



UNDERSTANDING IMPULSIVE BUYING BEHAVIOUR AMONG BUY NOW PAY LATER (BNPL) USERS AND ITS IMPLICATION FOR OVERCONSUMPTION AND THE ENVIRONMENT

Verni Juita^{1✉}, Vera Pujani², Rida Rahim³, Rita Rahayu⁴

^{1,2,3,4}Economic and Business Faculty, Universitas Andalas

Article Information Abstract

History of article:
Accepted October 2023
Approved November 2023
Published December 2023

Keywords:
Impulsive Buying
Behavior, Perceived
Risk, Digital Financial
Literacy, Self-Control

This study explores the influence of BNPL users' digital financial literacy, self-control, and perceived risk on their impulsive buying behaviors. This study surveys BNPL users in Indonesia through various online channels. Using PLS Smart 3.0 on the survey data of 185 respondents of BNPL users, this study found that digital financial literacy and self-control influenced the impulsive buying behavior of BNPL users. Over the last decade, the popularity of "buy now, pay later" (BNPL) in Indonesia has been increasing due to the various attractive offers available to consumers. However, the unwise use of BNPL may cause impulsive buying behavior, leading to excessive consumptions and waste productions that ultimately negatively affect the environment. Therefore, it is important to understand factors influencing the use of BNPL and impulsive buying behavior in order to help the BNPL users to use it more responsibly, ultimately control their consumption and reduce unnecessary wastes. However, the results also show that self-control has a greater influence than digital financial literacy on the impulsive buying behavior of BNPL users. In contrast, risk perception showed the opposite result. Hence, a policy strategy involving self-control and DFL in minimizing impulsive buying should be implemented to avoid overconsumption and waste crises.

✉correspondence Address:
Economic and Business Faculty, Universitas Andalas,
Limau Manis, Pauh, Padang City-West Sumatra 25175
Indonesia
E-mail: verniakuntansi@gmail.com

© 2023 Universitas Negeri Semarang
e-ISSN 2502-1451

INTRODUCTION

In the last decade, the use of e-commerce has rapidly increased in Indonesia. E-economy SEA report published by Google, Temasek, and Bain & Company revealed that primarily driven by a rapid increase of e-commerce, Indonesia's digital economy reached US\$77 billion in 2022 and is on course to attain US\$130 billion by 2023, with annual growth of gross merchandise value at 22%. The report particularly shows that e-commerce in Indonesia was estimated to grow at a compound annual growth rate (CAGR) of 22% during 2021-2022 and 17% during 2022-2025.

Furthermore, E-commerce in Indonesia is expected to continuously grow in the future as the report predicted that 50% of the digital customers intend to maintain their usage of e-commerce services, while another 32% plan to expand their

e-commerce services (Google, Temasek, and Bain&Co, 2022). Similarly, the Indosat and Twimbit report recorded that e-commerce and financial technology, the two of the four main pillars of Indonesia's digital economy, is estimated to grow by around 16% to 26% during the period of 2022-2027. According to the report, the E-Commerce growth in Indonesia had also accelerated the development of Indonesian digital finance, especially in digital payment such as digital wallets, peer-to-peer lending, and Buy Now Pay Later (BNPL) (Indosat and Twimbit, 2023).

As one of digital payment alternative by Indonesian consumers, the use of BNPL has also been on the rise in the recent years, along with the increase in e-commerce transactions. Google, Temasek, and Bain & Company disclosed that consumer search interest of BNPL in the

Southeast Asia, that primarily driven by Indonesia, has increased dramatically by 16 times (DSInnovate, 2021). The q4 2020 BNPL Survery conducted by Research And Markets also showed that paylater payment in Indonesia is espected to increase by 76.7% annually to reach US\$ 1.5 billion in 2021 and the paylater adoption is estimated to rise continously over the forecast period, recording a CAGR of 27.4% during 2021-2028 (DSInnovate, 2021). Moreover, a study by Katadata and Kredivo revealed that the BNPL users in Indonesia has grown from 28% 2021 to 38% in 2022 and the number of PayLater customers who use it more than once a month increased from 23% in 2021 to 27% in 2022 (KataData and Kredivo).

The significant increase in both the number of BNPL users and its usage is attributed to the popularity of pay later features and the possibility of unbankable consumers in the areas (Hilmi and Pratika, 2021). BNPL has also encouraged and facilitated more participation in online shopping transaction as it eliminates the financial barrier that may limit consumer buying decisions in the past. The Kredivo and Katadata survey found that the majority of respondents (almost 60%) used BNPL to help them buy sudden/urgent needs (KataData and Kredivo). However, some studies also found that BNPL may encourage impulsive buying behaviour and overconsumption among consumers[6]–[9]. It happened because BNPL system creates a minimal shopping effort in one click that encourages consumers to make purchase immediately(Mitchell and Qadar, 2019). In addition, Fook and McNeil found that BNPL users have a higher online impulse buying tendency compare to those who do not use BNPL(Fook and McNeill, 2020).

The impulsive buying, an act of purchase that is not consciously planned earlier, may cause overconsumption and unnecessary of wastes that are harmful for individual well-being and the environment. When individuals engage in impulse buying, they tend to make unplanned purchases based on desire or immediate emotion, ultimately leading them to purchase items they do not need. It will then lead to overconsumption and accumulation of waste. Overconsumption is harmful to both individual well-being and environmental sustainability (Pereira Heath and Chatzidakis, 2021). The reason is because buying items that are not needed will end up in a pile of unnecessary or unused items, which eventually become waste. The disposal of these items adds to the problem of waste management which continues to develop into a global waste crisis(Clapp, 2002). In order to avoid these problems, consumers need to use their financial resources or choices responsibly, including by wisely control the use of BNPL facilities that can minimize the possibility of impulsive buying behavior.

In this regard, therefore, it is important to conduct a study that can analyse impulsive buying behaviour among consumer group using Buy Now Pay Later as BNPL. By understanding the factors influencing the use of BNPL and impulsive buying behavior, this study is expected to help the BNPL users to use it more responsibly, ultimately control their consumption, and reduce unnecessary wastes. Following the previous related literature, this study explores the influence of BNPL users' digital financial literacy, self-control, and perceived risk on their impulsive buying behaviors. To achieve this objective, this study conducts online surveys targeting to BNPL users in Indonesia and process the collected data using PLS Smart 3.0.

The rest of this paper is organized as follows. The second section reviews the relevant literature of this study related to buy now, pay later (BNPL) payment alternatives, perceived risk, digital financial literacy (DFL), and self-control. The third section explains the research methodology used in this study. The fourth section discusses the results and analysis of the study. The fifth section is the conclusion of the study.

Hypotheses Development

Buy Now Pay Later (BNPL) defines as a credit agreement that tolerates consumers to buy and receive product and services directly, but pay for their purchases on an arranged schedule (on installment) (Gerrans et al., 2021). Similarly, DS Innovate describe BNPL as as an innovative payment alternative that grants customers the ability to access online credit up to a predetermined limit. Using BNPL enables users to conduct transactions at present while settling future loan payments(DSInnovate, 2021).

However, several research have discovered that BNPL may stimulate impulsive purchase and overconsumption in consumers(Google, Temasek, and Bain & Company, 2021; Pratika et al., 2021; Chatterjee & Rose, 2021; and Natswa, 2021) . The BNPL system, that creates a minimum shopping effort in one click, can encourage consumers to immediately make unplanned purchases leading to impulsive buying (Mitchell and Qadar, 2019). It will then potentially lead to overconsumption and accumulation of waste that is harmful to both individual well-being and environmental sustainability. In addition, a study by Fook and McNeil discovered that BNPL users have a more online impulsive buying tendency compare to those who do not use BNPL feature or application (Fook and McNeill, 2020).

To adopt paylater wisely, ultimately control their consumption, and reduce unnecessary wastes, therefore, consumers should have good information and understanding regarding this digital financial service, commonly referred to as digital financial literacy. They

should also acquire good risk perception to reduce the desire for impulsive buying (Park and Lennon, 2009). In addition, consumers need to maintain good self-control to avoid impulsive buying behavior, because in general adults with low self-control are relatively more vulnerable to risky financial behavior (Weaver et al., 2011).

Referring to those explanations, we can then draw the research framework for this study as presenting in the diagram below. The figure shows that impulsive buying behaviour can be influenced by perceived risk, digital financial literacy and self-control.



Figure 1. Research Framework

Park & Lennon presume the relationship between perceived risk and impulsive buying and found that perceived risk reduces the desire to buy impulsively (Park and Lennon, 2009). Another study also reveals that perceived risk has a fairly negative relationship with online impulse buying tendencies (Abrar et al., 2017). In addition, Cui's study found that perceived risk of online shopping has a negative impact on impulse buying (Wulandari and Damayanti, 2022). Based on the above explanation, the following hypothesis is developed:

H1: Perceived risk has a significant influence on impulsive buying behaviour

Digital financial literacy (DFL) is a multidimensional concept that integrates financial literacy, financial capacity, and digital literacy (The AFI management Unit, 2021). Digital financial literacy directly links and provides knowledge about online transaction such as online shopping, online payments through various means, and online banking systems (Prasad et al., 2018). Moreover, DFL also had a positive effect on spending behavior, saving behavior, and investment behavior (Rahayu et al., 2022). In addition, DFL has been found to have a positive effect on impulsive buying of BNPL users (Wulandari and Damayanti, 2022). Based on the previous explanation, the following hypothesis is developed:

H2: Digital Financial Literacy has a significant influence on impulsive buying behaviour

Consumers usually diverge in their level of self-control (Van Raaij, 2012). Low level or loss of self-control can increase the likelihood of impulsive purchases in store environment (Mattila and Wirtz, 2008). In addition, with

regard to payment options, consumers with poor self-control problems tend to use types of credit that facilitate purchases driven by impulse spending which usually have higher credit interest costs (Disney and Gathergood, 2013). However, the study of Li et al. found that self-control has no significant effect on impulse purchase intention among online Ant Creditpay user (Zhang et al., 2019). Thus, it is important to explore the relationship between self-control of BNPL user on their impulsive buying behaviour. Based on the previous explanation, the following hypothesis is developed:

H3: Self-control has a significant influence on impulsive buying behaviour

METHOD

This research is classified as explanatory research. This type of study examines a situation or problem to explain the relationship between the variables involved (Saunders et al., 2009). This study aims to investigate the influence of risk perception, digital financial literacy, and self-control on BNPL users' impulsive buying behavior in Indonesia. In answering the hypothesis above, this study used a quantitative approach by collecting data using an online survey of paylater users in Indonesia. The survey method is chosen to collect quantitative data that can be analyzed using descriptive and inferential statistics (Saunders et al., 2009).

The data collection method used was an online survey of BNPL users. This study used a convenience sampling method by distributing online questionnaires using Googleform through various online channels such as email and social media (e.g., Twitter, Facebook and Instagram, WhatsApp, etc.). Furthermore, respondents independently answered questions through the Google form page that had been prepared before. Each item in the questionnaire is modified from several previous studies. First, item questions related to perceived risk were adopted from (Thrinh et al., 2020). Second, item questions related to digital financial literacy were adopted from (Morgan and Trinh, 2020). Third, item questions related to self-control were adopted from (Tangney et al., 2004). Fourth, item questions related to impulsive buying behaviour were adopted from (Hashmi et al., 2019). In addition, five Likert-scale was used in this study. All responses were then analyzed using Microsoft excel application and Smart PLS 3.0 Application.

RESULT AND DISCUSSION

Based on data in Tabel 1, there were 185 paylater users participating in this study, with the proportion of 63% women and 47% Men. Interestingly, the majority of respondents (more than 70%) have a good higher education

background. Moreover, the data suggests that the majority of people have a lower share of online shopping expenditure in their monthly income, with a significant portion spending less than 20%. There is also a moderate group (38% of

respondents) who dedicate a moderate portion (between 21% and 40%) of their income to online shopping. Interestingly, moreover, almost 50% of respondent chose credit option to cover their online shopping expenditure.

Table 1. Profile of Respondents

Description	No. of Respondent	Percentage (%)
Gender: Male		37%
Female	68	63%
	117	
Educational Background: Senior High School Diploma	51	28%
Bachelor Degree/ D4 Post Graduate	21	11%
	91	49%
	22	12%
Share of Online shopping expenditure in monthly income:		
< 20%	90	49%
21% - 40%	70	38%
41% - 60%	18	10%
61% - 80%	7	4%
>80%	0	0%
Online shopping financing:		
Credit	92	49.7%
Non-Credit	93	50.3%

This study processes the collected data using the SEM PLS 3.0 application. Fornell & Bookstein recommend Partial least squares for predictive research models that emphasize theory development(Fornell and Bookstein, 1982). PLS processing results, according to Hair et.al, were analyzed by assessing the measurement model, or the outer model. This measurement model then determines the rules for the relationship between the measurable and latent variables.

This model allows to use several variables for one independent or dependent construct(Hair et al., 2021). Two main criterias are used to assess the measurement model or outer model in PLS analysis: reliability and validity(Ramayah et al., 2011). The reliability test aims to measure the

stability and consistency of the meaning of the instrument, while the validity test aims to determine how accurately an instrument measures certain concepts it is designed to measure(Sekaran and Bougie, 2016).

The validity of data is analyzed with two measures, namely convergent validity, and discriminant validity. The Rule of thumb for convergent validity measure is measured by looking at outer loading (>0.4) and the AVE (average variance extracted) value (>0.4). Meanwhile, reliability is assessed by looking at the composite reliability figure (>0.6) (Hair et al., 2021). Based on the observation of data in Table 2, all discriminant validity and reliability scores fulfill the stated rule of thumb.

Table 2. Reliability and Validity

	Indicator	Cronbach's Alpha	Outer Loading	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Digital Financial Literacy	DFLA1	0.78	0.73	0.78	0.84	0.46
	DFLA4		0.60			
	DFLCR2		0.64			
	DFLK4		0.71			
	DFLR2		0.75			
	DFLR4		0.63			
Impulsive Buying Behavior	IB1	0.74	0.90	0.79	0.84	0.57
	IB2		0.78			
	IB3		0.52			
	IB4		0.78			
Perceived Risk	PR1	0.91	0.80	0.92	0.93	0.56
	PR11		0.71			
	PR2		0.71			
	PR3		0.75			
	PR4		0.76			
	PR5		0.88			
	PR6		0.60			
Self-control	4C3	0.73	0.69	0.78	0.85	0.65
	4C4		0.85			
	4C5		0.86			

The next step in measurement model is to analyze discriminant validity. Discriminant validity measures the extent to which a construct is genuinely different from other constructs according to empirical standards. In assessing discriminant validity, it refers to the cross-loading rate. The rule of thumb for cross-loading will ensure that the external loading of indicators on

the related construct must be greater than the cross-loading (ie, the correlation) on the other constructs(Hair et al., 2021). Table 3 shows the cross-loading data that meets the criteria for measuring discriminant validity. Therefore, the data processing proceeds to the next stage, namely the structural model or hypothesis testing.

Table 3. Cross Loading

	Digital Financial Literacy	Impulsive Buying Behavior	Perceived Risk	Self-control
4C3	0.02	0.37	0.31	0.69
4C4	0.31	0.44	0.36	0.85
4C5	0.26	0.60	0.41	0.86
DFLA1	0.73	0.24	0.46	0.13
DFLA4	0.60	0.10	0.24	0.06
DFLCR2	0.64	0.19	0.11	0.23
DFLK4	0.71	0.26	0.19	0.21
DFLR2	0.75	0.22	0.34	0.25

DFLR4	0.63	0.06	0.25	0.09
IB1	0.25	0.90	0.30	0.55
IB2	0.33	0.78	0.36	0.44
IB3	0.11	0.52	0.13	0.29
IB4	0.20	0.78	0.37	0.49
PR1	0.29	0.37	0.80	0.40
PR11	0.26	0.13	0.71	0.12
PR2	0.30	0.37	0.71	0.38
PR3	0.29	0.31	0.75	0.34
PR4	0.12	0.17	0.76	0.20
PR5	0.36	0.29	0.88	0.29
PR6	0.03	0.26	0.60	0.44

Tabel 4. present the results of PLS hypothesis testing. From this testing using SEM, it was found that the p-value and t-statistic value for the influence of perceived risk on impulsive buying behaviour was greater than 0.05 and less than 1.96. It indicates that perceived risk has no

significant influence on impulsive buying behavior. This result implies that hypothesis 1 is rejected. This result is not in line with research from Park & Lennon (Park and Lennon, 2009) and Abrar & Ramay (Abrar et al., 2017).

Table 4. Hypothesis testing: Mean, STDEV, T-Values, P-Values

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Digital Financial Literacy → Impulsive Buying Behavior	0.12	0.14	0.06	2.20	0.03
Perceived Risk → Impulsive Buying Behavior	0.11	0.12	0.07	1.72	0.09
Self-control → Impulsive Buying Behavior	0.52	0.51	0.06	8.09	0.00

In the second hypothesis testing, this study found that the p-value and t-statistic value for the influence of digital financial literacy on impulsive buying behaviour is less than 0.05 and higher than 1.96. It indicates that BNPL user's digital financial literacy have positive significant influence on their impulsive buying behaviour. Therefore, the hypothesis 2 is accepted. This finding aligns with Wulandari and Damayanti's research which also revealed a positive and significant relationship between digital financial literacy and impulsive buying behavior from BNPL users in Indonesia (Wulandari and Damayanti, 2022).

The positive relationship between DFL and impulsive buying behavior can be explained by the fact that current DFL items represent the knowledge individuals need to navigate and use the BNPL platform and carry out digital transactions properly. However, it may not fully capture each individual's understanding of the long-term financial consequences of transactions

entered into, the impact on overall financial well-being, or the potential risk of debt accumulation in the long term. Despite the direction of the relationship, this study confirms that there is a significant relationship between DFL and impulsive buying behavior among BNPL users.

Lastly, the third hypothesis testing show that the p-value and t-statistic value for the influence of self-control on impulsive buying behaviour is less than 0.05 and higher than 1.96. This indicates that BNPL user's self-control have positive significant influence on their impulsive buying behaviour. Therefore, the hypothesis 3 is accepted. This finding differs from Li et al. which reveals that there is no significant relationship between self-control and impulsive purchase intention(Zhang et al., 2019). Moreover, despite having higher self-control, BNPL users may still be susceptible to impulsive buying triggers, such as marketing tactics, peer influence, or emotional states. These triggers can momentarily override their self-control mechanisms, leading to

impulsive purchases even among individuals with generally higher self-control levels.

Another reason for this finding is that the ease and convenience offered by BNPL services can contribute to impulse buying behavior. This may be because users with higher self-control may be more confident in their ability to manage their finances and may find the flexibility of BNPL as a convenient option. This confidence can make them more likely to make impulse purchases using BNPL, even if they generally show higher levels of self-control. Nevertheless, the results also reveal that self-control has more influence on impulsive buying behaviour of BNP user compare to DFL.

CONCLUSION AND RECOMMENDATION

This study aims to explore the effect of risk perception, digital financial literacy, self-control on impulsive buying behavior among BNPL users. This study surveyed BNPL users in Indonesia through various online channels and collected 185 responses. Through data analysis using PLS Smart 3.0, this study found risk perception shows insignificant result. In contrast, this study found that digital financial literacy and self-control positively influence the impulsive buying behavior of BNPL users with the former has a lesser influence than the later.

Interestingly, while Digital financial literacy (DFL) has a significant effect on BNPL user's impulsive buying behaviour, the sign of its influence is unexpected as it is not inline with the predicted outcome conjectured from the literature. The positive relationship between DFL and impulsive buying behavior can be explained by the fact that the DFL level may not fully capture each individual's understanding of the long-term financial consequences, impact on overall financial well-being, or potential risks of accumulating debt. The DFL only represent the individual's necessary knowledge to navigate and use the BNPL platform and make purchases. Meanwhile, the significant influence of Self-Control and the higher magnitude of its influence on the overall BNPL user's impulsive buying behaviour indicate the important of this variable, compare to other variables.

Overall, the results provide practical and policy implications for reducing overconsumption and promoting environmental well-being. To mitigate the negative effects of impulsive buying behavior among BNPL users and its implication for the environment, it may necessary for the policy makers to introduce, among others, the Integration of Self-Control Techniques in BNPL Platforms, the implementation of responsible lending practices, incorporation of environmental considerations and strengthened the DFL Education.

We express our gratitude to the Lembaga Penelitian dan Pengabdian Kepada Masyarakat (LPPM) and The Management Doctoral Program of Universitas Andalas for their assistance in completing this research. This research was funded by a Doctoral dissertation research grant from the higher education ministry.

REFERENCES

- Google, Temasek, and Bain&Co. (2022) Through the waves, towards a sea of opportunity.
- Indosat and Twimbit. (2023). Empowering indonesia 2023.
- DSInnovate, "Indonesia Paylater Ecosystem Report 2021," 2021.
- KataData and Kredivo, "Perilaku konsumen e-commerce indonesia."
- Google, Temasek, and Bain & Company, "e-Conomy SEA 2021 : The Digital Decade: Southeast Asia's internet economy resurgence is fueling growth across the region.," 2021.
- Hilmi, L. D., & Pratika, Y. (2021). Paylater feature: impulsive buying driver for e-commerce in indonesia. *International Journal of Economics, Business and Accounting Research (IJEBAR)*, 5(2), 63-76.
- Pratika, Y., Salahudin, S., Riyanto, D. W. U., & Ambarwati, T. (2020). Analysis of pay later payment system on online shopping in Indonesia. *Journal of Economics, Business, & Accountancy Ventura*, 23(3), 329-339.
- Chatterjee, P., & Rose, R. L. (2012). Do payment mechanisms change the way consumers perceive products?. *Journal of Consumer Research*, 38(6), 1129-1139.
- Natswa, S. L. A. (2021, November). Buy-now-pay-later (bnpl): generation z's dilemma on impulsive buying and overconsumption intention. In *BISTIC Business Innovation Sustainability and Technology International Conference (BISTIC 2021)* (pp. 130-137). Atlantis Press.
- Mitchell, S., & Qadar, S. (2019). Afterpay, PayPal and Zip Pay: The shopping tech making us buy more. Retrieved June, 20, 2020.
- Fook, L. A., & McNeill, L. (2020). Click to buy: the impact of retail credit on overconsumption in the online environment. *Sustainability*, 12(18), 1-15.
- Pereira Heath, M. T., & Chatzidakis, A. (2012). 'Blame it on marketing': consumers' views on unsustainable

- consumption. *International Journal of Consumer Studies*, 36(6), 656-667.
- Clapp, J. (2002). Distancing of waste: overconsumption in a global economy in Princen T, Maniates M and Conca K eds *Confronting consumption*.
- Gerrans, P., Baur, D. G., & Lavagna-Slater, S. (2022). Fintech and responsibility: Buy-now-pay-later arrangements. *Australian Journal of Management*, 47(3), 474-502.
- Park, M., & Lennon, S. J. (2009). Brand name and promotion in online shopping contexts. *Journal of Fashion Marketing and Management: An International Journal*, 13(2), 149-160.
- Weaver, S. T., Moschis, G. P., & Davis, T. (2011). Antecedents of materialism and compulsive buying: A life course study in Australia. *Australasian Marketing Journal*, 19(4), 247-256.
- Abrar, K., Naveed, M., & Ramay, M. I. (2017). Impact of perceived risk on online impulse buying tendency: An empirical study in the consumer market of Pakistan. *Journal of Accounting & Marketing*, 6(3), 246.
- The AFI management Unit. (2021). Digital Financial Literacy Research Paper.
- Prasad, H., Meghwal, D., & Dayama, V. (2018). Digital financial literacy: A study of households of Udaipur. *Journal of Business and Management*, 5, 23-32.
- Rahayu, R., Ali, S., Aulia, A., & Hidayah, R. (2022). The current digital financial literacy and financial behavior in Indonesian millennial generation. *Journal of Accounting and Investment*, 23(1), 78-94.
- Wulandari, R. T., & Damayanti, S. M. (2022). The Importance Of Digital Financial Literacy To Anticipate Impulsive Buying Behavior In Buy-Now-Pay-Later Mode. *International Journal of Business and Economy*, 4(3), 170-182.
- Van Raaij, W. F. (2014). Consumer financial behavior. *Foundations and Trends® in Marketing*, 7(4), 231-351.
- Mattila, A. S., & Wirtz, J. (2008). The role of store environmental stimulation and social factors on impulse purchasing. *Journal of services marketing*, 22(7), 562-567.
- Disney, R., & Gathergood, J. (2013). Financial literacy and consumer credit portfolios. *Journal of Banking & Finance*, 37(7), 2246-2254.
- Li, X., Zhang, H., Wang, Q., Chen, X., Shi, J., & Jia, Q. (2019, August). The Influence of Online Personal Consumer Credit Products on Consumers' Impulse Purchasing Intention: A case study of Ant Credit Pay. In *Proceedings of the 2019 3rd International Conference on E-Education, E-Business and E-Technology* (pp. 59-66).
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students*. Pearson education.
- Trinh, H. N., Tran, H. H., & Vuong, D. H. Q. (2020). Determinants of consumers' intention to use credit card: a perspective of multifaceted perceived risk. *Asian Journal of Economics and Banking*, 4(3), 105-120.
- Morgan, P. J., & Trinh, L. Q. (2020). *Fintech and financial literacy in Viet Nam* (No. 1154). ADBI Working Paper Series.
- Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of personality*, 72(2), 271-324.
- Hashmi, H., Attiq, S., & Rasheed, F. (2019). Factors affecting online impulsive buying behavior: A stimulus organism response model approach. *Market forces*, 14(1).
- Fornell, C., & Bookstein, F. L. (1982). Two structural equation models: LISREL and PLS applied to consumer exit-voice theory. *Journal of Marketing research*, 19(4), 440-452.
- Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., Ray, S., ... & Ray, S. (2021). An introduction to structural equation modeling. *Partial least squares structural equation modeling (PLS-SEM) using R: a workbook*, 1-29.
- Ramayah, T., Lee, J. W. C., & In, J. B. C. (2011). Network collaboration and performance in the tourism sector. *Service Business*, 5, 411-428.
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. John Wiley & Sons.