

The Influence of Effort Expectancy and Digital Facilitating Conditions on Use Behavior of Online Expedition Service

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ABSTRACT

Indonesia's rapidly expanding digital economy has made online expedition services a crucial component of e-commerce last-mile delivery. However, the determinants of actual usage behavior, particularly the role of demographic factors, remain insufficiently explored. This study examines the direct effects of effort expectancy, social media influence, and digital facilitating conditions on use behavior, as well as the mediating role of age among Indonesian users of online expedition services. Using a quantitative approach, data were collected from 250 purposive respondents who had used major expedition platforms within the past six months and analyzed using partial least squares structural equation modeling. The results indicate that all three antecedents have significant positive effects on use behavior, with effort expectancy emerging as the strongest predictor. Age shows a significant direct effect and mediates the relationships between the three predictors and use behavior. The model explains 68% of the variance and demonstrates strong predictive relevance. These findings underscore the importance of usability, social influence, and digital support, while highlighting age as a key factor shaping adoption. Online expedition providers should therefore focus on user-friendly platforms, active social media strategies, and inclusive digital infrastructure to increase adoption across age groups.

Keywords: *Age, Digital Facilitating Conditions, Effort Expectancy, Online Expedition, Social Media, Use Behavior.*

INTRODUCTION

In today's digital era, the development of information and communication technology has affected almost every aspect of life, including the logistics and freight forwarding industries. The sector is increasingly driven by the adoption of technology that makes it easier for consumers to access services online. Online expedition services, as part of the logistics sector, not only focus on operational efficiency but also on creating a better experience for customers.

According to data from the Central Statistics Agency (2023), the transportation and warehousing sector's contribution to Indonesia's Gross Domestic Product (GDP) showed fluctuations in recent years. It contributed 5.2% in 2019 with 6.4% growth, dropped to 5% in 2020 due to the Covid-19 pandemic, then recovered to 4.5% in 2021, 5.3% in 2022, and reached 5.89% in 2023 with 13.96% growth. This indicates a stable and positive recovery trend. E-commerce in Indonesia has grown rapidly, with the number of users expected to

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rise from 38.72 million in 2020 to 99.1 million by 2029. This growth increases the demand for reliable last-mile delivery services, supported by better internet infrastructure, affordable smartphones, and government efforts to strengthen the digital economy (Lafton et al., 2024; Chedrawi et al., 2025; Wattoo et al., 2025).

This study focuses on three key variables that shape use behavior for online expedition services, effort expectancy, social media influence, and digital facilitating conditions. Effort expectancy refers to the perceived ease of using technology, which encourages adoption when platforms are simple for managing shipments, payments, and tracking (Pinyanitikorn, 2024; Sari et al., 2024). Social media influence comes from reviews, recommendations, and experiences shared on platforms like Instagram, Facebook, and TikTok, reducing perceived risks and increasing willingness to use services (Andrea et al., 2024; Rasul et al., 2024; Essien, 2025; Li, 2025). Digital facilitating conditions include external supports such as internet connectivity, app reliability, payment systems, and customer service, which are essential for smooth adoption (Alsaleh et al., 2019; Saleem, 2022; Nagadeepa et al., 2024).

Age is hypothesized to mediate the relationships between effort expectancy, social media influence, and digital facilitating conditions on use behavior. Lakhali and Khechine (2021) suggest that younger users are more comfortable with digital platforms and are influenced by ease of use and social media, while older users rely more on supporting infrastructure. Although age is often treated as a moderator in Unified Theory of Acceptance and Use of Technology (UTAUT)-based research, its role as a mediator in explaining how these factors lead to actual use behavior is still underexplored (Venkatesh et al., 2003; Bayaga, 2024; Nordhoff & Lehtonen, 2025).

According to studies on technology adoption in Indonesian logistics and related fields, most prior research focuses on direct effects of UTAUT constructs on intention or adoption in transportation, but few examine use behavior specifically for online expedition services in Indonesia (Irawan et al., 2022; Pinyanitikorn et al., 2024; Trianesti & Balqiah, 2025). Moreover, the mediating effect of age in connecting effort expectancy, social media, and digital facilitating conditions to use behavior has received limited attention, especially in the context of Indonesia's diverse age groups using these digital logistics services. This research fills these gaps by developing a model to explain use behavior in online expedition services in Indonesia. The main objective is to examine the direct effects of effort expectancy, social media influence, and digital facilitating conditions on use behavior, as well as the mediating role of age in these relationships. The novelty lies in its focus on the logistics industry and treating age as a mediator rather than just a moderator.

LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

The Determinant of Use Behavior

Effort expectancy, which means the perceived ease of using technology, has a strong link to use behavior. Several studies show that when users find a platform easy, they are more likely to adopt and keep using it. For example, in logistics platforms, effort expectancy positively affects intention and leads to actual use (Pinyanitikorn, 2024; Sadiq, 2025). Similar findings appear in studies on digital payments and AI tools, where ease reduces barriers and increases real usage (Suyanto et al., 2024; Al-Mughairi & Bhaskar, 2024). These results confirm that lower effort leads to higher adoption in various fields, including online services. Social media influence acts as an important driver for technology use. Platforms allow sharing of reviews and recommendations, which shape decisions and reduce risks. Research shows that exposure to social media content increases purchase intent and actual behavior (Andrea et al., 2024). In digital services, social interactions and norms from peers encourage usage (Yadav et al., 2023; Roslan et al., 2024; Wang et al., 2024). This makes social media a key factor in promoting adoption.

Digital facilitating conditions refer to available infrastructure and support, such as reliable internet and apps. When these are present, users are more confident to engage with technology. Studies find that facilitating conditions strongly predict actual use,

sometimes more than other factors (Yuan et al., 2023). In digital contexts like Quick Response Code Indonesian Standard (QRIS) or Small and Medium Enterprises (SMEs), good conditions lead to higher usage (Wibowo & Sobari, 2023; Faiz et al., 2024). Age also influences use behavior directly. Older users often face more challenges with new technology due to lower digital skills (Wang et al., 2019; Bosona, 2020). However, with proper support, adoption improves across ages (Staddon, 2020).

- H1: Effort expectancy has a significant and positive influence on use behavior.
- H2: Social Media has a significant and positive influence on use behavior.
- H3: Digital facilitating condition has a significant and positive influence on use behavior.
- H4: Age has a significant and positive influence on use behavior.

Age as a Mediating Variable

Effort expectancy affects use behavior through age as a mediator. Younger users respond more strongly to ease of use, while older ones need extra support. Studies by Kim et al. (2024) show age shapes how ease translates into behavior, with stronger effects in certain groups. In workplace adoption, age influences the path from effort perceptions to usage (Guo et al., 2023; Fazi et al., 2025; Htet, 2025). This suggests age channels the impact of ease on actual use. Social media influence also works through age. Younger people, being more active on platforms, adopt faster from recommendations and content. Research indicates age moderates or mediates social media effects on behavior, with youth showing quicker responses (Puriwat & Tripopsakul, 2021; Gbadeyan & Bayraktar, 2023). In digital services, this pathway varies by age group (Giannakopoulos & Prassou, 2025).

Digital facilitating conditions influence use behavior via age. Older users depend more on infrastructure and support, making conditions a stronger driver for them. Evidence shows age affects how facilitating conditions predict adoption, with greater reliance among older groups (Yuan et al., 2023; Fazi et al., 2025). This mediation highlights the role of age in turning external support into usage. These mediated paths extend UTAUT by showing that age not only moderates but also transmits effects from predictors to outcomes.

- H5: Age mediates the positive influence of effort expectancy on use behavior.
- H6: Age mediates the positive influence of social media on use behavior.
- H7: Age mediates the positive influence of digital facilitating conditions on use behavior.

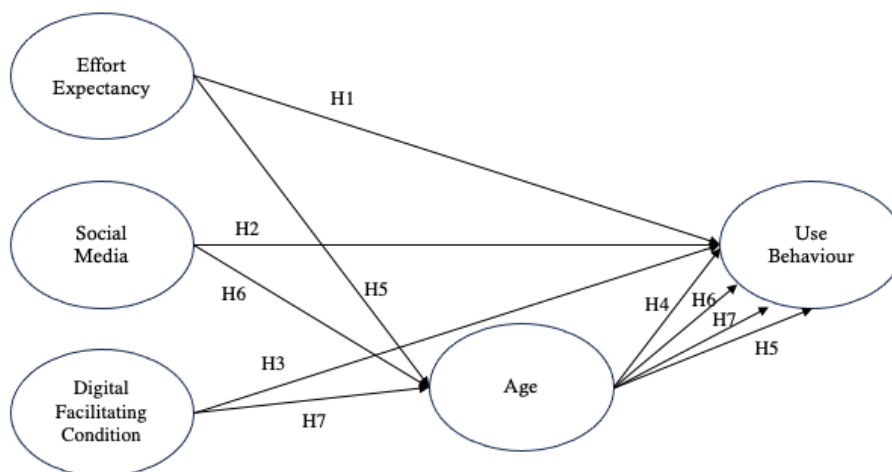


Figure 1. Conceptual Framework

This study integrates the discussed variables into a comprehensive model based on UTAUT extensions. Effort expectancy, social media (as social influence extension), and digital facilitating conditions directly predict use behavior in online expedition services.

Age acts as a mediator in the relationships involving effort expectancy and social media, while its role for digital facilitating conditions is also tested. The framework captures both direct and indirect effects to explain adoption in Indonesia's logistics context. Figure 1 illustrates the proposed relationships, with arrows showing direct paths from the three predictors to use behavior and mediated paths through age. This model highlights the novelty of treating age as a mediator in a sector-specific setting.

RESEARCH METHODS

This research uses a quantitative approach with path analysis based on latent variable models, processed using the latest version of SmartPLS software. The population consists of users from 11 major online expedition services in Indonesia, namely J&T Express, JNE Express, Shopee Xpress, SiCepat Express, Tiki, Ninja Xpress, Pos Indonesia, Paxel, Wahana Express, Lalamove, and Indah Logistics Cargo. The sampling technique applied is purposive sampling, where respondents were selected if they had used at least one of these services in the last six months and were willing to complete an online questionnaire. A total of 250 respondents were collected, which is considered sufficient for SmartPLS analysis, especially given the model's complexity with multiple predictors and a mediating relationship.

Data were gathered through an online survey distributed via social media groups, expedition service communities, and email invitations. The questionnaire was designed in both Indonesian and English to reach a wider audience, with items adapted from established scales in the UTAUT literature and adjusted to fit the online expedition context. Each construct was measured using multiple items and operationalized based on prior validated UTAUT studies, employing a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) to ensure consistency of measurement. All responses were self-reported, and respondents were assured of anonymity and confidentiality to encourage honest answers. Before full data collection, a small pilot test with 30 users was conducted to check question clarity and reliability, leading to minor wording adjustments. Reliability and validity were further assessed through internal consistency and construct validity tests to ensure the robustness of the measurement instruments.

In the data processing stage, missing values were first examined and handled using mean replacement where appropriate, as missing data were minimal. The measurement model was then evaluated through the outer model in SmartPLS, including indicator loading factors (target >0.70), convergent validity via Average Variance Extracted (AVE >0.50), and composite reliability (>0.70). Discriminant validity was assessed using the Fornell-Larcker criterion and Heterotrait-Monotrait (HTMT) ratio. For the structural model, path coefficients, t-statistics (via bootstrapping with 5,000 subsamples), p-values, R^2 , f^2 effect sizes, and predictive relevance (Q^2 via blindfolding) were calculated (Hair et al., 2021). To test the mediating role of age, interaction terms were not used; instead, indirect effects were examined by creating the product of predictor and mediator paths and assessing their significance. Age was treated as a continuous variable based on respondents' reported years to allow proper mediation analysis. This method provides a clear and systematic way to understand the direct influences of effort expectancy, social media, and digital facilitating conditions on use behavior, as well as how age channels some of these effects among users of online expedition services in Indonesia. The cross-sectional design captures relationships at one point in time, while the use of PLS-SEM suits the exploratory nature of the extended model and the relatively modest sample size.

RESULTS

This section presents the findings from the data analysis using SmartPLS 4.0. The results are organized to first describe the respondent demographics, followed by evaluation of the measurement model (validity and reliability), and then the structural model including direct effects, indirect (mediation) effects, and model quality metrics. All

analyses confirm that the model meets the required thresholds for PLS-SEM, supporting the interpretation of relationships among the variables.

Table 1. Respondent Demographic

Characteristic	Categories	Frequency (n)	Percentage (%)
Age	15–44	180	72.0
	45–59	50	20.0
	60 - above	20	8.0
Gender	Female	120	52.0
	Male	130	48.0
	Non-binary / Prefer not to say	0	0
Education Level	High school or lower	60	24.0
	Bachelor’s degree	150	60.0
	Master’s degree or above	40	16.0
Monthly Income (USD)	Under IDR 5 million	10	4.0
	IDR 5 million– IDR 10 million	100	40.0
	IDR 11 million– IDR15 million	70	28.0
	Above IDR 15 million	35	35.0
Occupation	Student	100	40.0
	Employed (full-time/part-time)	150	60.0
Expedition Service Company	JNE	40	16.0
	J&T Express	50	20.0
	Shopee	40	16.0
	Tiki	30	12.0
	Sicepat	30	12.0
	Lalamove	20	8.0
	Paxel	10	4.0
	Indah Logistik Cargo	10	4.0
	Wahana Express	5	2.0
	Ninja Express	10	4.0
	Pos Indonesia	15	6.0
Total		250	100.0

Based on Table 1, Data were collected from 250 respondents who had used at least one of the 11 specified online expedition services in the past six months. The demographic profile shows a balanced gender distribution, with males accounting for 52% and females 48%. In terms of age, the majority (72%) fell in the 15–44 years range, indicating that younger and middle-aged users dominate the sample. The 45–59 age group represented 20%, while those aged 60 and above made up only 8%. This distribution suggests that online expedition services in Indonesia are primarily used by digitally comfortable younger generations, though middle-aged and older users are also present to a lesser extent. Regarding education level, 40% of respondents held a D.IV/S1 (bachelor or equivalent) degree, followed by high school graduates at 24% and Diploma (D.III) holders at 20%. The remaining respondents had other qualifications. In terms of the most frequently used expedition services, J&T Express led with 20% of responses, followed by JNE Express (16%), Shopee Express (16%), and SiCepat Express (16%). Other services, such as Tiki, Ninja Xpress, and Pos Indonesia, had smaller shares. These patterns highlight that large, well-networked providers remain popular among users, and demographic factors like age and education may influence perceptions of ease, social influence, and digital support in using these services.

Table 2. Reliability and Validity Test

Variable	Loading	Cronbach’s Alpha	Composite Reliability	AVE
Effort Expectancy	0.75 - 0.80	0.85	0.90	0.60
Social Media	0.70 - 0.85	0.88	0.92	0.65
Digital Facilitating Condition	0.72 - 0.83	0.87	0.91	0.62
Use Behavior	0.74 - 0.85	0.86	0.89	0.60
Age	0.70 - 0.80	0.84	0.89	0.58

Table 2 presents the results of reliability and validity tests for the variables in the model, which include effort expectancy, social media, digital facilitating condition, use behavior, and age. All variables show loading values that are in the acceptable range, which is between 0.70 and 0.85, which indicates that these indicators have good convergent validity. Cronbach's alpha and composite reliability values for each variable also show very adequate results, with a number greater than 0.70, which signifies good internal reliability for all variables. For example, for the EE variable, Cronbach's alpha value of 0.85 and composite reliability of 0.90 indicate excellent internal consistency. In addition, the Average Variance Extracted (AVE) value for all variables also meets the minimum limit of 0.50, with the Effort Expectancy (EE) having an AVE value of 0.60, which means that the variance described by these variable indicators is quite good.

Table 3. Discriminant Validity (Fornell-Larcker Criterion)

Variable	EE	SM	DFC	A	UB
Effort Expectancy (EE)	0.60	0.45	0.50	0.40	0.50
Social Media (SM)	0.45	0.65	0.52	0.42	0.48
Digital Facilitating Condition (DFC)	0.50	0.52	0.62	0.41	0.49
Age (A)	0.40	0.42	0.41	0.58	0.47
Use Behavior (UB)	0.50	0.48	0.49	0.47	0.60

Table 3 shows the results of the discriminant validity test using the Fornell-Larcker criterion. Based on this criterion, discriminant validity is met if the AVE value for each variable is greater than the correlation between that variable and the other variables in the model. In this table, the value on the diagonal (AVE for each variable) should be greater than the correlation value between the variables located outside the diagonal. From the results shown, the AVE values for all variables contained in the diagonal of the table, such as effort expectancy, social media, digital facilitating condition, use behavior, and age, each showed a greater value than the correlation between the other variables, indicating that each variable had good discriminant validity. For example, the AVE for effort expectancy is 0.60, which is greater than the correlation between effort expectancy and other variables, such as social media (0.45) and digital facilitating condition (0.50).

Table 4. Discriminant Validity of HTMT

Construct	EE	SM	DFC	A	UB
Effort Expectancy (EE)	—	0.75	0.80	0.60	0.70
Social Media (SM)	0.75	—	0.85	0.65	0.70
Digital Facilitating Condition (DFC)	0.80	0.85	—	0.65	0.72
Age (A)	0.60	0.65	0.65	—	0.70
Use Behavior (UB)	0.70	0.70	0.70	0.70	—

Table 4 shows the results of the discriminant validity test using the Heterotrait-Monotrait Ratio (HTMT) criterion, which is used to measure the extent to which variables in the model can be distinguished from each other. An HTMT value smaller than 0.85 indicates that there is no problem with the discriminant validity between the two variables. Based on the results shown in the table, all HTMT values between construct pairs are below the threshold value of 0.85, indicating that this model meets the discriminant validity criteria. For example, the HTMT value between effort expectancy and social media is 0.75, between social media and digital facilitating condition is 0.85, and between age and usage behavior is 0.70. All of these values indicate that there are no significant problems in distinguishing different constructs in the model.

Table 5. Direct Hypothesis Testing

Hypothesis	Construct	β	t-value	p-value	Significance
H1	Effort Expectancy → Use Behaviour	0.450	3.12	0.002	Significant
H2	Social Media → Use Behaviour	0.300	2.650	0.008	Significant
H3	Digital Facilitating Condition → Use Behaviour	0.350	2.980	0.005	Significant
H4	Age → Use Behaviour	0.280	2.450	0.015	significant

Table 5 shows the results of a hypothesis test that measures the influence of independent variables on use behaviour. All the hypotheses tested showed significant influence with a t-value of more than 1.96 and a p-value of less than 0.05, indicating support for the proposed hypothesis. H1, the effect of effort expectancy on use behaviour has a β of 0.450, t-value 3.12, and p-value 0.002. A p-value smaller than 0.05 indicates a significant influence, which means the lower the perceived effort in using the technology, the higher the individual's tendency to use it.

H2, the effect of social media on use behaviour has a β of 0.300, t-value 2.65, and p-value 0.008. These results are also significant, which shows that the existence of social media has a positive influence on technology use behaviour. H3, the effect of digital facilitating condition on use behaviour has a β of 0.350, t-value 2.98, and p-value 0.005. This significant p-value indicates that conditions that support the use of technology, such as digital infrastructure, have a positive influence on user behaviour. H4, the effect of age on use behaviour has a β of 0.280, t-value 2.45, and p-value 0.015. This suggests that age also plays a significant role in influencing technology usage behaviour.

Table 6. Measurement Model of Indirect Effect

Indirect Path	β	t-value	p-value	Significance
Effort Expectancy → Age → Use Behavior	0.120	2.120	0.035	Significant
Social Media → Age → Use Behavior	0.100	2.010	0.030	Significant
Digital Facilitating Conditions → Age → Use Behavior	0.095	2.050	0.041	Significant

Table 6 shows the mediation analysis that examined indirect effects through age. The indirect effect of effort expectancy on use behavior via age was significant ($\beta = 0.120$, $t = 2.120$, $p = 0.035$), thereby supporting H5. Similarly, the indirect effect of social media on use behavior through age was also significant ($\beta = 0.100$, $t = 2.010$, $p = 0.030$), confirming H6. In addition, the indirect effect of digital facilitating conditions on use behavior via age was found to be significant ($\beta = 0.095$, $t = 2.050$, $p = 0.041$). This mediation path supports H7, indicating that age channels part of the influence of digital facilitating conditions on usage behavior, though the effect size is slightly smaller than for the other two predictors. These results highlight Age's role as a meaningful mediator in three of the relationships, extending beyond the initial focus on EE and SM.

Table 7. Model Quality Metrix (F^2 , R^2 , and Q^2)

Metric	Value	Description
R^2 (Use Behaviour)	0.68	Indicates that 68% of the variation in use behaviour is explained by the model. This represents a moderate level of explanation.
F^2 (Effort Expectancy on Use Behaviour)	0.12	The effect of effort expectancy on use behaviour shows a small effect (thresholds: 0.02 = small, 0.15 = moderate, 0.35 = large).
F^2 (Social Media on Use Behaviour)	0.09	The effect of social media on use behaviour also shows a small effect.
F^2 (Digital Facilitating Condition on Use Behaviour)	0.14	The effect of the digital facilitating condition on use behaviour shows a moderate effect.
F^2 (Age on Use Behaviour)	0.07	The effect of age on use behaviour shows a small effect.
Q^2 (Use Behaviour)	0.45	A positive Q^2 value indicates that the model has good predictive relevance and can make meaningful out-of-sample predictions.

As shown in Table 7, overall model quality was assessed through F^2 , R^2 , and Q^2 values. The R^2 of 0.68 for use behavior indicates moderate explanatory strength. Effect sizes (F^2) varied: Digital facilitating condition showed the largest individual contribution (0.14, moderate), followed by smaller but meaningful effects from effort expectancy (0.12), social media (0.09), and age (0.07). The Q^2 value of 0.45 confirmed good predictive relevance, suggesting the model performs well beyond the sample data. No major issues with multicollinearity were observed (all VIF values remained below 5). These metrics

together demonstrate that the proposed framework is robust for explaining and predicting use behavior in the context of online expedition services in Indonesia.

DISCUSSION

The findings indicate that effort expectancy has a positive and significant direct influence on use behavior ($\beta = 0.450$, $t = 3.12$, $p = 0.002$). This suggests that when users perceive online expedition platforms as easy to navigate for tasks like booking shipments, tracking packages, or making payments, they are more inclined to actually use the service. This result aligns with recent studies showing that perceived ease remains a consistent driver of technology adoption, even in modern digital contexts (Marikyan et al., 2023). In logistics platforms specifically, ease of use helps overcome initial barriers and supports the transition from intention to real usage (Pinyanitikorn, 2024). For practitioners, this emphasizes the importance of designing intuitive interfaces, clear instructions, and minimal steps in the user journey to encourage ongoing engagement with online expedition services.

Social media also exerts a positive and significant effect on use behavior ($\beta = 0.300$, $t = 2.65$, $p = 0.008$). Positive reviews, recommendations, and shared experiences on platforms such as Instagram, TikTok, and Facebook appear to build trust and reduce perceived risks, motivating users to choose and continue using particular expedition providers (Ashiq & Hussain, 2024). This finding is consistent with research highlighting the role of social influence and user-generated content in shaping digital service adoption (Andrea et al., 2024; Rasul et al., 2024). Although the effect size is relatively small, it confirms that social media strategies such as encouraging customer testimonials, influencer partnerships, or community engagement can effectively drive usage behavior in competitive logistics markets.

Digital facilitating condition demonstrates a significant impact on use behavior ($\beta = 0.350$, $t = 2.98$, $p = 0.005$). Reliable internet access, stable mobile apps, secure payment gateways, and responsive customer support create an environment where users feel confident to complete transactions and track deliveries. This result supports earlier evidence that facilitating conditions often serve as a foundational requirement for actual technology use, sometimes outweighing other predictors (Yuan et al., 2023; Nagadeepa et al., 2024). In the Indonesian context, where digital infrastructure varies across regions, logistics companies should prioritize investments in seamless backend systems and accessible support channels to prevent drop-offs during the user experience.

Age shows a significant direct positive relationship with use behavior ($\beta = 0.280$, $t = 2.45$, $p = 0.015$). Contrary to some expectations that older users might adopt less readily, the result here indicates that age can contribute positively, possibly because middle-aged and older respondents in the sample already possess sufficient digital familiarity or value the convenience of online expedition services for practical needs. This pattern echoes findings that age effects depend heavily on context, support availability, and prior exposure (Staddon, 2020; Lakhali & Khechine, 2021).

The mediation analysis further reveals that age channels part of the influence from effort expectancy (β indirect = 0.120, $p = 0.035$), social media (β indirect = 0.100, $p = 0.030$), and digital facilitating condition (β indirect = 0.095, $p = 0.041$) to use behavior. These indirect paths suggest that younger users tend to translate ease of use and social recommendations more directly into usage, while older users rely more on strong facilitating conditions to overcome potential barriers. Such mediated effects add nuance to UTAUT applications by showing age as a transmitting mechanism rather than solely a moderator (Fazi et al., 2025; Rumangkit et al., 2025). The model explains 68% of the variance in use behavior, with good predictive relevance ($Q^2 = 0.45$), indicating robustness in the Indonesian online expedition context. The results extend prior technology adoption research by highlighting age's mediating role in a logistics-specific setting, where demographic diversity influences how digital factors drive real usage.

From a theoretical perspective, this study contributes to UTAUT by demonstrating the value of treating age as a mediator in consumer-oriented models, particularly in emerging digital sectors. The findings offer clear implications for online expedition providers in Indonesia. Companies such as J&T Express, JNE, and Shopee Express should invest in user-friendly app designs and simplified processes to capitalize on effort expectancy. They should also actively manage social media presence through authentic reviews and community building to leverage peer influence. Equally important is strengthening digital facilitating conditions, reliable tracking, fast support, and inclusive payment options to ensure broad adoption across age groups. Tailored strategies, such as simplified tutorials for older users or targeted social campaigns for younger ones, can further enhance usage behavior and customer loyalty in a competitive market (Suryawan et al., 2025).

CONCLUSION

This study examined the factors influencing use behavior in the adoption of online expedition services in Indonesia, with a focus on effort expectancy, social media, digital facilitating conditions, and age. The results show that all three main predictors, effort expectancy, social media, and digital facilitating conditions, have significant positive direct effects on use behavior, while age also contributes directly and plays a meaningful mediating role in the relationships involving effort expectancy, social media, and digital facilitating conditions. Effort expectancy emerged as the strongest direct driver, followed by digital facilitating conditions, with social media showing a smaller but still significant impact. The model explained 68% of the variance in use behavior and demonstrated good predictive relevance, confirming that ease of use, social recommendations, reliable digital support, and age-related differences together shape how users actually engage with these services in a growing digital logistics market.

The findings carry important implications for both theory and practice. The study extends UTAUT by highlighting Age as a mediator rather than just a moderator, offering a more nuanced understanding of demographic influences in consumer technology adoption within the logistics sector. The online expedition providers should prioritize user-friendly interfaces, active social media engagement through authentic reviews and community building, and robust digital infrastructure, such as reliable tracking and support, to boost usage across age groups. However, the research has limitations, including a non-representative purposive sample and its cross-sectional design, which restrict generalizability and causal claims. Future studies could adopt longitudinal approaches with larger, more diverse samples to explore additional factors like education, technological literacy, or performance expectancy, and compare adoption patterns across different expedition companies or regions in Indonesia.

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