to the basic concept of consumer behavior (Keller & Kotler, 2010; Lamb et al., 2011; Schiffman et al., 2010), the concept of Islamic religiosity in purchasing (Agarwala et al., 2019; Gait & Worthington, 2008; Koc et al., 2024), and previous findings which have conceptually expanded studies about Islamic Consumers Behavior (Bashir et al., 2019; Puteri, Arinda, et al., 2022; Salem & Baidoun, 2022). To ensure that the instruments developed were in line with research needs, and core theory, test validity and reliability were conducted through a pilot test of 30 respondents in one of the sub-districts in the research area.

3.4. Analytical Method

This research applies a quantitative approach, with Multinomial Logistic Regression. For mapping the potential of Muslim customers for online shopping calculated based on the potential score value as follows:

$$\text{Potential Score} = \sum_{j=1}^k w_j s_j$$

Note: w_j weighted score for-j and s_j is Response category score value for-j. There are three levels of potential, consisting of low (score 1 if < 1.67), medium (score 2 if the score is between 1.67 to < 2), and high (score 3 if ≥ 2.34).

Next, to estimate the effects of dimensions of Islamic consumer behavior on online shopping's potential, the multinomial logistic regression is implemented. The response variable is online shopping's potential which is divided into three categories, covering high, medium, and low, (coded with 3, 2, and 1). The low category is used as a reference category which is used then as a comparison for the other two categories. The independent variables used are variables of social, cultural, psychological, and personal, which are dimensions of Islamic consumer behavior.

$$\begin{aligned} g_z(x) &= \beta_{j0} + \beta_{j1} x_1 + \beta_{j2} x_2 + \beta_{j3} x_3 + \beta_{j4} x_4 \\ \text{Logit}(Y=2) &= \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 \\ \text{Logit}(Y=3) &= \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 \end{aligned}$$

Description: X_1 is social, X_2 is culture, X_3 is Psychology, X_4 is personal, β_{ji} parameter estimation, and $g_z(x)$ is the dependent variable with polychotomous categories including High, Medium, and Low Potential. $Y=2$ is medium potential of online shopping, and $Y=3$ is the high potential of online shopping

Likelihood Ratio Tests are used as a reference to conclude whether the model used meets statistical feasibility and provides information about which dimensions of consumers' behavior can affect the achievement of online shopping's potential. Then, Pseudo R-Square informs about how far the predictors in the model can explain the variation in the achievement of online shopping's potential. Furthermore, the estimation coefficients are further analyzed whether they meet the statistical feasibility, which is then used to further estimate the response of predictors to the level of online shopping's potential.

4. RESULTS AND DISCUSSION

This results section shows two groups of important findings, consisting potential map of online shopping by Muslim Consumers in Indonesia and the second part contains the analysis of estimating the effect of Islamic consumers' behavior on online shopping's potential is analyzed by Multinomial Logistic Regression.

4.1. Socio-Demographic Information of Respondents

Table 1 shows the Frequency Distribution of Respondents based on socio-demographic information. A total of 977 respondents in this study are Muslim customers who are in ten large and medium cities in Indonesia, which are located in Jakarta (21.29%), Bandung (13.92%), Medan (12.08%), Padang (10.44%), Pekanbaru (11.36%), Surabaya (7.27%), Samarinda (7.06%), Makassar (6.79%), Banjarmasin (7.79%), and Ambon (2.02%). The response rate for this study was 92.81%, which is statistically appropriate for population generalization. It can be seen that respondents were dominated by customers in the age range of 20-30 years (43.91%) and dominated by students or productive workers who like practical things, including online shopping.

Table 1: Socio-demographic of respondents.

Characteristics	Description	Frequency	Percentage
Gender	Male	365	37.36
	Female	612	62.64
Age (Years)	<20	32	3.28
	20 - 30	429	43.91
	31 - 40	266	27.23
	41 - 50	162	16.58
	>50	88	9.01
Marital Status	Married	587	60.08
	Single	390	39.92
Education Level	Junior High School	78	7.98
	Senior High School	381	39.00
	Diploma	101	10.34
	Bachelor degree	288	29.48
	Master/Doctoral	129	13.20
Employment status	Civil Servant	186	19.04
	Private employees	218	22.31
	Entrepreneur	259	26.51
	Student	214	21.90
	Housewife	52	5.32
	Others	48	4.91

4.2. Potential Map of Online Shopping by Muslim Consumers in Indonesia

Table 2 shows the distribution of online shopping's potential for Muslim customers in Indonesia, which is categorized into low, medium, and high. This potential level mapping is the result of research that groups consumers based on the results of the rating scale on several measurement indicators in the Buyer Decision Process. It can be seen that most of the Muslim customers who were respondents in this study were in the high potential category in choosing online shopping (54.66%).

Table 2: Potential online shopping of Muslim customers.

Category	Frequency	Percentage (%)
Low	10	1.02
Moderate	433	44.32
High	534	54.66
Total	977	100.00

Results of Mapping of online shopping's potential also found that the most favorite e-commerce platform accessed by respondents was Shopee (51.07%). It was further observed that most of these customers have an average monthly expenditure for purchasing food products online is 870,668 (IDR per month) and the average non-food purchases online on various e-commerce is 1,524,434 (IDR per month).

4.3. Testing Validity and Reliability

To ensure the level of consistency among respondents' answers, a validity and reliability test is required as shown in Table 3. It can be seen that the average Cronbach's alpha for social, cultural, psychological, and personal constructs is greater than 0.6, which means that the constructs measured were statistically reliable. Corrected item correlation, which represents a measure of validity with internal consistency, is above 0.3 for each instrument implemented, so that it can be concluded that there is consistency on the Likert scale used.

Table 3: Validity and Reliability.

Construct	Item Instruments	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Social	1. Understanding of religious thought within the family	0.386	0.903
	2. Influence of religious communities	0.362	0.903
	3. References from religious friends, colleagues, and neighbors	0.398	0.902
Culture	1. Maintain the standards of Sharia as a Muslim	0.466	0.902
	2. Believe that online shopping is advantageous	0.511	0.901
	2. Uphold sharia-based tradition	0.566	0.901
	3. Believe that transactions are free from usury, Maysir, and Gharar	0.517	0.902
	4. Products and services purchased are more fair and good	0.502	0.901
Psychology	5. Online shopping is a modern Muslim culture	0.612	0.901
	1. Believe that online shopping is permissible as long as it is free of usury, Gharar, and Maysir	0.518	0.901
	2. Learning to be more religious is shown in online shopping habits	0.576	0.901
	3. Relevance between products purchased and needs is important	0.439	0.902
	4. Online shopping is in line with my practical character	0.538	0.901
Personal	5. Feel more pleased with online shopping compared to traditional shopping	0.504	0.901
	1. Online shopping is a modern Muslim lifestyle	0.518	0.901
	2. The features of products and services purchased online reflect personality	0.576	0.901
	3. Age influences online-shopping decisions	0.439	0.902
Online-Shopping's Potential	4. Products and services offered online are relevant to my needs and budget	0.538	0.901
	1. I choose online shopping after understanding advantages and disadvantages	0.669	0.883
	2. Understanding of Online-Shopping convinced me to choose it	0.678	0.849
	3. I will choose online shopping instead of conventional ones if it is more profitable	0.669	0.883
	4. I choose to do online shopping because it suits my personality as a Muslim	0.562	0.886
	5. I prefer to shop online and would recommend to others	0.618	0.768

4.4. Multinomial Logistic Regression

To estimate the effect of Islamic consumer behavior on online shopping's Potential for Muslim Consumers and to determine what the driving factors are, Multinomial Logistic Regression is implemented as a model estimation. There are various factors that influence Muslim consumers in shopping online, but overall, these elements can be grouped into four primary categories: social, cultural, personal, and psychological. Model Fitting Information in Table 4 provides the conclusion that this model fulfills the feasibility statistically and can be used for further estimation. This decision is based on the value of $-2 \text{ Log Likelihood}$ in the model which decreased from 1389.642 to 891.480 with a Chi-Square value of 498.162 (Sig. 0.000), which indicates that some independent variables in the model covering social, cultural, psychological, and personal, can provide better accuracy in predicting the potential of Online-Shopping.

Table 4: Model Fitting Information.

Model	Model Fitting Criteria	Likelihood Ratio Tests		
	$-2 \text{ Log Likelihood}$	Chi-Square	Df	Sig.
Intercept Only	1389.642			
Final	891.480	498.162	8	0.000

Furthermore, the output of Likelihood Ratio Tests, presented in Table 5, contains the results of partial tests on all independent variables in the model, which are used as a reference to elaborate the research hypothesis. The hypothesis in this model is $H_0 =$ None of the dimensions of Islamic consumer behavior covering social, cultural, psychological, and personal significantly influence online shopping's potential and $H_a =$ There is at least one dimension of Islamic consumer behavior, covering social, cultural, psychology and personal, which significantly influences online-shopping's potential.

Table 5: Likelihood Ratio Tests.

Effect	Model Fitting Criteria	Likelihood Ratio Tests		
	$-2 \text{ Log Likelihood}$ of Reduced Model	Chi-Square	df	Sig.
Intercept	1225.960	334.480	2	.000
Social	898.240	6.759	2	.034
Culture	916.515	25.035	2	.000
Psychology	931.236	39.756	2	.000
Personal	1103.795	212.315	2	.000

Based on Table 5, it can be seen that there are three significant independent variables, namely culture,

psychology, and personal with Chi-Square of 25.035 (p-value = 0.000), 39.756 (p-value = 0.000), and 212.315 (p-value = 0.000), respectively. Thus, it means that the high and low potential of online shopping is caused by culture, psychology, and personal, but social factors are not. The pseudo-R-Square in the model is 0.518 and strengthens the conclusion that the Dimensions of Islamic consumer behavior can influence the potential of online shopping by 51.8%.

Table 6: Estimation Parameters.

Potential of Online-Shopping		B	Std. Error	Sig
Medium	Intercept	-9.376	4.457	0.035
	Social	0.613	0.296	0.038
	Culture	0.265	0.131	0.043
	Psychology	-0.210	0.201	0.296
	Personal	0.190	0.076	0.012
High	Intercept	-24.592	4.586	0.000
	Social	0.670	0.298	0.025
	Culture	0.112	0.133	0.399
	Psychology	0.110	0.205	0.590
	Personal	0.522	0.080	0.000

The Reference Category Is: Low

Based on the estimated parameter values, the following functional equations can be formulated with the Multinomial Logistic Regression parameter model. For analysis purposes, the respondent groups can be divided into two, namely the respondent groups with medium and high potential, with the low potential group used as the reference group.

$$\text{Logit (Y=2)} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$$

$$\text{Logit (Y=2)} = -9.376 + 0.613 X_1 + 0.265 X_2 - 0.210 X_3 + 0.190 X_4$$

$$\text{Logit (Y=3)} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$$

$$\text{Logit (Y=3)} = -24.592 + 0.670 X_1 + 0.112 X_2 + 0.110 X_3 + 0.522 X_4$$

Note: X_1 is Social, X_2 is Culture, X_3 Psychology, X_4 is Personal,

$Y=2$ is middle potential of online shopping and $Y=3$ is high potential of online shopping.

The estimation result of this regression equation model provides an answer to the research question about what is the driving factor for Muslim customers to be in medium or high potential in online shopping. It can be seen that the level of online shopping's potential is influenced by Islamic consumers' behavior, especially in social, cultural, and personal dimensions. Without the influence of the dimensions of Islamic consumer behavior, the probability of Muslim consumers' decisions to do online shopping is very low. For the first model (middle online shopping's potential), it can be seen that the regression coefficient of social, cultural, and personal shows a higher probability of the comparison category than the probability of the reference category, respectively 0.613 (p-value = 0.038), 0.265 (p-value = 0.043) and 0.190 (p-value = 0.012). The increase in social, cultural, and personal dimensions causes an increase in the tendency of people to be in the middle potential group, respectively 0.613, 0.265, and 0.190 times the customer group in the low potential group. Furthermore, for the second model (high online shopping's potential) it is also seen that there is a higher probability of the comparison category than the probability of the reference category, respectively 0.670 (p-value = 0.025) for social and 0.522 (p-value = 0.000) for personal. The increase in social and personal dimensions causes an increase in the tendency of customers to be in the high potential group in online shopping, respectively 0.670 and 0.522 times the customer group in the low potential group. Thus, it can be concluded that social, cultural, and personal factors are strong predictors of online shopping's potential for Muslim customers.

5. DISCUSSION

The online shopping potential of Muslims reflects how big the market segment for Muslims can be managed by e-commerce entrepreneurs. This information is a reference in creating a market-driving strategy, which is not only to answer what consumers need but also to provide something that exceeds their expectations. This study is more than just testing the determinants of customer decisions in online shopping, because it finds what is the driving factor for the level of Muslim-customer potential in online shopping in Islamic consumers' behavior perspective. It has been revealed that personal and social dimensions are the strong predictors of online shopping potential and this finding represents the behavior of people in Muslim-dominated countries. In more detail, this finding has revealed some important implications.

First, personal dimension is a strong predictor of online shopping potential for Muslim customers (coeff. = 0.522, p-value = 0.000). The increase in personal dimension causes the tendency of Muslim customers to be in the high potential groups by 0.522 times more than the customer group in the low potential group. Two personal reasons that drive the potential of online shopping are the modern Muslim lifestyle and the features of products and services. Theoretically, this finding has enriched the diversity of personal reasons for Muslim customers to do online shopping by uncovering modern lifestyle as one reason. Findings of previous research have tested some other personal reasons such as accessibility (Sumarliah et al., 2021), intensity of Website Quality (Saoula, Shamim, Mohd Suki, et al., 2023), e-privacy (Lee et al., 2018), e-trust (Saoula, Shamim, Mohd Suki, et al., 2023), e-security

(Bare et al., 2021; Hoque et al., 2023; Zaheer et al., 2024), and also Muslims lifestyle (Salem et al., 2023). Online shopping reflects the modern lifestyle of Muslims who like practical things, and as long as the features of products and services do not conflict with their Islamic religiosity, the choice is worth adopting. This Muslim lifestyle can be reflected in the form of a person's pattern of life which is expressed in the person's activities, interests, and opinions towards online shopping.

Second, the enhancement of social factors can cause the tendency of customers to be in the high potential group of online shopping by 0.670 times than in the low potential group (p-value = 0.025). Referring to the theoretical concepts of Islamic consumer behavior, these social factors cover the understanding of religious thought in the family, Influence of religious communities, and also References from religious friends, colleagues, and neighbors. All of these things determine the level of potential in online shopping, and the most influential are references from friends and colleagues. This finding has elaborated in more detail previous findings about the importance of social aspects in online shopping (Kanwal et al., 2022; Nuseir, 2019), and the effect of social references on deciding online shopping (Arief et al., 2023; Kalia et al., 2022). Thus, it is implied that individuals who come from Muslim families who are obedient to the belief can be in the high potential group to adopt online shopping as long as this e-commerce pattern continues to promote Islamic business ethics. The Islamic belief starts from the family, parents are the first reference for an individual to know what is permitted and what is forbidden in transactions.

Third, even though is not a strong predictor for online shopping, still the increase in cultural aspects causes an increasing tendency for customers to be in medium potential group by 0.265 times compared to the low potential group (p-value = 0.043). Integration of cultural values with Islamic religiosity makes several cultural instruments determine the potential of online shopping, covering modern Muslim culture, Upholding sharia-based tradition, and also belief of Muslim customers that transactions are free from usury, Maysir, and Gharar. This finding enriches previous findings that tested the influence of beliefs, values, and habits on online shopping decisions (Thelwall, 2021; Wang et al., 2023), and also (Salem & Baidoun, 2022) which revealed analysis of online-shopping lifestyle for modern Muslim customers. Culture and religion that have been integrated for a long time among Muslims have enriched the diversity of studies in the field of Islamic Consumer Behavior.

From a theoretical perspective, this study has contributed in the expansion of Islamic consumer behavior theory, by combining Islamic religiosity with consumer behavior dimensions. Actually, Islamic religiosity is not a separate concept, because customer beliefs are integrated into consumer behavior dimensions. Personal, social, and also cultural aspects in Islamic perspective become driving factors for the potential of online shopping for Muslim customers. A Muslim has the potential to do online shopping as long as the reasons for belief in Islamic values do not conflict and especially the use of technology does not ruin their religious beliefs. From a policy perspective, this finding can be a consideration for expanding the halal business industry that competes in digital business. This finding has answered the doubts of most Islamic Economics experts who are still asking, "whether Muslim customers' shopping behavior is driven by the same predictors as conventional shopping or, do Muslims go shopping by considering their Islamic Religiosity? This research mainly aids policy, specifically for regulators and digital companies to create strategies that focus on Muslim consumer behavior as their primary market segment. In a competitive market, the top business actors are those who can provide more than what their customers expect.

6. CONCLUSION

This study has analyzed the behavior of Muslim customers in online shopping by using the Islamic consumer behavior framework. The results of the potential mapping revealed that there were quite a lot of Muslims doing online shopping because 54.66% of respondents in this study were in the high potential category. This finding reveals that the probability of the potential of online shopping of Muslim customers, which is classified into high, medium, and low, is determined by the behavior of Islamic consumers which includes personal, social, and cultural aspects. The increase in personal and social aspects causes the tendency of Muslim customers to be in the high potential groups in online shopping by 0.522 times and 0.670 times than the customer group in the low potential group. Although not a strong predictor, the cultural aspect also increases the probability of customers being in the medium potential in shopping online. The results of this study highlight the importance of Islamic religiosity in deciding online shopping by Muslims, whose belief values are integrated into their behavioral dimensions.

This research provides a theoretical contribution in the expansion of Islamic consumer behavior theory which is not yet well established by highlighting the importance of Islamic religiosity in online shopping behavior. These findings contribute to e-commerce development policies in Indonesia, especially for regulators and digital businesses as well as financial practitioners. Mapping Islamic consumer behavior can be used as a reference in designing market-driving strategies, because every consumer behavior is unique and entrepreneurs can take advantage of their uniqueness in designing relevant strategies. Although this study has attempted to describe the variables of Consumer Behavior in online shopping from the perspective of Islamic religiosity, theoretically this concept will of course continue to grow in further research. Limitations of the study lie in exogenous variables which place some classic predictors such as social, cultural, personal, and psychological as predictors. Future studies can focus on a deeper exploration of neuro-marketing or assessing technology use in e-commerce since this topic will always be interesting to examine alongside the growth of digital business.

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