Analysis of Paylater Usage on Impulse Buying Behaviour of E-Commerce Users in Batam

Alrido Martha Devano[1][✉], Yulinda Tarigan[2] and Baby Anggraini Darma Pratiwi[2]

[1] Business & Management Department, Politeknik Negeri Batam, Kepulauan Riau 29461, Indonesia
alridomd@gmail.com

Abstract. The phenomenon of digitalization presents the latest innovations in payment systems in fintech-based digital financial services with the paylater payment method. It is thought that one of the factors driving impulse buying behavior is the use of paylater. This study aims to find out how the use of paylaters has an impact on the impulse buying behavior of e-commerce consumers in Batam City. The research adopts a quantitative approach. Data analysis was performed using simple linear regression analysis. The collection of information in this study utilized a questionnaire. The participants involved in this research are e-commerce users in Batam City who use paylaters with a total of 100 individuals in the sample. The findings in this study indicate that the use of paylaters has a positive impact and influences impulsive buying tendencies of e-commerce consumers in Batam City. The results lead to the conclusion that the acceptance or use of paylater as an innovative technology in digital payment systems is very good, this is based on the high mean value of the intensity of use indicator in the paylater usage variable, which is 10.34, and paylater users tend to make impulse purchases on various e-commerce platforms.

Keywords: Paylater, Buying Behavior, E-Commerce.

1 Introduction

The phenomenon of digitalization is increasingly widespread in the lives of Indonesian people. This is a lifestyle solution for modern society that requires convenience and efficiency, one of which is digitization in the payment system. The increasing number of digital financial transactions has triggered various innovations in digital financial services, one of which is a fintech (Financial Technology) based payment system with the "Buy Now Pay Later" payment method, also known as paylater [1].

Paylater is an innovative digital payment system with a function similar to a credit card. The advantages offered by paylater compared to ordinary credit cards are in the form of convenience in the registration process [2]. The credit system is in the form of a paylater the expectation is that it will serve as a viable substitute for credit card usage for the general public. In 2022 the number of paylater users will almost double higher than before. The utilization of the paylater system is anticipated to experience steady growth from 2023 to 2028 [3]. The various conveniences provided by the paylater

A. Azizah et al. (eds.), *Proceedings of the International Conference on Applied Science and Technology on Social Science 2023 (iCAST-SS 2023)*, Advances in Social Science, Education and Humanities Research 817,
https://doi.org/10.2991/978-2-38476-202-6_106

payment system make it difficult for consumers to ignore their desire to buy goods that interest them. This behaviour is better known as impulse buying [4].

Impulse buying is a behaviour, where when someone makes an impulse purchase, they buy something spontaneously and immediately, without even realizing why they are doing it. Purchase stimulus can come from the encouragement of the buyer himself or other factors [5]. Elements of the TAM acceptance model can be used to predict how paylater users make impulse purchases. Business people, especially in the retail industry, must continue to adapt to digital payment technology innovations [6].

Although several studies have discussed the impact of the utilization paylaters on the impulsive purchasing behaviour of e-commerce consumers, there has not been a specific study that has analyzed the effects of utilizing paylaters on the impulsive purchasing behaviour of e-commerce consumers in Batam City. Hence, conducting this research is important in the hope that the discoveries in this study can be utilized as a valuable information repository for paylater consumers in Batam City to be wiser in using this feature [7].

2 Literature Review

2.1 E-Commerce

E-commerce is a form of trade or activity of buying and selling products that is carried out electronically through telecommunication networks or the internet [8].

2.2 Paylater Payment Method

Paylater is an innovation in a digital-based payment system in the form of credit cardless instalments that was launched by a fintech company in mid-2018. Currently, many online shops in Indonesia use paylater, including entertainment businesses, shops, hotels, tickets, and online transportation providers. Several platforms currently offer alternative payment methods in the form of credit instalments without a credit card, such as Paylater [9].

2.3 Impulse Buying Behavior

Impulse buying behaviour is when someone feels the desire to buy something without prior consideration. The causes for this behaviour can arise from individual characteristics and market situations. Impulse buying behaviour occurs suddenly and consumers find it difficult to resist the urge to shop even if it is not their need or purpose [10]. There are four characteristics of impulse buying, which are as follows:

1. Spontaneity is when someone sees a product and immediately wants to buy it.
2. Intensity, strength, and compulsions are behaviours that make decisions quickly without considering other factors.
3. Excitement and stimulation are impulses that arise suddenly when shopping and this behaviour is triggered by excitement or feeling aroused when seeing certain products

or being in the store environment, stimulation from product displays, promotions, or certain situations can affect the decision to make an impulse purchase.
4. Consequence indifference is the behaviour that arises when shopping quickly without considering the consequences.

2.4 Technology Acceptance Mode (TAM)

TAM is used to see the elements that result in the acceptance of an information system [10]. According to the TAM model, two factors that influence user perceptions about the use of information technology are usability and ease of use. This study utilizes four indicators from the technology acceptance model, which consist of:

1. Perceived Ease of Use: An understanding of the degree of ease of use refers to when consumers are confident that using a particular technology can reduce the effort required to perform a specific action or activity. This factor pertains to how easily users can utilize paylater technology.
2. Perceived Usefulness: A comprehension of benefits describes a measure of consumer confidence
3. that the use of technology can optimize their productivity in the work environment. In this context, someone is more likely to use technology if they already know the benefits that can be obtained from its use. In this study, perceived benefits refer to the extent to which paylater service consumers have confidence in the benefits of this technology in transacting on e-commerce platforms.
4. Attitude Toward Using: Attitudes in actual use can be measured by looking at how often they use it and how long they use it. If a technology is user-friendly and offers advantages to use, people will use it more often and eventually become more satisfied.
5. Intensity of Use (Intention to Use): Technology usage intensity is defined as the willingness to continue using it. The attitude and attention of an individual towards technology can reflect their level of technology utilization, such as the emergence of a desire to purchase additional devices.

2.5 Conceptual Framework

The following Figure 1 is a series of thoughts adopted to formulate the research hypothesis:

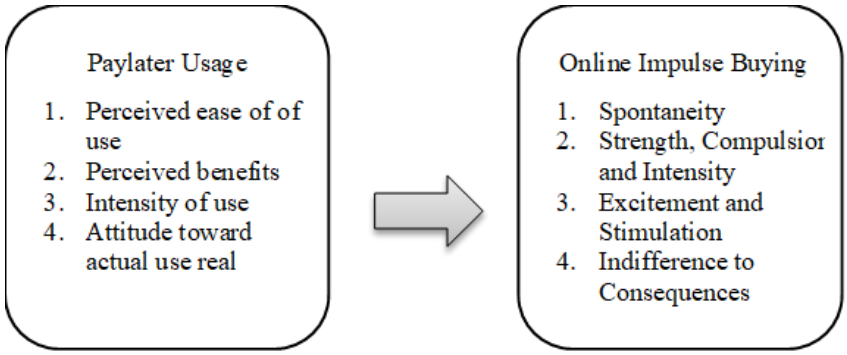

Figure 1. Conceptual model.

This research is looking for the impact of paylater usage on impulsive purchasing behaviour, so the hypothesis of this study is:

H_1: The use of paylater affects impulse buying behaviour

3 Research Methods

The research utilizes a quantitative method. The analysis of data was conducted using simple linear regression analysis through several stages, including instrument test, descriptive statistical analysis, classical assumption test, simple correlation analysis, coefficient of determination analysis, and hypothesis testing (t-test). The collection of information in this study utilized a questionnaire. The population in this study are e-commerce users in Batam City who use paylaters with a sample size of 100 people. In this study, the variable using paylater (X) is an independent variable with impulse buying (Y) as the dependent variable. The following Table 1 is the explanation of the operational variables.

Table 1. Operational variables.

Variable	Definition	Indicators	Measurement
Paylater Usage (X)	Use of Paylater (X) Paylater is an alternative payment method that adopts an online installment system without requiring a credit card.	1. Perceived ease of use 2. Perceived benefits 3. Intensity of use 4. Attitude in actual use Likert scale	Likert
Impulse Buying Behavior (Y)	Impulse Buying is a behavior when an individual feels a spontaneous urge to buy a product without prior planning.	1. Spontaneity 2. Strength, Compulsion, and Intensity 3. Stimulation and Excitement 4. Indifference to Consequences	Likert

Based on the variables explained above, here is the simple linear regression equation proposed to test the hypothesis:

$$Y = a + bX \quad (1)$$

Where:
Y = Impulse Buying Behavior
X = Paylater Usage
a = Constanta
b = Regression Coefficient

4 Results and Discussion

4.1 Characteristics of Respondents

E-commerce users in Batam City who use the paylater feature are the respondents in this study. The researcher utilized a non-probability sampling technique to collect a sample of 100 respondents based on the researcher's criteria. Table 2 below provides the characteristics of respondents.

Table 2. Characteristics of respondents.

Category	Frequency	Percentage
Based on Gender		
Male	39	39%
Female	61	61%
Based on Age		
17 – 25 years old	51	51%
26 – 34 years old	34	34%
35 – 42 years old	10	10%
> 42 years old	5	5%
B*ased on Occupation*		
Entrepreneur	12	12%
Private Sector Employee	53	53%
Civil Servant	15	15%
Student	20	20%
Based on Income		
Rp. < 3jt	16	16%
Rp. 3 – 5jt	31	31%
Rp. 5 – 10jt	22	22%
Rp. > 10jt	31	31%
Based on Paylater Service Used		
Gopay Paylater	10	10%
Shopee Paylater	73	73%
Kredivo Paylater	12	12%
Others	5	5%
Based on the Number of Paylater Transactions		
1 transactions	24	24%
2 – 5 transactions	42	42%

5 – 10 transactions	18	18%
> 10 transactions	16	16%

Based on the identification of data analysis results, it can be determined that male respondents with a frequency of 39 or 39% and 61 women with a percentage of 61%. This shows that women use the paylater feature more. the ages of respondents were divided into four groups, namely ages 17-25 years, 51 with a percentage of 51%, ages 26-34 years with a percentage of 34%, ages 35-42 years with a percentage of 5 with a percentage of 5% and ages > 42 years with a percentage of 5%. So it can be concluded that respondents aged 17-25 years with a percentage of 51% are more dominant in using the paylater feature.

The types of work of the respondents were divided into 4 groups, namely Entrepreneurs with a percentage of 12% or 12 people, Private Employees totalling 53 people with percentage of 53%, Civil Servants totalling 15 people with a percentage of 15%, and Students totalling 20 with a percentage of 20%. This shows that the respondents are private employees with a percentage of 53% who are more dominant in using the paylater feature.

The income of the respondents is divided into 4 groups, namely Rp. < 3 million with a percentage of 16% or 16 people, Rp. 3 - 5 million as many as 31 people or 31%, Rp. 5 - 10 million totalling 22 with a percentage of 22%, and Rp. > 10 million with a percentage gain of 31%. This finding shows that respondents with an income of Rp. 3 - 5 million and Rp. > 10 million are dominant in using the paylater feature.

The paylater providers that are often used by respondents are divided into 4 parts, namely Gopaylater totalling 10 with a percentage of 10%, Shopee Paylater totalling 73 with a percentage of 73%, Kredivo Paylater totalling 12 with a percentage of 12%, and other paylater providers totalling 5 with a percentage 5%. This shows that Shopee Paylater with a percentage of 73% is more dominant as a paylater provider which is often used by respondents. The number of respondents' transactions using paylater is divided into 4 groups, namely 1 transaction is known to be 24 with a percentage of 24%, 2 - 5 transactions totalling 42 with a percentage of 42%, 5 - 10 transactions totalling 18 with a percentage of 18% and > 10 transactions totalling 16 with a percentage of 16%. This shows that the number of transactions is 2-5 times with a percentage of 42% being more dominant in using the paylater feature.

4.2 Validity Test

The validity test (see Table 3) proves that each variable consists of twenty questions. Each questionnaire item produces r count > r table with a 5% significance degree of 0.195. This proves that each questionnaire item is valid.

Table 3. Validity test result

X Variable	R-Count Value	R-Table Value	Criteria	Y Variable	R-Count Value	R-Table Value	Criteria
X01	0,708	0,195	Valid	Y01	0,564	0,195	Valid
X02	0,786	0,195	Valid	Y02	0,749	0,195	Valid

X Variable	R-Count Value	R-Table Value	Criteria	Y Variable	R-Count Value	R-Table Value	Criteria
X03	0,737	0,195	Valid	Y03	0,856	0,195	Valid
X04	0,799	0,195	Valid	Y04	0,745	0,195	Valid
X05	0,742	0,195	Valid	Y05	0,850	0,195	Valid
X06	0,867	0,195	Valid	Y06	0,900	0,195	Valid
X07	0,828	0,195	Valid	Y07	0,916	0,195	Valid
X08	0,863	0,195	Valid	Y08	0,815	0,195	Valid
X09	0,895	0,195	Valid	Y09	0,884	0,195	Valid
X10	0,853	0,195	Valid	Y10	0,872	0,195	Valid
X11	0,886	0,195	Valid	Y11	0,812	0,195	Valid
X12	0,867	0,195	Valid	Y12	0,857	0,195	Valid
X13	0,891	0,195	Valid	Y13	0,845	0,195	Valid
X14	0,851	0,195	Valid	Y14	0,918	0,195	Valid
X15	0,850	0,195	Valid	Y15	0,728	0,195	Valid
X16	0,803	0,195	Valid	Y16	0,889	0,195	Valid
X17	0,885	0,195	Valid	Y17	0,853	0,195	Valid
X18	0,771	0,195	Valid	Y18	0,810	0,195	Valid
X19	0,767	0,195	Valid	Y19	0,869	0,195	Valid
X20	0,842	0,195	Valid	Y20	0,821	0,195	Valid

4.3 Reliability Test

The outcome of the reliability test (see Table 4) revealed that all components of the questions in each variable produced a Cronbach's Alpha value > 0.60, meaning that all questions were considered reliable.

Table 4. Reliability test results

Variable	Cronbach's Alpha	N of Items	Reliability
Paylater Usage	0,975	20	Reliable
Impulse Buying Behaviour	0,976	20	Reliable

4.4 Normality Test

The outcome of the Kolmogorov–Smirnov normality test (see Table 5) proves that the data exhibits a normal distribution. This is demonstrated by the sig value of 0.079, bigger than 0.05.

Table 5. Normality test results.

		Unstandardized Residual
N		100
Normal Parameters[a,b]	Mean	0,0000000
	Std. Deviation	19,50633690
Most Extreme Differences	Absolute	0,079
	Positive	0,079
	Negative	-0,067
Test Statistic		0,079
Asymp. Sig. (2-tailed)		0,124c

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

4.5 Linearity Test

Variables X and Y have a linear relationship, based on the results of the linearity test in Table 6, due to the deviation value of linearity for every variable being less than 0.05.

Table 6. Linearity Test Results

			Sum of Squares	df	Mean Square	F	Sig.
Impulse Buying Behavior * Paylater Usage	Between Groups	(Combined)	22073,299	38	580,876	1,905	0,012
		Linearity	3009,139	1	3009,139	9,866	0,003
		Deviation from Linearity	19064,160	37	515,248	1,689	0,034
	Within Groups		18605,061	61	305,001		
	Total		40678,360	99			

4.6 Descriptive Statistical Analysis

Based on the descriptive statistical tests carried out, the paylater use variable consists of 4 indicators as shown in Table 7, namely perceived ease of use with a mean value of 8.83, perceived benefits with an average value of 9.08, attitude in actual use with an average value of 9.30 and the intensity of use with an average value (mean) of 10.34. Overall, the data shows that the indicator with the highest 'mean' value is the intensity of use. Meanwhile, the indicator with the lowest average (mean) value is perceived ease of use.

Table 7. Results of descriptive statistical analysis paylater usage variables.

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Perceived_Easy_Of_Use	100	5	25	883	8,83	4,575
Perceived_Usefulness	100	5	25	908	9,08	4,869
Attitude_Toward_Using	100	5	24	930	9,30	4,574
Intention_To_Use	100	5	25	1034	10,34	5,192
Valid N (listwise)	100					

According to the descriptive statistical test, the impulse buying behavior variable consisted of 4 indicators as shown in Table 7, namely spontaneity with an average value of 11.77, strength, compulsion, and intensity with a mean of 13.71, stimulation and excitement with an average value of 13.45 and indifference to consequences with an average value of 14.65. So it can be inferred that the dimension on the impulse buying behavior variable with the highest average (mean) value is indifference to the consequences so it can be interpreted that paylater users often do not care about the consequences when shopping using paylater. While the indicator with the lowest average (mean) value is spontaneity.

Table 8. Results of Descriptive statistical analysis impulse buying behavior variables.

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Spontaneity	100	5	24	1177	11,77	4,716
Strength_Compulsion_and_Intensity	100	5	25	1371	13,71	5,520
Excitement_and_Stimulation	100	5	25	1345	13,45	5,262
Indifference_and_Effect	100	5	25	1465	14,65	5,997
Valid N (listwise)	100					

4.7 Simple Correlation Analysis

A simple correlation analysis (Table 9) proves that the paylater use variable and the impulse buying behaviour variable are correlated and it is proven from a sig value of 0.006 <0.05. The Pearson correlation value is 0.272, and according to the guidelines for the degree of correlation test, the correlation is weak if the Pearson value is 0.21 to 0.40. This finding is similar to the results of previous study [10], where the Pearson correlation value obtained was 0.253 (weak correlation).

Table 9. Results of simple correlation analysis.

		Paylater Usage	Impulse Buying Behavior
Paylater Usage	Pearson Correlation	1	0,272
	Sig. (2-tailed)		0,006
	N	100	100

Impulse	Pearson Correlation	0,272	1
Buying	Sig. (2-tailed)	0,006	
Behavior	N	100	100

4.8 Analysis of the Coefficient of Determination

Variable "paylater use" (refer to Table 10) exerts an impact of 7.4% on impulsive purchasing behaviour, as indicated by the results of the coefficient of determination analysis. It is important to note that the remaining 92.6% of this behaviour is shaped by external factors that fall outside the scope of our study's discussion.

Table 10. Results of analysis of the coefficient of determination.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,272[a]	0,074	0,065	19,606

4.9 Hypothesis Testing

Table 11. Hypothesis test results.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	41,529	4,732		8,775	0,000
	Paylater Usage	0,321	0,115	0,272	2,798	0,006

So, the regression model applied in this study is described as follows: Y = 41.529 + 0.321X.

The following is a summary of the regression model:

1. The constant value of 41.529 indicates that the consistent value of the impulse buying behaviour variable is 41.529 if there is no variable use of paylater (x).
2. Variable (x) has a positive effect on variable (y), based on a positive regression coefficient of 0.321. Thus, the value of impulse buying behaviour increases by 0.321 for every 1% addition of the value of using the paylater.

A simple linear regression test is used to make decisions regarding the relationship between two variables, namely variable (x) and variable (y). Comparison between the calculated t-value and t-table can give the result. If the calculated t value is greater than the t-table and the sig value is less than 0.05, then it is rejected. The following is the hypothesis presented in this study:

$\mathbf{H_1}$: The utilization of paylater has an impact on impulse buying behavior

Drawing from the data presented in Table 10 above, it is found that the calculated t-value (2.798) is higher than the t-table value (1.984), and the significance value (0.006)

is smaller than the threshold value (0.05). So, H_1 is accepted and it can be inferred that the paylater usage has an impact on impulsive buying behavior.

4.10 Discussion

Based on study findings, each respondent in the study used an average of 2 to 5 times the paylater, this shows that the majority of participants used the paylater repeatedly after the first use. As many as 61% of respondents were female. Women have many supporting factors and shop more often than men [10]. The majority of respondents are aged 17 to 25 years and around 51% are private employees.

The discoveries from this research show that there is an impact between the utilization of paylater on impulsive buying behavior. According to Table 10, the findings from the t-test indicate that the accepted hypothesis is H1, which shows that the use of paylater has an impact on the impulse purchasing behavior of online shoppers in Batam City. The use of paylaters has an impact of 7.4% on impulse buying behavior with no significant impact (Table 9). Nonetheless, the effect shows a positive direction, because each additional 1% use of paylater will increase impulsive buying behavior by 0.321 (Table 10). The use of paylater by e-commerce customers in Batam City has influenced impulse buying behavior because of the convenience and benefits offered by this technology. Additionally, as previous research suggested that that internal and external factors can influence someone to use the paylater payment method to do impulsive buying, but external factors have less influence to make someone do impulsive buying [11].

5 Conclusions and Suggestions

In this study, a majority of respondents (61%) were women, with 51% falling within the age group of 17 to 25 years. Furthermore, 53% of the participants were private employees, and 31% had incomes ranging from Rp. 3 to 5 million and above Rp. 10 million. Notably, 73% of respondents reported using Shopee Paylater, and 42% conducted 2-5 transactions using this digital payment system. The acceptance and utilization of PayLater technology within the digital payment landscape garnered a highly positive response, with a significant mean value of 10.34 in the PayLater usage variable, indicating the widespread adoption of this technology in various e-commerce transactions in Batam City.

The study also revealed that impulsive purchasing behavior among PayLater consumers in Batam City is notably high, evidenced by a mean value of 14.65 in the impulse buying behavior variable. This indicates that PayLater consumers tend to make spontaneous purchases on various e-commerce platforms, showing a certain level of indifference to the consequences of their spending decisions.

Furthermore, the study found that the utilization of PayLater services has a positive impact of 7.4% on impulsive buying behavior. However, it's important to note that the majority, amounting to 92.6%, of the influence on impulsive buying behavior is attributed to elements beyond the scope of this study.

For paylater feature providers, these findings carry significant implications. They can serve as a valuable reference point in the development of strategies aimed at improving the overall quality of paylater services. Furthermore, there is an optimistic outlook for the expansion of paylater features beyond their current online-centric applications. By encompassing both online and offline transactions, paylater services can become even more versatile, offering users a seamless and accessible payment option that aligns with their diverse needs and preferences.

Likewise, for future researchers, this study opens up exciting possibilities. Beyond the variables and indicators explored in this research, there remains ample room for the consideration of other relevant elements that could exert an influence on research outcomes. With this study as a foundation, it aspires to guide and inspire future researchers in their quest to develop novel research models. By delving deeper into this subject matter and taking a broader perspective, upcoming research endeavors can further enrich our understanding of paylater services, consumer behavior, and financial decision-making in the evolving landscape of digital payments.

References

1. Cuandra, F.: The Effect of Paylater Payment Method Used in Online Impulsive Buying in Batam City. SEIKO J. Manag. Bus. 5(1). 625–633 (2022).
2. Hilmi, L.D., and Pratika, Y.: Paylater feature: impulsive buying driver for e-commerce in indonesia. Int. J. Econ. Bus. Account. Res. 5(2). (2021).
3. Zahra, Z., Suleman, D., Wuryanto, A., Styaningrum, E.D., Rini, R.S., Suhendra, A.D., Supriatin, S., and Setiawan, A.C.: Study of Impulse Buying Behavior on Interest in Using Paylater Facilities In The Marketplace With Celebrity Endorsers As Mediations. Int. J. Soc. Manag. Stud. 3(6). 86–91 (2022).
4. Dude, N.Z., Isa, R.A., and Ismail, Y.L.: Pengaruh Penggunaan Paylater Dan Flashsale Terhadap Perilaku Impulse Buying Pada Pengguna Shopee (Studi pada Mahasiswa Pengguna Shopee Jurusan Manajemen Universitas Negeri Gorontalo). YUME J. Manag. (Vol 5, No 3 (2022)). 358–363 (2022).
5. Wulandari, R.T., and Damayanti, S.M.: The Importance of Digital Financial Literacy to Anticipaye Impulsive Buying Behavior In Buy-Now-Pay-Later Mode. Int. J. Bus. Econ. Vol 4 No 3 Sept. 2022. (2022).
6. Lee, H.: Intrinsic and extrinsic motivations affecting impulse-buying tendency in mobile shopping. Soc. Behav. Personal. an Int. J. 46(4). 683–694 (2018).
7. Kamil, I.: Financial Ability and Impulsive Buying Behavior in Online Paylater Systems: Case Study In Marketplace. EPRA Int. J. Econ. Bus. Manag. Stud. 10(1). 81–93 (2023).
8. An Overview of Electronic Commerce (e-Commerce). J. Contemp. Issues Bus. Gov. 27(3). (2021).
9. Natswa, S.L.: Buy-now-pay-later (bnpl): generation z's dilemma on impulsive buying and overconsumption intention. In BISTIC Bus. Innov. Sustain. Technol. Int. Conf. (BISTIC 2021) (Atlantis Press, 2021), pp. 130–137.
10. Sari, R.: Pengaruh Penggunaan Paylater Terhadap Perilaku Impulse Buying Pengguna E-Commerce di Indonesia. J. Ris. Bisnis Dan Investasi 7(1). 44–57 (2021).
11. Nicholas, J., Ruben, G., and Meiryani: The Effect of Paylater Payment Method on Impulsive Buying of E-Commerce Users in Indonesia. In 2023 International Conference on Digital Applications, Transformation & Economy (ICDATE), pp. 1–6. (2023)