

IS IMPULSIVE BUYING FOR MUSLIM FASHION PRODUCTS INVARIABLY FOLLOWED BY POST-PURCHASE REGRET? THE ROLE OF S-O-R THEORY

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ABSTRACT

The growth of e-commerce has not only expanded the Muslim fashion industry but also fostered impulsive buying among customers. This article analyses the behaviour of Muslim customers using the S-O-R model to detect impulsive buying and subsequently post-purchase regret. In the analysis, we consider the role of religiosity in the link between the two. We collect data via self-administered questionnaires from 312 Muslim respondents and apply Partial Least Square structural equation modelling (PLS-SEM) to analyse the data using AMOS version 24.0. The results suggest that scarcity cues, fear of missing out, and live commerce have a significant influence on impulsive buying. Additionally, scarcity cues can lead to fear of missing out, based on their positive worth. The impulsive buying also invariably culminates in post-purchase regret. However, religion weakens the link between impulsive buying and post-purchase regret. Religiosity also reduces post-purchase regret. The results of our study can help authorities in understanding purchasing behavior of Muslims and consequently crafting initiatives to encourage purposeful purchase of fashions by Muslims.

Keywords: Scarcity, FoMO, Live commerce, Impulsive buying, Regret, Religiosity.

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I. INTRODUCTION

The emergence of online shopping has made it easier for some to purchase products without having to meet face-to-face with sellers (Wang et al., 2022; Sharabati et al., 2022). In general, online shopping activities are carried out by various sections of the community. In the Beyond the Digital Frontier research report, KIC estimates that in Indonesia 33.4% of the population are active e-commerce consumers while 17% of the population are occasional users and the remaining 49.6% are non-e-commerce users (Ahdiat, 2023). Globally, 59% of consumers prefer to shop online, while the remaining 41% prefer shopping in stores (Cassetti, 2023).

In 2023, e-commerce transactions in Indonesia increased by 4.99% and sale volumes through e-commerce reached 361.54 million (Kusnindar et al., 2023). This indicates that consumer sales via e-commerce have grown in recent years, albeit with 33.4% of the population being active users. E-commerce is expected to be the largest contributing sector to the digital economy in Indonesia based on a recent report by Google, Temasek, and Bain & Company entitled e-Conomy SEA 2023 (Hoppe et al., 2023). The Gross Merchandise Value (GMV) of Indonesia's digital economy in the e-commerce sector is estimated at US\$62 billion for 2023.

The development of the Internet potentially encourages impulsive online shopping behavior among the public (Ardiyanti, 2023; Ming et al., 2021). Impulsive Buying is defined as spontaneous and immediate purchases of a product without a mature and considerate evaluation of alternatives or future repercussions (Nurohman & Aziz, 2021; Rahmawati & Primanto, 2021; Rizki et al., 2022; Rook, 1987; Rook & Fisher, 1995). Impulsive buying is also referred as unexpected purchases or unreasonable conduct (Li et al., 2021). According to Usadi et al. (2023) and Nugraha et al. (2023), roughly 47% of impulsive consumers claim they are heavily attracted to bargains as well as bids, which are the greatest reasons for buying. Accordingly, a study on impulsive buying is relevant, given the rise of impulsive buying in e-commerce.

Indonesia is a country with the largest Muslim population, with 87% of 254 million population being Muslims (Usadi et al., 2023). This makes Indonesia the third-largest Muslim fashion consumers in the world with sales exceeding 20 billion dollars or 300 trillion rupiah (Nugraha et al., 2023). Muslim fashion trends themselves can create an identity that is obedient and yet fashionable and stylish (Nurani & Adinugraha, 2022). Moreover, Indonesia has already positioned itself in 2020 as the global hub of Muslim fashion (Izza, 2022). Muslim fashion maintains its popularity among consumers in the e-commerce industry (Adriyanto et al., 2024). Therefore, this research focuses on Muslim fashion products and examines the impulsive purchase behavior of customers for these products.

More specifically, this research has the following objectives: (1) to describe Muslim behavior in buying Muslim fashion using the S-O-R (Stimulus-Organism-Response) model; (2) to determine the factors that have the highest influence on Impulsive buying; (3) to find out whether impulsive buying ends in post-purchase regret; and (4) to find out whether religiosity is a moderator of the relationship between impulsive Buying and post-purchase regret.

Developed by Hoveland et al. (1953), the S-O-R (Stimulus-Organism-Response) model in impulsive buying has been applied by prior studies (Clouthier et al., 2017; Feng et al., 2023; Huo et al., 2023; Karim et al., 2021; Li et al., 2022; Maryati

et al., 2020; Wang et al., 2022). The SOR model on Impulsive buying is framed in various contexts, which include web stimuli, product and marketing variations (Karim et al., 2021), promotions (Huo et al., 2023; Rita et al., 2019), urgent needs (Feng et al., 2023), hedonic lifestyle (Li et al., 2022; Maryati et al., 2020), and others. In the paper, we apply the SOR model to Muslim clients buying Muslim garments online. We extend the analysis further by examining whether impulsive buying results in regret, an aspect that is still underexplored in the literature (Çelik et al., 2019; Nurohman & Aziz, 2021; Secapramana et al., 2021).

It is generally noted that regret after making a purchase is due to lack of thorough consideration and attention to detail in selecting items (Papé & Martinez, 2017). This regret is often influenced by discounts (Barta et al., 2023) and the constraints of time (Kumar et al., 2020). Regret occurs when customers become aware that their purchase selections are erroneous, further inflicting loss. Again, impulsive buying behaviors influenced by materialism are believed to be an instance of post-purchase regret (Çelik et al., 2019). Therefore, preventive measures are necessary to overcome post-purchase regret. In this regard, religiosity can potentially avert impulsive buying and regret. In light of this, we also examine the role of religiosity in impulsive purchase and regret.

The rest of the paper is structured as follows. In the next section, we review relevant literature. Then, section III presents the methodology, followed by presentation and discussion of results in section IV. Finally, we draw conclusions and recommendations in section V.

II. LITERATURE REVIEW AND RESEARCH HYPOTHESES

2.1. Background Theory

The basis for this research is the S-O-R (Stimulus-Organism-Response) theory developed by Hovland et al. (1953). It posits that sensory cues prompts consumer desire. Stimulus (S) refers to an environmental or external cause that sparks consumer interest. Organism (O) is an internal process that happens between consciousness of stimuli and consequent action, comprised of varied senses, arousal, psychological, and mental achievements. Meanwhile, response (R) is a result of the stimulus, and the organism symbolizes the ultimate action, choice, and reaction in response (Huo et al., 2023).

The S-O-R model is normally used for the following two reasons: First, the SOR model provides a complete model for comprehending how environmental stimuli (S) can cause an organism (O) to participate in psychological processes to create behavioural reactions (R) (Wang et al., 2022). And secondly, the S-O-R model provides a holistic approach in integrating multiple external cues associated to the impulsive buying (Gulfraz et al., 2022; Zhang et al., 2022).

The key variables based on the S-O-R theory are the scarcity cue, fear of missing out and live commerce. They serve as stimulants to make customers interested so that they would act accordingly. The scarcity alludes to the desire for security. The security needs can be used as a precaution because these needs cannot totally remove concern about risks such as the shortage of a product (Li et al., 2021). Live commerce will affect emotions, resulting in unforeseen actions (Zhang et al., 2020). Meanwhile, fear of missing out (FOMO), according to Çelik et al. (2019), is an

emotion used to define customers' anxieties about losing out on opportunities or experiences that others have had.

2.2. Previous Studies

Clover (1950) is perhaps the first study on impulsive purchase, which has since attracted substantial interest from scholars to examine impulsive buying. In a recent bibliometric analysis, Bashar et al. (2022) analyse 482 research papers from 2000 to 2020 using Scopus database. As it provides us with a comprehensive picture on such information as co-citations, co-occurrences, frequent searches and others (Rusydiana, 2021), we follow Bashar et al. (2022) by analysing 200 related research works published in 2008 to 2021 as a review of the literature.

Articles are assessed by VOSViewer based on co-occurrence analysis with the counting technique of total counting. Through the results of the VOSViewer, it is noted that there are not many articles addressing buying without thinking in terms of impulsive buying, food waste, grocery shopping, scarcity, discounts, live streaming commerce, customers, and others (see Figure 1). The Network Visualization graphic also illustrates that numerous studies on impulsive buying focus on sales promotion, Impulsive buying behavior, e-commerce, and so on.

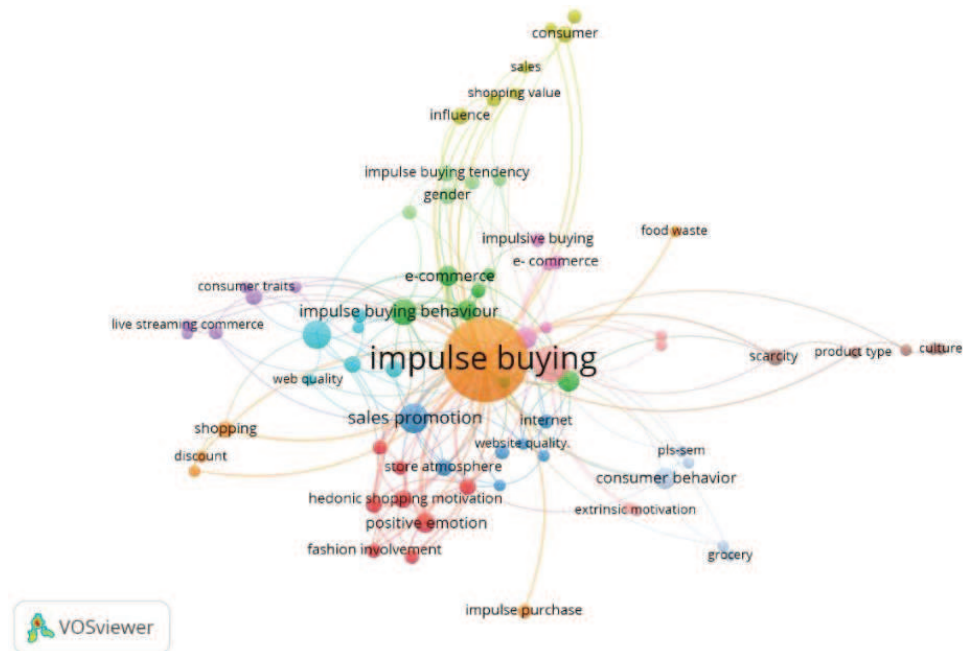


Figure 1.
Network Visualization

Furthermore, Overlay Visualization demonstrates that most research is from mid-2019 to 2020. The topics explored in the most recent years are indicated in yellow in Figure 2. The Figure shows that the newest studies on impulsive buying focuses on e-commerce, scarcity, pls-sem, buying tendency, live streaming commerce, and discounts. However, there are still several areas connected to impulsive buying that are underexplored.

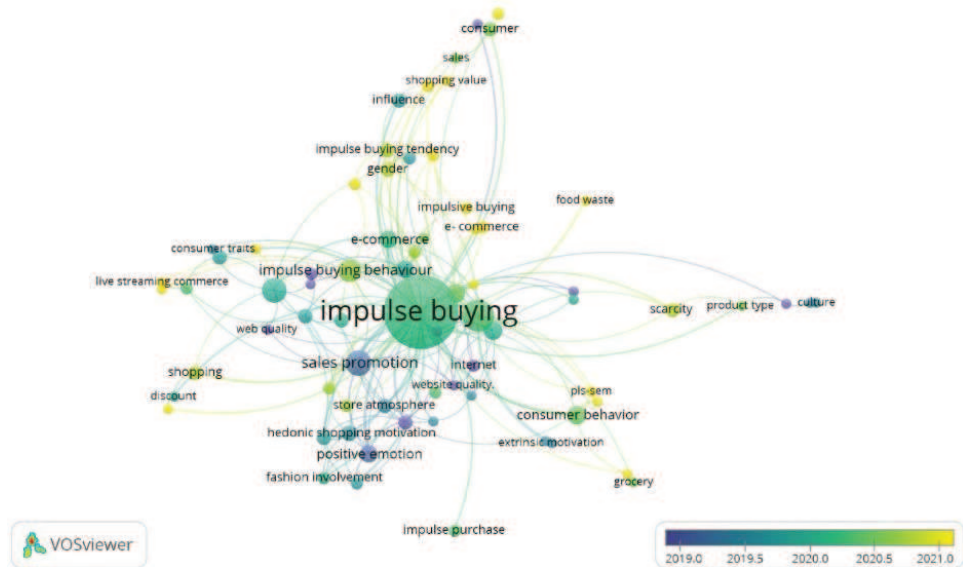


Figure 2.
Overlay Visualization

The researchers are intrigued with the issue of impulsive buying and scarcity cues, live commerce and FOMO tendencies as determinants, which we find missing in the recent literature. The scarcity cues are indicators or information that suggest that something is restricted or difficult to get (Broeder & Wentink, 2022). This scarcity cues can provoke FOMO tendencies because someone may believe they have to instantly take action to acquire it before it is too late or runs out (Gullu & Serin, 2020). On the other side, a shortage of resources is generated by a demand-supply mismatch, which generates scarcity (Kristofferson et al., 2017).

According to Rahmawati & Primanto's (2021), scarcity cues have emerged as an indicator of impulsive buying. Çelik et al. (2019) further add the tendency for FOMO to lead to impulsive buying. Consumers are able to interact with sellers through the live commerce function. Additionally, customers will be aroused in their cognitive and emotional states, leading to purchase activities (Usadi et al., 2023; Zhang et al., 2020).

Shopping impulsively, unplanned shopping behaviour, limited thinking, and demands to meet wishes promptly are prone to giving rise to post-purchase regret (Barek & Gharbi, 2011). Consumers must consider all sorts of risks that will come

after a purchase so that they do not end up regretting it (Kumar et al., 2020). This research becomes more fascinating with the introduction of indicators of religion as a moderator. Alfi & Yusuf (2022) assert that religiosity relates to the level of an individual's connection to their faith. The more someone understands their faith, the more profound the effect on their daily actions. Andariesta et al. (2023) propose that Muslim consumers think of spirituality in their consumption behaviour.

2.3. Hypothesis Development

2.3.1. Scarcity Cues, FoMO Tendencies, Impulsive Buying

As stated by Jha et al. (2019), scarcity cues are a potential determinant of unplanned purchases since the existence of scarcity cues may result in the feeling of urgency towards owning a product. Moreover, Muslim fashion products typically undertake promotional events for consumers (Nasution, 2022). As a result, the resultant scarcity is also considered to induce emotional activity such as anticipation of regret. Feelings of scarcity tied to a product will cause the minds of customers to be prepared to sacrifice more resources to get a product advertised with the cues (Kristofferson et al., 2017).

A product that has limited availability on the market will call for decisions. In fact, scarcity cues itself might activate FoMO, because the fear of missing an opportunity would lead to a desire to acquire the product quickly (Çelik et al., 2019). The scarcity cues also likely raise customer's perceived value of a product or service, stimulate consumers to increase purchase intensity, limit searches related to other items, and produce fulfilment. The enthusiasm felt by prospective consumers has a positive impact on impulsive buying behaviour (Secapramana et al., 2021). Broeder & Wentink (2022) then claim that restricted purchasing time and flash sales in e-commerce would immediately result in impulsive purchases. When the product has won their trust, the sensation of instantly desiring to buy it will occur by itself (Suhardi et al., 2023). Furthermore, enthusiasm can be developed when the desired product is well reviewed by online vendors (Dahmiri et al., 2023).

Kristofferson et al. (2017) state that limited quantity of products and time will lead to the formation of impulsive buying behaviour. They also identify scarcity cues as a factor sustaining FoMO and fostering impulsive buying behaviour. It is evident that scarcity cues can cause FoMO tendencies (Suhardi et al., 2023; Zhang et al., 2022), as well as give rise to impulsive buying (Hajar & Musadik, 2021; Li et al., 2021; Rahmawati & Primanto, 2021). Previous research has also established that FoMO is a predictor of impulsive buying (Ahmed et al., 2020; Çelik et al., 2019).

Based on the above, the hypotheses to be tested are:

H1: Scarcity cues are positively related to FoMO in Muslim fashion.

H2: Scarcity cues are positively related to impulsive buying in Muslim fashion.

H3: FoMO tendencies have a positive relationship to impulsive buying in Muslim Fashion.

2.3.2. Live Commerce, Impulsive Buying

According to Ming et al. (2021), live commerce will induce viewers to make impulsive buying of the products that are being offered. The live commerce feature becomes transactional booster in e-commerce platform. The feature enables real-time interactions between viewers and broadcasters, which can affect customer attitudes and behaviors (Wang et al., 2022). This is because the involvement and delivery of the product by the broadcaster might influence feelings (affective) of those watching, resulting in unintended behavior by them.

These emotions develop because, with live commerce, viewers may not only acquire complete information about the products being promoted, but they are also able to interact directly with the host so that they better grasp the purpose and value of the products being marketed. Many e-commerce platforms offer Muslim items live because live commerce can enhance revenue from sales (Ardiyanti, 2023). This gradually builds the viewer's faith in the products being advertised. Ming et al. (2021) and Zhang et al. (2020), have shown that direct sales can lead to impulsive buying. Accordingly, the research hypothesis is:

H4: Live Commerce has a positive relationship with impulsive buying of Muslim Fashion.

2.3.3. Impulsive Buying, Post-Buying Regret, Religiosity

Impulsive buying is shopping behavior that occurs when there is a resilient, deep, and unexpected desire to acquire something instantly (Rook & Fisher, 1995). This action is preceded by feelings of animosity and tends to neglect the impact or repercussions that will be achieved subsequently (Ardiyanti, 2023). Buying with a limited time to consider the worth of an item, unexpected purchasing behavior, minimal contemplation, and expectations to rapidly fulfill one's desires are prone to cause post-purchase regret (Secapramana et al., 2021). Post-buying regret can occur due to factors such as hesitation, lack of consideration, impulsiveness, pessimism, being overly bold to take risks, being too careful, enjoying comparing oneself with others, and being sensitive to criticism and suggestions from people (Kumar et al., 2020; Lee & Cotte, 2009). As Kumar et al. (2020) and Çelik et al. (2019) note, impulsive buying has a positive and substantial hyperlink with post-purchase regret; therefore, the greater the impulsive buying, the higher the post-purchase regret.

According to Glock & Stark (1968), religiosity is societal behavior that is totally molded by belief in the supranatural or supernatural world, particularly supra-empirical reality. The more someone understands their religious beliefs, the bigger the effect on their everyday actions. Alfi & Yusuf (2022) advocate that Muslim consumers strengthen their spirituality to manage consumption behavior. According to Rahayu (2021), religion has an adverse effect on the desire to acquire an object. In a similar vein, Maryati et al. (2020) note that an intense comprehension of behaviors based on religiosity has a significant impact on individual behavior, notably in decision-making.

Impulsive buying online is a negative behaviour of a person that happens without forethought and can lead to waste and unnecessary purchases. Islam enlightens modesty (Alfi & Yusuf, 2022), not being excessive or wasteful and

encouraging simplicity in consumption but also not stopping people from enjoying the gifts that Allah SWT has given (Maryati et al., 2020; Rahayu, 2021). This religiosity can be applied as one of the reasons for someone to make purchase selections so that they do not end up regretting them, especially for Muslim fashion goods. Zeelenberg & Pieters (2007) claim that there are two things in the process of the creation of regret: regret that occurs if there is no or inadequate consideration, and regret that arises if there is too much consideration for the object acquired. So, we posit that religion is a self-controlling component in the relationship between impulsive buying and post-purchasing regret. Based on the reasoning above, the hypotheses are:

H5: Impulsive buying behaviors are positively connected to post-purchase regret

H6: Religiosity is adversely related to post-purchase regret

H7: Religiosity could decrease the connection between impulsive buying and post-purchase regret

III. METHODOLOGY

3.1. Data

This research focuses on Muslim customers in Indonesia. A convenience sampling approach is chosen for research purposes. The convenience sampling strategy necessitates the inclusion of only those who are available in the research sample (Andrade, 2021). Then, 323 customers answered the survey; nevertheless, only 312 questionnaires are used following the examination of their accuracy. A total of 11 respondents are not included because they have not purchased Muslim fashion products, but they could have bought other products.

Several scale statements are drawn from prior studies: the scarcity message scale comprises four statements based on Broeder & Wentink's (2022), and Li et al. (2021); the FOMO tendency includes three statements from Çelik et al. (2019), and Gullu & Serin (2020); the live commerce scale consists of six statements based on Sharabati et al. (2022), and Zhang et al. (2020); the impulsive buying scale features four statements from Nurohman & Aziz (2021), and Rizki et al. (2022); the post-buying regret scale contains four statements from Lee & Cotte (2009); and the religiosity scale contains five statements based on Alfi & Yusuf (2022) and Glock & Stark (1968). These are presented in Table 1.

The questionnaire link was distributed through the WhatsApps group, and we additionally used sponsored Instagram for the same purpose. Sponsored Instagram is thought to be a viable advertising technique according to customer desires and aims (Amira & Nurhayati, 2019). The survey was conducted from October to December 2023. Our respondents found it comfortable to complete the questionnaire in digital format with the Google Form link.

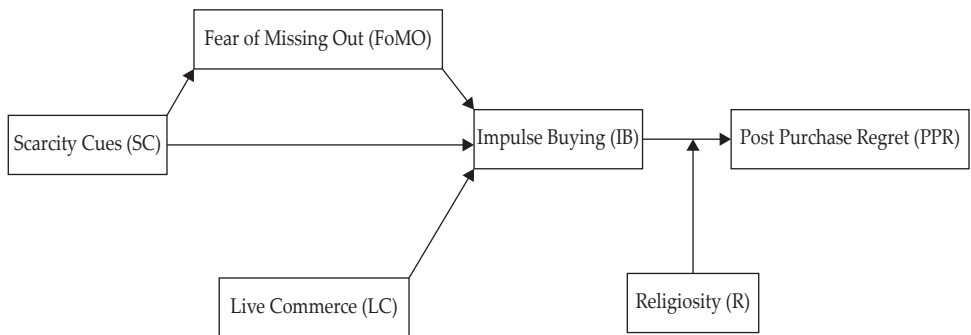
Table 1.
Variables, Indicators, and Sources

No	Variable	Indicators	Source
1	Scarcity cues	Limited Time Limited Quantity Out of Product Product Uniqueness	(Broeder & Wentink, 2022; Li et al., 2021)
2	FOMO tendencies	Frights Anxieties Worries	(Çelik et al., 2019; Gullu & Serin, 2020)
3	Live commerce	Active interaction between broadcasters and viewers Similarity in product quality Complete product information Ease of shopping Active audience interaction Hands-on shopping experience	(Sharabati et al., 2022; Zhang et al., 2020)
4	Impulsive Buying	Purchase without prior planning Purchase without thinking about the consequences Purchases are influenced by emotional states Purchases are influenced by attractive offers	(Nurohman & Aziz, 2021; Rizki et al., 2022)
5	Post-Buying Regret	Regret due to foreonate alternatives Regret due to change in significance Regret Due to Under-Consideration Regret Due to Over Consideration	(Lee & Cotte, 2009)
6	Religiosities	Ideology Ritual Experience Intellectual Practices	(Alfi & Yusuf, 2022; Glock & Stark, 1968)

3.2. Method

For data analysis, the IBM SPSS AMOS 24 statistical software package’s Structural Equation Modeling (SEM) analysis tool is utilized. The reason for using SEM in this study is that it can simultaneously test a series of correlations between complicated constructs following Hair et al. (2014), which are: measurement model analysis, goodness of fit, and structural model analysis (Ascarya & Tekdogan, 2022).

3.3. Model Development



Notes: SC= Scarcity Cues, FoMO = Fear of Missing Out, LC = Live Commerce, IB = Impulse Buying, R = Religiosity, PPR= Post Purchase Regret.

Figure 3.
Research Model

Figure 3 presents the model, which is derived from Zhang et al. (2022) with the addition of Live Commerce (LC) as an exogenous variable, Post Purchase Regret (PPR) as an endogenous variables and Religiosity (R) as a moderating variable.

IV. RESULTS AND DISCUSSION

4.1. Respondents’ Profiles

Table 2 presents the respondents’ profiles or demographics covering gender, age, education, occupation, domicile, monthly wages, shopping apps and the buying intention in a month.

Table 2.
Respondent Demographics

Characteristic	Frequency	Percentage (%)
Genders		
Males	109	34,94
Females	203	65,06
Total	312	100
Age		
15 – 25	181	58,02
26 – 35	93	29,80
36 – 45	23	7,37
Above 46	15	4,81
Total	312	100
Education		
Elementary-Senior High	91	29,17
Bachelor	103	33,01

Table 2.
Respondent Demographics (Continued)

Characteristic	Frequency	Percentage (%)
Magister	98	31,41
Doctoral/PhD	18	5,77
Other Degrees	2	0,64
Total	312	100
Occupation		
Housewife	34	10,89
Civil servants	47	15,06
College Students	84	26,92
Businesswoman	44	14,11
Other Occupations	103	33,02
Total	218	100
Domicile		
Sumatera	129	41,35
Java and Bali	88	28,21
Kalimantan	28	8,97
Sulawesi	48	15,38
Nusa Tenggara and Maluku	11	3,53
Papua	8	2,56
Total	312	100
Wages (Month)		
1.000.000 – 2.000.000	33	10,57
2.100.000 – 3.000.000	132	42,31
3.100.000 – 4.000.000	87	27,89
Above 4.100.000	60	19,23
Total	312	100
Shopping Apps.		
TikTok Shop	97	31,09
Shopee	131	41,99
Tokopedia	31	9,94
Bukalapak	27	8,65
Lazada	18	5,77
Other apps.	8	2,56
Total	312	100
Intention (Month)		
Once	131	41,99
2 -5 times	171	54,81
6-10 times	6	1,92
More than 10 times	4	1,28
Total	312	100

4.2. Measurement Model Testing

This study uses Confirmatory Factor Analysis (CFA) in the AMOS 24 program. Data alignment was done prior to factor analysis and evaluated using Bartlett's

Test of Sphericity and Kaiser-Meyer-Olkin (KMO) test (Shrestha, 2021). The KMO score of 0.702 surpasses the minimum level of 0.6. Additionally, Bartlett's Sphericity test produced $\chi^2 = 992.009$, $df = 181$, and $p < 0.001$, further substantiating the adequacy of the analytical instruments examined in the study.

The standardized factor loadings for all measuring items reach 0.7, showing that the items successfully reflect the properties of their associated latent variables. The reliability is examined by calculating the Cronbach's alpha coefficient and composite reliability (CR) to quantify the internal consistency of the scale. The results (Table 3) demonstrate that the Cronbach α coefficients for all latent variables exceed 0.7 threshold, and the CR values likewise exceed the recognized requirement of 0.7, signaling substantial measurement reliability (Hair et al., 2019). Furthermore, the average variance extracted (AVE) for all latent components surpasses 0.5, signaling that these variables sufficiently explain the variance in the relevant items (Ascarya & Tekdogan, 2022).

Table 3.
Confirmatory Factor Analysis (Standardized Factor Loadings)

Variable	Code	Loadings
Scarcity cues (Cronbach's $\alpha = 0.891$ CR= 0.894 and AVE= 0.541)		
I am scared that time is out when buying Muslim fashion items.	SC.1	0.829
I always avoid to buy limited supply of Muslim fashion products on sale.	SC.2	0.804
I buy Muslim products instantly in order to avoid them selling out.	SC.3	0.841
I buy Muslim products because of their uniqueness	SC.4	0.867
Live commerce (Cronbach's $\alpha = 0.970$ CR= 0.973 and AVE= 0.869)		
The live commerce feature provides an atmosphere of actual conversation	LC.1	0.736
The live commerce feature allows me to see conditions of the product in real time	LC.2	0.744
The live commerce feature is highly useful for my real-time shopping	LC.3	0.720
The live commerce feature makes the negotiation process easier for me	LC.4	0.886
The live commerce feature makes it easier for customers to find product-promotions being offered	LC.5	0.792
I have experience in Live Commerce Shopping	LC.6	0.721
FoMO Tendencies (Cronbach's $\alpha = 0.785$ CR= 0.791 and AVE= 0.602)		
I feel afraid if I do not buy Muslim fashion products	FoMO.1	0.712
I feel anxious if I do not buy Muslim fashion products	FoMO.2	0.790
I feel worried if I do not buy Muslim fashion products	FoMO.3	0.728
Impulsive Buying (Cronbach's $\alpha = 0.891$ CR= 0.898 and AVE= 0.652)		
I made a spontaneous purchase of Muslim fashion products	IB.1	0.742
I bought Muslim fashion products without considering the consequences	IB.2	0.839
I often unknowingly buy a Muslim fashion product that I do not actually need	IB.3	0.833
I will buy Muslim fashion products because of the attractive offers	IB.4	0.808
Post-Purchasing Regret (Cronbach's $\alpha = 0.856$ CR= 0.861 and AVE= 0.613)		
I felt sorry after finding out that there were similar Muslim fashion products with the same quality but cheaper prices	PPR.1	0.838
My time was wasted looking for product information repeatedly before buying it	PPR.2	0.860

Table 3.
Confirmatory Factor Analysis (Standardized Factor Loadings) (Continued)

Variable	Code	Loadings
I regret that I easily bought a product without a clear purpose	PPR.3	0.852
I have considered various considerations before purchasing a product	PPR.4	0.764
Religiosity (Cronbach's α = 0.862 CR= 0.879 and AVE= 0.624)		
I buy Muslim fashion products solely to meet my needs	R.1	0.757
Religious norms guide the purchase of Muslim fashion products	R.2	0.744
I use knowledge when purchasing a product	R.3	0.803
I have experience buying Muslim fashion products	R.4	0.824
I purchase Muslim fashion products because of Islamic values	R.5	0.791

4.3. Structural Model Analysis

We conduct the goodness-of-fit analysis to evaluate our used-research model. Table 4 demonstrates the model is adequate following to suggested-criteria for model fitness.

Table 4.
Result of Confirmatory Factor Analysis Testing

Goodness of fit Indeks	Recommended Value	Result of this model	Conclusion
χ^2/df	< 3	2.245	Good Fit
RMSEA	< 0.08	0.031	Good Fit
RMR	< 0.05	0.002	Good Fit
GFI	> 0.90	0.978	Good Fit
CFI	> 0.90	0.866	Marginal Fit
NFI	> 0.90	0.934	Good Fit
NNFI	> 0.90	0.909	Good Fit

Notes: χ^2/df = Relative Chi-Square Statistic, RMSEA= Root Mean Square Error of Approximation, RMR = Root Mean Square Residual, GFI = Goodness of Fit Index, CFI = Comparative Fit Index, NFI = Normed Fit Iposed Model Index, NNFI = Incremental Fit Index

The χ^2/df ratio value is 2.245, slightly under the preferred threshold of 3, indicating a satisfactory complexity of fit between the data and the model. The RMSEA value is 0.031, which falls below the acceptable threshold of 0.08, indicating good. The RMR value is 0.002, which is substantially less than the prescribed limit of 0.05, proving that the residual is within the acceptable range. In addition, GFI = 0.978, CFI = 0.866, NFI = 0.934, and NNFI = 0.909, all exceed the recommended threshold of 0.9 except for the CFI < 0.90 marginal category. Values above-average the threshold indicate that the model structure effectively captures the relationships between latent variables. (See Table 5) to ensure that the proposed hypothesis is accepted or rejected by using the p-value of 5% (Hair et al., 2019).

Table 5.
Structural Model Estimates

Variable	Estimate	S.E.	C.R.	P	Conclusion
IB <- SC	0.469	0.285	5.591	***	Accepted
IB <- LC	0.774	0.515	1.503	0.033	Accepted
IB <- FoMO	0.026	0.307	2.085	0.005	Accepted
FoMO <- SC	0.306	0.375	5.809	***	Accepted
PPR <- R	0.181	0.065	2.783	***	Accepted
PPR <- R <- IB	0.523	0.073	7.199	0.042	Accepted

Notes: SC= Scarcity Cues, FoMO = Fear of Missing Out, LC = Live Commerce, IB = Impulsive Buying, R = Religiosity, PPR= Post Purchase Regret

The table indicates that all the hypotheses proposed by the researcher are supported. It is stated that they meet the requirements because the P value of the complete model indicates a fairly good number that falls below 0.05 (SC>IB has P 0.00), (LC>IB has P 0.033), (FoMO>IB has P 0.005), (SC >FoMO has P 0.00), and (R>PPR has P 0.00). As for the moderating role of religiosity, the result supports our hypothesis that religiosity weakens the relationship between impulsive buying and post-purchase regret (IB>R>PPR has P 0.04).

4.4. Robustness Test

In this study, a non - linear approach is used to assess the extent to which the constructs in the model conform to theoretical expectations (Sarstedt et al., 2020). While theoretical models generally imply linear relationships between constructs, real-world relationships may not always follow this assumption. In statistical terms, a non-linear relationship means that the strength of the relationship between two constructs is influenced by the specific value of the exogenous construct and the rate of change in it. Based on the quadratic effect results, all P values for the paths are higher than 0.05, indicating that the interactions are not significant. This indicates that the linear effect of the pathway remains strong and reliable in accordance with Sarstedt et al. (2020).

Table 6.
Results of Quadratic Effect

Variable	Coefficient	P-value	Conclusion
SC>IB	0.145	0.728	Robust
SC>FoMO	0.256	0.459	Robust
FoMO>IB	0.289	0.716	Robust
LC>IB	0.083	0.569	Robust
IB>PPR	3.196	0.078	Robust
R>PPR	0.267	0.823	Robust
PPR <- R <- IB	0.659	0.980	Robust

Notes: SC= Scarcity Cues, FoMO = Fear of Missing Out, LC = Live Commerce, IB = Impulsive Buying, R = Religiosity, PPR= Post Purchase Regret

4.5. Discussions

Overall, the SOR model developed by Hovland et al. (1953) effectively predicts impulsive buying. This research shows that scarcity cues can activate FoMO because a person feels that they must immediately seize the opportunity before it is too late or a product is sold out (Çelik et al., 2019; Dahmire et al., 2023). It can be asserted that when consumers believe that the product offered is restricted, it stimulates their urge to acquire it instantly. In line with prior studies (Çelik et al., 2019; Suhardi et al., 2023; Zhang et al., 2022), **H1 is supported**. Online e-commerce buying offers many various items, including Muslim fashion, which is the current trend (Izza, 2022). Muslim garments are popular for Indonesian Muslims (Nugraha et al., 2023). Muslim consumers can become worried if they lose the opportunity of buying fashionable items. Therefore, the increased amount of scarcity cues could set off a worry.

Then, from the statistical results, SC has a positive effect on IB, in line with previous research on impulsive buying behaviours (Dahmire et al., 2023; Hajar & Musadik, 2021; Kristofferson et al., 2017; Li et al., 2021; Nasution, 2022; Rahmawati & Primanto, 2021). This finding implies that scarcity cues can influence impulsive buying because it creates fear and anxiety in customers that they would miss the opportunity to acquire the goods if they fail to purchase them immediately (Dahmire et al., 2023). Consumers tend to feel threatened when they notice messages of limited product availability within a given period of time, and they will take impulsive action to acquire the products so as not to risk missing out. As a result,, **H2 is also supported**. Whenever customers notice limited purchasing time and flash discounts that occur in e-commerce, they are enthusiastic about making purchases on e-commerce (Broeder & Wentink, 2022). Dahmire et al. (2023) state that subscription messages typically arise in Muslim fashion products. Our findings provide evidence that the scarcity message provided by e-commerce for Muslim fashion products has a significant impact on impulsive purchasing.

H3 is supported in our research. FoMO is used to define customers' anxieties about missing out on chances or experiences that others have enjoyed (Çelik et al., 2019). Research results show that FoMO is a predictor of impulsive buying (Ahmed et al., 2020; Çelik et al., 2019). In other words, FoMO may cause impulsive purchases by Muslim of fashion products for fear of missing out on opportunities or experiences that are popular or viral. As a consequence, customers will be urged to instantly take action while making purchase decisions. Therefore, impulsive buying can occur because customers feel forced to instantly obtain the item or service so as not to lose the chance or experience (Gullu & Serin, 2020). When Muslim consumers buy items online, they become pressurized and instantly interested in having them; this has an effect on impulsive purchases (Dahmire et al., 2023).

The statistical test results indicate that LC has a positive impact on IB and hence **H4 is supported**. According to Ming et al. (2021), live commerce will encourage viewers to make impulsive buying of the products that are being offered. One of the key advantages of live commerce is its capacity to allow direct connections between sellers and consumers. This feature allows real-time interactions between viewers and shopping hosts, which can affect consumers' attitudes and behaviors (Gao et al., 2022; Wang et al., 2022). So, the greater the intensity of live commerce,

the more impulsive buying tendencies would be. This is because the involvement and delivery of the product by the sellers may generate emotions (affective) from the viewers, resulting in unintended behavior by the audience. Ming et al. (2021), Zhang et al. (2020) and Gao et al. (2022) show that direct sales can lead to impulsive buying.

Buying impulsively may not necessarily produce satisfaction (Lee & Cotte, 2009) but rather can cause disappointment (Secapramana et al., 2021). This assertion, which is our H5, is supported. The more impulsive a person is, the more likely she or he will experience post-purchase regret (Çelik et al., 2019). This occurs because unplanned decisions tend to be unsupported by adequate effort in the decision-making process (Barek & Gharbi, 2011). Numerous items, when purchased, fail to meet the specifications, one of which is fashion (Nurani & Adinugraha, 2022), which can result in regret (Secapramana et al., 2021). Women tend to have higher regrets due to impulsive buying than men (Huo et al., 2023). The higher the level of sales on e-commerce platforms, the greater the danger of post-purchase regret for consumers (Papé & Martinez, 2017).

Hypothesis 6 presents firm statistical results in supporting of **H6**. Lee & Cotte (2009) outline post-purchase regret as a disparity in the outcomes of an individual's judgment between what they purchased and what they could have acquired. Religiosity is a key motivating factor that can impact buying habits (Glock & Stark, 1968). Customers' decisions to buy items depending on their level of religiosity; consequently, religiosity significantly affects consumers' purchasing decisions see Maryati et al. (2020). If someone has great faith, they will not commit to behavior that will ultimately result in regret (Alfi & Yusuf, 2022).

Religiosity can also be applied as a basis to avoid regret after acquiring items through impulsive buying (**H7 is supported**). Impulsive buying happens when customers experience something intensely and instantly and have a desire to get the item promptly (Rook, 1987). Çelik et al. (2019) claim that if an individual has a tendency to impulsively acquire items, then at some point after the purchase there will be regret. An impulsive buying is a quick purchase of an item without prior preparation or consideration, followed by sensations of excitement, so that it is able to set aside considerations that can give rise to dissatisfaction in the end (Lee & Cotte, 2009). Religiosity has a crucial role in averting this instance. Religiosity is regarded as self-control and indirectly impacts impulsive buying (Maryati et al., 2020). Buying impulsively is a negative consuming trait of a person that is carried out without forethought and can lead to inefficiency and excessive expenditures. Islam teaches moderation (Alfi & Yusuf, 2022), not being stingy and extravagant and encouraging simplicity in spending but also not stopping people from enjoying the gifts that Allah SWT has granted (Maryati et al., 2020; Rahayu, 2021).

V. CONCLUSION

This research has significance for various parties, notably Muslim practitioners and researchers. The S-O-R model proposed in this research comprises the scarcity cues, fear of missing out and live commerce, which function as stimuli to get customers enthusiastic, consequently making a quick purchase decision, the so-called impulsive buying. The scarcity cues, fear of missing out and live commerce

have positive effects on impulsive buying. In addition, scarcity cues may also cause a feeling of fear of missing out. Furthermore, impulsive buying also has a positive effect on post-purchase regret. By contrast, religiosity has a negative effect on post-purchase regret.

In our analysis, we also note that religiosity can weaken the relationship between impulsive buying and post-purchase regret. Impulsive buying is a negative consuming trait of a person that is carried out without contemplation and can lead to waste and excessive expenditure. Islam promotes moderation. Islam teaches that Muslims are forbidden to be greedy or wasteful and favours simplicity in consumption, but it also does not prohibit its adherents from enjoying the gifts that Allah SWT has presented. Religiosity serves as a self-control mechanism and indirectly impacts purchases made impulsively, which lead to regret.

This research has some limitations. First, this research merely studies impulsive buying in the development of the underlying S-O-R model, even though researchers can integrate it with various models, for example, Maslow et al. (1998) hierarchy of needs theory, which is equivalent to evaluating basic human requirements in tiers. And second, this research focuses on one product, namely Muslim fashion. Future research may consider other products, such as cuisines and beverages, accessories, tools, health equipment, beauty products, domestic equipment, and technological devices.

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