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Modelling User Behavior in Super Apps: Integrating Trust and Personal Innovativeness into the UTAUT3 Framework for Gojek

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ABSTRACT

The rapid advancement of digital technology has fostered the rise of super apps, multifunctional platforms that consolidate services such as ride-hailing, digital payments, and food delivery. In Indonesia, Gojek exemplifies this trend, particularly among university students, who represent tech-savvy early adopters. However, current research applying the Unified Theory of Acceptance and Use of Technology 3 (UTAUT3) to such complex digital ecosystems remains limited. This study addresses the theoretical and empirical gaps by examining the behavioral intention and actual usage of Gojek among students at University X using an extended UTAUT3 framework, which incorporates trust and personal innovativeness. Employing a quantitative approach, primary data were collected via an online questionnaire distributed to students from the 2021–2024 cohorts. The data were analyzed using Structural Equation Modeling with Partial Least Squares (SEM-PLS). Results revealed that all 12 main UTAUT3 constructs significantly influenced behavioral intention and use behavior, with habit, social influence, and facilitating conditions emerging as the strongest predictors. Meanwhile, price value showed a negative influence, highlighting cost sensitivity. Among the 26 moderation hypotheses, only three were accepted, with user experience moderately enhancing the link between intention and actual use. These findings provide both theoretical insights into the applicability of UTAUT3 in super app contexts and practical implications for enhancing user engagement strategies within the digital platform economy.

Keywords: *UTAUT3, Super Apps, Behavioral Intention, Structural Equation Modeling*

INTRODUCTION

The fast pace of digital technology development has focalized a complete shift in consumer behavior, especially the development of super apps as enhanced collection tools that unify various services, e.g., ride-hailing, digital payments, food delivery, logistics, and financial technology, into a single environment. Gojek and Grab are examples of super apps that have grown on an exponential scale and made life much more convenient for many millions of people in Indonesia (Widianto & Wijaya, 2022). The platforms are meeting the increasing need for ease and efficiency in the urban context, and they have reshaped the way users access digital services. Nevertheless, relying on their prevalence rate, the academic studies of super app adoption (particularly among students of university age, as they form a demographic of users with the highest degree of digital nativity and usage levels) are quite underdeveloped.

When studying the acceptance of technologies in such active ecosystems, the Unified Theory of Acceptance and Use of Technology (UTAUT) model has been one of the most frequently used because of its high predictive capabilities in different technological fields (Venkatesh et al., 2003, 2012). UTAUT3 added additional constructs of personal innovativeness, hedonic motivation, habit, and contexts, which provide a more whole-body scheme to achieve the understanding of modern technology adoption (Bhatnagr & Rajesh, 2024). However, not much has been established on the use of UTAUT3 in the context of integrated digital ecosystems like the super apps. The studies done in the past were more specific, e.g., mobile learning (Khan et al., 2022), m-wallets (Ramadhan et al., 2019), autonomous cars (Nordhoff et al., 2020), and educational systems (Azam et al., 2019), and failed to grasp the multifunctional and complex nature of super apps.

The Unified Theory of Acceptance and Use of Technology 3 (UTAUT3) posits an extension of the frameworks of the UTAUT and UTAUT2, providing a sophisticated view on the technology adoption situation and introducing more constructs into the equation, including individual innovation and the context. The model is especially essential when dealing with the intricacy of different real-life settings in which the use of technology will be determined by individual and social determinations. These gaps in research can be observed even in the field of UTAUT3 application, since there are at least weak links in its adaptability to different demographic and geographic contexts, as well as its resistance to developing new technologies and changes in user needs—thus, given the current prominence and development of super apps, significant theoretical and empirical gaps exist in the field still. To start with, even though UTAUT3 introduces new constructs, such as personal innovativeness and habit, in the effort to enhance the explanatory power of the model (Bhatnagr & Rajesh, 2024), its use extends only to single-purpose platforms, such as mobile learning (Khan et al., 2022), e-wallets (Ramadhan et al., 2019), and autonomous vehicles (Nordhoff et al., 2020), but not

to other multi-service platforms that enshrine This small usage does not lend itself to the transactional exchanges of user motivations, contextual utility, and habitual use patterns that exist in super app ecosystems. Second, prior UTAUT-based studies display conflicting empirical findings, particularly in terms of the role of critical predictors (i.e., performance expectancy, effort expectancy, and social influence) and whether they have a positive or negative effect (Gunasinghe et al., 2019; Tiwari et al., 2020). The presence of such inconsistencies creates the impression that the impact of a contextual and demographic variable has not been adequately considered, which makes the model weak in terms of generalizations to the use cases. As an example, the model in a highly digitally saturated country (Indonesia) with young adults as the frontrunners in using mobile applications (especially those in universities) might be affected by the combination of culture, economic, and technological exposure, which are inadequately reflected in the literature. Third, the study in this field is lacking domain-specific models that put UTAUT3 into perspective in a super app context, where users can interact with several services (i.e., ride-hailing, food delivery, and mobile payments) within a single digital umbrella. Such platforms come in with compounded user expectations and interactions that exceed the linear utility-centric assumptions of the traditional UTAUT research. Regarding a growingly interconnected digital economy, as Wang et al. (2021) observe, the adoption of technology should change to incorporate hybrid user objectives and digital multitasking behavior. Finally, personal innovativeness and habit are deemed the central constructs to modern technology acceptance but are not used enough or are used inconsistently in the case of UTAUT3 applications (Gunasinghe et al., 2019; Wang et al., 2021). This creates incomplete knowledge concerning the effect of intrinsic traits on long-term adoption and behavioral intention, particularly with regard to digital natives, such as the university students.

Within the Indonesian context, literature on digital engagement has been well-documented, although it usually fails to capture the multi-dimensionality of super apps and the individualized sociocultural motivation within young people. Because university students are the most advanced in adopting technologies, and they are the future decision-makers in the marketplace, more insights on how they accept technologies may enrich developers and policymakers in decision-making. Thus, the current research attempts to consider the effect of the UTAUT3 constructs of performance expectancy, effort expectancy, social influence, facilitating condition, hedonic motivation, habit, and personal innovativeness on adoption and continued use of Gojek among university students in Indonesia within 2021-2024. The study aims to address the current theoretical and empirical gaps by testing UTAUT3 in the case of a super app scenario and providing practice-based implications that can be used to improve the overall engagement of a user and the advancement of digital platforms.

LITERATURE REVIEW

Digitalization of consumer markets has witnessed a rapid change, and this has highlighted the need for grasping user acceptance and adoption of e-commerce websites. The traditional approaches like the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) have formed initial insight. Nevertheless, as the user interaction becomes more complex in e-commerce environments, the more balanced frameworks are required. UTAUT3, which is a continuation of UTAUT and UTAUT2, includes the most essential sets of constructs, like personal innovativeness or trust and behavioral habits, so it can be well applicable to the research of technology adoption in the domain of e-commerce (Venkatesh et al., 2012; Pal et al., 2023). UTAUT3 is an improvement of UTAUT2 since it incorporates variables that deal with individual diversity and contextual dynamics. Performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, habit, personal innovativeness, and trust are the core constructs (Sun et al., 2019; Venkatesh et al., 2012). These aspects play a key role in defining initial adoption as well as ongoing usage reduction in the e-commerce environment.

UTAUT3 builds off of this framework and adds personal innovativeness, perceived risk, and technological trust. These dimensions particularly apply in the setting of e-commerce, where such concepts as consumer trust and contention in respect of privacy, as well as individual technological tendencies, come into effect in initial adoption and subsequent utilization. Examples of the importance of individual innovativeness in moderating the hedonic motivation to behavioral intention relationship were seen in the most recent study by Pal (2023), which taught us that early adopters demonstrate a higher behavioral intention in utilizing new elements of e-commerce. Simultaneously, it is demonstrated that trust can reduce perceived risk, particularly among online marketplace users who have to depend on the credibility of the platform, hence the vital role that trust plays in keeping users engaged. The factors that lead to behavioral intention and usage behavior are also drafted by many utilitarian, psychological, and situational variables. Oliveira et al. (2016) explain that price value and habit are two of the UTAUT2 constructs that are especially applicable as regards e-commerce usage. UTAUT3 goes beyond this knowledge and shows that personal innovativeness enhances the effects of performance expectancy and technological trust overrides the issues surrounding privacy. Alalwan (2018) confirmed those results on mobile commerce by demonstrating that such factors as the facilitating conditions and habit have a direct effect on the behavioral intention and the usage behavior. These findings support the significance of contextual and user-driven variables, which are embraced in UTAUT3. The applicability of the UTAUT3 is also modified by cultural and demographic reasons. Research on developing countries like India and Indonesia demonstrates the rural-urban digital divide makes a difference in the

degree of UTAUT3 predictors: urban consumers are largely stimulated by hedonic motivation and individual innovativeness, but in rural areas, the priority is given to social influence and favourable circumstances (Amalia et al., 2025).

Performance Expectancy (PE)

Performance Expectancy (PE) can be defined as the degree to which an individual thinks that the system would enhance their performance (Venkatesh et al., 2003). It corresponds to the Technology Acceptance Model's (TAM) component of perceived usefulness, which states that the more the readers find the technology useful, the more inclined they are to embrace it. According to Alruthaya et al. (2021), the fact that users believe that chatbots are effective in undertaking tasks inspires their usage. The importance of performance expectancy in terms of behavioral intentions and usage behavior for AI technologies was also proved (Gansser & Reich, 2021). The study proposes the following hypothesis:

H1: Performance expectancy has a positive effect on behavioral intention to use Gojek.

Effort Expectancy (EE)

Effort expectancy as referred to herein (EE) is the ease of uncomplicatedness, which is linked with a technology (Venkatesh et al., 2003). The notion is closely associated with Perceived Ease of Use (PEOU) in TAM. Literature indicates that the adoption intent can be enhanced in any context, including digital wallets (Chawla & Joshi, 2019), online banking (Suh & Han, 2003), and mobile applications (Deb & David, 2014) through user-friendly applications. Ease of use is attributed to decreasing the cognitive load in e-commerce and in the use of mobile applications, but in addition to this, it enhances user confidence in carrying out transactions (Alruthaya et al., 2021; Seo & Lee, 2021). Thus, the hypothesis is:

H2: Expectancy of effort has a positive effect on behavioral intention to use Gojek.

Social Influence

Social Influence (SI) simply describes how far the users feel that the important others believe they ought to use a certain technology (Venkatesh et al., 2003). The theory is based on the Theory of Reasoned Action by Fishbein and Ajzen (1975), in which the subjective norms determine the intentions of the users. Social influence in UTAUT addresses peer pressure and societal expectations, which play a special role in collectivist societies. Therefore:

H3: Social influence positively affects the behavioral intention to use Gojek.

Facilitating Conditions (FC)

Facilitating conditions describe what someone feels about the provision of available technical and organizational support to use technology

(Venkatesh et al., 2003). Research indicates that such factors as infrastructure, internet access, availability of devices, and training are influential with regard to the readiness of users and successful adoption (Chatterjee & Bhattacharjee, 2020; Lin, 2011). Within the mobile commerce scenario, favorable facilitating circumstances reduce worry regarding the operations of users and raise their chance to use the platform (Kasilingam, 2020). Hence:

H4: The facilitating condition generates a positive impact on behavioral intention toward the use of Gojek.

H5: Favorable conditions positively affect the usage behaviors of Gojek.

Hedonic Motivation (HM)

Hedonic motivation simply denotes the level of enjoyment or pleasure of utilization of a technology (Venkatesh et al., 2012). It regards intrinsic motives, which motivate technology use to entertain or satisfy, especially in lifestyle and mobile applications. The relationship between HM and behavioral intention is positive according to previous studies (Ramadhan et al., 2019; Gunasinghe et al., 2020). Therefore:

H6: Hedonic motivation has a positive influence on behavioral intention to use Gojek.

Price Value (PV)

Price value describes a mental exchange between a person's perceived advantages and the price (Venkatesh et al., 2012). When it comes to buying behavior, in developing economies, pricing sensitivity does influence various purchases, especially among millennials and economical buyers. Nevertheless, other studies do not demonstrate any significant effects of PV where perceived value is higher than costs (Ramadhan et al., 2019). According to these grounds:

H7: The value of prices positively influences the intention to use Gojek.

Habit (HB)

Habit is a measure of how individuals engage in behaviors as a result of unconscious learning (Venkatesh et al., 2012). Development of habits happens as a result of repetition and is a very favorable predictor of intention as well as usage. As users become more accustomed to a technology, their usage gradually transforms into a habit (Azam et al., 2019). Therefore:

H8: Habit has a positive effect on the behavioral intention of using Gojek.

H9: Habit has a positive impact on Gojek usage behavior.

Personal Innovativeness (PI)

Personal innovativeness refers to the dispositions to test new technologies (Azam et al., 2019). It measures the trait dimensional aspect of user behavior, which is their willingness to use digital innovations. Research proves that highly innovative people are more inclined to perceive and maintain new systems (Gunasinghe et al., 2019; Ramadhan et al., 2019). Hence:

H10: Personal innovativeness positively influences the behavioral intention to use Gojek. **H11:** Individual innovativeness has a positive effect on the Gojek usage behavior.

Behavioral Intention (BI)

Behavioral intention forms a user-perceived probability of resulting activities (BI) (Fishbein & Ajzen, 1975). BI features as one of the main antecedents of usage behavior in the technology acceptance literature. Adoption and further maintenance chances are higher in case of strong intention (Tarhini et al., 2013; Venkatesh et al., 2003). Thus:

H12: Behavioral intention positively impacts Gojek's usage behavior.

The Effects of Age and Gender

Age and gender have been established to act as moderators of relationships in the UTAUT model (Venkatesh et al., 2003). To illustrate this point, younger users tend to place more importance on performance expectancy than their older counterparts, while men tend to value usefulness more than women do. However, as the latest reports indicate, these moderating influences vary depending on the context and are not necessarily important (García-Murillo et al., 2023; Tresnawan et al., 2020).

H1a: Gender moderates the relationship between performance expectancy and behavioral intention to use Gojek.

H1b: Performance expectancy will mediate the association between age and the intention to use Gojek only at a behavioral level.

Moderating Effects of Gender, Age, and Experience in Relating to Effort Expectancy and Behavioral Intention

Venkatesh et al. (2003) have considered that the level of effort expectancy in predicting behavior intention is dependent on the gender, age, and experience of the user. This association tends to be greater in women, especially among the younger ones, and is more likely to be exhibited in the early phases of the use of technologies. Siwela et al. (2022) and Tresnawan et al. (2020) found different results, showing that factors like gender, age, and experience do not significantly affect the relationship between effort expectancy and behavioral intention.

H2a: Expectancy of effort moderates the correlation between the expectancy of effort and intention of behavior to use Gojek.

H2b: Age moderates the association amid effort expectancy as well as the behavioral inclination of using Gojek.

H2c: Effort expectancy is moderated by experience with the behavioral intention of using Gojek.

The effect of gender, age, and experience moderating the relationship between social influence and behavioral intention

Venkatesh et al. (2003) indicate that gender, age, and experience combine to moderate the influence of social influence on behavioral intention. This effect tends to be greater on women of a certain age who are also sensitive to the case when the use of technology is obligatory or in the initial phases of adoption. Still, García-Murillo et al. (2023) did not discover significant moderating effects of these variables.

H3a: The association between social influence and behavioral intention to use Gojek depends on gender.

H3b: The correlation between social influence and behavioral intention to use Gojek is moderate based on age.

H3c: Experience moderates the relationship between social influence and behavior intention to use Gojek.

Gender, Age, and Experience as Moderators of the Relationship between Facilitating Conditions and Behavioral Intention

According to Venkatesh et al. (2012), the association between the facilitating conditions and the behavioral intention depends on gender, age, and experience. The effect is particularly noticeable in older women who are just beginning to adopt the technology. On the other hand, recent empirical results by few researchers point to the fact that such moderating effects might not be of major importance (García-Murillo et al., 2023; Manaar et al., 2023; Siwela et al., 2022).

H4a Gender moderates the relationship between facilitating conditions and intent to use Gojek behavior.

H4b: Age also moderates the facilitating condition relationship with the behavioral intention to use Gojek.

H4c: Experience has a moderation effect on the linkage between facilitating conditions and behavioral intention to use Gojek.

Moderating Role of Experience in the Correlation between Facilitating Conditions and Use Behavior

The conclusion obtained by Tresnawan et al. (2020) showed that experience did not moderate the association between what facilitates conditions and use

behavior. Siwela et al. (2022), alternatively, furnished the evidence in support of the vitality of experience as a moderator.

H5a: Experience mediates the connection between the facilitating conditions and the use of Gojek's behavior.

Gender, Age, and Experience Moderating the Relationship between Hedonic Motivation and Behavioral Intention

Venkatesh et al. (2012) argued that gender, age, and experience moderate hedonic motivation, though most impact is seen in the youths who use technology as early adopters, who are mainly males. Nevertheless, it is also possible that these variables do not play as significant a role as modifiers in the relationship (Saputra et al., 2021).

H6a: Gender modifies the correlation between hedonic motivation and the behavioral intention of using Gojek.

H6b: There exists an interaction effect between age and the relationship between hedonic motivation and the behavioral intention to use Gojek.

H6c: The relationship between hedonic motivation and the intention to use Gojek is moderated by experience.

The Moderating Nature of Gender and Age in the Relationship between Price Value and Behavioral Intention

Venkatesh et al. (2012) claimed that gender and age mediate the effects of price value on the behavioral intention in such a way that older women are responsive to cost-benefit considerations. However, Fatihanisya and Purnamasari (2021) presented a different report, asserting that these variables do not significantly moderate the relationship.

H7a: Gender moderates the relationship between price value and behavioral intention to use Gojek.

H7b: A price value does not impact behavioral intention to use Gojek to the same magnitude across ages.

Moderating Effect of Gender, Age, and Experience on the Relationships between Habit and Behavioral Intention and Habit and Use Behavior

Venkatesh et al. (2012) pointed out that the influence of habit on behavioral intention as well as use behavior was shown to be moderated by gender, age, and experience. In particular, older and more experienced users tend to be staid by habit, while younger or less experienced users are more susceptible to changes in context.

H8a: Gender moderates both habit and the behavioral intention of Gojek usage.

H8b: There is an interaction effect of age on the association of habit and behavioral intention to use Gojek.

H8c: Habit—behavioral intention is moderated with experience concerning Gojek usage.

H9a: Gender moderates the relationship between habit and use behavior among Gojek.

H9b: The appreciation between habit and use behavior of Gojek is shown by the moderating role of age.

H9c: Experience mediates the relationship between habitualness and Gojek use behavior.

Gender as a Moderator between the Relationships between Personal Innovativeness and Behavioral Intention, and Personal Innovativeness and Status Quo

Ngusie et al. (2024) disclosed that gender moderates the combined association between personal innovativeness and behavioral intention. Conversely, Chiu et al. (2005) reported that there was no significant gender difference in behavioral intention.

H10a: Gender mediates the relationship between personal innovativeness and behavioral intention to use Gojek.

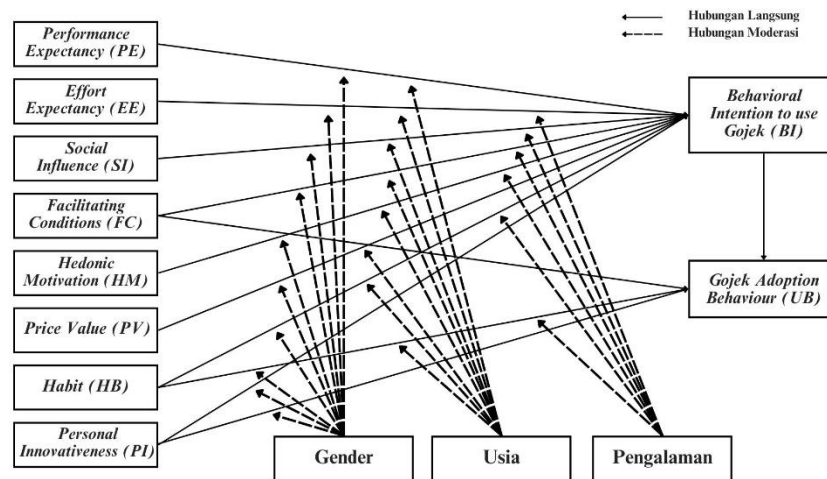
H11a: Gender moderates the role of personal innovativeness and use behaviors in Gojek.

Moderating Role of Experience in the Connection between Behavioral Intention and Use Behavior

According to Venkatesh et al. (2012), experience moderates the effect of behavioral intention on use behavior, with a stronger effect observed among less experienced users. Nevertheless, experience might not be an important moderator of this association (Saputra et al., 2021).

H12a: Behavioral intention and the use of Gojek's behavior have the moderating effect of experience.

It is on the basis of a literature review and past research findings that the author embedded the research model below.



RESEARCH METHODOLOGY

This study uses a quantitative approach based on an online questionnaire. In terms of its usefulness, this study is categorized as basic research, which is a form of research designed to develop theories about how the world works in all aspects of life. The target population in this study is all Gojek users at University X.

The unit of analysis used is students at University X from the 2021-2024 batch due to the ease of access for researchers. The researcher obtained primary data from the research subjects by distributing questionnaires directly, using a non-random sampling data collection method by randomly selecting students to fill out questionnaires created by the researcher online using Google Forms distributed through the Line, Instagram, and WhatsApp applications.

The measurement scale used in this study is an ordinal scale, using a 1-7 Likert scale. The Likert scale will be used as answers to the questionnaire statements ranging from “Strongly Disagree,” “Disagree,” “Somewhat Disagree,” “Neutral,” “Agree,” “Strongly Agree.” This study employs descriptive statistical methods through the *Structural Equation Modeling* (SEM) analysis technique with *Partial Least Square* (SEM-PLS) to analyze the influence between variables. The *software* used for SEM-PLS analysis is the SmartPLS 4.1.0.4 program.

RESULT AND DISCUSSION

Respondent Demographics

Gender, age, and experience of respondents are presented in table 4.1 below:

Table 1 Respondent Demographic Data

Characteristics	Number
Gender	
Male	36
Female	64
Age	
18 years old	8
19 years old	26
20 years old	20
21 years old	46
Experience	
Class of 2021	55
Class of 2022	13
Class of 2023	25
Class of 2024	7

Outer Model Evaluation

Outer model calculations use loading factor test criteria ≥ 0.70 , Cronbach $\alpha \geq 0.70$, composite reliability ≥ 0.70 , average variance extracted (AVE) ≥ 0.50 , and Fornell-Larcker and HTMT below 0.90 with root AVE > correlation between variables (Hair et al., 2021). Data processing shows that all variable items are valid, reliable, and have good convergent and discriminant validity. These results are shown in table 4.2, table 4.3, table 4.4, and table 4.5 below:

Table 2 SmartPLS Loading Factor Test Results

Indicator	Outer Loadings	Description
BI1 <- BI	0.929	Valid
BI2 <- BI	0.904	Valid
BI3 <- BI	0.909	Valid
EE1 <- EE	0.870	Valid
EE2 <- EE	0.913	Valid
EE3 <- EE	0.914	Valid
EE4 <- EE	0.903	Valid
FC1 <- FC	0.921	Valid
FC2 <- FC	0.927	Valid
FC3 <- FC	0.905	Valid
FC4 <- FC	0.894	Valid
HB1 <- HB	0.880	Valid
HB2 <- HB	0.880	Valid
HB3 <- HB	0.734	Valid
HM1 <- HM	0.940	Valid
HM2 <- HM	0.932	Valid
HM3 <- HM	0.926	Valid
PE1 <- PE	0.899	Valid
PE2 <- PE	0.911	Valid

Indicator	Outer Loadings	Description
PE3 <- PE	0.901	Valid
PI1 <- PI	0.868	Valid
PI2 <- PI	0.872	Valid
PI3 <- PI	0.883	Valid
PV1 <- PV	0.881	Valid
PV2 <- PV	0.909	Valid
PV3 <- PV	0.899	Valid
SI1 <- SI	0.939	Valid
SI2 <- SI	0.916	Valid
SI3 <- SI	0.921	Valid
UB1 <- UB	0.859	Valid
UB2 <- UB	0.851	Valid
UB3 <- UB	0.892	Valid

Table 3 SmartPLS Validity, Reliability, and Convergent Validity Test Results

Variable	Measurement Item	Indicator	Outer Loadings	Cronbach Alpha	Composite Reliability	AVE	Description
<i>Performance Expectancy</i>	PE1 <- PE	Application is useful	0.899	0.888	0.930	0.817	Valid and reliable
	PE2 <- PE	Application increases student efficiency	0.911				Valid and reliable
	PE3 <- PE	Application increases student productivity	0.901				Valid and reliable
<i>Effort Expectancy</i>	EE1 <- EE	Ease of operating the application	0.870	0.922	0.945	0.810	Valid and reliable
	EE2 <- EE	Application is easy to learn	0.913				Valid and reliable
	EE3 <- EE	Students quickly become proficient in using the application	0.914				Valid and reliable
	EE4 <- EE	Application is easy to understand	0.903				Valid and reliable
<i>Social Influence</i>	SI1 <- SI	Students are advised by their families to use the application	0.939	0.917	0.947	0.856	Valid and reliable
	SI2 <- SI	Students are urged by their families to use the application	0.916				Valid and reliable
	SI3 <- SI	The use of applications is	0.921				Valid and reliable

Variable	Measurement Item	Indicator	Outer Loadings	Cronbach Alpha	Composite Reliability	AVE	Description
		supported by the campus					
<i>Facilitating Conditions</i>	FC1 <- FC	Student devices are adequate	0.921	0.933	0.952	0.832	Valid and reliable
	FC2 <- FC	Student understanding is adequate	0.927				Valid and reliable
	FC3 <- FC	Students have appropriate technology devices	0.905				Valid and reliable
	FC4 <- FC	Students are helped by application customer service	0.894				Valid and reliable
<i>Hedonic Motivation</i>	HM1 <- HM	The application is comfortable to use	0.940	0.925	0.953	0.870	Valid and reliable
	HM2 <- HM	Students enjoy using the application	0.932				Valid and reliable
	HM3 <- HM	Students are satisfied using the application	0.926				Valid and reliable
<i>Price Value</i>	PV1 <- PV	The benefits received and the costs incurred are worth it	0.881	0.880	0.925	0.804	Valid and reliable
	PV2 <- PV	The price offered by the application is more affordable than competitors	0.909				Valid and reliable
	PV3 <- PV	The price on the app is reasonable	0.899				Valid and reliable
<i>Habit</i>	HB1 <- HB	Students are accustomed to using the application	0.880	0.777	0.872	0.696	Valid and reliable
	HB2 <- HB	Students use the application without thinking	0.880				Valid and reliable
	HB3 <- HB	Using the app has become a daily habit	0.734				Valid and reliable
<i>Personal Innovativeness</i>	PI1 <- PI	Students like to try new	0.868	0.846	0.907	0.765	Valid and reliable

Variable	Measurement Item	Indicator	Outer Loadings	Cronbach Alpha	Composite Reliability	AVE	Description
	PI2 <- PI	features in the application Students are the first application users in their circle	0.872				Valid and reliable
	PI3 <- PI	Students want to utilize the application thoroughly	0.883				Valid and reliable
	BI1 <- BI	Intend to use the application on an ongoing basis	0.929				Valid and reliable
<i>Behavioral Intention</i>	BI2 <- BI	Plan to use the application	0.904	0.901	0.938	0.835	Valid and reliable
	BI3 <- BI	Trying to use the application optimally	0.909				Valid and reliable
<i>Use Behavior</i>	UB1 <- UB	Students want to use the application regularly	0.859				Valid and reliable
	UB2 <- UB	Students have a positive view of the application	0.851	0.836	0.902	0.753	Valid and reliable
	UB3 <- UB	Students expect to use the application more often	0.892				Valid and reliable

Table 4 Fornell-Larcker Discriminant Validity Test Results SmartPLS

Variable	BI	EE	FC	HB	HM	PE	PI	PV	SI	UB
BI	0.914									
EE	0.717	0.900								
FC	0.431	0.254	0.912							
HB	0.462	0.452	0.139	0.834						
HM	0.495	0.419	0.188	0.225	0.933					
PE	0.579	0.571	0.211	0.433	0.346	0.904				
PI	0.576	0.533	0.197	0.569	0.381	0.336	0.875			
PV	0.423	0.575	0.153	0.797	0.270	0.370	0.603	0.897		
SI	0.449	0.457	0.279	0.139	0.304	0.203	0.192	0.189	0.925	
UB	0.606	0.528	0.372	0.543	0.407	0.347	0.655	0.529	0.312	0.868

Table 5 SmartPLS HTMT Discriminant Validity Test Results

Variable	BI	EE	FC	HB	HM	PE	PI	PV	SI	UB
BI										
EE	0.783									
FC	0.464	0.270								
HB	0.552	0.537	0.165							
HM	0.541	0.452	0.198	0.264						
PE	0.645	0.630	0.226	0.521	0.384					
PI	0.659	0.602	0.222	0.701	0.429	0.386				
PV	0.460	0.637	0.172	0.541	0.282	0.412	0.687			
SI	0.486	0.494	0.302	0.162	0.325	0.226	0.212	0.210		
UB	0.695	0.596	0.424	0.666	0.459	0.398	0.775	0.594	0.353	

Inner Model Evaluation

The calculation of the *inner model* uses the criteria for testing the level of multicollinearity with the *inner VIF* (*variance inflated factor*) value <5, hypothesis testing by looking at the *p-value* or *t-statistics*, where when the *t-statistics* calculation results are greater than the t table (1.96), or the *p-value* <0.05, then there is a significant influence between the variables. The next criterion, the *f-square* value which is the direct variable effect with a value of 0.02 indicates a low value, 0.15 is moderate, and 0.35 is high (Hair et al., 2021). Finally, the *f-square* value on the moderating variable also needs to be seen, with a value of 0.005 indicating a low value, 0.01 moderate, and 0.025 high (Habibi et al., 2024). In table 4.6, it is found that all item variables have a VIF value <5, implying a low multicollinearity. Furthermore, the results of testing the direct effect hypothesis are presented in table 4.7 and the moderating effect in table 4.8.

Table 6 SmartPLS Inner VIF Test Results

Variable	BI	UB
BI		2.197
EE	3.493	
FC	1.663	1.428
HB	2.052	2.024
HM	1.808	
PE	2.739	
PI	2.657	2.068
PV	1.923	
SI	2.210	
G x PE	2.627	
U x PV	2.005	

Variable	BI	UB
U x PE	2.551	
U x FC	2.752	
G x PI	1.698	1.723
U x EE	2.046	
G x EE	1.144	
P x FC	2.206	1.380
P x SI	2.709	
P x EE	3.336	
G x SI	1.926	
G x HB	1.057	1.842
U x HB	3.044	2.790
P x BI		2.148
G x HM	2.063	
P x HB	1.469	1.809
G x PV	3.248	
U x HM	2.846	
P x HM	1.555	
G x FC	1.331	
U x SI	2.776	

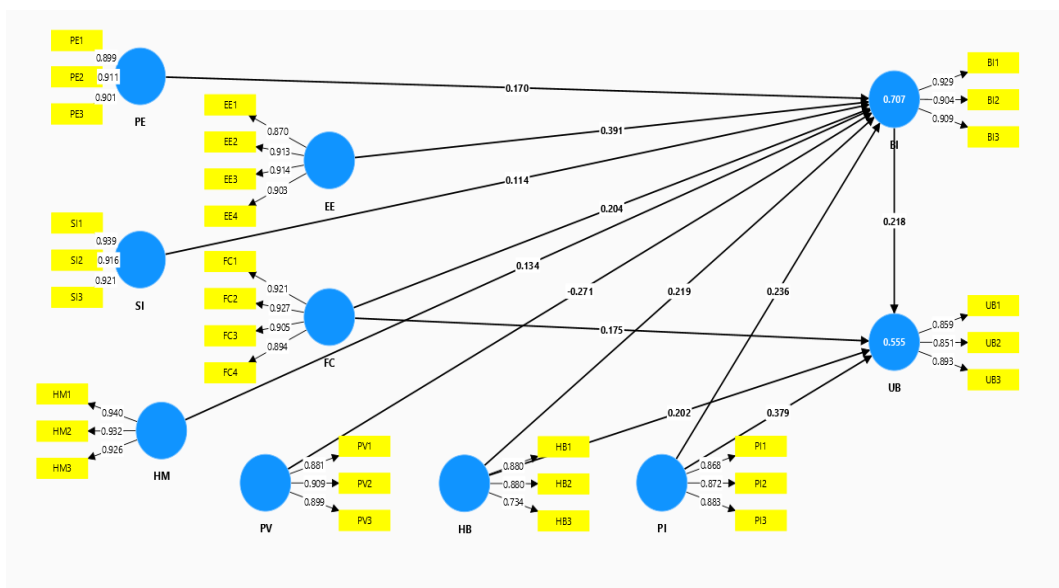


Figure 1 Graph of SmartPLS Direct Effect Hypothesis testing Results

Table 7 SmartPLS Direct Effect Hypothesis Testing Results

Hypothesis	Hypothesis Statement	Path Coefficients	P-value	95% Confidence Interval Path Coefficients		F-square	Description
				Lower Limit	Upper Limit		
H1	PE -> BI	0.170	0.028	0.019	0.328	0.300	Accepted
H2	EE -> BI	0.391	0.000	0.183	0.597	0.077	Accepted
H3	SI -> BI	0.114	0.044	0.014	0.242	0.359	Accepted
H4	FC -> BI	0.204	0.000	0.085	0.317	0.103	Accepted
H5	FC -> UB	0.175	0.034	0.024	0.350	0.392	Accepted
H6	HM -> BI	0.134	0.046	-0.008	0.256	0.316	Accepted
H7	PV -> BI	-0.271	0.028	-0.514	-0.041	0.225	Accepted
H8	HB -> BI	0.219	0.037	0.024	0.440	0.327	Accepted
H9	HB -> UB	0.202	0.036	0.006	0.390	0.370	Accepted
H10	PI -> BI	0.236	0.005	0.067	0.393	0.205	Accepted
H11	PI -> UB	0.379	0.006	0.097	0.632	0.231	Accepted
H12	BI -> UB	0.218	0.028	0.018	0.407	0.367	Accepted

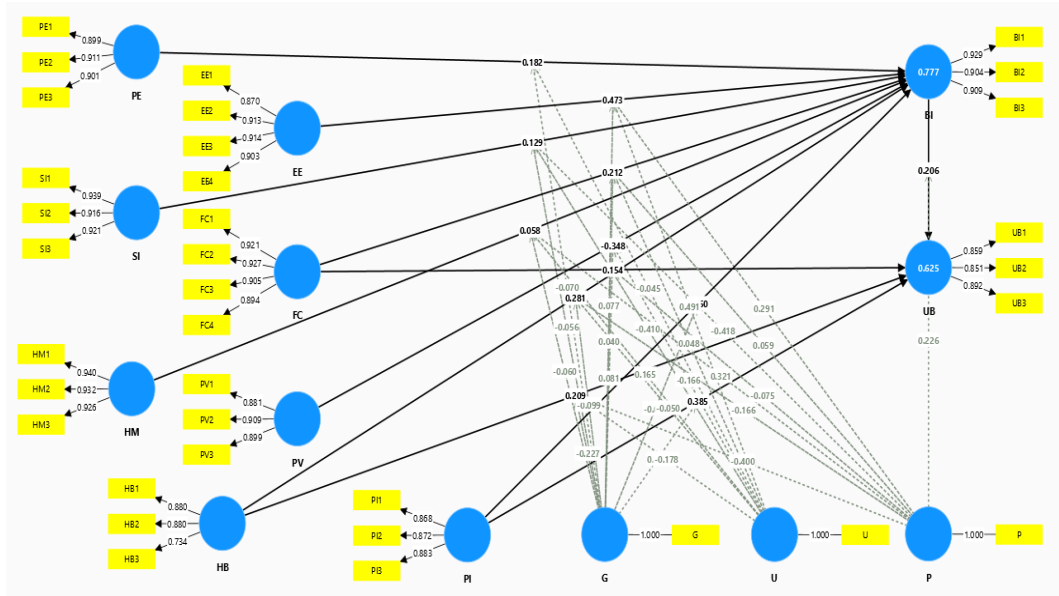


Figure 2 Graph of Hypothesis Testing Results of SmartPLS Moderation Effect

Table 8 SmartPLS Moderation Effect Hypothesis Testing Results

Hypothesis	Hypothesis Statement	Path Coefficients	P-value	95% Confidence Interval Path Coefficients		F-square	Description
				Lower Limit	Upper Limit		
H1a	G x PE -> BI	-0.070	0.640	-0.302	0.285	0.829	Rejected
H1b	U x PE -> BI	-0.045	0.703	-0.241	0.245	0.891	Rejected
H2a	G x EE -> BI	0.077	0.691	-0.407	0.349	0.871	Rejected
H2b	U x EE -> BI	0.491	0.445	-0.488	1.837	0.461	Rejected
H2c	P x EE -> BI	0.291	0.646	-0.648	1.673	0.751	Rejected
H3a	G x SI -> BI	-0.056	0.546	-0.196	0.170	0.756	Rejected
H3b	U x SI -> BI	-0.410	0.478	-1.547	0.628	0.619	Rejected
H3c	P x SI -> BI	-0.418	0.469	-1.557	0.623	0.602	Rejected
H4a	G x FC -> BI	0.040	0.631	-0.127	0.198	0.873	Rejected
H4b	U x FC -> BI	0.048	0.938	-1.051	1.301	0.993	Rejected

Hypothesis	Hypothesis Statement	Path Coefficients	P-value	95% Confidence Interval Path Coefficients		F-square	Description
				Lower Limit	Upper Limit		
H4c	P x FC -> BI	0.059	0.923	-1.090	1.257	0.989	Rejected
H5a	P x FC -> UB	-0.075	0.426	-0.245	0.120	0.767	Rejected
H6a	G x HM -> BI	-0.060	0.617	-0.334	0.141	0.887	Rejected
H6b	U x HM -> BI	0.165	0.668	-0.428	1.044	0.885	Rejected
H6c	P x HM -> BI	0.321	0.414	-0.221	1.307	0.706	Rejected
H7a	G x PV -> BI	0.081	0.667	-0.315	0.417	0.883	Rejected
H7b	U x PV -> BI	-0.166	0.376	-0.453	0.289	0.652	Rejected
H8a	G x HB -> BI	-0.099	0.537	-0.447	0.186	0.842	Rejected
H8b	U x HB -> BI	-0.050	0.933	-1.318	0.942	0.993	Rejected
H8c	P x HB -> BI	-0.166	0.771	-1.420	0.787	0.920	Rejected
H9a	G x HB -> UB	-0.227	0.019	-0.424	-0.042	0.210	Accepted
H9b	U x HB -> UB	-0.178	0.376	-0.444	0.380	0.568	Rejected
H9c	P x HB -> UB	-0.400	0.061	-0.702	0.158	0.236	Rejected
H10a	G x PI -> BI	-0.006	0.962	-0.218	0.313	0.998	Rejected
H11a	G x PI -> UB	0.279	0.011	0.044	0.483	0.199	Accepted
H12a	P x BI -> UB	0.226	0.013	0.032	0.386	0.218	Accepted

Relationship between Performance Expectancy and Behavioral Intention

University X students use Gojek because this application offers many benefits for their daily lives, ranging from efficient time to walk to campus (transportation) and delivering goods and food to shopping for daily needs. Student productivity is heading in a positive direction along with the intention of using Gojek to improve

student performance for the better. The stronger their belief in the positive value offered by Gojek, the higher their intention to continue utilizing the service. With the delivery of groceries, food, goods, and digital payment services, students will have the intention to use Gojek on an ongoing basis. With this, *performance expectancy* has a positive effect on *behavioral intention to use Gojek* for University X students and shows significant results. Previous research shows similar results, namely the influence between *performance expectancy* and *behavioral intention* (Ade Permata Surya et al., 2021; Azam et al., 2019; Bhatnagr & Rajesh, 2024; Nordhoff et al., 2020; Ramadhan et al., 2019).

Moderating Effect of Gender and Age on the Relationship between Performance Expectancy and Behavioral Intention

Demographic factors such as gender and age do not significantly affect perceived usefulness. This means that both male and female students, junior (new) students who are still adapting to campus life, and senior students who are used to routine all have the same view of the perception that if Gojek proves to be useful, then they will choose to use it as part of their daily solutions. With this, gender and age do not moderate the relationship between *performance expectancy* and *behavioral intention* (García-Murillo et al., 2023; Tresnawan et al., 2020).

Relationship between Effort Expectancy and Behavioral Intention

University X students think that when the application *user interface* is attractive, the navigation system *is simple*, and the process of using the service does not require more *effort*, students will tend to be more willing to adopt it. Perceptions of convenience will directly increase their interest in utilizing Gojek services, from pick-up and drop-off services to ordering and delivering goods and food. With this, *effort expectancy* has a positive effect on *behavioral intention to use Gojek* for University X students and shows significant results. These results are in line with previous research, which states that there is an influence between *effort expectancy* and *behavioral intention* (Azam et al., 2019; Bhatnagr & Rajesh, 2024; Ramadhan et al., 2019).

Moderating Effect of Gender, Age, and Experience on the Relationship between Effort Expectancy and Behavioral Intention

Gender, age, and previous experience in using technology are similar among students. Both women and men, young and old students, with technology experience or beginners, all agree that ease of use is the key that drives their interest in using technology. Thus, Gojek succeeded in attracting the attention of the University X student group simply by providing an uncomplicated user experience. With this, gender, age, and experience do not moderate the relationship between *effort expectancy* and *behavioral intention* (Siwela et al., 2022; Tresnawan et al., 2020).

Relationship between Social Influence and Behavioral Intention

Social environment encouragement really has a noticeable impact on increasing the intention of University X students to integrate Gojek into their routine. When family, relatives, and closest friends recommend this application, perhaps by sharing positive experiences, students will become more motivated to try it. They think that if the people they trust are already relying on this application, then they can rely on this option too. With this, *social influence* has a positive effect on *behavioral intention* to use Gojek for University X students and shows significant results. Previous research shows similar results, namely the influence between *social influence* and *behavioral intention* (Ade Permata Surya et al., 2021; Nordhoff et al., 2020; Ramadhan et al., 2019).

Moderating Effect of Gender, Age, and Experience on the Relationship between Social Influence and Behavioral Intention

Differences in gender, age, and experience do not have a different effect on the relationship between social encouragement and intention to use Gojek. In other words, all students, male and female, juniors and seniors, with technology experience or not, respond uniformly to social recommendations. With this, gender, age, and experience do not moderate the relationship between *social influence* and *behavioral intention* (Nordhoff et al., 2020; Siwela et al., 2022; Tresnawan et al., 2020).

Relationship between Facilitating Conditions with Behavioral Intention and Use Behavior

Supporting facilities such as *smartphone* devices, stable internet connections, and responsive *customer service* are proven to have a huge effect on not only encouraging the interest of X University students to use the application but also actually increasing their actions to use it in their daily activities. Adequate facilities not only increase their interest but also encourage actual use, such as ordering food and transportation regularly or relying on this app for urgent needs. With this, *facilitating conditions* have a positive effect on *behavioral intention* and *use behavior* of using Gojek for University X students and show significant results. These results are in line with previous research, which states that there is an influence between *facilitating conditions* with *behavioral intention* and *use behavior* (Ade Permata Surya et al., 2021; Azam et al., 2019; Ramadhan et al., 2019).

Moderating Effect of Gender, Age, and Experience on the Relationship between Facilitating Conditions and Behavioral Intention and Moderating Experience on Use Behavior

Both female and male students, students from different age groups, and students with different technology experiences all showed a positive response to Gojek's supporting facilities. In essence, as long as these facilities are available,

they will happily make *Gojek* a part of their daily activities. With this, gender, age, and experience do not moderate the relationship between *facilitating conditions* and *behavioral intention*, and experience does not moderate the relationship between *facilitating conditions* and *use behavior* (García-Murillo et al., 2023; Manaar et al., 2023; Nordhoff et al., 2020).

Relationship between *Hedonic Motivation* and *Behavioral Intention*

Pleasure elements such as comfort and satisfaction play a key role in shaping the intention of University X students to use *Gojek*. When students feel satisfied with the speed of food delivery services or feel happy with attractive promos on transportation services, they will become more motivated to continue using this application. They may consider that this application is not only practical but can also improve their *mood for the day*. With this, *hedonic motivation* has a positive effect on *behavioral intention* to use *Gojek* for University X students and shows significant results. Previous research shows similar results, namely the influence between *hedonic motivation* and *behavioral intention* (Azam et al., 2019; Nordhoff et al., 2020; Ramadhan et al., 2019).

Moderating Effect of Gender, Age, and Experience on the Relationship between *Hedonic Motivation* and *Behavioral Intention*

Demographic factors such as gender, age, and experience do not make a difference, so that regardless of student background, the same sense of pleasure is felt by those who use the application. *Gojek* is considered successful in providing a pleasant experience, making it a great opportunity to maintain customer loyalty. With this, gender, age, and experience do not moderate the relationship between *hedonic motivation* and *behavioral intention* (Nordhoff et al., 2020; Saputra et al., 2021).

Price Value Relationship with *Behavioral Intention*

Looking in terms of price, if University X students feel that *Gojek* service rates are too high or not commensurate with the benefits received, then their interest in using the application will decrease. This study explains that unfavorable price perceptions can be a significant obstacle, making students consider other options or even avoid using the application altogether. With this, *price value* has a negative effect on *behavioral intention* to use *Gojek* for University X students and shows significant results. These results are in line with the research of Ramadhan et al. (2019), which states that there is an influence between *price value* and *behavioral intention*.

Moderating Effect of Gender and Age on the Relationship between *Price Value* and *Behavioral Intention*

Perceptions of the price of the results are consistent between women and men, as well as in various age groups, which means that price is the main consideration

for students in determining whether Gojek remains their choice or not. With this, gender and age do not moderate the relationship between *price value* and *behavioral intention* (Fatihanisya & Purnamasari, 2021; Manaar et al., 2023).

Habit's Relationship with Behavioral Intention and Use Behavior

Habit creates a pattern that is difficult to separate from the lives of University X students, so this makes Gojek an automatic solution for various situations. When students are accustomed to using this application, their desire to continue using it will increase so that actual use becomes more frequent. With this, *habit* has a positive effect on *behavioral intention* to use Gojek for University X students and shows significant results. These results are in line with previous research, which states that there is an influence between *habit* and *behavioral intention* and *use behavior* (Azam et al., 2019; Ramadhan et al., 2019).

Moderating Effect of Gender, Age, and Experience on the Relationship between Habit with Behavioral Intention and Habit with Use Behavior.

Based on demographic analysis, differences in gender, age, and experience are not factors that encourage students' interest in forming habitual patterns of using Gojek, but the frequency of use is. With this, gender, age, and experience do not moderate the relationship between *habit* and *behavioral intention* (Fatihanisya & Purnamasari, 2021; Manaar et al., 2023; Saputra et al., 2021). Men and women may have the same habit of using Gojek, but they apply it to different services. For example, men may use transportation services more for commuting, while women may use food delivery services more. On the other hand, differences in age and experience using technology do not significantly affect this pattern. With this, gender is proven to moderate the relationship between *habit* and *use behavior* even though the effect is low, while age and experience do not moderate the relationship between the two (Fatihanisya & Purnamasari, 2021; Manaar et al., 2023; Rivaldi et al., 2022; Saputra et al., 2021).

Relationship between Personal Innovativeness and Behavioral Intention and Use Behavior

Looking at *personal traits*, University X students with a high innovative spirit tend to have high interest and more frequent actual use of Gojek. Students who like to explore the features in the application tend to be interested and use the application in their daily lives. With this, *personal innovativeness* has a positive effect on *behavioral intention* and *use behavior* of using Gojek for University X students and shows significant results. These results are in line with the research of Ramadhan et al. (2019), which states that there is an influence between *personal innovativeness* with *behavioral intention* and *use behavior*.

Moderating Effect of Gender on the Relationship between *Personal Innovativeness with Behavioral Intention* and *Personal Innovativeness with Use Behavior*

When looking in terms of interest, men and women are not different; all of them have the same intention, but when looking in terms of actual use, it turns out that there are different responses between male and female students, most likely due to differences in their preferences in using services on Gojek. It is possible that men tend to use the application for urgent purposes, for example, traveling to a place with tight time conditions, while women may tend to prioritize convenience, such as ordering food to the house so they don't have to bother dressing up to go out to eat. With this, gender is proven to moderate the relationship between *personal innovativeness* and *use behavior* even though the effect is low, while in the relationship between *personal innovativeness* and *behavioral intention*, gender does not strengthen or weaken the relationship (Chiu et al., 2005; Kusmintarti et al., 2018; Lattu & Maulana, 2023).

Relationship between *Behavioral Intention* and *Use Behavior*

The interest of University X students is the most important thing, especially towards consistent use. This intention arises because of the perceived benefits, usefulness, and convenience offered by Gojek. When students feel trust and confidence in Gojek, these feelings will materialize and encourage the real action of using the application, which is repeated until it becomes a routine. This means that the intention to use the application is not only a plan but also has an impact on *use behavior*. With this, *behavioral intention* has a positive effect on the *use behavior* of using Gojek for University X students and shows significant results. Previous research shows similar results, namely the influence between *behavioral intention* and *use behavior* (Azam et al., 2019; Ramadhan et al., 2019).

Moderating Effect of Experience on the Relationship between *Behavioral Intention* and *Use Behavior*

Students who already have experience with Gojek usually have a greater tendency to turn intentions into habits because they already understand how the application works, so they feel comfortable continuing to use it. When students have a strong desire to take advantage of existing promos or features, this will directly increase their actual usage in daily activities. With this, experience is proven to moderate the relationship between *behavioral intention* and *use behavior* even though the effect is low. This result is in line with the research of Manaar et al. (2023).

CONCLUSION

Of the 12 main hypotheses in the UTAUT-3 model, all were accepted, indicating that this model successfully explains the factors that influence application acceptance and use. The variables with the strongest influence are *social influence* and *habit* on usage intention, which means that encouragement from the social environment and routine patterns built by users themselves have a major impact on their desire to continue using the application, while the weakest influence is on the relationship between *effort expectancy* and usage intention. *Facilitating conditions* and *habit* act as the strongest predictors of usage behavior, which means that adequate supporting facilities and user habit patterns encourage users' actual use. Of the 26 moderation hypotheses, only 3 were accepted, with experience being the strongest moderating factor in the relationship between intention and usage behavior. The implication is that to maintain customer loyalty and increase application adoption rates, Gojek needs to highlight the benefits and ease of use, offer competitive prices, and utilize social influence and positive user experiences in *its marketing* strategy so that the community within Gen Z to the wider community has the perception to make Gojek a reliable application and will be recommended to others.

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