FACTORS INFLUENCING TECHNOLOGY ADOPTION AMONG SMES: A CASE STUDY OF YOUTAP AND THE ROLE OF PERFORMANCE EXPECTANCY AND EFFORT EXPECTANCY

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Abstract
This study examines the factors influencing technology acceptance among Indonesian Micro, Small, and Medium Enterprises (MSMEs) by analyzing Youtap, a Point of Sales (POS) service provider, as a case study. The research specifically investigates the roles of Performance Expectancy and Effort Expectancy in shaping the intention to adopt such services. Performance Expectancy refers to the perceived benefits and productivity enhancements offered by the technology, while Effort Expectancy relates to the ease of use and simplicity of the system. The study employs a quantitative approach, gathering data from MSME owners and operators through structured surveys. Statistical analysis reveals that both Performance Expectancy and Effort Expectancy significantly influence the intention to adopt Youtap. MSMEs recognize the potential of Youtap to streamline business operations, improve efficiency, and enhance customer engagement, while also valuing the platform's intuitive design and ease of integration. These findings contribute to the broader understanding of technology acceptance within the MSME sector in Indonesia, a critical driver of the national economy. The study highlights actionable insights for technology providers, emphasizing the need to align their solutions with the specific needs and expectations of MSMEs. Strategies that enhance perceived benefits and ease of use can improve adoption rates, fostering technological innovation and competitiveness in the sector.
Keywords: Technology Acceptance, UTAUT, Performance Expectancy, Effort Expectancy, Behavioural Intention, Use Behaviour.

Introduction

ICTs are evolving quickly and have become a research focus due to their complexity and varied applications across industries. They are often tailored to fit the specific needs of organizations, adding to their complexity. Various tools have been developed to track the growth and impact of technology. The Network Readiness Index (NRI) is a tool designed to measure how ready different countries are to use and benefit from Information and Communication Technologies (ICTs). It evaluates 130 countries based on four main categories: Technology, People, Governance, and Impact. Each of these categories is further divided into three sub-categories, making a total of 60 factors that are considered in the evaluation. This tool helps us understand the role and status of ICTs in today's global societies. The NRI model has a "People" pillar, which can be broken down into individual, business, or government levels. Within this pillar, several indicators assess how these stakeholders adopt and use ICTs effectively. Unfortunately, Indonesia's position among the 130 nations is subpar, as indicated in the table below.

Table 1. Indonesian Ranking in The Network Readiness Index (NRI) 2021

Sub-Pillar	Indicators	Ranking
Individuals (55)	Active mobile broadband subscriptions	5
	ICT skills	41
	Use of virtual social networks	76
	Tertiary enrichment	77
	Adult literacy rate	41
Business (119)	Firms with website	111
	GERD financed by business enterprise	80
	Professionals	101
	Technicians and associate professionals	108
	Annual investment in telecommunication services	13
	GERD performed by business enterprise	82
Government (53)	Government online services	70
	Publication and use of open data	28
	Government promotion of investment in emerging tech	24
	R &D expenditure by governments and higher education	72

Source: Network Readiness Index – Benchmarking the Future of the Network Economy, 2022

One possible explanation for this low ranking is that ICT adoption within businesses encompasses Micro, Small, and Medium Enterprises (MSMEs). To clarify, MSMEs are defined differently across countries and international organizations. Factors such as employee count, annual turnover, capital assets, technology use, and management practices all contribute to this definition.

The Indonesian government classifies MSMEs based on net worth or annual sales proceeds. These enterprises fall into three categories: micro, small, and medium. As presented in Table 2.

Table 2. Definition of MSMEs in Indonesia

No	Type of Business	Net Worth	Annual Sales
1.	Micro Business	Have a maximum net worth of IDR 50 million excluding land and buildings for business	Have a maximum annual sale of IDR 300 million
2.	Small Business	Have a net worth greater than IDR 50 million up to a maximum of IDR 500 million excluding land and buildings for business	Have annual sales of more than IDR 300 million to a maximum of IDR 2.5 billion
3.	Medium Enterprise	Have a net worth greater than IDR 500 million up to a maximum of IDR 10 billion excluding land and buildings for business	Have annual sales of more than IDR 2.5 billion up to a maximum of IDR 50 billion

Source: UU No 20/2008 on UMKM

In 2019, Indonesia had 65,471,134 Micro, Small, and Medium Enterprises (MSMEs), constituting 99.99% of all business entities according to a 2022 report by the Indonesian Ministry of Foreign Affairs (Kementerian Luar Negeri Republik Indonesia, 2022).In contrast, large businesses numbered only 5,550 (0.01%). MSMEs played a

crucial role in employment, hiring 116,978,631 workers (97% of the total workforce), while large businesses employed 3,619,507 workers (3%). Additionally, MSMEs contributed significantly to Indonesia's GDP, accounting for 61.07% of the total GDP contribution by all business actors, surpassing large businesses' contribution of 38.93%.

Despite their importance, many MSMEs have yet to embrace digital technologies. Approximately 12 million MSMEs (around 17%) were already operating through digital channels during the initial stages of the Covid-19 pandemic (Indonesia.go.id., 2021). However, the majority (around 53 million MSMEs) still lag behind in adopting digital tools. In their study on digital payment system adoption among Indonesian MSMEs, Najib and Fahma (2020) emphasize the importance of technology adaptation for MSME survival in Indonesia. They also highlight that MSMEs tend to be slow in adopting new technologies, especially given the rapid pace of technological advancements. Additionally, the disinterest of many companies in serving bottom-of-the-pyramid (BOP) consumers, including MSMEs, puts these enterprises at a disadvantage when dealing with change (Dakduk et al., 2020).

In today's world, technology is no longer a luxury; but a necessity (Matikiti et al., 2018). The ease of technology use has contributed to its widespread acceptance (Bakar & Bidin, 2014). Additionally, the mobilization of technology, offering self-service capabilities anytime and anywhere, has further fueled its adoption (Ting et al., 2016). Technology has become deeply ingrained in day-to-day life, affecting businesses that strive to leverage this trend. Despite the benefits it could offer, small to medium enterprises often lag behind in technological adoption (Hoong et al., 2017). The year 2020, marked by the Covid-19 pandemic, accelerated the adoption of digitalization policies as many enterprises enforced work-from-home measures to combat the virus's impact on industries and economies worldwide.

Our research focuses on assessing technology acceptance among Indonesian Micro, Small, and Medium Enterprises (MSMEs), particularly within the financial sector known as fintech (financial technology). Fintech encompasses technological innovations that enhance financial services processes, including payments, financial data analysis, systems, loans, investments, insurance, and digitalization services. In this study, we specifically investigate fintech usage in Point-of-Sale systems.

Point of Sales (POS) technology is widely distributed in Indonesia and increasingly common in stores of all sizes. Originally designed to facilitate transaction processing and tracking, it now integrates both software and hardware. These systems streamline processes such as stock management, bookkeeping, and digital payments. Previously, such capabilities were limited to large businesses, but now even smaller enterprises benefit from this awareness, enabling better-informed decisions.

The 2020 Indonesia Fintech Report revealed that online money lending dominated the Indonesian fintech industry, constituting over half of fintech startups: Online Lending (50%), Payment (23%), Cryptocurrency (8%), Personal Finance (7%), Insurtech (5%), Crowdfunding (3%), Point-of-Sales (2%), and Financial Comparison (2%) (Fintechnews.sg, 2016). Despite Youtap's widespread usage and features related to both POS and aggregator fintech, it remains underrepresented in financial reports and research papers. This lack of attention, coupled with limited studies surrounding Youtap, motivated us to focus on it for our study (Molana, 2021). Determining Youtap's market share compared to competitors has been challenging due to the scarcity of data on POS technology usage in Indonesia. However, considering Youtap's 500,000 users and the

government's Go-Digital target of 30 million MSMEs by 2024, its market penetration appears somewhat limited in this context (Darisman, 2023).

Our research focuses on understanding how Indonesian Micro, Small, and Medium Enterprises (MSMEs) currently adopt trading applications like Youtap and how these tools impact their productivity. Although Youtap operates globally, we specifically study its Indonesian users. We distributed questionnaires across various Youtap operational areas in Indonesia (Java, Sumatra, and Kalimantan) to gather real-world data on user experiences. Our findings indicate that technology acceptance in Indonesia remains modest, despite the benefits. Many businesses hesitate to fully embrace digital solutions. The Covid pandemic highlighted the need for adaptability and flexibility in business survival. We aim to explore the reasons behind this adoption gap and identify critical factors for successful technology implementation. Youtap, with its focus on Point of Sales (POS) adoption within Indonesian MSMEs, stands out as a service provider worth studying. Youtap's vision emphasizes accessibility for businesses of all sizes, and they actively engage with MSME communities and relevant governing bodies. Our research seeks to uncover why MSMEs struggle with digital transitions and how to enhance technology adoption in the post-pandemic era.

Through it we wish to determine what factors are most important in the acceptance of technology in MSMEs and the implications this has both for them and the service providers who created the system.

Research Method
Type and Subject of this study

This study is quantitative in nature in which we will therefore gather numerical data that would then be processed through statistical means to yield conclusions based off of our sample population.

The study will be conducted within the confines of Indonesia, specifically in the Islands of Java, Kalimantan and Sumatera as those islands have the highest number of MSME Youtap users. The users, being owners of their MSMEs will be the target population, with our unit of analysis being one MSME owner. As stipulated in Iacobucci (2010) and Bagozzi (2010) the minimum sample size should be 100 with 200 being a recommended amount.

We used a convenience based non-probability sampling approach to this study. The samples used for our study was anyone in Youtap's user database that voluntarily filled in our survey so long as the individual filling our forms fits the characteristics of our population (Sugiyono, 2013).

Data Collection

Data will be collected through an online survey distributed by Google Forms. The link to the surveys will be sent directly to Youtap users through a database of phone numbers collected with the aid of Youtap. The data itself will be collected in the timeframe of two (2) weeks.

Data Analysis

The data analysis we will use of this study will be descriptive analysis. This method will help us put into words observations made based on the findings of our study and will comprise the calculation of the medium value, the mode value, the average value,

the minimum value, the maximum value and the standard deviation of our data (Ghozali, 2012).

We will supplement this method with the use of inferential analysis using the Partial Least Squared (PLS) methodology developed by Wold (1974). PLS is able to explain the relationship between variables and conduct an analysis within a single test (F. Hair et al., 2014), leading us to choose it for our research. This method will evaluate the robustness of both our internal and external models.

Finally, we will end our data analysis with hypothesis testing from which we will determine the veracity of our hypotheses and from this determine what are the most important factors behind the adoption of technologies in MSMEs.

Result and Discussion
Result

The scale of 1 to 5 are utilized to measure most items. However, for the UB variable, we use a different scale of 1 to 7. This is because the UB scale measures how frequently MSMEs use Youtap, not how much respondents agree with a questionnaire statement.

Based on the survey conducted, the majority of Youtap users who participated are located in Java, accounting for a significant 88.7% of the total respondents. This is followed by Sumatera, which represents 9.3% of the participants. The remaining 2% of the users are from Kalimantan. The survey revealed that the majority of Youtap users are in the food and beverage (F&B) industry, accounting for 78.92% of respondents. Additionally, 8.82% are in the service sector, 3.92% own grocery stores, with the remaining participants engaged in various other retail businesses. The survey indicates a diverse range of business tenure among respondents, with 28.43% operating for less than a year, 43.14% between 1 to 3 years, and an equal percentage, 28.43%, running for more than 3 years. Regarding the number of employees, the majority, 74.51%, have small teams of 1-3 people, followed by 17.65% with 4-10 employees, and a smaller fraction of 7.84% employing more than 10 individuals. The majority of respondents primarily access Youtap through their Android mobile devices, representing 72.06% of users, followed by 16.18% utilizing tablets, 11.27% using iOS mobile devices, and a small fraction of 0.49% utilizing Youtap's device. In terms of the age distribution of business owners, the survey indicates that 74.51% are between 20 and 30 years old, 17.65% fall within the 31-40 age range, and only 7.84% are aged 40 and above. As we can see from this chart below (Figure 1).
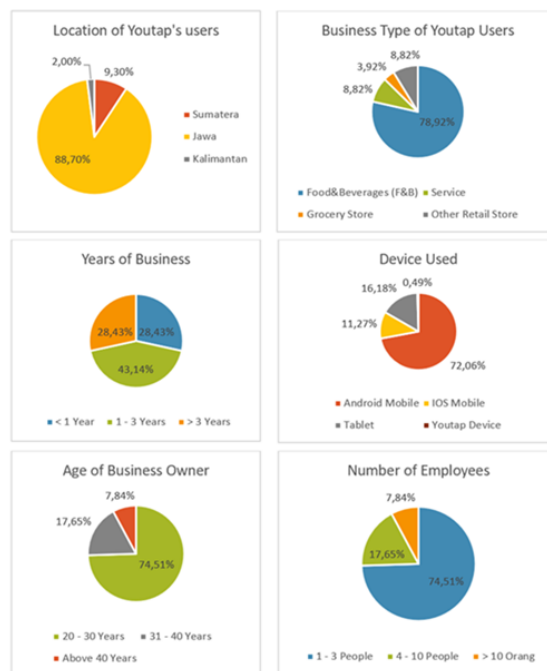
Figure 1. Demographic Data Survey

At first look, it appears that respondents believe Youtap is beneficial for their business. For all variables, MSMEs generally give high scores to Youtap, indicating that they find the service useful and meeting their needs overall.

Validity and Reliability Testing

Table 3. Construct Reliability and Validity

Variables	Items	Cronbach's Alpha	rho_A	Factor Loading	Composite Reliability	Average Variance Extracted (AVE)
Behavioral Intention (BI)	BI1	871	876	798	912	722
	BI2			881		
	BI3			851		
	BI4			866		
Effort Expectancy (EE)	EE1	832	834	0.88	899	749
	EE2			829		
	EE3			886		
Performance Expectancy (PE)	PE1	891	0.89	918	925	756
	PE2			821		
	PE3			913		
	PE4			819		
Use Behavior (UB)	UB1	919	919	964	961	925
	UB2			959		

The validity of the data can be assessed using the Average Extracted Variances (AVE). If the AVE value exceeds 0.5, the data is considered valid. Another indicator of validity is if the loading factor value is above 0.7 (Widarjono, 2015, Hair et al., 2014, and Haryono, 2017). As shown in Table 3, all questionnaire items are deemed valid as each

item's factor loading value is above 0.7. The analysis results in Table 3 confirm that all questionnaire items have a value above 0.7, indicating their validity. Therefore, indicators for this study can be considered reliable for the purpose of analysis.

Discriminant Validity Test

Subsequently, for the discriminant validity test, we will be looking at the Fornell Larcker measurements to ensure the validity of the data collected. The results for this can be found in Tables 4.

Table 4. Discriminant Validity – Fornell Larcker Criterion

	BI	EE	PE	UB
BI	849			
EE	677	865		
PE	641	608	869	
UB	438	308	443	962

For the Fornell Larcker test, as the correlations found in Table 4 between each construct are lesser than the square root of AVE, it can be concluded that the variables pass this discriminant validity test.

Table 5. Discriminant Validity – Cross Loading

	BI	EE	PE	UB
BI1	798	553	482	327
BI2	881	573	561	322
BI3	851	538	498	424
BI4	866	0.63	622	406
EE1	576	0.88	474	214
EE2	557	829	521	314
EE3	622	886	581	273
PE1	549	584	918	379
PE2	519	437	821	433
PE3	541	576	913	366
PE4	605	0.51	819	365
UB1	436	294	402	964
UB2	405	298	452	959

According to the results displayed on Table 5, each indicator passes the discriminant validity test as their cross-loading scores are highest to their latent variable when compared to other variables in this table.

From the final results of our testing, the variables and indicators used for this study can be considered reliable and valid.
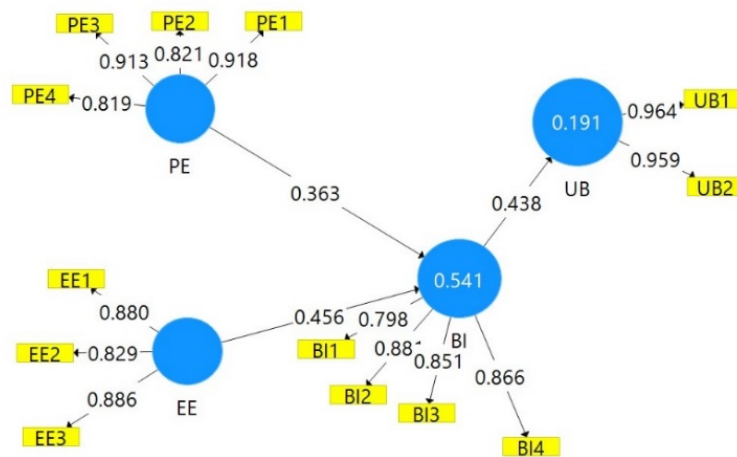
Figure 2. Output Partial Least Square Full Structural Model

Hypothesis Testing

In line with Widarjono (2015) and Haryono (2017), we seek to ascertain the validity of our hypotheses and determine whether or not our independent variables play a role in the Use Behavior of MSMEs who use Youtap. This will be achieved through the use of the SmartPLS software which will provide the results needed to make these assertions. The hypotheses tests for the direct effect between our independent and dependent variables can be found in Table 6 below.

Table 6. Hypothesis Testing

Hypothesis	Original Sample	Sample Mean	(STDEV)	T Statistics (|O/STDEV|)	P Values	Conclusion
BI -> UB	438	0.44	63	6.978	0.0	Accepted
EE -> BI	456	453	87	5.217	0.0	Accepted
PE -> BI	363	0.37	85	4.288	0.0	Accepted

The empirical analysis reveals that both independent variables exert a positive and statistically significant influence on Behavioral Intention. Among these, EE emerges as the most influential factor on BI, as evidenced by a t-statistic value of 5.217. Additionally, we can also discern that BI has a strong positive influence on UB, reinforcing the relationship between these two variables.

Discussion

Performance Expectancy and Behavioral Intention

Performance expectancy positively affects the intention of MSMEs to adopt POS technology in their operations. Our study, based on the UTAUT model, looked into fintech adoption among Indonesian MSMEs. We found a strong positive correlation between Performance Expectancy and Behavioral Intention, thus confirming Hypothesis 1. This is consistent with the findings of previous studies by Ghalandari (2012), Sair et al. (2018), Lowenthal (2010), Azman dan Zabri (2022), and Abdat (2020). This suggests that users' belief that Youtap will bring concrete benefits significantly influences their initial decision to adopt the technology.

Our research implies that fintech firms should focus on improving the expected performance of their platforms. This could mean enhancing the efficiency, dependability, and overall functionality of their services. By doing this, they can positively impact users'

intentions to use the service and, eventually, their actual usage. This approach could be key in increasing the rate of fintech adoption among MSMEs in Indonesia, helping them transition to digital and contributing to the Indonesian economy's growth and resilience. Since our study targets MSME owners, the responses collected offer insights into how these owners perceive Youtap's practical benefits to their livelihoods. However, fintech firms need to understand that while performance expectancy is an important factor, it's not the only one influencing fintech acceptance. Other elements like social influence, facilitating conditions, and individual effort expectancy also matter and shouldn't be ignored. Compared to earlier studies, our research contributes to the growing evidence that supports the crucial role of performance expectancy in influencing behavioral intention and usage behavior. The consistency across studies highlights the strength of the UTAUT theory and its relevance in the context of fintech adoption among Indonesian MSMEs.

Effort Expectancy and Behavioral Intention

The concept of Effort Expectancy has a strong and positive impact on Behavioral Intention (BI), which supports Hypothesis 2 (H2). This is consistent with the findings of several studies, including those by Hung et al. (2019), Catherine et al. (2017), Ghalandari (2012), Lowenthal (2010), and Sair et al. (2018). These results are significant. They suggest that even though Effort Expectancy plays a key role in shaping a person's intention to behave in a certain way, it doesn't directly lead to the actual behavior. This could be because our model doesn't account for other factors like personal traits or outside influences. According to the literature,

Effort Expectancy, a concept from the UTAUT model, remains a strong predictor of a user's intention to adopt technology. For managers, focusing on efforts to make fintech platforms easier to use can positively affect a user's intention to adopt these technologies. Tactics like making user interfaces simpler, giving clear instructions, and adding user-friendly features can lessen the perceived effort and increase user adoption.

Behavioral Intention and Use Behavior

The study found a strong and positive link between Behavioral Intention (BI) and UB, with a coefficient of 6.978, supporting Hypothesis 3. This aligns with earlier research by Al Fajri et al. (2021) and Asastani et al. (2018). These high scores indicate that MSMEs are likely to keep using Youtap's services.

Managers need to understand that influencing user's intentions can lead to actual system use. By focusing on strategies that shape user's attitudes and perceptions towards the fintech platform, they can indirectly affect their usage behavior. Initiatives that improve perceived trust, security, usability, and other factors influencing BI can boost user engagement and adoption. Companies should focus on user-centered design principles to improve the user experience and positively impact behavioral intentions. By knowing what users want and need, companies can create easy-to-use interfaces and features that promote positive attitudes and intentions towards the fintech platform, leading to more usage.

From a scientific viewpoint, these results highlight BI's direct impact on UB, suggesting that MSME's intentions significantly affect their actual Youtap usage. This finding is consistent with the UTAUT framework, which states that behavioral intentions are a crucial factor in actual system usage. The high average score for BI further

strengthens this relationship, showing a strong commitment among MSMEs to keep using Youtap.

The findings suggest that user's intentions to use Youtap strongly predict their actual behavior. Users who intend to continue using the service are likely to show more engagement and loyalty to Youtap. This emphasizes the importance of a positive user experience and addressing any usage barriers to maintain and strengthen user intentions over time.

Conclusion

It is found that both EE followed by PE are significant factors behind why Indonesian MSMEs chose to integrate POS systems such as Youtap into their business processes. This would mean MSMEs are heavily concerned with how much effort they need to expend to learn the new system when deciding whether or not to integrate a technology in their business. This should therefore be an area of priority when targeting this segment as a customer base. The high score of EE is further evidence in the growing trend of increased technology literacy amongst MSMEs who are becoming more acquainted with the benefits and conveniences of modern technology. It is also an indication that Youtap in particular is not a difficult technology to learn and is not a barrier for MSMEs to adopt it.

Furthermore, PE being the second most important factor in influencing BI would indicate that these MSMEs have deemed that technology is not only just a matter of "keeping up with the times" but also a means to improve the performance of their businesses and day-to-day work. From this it can be surmised that the demand from this target segment will only increase over time and that service providers such as Youtap who are building experience in meeting the needs and expectations of these MSMEs will have a distinct advantage should this trend continue in the future. BI was found to have a significant influence on UB, cementing the need to influence the desire of MSMEs to continue to use Youtap. This is consistent with UTAUT based model.

BIBLIOGRAPHY

Abdat, F. A. (2020). Using UTAUT Model to Predict Social Media Adoption among Indonesian SMEs. *Saudi Journal of Economics and Finance*, *4*(10). https://doi.org/10.36348/sjef.2020.v04i10.003

Al Fajri, M., Panjaitan, E. S., & Hanes, H. (2021). Examine the role of motivation in UTAUT model on the use of cloud computing by SMEs during Covid-19 pandemic. *Infokum,* *9*(2), 490–495. https://infor.seaninstitute.org/index.php/infokum/article/view/179

Asastani, H. L., Harisno, Kusumawardhana, V. H., & Warnars, H. L. H. (2018). Factors affecting the usage of mobile commerce using technology acceptance model (TAM) and unified theory of acceptance and use of technology (UTAUT). *INAPR International Conference*, 322–328. https://doi.org/10.1109/INAPR.2018.8627003

Azman, N. H. N., & Zabri, M. Z. M. (2022). Shari'ah compliant fintech usage among microentrepreneurs in Malaysia: An extension of UTAUT model. *Journal of Islamic Monetary Economics and Finance, 8*(2), 305–324.

Bagozzi, R. P. (2010). Structural equation models are modelling tools with many ambiguities: Comments acknowledging the need for caution and humility in their use. *Journal of Consumer Psychology, 20*(2), 208–214.

Bakar, M. S. A., & Bidin, R. (2014). Technology acceptance and purchase intention towards movie mobile advertising among youth in Malaysia. *Procedia - Social and Behavioral Sciences, 130*, 558–567. https://doi.org/10.1016/j.sbspro.2014.04.065

Catherine, N., Geiofrey, K. M., Moya, M. B., & Aballo, G. (2017). Effort expectancy, performance expectancy, social influence and facilitating conditions as predictors of behavioral intentions to use ATMS with fingerprint authentication in Uganda. *Global Journal of Computer Science and Technology: E-Network, Web & Security, 17*(5), 1–19.

Dakduk, S., Santalla-Banderali, Z., & Siqueira, J. R. (2020). Acceptance of mobile commerce in low-income consumers: Evidence from an emerging economy. *Heliyon, 6*(11), e05451. https://doi.org/10.1016/j.heliyon.2020.e05451

Darisman, M. (2023, March 8). Pengguna Youtap Indonesia tembus 500 ribu orang, jumlah transaksi 15 ribu kali. *kumparan.* https://kumparan.com/kumparanbisnis/pengguna-youtap-indonesia-tembus-500-ribu-orang-jumlah-transaksi-15-ribu-kali-1zyVI3zWbqs/full

Fintechnews.sg. (2016). New fintech report highlights Indonesia's untapped digital finance opportunity. *Fintechnews.sg.* https://fintechnews.sg/4814/indonesia/new-fintech-report-highlights-indonesias-untapped-opportunity/

Ghalandari, K. (2012). The effect of performance expectancy, effort expectancy, social influence and facilitating conditions on acceptance of e-banking services in Iran: The moderating role of age and gender. *Middle-East Journal of Scientific Research, 12*(6), 801–807.

Ghozali, I. (2012). *Aplikasi analisis multivariate dengan program SPSS 20.* Semarang: Badan Penerbit Universitas Diponegoro.

Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). *A primer on partial least squares structural equation modeling (PLS-SEM).* Thousand Oaks: SAGE Publications.

Haryono, S. (2017). *Metode SEM untuk penelitian manajemen: AMOS, LISREL, PLS.* Jakarta: Luxima Metro Media.

Hoong, A. L. S., Thi, L. S., & Lin, M.-H. (2017). Affective technology acceptance model: Extending technology acceptance model with positive and negative affect. *Knowledge Management Strategies and Applications.* https://doi.org/10.5772/intechopen.70351

Hung, D. N., Azam, S. F., & Khatibi, A. A. (2019). An empirical analysis of perceived transaction convenience, performance expectancy, effort expectancy and behavior intention to mobile payment of Cambodian users. *International Journal of Marketing Studies, 11*, 77.

Iacobucci, D. (2010). Structural equations modeling: Fit indices, sample size, and advanced topics. *Journal of Consumer Psychology, 20*(1), 90–98. https://doi.org/10.1016/j.jcps.2009.09.003

Indonesia.go.id. (2021). Berkah pandemi, UMKM semakin go digital. *Indonesia.go.id.* https://indonesia.go.id/kategori/indonesia-dalam-angka/2597/berkah-pandemi-umkm-semakin-go-digital

Kementerian Luar Negeri Republik Indonesia. (2022). Indonesia strives to expand coverage of digitalization of MSMEs. *Kementerian Luar Negeri Republik*

Indonesia. https://kemlu.go.id/yangon/en/news/20994/indonesia-strives-to-expand-coverage-of-digitalization-of-msmes

Lowenthal, J. N. (2010). Using mobile learning: Determinates impacting behavioral intention. *The American Journal of Distance Education, 24*(4), 195–206.

Matikiti, R., Mpinganjira, M., & Roberts-Lombard, M. (2018). Application of the technology acceptance model and the technology–organisation–environment model to examine social media marketing use in the South African tourism industry. *SA Journal of Information Management, 20*(1), 1–12. https://doi.org/10.4102/sajim.v20i1.790

Molana, S. Y. (2021, November 26). Kelola bisnis pasca-pandemi makin mudah dengan aplikasi. *Tech in Asia Indonesia - Menghubungkan Ekosistem Startup Indonesia.* https://id.techinasia.com/youtap-kelola-bisnis-makin-mudah-aplikasi

Najib, M., & Fahma, F. (2020). Investigating the adoption of digital payment system through an extended technology acceptance model: An insight from the Indonesian small and medium enterprises.

Sair, S. A., & Danish, R. Q. (2018). Effect of performance expectancy and effort expectancy on the mobile commerce adoption intention through personal innovativeness among Pakistani consumers. *Pakistan Journal of Commerce and Social Sciences (PJCSS), 12*(2), 501–520.

Sugiyono. (2013). *Metode penelitian kombinasi (Mixed Methods).* Bandung: Alfabeta.

Ting, H., Yacob, Y., Liew, L., & Lau, W. M. (2016). Intention to use mobile payment system: A case of developing market by ethnicity. *Procedia - Social and Behavioral Sciences, 224*, 368–375. https://doi.org/10.1016/j.sbspro.2016.05.390

Widarjono, A. (2015). *Analisis multivariat terapan: Dengan program SPSS, AMOS, dan SMARTPLS.* Yogyakarta: UPP STIM YKPN.

Wold, H. (1974). Causal flows with latent variables: Partings of ways in the light of NIPALS modelling. *European Economic Review, 5*(1), 67–86. https://doi.org/10.1016/0014-2921(74)90008-7