



Examining e-commerce user's switching intention through an extended push-pull-mooring model

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Abstract

Purpose – This study investigates the determinants of Indonesian e-commerce users' intention toward productive digital behavior using the push-pull-mooring (PPM) model. It further integrates the Homo Islamicus perspective, the technology acceptance model (TAM), and the marketing mix to provide a more comprehensive explanation of this behavioral transition.

Methodology – Primary data were collected from 231 Indonesian e-commerce users through an online survey using purposive sampling method. The eligible respondents were individuals who had actively engaged in online shopping. The proposed model was evaluated using a two-stage partial least squares structural equation modeling (PLS-SEM) approach.

Findings – The results indicate that push factors, represented by impulse buying and Homo Islamicus attributes, do not significantly explain the switching intention toward productive digital behavior. In contrast, pull factors, including perceived usefulness, perceived ease of use, attitude toward e-commerce, and the marketing mix, significantly influenced switching intention. Mooring factors, including risk propensity, tolerance of ambiguity, and perceived educational support, also positively influenced switching intention.

Implications – Encouraging productive digital behavior requires more than just reducing consumptive tendencies. Policymakers and e-commerce platform providers should strengthen digital entrepreneurship education, mentoring, and risk management support to enhance users' readiness for productive digital activities.

Originality – Previous e-commerce studies have primarily focused on purchase intention, online shopping adoption and impulse buying. This study extends the PPM model by explaining users' switching intention from consumptive to productive digital behavior in the Indonesian e-commerce ecosystem.

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Introduction

The rapid advancement of information technology has drastically changed consumer behavior, particularly regarding consumption patterns and online purchasing decisions (Jekše et al., 2021). Among these developments, e-commerce has emerged as the dominant digital platform

facilitating commercial interactions between sellers and buyers (Ben Youssef et al., 2021). In Indonesia, the growth of e-commerce has significantly increased, particularly after the Covid-19 pandemic, as mobility restrictions and stay-at-home policies encouraged consumers to shift from conventional in-store shopping to online transactions. This transformation has positioned e-commerce as a key component of digital economic development (Salim et al., 2019).

According to We are Social (2024), approximately 90% of internet users in Indonesia engage in e-commerce activities, positioning the country among the largest e-commerce markets worldwide. Despite this rapid expansion, e-commerce usage remains predominantly consumption-oriented, with most users relying on digital platforms primarily for online shopping rather than for productive activities, such as entrepreneurship, business development, or online selling. (Chen & Li, 2020; Rita & Ramos, 2022; Salim et al., 2019; Sembada & Koay, 2021; SivaKumar, 2017). This is evident from the increase in consumption during specific periods, such as flash sales or discount sales, which often stimulate impulsive buying behavior. Therefore, it is important to identify the factors that encourage e-commerce users to switch to productive digital behavior to create more economic value through e-commerce.

Previous studies related to e-commerce have primarily focused on online purchase intention, repurchase intention, and impulsive buying (Chen & Li, 2020; Mansur et al., 2019; Gunawan et al., 2023; Hamid et al., 2023; Yulianto et al., 2021). Studies have also examined the factors that lead consumers to engage in online shopping and promotional activities (Yulianto et al., 2021; Zheng et al., 2019). Previous study shows that users are most interested in selling on e-commerce platforms when they clearly see business benefits (Misra et al., 2022), find platforms easy to use and well supported, trust the system, and feel social and policy backing (Nguyen et al., 2024; Chen et al., 2021). Costs and risks matter (Wang et al., 2021), but their impact varies by setting and may be outweighed by perceived opportunities, usability, and supportive ecosystems. However, studies that specifically investigate users transition from consumption orientation to productive participation, such as online selling, affiliate marketing, or digital entrepreneurship, are limited. This gap is particularly important for positioned e-commerce, not merely as a shopping platform, but also as a space for creating economic value through sales activities.

Accordingly, this study aims to investigate the determinants of switching intention toward productive digital behavior among Indonesian e-commerce users. The proposed research model is based on the PPM framework and integrates the TAM, the marketing mix, and the concept of Homo Islamicus. Unlike previous studies that have primarily focused on technology adoption and online purchasing behavior, this study examines the intention to shift from consumptive to productive engagement within e-commerce platforms, thereby extending the literature on digital behavioral transformation. Furthermore, incorporating Homo Islamicus into the push dimension highlights the role of Islamic values in shaping behavioral change in Indonesia, where the majority of the population is Muslim. By emphasizing responsibility, value creation, and social welfare alongside individual utility maximization, Homo Islamicus provides a relevant theoretical perspective for explaining the transition from consumption-oriented to productive digital behavior.

Literature Review

Productive digital behavior

Productive digital behavior refers to the utilization of digital technologies and e-commerce platforms to generate economic value through activities such as online entrepreneurship, digital content creation, online selling, and other income-generating endeavors (Park et al., 2025). This concept differs fundamentally from consumptive digital behavior, which primarily involves the use of digital platforms for shopping, entertainment, and personal consumption. While both behaviors emerge within the digital economy, they produce different outcomes (Ngo et al., 2024). Productive digital behavior contributes to value creation, income generation, and economic empowerment (Vrontis et al., 2022), whereas excessive consumptive digital behavior may encourage impulsive buying, overspending, and financial vulnerability. Consequently, recent

discussions on digital transformation have increasingly emphasized the need to shift digital engagement from consumption-oriented activities toward productive economic participation.

Promoting productive digital behavior is important from economic, social, and policy perspectives. Economically, productive engagement on digital platforms can support entrepreneurship, strengthen household income, and enhance the competitiveness of micro, small, and medium enterprises (MSMEs) (Criveanu, 2023). Socially, it contributes to job creation, financial resilience, and inclusive economic development by expanding access to market opportunities, regardless of geographical limitations (Elia et al., 2020). From a policy perspective, encouraging productive digital participation aligns with the national digital economy agendas pursued by many emerging economies, including Indonesia (Ahi et al., 2023).

Furthermore, the preference for productive behavior is strongly supported by Islamic principles. The concept of Homo Islamicus emphasizes that economic activities should generate social benefit (*maslahah*), promote responsible resource utilization, and contribute to individual and societal welfare. Accordingly, productive economic activities are encouraged because they create value and support sustainable prosperity, whereas excessive consumption is discouraged because of its association with wastefulness (*israf*) and extravagance (*tabdzir*). Thus, transforming digital platforms into instruments of entrepreneurship and economic productivity is consistent with the ethical and developmental objectives of Islamic economic theory.

However, the emergence of productive digital behavior depends not only on normative values but also on technological and market-related factors (Shammre, 2025; Indiani et al., 2025). The TAM suggests that individuals are more likely to engage productively with digital platforms when they perceive them as useful and easy to use (Ruiz-Herrera et al., 2023; Putri et al., 2023). Perceived usefulness enables users to recognize the economic benefits of digital technologies, whereas perceived ease of use reduces barriers to participation. At the same time, marketing mix elements such as product offerings, pricing strategies, promotional activities, and platform accessibility serve as external stimuli that create opportunities and incentives for productive engagement (Rangaswamy et al., 2020; Huang & Benyoucef, 2017).

Together, the TAM and the marketing mix explain how digital platforms can facilitate productive economic activities and encourage users to shift beyond consumption-oriented behavior. However, despite the potential benefits of engaging in productive digital activities, many users remain reluctant to transition from consumption-oriented to production-oriented digital participation. Understanding this behavioral shift requires a theoretical perspective that explains the factors driving individuals to change from one behavioral pattern to another. In this regard, the PPM framework provides a robust theoretical foundation for explaining the mechanisms underlying users' switching intentions toward productive digital behavior.

Push pull mooring theory and switching behavior

While conducting a study on human migration for the renowned publication "Laws of migration," Ravenstein (1885) developed the PPM framework. Moon (1995) expanded the framework by including mooring elements to balance push and pull factors. The PPM paradigm is used in many domains to assist in explaining and forecasting consumer switching behavior (Pambekti et al., 2023). The early stages of the PPM framework benefited from human migration studies. For example, China's transition from an agrarian to an industrial culture impacted several elements that helped shape the modern PPM (Ravenstein, 1885). According to Nugroho and Wang (2023), PPM theory is now linked to switching behavior and the analogy of moving from one place to another.

Push, pull, and mooring are the three key factors that affect migration decisions (Lisana, 2023; Yoon & Lim, 2021). The pull effect pertains to the positive characteristics from a new site that entice people to come, whereas the push effect refers to the negative factors from the existing location that drive individuals to migrate to a better destination (Kim et al., 2020; Lisana, 2023). However, the mooring effect is related to social and personal elements that influence people's decisions to move or not (Fan et al., 2021; Lisana, 2023; Liu & Lee, 2020).

The PPM framework includes push, pull, and anchoring elements that affect user intention. According to PPM theory, pull factors are "positive factors that attract potential migrants to their destination" and "attributes of places that attract migrants" (Hou et al., 2014; Pambekti et al., 2023). According to Bansal et al. (2005), the characteristics mentioned are related to the location and not the migrants themselves. Even while the push and pull variables are important, mooring can interfere and stop migration, therefore the intricacy of migratory decisions is not totally influenced by these factors. The PPM migration model of service switching is sufficient to explain consumers' reluctance to shift service providers, even when push and pull influences are significant (Bansal et al., 2005; Pambekti et al., 2023).

Hypotheses development

Element of push effects

Impulse buying attributes

An impulsive buying decision is one that is made unintentionally, hastily, and without much thought after being exposed to a stimulus and experiencing a quick, intense want to make a purchase (Redine et al., 2023; Zheng et al., 2019). According to Atulkar and Kesari (2017), and Chauhan et al. (2023), impulsive buying is defined as unanticipated stimulation offered by firms through visual merchandising, including alluring displays, store layouts, price, sales promotions, packing, and a range of product categories. This behavior is known as impulsive buying and is characterized by a lack of control and unplanned actions. The buyer makes a hasty purchase of the product after receiving an impulsive and persuasive stimulus. According to Coelho et al. (2023), the sales revenue of many stores accounts for a sizable amount of their revenue. Both internal and external influences may impact impulsive buying behavior. All marketing-related stimuli that marketing experts use to sway consumers are considered external influences.

Homo Islamicus attributes

Islam encourages its adherents to uphold religiously prescribed moral and economic principles above anything else. Economic steps connected to production, consumption, and distribution will make the connection between the economy and morality more obvious (Aravik et al., 2023). Muslims' views toward money and property are governed by three categories of Islamic principles: The first is the way that property is acquired according to Islamic law, the second is usage limits, and the third is the distribution of property to others. A lighter, more productive, and more stable need for personal finances may eventually result from this Islamic norm. The following are the appropriate rules for purchasing property and its restrictions: *halal*, *laa maysir*, *laa gharar*, *laa tabdzir*, *laa israf*, *laa ibtikar*, *laa iktinaz*, and *laa riba* (Bayuni & Srisusilawati, 2022).

When considering these factors, the Homo Islamicus has some extremely distinctive characteristics. They only consume *halal* and *tayyib* goods and services (QS. 2:168), there will be no wasted expenditure (QS. 6:141; 17:27), human charity is on the horizon (QS. 25:67), and there will be no hedonistic behavior (QS. 89:20), among other factors. In other words, this person is a spiritual being whose goal is to glorify God. Through self-improvement and self-realization, they will constantly strive to be better people. Their activities will not be self-centered; instead, they will be others- and nature-focused (Azizy et al., 2019).

In the context of the push effect, Homo Islamicus can be conceptualized as an internal value-based push factor that motivates individuals to disengage from excessive digital consumption. The ethical principles embedded in Homo Islamicus generate dissatisfaction with wasteful consumption and encourage the pursuit of more productive and socially beneficial forms of digital engagement. Consequently, individuals with stronger Homo Islamicus orientations are more likely to develop intentions to switch from a consumptive to a productive digital behavior.

H₁: Push effects affect consumer's switching intention to digital productive behavior

Element of pull effects

Perceived of usefulness

Perceived usefulness refers to an individual's perception that digital technology is beneficial and enhances task performance (Davis, 1986; Venkatesh & Davis, 2000). It encompasses improvements in work speed, effectiveness, efficiency, productivity, and overall convenience, leading users to continue using a system when it provides clear benefits (Gao et al., 2021). Previous studies have shown that perceived usefulness positively influences users' attitudes, engagement, and behavioral intentions, while e-commerce strengthens trust between businesses, customers, and vendors (Dignum, 2002). The perceived benefits of technology also shape producers' and consumers' willingness to adopt digital platforms (Indahingwati et al., 2019). Empirical evidence indicates that e-commerce improves sales efficiency, expands market access (Nugroho, 2020), enhances economic productivity (Rayah et al., 2022), and increases the productivity of micro, small, and medium enterprises (MSMEs), particularly in rural areas (Kartika et al., 2021). Overall, consumers are more likely to adopt e-commerce when they perceive it as useful and beneficial.

Trust refers to users' confidence in the reliability and security of e-commerce systems when engaging in online transactions. In the context of e-commerce, trust reflects users' perceptions of a platform's competence, integrity, reliability, and ability to deliver secure, accurate, and efficient services (Mu & Pereyra-Rojas, 2017). Trust plays a critical role in shaping consumers' willingness to adopt and continue using digital platforms. As users become more familiar with a system and recognize its benefits, they are more likely to develop stronger purchase intentions and engage in online transactions (Nugraha et al., 2021). Consumers primarily evaluate the usefulness and reliability of e-commerce platforms before deciding to shop online, making trust an important driver of behavioral intention (Suleman et al., 2019). Consistent with this view, previous studies have reported that trust is positively associated with consumers' behavioral intention and technology adoption (Iriani & Andjarwati, 2020; Wilson, 2019; Yulianita, 2018).

Perceived easy to use

Perceived ease of use (PEU) refers to an individual's perception that using technology requires minimal effort and is easy to learn (Davis, 1989). The perceived ease of using digital services significantly influences consumers' and producers' adoption of e-commerce (Kim & Song, 2010). Greater ease of use increases users' willingness to engage in digital commerce by enhancing convenience and reducing barriers to technology adoption. For producers, e-commerce improves production efficiency, reduces human errors, enhances product quality, and optimizes supply chain performance (Al-Lami, 2021; Cherednichenko et al., 2023; Praditya, 2018), thereby strengthening competitiveness in increasingly dynamic markets (Muftiadi, 2021). From the consumer perspective, concerns about risk and uncertainty remain important barriers to technology adoption (Iriani & Andjarwati, 2020). Therefore, when e-commerce platforms are perceived as easy to use, consumers are more likely to develop positive attitudes and stronger intentions to use them.

Conversely, if consumers encounter challenges in conducting online transactions, they may develop unfavorable attitudes toward online purchasing. Several studies undertaken by Basyar and Sanaji (2018), Damayanti (2019), and Yulianita (2018) have demonstrated a noteworthy correlation between the perceived ease of use and both purchasing behavior and productivity. According to the provided description, the perception of e-commerce as easy to use is associated with a beneficial impact on both productive and consumptive behaviors.

Attitude toward e-commerce

Attitude (ATT) refers to an individual's positive or negative evaluation of performing a particular behavior or using a specific technology (Davis, 1989). It is shaped by underlying beliefs and evaluations developed through cognitive processes (Ajzen, 2014). In technology adoption, attitude reflects an individual's favorable or unfavorable evaluation of using a technological innovation (Alfanur & Kadono, 2021). According to Ajzen and Madden (1986), a positive attitude increases individuals' willingness to adopt and use technology, making attitude a key determinant of user

behavior (Ajzen & Fishbein, 1980). Empirical studies have confirmed that attitude significantly influences the adoption of e-commerce platforms (Arseto & Soemitra, 2022; Kurniawan, 2019). Producers also perceive e-commerce as enhancing efficiency, accuracy, cost-effectiveness, and operational reliability (Mu & Pereyra-Rojas, 2017). Consequently, favorable attitudes toward e-commerce strengthen consumers' intentions to engage in online shopping and other technology-based activities (Sharma, 2020).

The marketing mix

The composition of the marketing mix depends on an organization's characteristics and target market and should be designed to meet customer needs effectively (Sashi, 2012). As a strategic tool, the marketing mix enhances organizational competitiveness by integrating key elements under managerial control. Its effective implementation requires a comprehensive understanding of customers and the macro- and micro-environment affecting the organization (Owomoyela et al., 2013). The 7Ps framework—product, price, place, promotion, people, process, and physical evidence—provides a comprehensive approach to delivering customer value through high-quality products, competitive pricing, accessible distribution, effective promotion, capable personnel, efficient processes, and appropriate physical evidence (Ho & Hung, 2008). By integrating these elements, organizations can strengthen their competitive advantage, improve marketing performance, and influence consumers' purchasing and consumption behavior.

According to Al Badi (2018), consumers are more likely to purchase products and services through e-commerce when they effectively satisfy their needs and preferences. Marketing mix elements, including price, place, promotion, people, and process, play an important role in shaping consumer behavior. Affordable prices and promotional offers can encourage purchasing, whereas higher prices may reduce consumption and support more productive spending. Business location and product accessibility also influence consumer behavior by increasing both consumption and organizational productivity (Avlonitis & Indounas, 2005). In addition, effective promotional strategies stimulate consumer interest and purchase intentions (Festa et al., 2016), while positive interactions with sales personnel or customer service strengthen consumers' willingness to continue using or repurchasing products (Wibowo et al., 2021). Finally, efficient and convenient service processes enhance consumer satisfaction and encourage repeated use of products and services (Ho & Hung, 2008).

H₂: Pull effects affect consumer's switching intention to digital productive behaviour

Element of mooring effects

Propensity to risk

The literature on risk propensity has two main themes. The first theme relates to prospect theory (Kahneman & Tversky, 1979), which proposes that risk-taking is asymmetric about a reference point and that people will be risk averse when they perceive themselves to be in the domain of gain and risk-seeking in the domain of loss. The risk of using e-commerce is one of the obstacles in society today. Concerns include security, privacy, merchant legitimacy, and order fulfillment. Propensity to risk in the context of e-commerce technology refers to the tendency or level of readiness of a person or company to face and take risks associated with using and adopting e-commerce technology (Hoffman et al., 1999). This includes the ability and willingness to deal with the risks and uncertainties associated with online shopping and transactions (Bonera, 2011).

Tolerance of ambiguity

Tolerance of ambiguity is the ability of a person or organization to feel comfortable and function effectively in unclear, uncertain, or ambiguous situations (Nicolaidis & Katsaros, 2011). In e-commerce, tolerance of ambiguity is relevant because the online business environment often changes quickly, is complex, and uncertain (Kurjono et al., 2022). E-commerce companies with a high tolerance for ambiguity are more open to trying new things and adapting their business models to deal with market changes. Tolerance of ambiguity enables e-commerce companies to

identify opportunities and develop strategies that respond to environmental changes. E-commerce can face uncertainties such as regulatory changes, intense competition and technological developments. Tolerance of ambiguity helps companies remain calm and focused in facing these challenges creatively and innovatively. Therefore, e-commerce companies continue to develop themselves to increase and maintain their productivity and consumer loyalty (Hazen et al., 2012). This is because ambiguity or uncertainty can lead to excessive instability and confusion. Therefore, e-commerce companies must balance their tolerance for ambiguity and their ability to manage risk and change wisely (Furnham & Marks, 2013).

Perceived education support

Perceived educational support refers to individual perceptions of the support provided by the educational environment or institutions for developing community knowledge and skills (Martzoukou et al., 2020). In digital or digital behavior, perceived educational support can influence how individuals interact with technology and conduct online activities (Basu et al., 2022). The provision of technological skills influences individual courage in trying and utilizing various digital tools, including e-commerce. Consumers should have digital literacy and be able to critically assess information and use technology wisely, including the use of technology not only for consumptive things but for productive ones (Fisher, 2000). Educational support can influence the behavior of using digital platforms and applications so that when users understand how platforms and applications work, they will be more likely to use digital more effectively and productively, avoid online threats and adopt appropriate, ethical precautions (Cramarenco et al., 2023). Thus, effective educational support in the context of digital behavior is very important to help individuals face challenges and opportunities in the digital era and can change from consumptive habits to productive use (Ratnasingam, 2003).

H₃: Mooring effects affect consumer's switching intention to digital productive behavior

Figure 1 illustrates the proposed research framework and the development of the study hypotheses. Based on the Push–Pull–Mooring (PPM) framework, switching intention toward productive digital behavior is explained through three dimensions: push, pull, and mooring effects. The subsequent sections develop the hypotheses by discussing the theoretical rationale and empirical evidence supporting each proposed relationship.

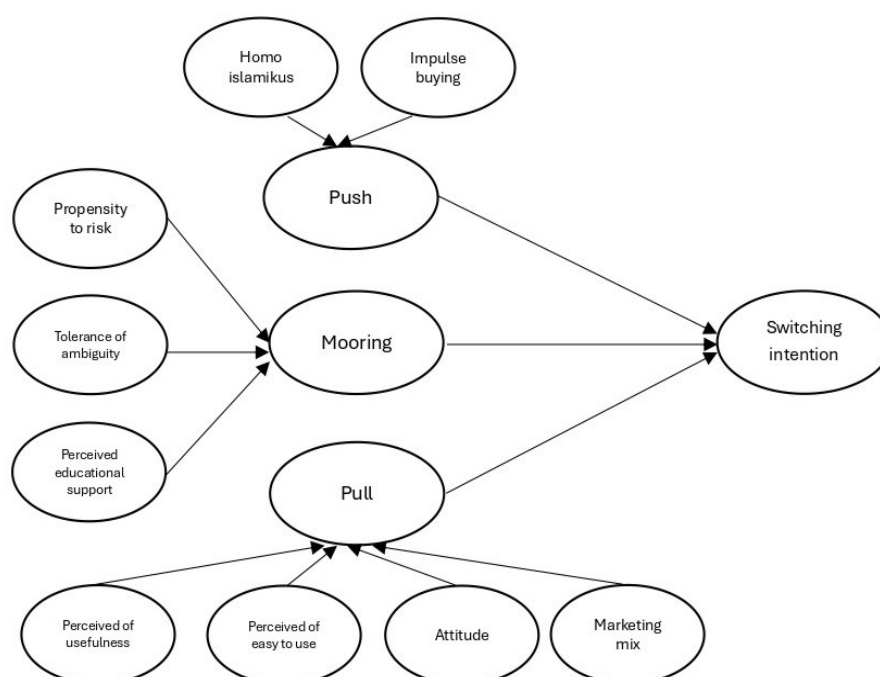


Figure 1. Research framework
Source: Developed by the authors.

Research Methods

Data collection and variable measurement

The data were obtained by distributing questionnaires online to Indonesian respondents in 2023 – 2024 through various online channels, including social media platforms, online communities, and messaging apps. The sampling technique utilized purposive sampling, limiting respondents to a minimum age of 17 and e-commerce users for consumer purposes. The use of a purposive sampling strategy targeting e-commerce users enabled this study to provide meaningful insights into switching intention toward productive digital behavior. In addition, the various demographic backgrounds and geographic locations of the respondents can increase sample variability and enhance the robustness of empirical findings. Among the 291 responses, 60 were excluded due to incomplete answers. Consequently, 231 valid responses were retained for the analysis.

Variable measurements were carried out using a Likert scale, where for positive statements, the values ranged from strongly disagree (1) to strongly agree (5). Meanwhile, negative statements were rated as strongly disagree (5) to strongly agree (1). All variables were measured with indicators based on previous research and modified and adapted to productive and consumptive behavior in the use of e-commerce. The push effect was measured using the indicators of impulsive buying and Homo Islamicus. The mooring effect was measured using indicators of risk probability, tolerance of ambiguity, and perceived educational support. Meanwhile, the pull effect construct is measured by perceived usefulness, perceived ease of use, attitude towards e-commerce, and marketing mix.

Analytical approach

The collected primary data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). This method is appropriate for simultaneously assessing the measurement model and testing the structural relationships among latent constructs (Byrne, 2013). Following the procedure proposed by Hoyle (2012), the analysis involved data preparation, model specification, parameter estimation, model evaluation, interpretation, and reporting. PLS-SEM was selected because it imposes fewer distributional assumptions and is suitable for complex research models and relatively small sample sizes (Qoyum & Fauziyyah, 2019). The analysis was conducted using WarpPLS software to evaluate the validity and reliability of the measurement model, examine the hypothesized relationships among constructs, and identify the key determinants of the dependent variable.

Partial least squares structural equation modeling (PLS-SEM) was employed to analyze the proposed research model. PLS-SEM is appropriate for prediction-oriented research, accommodates moderate sample sizes, and requires fewer distributional assumptions than covariance-based structural equation modeling (CB-SEM). This study adopted a reflective–formative hierarchical component model (HCM), in which the push and pull effects were modeled as higher-order constructs (HOCs) comprising several lower-order constructs (LOCs). Following the two-stage approach recommended by Hair et al. (2019), LOC scores were estimated in the first stage and subsequently used to assess the HOCs in the second stage. The measurement model was evaluated by examining its validity and reliability, while the structural model was assessed to test the direct and moderating effects. Consistent with the recommendation of Hair et al. (2018), the moderating effect was analyzed using the two-stage approach.

Results

This study used primary data collected through a questionnaire survey. A total of 350 questionnaires were distributed, of which 291 valid responses were returned. Respondents were classified into three groups based on their e-commerce usage: (1) those who used e-commerce exclusively for shopping; (2) those who used it for selling, affiliate marketing, or endorsements; and (3) those who used it for both shopping and commercial activities. Because the study focuses on users who engage in e-commerce solely for shopping, only respondents in the first group were included in the analysis. Consequently, the final sample consisted of 231 respondents.

Table 1. Respondent's demographic profile

Variable	Description	Frequency	Percent
Age	17 – 30 years	204	88
	31 – 40 years	17	7
	41 – 50 years	10	5
Educational level	Middle school graduate	1	0.4
	High school graduate	71	31
	Master's degree	118	51
	Doctoral degree	41	17.6
Monthly income	IDR. 500,000 - 1,000,000	21	9
	IDR. 1,000,001 - 3,000,000	53	23
	IDR. 3,000,001 - 5,000,000	25	11
	> IDR. 5,000,000	132	57
Duration of using e-commerce	< 1 year	165	71
	1-5 years	32	14
	> 5 Years	34	15
Average consumption of e-commerce every month	< IDR. 100,000	86	38
	IDR. 100,000 - 500,000	123	53
	IDR. 500,001 - 1,000,000	19	8
	> IDR. 1,000,000	3	1

Source: Authors' calculations based on survey data.

Table 1 presents the demographic characteristics of the respondents, revealing considerable diversity in terms of their geographical distribution across Indonesia and their duration of e-commerce usage. The broad regional representation and variation in user experience indicate that the sample reflects a heterogeneous population of Indonesian e-commerce users. These characteristics demonstrate that the data collection process successfully captured respondents from different backgrounds, thereby strengthening the representativeness and reliability of the study findings.

Measurement model assessment

Table 2 presents the results of the formative measurement model assessment. Following the recommended assessment procedure for formative measurement models, the significance of outer weights and the value of the formative multicollinearity indicator were examined. The results demonstrate that all formative indicators contribute significantly to their respective constructs ($p < 0.01$), while variance inflation factor (VIF) values ranging from 1.002 to 2.684 remain below the accepted cut-off values, confirming that no evidence of multicollinearity.

Table 2. Formative measurement model

PLS path	Outer weight	VIF
Impulse buying attributes (IBA) > Push	0.70***	1,002
Homo Islamicus attributes (HIA) > Push	0.72***	1,002
Perceived of usefulness (PUS) > Pull	0.29***	2044
Perceived of easy to use (PEU) > Pull	0.28***	1,742
Attitude toward e-commerce (ATT) > Pull	0.32***	2,684
Marketing mix (MM) > Pull	0.31***	2.178
Propensity to risk (PR) > Mooring	0.42***	1,456
Tolerance of ambiguity (TA) > Mooring	0.43***	1510
Perceived education support (PES) > Mooring	0.39***	1,325

Note. VIF: variance inflation factor

Source: Authors' own calculations.

Table 3 reports the measurement items and their corresponding standardized factor loadings for each construct included in the research model. All indicator loadings exceed the recommended threshold of 0.70, ranging from 0.753 to 0.929, indicating strong associations between the observed indicators and their underlying latent constructs (Hair et al., 2019). These

results confirm that each measurement item contributes adequately to its respective construct and demonstrates satisfactory indicator reliability. Consequently, the measurement instrument is considered appropriate for evaluating the psychometric properties of the constructs and for subsequent structural model analysis.

Table 3. Measurement items

Variable items	Loading factor
Impulse buying attributes	
IBA1 : Using E-Commerce makes me shop for a product without planning	0.863
IBA2 : The use of E-Commerce makes me shop for an item without considering it first	0.859
IBA3 : I can't afford to hold back shopping when there are discounts on E-Commerce	0.783
Homo Islamicus attributes	
HIA1 : I realize that Islam does not encourage israf (wasteful) spending	0.925
HIA2 : I realize that Islam does not encourage tabdhir spending (spending without benefit)	0.923
HIA3 : I realize that consumption behaviour in Islam must be carried out fairly and in a balanced way (tawazun)	0.817
Perceived of usefulness	
PUS1 : E-commerce makes it easy for me to start an entrepreneurship	0.826
PUS2 : Being a seller/reseller/affiliator/endorsement in e-commerce is very profitable	0.854
PUS3 : E-commerce pushes me to be more productive	0.844
PUS4 : E-commerce increases the effectiveness of entrepreneurship	0.840
Perceived of easy to use	
PEU1 : Learning to operate e-commerce is easy for me	0.835
PEU2 : For me, using e-commerce to sell/affiliate/endorsement is not difficult	0.804
PEU3 : E-commerce is a flexible tool for entrepreneurship	0.778
PEU4 : In general, e-commerce is easy to use	0.798
Attitude toward e-commerce	
ATT1 : E-commerce creates new jobs	0.789
ATT2 : There is a great opportunity to make a profit through e-commerce	0.846
ATT3 : E-commerce encourages me to be an independent and productive human being	0.850
ATT4 : E-commerce encourages me to be a creative and innovative human being	0.853
Marketing mix	
MM1 : E-commerce offers varied quality products	0.753
MM2 : Promoting products on E-commerce is easier than offline channels	0.758
MM3 : Promoting products through E-commerce can attract more consumers	0.865
MM4 : Buyer testimonials are easy to find on sales through e-commerce	0.868
MM5 : Product quality is easily identified through store ratings (star rating)	0.769
Propensity to risk	
PR1 : I am a person who likes risk	0.883
PR2 : Taking risks is my strategy for being more productive	0.929
PR3 : The higher the risk I take, the higher the income I get	0.816
Tolerance of Ambiguity	
TA1 : I don't have a problem if entrepreneurship in E-Commerce doesn't provide a steady income	0.854
TA2 : I don't mind if I don't succeed right away as an entrepreneur in e-commerce	0.925
TA3 : I don't mind if my income fluctuates when selling on e-commerce	0.897
Perceived Education Support	
PES1 : I received an entrepreneurship education when I was in school/college	0.842)
PES2 : Education at school/campus encouraged me to be creative and become an entrepreneur	0.890)
PES3 : My school/college provides the necessary knowledge for entrepreneurship	0.910)
Switching intention to digital productive behavior	
SW1 : I plan to do business through e-commerce	0.896
SW2 : If I have the opportunity and resources, I will choose to be an entrepreneur in e-commerce	0.857
SW3 : I will make every effort to start a business in e-commerce	0.893
SW4 : I am very serious about being more productive through e-commerce	0.902
SW5 : My professional goal is to become an entrepreneur	0.816

Source: Authors' own calculations.

Table 4 presents the results of the reflective measurement model assessment. The reflective measurement model involved examining Cronbach's alpha (CA) and composite reliability (CR) as indicators of internal consistency. The results showed that CA values ranged from 0.783 to 0.922, while CR values ranged from 0.874 to 0.941, exceeding the recommended threshold values and confirming satisfactory internal consistency of the constructs (Hair et al., 2019). Furthermore, the reflective measurement model was evaluated in terms of convergent and discriminant validity (Hair et al., 2018). Convergent validity was assessed using indicator loadings and average variance extracted (AVE) values. All indicator loadings were above the recommended threshold of 0.70, ranging from 0.753 to 0.929, while the AVE values ranged from 0.646 to 0.797, exceeding the minimum acceptable value of 0.50. These findings demonstrate that all the constructs exhibited adequate reliability and validity.

Table 4. Reflective measurement model

	CA	CR	AVE
Impulse buying attributes	0.783	0.874	0.698
Homo Islamicus attributes	0.867	0.919	0.792
Perceived of usefulness	0.862	0.906	0.708
Perceived of easy to use	0.817	0.879	0.646
Attitude toward e-commerce	0.855	0.902	0.697
Marketing mix	0.862	0.901	0.647
Propensity to risk	0.849	0.909	0.770
Tolerance of ambiguity	0.872	0.922	0.797
Perceived education support	0.856	0.912	0.777
Switching intention to digital productive behavior	0.922	0.941	0.763

Note. CA = Cronbach's alpha; CR = composite reliability; AVE = average variance extracted.

Source: Authors' own calculations.

Structural model assessment

A structural model assessment was conducted to evaluate the proposed hypotheses, with the results summarized in Table 5 and Figure 2. The coefficient of determination (R^2) for Switching Intention is 0.54, indicating that the push-pull-mooring (PPM) model explains 54% of the variance in switching intention toward productive digital behavior, while the remaining 46% is attributable to factors not included in the proposed model. According to Hair et al. (2019), this R^2 value reflects a moderate level of explanatory power (≥ 0.75 = substantial, ≥ 0.50 = moderate, and ≥ 0.25 = weak). The path coefficient analysis reveals that the Pull Effect ($\beta = 0.32$, $p < 0.001$) and Mooring Effect ($\beta = 0.52$, $p < 0.001$) have significant positive effects on switching intention, thereby supporting the corresponding hypotheses. In contrast, the Push Effect does not significantly influence switching intention ($\beta = 0.01$, $p = 0.47$), indicating that factors associated with impulse buying attributes and Homo Islamicus attributes are insufficient to directly motivate users to shift from consumptive to productive digital behavior. Overall, these findings suggest that attractive productive opportunities and favorable facilitating conditions play a more influential role in encouraging switching intention than push-related factors associated with existing consumption behavior.

Table 5. Structural models

PLS Path	β	P-values	Supported
Push > Switching intention to digital productive behavior	0.01	0.47	No
Pull > Switching intention to digital productive behavior	0.32	0.000	Yes
Mooring > Switching intention to digital productive behavior	0.52	0.000	Yes

Source: Authors' own calculations.

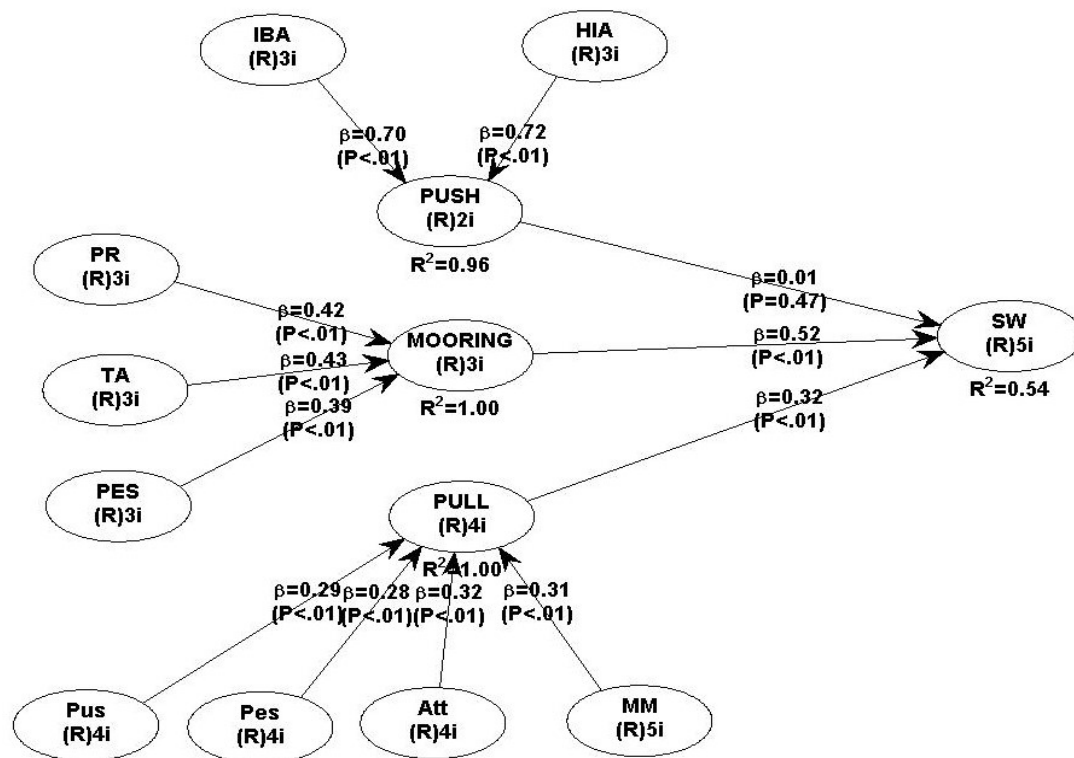


Figure 2. The results of the structural model test

Robustness check

To further evaluate the robustness of the proposed structural model, the PLSpredict procedure was employed to assess its out-of-sample predictive performance, with Switching Intention specified as the primary target construct. As reported in Tables 6 and 7, the Q^2 values for Push Effects (0.271), pull effects (0.437), and Switching Intention (0.514) all exceed the recommended threshold of zero, indicating satisfactory predictive relevance for the endogenous constructs. In addition, the positive Q^2_{predict} values for all indicators, together with consistently lower root mean squared error (RMSE) and mean absolute error (MAE) values produced by the PLS-SEM model compared with the benchmark linear model (LM), demonstrate superior predictive accuracy. Following the guidelines of Shmueli et al. (2019), these findings provide strong evidence that the proposed model possesses high out-of-sample predictive power, confirming its robustness and its ability to reliably predict switching intention toward productive digital behavior beyond the estimation sample.

Table 6. Coefficient determination and predictive relevance

Constructs	SSO	SSE	Q^2
Push effects	635	462,944	0.271
Pull effect	924	520,362	0.437
Switching intention to digital productive behavior	231	112,319	0.514

Source: Authors' own calculations.

Table 7. PLS predict

	PLS			LM	
	RMSE	MAE	Q^2_{predict}	RMSE	MAE
Switching intention to digital productive behavior (SW) 2	0.7	0.514	0.512	0.724	0.536
Switching intention to digital productive behavior (SW) 3	0.702	0.515	0.509	0.726	0.537

Source: Authors' own calculations.

Discussion

The push effect, represented by Homo Islamicus and impulsive buying, did not significantly impact the intention to switch toward productive digital behavior. Within the Push–Pull–Mooring (PPM) framework, these results indicate that an individual's religious consciousness does not always align with their intention to reduce consumptive activities and encourage productive behavior (Zeqiri et al., 2024; Zakaria et al., 2022). Previous studies have shown that individuals with a stronger religious orientation tend to engage in productive economic activities, as evidenced by ethical consumption behavior, entrepreneurial intention, and responsible economic behavior. However, the current findings suggest that these normative Islamic values do not directly translate into intentions to switch to productive digital behavior. These results align with studies highlighting a behavioral gap among e-commerce users regarding consumptive and productive activities, where individuals may support economic principles that uphold ethical values but fail to translate them into actual behavioral intentions due to various real-world challenges in the digital realm (Cheng et al., 2019; Guo et al., 2021; Sun et al., 2017).

Furthermore, the insignificant role of impulsive buying suggests that reducing consumption tendencies does not automatically encourage productive digital engagement. The psychological mechanisms required to avoid unnecessary consumption differ from those required to initiate entrepreneurial activities on digital platforms. These findings suggest that the transition toward productive digital behavior is not driven by dissatisfaction with consumption patterns, but rather by attractive opportunities, perceived benefits, and the potential of digital platforms (Ruiz-Herrera et al., 2023; Putri et al., 2023; Rangaswamy et al., 2020; Huang & Benyoucef, 2017). Therefore, policies for transitioning toward productive behavior are not sufficient by raising awareness of ethical consumption, they must also be accompanied by strengthening the digital entrepreneurial ecosystem, improving business literacy, and raising awareness of the economic opportunities available in e-commerce. Future studies could further investigate whether the influence of Homo Islamicus is moderated by variables such as entrepreneurship, digital competence, or the ability to seize business opportunities.

These findings are also supported by data showing that impulsive behavior among Indonesians remains high (Akram et al., 2018; Yulianto et al., 2021), particularly during promotional periods or flash sales. In December 2022, total retail transactions reached 27 trillion rupiah in just two days (December 11–12). This statistic contradicts the participation rate of SMEs in e-commerce, which remains at 32.23% of all SMEs in Indonesia (Badan Pusat Statistik, 2022). Impulse buying does not lead to switching intentions because consumers perceive that particular periods actually increase their marginal utility in consumption.

Further findings show that the pull effect has a significant influence on the interest of e-commerce users switching to productive activities (shopping, becoming an endorser, or affiliate). We use four pull-effect elements: attitude toward e-commerce, perceived usefulness, perceived ease of use, and marketing mix. We built the first three components based on the theory of acceptance model, while the next factor is the marketing mix with the 7P approach. This finding is in line with previous research, which states that the pull effect significantly influences switching decisions. Elements of the pull effect also show the same findings as previous research, that the variable attitude toward e-commerce, perceived usefulness, perceived ease to use, and marketing mix can encourage public interest in entrepreneurship through e-commerce (Chang et al., 2017; Sun et al., 2017).

Most respondents were millennials, aligning with Katadata (2023) indicates that 46.2% of e-commerce users in Indonesia belong to this group. This dominance demonstrates that the sample aligns with the characteristics of the national e-commerce user base in Brazil. As a group that is more adaptable to digital technology, millennials tend to have a greater capacity to utilize e-commerce for consumption and productive activities. E-commerce provides multiple tools to facilitate business activities, including ease of access, transaction transparency, real-time shipment tracking, and flexible payment methods. Additionally, the available digital marketing features enable sellers to reach a wider market at relatively low costs. These advantages make e-commerce an attractive platform for supporting productive economic activity. These findings serve as an

important signal to the government and startup developers to continue supporting and building safe and convenient e-commerce ecosystems. In addition, features must be continuously updated to facilitate business activities and enhance public awareness of the benefits of using e-commerce.

The final factor in the push-pull-mooring framework is the mooring effect. In this section, we examine the components of risk propensity, tolerance for ambiguity, and perceived educational support. These findings are consistent with previous research indicating that the mooring effect has a positive influence on relocation decisions (Moriano et al., 2012; Obschonka et al., 2010). However, on the other hand, these findings also do not align with previous studies stating that the mooring effect has a negative effect on relocation decisions. The mooring effect inhibits relocation (Hou, 2014; Pambekti et al., 2023; Sun et al., 2017). However, not everyone considers obstacles to be a reason for not switching. Propensity to risk is a condition that shows a person's tendency to take risks. The results of the outer weight model show that the propensity to risk has a positive path coefficient. This means that most Indonesians are not concerned about risk factors.

Tolerance of ambiguity is a condition in which a person has a high tolerance for uncertainty. This attitude is a must-have for an entrepreneur; they are not only ready to face ambiguity by deciding to become an entrepreneur, but being an entrepreneur itself is an ambiguous condition. However, not everyone can accept ambiguous conditions, especially in terms of income. However, based on these findings, most are aware that ambiguity about the future or fluctuating opinions as a result of being an entrepreneur is not the main problem.

The third element is perceived educational support, initially, we predicted that the lack of public interest in switching to productive behavior was the impact of the transformation of entrepreneurship knowledge which was not mature while in school/university. This condition is not the main factor. Formal education can foster public interest in switching to productive behaviors. This finding is also in line with the results of a survey of undergraduate graduates, the majority of whom said they wanted to become entrepreneurs after they graduated from campus (Ferreira et al., 2012; Turker & Sonmez Selcuk, 2009). Of course, apart from being supported by the educational ecosystem, this condition is also characteristic of the millennial generation, who do not like being controlled. The majority of them prefer a free and unregulated lifestyle.

Conclusion

The finding can be concluded that the push-pull-mooring model generally explains the transition toward productive behavior in e-commerce, although some factors reflected in the push effect were not supported by the theory. The results indicate that the push effect, represented by Homo Islamicus and impulsive buying, does not significantly influence the switching intention, whereas the pull effect and mooring effect contribute significantly to fostering productive digital behavior. These findings contribute to the literature on the push-pull-mooring model by demonstrating transition toward productive behavior in e-commerce is actually driven by perceived opportunities, technological ease and appeal, and individual readiness rather than awareness of the negative effects of impulse buying or religious incentives. The statistically insignificant influence of Homo Islamicus implicitly suggests that religious values alone are insufficient to drive productive digital behavior without supporting factors such as entrepreneurial ability and digital competence. However, this study still faces several limitations, including the use of purposive sampling for data collection, which could restrict the generalization of the findings to the entire population. Future research could also incorporate multigroup analysis to evaluate the robustness of the model, considering that the majority of our respondents are still dominated by millennials. Additionally, the push effect which fails to explain the switching intention, the model could be examined by incorporating moderating effects related to entrepreneurship, digital competence, or the ability to seize business opportunities.

Abbreviations

MSMEs: Micro, small, and medium enterprises

PPM: Push-pull-mooring

TAM: Technology acceptance model

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All data generated or analyzed during this study are included in this published article

Declaration of generative AI and AI-assisted technologies in the writing process

During the preparation of this manuscript, the authors used Grammarly, ChatGPT, and Gemini to improve the English grammar. After using this tool/service, the authors reviewed and edited the content as needed and took full responsibility for the content of the publication.

Conflict of interest statement

The authors declare no conflict of interest regarding the publication of this manuscript.

Ethic approval and consent to participate

The authors declare that ethical approval was not required for this study because it used completely anonymized primary data.

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References

- Ahi, A. A., Sinkovics, N., & Sinkovics, R. R. (2023). E-commerce policy and the global economy: A path to more inclusive development? *Management International Review*, 63(1), 27–56. <https://doi.org/10.1007/s11575-022-00490-1>
- Ajzen, I. (2014). The theory of planned behavior. In *Handbook of Theories of Social Psychology* (pp. 438–459). <https://doi.org/10.4135/9781446249215.n22>
- Ajzen, I., & Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behavior*. Prentice-Hall.
- Ajzen, I., & Madden, T. J. (1986). Prediction of goal-directed behavior: Attitudes, intentions, and perceived behavioral control. *Journal of Experimental Social Psychology*, 22(5), 453–474. [https://doi.org/10.1016/0022-1031\(86\)90045-4](https://doi.org/10.1016/0022-1031(86)90045-4)
- Akram, U., Hui, P., Khan, M. K., Hashim, M., Qiu, Y., & Zhang, Y. (2018). Online impulse

- buying on “double eleven” shopping festival: An empirical investigation of utilitarian and hedonic motivations. In J. Xu, M. Gen, A. Hajiyeve, & F. L. Cooke (Eds.), *Proceedings of the Eleventh International Conference on Management Science and Engineering Management* (pp. 680–692). Springer International Publishing. https://doi.org/10.1007/978-3-319-59280-0_56
- Al Badi, K. S. (2018). The impact of marketing mix on the competitive advantage of the SME sector in the Al Buraimi Governorate in Oman. *SAGE Open*, 8(3). <https://doi.org/10.1177/2158244018800838>
- Al Shammre, A. S. (2025). Digital adoption and productivity in rentier economies: Evidence from the GCC. *Systems*, 13(11), 1038. <https://doi.org/10.3390/systems13111038>
- Al-Lami, G. (2021). E-commerce: Advantages and limitations. *International Journal of Academic Research in Accounting Finance and Management Sciences*, 11(February), 153–165. <https://doi.org/10.6007/IJARAFMS>
- Alfanur, F., & Kadono, Y. (2021). Empirical study of purchase intention and behavior of e-commerce consumers in Indonesia. *Malaysian E Commerce Journal*, 4(1), 20–28. <https://doi.org/10.26480/mecj.01.2021>.
- Aravik, H., Hamzani, I. A., & Khasanah, N. (2023). Al-Ghazali's Sufistic economy concept: From Homo Islamicus to economic progress. *At-Taradhi: Jurnal Studi Ekonomi*, 14(21), 1–20. <https://doi.org/10.18592/at-taradhi.v14i1.9131>
- Arseto, D. D., & Soemitra, A. (2022). Analysis of the influence of attitudes and perceptions on decisions to use Sharia fintech peer to peer lending in Indonesia with satisfaction as an intervening variable. *Reslaj: Religion Education Social Laa Roiba Journal*, 4(4), 1000–1009. <https://doi.org/10.47467/reslaj.v4i4.1048>
- Atulkar, S., & Kesari, B. (2017). Impulse buying: A consumer trait prospective in context of central India. *Global Business Review*, 19(2), 477–493. <https://doi.org/10.1177/0972150917713546>
- Avlonitis, G. J., & Indounas, K. A. (2005). Pricing objectives and pricing methods in the services sector. *Journal of Services Marketing*, 19(1), 47–57. <https://doi.org/10.1108/08876040510579398>
- Azizy, S. H., Mahyudi, M., & Yusop, M. (2019). The ends of Islamic economics from the perspective of Homo Economicus and Homo Islamicus: A critical study. *Adzkiya: Jurnal Hukum Dan Ekonomi Syariah*, 7(1), 1. <https://doi.org/10.32332/adzkiya.v7i1.1436>
- Badan Pusat Statistik. (2022). *Statistik E-Commerce 2022*. <https://www.bps.go.id/id/publication/2022/12/19/d215899e13b89e516caa7a44/statistik-e-commerce-2022.html>
- Bangun, C. S., & Handra, T. (2021). How theory of planned behavior and perceived risk affect online shopping behavior. *Aptisi Transactions on Management (ATM)*, 5(2), 169–179. <https://doi.org/10.33050/atm.v5i2.1594>
- Bansal, H. S., Taylor, S. F., & James, Y. S. (2005). “Migrating” to new service providers: Toward a unifying framework of consumers' switching behaviors. *Journal of the Academy of Marketing Science*, 33(1), 96–115. <https://doi.org/10.1177/0092070304267928>
- Basu, S., Thomas, S., & Khan, T. (2022). Impact of digital education on learning behavior of undergraduates. *Journal of Higher Education Theory and Practice*, 22(11), 166–178. <https://doi.org/10.33423/jhetp.v22i11.5421>
- Basyar, K., & Sanaji. (2018). Pengaruh persepsi kemudahan dan persepsi manfaat terhadap niat beli ulang secara online dengan kepuasan sebagai variabel intervening. *Bisnis dan Manajemen (BISMA)*, 8(2), 204–217. <https://doi.org/10.26740/bisma.v8n2.p204-217>
- Bayuni, E. M., & Srisusilawati, P. (2022). Human perspectives as Homo Islamicus and Homo

- Economicus towards money. *Proceedings of the International Conference on Islamic and Muhammadiyah Studies (ICIMS 2022)*, 676, 347–353. <https://doi.org/10.2991/assehr.k.220708.043>
- Ben Youssef, A., Boubaker, S., Dedaj, B., & Carabregu-Vokshi, M. (2021). Digitalization of the economy and entrepreneurship intention. *Technological Forecasting and Social Change*, 164, 120043. <https://doi.org/10.1016/j.techfore.2020.120043>
- Booms, B. and Bitner M. (1981). *Marketing strategies and organization structure for service firm*, McGraw Hill, New York.
- Bonera, M. (2011). The propensity of e-commerce usage: The influencing variables. *Management Research Review*, 34(7), 821–837. <https://doi.org/10.1108/01409171111146706>
- Byrne, B. M. (2013). *Structural Equation Modeling With AMOS*. <https://doi.org/10.4324/9781410600219>
- Chang, H. H., Wong, K. H., & Li, S. Y. (2017). Applying push-pull-mooring to investigate channel switching behaviors: M-shopping self-efficacy and switching costs as moderators. *Electronic Commerce Research and Applications*, 24, 50–67. <https://doi.org/10.1016/j.elerap.2017.06.002>
- Chauhan, S., Banerjee, R., & Dagar, V. (2023). Analysis of impulse buying behaviour of consumer during COVID-19: An empirical study. *Millennial Asia*, 14(2), 278–299. <https://doi.org/10.1177/09763996211041215>
- Chen, C., & Li, X. (2020). The effect of online shopping festival promotion strategies on consumer participation intention. *Industrial Management & Data Systems*, 120(12), 2375–2395. <https://doi.org/10.1108/IMDS-11-2019-0628>
- Chen, Y., Chen, L., Zou, S., & Hou, H. (2021). Easy to start, hard to persist: Antecedents and outcomes of entrepreneurial persistence in online marketplaces. *Journal of Marketing Channels*, 28(4), 234–253. <https://doi.org/10.1080/10864415.2021.1967003>
- Cheng, S., Lee, S.-J., & Choi, B. (2019). An empirical investigation of users' voluntary switching intention for mobile personal cloud storage services based on the push-pull-mooring framework. *Computers in Human Behavior*, 92, 198–215. <https://doi.org/10.1016/j.chb.2018.10.035>
- Cherednichenko, O., Ivashchenko, O., Cibák, L., & Lincenyi, M. (2023). Item matching model in e-commerce: How users benefit. *Economics and Culture*, 20(1), 77–90. <https://doi.org/10.2478/jec-2023-0007>
- Coelho, F., Aniceto, I., Bairrada, C. M., & Silva, P. (2023). Personal values and impulse buying: The mediating role of hedonic shopping motivations. *Journal of Retailing and Consumer Services*, 72, 103236. <https://doi.org/10.1016/j.jretconser.2022.103236>
- Cramarencu, R. E., Burcă-Voicu, M. I., & Dabija, D. C. (2023). Student perceptions of online education and digital technologies during the Covid-19 pandemic: A systematic review. *Electronics*, 12(2). <https://doi.org/10.3390/electronics12020319>
- Criveanu, M. M. (2023). Investigating digital intensity and e-commerce as drivers for sustainability and economic growth in the EU countries. *Electronics*, 12(10), 2318. <https://doi.org/10.3390/electronics12102318>
- Croes, E., & Bartels, J. (2021). Young adults' motivations for following social influencers and their relationship to identification and buying behavior. *Computers in Human Behavior*, 124, 106910. <https://doi.org/10.1016/j.chb.2021.106910>
- Damayanti, V. (2019). Pengaruh perceived usefulness dan perceived ease of use terhadap purchase intention melalui brand image sebagai variabel intervening pada mahasiswa ust yogyakarta pengguna shopee. *Jurnal Ilmiah Ekonomi dan Bisnis*, 16(2), 99-109.

<https://doi.org/10.31849/jieb.v16i2.2317>

- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly: Management Information Systems*, 13(3), 319–339. <https://doi.org/10.2307/249008>
- Dignum, F. (2002). E-commerce in production: Some experiences. *Integrated Manufacturing Systems*, 13(5), 283–294. <https://doi.org/10.1108/09576060210429739>
- Elia, G., Margherita, A., & Passiante, G. (2020). Digital entrepreneurship ecosystem: How digital technologies and collective intelligence are reshaping the entrepreneurial process. *Technological Forecasting and Social Change*, 150, 119791. <https://doi.org/10.1016/j.techfore.2019.119791>
- Fan, L., Zhang, X., Rai, L., & Du, Y. (2021). Mobile payment: The next frontier of payment systems?—An empirical study based on push-pull-mooring framework. *Journal of Theoretical and Applied Electronic Commerce Research*, 16(2), 155–169. <http://dx.doi.org/10.4067/S0718-18762021000200111>
- Ferreira, J. J., Raposo, M. L., Gouveia Rodrigues, R., Dinis, A., & do Paço, A. (2012). A model of entrepreneurial intention: An application of the psychological and behavioral approaches. *Journal of Small Business and Enterprise Development*, 19(3), 424–440. <https://doi.org/10.1108/14626001211250144>
- Festa, G., Cuomo, M. T., Metallo, G., & Festa, A. (2016). The (r)evolution of wine marketing mix: From the 4Ps to the 4Es. *Journal of Business Research*, 69(5), 1550–1555. <https://doi.org/10.1016/j.jbusres.2015.10.015>
- Fisher, M. (2000). Using e-commerce to deliver high productivity. *Work Studies*, 49(2), 59–62. <https://doi.org/10.1108/00438020010311188>
- Furnham, A., & Marks, J. (2013). Tolerance of ambiguity: A review of the recent literature. *Psychology*, 4(9), 717–728. <https://doi.org/10.4236/psych.2013.49102>
- Furqani, H., & Echchabi, A. (2022). Who is Homo Islamicus? A Qur'ānic perspective on the economic agent in Islamic economics. *ISRA International Journal of Islamic Finance*, 14(2), 206–220. <https://doi.org/10.1108/IJIF-05-2021-0102>
- Gao, M., Yen, J., & Liu, M. (2021). Determinants of defaults on P2P lending platforms in China. *International Review of Economics and Finance*, 72, 334–348. <https://doi.org/10.1016/j.iref.2020.11.012>
- Gunawan, C. M., Rahmania, L., & Kenang, I. H. (2023). The influence of social influence and peer influence on intention to purchase in e-commerce. *Review of Management and Entrepreneurship*, 7(1), 61–84. <https://doi.org/10.37715/rme.v7i1.3683>
- Guo, J., Shan, S., Wang, Y., & Khan, Y. A. (2021). Analyzing Chinese customers' switching intention of smartphone brands: Integrating the push-pull-mooring framework. *Discrete Dynamics in Nature and Society*, 1–14. <https://doi.org/10.1155/2021/6660340>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hair, J. F., Sarstedt, M., Ringle, C. M., & Gudergan, S. (2018). *Advanced issues in partial least squares structural equation modelling*. Sage.
- Hamid, S., Mohd, A., & Sujood. (2023). Behavioral intention to order food and beverage items using e-commerce during Covid-19: An integration of theory of planned behavior (TPB) with trust. *British Food Journal*, 125(1), 112–131. <https://doi.org/10.1108/BFJ-03-2021-0338>

- Hazen, B. T., Overstreet, R. E., Jones-Farmer, L. A., & Field, H. S. (2012). The role of ambiguity tolerance in consumer perception of remanufactured products. *International Journal of Production Economics*, 135(2), 781–790. <https://doi.org/10.1016/j.ijpe.2011.10.011>
- Ho, H. F., & Hung, C. C. (2008). Marketing mix formulation for higher education: An integrated analysis employing analytic hierarchy process, cluster analysis and correspondence analysis. *International Journal of Educational Management*, 22(4), 328–340. <https://doi.org/10.1108/09513540810875662>
- Hoffman, D. L., Novak, T. P., & Peralta, M. (1999). Building consumer trust online. *Communications of the ACM*, 42(4), 80–85. <https://doi.org/10.1145/299157.299175>
- Hou, A., Shang, R. A., Huang, C., & Wu, K. L. (2014). The effects of push-pull-mooring on the switching model for social. *Pacific Asia Conference on Information Systems (PACIS) 2014 Proceedings*, PACIS 2014 Proceedings. 64. <https://aisel.aisnet.org/cgi/viewcontent.cgi?article=1327&context=pacis2014>
- Hoyle, R. H. (2012). Handbook of structural equation modeling. In D. Kaplan, G. A. Marcoulides, & S. G. West (Eds.). The Guilford Press.
- Huang, Z., & Benyoucef, M. (2017). The effects of social commerce design on consumer purchase decision-making: An empirical study. *Electronic Commerce Research and Applications*, 25, 40–58. <https://doi.org/10.1016/j.elerap.2017.08.003>
- Indahingwati, A., Launtu, A., Tamsah, H., Firman, A., Putra, A. H. P. K., & Aswari, A. (2019). How digital technology driven millennial consumer behavior in Indonesia. *Journal of Distribution Science*, 17(8), 25–34. <https://doi.org/10.15722/jds.17.08.201908.25>
- Indiani, N. L. P., Keshminder, J. S., Wiratama, N. I., & Amertha, G. S. (2025). Unlocking e-commerce potential in SMEs: An integrative framework for adoption in emerging markets. *Humanities and Social Sciences Communications*, 12(1), 1–16. <https://doi.org/10.1057/s41599-025-04952-3>
- Iriani, S. S., & Andjarwati, A. L. (2020). Analysis of perceived usefulness, perceived ease of use, and perceived risk toward online shopping in the era of Covid-19 Pandemic. *Systematic Reviews in Pharmacy*, 11(12), 313–320. <https://doi.org/10.31838/srp.2020.12.50>
- Jeske, T., Würfels, M., & Lennings, F. (2021). Development of digitalization in production industry – Impact on productivity, management and human work. *Procedia Computer Science*, 180, 371–380. <https://doi.org/10.1016/j.procs.2021.01.358>
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47.
- Kartika, Y., Tahalele, S., Yunita Tanzil, M., & Toreh, F. R. (2021). The importance of e-commerce on the development of micro, small and medium enterprises (MSMEs) in the rural area during COVID-19. *Business and Accounting Research (IJEBAR) Peer Reviewed-International Journal*, 5(4), 34–43. <https://doi.org/10.29040/ijebar.v5i4.3012>
- Katadata. (2023). *Proporsi Jumlah Transaksi E-commerce Berdasarkan Kelompok Usia*. <https://databoks.katadata.co.id/datapublish/2023/06/22/transaksi-e-commerce-konsumen-usia-tua-terus-meningkat-ketimbang-gen-z-dan-milenial>
- Kim, S., Choi, M. J., & Choi, J. S. (2020). Empirical study on the factors affecting individuals' switching intention to augmented/virtual reality content services based on push-pull-mooring theory. *Information*, 11(1), 25. <https://doi.org/10.3390/info11010025>
- Kurjono, K., Samlawi, F., Muntashofi, B., & Saprudin, N. (2022). The effect of locus of control and tolerance of ambiguity on entrepreneurial intention. *Proceedings of the 6th Global Conference on Business, Management, and Entrepreneurship (GCBME 2021)*, 657, 7–12. <https://doi.org/10.2991/aebmr.k.220701.003>

- Kurniawan, R. (2019). Examination of the factors contributing to financial technology adoption in Indonesia using technology acceptance model: Case study of peer to peer lending service platform. In *2019 International Conference on Information Management and Technology (ICIMTech)* (Vol. 1, pp. 432–437). IEEE.
- Lisana, L. (2023). Factors affecting university students switching intention to mobile learning: A push-pull-mooring theory perspective. *Education and Information Technologies*, 28(5), 5341–5361. <https://doi.org/10.1007/s10639-022-11410-z>
- Liu, J., & Lee, J. (2020). Factors analysis influencing the switching intention of Chinese mobile games based on push-pull-mooring model. *Journal of Information Technology Applications and Management*, 27(5), 49–68. 27(5), 49–68
- Mansur., D.M., Sule, E.T., Kartini, D., Oesman, Y. M., Putra, A.H.P.K., & Chamidah, N (2019). Moderating of the role of technology theory to the existence of consumer behavior on e-commerce. *Journal of Distribution Science*, 17(7), 15–25. <https://doi.org/10.15722/JDS.17.7.201907.15>
- Martzoukou, K., Fulton, C., Kostagiolas, P., & Lavranos, C. (2020). A study of higher education students' self-perceived digital competences for learning and everyday life online participation. *Journal of Documentation*, 76(6), 1413–1458. <https://doi.org/10.1108/JD-03-2020-0041>
- Misra, R., Mahajan, R., Singh, N., Khorana, S., & Rana, N. P. (2022). Factors impacting behavioural intentions to adopt the electronic marketplace: Findings from small businesses in India. *Electronic Markets*, 32(3), 1639–1660. <https://doi.org/10.1007/s12525-022-00578-4>
- Moon, B. (1995). Paradigms in migration research: Exploring ‘moorings’ as a schema. *Progress in Human Geography*, 19(4), 504–524. <https://doi.org/10.1177/030913259501900404>
- Moriano, J. A., Gorgievski, M., Laguna, M., Stephan, U., & Zarafshani, K. (2012). A cross-cultural approach to understanding entrepreneurial intention. *Journal of Career Development*, 39(2), 162–185. <https://doi.org/10.1177/0894845310384481>
- Mu, E., & Pereyra-Rojas, M. (2017). Understanding the analytic hierarchy process. In *Practical Decision Making* (pp. 7–22). Springer, Cham.
- Muftiadi, A. (2021). *Business Innovation and E-Commerce in Indonesia*. <https://www.adb.org/sites/default/files/institutional-document/826606/adou2022bn-business-innovation-ecommerce-indonesia.pdf>
- Muttaqin, Z. (2019). The nature of excessive behavior (israf) in the Islamic economic framework. *J. Bus. Econ. Review*, 4(1), 49–57. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3362395
- Ngo, T. T. A., Nguyen, H. L. T., Nguyen, H. P., Mai, H. T. A., Mai, T. H. T., & Hoang, P. L. (2024). A comprehensive study on factors influencing online impulse buying behavior: Evidence from Shopee video platform. *Heliyon*, 10(17), Article e35743. <https://doi.org/10.1016/j.heliyon.2024.e35743>
- Nguyen, T. T., Ha, V. D., & Nguyen, L. T. T. (2024). Retailers' behavioral intention and behavior in adopting e-commerce platforms. *Journal of Infrastructure, Policy and Development*, 8(9). <https://doi.org/10.24294/jipd.v8i9.7257>
- Nicolaidis, C., & Katsaros, K. (2011). Tolerance of ambiguity and emotional attitudes in a changing business environment: A case of Greek IT CEOs. *Journal of Strategy and Management*, 4(1), 44–61. <https://doi.org/10.1108/17554251111110113>
- Nugraha, T. W., Udayana, I. B. N., & Lukitaningsih, A. (2021). The influence of perceived usefulness, perceived ease of use and subjective norm to purchase intention through

- OLX user attitudes (Case study: In UST Yogyakarta students). *JBE (Journal of Economic Frames)*, 6(2), 12–27. <https://doi.org/10.54066/jbe.v6i2.102>
- Nugroho, A., & Wang, W.-T. (2023). Consumer switching behavior to an augmented reality (AR) beauty product application: Push-pull mooring theory framework. *Computers in Human Behavior*, 142, 107646. <https://doi.org/10.1016/j.chb.2022.107646>
- Nugroho, L. (2020). E-commerce to improve homemaker productivity (Women entrepreneur empowerment at Meruya Utara, Kembangan District, West Jakarta, Indonesia). *Amalee: Indonesian Journal of Community Research and Engagement*, 1(1), 13–24. <https://doi.org/10.37680/amalee.v1i01.166>
- Obschonka, M., Silbereisen, R. K., & Schmitt-Rodermund, E. (2010). Entrepreneurial intention as developmental outcome. *Journal of Vocational Behavior*, 77(1), 63–72. <https://doi.org/10.1016/j.jvb.2010.02.008>
- Otoritas Jasa Keuangan. (2022). *Penguatan Infrastruktur Digital Dukung E-Commerce Lebih Sustain*. <https://www.ojk.go.id/ojk-institute/id/news/read/855/penguatan-infrastruktur-digital-dukung-e-commerce-lebih-sustain>
- Owomoyela, S. K., Oyeniyi, K. O., & Ola, O. S. (2013). Investigating the impact of marketing mix elements on consumer loyalty: An empirical study on Nigerian Breweries Plc. *Interdisciplinary journal of contemporary research in business*, 4(11), 485-496. <https://id.scribd.com/document/230221661/INVESTIGATING-THE-IMPACT-OF-MARKETING-MIX-ELEMENTS-ON-CONSUMER-LOYALTY-AN-EMPRICAL-STUDY-ON-NIGERIAN-BREWERIES-PLC>
- Pambekti, G. T., Nugraha, S. S., & Yusfiarto, R. (2023). Muslim women switching intention to halal cosmetic: Push-pull-mooring model application. *Journal of Islamic Monetary Economics and Finance*, 9(2). <https://doi.org/10.21098/jimf.v9i2.1633>
- Park, H., Kim, S., Jeong, Y., & Minshall, T. (2022). Customer entrepreneurship on digital platforms: Challenges and solutions for platform business models. *California Management Review*, 64(4), 64–90. <https://doi.org/10.1111/caim.12404>
- Praditya, D. (2018). Cost and benefit analysis of e-commerce investment in small medium enterprise. *Journal of Communication and Public Opinion Research*, 22(2), <https://doi.org/10.33299/jpkop.22.2.1377>
- Putri, L. T., Aini, A. P. N., Solekah, N. A., & Istiqomah, D. F. (2024). Exploring e-commerce adoption in small and medium enterprises (SMEs) using the technology acceptance model. *International Journal of Business Economics*, 5(1), 1–14. <https://doi.org/10.30596/ijbe.v5i1.16262>
- Qoyum, A., & Fauziyyah, N. E. (2019). The halal aspect and islamic financing among micro, small, and medium enterprises (MSMEs) in Yogyakarta: Does berkah matter? *Journal of Islamic Monetary Economics and Finance*, 5(1), 215–236. <https://doi.org/10.21098/jimf.v5i1.1055>
- Rangaswamy, A., Moch, N., & Wirtz, J. (2020). The role of marketing in digital business platforms. *International Marketing Review*, 37(4), 527–547. <https://doi.org/10.1016/j.intmar.2020.04.006>
- Ratnasingam, P. (2003). Trust and business-to-business e-commerce communications and performance. *Advances in Business Marketing and Purchasing*, 12(03), 359–434. [https://doi.org/10.1016/S1069-0964\(03\)12006-6](https://doi.org/10.1016/S1069-0964(03)12006-6)
- Ravenstein, E. G. (1885). The laws of migration. *Journal of the Statistical Society*, 48(2), 167–235. <https://doi.org/10.2307/2979181>
- Rayah Delos Santos, K., Elizabeth Gabinete, F., Freedom Red, M., & Jeff Camaro, P. (2022). The

- implications of e-commerce on labor productivity in the Philippines. *International Journal of Social and Management Studies (Ijosmas)*, 3(1), 75–86.
- Redine, A., Deshpande, S., Jebarajakirthy, C., & Surachartkumtonkun, J. (2023). Impulse buying: A systematic literature review and future research directions. *International Journal of Consumer Studies*, 47(1), 3–41. <https://doi.org/10.1111/ijcs.12862>
- Rita, P., & Ramos, R. F. (2022). Global research trends in consumer behavior and sustainability in e-commerce: A bibliometric analysis of the knowledge structure. *Sustainability*, 14(15), 9455. <https://doi.org/10.3390/su14159455>
- Ruiz-Herrera, L. G., Valencia-Arias, A., Gallegos, A., Benjumea-Arias, M., & Flores-Siapo, E. (2023). Technology acceptance factors of e-commerce among young people: An integration of the technology acceptance model and theory of planned behavior. *Heliyon*, 9(6), Article e16418. <https://doi.org/10.1016/j.heliyon.2023.e16418>
- Sashi, C. M. (2012). Customer Engagement, Buyer-Seller Relationships, and Social Media. *Management Decision*, 50, 253–272. <https://doi.org/10.1108/00251741211203551>
- Salim, M., Alfansi, L., Darti, E., Anggarawati, S., & Amin, A. (2019). Indonesian millenials online shopping behavior. *International Review of Management and Marketing*, 9(3), 41–48. <https://doi.org/10.32479/irmm.7684>
- Sembada, A. Y., & Koay, K. Y. (2021). How perceived behavioral control affects trust to purchase in social media stores. *Journal of Business Research*, 130, 574–582. <https://doi.org/10.1016/j.jbusres.2019.09.028>
- Sharma, K. (2020). A study of consumer attitude towards online shopping in India and its impact. *A Global Journal of Social Sciences*, 3(July), 35–54. https://www.academia.edu/42500907/A_Study_of_Consumer_Attitude_Towards_Online_Shopping_in_India_and_Its_Impact
- Shmueli, G., Sarstedt, M., Hair, J. F., Cheah, J.-H., Ting, H., Vaithilingam, S., & Ringle, C. M. (2019). Predictive model assessment in PLS-SEM: guidelines for using PLSpredict. *European Journal of Marketing*, 53(11). <https://doi.org/10.1108/EJM-02-2019-0189>
- SivaKumar, A. (2017). An empirical study on the factors affecting online shopping behavior of millennial consumers. *Journal of Internet Commerce*. <https://doi.org/10.1080/15332861.2017.1317150>
- Suleman, D., Zuniarti, I., & Sabil. (2019). Consumer decisions toward fashion product shopping in indonesia: the effects of attitude, perception of ease of use, usefulness, and trust. *Management dynamics in the knowledge economy*, 7(2), 133–146. <http://doi.org/10.25019/MDKE/7.2.01>
- Sun, Y., Liu, D., Chen, S., Wu, X., Shen, X.-L., & Zhang, X. (2017). Understanding users' switching behavior of mobile instant messaging applications: An empirical study from the perspective of push-pull-mooring framework. *Computers in Human Behavior*, 75, 727–738. <https://doi.org/10.1016/j.chb.2017.06.014>
- Turker, D., & Sonmez Selcuk, S. (2009). Which factors affect entrepreneurial intention of university students? *Journal of European Industrial Training*, 33(2), 142–159. <https://doi.org/10.1108/03090590910939049>
- Venkatesh, V., & Davis, F. D. (2000). Theoretical extension of the Technology Acceptance Model: Four longitudinal field studies. *Management Science*, 46(2), 186–204. <https://doi.org/10.1287/mnsc.46.2.186.11926>
- Vrontis, D., Chaudhuri, R., & Chatterjee, S. (2022). Adoption of digital technologies by SMEs for sustainability and value creation: Moderating role of entrepreneurial orientation. *Sustainability*, 14(13), 7949. <https://doi.org/10.3390/su14137949>

- Wang, J., Cai, S., Xie, Q., & Chen, L. (2022). The influence of community engagement on seller opportunistic behaviors in e-commerce platform. *Electronic Commerce Research*, 22(4), 1377–1405. <https://doi.org/10.1007/s10660-021-09469-w>
- We are Social (2024) *Digital 2024, your ultimate guide to the evolving digital world*. <https://wearesocial.com/id/blog/2024/01/digital-2024/>
- Wibowo, A., Chen, S. C., Wiangin, U., Ma, Y., & Ruangkanjanases, A. (2021). Customer behavior as an outcome of social media marketing: The role of social media marketing activity and customer experience. *Sustainability*, 13(1), 1–18. <https://doi.org/10.3390/su13010189>
- Wilson, N. (2019). The impact of perceived usefulness and perceived ease-of-use toward repurchase intention in the Indonesian e-commerce industry. *Jurnal Manajemen Indonesia*, 19(3), 241-249. <https://doi.org/10.25124/jmi.v19i3.2412>
- Yoon, C., & Lim, D. (2021). Customers' intentions to switch to internet-only banks: Perspective of the push-pull-mooring model. *Sustainability*, 13(14), 8062. <https://doi.org/10.3390/su13148062>
- Yulianita. (2018). Comparison of generation X and Y: Perceived usefulness, perceived ease of use, and subjective norms on purchase intention in e-commerce. *Jurnal Komunikasi Indonesia*, 7(2), 140-152. <https://doi.org/10.7454/jki.v7i2.9677>
- Yulianto, Y., Sisko, A., & Hendriana, E. (2021). The stimulus of impulse buying behavior on e-commerce shopping festival: A moderated-mediated analysis. *Journal of Business and Management Review*, 2(10), 692–714. <https://doi.org/10.47153/jbmr210.2152021>
- Zakaria, A., Arof, A. M., & Tholarnathan, T. (2022). SWOT and TOWS matrix analysis: A study on Ro-Ro Port Klang Malaysia. In *Advanced Maritime Technologies and Applications: Papers from the ICMAT 2021* (pp. 49-60). Springer International Publishing. https://doi.org/10.1007/978-3-030-89992-9_5
- Zeqiri, J., Koku, P. S., Dobre, C., Milovan, A. M., Hasani, V. V., & Paientko, T. (2024). The impact of social media marketing on brand awareness, brand engagement and purchase intention in emerging economies. *Marketing Intelligence & Planning*, 43(1), 28-49. <https://doi.org/10.1108/MIP-06-2023-0248>
- Zheng, X., Men, J., Yang, F., & Gong, X. (2019). Understanding impulse buying in mobile commerce: An investigation into hedonic and utilitarian browsing. *International Journal of Information Management*, 48, 151–160. <https://doi.org/10.1016/j.ijinfomgt.2019.02.010>