

The Impact of Incremental Innovation at Gojek Startup on Users in Batam City Using the Expectation Confirmation Model

Vincent¹, Indasari Deu², Eryc³

^{1,2,3}Faculty of Computer Science, Batam International University

Email: 2131092.vincent@uib.edu

ABSTRACT

In this modern era, the world has witnessed a phenomenal explosion in the growth of startups in various countries. Startups have become the main drivers of innovation and economic growth. Startup businesses are currently experiencing significant and rapid growth, especially in Indonesia. Currently, there are many new startup companies, so innovation is needed to compete with other competitors. Startup development requires creative ideas to attract investors. In addition to innovative ideas, product quality must also be a priority to attract consumer interest. Therefore, this study aims to examine the impact of incremental innovation on startups from the perspective of users in Batam City. The purpose of this study is to examine the impact of incremental innovation on the Gojek application. The author uses the Structural Equation Model (SEM) with the Partial Least Squares method, then the researcher applies the Extended Expectation Confirmation Model (ECM) from the perspective of Gojek application users to analyze the effect of incremental innovation efforts on the Gojek application. The author collects data by distributing questionnaires to people who have made transactions with Gojek. A total of 264 samples have been collected, and the results show that confirmation has a positive effect on the perception of enjoyment, satisfaction, and customer engagement. The results show that the perception of enjoyment and satisfaction has a positive impact on the user's intention to continue using the Gojek application. However, customer engagement does not significantly affect the user's intention to continue using the Gojek application.

Keywords: *Application, Incremental Innovation, Confirmation, Perceived enjoyment, Satisfaction, Customer engagement*

INTRODUCTION

A startup is a newly established company that implements technological innovation to grow and develop rapidly (Karina et al., 2021). In this modern era, the world has witnessed a phenomenal explosion in the growth of startups in various parts of the world (Nasution, 2024). Technology startups have become a major driver of innovation and economic growth (Padli et al., 2024). Startup businesses are currently experiencing significant and rapid growth, especially in Indonesia.

The internet plays a crucial role in the growth of these startups, offering essential tools and platforms that facilitate their operations (Erwina, 2023). By utilizing digital technology, startups can simplify processes, increase customer engagement, and reach a wider market (Suryadi et al., 2021). Technological advancements have become an important foundation that shapes various aspects of life, influencing how people work, learn, and interact with each other. Rapid and continuous technological advancements have brought significant changes to various aspects of life, including politics, society, culture, and economy. These technological developments have redefined daily activities, revolutionized industries, and transformed traditional systems, thus driving major changes in social structures and the way we face challenges in today's interconnected world (Ermawati & Lestari, 2022).

E-commerce or electronic commerce refers to the process of distributing, purchasing, selling, and marketing products and services carried out online via the Internet (Teresya et al., 2022). E-commerce encompasses a variety of activities, including the exchange of goods, digital transactions, and marketing strategies executed through online platforms (Fajarwati, 2020). By utilizing digital technology and the internet, e-commerce facilitates smooth interactions between businesses and consumers, enabling more efficient transactions, wider market reach, and better customer experiences (Sharma et al., 2023). This digital approach has fundamentally changed traditional retail practices and become a major driver of global economic growth in the digital era (Pratama et al., 2021). With the growth of e-commerce, people can now enjoy various conveniences in their daily activities, such as smoother digital transactions, more efficient communication, and wider opportunities to promote goods and services.

The growth of e-commerce allows consumers to shop conveniently from home, explore a wider range of product choices, and simplify the payment process (Aslam, 2023). As previously mentioned, there are currently many new startup companies, so innovation is needed to compete with other competitors (Yuda, Fauzan, Mukhammad, Kholid Mohammad, 2021). Startup development requires creative ideas to attract investors. In addition to innovative ideas, product quality must also be a priority to attract consumer interest (Laksmiana & Ningsih, 2024). Therefore, this study aims to examine the impact of incremental innovation on startups from the perspective of users in Batam City.

Gojek is an example of a startup that has managed to survive and continue to operate to this day. Gojek adopted an incremental innovation strategy by improving its e-commerce services.

Research Gap

Previous studies have investigated the influence of radical and incremental innovation on leading e-commerce startups through the expectation confirmation model, but there has been no research on the influence of incremental innovation in Gojek on users in Batam.

Research purposes

The purpose of this study is to determine the impact of incremental innovation on Gojek on users in Batam City.

METHOD

This study uses the Partial Least Squares Structural Equation Modeling (PLS-SEM) method with SmartPLS software for data analysis. The Partial Least Squares Structural Equation Modeling (PLS-SEM) approach is applied to perform structural equation modeling and analyze the relationships between latent variables. To assess these relationships in the structural model (inner model), a t value of more than 1.96 and the corresponding path coefficients are considered significant (Huang, 2021). Once the outer model meets the required criteria, this study is ready to assess the relationships between all latent variables.

This study uses a quantitative research method. Quantitative methods involve the collection and analysis of numerical data to understand certain phenomena and identify patterns and relationships between variables (Rustamana et al., 2024). This study collected data from 264 Gojek user respondents in Batam City through an electronic survey. These respondents are Gojek users who make transactions with Gojek. The sampling theory used is based on (Hair et al., 2021), which states that a minimum of 10 respondents are needed for each question. Details of respondent data are presented below.

Table 1. Respondents' Gender

Gender	Total	Percentage
Male	122	46.2%
Female	142	53.8%

The data presented in Table 1 shows that of the 264 respondents, 122 identified as male, and 142 identified as female.

Table 2. Respondents' Age

Age	Total	Percentage
16 years old and under	39	14.8%
17-30 years old	151	57.2%
30-40 years old	74	28%

The data presented in Table 2 shows that of the 264 respondents, 39 were 16 years old or younger, 151 were 17-30 years old, and 74 were 30-40 years old.

Table 3. Respondents' Occupations

Occupation	Total	Percentage
Student	68	25.8%
Employee	123	46.6%
Entrepreneur	68	25.8%
Others	5	2%

The data presented in Table 3 shows that of the 264 respondents, 68 of them were students, 123 were employees, 68 were entrepreneurs, and 5 others were from other professions.

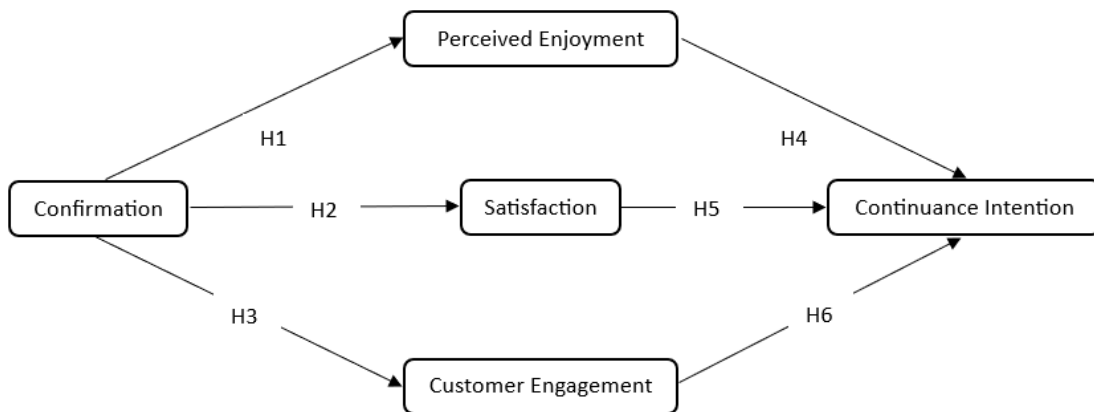


Fig. 1. Research Model

Measurement

This study used the Structural Equation Modeling – Partial Least Squares (SEM-PLS) method for analysis. The PLS method requires an evaluation of the validity and reliability of both the outer and inner models to test the hypothesis (Azlis-Sani et al., 2013). The questions

asked to respondents used a Likert scale. The indicators on the Likert scale are as follows: strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5).

RESEARCH RESULT

Table 4. Validity and Reliability Results

Variable	AVE	CR	CA
Confirmation	0.685	0.896	0.844
Perceived Enjoyment	0.733	0.892	0.818
Satisfaction	0.671	0.891	0.836
Customer Engagement	0.673	0.961	0.956
Continuance Intention	0.712	0.881	0.797

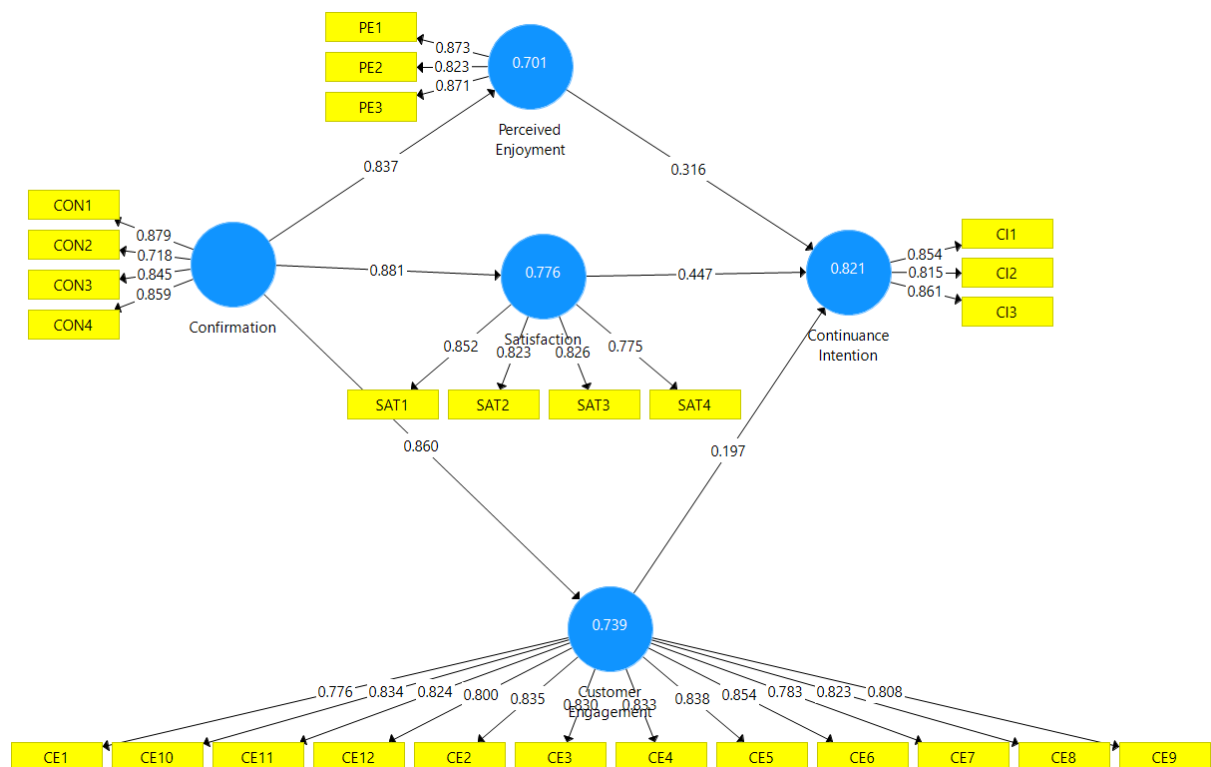


Fig. 2. Results of PLS-SEM Research Model

PLS-SEM requires that the composite reliability (CR) exceeds 0.6, the average variance

extracted (AVE) is greater than 0.5, and Cronbach's alpha (CA) is above 0.5. This study has met the criteria of the outer model, which confirms the validity and reliability of the results. The results of this study indicate that confirmation affects satisfaction (T-value = 23.037) and (P-Value = 0.000), confirmation affects perceived enjoyment (T-value = 16.303) and (P-Value = 0.000), confirmation affects customer engagement (T-value = 15.289) and (P-Value = 0.000). These findings confirm the validity of H1, H2, and H3. The results of satisfaction have an effect on continuation intention (T-value = 5.697) and (P-Value = 0.000), perceived enjoyment has an effect on continuation intention (T-value = 4.037) and (P-Value = 0.000), customer involvement has an effect on continuation intention (T-value = 1.833) and (P-Value = 0.000). These findings confirm the validity of H4, and H5, while H6 is not supported.

Table 5. Statistical results of the structural model.

Variables	T-Value	P Values	Results
Confirmation -> Satisfaction	23,037	0.000	Supported
Confirmation -> Perceived Enjoyment	16,303	0.000	Supported
Confirmation -> Customer Engagement	15,289	0.000	Supported
Satisfaction -> Continuance Intention	5,697	0.000	Supported
Perceived Enjoyment -> Continuance Intention	4.037	0.000	Supported
Customer Engagement -> Continuance Intention	1,833	0.067	Not Supported

DISCUSSION

Increasing confirmation can be an effective approach to reduce dissatisfaction with perceived benefits. The findings of hypothesis 1, state that confirmation affects perceived enjoyment where users tend to prefer using the Gojek application when their expectations of the Gojek application are met. This result is also supported by several studies that show a positive correlation between user confirmation and enjoyment (Shiau & Luo, 2013). Hypothesis 2, states that confirmation affects satisfaction where users are satisfied with what the application provides. This result is also supported by studies (Carissa et al., 2023) and (Muñoz-Carril et al., 2021) which show that people are satisfied with using the Gojek application because it follows the expected benefits of using the information system. Hypothesis 3, states that

confirmation affects customer engagement. This result is also supported by a study (Gunawan et al., 2021) which shows that users may initially have a blurred perception of customer engagement due to uncertainty, but their experience and confirmation of expectations cause a shift in their understanding.

Hypothesis 4, states that perceived enjoyment affects continuation intentions where users will continue using the application if users feel comfortable using the application. This result is also supported by a study (Lestari & Soesanto, 2020) which recognizes perceived enjoyment as the main determining factor influencing users' willingness to continue using the service. Previous research also shows that perceived enjoyment plays an important role in influencing students' intention to adopt a mobile learning system (Chen & Demirci, 2019). Hypothesis 5, states that satisfaction affects continuation intentions where if users are satisfied with the use of the application, then users are more likely to continue using the application. This result is also supported by studies (Nong et al., 2022) and (Elnadi et al., 2024) which identify that satisfaction appears as the main driver of repetitive behavior and is considered the most reliable predictor of continuation intentions. Higher levels of satisfaction are often associated with stronger intentions to continue using the application or spend more time in it. Hypothesis 6, states that customer engagement does not affect continuation intentions. The results of the study (Hepola et al., 2020) showed that each dimension of customer engagement was positively related to continuance intentions.

CONCLUSION

The results of this study indicate that (1) Confirmation has a positive effect on Satisfaction, (2) Confirmation has a positive effect on Perceived Enjoyment, (3) Confirmation has a positive effect on Customer Engagement, (4) Satisfaction has a positive effect on Continuance Intention, (5) Perceived Enjoyment has a positive effect on Continuance Intention, (6) Customer Engagement does not have a positive effect on Continuance Intention. The results of this study indicate that the impact of incremental innovation has a positive effect on the Gojek startup, but (6) Customer Engagement does not have a positive effect on Continuance Intention, therefore further research is needed.

BIBLIOGRAPHY

- Aslam, N. (2023). Consumer Behavior in the Age of E-Commerce. *Journal for Business Research Review*, 1(01), 31–40.
- Azlis-Sani, J., Dawal, SZM, & Zakuan, N. (2013). Validity and Reliability Testing on Train Driver Performance Model Using a PLS Approach. *Advanced Engineering Forum*, 10, 361–366. <https://doi.org/10.4028/www.scientific.net/aef.10.361>
- Carissa, NE, Erlangga, M., Evik, CS, & Handayani, PW (2023). The Influence of Perceived Usefulness, Satisfaction, and Personalization on Subscription Video on Demand Continuance Intentions. *CommIT Journal*, 17(2), 169–184. <https://doi.org/10.21512/commit.v17i2.8446>
- Chen, C.-W., & Demirci, S. (2019). Understanding Mobile Data Services' Continuance: The Role of Enjoyment and Media Richness. *International Journal of Business and Economics*, 18(3), 347–369. https://ijbe.fcu.edu.tw/assets/ijbe/past_issue/No.18-3/pdf/vol_18-3-6.pdf
- Elnadi, M., Troise, C., Jones, P., & Gheith, M. H. (2024). Exploring post-usage behavior in app-based ride-sourcing services: Evidence from Egypt. *Technological Forecasting and Social Change*, 207(December 2023), 123643. <https://doi.org/10.1016/j.techfore.2024.123643>
- Ermawati, S., & Lestari, P. (2022). The Influence of Startups as Digitalization for the Creative Economy in Indonesia. *Transekonomika: Accounting, Business and Finance*, 2(5), 221–228. <https://doi.org/10.55047/transekonomika.v2i5.186>
- Erwina, RMA (2023). E-commerce and Startup: A Form of Business Sustainability Innovation. *Journal of Economics, Entrepreneurship, Management Business and Accounting (JEEMBA)*, 01, 33–39.
- Fajarwati, D. (2020). Introduction to E-Commerce. Faculty of Economics & Business, Esa Unggul University, 1–26.
- Gunawan, F., Santoso, AS, Yustina, AI, & Rahmiati, F. (2021). Examining the effect of radical innovation and incremental innovation on leading e-commerce startups by using the expectation confirmation model. *Procedia Computer Science*, 197(2021), 393–402. <https://doi.org/10.1016/j.procs.2021.12.155>
- Hair, J.F., Hult, G.T.M., Ringle, C.M., Sarstedt, M., Danks, N.P., & Ray, S. (2021). Evaluation of Formative Measurement Models. https://doi.org/10.1007/978-3-030-80519-7_5
- Hepola, J., Leppäniemi, M., & Karjaluoto, H. (2020). Is it all about consumer engagement?

- Explaining continuity of intention for utilitarian and hedonic service consumption. *Journal of Retailing and Consumer Services*, 57(December 2019). <https://doi.org/10.1016/j.jretconser.2020.102232>
- Huang, C. H. (2021). Using the pls-sem model to explore the influencing factors of learning satisfaction in blended learning. *Education Sciences*, 11(5). <https://doi.org/10.3390/educsci11050249>
- Karina, D., Alfiyatus Sa'diyah, S., Nabilah, H., & Panorama, M. (2021). The Influence of Startup Companies on Indonesia's Economic Growth During the Covid-19 Pandemic. *Berajah Journal*, 2(1), 156–166. <https://doi.org/10.47353/bj.v2i1.69>
- Laksmiana, INH, & Ningsih, RA (2024). Analysis of Success Factors of Gojek Startup Services Compared to Other Competitor Startup Services. *TECHNOVATE: Journal of Information Technology and Strategic Innovation Management*, 1(1), 1–8. <https://doi.org/10.52432/technovate.1.1.2024.1-8>
- Lestari, E., & Soesanto, ORC (2020). PREDICTING FACTORS THAT INFLUENCE ATTITUDE TO USE AND ITS IMPLICATIONS ON CONTINUANCE INTENTION TO USE SVOD: STUDY ON NETFLIX USERS OF INDONESIA. *DeReMa (Development Research of Management): Jurnal Manajemen*, 15(2), 183. <https://doi.org/10.19166/derema.v15i2.2541>
- Muñoz-Carril, P.C., Hernández-Sellés, N., Fuentes-Abeledo, E.J., & González-Sanmamed, M. (2021). Factors influencing students' perceived impact of learning and satisfaction in Computer Supported Collaborative Learning. *Computers and Education*, 174(August). <https://doi.org/10.1016/j.compedu.2021.104310>
- Nasution, RS (2024). Optimizing Business Models for Startups in Indonesia in Facing Global Competition. *Circle Archive*, 1–13. <http://www.circle-archive.com/index.php/carc/article/view/201>
- Nong, Y., Buavaraporn, N., & Punnakitikashem, P. (2022). Exploring the factors influencing users' satisfaction and continuance intention of MOOCs in China. *Kasetsart Journal of Social Sciences*, 43(2), 403–408. <https://doi.org/10.34044/j.kjss.2022.43.2.18>
- Padli, A., Khairunnisa, N., Khanza, A., Andayani, D., & Halim, E. (2024). Technology Startup Development Strategy in Indonesia Through IT Business Incubation. 3(1), 73–80.
- Pasaribu, E., & Aruan, DTH (2024). Craving Continuity: Unveiling the Impact of Integrating Information System Success and Expectation Confirmation Models on Sustained Use of

- Food Delivery Apps. *Asian Journal of Engineering, Social, and Health*, 3(6), 1359–1376. <https://doi.org/10.46799/ajesh.v3i6.342>
- Pratama, IR, Zulita, LN, & Sari, HL (2021). Development of Bengkulu Traditional Cake Marketing through E-Commerce Media. 1(1), 157–164.
- Rustamana, A., Wahyuningsih, P., Azka, MF, & Wahyu, P. (2024). Quantitative Method Research. *Sindoro Cendikia Pendidikan*, 5(6), 1–10.
- Sharma, R., Srivastva, S., & Fatima, S. (2023). E-Commerce and Digital Transformation: Trends, Challenges, and Implications. *International Journal For Multidisciplinary Research*, 5(5), 1–9. <https://doi.org/10.36948/ijfmr.2023.v05i05.7128>
- Shiau, W.L., & Luo, M.M. (2013). Continuance intention of blog users: The impact of perceived enjoyment, habit, user involvement and blogging time. *Behavior and Information Technology*, 32(6), 570–583. <https://doi.org/10.1080/0144929X.2012.671851>
- Suryadi, S., Widodo, T., & Domos, E. (2021). Planning and Implementation of the National Startup Seminar in the Creative Industry of the Modern Era Based on Digital Business (Promotion Aspect). *JIHAD: Journal of Law and Administration*, 3(1), 1–7. <https://doi.org/10.58258/jihad.v3i1.2356>
- Teresya, R., Rizka Rahmah Nabiilah, & Safina Tunnajah. (2022). Literature Review of E-Commerce: Profitability, External Pressure, and User Ease. *Journal of Information Systems Management Economics*, 3(4), 474–484. <https://doi.org/10.31933/jemsi.v3i4.979>
- Yuda, Fauzan, Mukhammad, Kholid Mohammad, I. (2021). SME Business Model Innovation. *Profit: Journal of Business Administration*, 15(1), 43–56.