

# The Role of JASTIP in E-Marketplace Adoption: A UTAUT Model Analysis with Gender as a Moderator in West Papua

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**Abstract**— E-marketplaces play a pivotal role in Indonesia’s digital economic transformation; however, infrastructural limitations, high logistical costs, and low levels of technological literacy hinder their adoption in West Papua Province. *Jasa Titip* (JASTIP) represents an informal digital facilitation mechanism that enables communities to collectively and affordably access e-marketplace products. Importance-Performance Map Analysis (IPMA) is used to identify strategic intervention priorities for e-marketplace adoption in West Papua using an expanded Unified Theory of Acceptance and Use of Technology (UTAUT) framework. The moderating influence of gender in community-based social support is examined. PLS-SEM was used to analyze data from 177 respondents. Results show that enabling environments, hedonic incentives, and social influence greatly affect behavioural intention and utilization. Gender also moderates social impact and behavioural intention, highlighting its function in adoption. The model explains 62.1% of behavioural intention and 66.2% of use behaviour. Policymakers and e-marketplace stakeholders should learn from these results about the necessity of inclusive initiatives that account for gender-specific adoption habits. Moreover, they highlight the critical role of JASTIP practices in overcoming structural barriers to digital access in underserved regions.

**Keywords**— *E-marketplace, Facilitating Conditions, JASTIP, Moderating Effect of Gender, Unified Theory of Acceptance and Use of Technology*

## I. INTRODUCTION

In the era of the global digital economy, e-marketplaces have become a central driver of trade system transformation worldwide, including in Indonesia. Platforms such as Tokopedia and Shopee improve transaction efficiency, expand market access, and create new opportunities for small and micro-entrepreneurs [1]. In Indonesia, the sector’s growth is further supported by rising internet penetration and the rapid adoption of digital devices [2]. However, this digital transformation is unevenly distributed. West Papua, as one of Indonesia’s easternmost provinces, continues to face substantial challenges, including high logistics costs, inadequate digital infrastructure, and low technological literacy. Recent statistics indicate that internet penetration in

Papua and West Papua remains significantly below the national average, underscoring the urgency of addressing regional disparities in digital access. Under such conditions, local communities have developed adaptive, community-based approaches to remain connected to the national digital ecosystem. While existing studies on technology adoption are extensive, few address structural barriers, such as logistical constraints and unequal digital access, in underdeveloped regions like West Papua.

One such organically emerging approach is *Jasa Titip* (JASTIP), which operates as an informal mechanism of digital facilitation and a collective strategy to reduce the costs of accessing e-marketplace products. JASTIP emerged as a response to the high shipping fees and logistical limitations faced by communities in West Papua. By consolidating multiple orders into a single shipment and leveraging social networks, it enables significant cost reductions. For instance, goods ordered via e-marketplaces are often delivered first to JASTIP agents in Jakarta, who then forward consolidated shipments to West Papua via cargo ships or pioneer aircraft. This arrangement distributes shipping costs among multiple buyers, making the process more affordable compared to individual deliveries. Beyond cost savings, JASTIP also fosters social support that sustains digital participation. Despite its practical significance, JASTIP has received limited academic attention, creating a notable gap in the literature on community-based strategies for overcoming structural barriers to technology adoption.

UTAUT and other digital technology adoption models emphasise user-technology interactions [3]. These frameworks do not sufficiently account for the role of informal facilitators like JASTIP, which complement or substitute for formal infrastructure in low-access communities. To address this limitation, the present study proposes an extended UTAUT model [4], incorporating JASTIP into the “Facilitating Conditions” construct while adding variables such as “Perceived Cost.” These extensions more accurately capture the realities of West Papuan communities, where affordability and

interpersonal trust are critical to technology adoption. The model is ideal for studying JASTIP's adaptive, community-based social assistance. According to Khechine et al. [5], gender may moderate the association between community-based support and technological adoption. This perspective resonates with calls for context-sensitive revisions of UTAUT, especially for regions with limited digital accessibility.

From the literature review, this study identifies three key research gaps. First, little is known about informal digital inclusion practices such as JASTIP in West Papua. Second, the UTAUT paradigm does not explicitly incorporate informal facilitators as enabling conditions. Third, no adoption model emphasizes the role of community-based social support in shaping users' behavioural intentions and usage of digital platforms. In addition, prior research has rarely addressed the practical barriers to adoption in low-infrastructure settings. To bridge these gaps, the study integrates Perceived Cost and Perceived Trust into the model, as these constructs are particularly relevant in contexts where geographic and economic constraints complicate digital transactions [6], [7]. Previous studies confirm that cost and trust perceptions strongly influence technology adoption, especially in developing or structurally limited environments. This research also strengthens its contribution by employing Importance-Performance Map Analysis (IPMA), a tool rarely applied in community-based adoption studies, to prioritize interventions and identify the most impactful factors for digital inclusion strategies.

This study contributes theoretically by extending the UTAUT model through the integration of informal social facilitation within low-access communities and by introducing IPMA as a framework for prioritizing intervention strategies. Practically, the findings may assist policymakers and community leaders in designing localized digital literacy programs that recognize the role of JASTIP agents. This study addresses a significant gap in the literature and provides a more relevant viewpoint to countries facing severe structural issues than previous studies that focused on well-established digital ecosystems.

## II. THEORETICAL BACKGROUND

### A. Unified Theory of Acceptance Use of Technology (UTAUT)

UTAUT by Venkatesh et al. supports this [3]. The paradigm says performance expectation, effort expectancy, social influence, and enabling variables impact technology use and behaviour. Hedonic incentive and perceived cost were added to UTAUT2 using digital technologies [8]. The UTAUT framework is particularly relevant for this study as it effectively captures external factors influencing technology adoption, including community-driven practices such as JASTIP. Nevertheless, prior research has not sufficiently examined JASTIP as a distinct form of facilitating condition that supports e-marketplace adoption in low-infrastructure contexts. This study aims to address that gap by integrating JASTIP into the UTAUT framework.

### B. JASTIP as a Facilitating Conditions

Jasa Titip (JASTIP) is a community-based social practice that has emerged in response to limited digital infrastructure and high logistics costs in regions such as West Papua. By consolidating consumer orders into collective shipments using public transportation such as cargo ships and small regional aircraft JASTIP functions as an informal form of digital facilitation. This practice enables communities to access e-marketplace products at lower costs while simultaneously strengthening local social networks, which serve as a key foundation in overcoming structural barriers to technology adoption.

According to the UTAUT, JASTIP is enabling conditions, or external assistance for technology usage [3]. However, unlike formal infrastructure, JASTIP represents a non-formal and adaptive form of support, effectively substituting for digital logistics systems that are not yet widely available. Moreover, trust in JASTIP facilitators who typically come from the same social environment plays a critical role in fostering user confidence in online transactions, particularly among individuals with limited digital literacy. Thus, JASTIP serves as a contextual example of facilitating conditions within a community-based digital ecosystem.

### C. Gender Roles in Technology

Gender roles have historically affected technology uptake. Men and women use digital technology for different reasons, according to many research. For example, social impact strongly influences mobile banking adoption intentions, especially among women [9]. This implies that social recommendations might impact technology adoption, particularly among women.

Gender may also modify the link between performance expectation, effort expectancy, and social impact on technology adoption intention, especially in developing nations' e-learning [10]. They found that women prioritize social considerations and simplicity of use, whereas males prioritize technical performance. Therefore, this study adopts gender as a moderating variable to explore how perceptions differ between men and women in using e-marketplaces, especially in the context of the presence of JASTIP as a supporting factor.

### D. Importance-Performance Map Analysis (IPMA) in UTAUT Research

IPMA considers research model build importance and performance. IPMA maps these two characteristics to assist researchers prioritize performance improvements [11]. The Unified Theory of Acceptance and Use of Technology (UTAUT) model examines how performance expectations, effort expectations, societal effect, and enabling variables influence technology adoption using IPMA [3]. IPMA helps researchers identify elements with a big impact but poor performance, needing more attention.

The application of IPMA in the adoption strategy of e-marketplaces through JASTIP provides additional insights into the key factors that need to be improved to increase user

adoption and satisfaction. For example, if performance expectations are of high importance but performance is low, then efforts should be focused on improving that aspect to encourage wider adoption. Thus, IPMA helps in formulating more effective and efficient strategies in optimizing the factors that influence e-marketplace adoption through JASTIP.

### III. RESEARCH METHODOLOGY

#### A. Research Model and Hypotheses Development

This research uses UTAUT to present JASTIP as a Facilitating Conditions for e-marketplace adoption. Hedonic incentive, perceived cost, and social impact drive behavioural intention and use behaviour, using gender as a moderating variable to study gender perception differences. The UTAUT implies behavioural intention promotes tech adoption [8]. The model examines how these factors shape e-marketplace adoption via JASTIP and provides strategic insights for developing e-marketplaces in emerging regions.

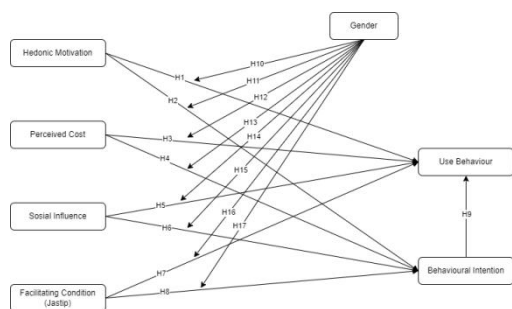


Fig. 1. Research Model

#### 1.) The Influence of Hedonic Motivation on Behavioural Intention and Use Behaviour.

Hedonic motivation the pleasure customers get from utilizing an e-marketplace influences use and behavioural intention. The UTAUT2 model shows that hedonic motivation greatly influences technology usage, especially in consumers [8]. Recent studies show that people are more inclined to utilize e-marketplaces when purchasing is fun [12]. Moreover, the enjoyment users experience not only drives current usage but also reinforces their intention to continue using the platform [13]. These findings indicate that hedonic drive plays a significant role in promoting the adoption and continued use of e-marketplaces. Based on these insights, the following hypotheses are proposed:

- H1: Hedonic motivation significantly influences use behaviour in the adoption of e-marketplaces.
- H2: Hedonic motivation significantly influences behavioural intention in the adoption of e-marketplaces.

#### 2.) The Influence of Perceived Cost on Behavioural Intention and Use Behaviour.

Perceived cost is a critical factor that influences both users actual behaviour and their behavioural intention when adoption an e-marketplace. High perceived costs such as shipping or transaction fees can discourage frequent us the

platform [14]. Conversely, when users perceive the associated costs as low, their intention to adopt the technology tends to increase [15]. Therefore, perceived cost not only affects users actual engagement with e-marketplaces but also shapes their continued intention to use them. Based on this, the following hypotheses are proposed:

- H3: Perceived cost significantly influences use behaviour in the adoption of e-marketplaces.
- H4: Perceived cost significantly influences behavioural intention in the adoption of e-marketplaces.

#### 3.) The Influence of Social Influence on Behavioural Intention and Use Behaviour

Social influence plays a significant role in shopping both the usage behaviour and intention of e-marketplace users. Social recommendations from friends, family, and the broader community have been shown to strongly affect user engagement with e-commerce platforms [16]. Additionally, social pressure and encouragement from close social circles can further enhance technology adoption [17]. Overall, social influence not only guides consumers decisions to use e-marketplace but also reinforces their intention to continue using them. Based on these findings, the following hypotheses are proposed:

- H5: Social influence significantly influences use behaviour in the adoption of e-marketplaces.
- H6: Social influence significantly influences behavioural intention in the adoption of e-marketplaces.

#### 4.) The Influence of Facilitating Conditions on Behavioural Intention and Use Behaviour.

Infrastructure and technological support significantly influence the use and purpose of e-marketplaces. Favorable conditions have been shown to enhance users engagement with technology [4]. Moreover, the availability of resources and technical support increases users intention to adopt technology [18]. Thus, facilitating conditions not only drive actual usage but also strengthen users intention to continue engaging with e-marketplaces. Accordingly, the following hypotheses are proposed:

- H7: Facilitating conditions significantly influence use behaviour in the adoption of e-marketplaces.
- H8: Facilitating conditions significantly influence behavioural intention in the adoption of e-marketplaces.

#### 5.) The Influence of Behavioural Intention on Use Behaviour.

Use behaviour is strongly associated with behavioural intention, patterns of technology usage have been shown to be significantly influenced by users intention [8], [16]. The desire to continue using an e-marketplace often leads to more frequent transactions, thereby increasing actual usage. Thus, behavioural intention serves as a bridge between users motivations and their real world action in adopting e-marketplaces. Therefore, the following hypotheses is proposed:

H9: Behavioural intention significantly influences use behaviour in the adoption of e-marketplaces.

6.) Moderating Effect of Gender

In studies on technology adoption, gender has been identified as a moderating variable. It has been shown that gender influences psychological traits and user behaviour [3]. Men are generally more responsive to functional aspects such as performance expectancy, while effort expectancy. Additionally, recent studies suggest that men tend to adopt new technologies more quickly, whereas women are sensitive to perceived risk and cost [10].

Building on these insights, this study proposes gender as a moderating variable in the context of e-marketplace adoption, particularly regarding JASTIP (Jasa Titip). Since JASTIP involves purchasing goods through intermediaries, men and women may perceive these services differently, potentially affecting their adoption decisions. Accordingly, the hypotheses are proposed:

- H10: Gender moderates the relationship between hedonic motivation and use behaviour in the adoption of e-marketplaces.
- H11: Gender moderates the relationship between hedonic motivation and behavioural intention in the adoption of e-marketplaces.
- H12: Gender moderates the relationship between perceived cost and use behaviour in the adoption of e-marketplaces.
- H13: Gender moderates the relationship between perceived cost and behavioural intention in the adoption of e-marketplaces.
- H14: Gender moderates the relationship between social influence and use behaviour in the adoption of e-marketplaces.
- H15: Gender moderates the relationship between social influence and behavioural intention in the adoption of e-marketplaces.
- H16: Gender moderates the relationship between facilitating conditions and use behaviour in the adoption of e-marketplaces.
- H17: Gender moderates the relationship between facilitating conditions and behavioural intention in the adoption of e-marketplaces.

B. Sample

This survey addresses all Indonesian JASTIP digital transaction ensurers. The technique guarantees participants satisfy requirements. JASTIP adoption characteristics were obtained using Google Forms surveys. Non-probability sampling selected voluntarily respondents. As advised by past methodological research [19], Data was analysed using PLS-SEM. G\*Power software was used to analyse the study's statistical validity with an effect size of 0.15, alpha significance level of 5%, statistical power of 95%, and nine predictor variables. Calculations showed a minimum sample size of 75 responses [20]. However, to enhance reliability, this study successfully collected data from 177 respondents, exceeding the minimum requirement and

thereby improving the quality and generalizability of the findings.

Data collection took place over approximately two weeks, from October 29 to November 15, 2024. The online survey link was distributed, resulting in participation from 177 respondents. The study focuses on the West Papua region, with respondent characteristics including gender, age range, and highest educational attainment. Detailed respondent profiles are presented in Table 1.

TABLE I. Description of Demographic Respondents

Category	Item	Total	Percentage
Gender	Male	31	40,8%
	Female	42	59,2%
Age	< 17 years old	13	5,8%
	18-35 years old	19	85,2%
	36-50	19	8,5%
	> 50 years	1	0,4%
Last Education	SMA / SMK / Equivalent	11	50,2%
	Diploma	27	12,1%
	Bachelor	2	32,3%
	Master	3	1,3%
	More	9	4%

C. Analysis Method

The proposed structural model's complex latent variable relationships were investigated using PLS-SEM. Variance-based PLS-SEM optimizes explained variance, making it appropriate for exploratory and predictive research with small sample sizes or non-normal data distribution [19]. PLS-SEM can handle complicated models with many constructs and indicators and loosen data distribution assumptions better than CB-SEM [21]. Given these benefits, PLS-SEM was used to assess this study's variables' validity, reliability, and structural linkages.

IV. RESULTS AND ANALYSIS

A. Measurement Model Evaluation

To guarantee construct reliability and validity, the measurement model was rigorously evaluated before examining structural correlations among variables. The Loading Factors (LF) for each indication were examined first. Indicators with LF values over 0.70 were kept because they strongly contributed to latent components [22]. Cronbach's Alpha (CA) and Composite dependability (CR) measured construct indicator internal consistency and construct dependability. Reliability was established when CA and CR values above 0.70, indicating that measurement items consistently represented the concept [21].

Validity converges and discriminates examined idea validity and reliability. Convergent validity was assessed using AVE. At 0.50, the notion explained at least 50% of indicator variance. To assess discriminant validity, the Fornell-Larcker Criterion compares each construct's square root AVE to its correlations with others. Latent components are discriminant when the square root of the AVE exceeds inter-construct

correlations [23]. Table 2 lists constructs, measures, and confirmatory analysis results.

TABLE II. Confirmation Variable Results

Building	Statement	Code	LF
Hedonic Motivation (HM) [24] CA, CR, AVE = 0.719, 0.842, 0.642	I feel satisfied using JASTIP when shopping online because of the limited products in Papua.	HM1	0.707
	I am a loyal JASTIP user and will not switch to other services (courier services) when shopping online.	HM2	0.892
	I feel it would be difficult if I shop online without using a JASTIP	HM3	0.794
Perceived Cost (PC) [6] CA, CR, AVE = 0.778, 0.871, 0.692	I believe that using JASTIP will save you money on shipping costs when shopping online.	PC1	0.839
	I found it easy to communicate with the JASTIP agent for the purpose of tracking the status of the item delivery.	PC2	0.814
	I have an internet connection to use JASTIP when shopping online.	PC3	0.842
Social Influence (SI) [3] CA, CR, AVE = 0.700, 0.832, 0.63	I use JASTIP when shopping online because of recommendations from friends and family.	SI1	0.772
	People in my neighborhood prefer JASTIP because it's fast and you can get products from outside Papua.	SI2	0.733
	I use JASTIP because people I consider important also use it.	SI3	0.858
Facilitating Condition (FC) [8] CA, CR, AVE = 0.871, 0.921, 0.795	I have a cell phone that supports online shopping and using JASTIP.	FC1	0.886
	I feel that JASTIP makes the online shopping process easier to get goods from outside Papua.	FC2	0.904
	I feel that JASTIP services make it easier to access products from outside Papua.	FC3	0.883
Use Behaviour (UB) [25] CA, CR, AVE = 0.913, 0.945, 0.852	I use JASTIP very often when shopping online.	UB1	0.926
	JASTIP is my first choice for online shopping.	UB2	0.940
	JASTIP has become an important part of my online shopping activities.	UB3	0.903
Behavioural Intention (BI) [8] CA, CR, AVE = 0.29, 0.897, 0.744	I intend to use JASTIP for online shopping in the future.	BI1	0.855
	I prefer to shop online and use JASTIP because I buy products from outside Papua.	BI2	0.860
	I will use JASTIP more often to reduce shipping costs when shopping online.	BI3	0.873

The Cronbach's Alpha (CA) value for the Social Influence variable was recorded at 0.689, which is close to or within the acceptable threshold for reliability. In quantitative research, a CA value greater than 0.7 is typically considered reliable, while

values between 0.6 and 0.7 are still deemed acceptable, particularly in exploratory studies [19]. Despite falling slightly below 0.7, the reliability of the Social Influence construct is still considered adequate, especially when supported by a Composite Reliability (CR) value exceeding 0.7.

Indicators HM1 and BI3 were removed from the model due to their high correlations with other indicators, which resulted in Heterotrait-Monotrait Ratio (HTMT) values exceeding the recommended thresholds. Such overlaps could compromise discriminant validity, making it necessary to eliminate these indicators to ensure that each construct distinctly measures a unique concept without redundancy. This approach is in line with recommendations that consider HTMT a more accurate method for assessing discriminant validity [26].

After establishing reflective construct reliability and convergent validity, discriminant validity was assessed. This review strives to ensure that each concept is empirically different and that the indicators accurately reflect its latent constructions without overlap. Using the Fornell-Larcker criterion, discriminant validity is assessed by comparing each construct's square root of the Average Variance Extracted (AVE) to its correlations with others. Discriminant validity is achieved when a construct's square root AVE exceeds its correlations. For exploratory and confirmatory research, HTMT should be below 0.90 and 0.85 [26]. If HTMT values surpass these criteria, discriminant validity is lacking, and troublesome markers must be removed. Table 3 shows discriminant validity findings.

TABLE III. Heterotrait-Monotrait Ratio

	BI	FC	HM	PC	SI	UB
BI						
FC	0.896					
HM	0.797	0.631				
PC	0.783	0.817	0.864			
SI	0.898	0.876	0.876	0.864		
UB	0.857	0.745	0.854	0.740	0.743	

B. Structural Model Evaluation

Once the measurement model fulfills validity and reliability, the structural model is analyzed to examine the relationship among the research variables. This step is essential for evaluating the proposed linkages and theoretical framework. Prior to hypotheses testing, the VIF is employed to assess multicollinearity and ensure that the independent variables are not excessively correlated, a VIF value greater than 5 indicates high multicollinearity, which can distort the results of that may compromise model accuracy [27]. therefore, only variables with VIF values between 0.2 and 5 are retained for analysis.

Once multicollinearity concerns have been addressed, hypothesis testing is conducted using the bootstrapping method with 5,000 subsamples to obtain more robust and accurate results [26]. A hypothesis is accepted if the T-Statistic is  $\geq 1.96$  and the P-Value is  $\leq 0.05$  at a 5% significance level [23]. Additionally, significant values of 1% (T-Statistic  $\geq 2.58$ ) and

10% (T-Statistic  $\geq 1.65$ ) indicate tighter or more lenient model assessment criteria. Table 5 shows whether hypotheses were supported or rejected based on T-Statistic and P-Value, thereby ensuring that the relationships among variables are statistically tested with a rigorous approach.

TABLE IV. Multicollinearity Test Result (inner VIF)

	BI	FC	HM	PC	SI	UB
BI						2.636
FC	2.289					2.909
HM	2.103					2.277
PC	2.454					2.455
SI	2.473					2.538
UB						

TABLE V. Hypotheses Test Result

Hypotheses	Variables	T-statistics	P values	Description
H1	HM→UB	5.300	0.002	Accepted
H2	HM→BI	3.129	0.000	Accepted
H3	PC→UB	0.594	0.553	Rejected
H4	PC→BI	0.073	0.942	Rejected
H5	SI→UB	0.797	0.425	Rejected
H6	SI→BI	1.980	0.048	Accepted
H7	FC→UB	2.569	0.010	Accepted
H8	FC→BI	5.459	0.000	Accepted
H9	BI→UB	2.769	0.006	Accepted

TABLE VI. Hypotheses Testing Result with Moderator Variables

Hypot heses	Variables	T-statistics	P values	Description
H1	Gender x HM→UB	0.302	0.763	Rejected
H2	Gender x HM→BI	0.716	0.474	Rejected
H3	Gender x PC→UB	1.195	0.232	Rejected
H4	Gender x PC→BI	1.113	0.266	Rejected
H5	Gender x SI→UB	0.292	0.771	Rejected
H6	Gender x SI→BI	2.112	0.035	Accepted
H7	Gender x FC→UB	1.704	0.088	Rejected
H8	Gender x FC→BI	0.721	0.471	Rejected

Figure 2 shows that gender moderates Social Influence and Behavioural Intention. Red lines reflect female replies, whereas green lines represent male responses. The steeper red line shows that Social Influence affects Behavioural Intention more in women than men. This shows that social factors influence women's e-marketplace usage more. Table 6 shows that gender substantially moderates this link (T-statistic = 2.112, P-value = 0.035,  $P < 0.05$ ). These results support previous studies showing women are more sensitive to social influence due to their greater responsiveness to social norms and environmental signals [8]. Additionally, social support has been shown to increase women's likelihood of adopting new technologies [10].

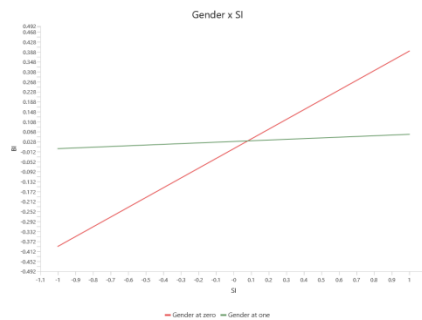


Fig. 2. Moderating Effect of Gender

To assess the structural model, the R-squared ( $R^2$ ) value measures how much independent factors explain variation in dependent variables.  $R^2$  values of 0.75 or more show strong predictive capacity, 0.50 represent moderate ability, and 0.25 or less indicate poor relevance [28].

TABLE VII. R-Square Test Result

	R-square	Description
BI	0.621	Moderate
UB	0.662	Moderate

The study found that the R-Square ( $R^2$ ) value for behavioural intention is 0.621, indicating that the independent variables explain 62.1% of the variability, while external factors likely influence the remaining 37.9%. According to the  $R^2$  value of 0.662, the model's independent variables account for 66.2% of use behaviour variation, while external factors account for 33.8%.

Graphs a and b in the Importance-Performance Map Analysis (IPMA) show how enabling circumstances (FC–Blue), hedonic motivation (HM–Orange), perceived post (PC–Yellow), and social influence (SI–Purple) affect behavioural intention (BI). This analysis is instrumental in identifying factors that exhibit high importance but low performance, highlighting areas that require targeted improvement efforts.

From Graph a, it is evident that facilitating conditions and perceived cost demonstrate high importance but relatively low performance in influencing behavioural intention. This finding suggests that improving service accessibility and addressing cost perceptions are critical to strengthening users' intentions. Meanwhile, in Graph b, facilitating conditions and hedonic motivation are identified as highly important yet underperforming factors in influencing use behaviour, emphasizing the need to enhance both service convenience and the quality of user experiences. Improving these aspects can foster greater comfort and sustained engagement among users in utilizing the JASTIP platform.

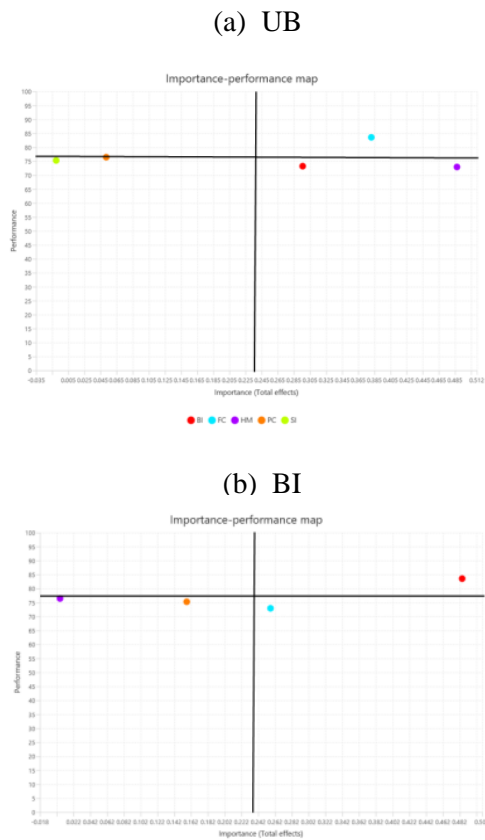


Fig. 3. IPMA for (a) Use Behaviour (UB) and (b) Behavioural Intention (BI)

TABLE VIII. IPMA for all dependent variables

	UB		BI	
	Performance	Total Effects	Performance	Total Effects
BI	75.203	0.478		
FC	83.552	0.296	83.552	0.469
HM	76.806	0.461	76.806	0.224
PC	76.521	0.089	76.521	0.157
SI	75.237	0.021	75.237	0.103

Based on the results presented in Table 8, Behavioural Intention demonstrates a performance score of 75.203 and a total effect of 0.478, establishing it as the primary driver of Use Behaviour. Facilitating Conditions also show a high performance score (83.552) and a significant total effect (0.296), underscoring its crucial role in promoting service usage. On the other hand, Hedonic Motivation contributes a notable total effect 0.461, indicating that positive experiences can significantly enhance user engagement. In contrast, Perceived Cost and Social Influence exhibit relatively low total effects (0.089 and 0.021, respectively), suggesting they have a less significant influence on Use Behaviour within this context.

V. DISCUSSION AND CONCLUSION

Hedonic motivation (H1) and social influence (H6) significantly affect behavioural intention, with T-statistics of 5.300 (p = 0.002) and 1.980 (p = 0.048), respectively, as shown

in Table 5. These findings are consistent with previous studies, which confirm that enjoyment and social encouragement are key determinants of users' intentions toward digital services [8], [16]. Users who experience excitement or entertainment while using the service are more likely to develop strong intentions to continue using it. This suggests that JASTIP serves not only as an additional service but also as a vital component fostering emotional and social engagement within the e-marketplace environment.

Conversely, perceived cost does not exhibit a significant influence on use behaviour (H3: T = 0.594, p = 0.533) or behavioural intention (H4: T = 0.073, p = 0.942). This finding contrasts with previous studies, which suggested that cost considerations could inhibit the adoption of digital services [4], [29]. In this context, the insignificant results indicate that users may prioritize perceived value and convenience over financial concerns. It appears that users are more motivated by the service's ease of use and overall experience than by the monetary cost.

Facilitating circumstances substantially affected use behaviour (H7: T = 2.569, p = 0.010) and behavioural intention (H8: T = 5.459, p = 0.000). These results reflect earlier research [17], [30] that emphasise technical support, suitable infrastructure, and user-friendly system characteristics in digital service uptake. A satisfying and lasting user experience in JASTIP requires stable internet connectivity and an intuitive UI.

Gender limitedly moderated social impact and behavioural intention (H6: T = 2.112, p = 0.035). This supports [8] that women are more receptive to social and environmental factors such friends and family suggestions. Gender did not alter hedonic motivation, perceived cost, enabling circumstances, and behavioural intention (p > 0.05). As mentioned in [19], these factors appear to affect behavioural intention consistently across genders.

Based on R-square (R<sup>2</sup>), the model variables explain 62.1% of behavioural intention variation and 66.2% of use behaviour variance, suggesting predictive power. This shows good predictive value, although cultural, psychological, and environmental variables may still explain 30–40% of the variation. The IPMA shows that hedonic motivation and enabling situations are crucial yet underperforming. Although these characteristics drive adoption intentions and behaviour, consumers may evaluate their quality or efficacy as poor. Thus, JASTIP platform development should emphasize user experience, infrastructure, and service features.

In summary, this study confirms that hedonic motivation, social influence, and facilitating conditions are the main drivers of e-marketplace adoption, with supporting features such as JASTIP strengthening the user experience. Users who enjoy the service, have easy access, and receive social support tend to have stronger intentions to continue using the platform.

Interestingly, perceived cost does not act as a significant barrier, indicating that convenience, functional benefits, and positive experiences are prioritized over financial considerations. The relatively high  $R^2$  values show that the model effectively explains variations in intention and usage behaviour in the context of platform adoption, primarily through the utilization of supplementary features such as JASTIP.

#### A. Theoretical Implications

The findings of this study offer several actionable strategies to accelerate e-marketplace adoption, especially in regions with limited infrastructure, such as West Papua. Given the strong influence of Facilitating Conditions (FC), local governments and service providers must prioritize improvements in digital infrastructure, ensure more stable internet access, and design user-friendly platforms with accessible technical support. Enhancing JASTIP services as intermediaries between users and e-marketplaces also presents a strategic opportunity; partnerships with e-marketplace platforms and the introduction of specialized features or loyalty incentives for JASTIP transactions could effectively reach users less familiar with digital commerce. Additionally, platforms should focus on strengthening Hedonic Motivation (HM) by creating engaging and enjoyable user experiences through interactive features, appealing interface designs, personalized product recommendations, and gamified reward systems.

Marketing strategies should also leverage the importance of Social Influence (SI), particularly among female users, by utilizing local influencers, customer testimonials, and referral programs to foster trust and encourage wider adoption. Although Perceived Cost (PC) was not found to be a significant barrier, maintaining pricing transparency and offering flexible payment options can further enhance the appeal of JASTIP services. Discount programs or loyalty rewards could serve as additional incentives. Moreover, improving digital literacy remains essential; collaborative initiatives between governments, e-marketplaces, and JASTIP providers to conduct training and education programs on safe and efficient digital transactions will help bridge the digital divide. Lastly, the Importance-Performance Map Analysis (IPMA) results emphasize that focusing on improving Facilitating Conditions and Hedonic Motivation should be a top priority to maximize adoption and sustain the growth of e-marketplace usage in underdeveloped regions.

#### B. Limitations and Future Research Directions

Limitations in this study provide opportunities for further investigation. Hedonic Motivation (HM), Social Influence (SI), Facilitating Conditions (FC), and Perceived Cost (PC) are the only factors evaluated. Trust, perceived risk, and service quality were ignored. These characteristics should be included in future research to understand JASTIP service acceptance better. The research was confined to a narrow set of responders, limiting its generalizability. Future studies should involve a broader and representative sample across demographic and geographic backgrounds to expand on current work.

Additionally, this research examined gender as the sole moderator. Future studies might incorporate demographic factors like age, education, and technological experience into the moderation analysis. It would also be valuable to explore external factors, such as technological advancements and regulatory changes, that could affect JASTIP service adoption. By addressing these areas, future research can offer more profound and more nuanced insights, leading to more robust recommendations for enhancing the development and adoption of JASTIP.

#### REFERENCES

- [1] & B. & C. Google, Temasek, "e-Conomy SEA 2022: Through the waves, towards a sea of opportunity," 2022. [Online]. Available: <https://economysea.withgoogle.com/>
- [2] B. P. S. P. Barat, "Provinsi Papua Barat Dalam Angka 2023," 2023. [Online]. Available: <https://papuabarats.bps.go.id/id/publication/2023/02/28/1675aaebd5ba59b4d6e1cdd3/provinsi-papua-barat-dalam-angka-2023.html>
- [3] V. Venkatesh, M. G. Morris, G. B. Davis, and F. D. Davis, "User Acceptance of Information: Toward a Unified View," *MIS Q.*, vol. 27, no. 3, pp. 425–478, 2003, [Online]. Available: <https://www.jstor.org/stable/30036540>
- [4] Y. K. Dwivedi, N. P. Rana, A. Jeyaraj, M. Clement, and M. D. Williams, "Re-examining the Unified Theory of Acceptance and Use of Technology (UTAUT): Towards a Revised Theoretical Model," *Inf. Syst. Front.*, vol. 21, no. 3, pp. 719–734, 2019, doi: 10.1007/s10796-017-9774-y.
- [5] H. Khechine, S. Lakhal, D. Pascot, and A. Bytha, "UTAUT Model for Blended Learning: The Role of Gender and Age in the Intention to Use Webinars," *Interdiscip. J. e-Skills Lifelong Learn.*, vol. 10, pp. 33–52, 2014, doi: 10.28945/1994.
- [6] K. Al-Saedi, M. Al-Emran, T. Ramayah, and E. Abusham, "Developing a general extended UTAUT model for M-payment adoption," *Technol. Soc.*, vol. 62, pp. 1–10, 2020, doi: 10.1016/j.techsoc.2020.101293.
- [7] L. Yu, Z. Chen, P. Yao, and H. Liu, "A study on the factors influencing users' online knowledge paying-behaviour based on the utaut model," *J. Theor. Appl. Electron. Commer. Res.*, vol. 16, no. 5, pp. 1768–1790, 2021, doi: 10.3390/jtaer16050099.
- [8] V. Venkatesh, J. Y. L. Thong, and Xin Xu, "Consumer SEBUAH CCEPTANCE DAN U SE OF saya NFORMASI T echnology: EXTENDING THE UNIFIED THEORY," *MIS Q.*, vol. 36, no. 1, pp. 157–178, 2012.
- [9] T. Zhang, C. Lu, and M. Kizildag, "Banking 'on-the-go': examining consumers' adoption of mobile banking services," *Int. J. Qual. Serv. Sci.*, vol. 10, no. 3, pp. 279–295, 2018, doi: 10.1108/IJQSS-07-2017-0067.
- [10] A. Tarhini, K. Hone, and X. Liu, "The effects of individual differences on e-learning users' behaviour in developing countries: A structural equation model," *Comput. Human Behav.*, vol. 41, no. July, pp. 153–163, Dec. 2014, doi: 10.1016/j.chb.2014.09.020.
- [11] C. M. Ringle and M. Sarstedt, "Gain more insight from your PLS-SEM results the importance-performance map analysis," *Ind. Manag. Data Syst.*, vol. 116, no. 9, pp. 1865–1886, 2016, doi: 10.1108/IMDS-10-2015-0449.
- [12] A. A. Alalwan, "Mobile food ordering apps: An empirical study of the factors affecting customer e-satisfaction and continued intention to reuse," *Int. J. Inf. Manage.*, vol. 50, no. February 2019, pp. 28–44, 2020, doi: 10.1016/j.ijinfomgt.2019.04.008.
- [13] R. Yadav and G. S. Pathak, "Determinants of Consumers' Green Purchase Behaviour in a Developing Nation: Applying and Extending the Theory of Planned Behaviour," *Ecol. Econ.*, vol. 134, pp. 114–122, 2017, doi: 10.1016/j.ecolecon.2016.12.019.
- [14] A. Gupta, N. Dogra, and B. George, "What determines tourist adoption of smartphone apps?: An analysis based on the UTAUT-2 framework," *J. Hosp. Tour. Technol.*, vol. 9, no. 1, pp. 48–62, 2018, doi: 10.1108/JHTT-02-2017-0013.
- [15] Y. Zhao, Q. Ni, and R. Zhou, "What factors influence the mobile health service adoption? A meta-analysis and the moderating role of age," *Int.*

- J. Inf. Manage.*, vol. 43, no. December 2016, pp. 342–350, 2018, doi: 10.1016/j.ijinfomgt.2017.08.006.
- [16] A. A. Alalwan, Y. K. Dwivedi, and N. P. Rana, “Factors influencing adoption of mobile banking by Jordanian bank customers: Extending UTAUT2 with trust,” *Int. J. Inf. Manage.*, vol. 37, no. 3, pp. 99–110, 2017, doi: 10.1016/j.ijinfomgt.2017.01.002.
- [17] V. Venkatesh, J. Y. L. Thong, and X. Xu, “Unified Theory of Acceptance and Use of Technology: A Synthesis and the Road Ahead by Viswanath Venkatesh, James Y.L. Thong, Xin Xu :: SSRN,” *J. Assoc. Inf. Syst.*, vol. 17, no. 5, pp. 328–376, 2016, [Online]. Available: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2800121](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2800121)
- [18] H. Taherdoost, “A review of technology acceptance and adoption models and theories,” *Procedia Manuf.*, vol. 22, pp. 960–967, 2018, doi: 10.1016/j.promfg.2018.03.137.
- [19] J. F. Hair, G. T. Hult, C. Ringle, and M. Sarstedt, *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM) - Joseph F. Hair, Jr., G. Tomas M. Hult, Christian Ringle, Marko Sarstedt*. 2017.
- [20] N. Kock and P. Hadaya, “Minimum sample size estimation in PLS-SEM: The inverse square root and gamma-exponential methods,” *Inf. Syst. J.*, vol. 28, no. 1, pp. 227–261, 2018, doi: 10.1111/isj.12131.
- [21] M. Sarstedt, C. M. Ringle, and J. F. Hair, *Handbook of Market Research*, no. July. 2020. doi: 10.1007/978-3-319-05542-8.
- [22] D. I. Inan *et al.*, “Technology anxiety and social influence towards intention to use of ride-hailing service in Indonesia,” *Case Stud. Transp. Policy*, vol. 10, no. 3, pp. 1591–1601, 2022, doi: 10.1016/j.cstp.2022.05.017.
- [23] D. I. Inan *et al.*, “Service quality and self-determination theory towards continuance usage intention of mobile banking,” *J. Sci. Technol. Policy Manag.*, vol. 14, no. 2, pp. 303–328, 2023, doi: 10.1108/JSTPM-01-2021-0005.
- [24] Z. Shoheib and E. A. Abu-Shanab, “Adapting the UTAUT2 Model for Social Commerce Context,” *Int. J. E-bus. Res.*, vol. 18, no. 1, pp. 1–20, 2022, doi: 10.4018/IJEER.293293.
- [25] M. Z. Alam, M. R. Hoque, W. Hu, and Z. Barua, “Factors influencing the adoption of mHealth services in a developing country: A patient-centric study,” *Int. J. Inf. Manage.*, vol. 50, no. October 2018, pp. 128–143, 2020, doi: 10.1016/j.ijinfomgt.2019.04.016.
- [26] J. Henseler, C. M. Ringle, and M. Sarstedt, “A new criterion for assessing discriminant validity in variance-based structural equation modeling,” *J. Acad. Mark. Sci.*, vol. 43, no. 1, pp. 115–135, 2015, doi: 10.1007/s11747-014-0403-8.
- [27] D. I. Inan *et al.*, “How personal, technical, social environments affecting generation Z to utilise video-based sharing platform in learning process during crisis?,” *Res. Pract. Technol. Enhanc. Learn.*, vol. 19, 2024, doi: 10.58459/rptel.2024.19003.
- [28] J. F. Hair, G. T. M. Hult, C. M. Ringle, M. Sarstedt, N. P. Danks, and S. Ray, *Evaluation of Formative Measurement Models*. 2021. doi: 10.1007/978-3-030-80519-7\_5.
- [29] A. Gupta, A. Yousaf, and A. Mishra, “How pre-adoption expectancies shape post-adoption continuance intentions: An extended expectation-confirmation model,” *Int. J. Inf. Manage.*, vol. 52, no. April 2019, p. 102094, 2020, doi: 10.1016/j.ijinfomgt.2020.102094.
- [30] N. P. Rana, Y. K. Dwivedi, and M. D. Williams, “A meta-analysis of existing research on citizen adoption of e-government,” *Inf. Syst. Front.*, vol. 17, no. 3, pp. 547–563, 2015, doi: 10.1007/s10796-013-9431-z.