Behavioral Analysis of Fintech Adoption in Sharia Investment with Artificial Intelligence: Stimulus-Organism-Response Approach

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ABSTRACT

Purpose — *Sharia investment is increasingly becoming a choice and priority among Indonesians. This study aims to analyze fintech adoption behavior in sharia investing with artificial intelligence using a stimulus-organism-response (S-O-R) approach.This paper contributes or enriches the behavior of fintech adoption in sharia investing with artificial intelligence which is certainly expected to be a consideration in policy formulation for stakeholders including Islamic financial institutions.*

Method — *This research is a type of field research using quantitative methods. Data collection using questionnaires conducted online through google form. Analysis with PLS-SEM using Smart-PLS with a sample of 100 respondents spread across several regions in Indonesia. The respondents were determined by the main criteria, namely Muslims aged 24-39 years who represent the millennial generation.*

Result — *The results showed that security has a positive effect on trust. In addition, persevied intelligence and service quality positively affect attitude, and trust and attitude positively affect the adoption of fintech-AI. However, unlike perceived usability, persevied intelligence and service quality do not significantly affect trust, besides perceived usability and security do not significantly affect attitude.*

Novelty — *The use of S-O-R Theory in the context of behavioral analysis of fintech adoption in Islamic investing with artificial intelligence has not received enough attention from experts and trust variables as constructs of organisms have relatively never been tested before.*

Keywords: Artificial intelligence, Fintech, S-O-R

INTRODUCTION

Indonesian investors are increasingly interested in Islamic investment. This situation is proven based on data from the Jakarta Stock Exchange (IDX), from 2011 to October 27, 2020, the number of sharia shares increased by 90.3% from 237 to 451 and this number is equivalent to 63.6% of shares on the Jakarta Stock Exchange (IDX). The Director General of Capital Market Supervision of the Financial Services Authority (OJK) also said that Indonesia again won the Best Sharia Capital Market 2020 award at the Global Islamic Finance Awards (GIFA) (Pina 2020). With an increasingly diverse selection of products, it is not surprising that the number of Islamic investors is also increasing. Specifically, from 4,908 investors in 2015 to 89,678 investors in January 2021 (Artanti 2021). Indonesia has become the first Islamic capital market to offer comprehensive investment products connected to the entire spectrum of Islamic philanthropy. Along with the development of technology, more and more financial technology (fintech) companies are providing education about various choices of investment instruments. Currently, sharia-compliant investment is increasingly in demand considering that Indonesia is a country with the largest Muslim population in Indonesia, reaching 86.7%.

In this study, using a stimulus-organism-response (S-O-R) approach in analyzing people's behavior in adopting fintech with AI in sharia investing. The S-O-R approach was chosen because it explains how stimuli from the environment affect organisms and respond to them. The stimulus used is the use of AI technology in fintech, while the organism that responds is the millennial generation community in Indonesia. The elements of this model are stimulus (S), organism (O), and response (R). The S-O-R theory is based on the assumption that the cause of behavioral changes depends on the quality of the stimulus communicating with the organism. The quality of communication sources, such as credibility, leadership, and speaking style, is very important in determining the success of behavior change in individuals, groups, or communities (Rahmat abidin and Abidin 2021). This S-O-R approach explains how stimuli from the environment affect

organisms and respond to them (Mi Alnaser et al. 2023). This theory states that behavior can only change if the stimulus given actually exceeds the original stimulus. A stimulus that exceeds the original stimulus means that the stimulus given must be able to convince the organism (Sultan, Wong, and Azam 2021).

From previous research, the use of the S-O-R model in the context of analyzing fintech adoption behavior in Islamic investing has not received enough attention from experts. However, there are several previous studies related to this study, such as research conducted by (Pillai and Sivathanu 2020), (Rahayu, Mukrodin, and Hariyono 2020), (Hosseini 2020), (Rafiq et al. 2022) and (Hetharie et al. 2019). Research conducted by (Kishada, Wahab, and Mustapha 2016) in Malaysia shows the results that these studies tend to explore people's behavior in adopting AI in the scope of hospitality and tourism. Therefore, as an extension and novelty in this study examines the use of AI in the scope of Islamic investment using the S-O-R approach. The urgency of similar research conducted in Indonesia has two reasons, namely as an expansion of literature in the field of AI and advice for fintech stakeholders who provide Islamic investment services.

This study aims to complement previous studies that have not paid enough attention to the analysis of public behavior in adopting fintech with AI in sharia investing, while specifically this study aims to predict the influence of perceived usability, perseived intelligence, service quality and security as stimulus trust and attitude towards fintech-AI adoption. Thus, this study is considered to be the first study designed to investigate people's behavior in adopting fintech with AI. This research reviews relevant theories and concepts and supports the research thinking to be carried out, and is used for the development of research hypotheses. Discussion of theories and concepts includes people's behavior in adopting fintech with aI.

METHOD

This research is a type of descriptive quantitative research focused on analyzing people's behavior in adopting fintech with AI in sharia investing. The population in this study is the millennial generation in Indonesia who use fintech in investing sharia in Indonesia. The number of populations in this study is not known with certainty, so the adequacy of the number of research samples using the Roscoe approach is 10 times the number of research variables (Sugiyono, 2015). The sampling technique uses nonprobability sampling with the purposive sampling method. The sample selected in this study is the millennial generation who have used fintech. Data collection is done online using google form. The author designed and distributed the questionnaire online using social media. All questions were scored using a 5-point likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree).

This study used two variables, namely independent and dependent variables. The independent variables in this study were perceived usability (X1), perseived intelligence (X2), service quality (X3) and security (X4). While the dependent variables in this study are trust (Y1), attitude (Y2) and fintech-AI adoption (Y3). Data analysis using Structural Equation Modeling Partial Least Square (SEM-PLS) using the SmartPLS 4.0.9.5 PLS-SEM application is chosen because it can confirm the theory and can explain the presence or absence of relationships between latent variables in the model (Hilmawan 2020).

Hypotheses development

Based on the description of the theoretical basis and hypothesis development, it can be constructed the research framework carried out as presented in figure 2 below, namely:

Figure 2. Research Theoretical Framework
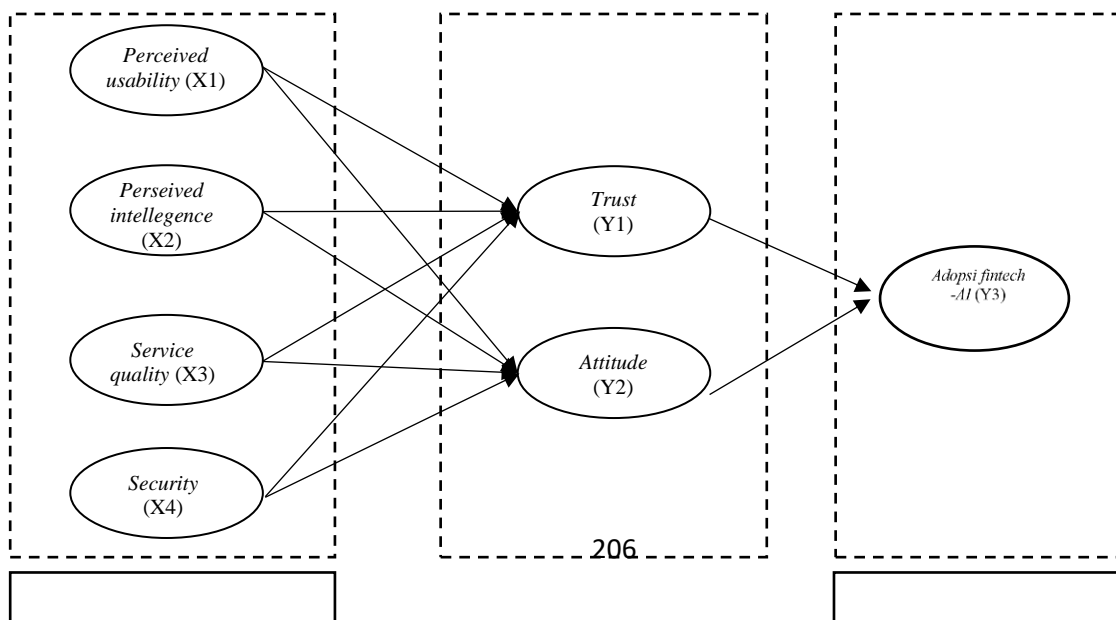
	Stimulus	Organism	Reponse

H1. Perceived usability positively affects trust
H2. Perceived usability positively affects attitude
H3. Perseived intelligence positively affects trust
H4. Perceived intelligence positively affects attitude
H5. Service quality has a positive effect on trust
H6. Service quality has a positive effect on attitude
H7. Security positively affects trust
H8. Security has a positive effect on attitude
H9. Trust positively influences fintech-AI adoption
H10. Attitude has a positive influence on fintech-AI adoption

RESULT AND DISCUSSION

Result

The respondents in this study were 100 millennials who had used fintech. Respondents' demographic information can be observed in table 1:

Table 1. Respondent Demographic Data

Demographics	Category	Frequency	Percentage
Gender	Man	35	35%
	Woman	65	65%
Age	24 - 28	82	82%
	29 – 33	11	11%
	34 - 39	7	7%
Provincial Origin	Sumatra	7	7%
	Jawa	16	16%
	Kalimatan	2	2%
	Sulawesi	73	73%
	Maluku	2	2%
Work	Student	29	29%
	Private Officers	10	10%
	State Officer/ASN	9	9%
	Entrepreneurial	18	18%
	Lecturer/Teacher	9	9%
	Policies/TNI	0	0%
	Other	29	29%
Monthly Allowance	< Rp 500.000	31	31%
	Rp. 500.000 s/d Rp. 1.000.000	26	26%
	Rp. 1.000.000 s/d Rp. 1.500.000	15	15%
	> Rp. 1.500.000	28	28%

Source: Primary Data, Processed (2023)

From table 1, it can be seen that the millennial generation in Indonesia has used fintech. The majority of research respondents were dominated by female gender (with a percentage of 65%), age (dominated by 24-28 years with a percentage of 82%), provincial origin (dominated by Sulawesi island with a percentage of 73%), work (dominated by students and others with a percentage of 29%) and monthly income/pocket money (the majority of respondents spent pocket money per month < IDR 500,00.00 with an amount of as much as a percentage by 31%).

Outer Model

This validity and reliability test was carried out to analyze the feasibility of the indicators (question items) used in the study (Dyah Budiastuti and Bandur 2018). Validity testing is carried out through 3 criteria, namely convergent validity by looking at the outer loading value must be above > 0.7, discriminant validity

by looking at the cross loading value > 0.7 or the Average Variance Extracted (AVE) value must be above > 0.5 and composite reliability by looking at the value of composite reliability and Crobach's alpha should be above > 0.7.

Table 2. Validity and Reliability Test Results

Variable	Indicator	Loading	AVE	CR & CA
Perceived usability (X1)	X1.1	0.907	0.821	0.932 0.927
	X1.2	0.875		
	X1.3	0.915		
	X1.4	0.926		
Perseived intellegence (X2)	X2.1	0.919	0.837	0.952 0.935
	X2.2	0.916		
	X2.3	0.943		
	X2.4	0.880		
Service quality (X3)	X3.1	0.894	0.839	0.937 0.936
	X3.2	0.917		
	X3.3	0.931		
	X3.4	0.922		
Security (X4)	X4.1	0.935	0.860	0.947 0.946
	X4.2	0.952		
	X4.3	0.920		
	X4.4	0.903		
Trust (Y1)	Y1.1	0.907	0.834	0.937 0.933
	Y1.2	0.870		
	Y1.3	0.948		
	Y1.4	0.927		
Attitude (Y2)	Y2.1	0.901	0.873	0.954 0.951
	Y2.2	0.944		
	Y2.3	0.964		
	Y2.4	0.929		
Fintech-AI adoption (Y3)	Y3.1	0.871	0.888	0.961 0.957
	Y3.2	0.953		
	Y3.3	0.967		
	Y3.4	0.975		

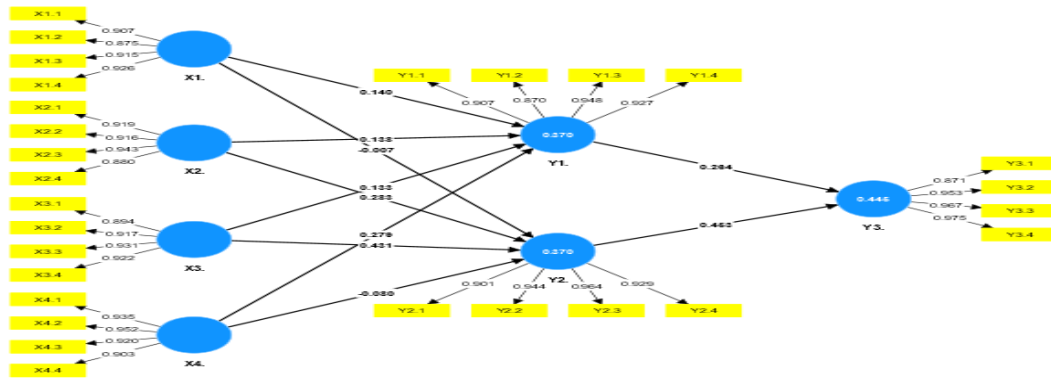Source: Primary Data, Processed with Smart-PLS (2023)

Based on table 2, it can be seen that the loading factor value of each indicator above > 0.7 so that the indicators used in the study are valid and can be used in the next analysis. The results of data processing also show that all constructs measured are reliable because the Cronbach Alpha (CA) value of each variable is above 0.7 so that it can be said that the research variable has good reliability and can be at the next stage of analysis, with an NFI value of 0.805 as in table 3 and figure 3 below:

Table 3. R-square value

	Saturated model	Estimated model
SRMR	0.051	0.138
d_ULS	1.058	7.741
d_G	1.991	2.672
Chi-square	937.691	1074.925
NFI	0.767	0.733

Source: Primary Data, Processed with Smart-PLS (2023)

Figure 3. Outer Model Results

Source: Primary Data, Processed with Smart-PLS (2023)

Inner Model

Structural model testing is a test carried out to determine the influence between latent variables and others. The structural model in PLS was evaluated using R2, the value of the path coefficient to test the significance between constructs in the structural model (Oktavia et al. 2021). This test is by looking at the R-Square value or coefficient determination to find out whether the research model has a high or low influence. The standard measurement on R2 is in the range between > 0.67 (strong), around 0.33-0.67 (moderate), and below 0.19-0.33 (weak)

Table 4. R-Square value

Variable	R-Square	R-Square Adjusted
Trust (Y1)	0.370	0.344
Attitude (Y2)	0.370	0.343
Fintech-AI adoption (Y3)	0.445	0.434

Source: Primary Data, Processed with Smart-PLS (2023)

Based on the results of table 4, it can be seen that the R-Square trust value of 37.0% and attitude of 37.0% can be explained by independent variables (construction X1, X2, X3 and X4) and the adoption value of fintech-AI 44.5% can be explained by independent variables (constructs Y1 and Y2). So it can be said that the influence of the independent variable on the dependent variable is moderate because the value is above 0.33.

Hypothesis testing is done to find out the hypothesis it is accepted or rejected as well as the direction of the relationship. Hypotheses with a T-Statistics value of > 1.96 and a P-Value of < 0.05 are accepted (significant). While the original value of the sample leads to the relationship between the influence of positive or negative research variables (Meiryani 2021)

Table 5. Inner Model Results

No	Variable	Original Sample (O)	T Statistic	P Values	Ket.
H1	Perceived usability → trust	0.140	1.045	0.299	Rejected
H2	Perceived usability → attitude	-0.007	0.053	0.958	Rejected
H3	Perseived intellegence → trust	0.138	1.063	0.290	Rejected
H4	Perseived intellegence → attitude	0.283	2.096	0.039	Accepted

H5	Service quality → trust	0.133	0.902	0.369	Rejected
H6	Service quality → attitude	0.431	2.476	0.015	Accepted
H7	Security → trust	0.279	2.177	0.032	Accepted
H8	Security → attitude	-0.080	0.535	0.594	Rejected
H9	Trust → Fintech adoption-AI	0.264	2.197	0.030	Accepted
H10	Attitude → Fintech adoption -AI	0.453	3.430	0.001	Accepted

Source: Primary Data, Processed with Smart-PLS (2023)

The results of the table analysis above are known to have five hypotheses accepted and five hypotheses rejected. There are five hypotheses that are stated to be accepted, namely X2→Y2, X3→Y2, X4→Y1, Y1 → Y3 and Y2 →Y3. While four other hypotheses were rejected because the T-Statistic value and P-Value value did not meet, namely X1→Y1, X1→Y2, X2→Y1 , X3 → Y1 and X4 →Y2.

Hypothesis four tests whether perceived intelligence positively affects attitude. The results of the test conducted showed that the value of the coefficient was 0.283 and the t-statistic was 2.096 > 1.96, so it can be concluded that the t-statistic is significant. The fourth hypothesis is accepted and has a positive effect because the P-Value is 0.039 < 0.05.

The sixth hypothesis tests whether service quality has a positive effect on attitude. The results of the test conducted showed that the value of the coefficient was 0.431 and the t-statistic was 2.476 > 1.96, so it can be concluded that the t-statistic is significant. The sixth hypothesis is accepted and has a positive effect because the P-Value is 0.015 < 0.05.

The hypothesis aims to test whether security has a positive effect on trust. The results of the test conducted showed that the value of the coefficient was 0.279 and the t-statistic was 2.177 > 1.96, so it can be concluded that the t-statistic is significant. The aiming hypothesis is accepted and has a positive effect because the P-Value is 0.032 < 0.05.

The ninth hypothesis tests whether trust positively affects fintech-AI adoption. The results of the test conducted show that the value of the coefficient is 0.264 and the t-statistic is 2.197 > 1.96, it can be concluded that the t-statistic is significant. The ninth hypothesis is accepted and has a positive effect because the P-Value is 0.030 < 0.05. The results of this study reinforce the results of research conducted by (Suhartanto et al. 2022) which shows that Perceived trust has a significant effect on loyalty towards mobile banking.

The tenth hypothesis tests whether trust positively affects fintech-AI adoption. The results of the test conducted showed that the value of the coefficient was 0.453 and the t-statistic was 3.430 > 1.96, so it can be concluded that the t-statistic is significant. The tenth hypothesis is accepted and has a positive effect because the P-Value is 0.001 < 0.05. The results of this study are also in line with the results of research conducted by (Suhartanto et al. 2022) which shows that attitudes towards AI have a significant effect on loyalty towards mobile banking.

Discussion

The behavior of fintech-AI adoption is influenced by several factors that can drive a person's decision to use fintech in sharia investing. In general, the variables used in this study showed a significant relationship. However, there are also some variables that show insignificant values. as shown by Table 5. This research shows that security has a positive effect on trust. In addition, perseived intelligence and service quality positively affect attitude, and trust and attitude positively affect the adoption of fintech-AI. However, unlike perceived usability, perseived intelligence and service quality do not significantly affect trust, while perceived usability and security do not significantly affect attitude.

That means, that the stimulation or stimulus obtained by the perceived intelligence and high quality of service in the use of fintech is considered to have an influence on the attitude of the millennial generation. On the other hand, the stimulus obtained by the security of fintech felt by users can affect the confidence of the millennial generation to use fintech in investing in sharia. Furthermore, the millennial generation who received the stimulation led to the emotional and cognitive state of the individual and their subconscious actions in intervening between stimuli and responses, and finally the response of the millennial generation to adopt fintech-AI.

Examined further, several influences between variables can also be seen from perseived intelligence, service quality, a significant and positive effect on attitude, as well as attitude variables have a significant and positive effect on digital-AI adoption as shown by (Rafiq et al. 2022) that the S-O-R approach to behavior digital-AI adoption is a theoretical approach that corresponds to a bi-dimensional attitude.

CONCLUSION

Overall, this study aims to analyze the behavior of the millennial generation in adopting fintech with AI in investing in sharia. The results showed that stimulus constructs in the form of perceived intelligence and high service quality as well as security in using fintech with AI are choices for the millennial generation to adopt fintech-AI in sharia investing. So it is important to improve the quality of fintech services and the benefits of fintech intelligence with AI. Furthermore, the construct of organisms in the form of people's beliefs and attitudes will ultimately shape the behavior of fintech-AI adoption. So it can be concluded that the behavior of fintech-AI adoption will be formed through the beliefs and attitudes of the millennial generation in Indonesia.

REFERENCES

1. Akhtar, Sadia, Muhammad Irfan, Shamsa Kanwal, and Abdul Hameed Pitafi. 2019. "Analysing UTAUT with Trust toward Mobile Banking Adoption in China and Pakistan: Extending with the Effect of Power Distance and Uncertainty Avoidance." *International Journal of Financial Innovation in Banking* 2(3):183. doi: 10.1504/ijfib.2019.102307.
2. Alonso-Dos-Santos, M., Y. Soto-Fuentes, and V. A. Valderrama-Palma. 2020. "Determinants of Mobile Banking Users' Loyalty." *Journal of Promotion Management* 26(5):615–33. doi: 10.1080/10496491.2020.1729312.
3. Budiman, Jhony, Hesniati, Candy, Vincent, Celine Kho, Devin, and Kelly. 2023. "Analisis Faktor Yang Mempengaruhi Niat Gen Z Untuk Mengadopsi Fintech Syariah." *Management Studies and Entrepreneurship Journal* 4(3):1944–55.
4. Djulianto, Michael Vinsent. 2022. "Peran Perceived Usability, Satisfaction, Dan Customer Trust Dalam Merancang Dan Mengembangkan Loyalitas Pengguna Website Edutech"." Universitas Dinamika.
5. Djulianto, Michael Vinsent, Ayouvi Poerna Wardhanie, and Candraningrat Candraningrat. 2022. "The Role of Perceived Usability, Satisfaction, and Customer Trust in Design and Developing User Loyalty Edutech Website." *Business and Finance Journal* 7(2):183–94. doi: 10.33086/bfj.v7i2.3493.
6. Dyah Budiastuti, and Agustinus Bandur. 2018. *Validitas Dan Realibilitas Penelitian*. Jakarta.
7. Hetharie, Jondry Adrin, Surachman, Ananda Sabil Hussein, and Astrid Puspaningrum. 2019. "SOR (Stimulus-Organism-Response) Model Application in Observing the Influence of Impulsive Buying on Consumer"s Post-Purchase Regret." *International Journal of Scientific and Technology Research* 8(11):2829–41.
8. Hilmawan, T. W. 2020. "Faktor-Faktor Yang Mempengaruhi Minat Masyarakat Kota Malang Menggunakan Uang Elektronik Dengan Menggunakan Model UTAUT." *Skripsi Universitas Islam Negeri Maulana Malik Ibrahim* 124.
9. Hosseini, Samane. 2020. "Using a Chatbot to Increase Tourists' Engagement." *Lab University of Applied Sciences*.
10. Inayah, Ina Nur. 2020. "Prinsip-Prinsip Ekonomi Islam Dalam Investasi Syariah." *Jurnal Ilmu Akuntansi Dan Bisnis Syariah* 2(2):90.
11. irawan, Doni, Prima Widhi N, Richard Sagiman, and Soesilo Nugroho. 2020. "Pengaruh Theory Planned Behavior Terhadap Keputusan Menabung Di Rekening Syariah." *Indonesian Business Review* 3(1):1–14. doi: 10.21632/ibr.3.1.1-14.
12. Kaabachi, Souheila, Selima Ben Mrad, and Anne Fiedler. 2020. "The Moderating Effect of E-Bank Structure on French Consumers' Trust." *International Journal of Bank Marketing* 38(2):501–28. doi: 10.1108/IJBM-04-2019-0119.
13. Kim, Jiyoung, and Sharron J. Lennon. 2013. "Effects of Reputation and Website Quality on Online Consumers' Emotion, Perceived Risk and Purchase Intention: Based on the Stimulus-Organism-Response Model." *Journal of Research in Interactive Marketing* 7(1):33–56. doi: 10.1108/17505931311316734.
14. Kishada, Zeyad M. E. M., Norailis A. B. Wahab, and Aouache Mustapha. 2016. "Customer Loyalty Assessment In Malaysian Islamic Banking Using Artificial Intelligence." *Journal of Theoretical and Applied Information Technology* 87(1).
15. Kristhiofan, Karen Yuliani, and Faishal Fadli. 2023. "Pengaruh E-Service Quality, E-Trust Dan Artificial Intelligence Terhadap Nasabah Experience Pengguna Aplikasi Brimo." *Contemporary Studies In Economic, Finance And Banking* 2(2):181–92.

16. Kartika Dewi, Resti & Gilang Gemilang, Sabrang (2021) "Literasi Keuangan dan Pengelolaan Keuangan Keluarga Generasi Milenial" JPIn: Jurnal Pendidik Indonesia p-ISSN 2722-8134, e-ISSN 2620-8466 Volume 4, No.2

17. Maulana, Aviandi Okta, Georgius Chandra Herfanda, and Faradillah Hasan. 2022. "Perceived Trustworthiness of Artificial Intelligence Implementation in Indonesia Public Sector Services: Gen Z and Millennial Perspectives." *Jurnal Akuntansi & Auditing Indonesia* 26(1):65–75. doi: 10.20885/jaai.vol26.iss1.art7.

18. Meheabian, A., and James A. Russel. 1974. "An Approach to Environmental Psychology." *MIT Press: Cambridge, MA, USA*.

19. Meiryani. 2021. "Memahami Uji T Dalam Regresi Linier." *Accounting.Binus.Ac.Id* 1. Retrieved July 2, 2023 (https://accounting.binus.ac.id/2021/08/12/memahami-uji-t-dalam-regresi-linear/).

20. Mentari, Andi Dewi. 2018. "Pengaruh Kesadaran, Kecepatan Transaksi, Keamanan, Manfaat Yang Dirasakan Dengan Mediasi Persepsi Kemudahan Penggunaan Terhadap Adopsi m-Banking BRI Makassar Raya." *Journal of Business and Banking* 8(1):157–75.

21. Mi Alnaser, Feras, Samar Rahi, Mahmoud Alghizzawi, and Abdul Hafaz Ngah. 2023. "Does Artificial Intelligence (AI) Boost Digital Banking User Satisfaction? Integration of Expectation Confirmation Model and Antecedents of Artificial Intelligence Enabled Digital Banking." *Heliyon* 9(8):e18930. doi: 10.1016/j.heliyon.2023.e18930.

22. Moussawi, Sara, and Marios Koufaris. 2019. "Perceived Intelligence and Perceived Anthropomorphism of Personal Intelligent Agents: Scale Development and Validation." *Proceedings of the Annual Hawaii International Conference on System Sciences* 2019-Janua:115–24. doi: 10.24251/hicss.2019.015.

23. Nafiah, Rohmatun, and Ahmad Faih. 2019. "Analisis Transaksi Financial Technology (Fintech) Syariah Dalam Perspektif Maqashid Syariah." *IQTISHADIA Jurnal Ekonomi & Perbankan Syariah* 6(2):167–75. doi: 10.19105/iqtishadia.v6i2.2479.

24. Oktavia, Handayani, Lukman Abdurrahman, Rahmat Mulyana, Universitas Telkom, User Orientation, Operational Excellence, Pengujian Model, and Partial Least Square. 2021. "Pembuatan Model Balanced Scorecard Ti Menggunakan Pendekatan Structural Equation Model (SEM) Berbasis Varian Di Pt . Telekomunikasi Indonesia Tbk Pada Unit Enterprise Service (Sem) on Varian Models in Pt . Telekomunikasi Indonesia Enterprise." Pp. 9347–54 in Vol. 8.

25. Pillai, Rajasshrie, and Brijesh Sivathanu. 2020. "Adoption of AI-Based Chatbots for Hospitality and Tourism." *International Journal of Contemporary Hospitality Management* 32(10):3199–3226. doi: 10.1108/IJCHM-04-2020-0259.

26. Rafiq, Farrukh, Nikhil Dogra, Mohd Adil, and Jei Zheng Wu. 2022. "Examining Consumer's Intention to Adopt AI-Chatbots in Tourism Using Partial Least Squares Structural Equation Modeling Method." *Mathematics* 10(13). doi: 10.3390/math10132190.

27. Rahayu, Dhawuh, Mukrodin Mukrodin, and Rito Hariyono. 2020. "Penerapan Artificial Intelligence Dalam Aplikasi Chatbot Sebagai Helpdesk Objek Wisata Dengan Permodelan Simple Reflex-Agent (Studi Kasus : Desa Karangbenda)." *Smart Comp :Jurnalnya Orang Pintar Komputer* 9(1):7–21. doi: 10.30591/smartcomp.v9i1.1813.

28. Rahmat abidin, Andi, and Mustika Abidin. 2021. "Urgensi Komunikasi Model Stimulus Organism Response (S-O-R) Dalam Meningkatkan Kualitas Pembelajaran." *Al-Iltizam: Jurnal Pendidikan Agama Islam* 6(2):74. doi: 10.33477/alt.v6i2.2525.

29. Saputra, Roni Yulistyo, Hanifah Muslimah Az-Zahra, and Satrio Hadi Wijoyo. 2019. "Analisis Pengaruh User Experience Portal Berita Terhadap Citra Merek (Studi Pada Portal Berita XYZ)." *Jurnal Pengembangan Teknologi Informasi Dan Ilmu Komputer* 3(8):7809–16.

30. Suhartanto, Dwi, Moch Edman Syarief, Ade Chandra Nugraha, Tintin Suhaeni, Ambia Masthura, and Hanudin Amin. 2022. "Millennial Loyalty towards Artificial Intelligence-Enabled Mobile Banking: Evidence from Indonesian Islamic Banks." *Journal of Islamic Marketing* 13(9):1958–72. doi: 10.1108/JIMA-12-2020-0380.

31. Sultan, Parves, Ho Yin Wong, and Md Shah Azam. 2021. "How Perceived Communication Source and Food Value Stimulate Purchase Intention of Organic Food: An Examination of the Stimulus-Organism-Response (SOR) Model." *Journal of Cleaner Production* 312(May):127807. doi: 10.1016/j.jclepro.2021.127807.

32. Suandi, A. A. (2023). Inflasi Pemoderasi ROA, EPSdan DERTerhadap Return Saham Perusahaan Consumer Goods di JII. Ekonomi, Keuangan, Investasi dan Syariah (EKUITAS), 925-933

33. Utama, Mekar Satria, Umar Nimran, Kadarisman Hidayat, and Arik Prasetya. 2022. "Effect of Religiosity, Perceived Risk, and Attitude on Tax Compliant Intention Moderated by e-Filing." *International Journal of Financial Studies* 10(1). doi: 10.3390/ijfs10010008.

34. Winarto, Wahid Wachyu Adi. 2020. "Peran Fintech Dalam Usaha Mikro Kecil Dan Menengah (UMKM)." *Jesya (Jurnal Ekonomi & Ekonomi Syariah)* 3(1):61–73. doi: 10.36778/jesya.v3i1.132.

35. Woodworth, Robert Sessions. 1929. "Psychology." *Holt: New York, NY, USA*.

36. Wulandari, Sri, Keni Keni, and Ai Ping Teoh. 2023. "Pengaruh Relative Advantage Dan Perceived Ease of Use Terhadap Attitude Dengan Trust Sebagai Variabel Mediasi." *Jurnal Muara Ilmu Ekonomi Dan Bisnis* 7(1):68–79. doi: 10.24912/jmieb.v7i1.21228.

37. Zahra Mansyriah, Huwaida, and Reni Shinta Dewi. 2023. "Pengaruh E-Service Quality Terhadap E-Loyalty Dengan E-Satisfaction Sebagai Variabel Intervening Pada Nasabah Bank Mandiri Pengguna New Livin By Mandiri Di Kota Semarang." *Jurnal Ilmu Administrasi Bisnis* 12(1):195–202.