



# Examining the Role of Personal Character in Indonesian Peer-to-Peer Lending

Iwan Purwanto<sup>ab\*</sup>, Rizal Isnanto<sup>c</sup>, Aris Puji Widodo<sup>d</sup>

<sup>a</sup> Doctoral Program of Information Systems, Diponegoro University, Semarang, Indonesia

<sup>b</sup> Information Systems Department, Faculty of Industrial Technology, Universitas Trisakti, Indonesia

<sup>c</sup> Computer Engineering Department of Diponegoro University, Semarang, Indonesia

<sup>d</sup> Science and Mathematics Department of Diponegoro University, Semarang, Indonesia

*Submitted: March 16th, 2025; Revised: April 17th, 2025;  
Accepted: May 15th, 2025; Available Online: May 14th, 2025  
DOI: 10.21456/vol15iss1pp21-337*

## Abstract

This research examines Indonesian P2P lending and bad loan management by analyzing borrower characteristics. The large value of problematic loans is a key signal for this investigation. The Big Five Personality Approach is used to survey P2P lending users. This study solely examines if the Big Five personality traits affect evaluation. On March 5–18, 2023, 17 P2P lending sites gathered data from 197 respondents for two weeks. Data validation continued until 11 respondents were pruned. The remaining 186 respondents' data was evaluated using SPSS. The management process yielded two hypothesis tests, the T-test and the F-test, which showed that the Big Five personality significantly affects present assessment activities. F-Test findings show the Big Five Personalities have a big impact concurrently. These two factors suggest that the Big Five Personalities may evaluate decision support systems for borrower recommendations.

**Keywords :** P2P Lending; Bad Loan Management; Borrower Characteristics; Big Five Personality Approach; Personality Traits

## 1. Introduction

The role of micro, small, and medium enterprises (MSMEs) in Indonesia is crucial in facilitating the participation of the low-income population in economically productive activities (Handayani et al., 2023). These enterprises contribute significantly to the creation of employment opportunities and the development of the workforce, thereby contributing to the growth of the domestic gross product (GDP) and enhancing access to communications infrastructure (Gandhi et al., 2021; A. Kumar et al., 2022; D. Kumar et al., 2023; Sharma et al., 2023; Utami & Supriadi, 2023). Nevertheless, the contributions made by these MSMEs are insufficient in terms of stimulating significant economic development and enhancing society incomes (Amornkitvikai et al., 2022). MSMEs encounters many obstacles pertaining to human resource capacity and quality, along with market access. MSMEs are required to enhance their operational resilience in response to the escalating competitiveness in the business landscape and the changing customer tastes driven by technology advancements (Gao et al., 2023; Gupta & Kumar Singh, 2023; Kumar Singh et al., 2023; Yang et al., 2022).

The MSMEs is vital to the growth of the Indonesian economy since MSMEs own almost all of the country's enterprises. When it comes to the PDB, the MSMEs is responsible for 60.5% of all

contributions, and when it comes to spending on labor, the UMKM is responsible for 96.9% of all national spending. In the two years leading up to the first Covid-19 pandemic in 2020–2021, local MSMEs circumstances improved. During this time period, more than 48% of MSMEs saw raw material shortages, 77% witnessed a fall in revenue, 88% saw a reduction in product demand, and 97% saw a decline in asset value, according to a study done by UNDP and LPEM UI with 1,180 MSMEs operators as respondents (Coordinating Ministry for Economic Affairs of The Republic of Indonesia, October 2022). The economic indicators of Indonesia have been bolstered by MSMEs, making their performances a subject of interest for scholars (Astadi et al., 2022; Gandhi et al., 2021; Mauladi et al., 2022; Muslih, 2022; Rahayu et al., 2023)

Capital is a factor that has a significant influence on the progress of a business. MSMEs need a certain amount of cash for their growth, not just large-scale firms (Ravina-Ripoll et al., 2023), (Pham & Sala, 2022). Nevertheless, in practical terms, the majority MSMEs encounter obstacles related to financing, since they started their commercial operations with few financial resources (Sahoo & Thakur, 2023). In an effort to overcome capital limitations, often applying for a loan is considered an alternative that can be taken. However, when referring to the policies of banks and financial institutions with authority, access

\*) Corresponding author: [iwan.purwanto@trisakti.ac.id](mailto:iwan.purwanto@trisakti.ac.id)

to these loans also becomes very limited for MSMEs. The process requires the fulfillment of a number of complex requirements, which are often challenging for MSMEs, hence making loan applications to banking institutions a difficult challenge. Furthermore, the protracted loan application process is a notable obstacle, as financial institutions impose a series of strict restrictions on their loan application protocols (Altavilla et al., 2019; Cincinelli & Piatti, 2021; Vallet et al., 2021). In this MSMEs are faced with the challenge of finding solutions to obtain easier access to sources of capital. One method is using the peer-to-peer (P2P) lending scheme, which has emerged as a promising avenue for commercial entities. Peer-to-peer (P2P) financing provides several conveniences for MSMEs, including an efficient and straightforward process, affordable interest rates, no collateral requirements, and flexibility in application timing (Mitra et al., 2022; Vijayakumar Bharathi et al., 2022).

The role of SMEs in Indonesia is crucial in facilitating the economic engagement of the low-income population (T. Zhou, 2012). These enterprises contribute significantly to the creation of employment opportunities and the development of the workforce, thereby enhancing the domestic gross product (GDP) and ensuring access to essential communications infrastructure. Nevertheless, the contributions made by these MSMEs are insufficient in terms of stimulating significant economic development and increasing society's incomes (Banfi & Randall, 2022; Li et al., 2022; Siqueira et al., 2022). MSMEs have many problems with regard to human resource capacity, quality, and market access. MSMEs are required to enhance their operational resilience in response to the escalating competitiveness in the business landscape and the changing customer tastes driven by technological advancements.

Various methods have been used by P2P lending providers, however, the incidence of non-performing loans remains very high (Cardaci, 2018; Ahiasse et al., 2023; Banna & Alam, 2021; Gouda, 2022; Jiajia et al., 2023; Uddin et al., 2022). The process of document selection, business ownership surveys, and the need for third-party recommendations have not yet yielded significant transformative value. In this study, we attempt to evaluate borrowers through identification of their characteristics, using the Big Five Personality method which can provide recommendations to lenders or P2P platforms to determine the amount of funds to be provided to borrowers.

The focal point of this study is the prevalent issue of poor credit, which has emerged as a significant phenomenon. Our research endeavors include the utilization of survey methodologies to do data mining on individuals who have borrowed funds (Ahiasse et al., 2023; Naili & Lahrichi, 2022). The term "selected borrowers" refers to individuals who have obtained financial help via the peer-to-peer lending platform

and are now in the repayment phase of their loans. A cohort of 197 participants completed the Big Five Personality Assessment in order to ascertain a more dependable measure than the existing formula. To get relevant information, we engaged in a collaborative effort with a total of 17 peer-to-peer lending entities. The procedure for collecting data is conducted over a period of two weeks and then disseminated to the recipients. The outcomes of data mining are consolidated for further administration with the aim of yielding advantages for participants in P2P lending, particularly lenders, by serving as a suggestion for a decision support system through an examination of borrower attributes.

## 2. Method

In order to ascertain the dependable extent of peer-to-peer (P2P) lending, it is vital to use the survey methodology to gauge the impact of the Big Five personality traits on the existing operational approach (Akbar et al., 2023; Arpaci et al., 2022; Bano et al., 2019; Di Fabio et al., 2022; Khorrami et al., 2022; Luo et al., 2023; Myszkowski et al., 2015). The survey was carried out over a span of two weeks, namely from the 5th to the 18th of March 2023. It included a total of 17 peer-to-peer lending platforms operating in Indonesia. The loan period under investigation spanned from January to October 2023. According to the survey results, a total of 197 participants indicated that they had completed the survey. Subsequently, the collected data was analyzed using the methodology outlined in Figure 1.

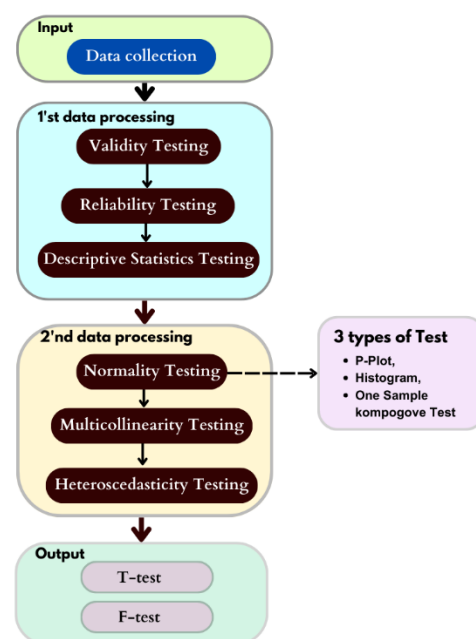


Fig 1. Research Process Diagram

The activities carried out in processing this data are, first we conducted a survey of 17 P2P platforms

within 2 weeks. We have obtained 197 survey results and have been grouped for further processing. After that we carried out the management process which was divided into two major parts, the first processing was carried out in three trial processes.

Trial in the first process is to test the validity. Validity Test is a testing activity that aims to determine whether a measuring instrument is valid or vice versa. The measuring instrument in question is the questions contained in the questionnaire. This questionnaire uses the Big Five Personality method which is divided into five components, where each component has five questions that are given randomly.

After going through the validity test phase and being declared valid, then entering the second test stage, namely the Reliability test. Reliability test is a statistical process or technique used to assess the extent to which a measuring instrument or test is reliable or consistently gives the same results in several measurements. In this context, the reliability test aims to assess the level of accuracy and consistency of an instrument in measuring a given concept or variable. These two methods are the initial stage for carrying out the third process in this 1st data processing. The third stage in the first data processing is Descriptive Statistics testing. The purpose of testing Descriptive Statistics on SPSS is to present a comprehensive and brief statistical summary of the data that has been input. The main purpose of this activity is to summarize, organize, and understand the distribution of data from specific variables.

The second processing process is divided into three major test contexts, namely: normality test, multicollinearity test, and heteroscedasticity test.

A normality test is a statistical process used to determine whether the data at hand exhibits the properties of a normal distribution or not. The normal distribution, commonly referred to as the Gaussian distribution or the bell-shaped distribution, is a prevalent probability distribution seen in several natural and social phenomena. In the current phase, our testing procedures include three distinct kinds of tests: the P-Plot Test, Histogram analysis, and the One Sample Komogove test. Following the completion of the normality test, the subsequent procedure is conducting the multicollinearity test. The multicollinearity test is a statistical procedure used to assess the presence of a significant linear association among many independent variables (predictors) inside a regression analysis model. Multicollinearity arises when there is a strong connection between two or more independent variables inside a regression model, leading to challenges in the interpretation of outcomes and the accuracy of predictions. The last examination in the subsequent phase of the procedure is the Heteroscedasticity Test. The heteroscedasticity test is a statistical procedure used to ascertain the existence of heteroscedasticity, which refers to the unequal

dispersion of error terms inside a regression model. Heteroscedasticity is a phenomenon that arises when the variability of errors in a statistical model is not constant (i.e., heterogeneous) across all levels of predictor variables. Upon undergoing two significant stages of processing, the output is obtained by the T-test procedure. The T-test function in the Statistical Package for the Social Sciences (SPSS) software is used to examine hypotheses pertaining to the disparity between two distinct groups or the mean of two separate samples. The T-test is used within the framework of comparing two groups or two conditions in order to examine the presence of a statistically significant disparity between the means of the variables observed in the two groups.

The F test should be used to get the output. The primary objective of doing the F-test in SPSS is to use the analysis of variance (ANOVA) technique, which is employed to assess and contrast the means of three or more groups. The F-test was used to assess the presence of a statistically significant disparity among the observed group means.

### 3. Results and Discussion

#### 3.1. Dataset

A total of 197 participants were gathered over a span of two weeks. The poll is disseminated over a total of 17 peer-to-peer lending sites. The questions were categorized based on the Big Five Personality Framework, including openness, conscientiousness, extraversion, agreeableness, and neuroticism. Openness to experience refers to an individual's inclination towards embracing new ideas and experiences. Conscientiousness pertains to one's tendency to exhibit carefulness and thoroughness in their actions. Extraversion relates to the degree of sociability and outgoingness in a person. Agreeableness reflects an individual's propensity to be cooperative and accommodating. Lastly, neuroticism characterizes the extent of emotional instability and vulnerability in an individual.

Table 1. Sample Questions on the Big Five Personality Components

Component	Question
Openness	Do you like trying new things?
	Are you comfortable with change?
	Do you find it difficult to strike up a conversation with someone you just met?
	Do you feel reluctant to get involved in other people's lives?
	Do you feel open to trying new or unusual experiences?
Conscientiousness	Do you feel devastated when you fail to achieve your goals?
	Do you feel the need to complete tasks regularly?
	Do you feel the need to re-evaluate your work before turning it in?

	Do you feel compelled to continually learn and improve yourself? Do you feel the need to make corrections when you make a mistake?
Extraversion	Do you feel tired and less energetic in various situations? Do you tend to be the center of attention among your friends? Do you tend to stay out of the spotlight among your friends? Do you feel happy when others pay attention to you? Do you feel unhappy when other people pay attention to you?
Agreeableness	Do you tend to prioritize your personal interests over the interests of others? Do you feel happy when you are able to resolve conflicts between other people? Do you feel unhappy when you have to resolve conflicts between other people? Do you tend to seek approval from others? Do you tend not to seek approval from others?

Neuroticism	Do you feel anxious when you face a new situation? Don't you feel anxious when you face new situations? Do you tend to worry a lot about small problems? Aren't you worried about a small problem? Do you often feel sad?
-------------	---

### 3.2. Processing

The processing stage is divided into two major parts, where each part has three test stages. In the first stage of processing, the test activity is divided into three activities, namely: validity test, reliability test, and descriptive statistical test (Abadi et al., 2020; Akbar et al., 2023; Simpson & Bedwell, 2022).

In the context of using SPSS, the actions undertaken in this phase pertain to the examination of the validity of an instrument or measuring tool used in research or surveys, including five distinct components. The primary objective of validity testing is to ascertain if the instrument or measuring tool has the capacity to effectively and reliably assess the intended notion. The results of the data processing can be presented in Table 2.

Table 2. Validity Testing Results

Item	R Count	R Table (5%)	Re
<b>Openness</b>			
O1	0,694	0,1398	Valid
O2	0,632	0,1398	Valid
O3	0,710	0,1398	Valid
O4	0,585	0,1398	Valid
O5	0,677	0,1398	Valid
<b>Extraversion</b>			
E1	0,705	0,1398	Valid
E2	0,688	0,1398	Valid
E3	0,648	0,1398	Valid
E4	0,722	0,1398	Valid
E5	0,670	0,1398	Valid
<b>Neuroticism</b>			
N1	0,808	0,1398	Valid
N2	0,615	0,1398	Valid
N3	0,848	0,1398	Valid
N4	0,850	0,1398	Valid
N5	0,741	0,1398	Valid

Item	R Count	R Table (5%)	Re
<b>Conscientiousness</b>			
C1	0,770	0,1398	Valid
C2	0,738	0,1398	Valid
C3	0,666	0,1398	Valid
C4	0,705	0,1398	Valid
C5	0,558	0,1398	Valid
<b>Agreeableness</b>			
A1	0,542	0,1398	Valid
A2	0,461	0,1398	Valid
A3	0,585	0,1398	Valid
A4	0,528	0,1398	Valid
A5	0,608	0,1398	Valid

In this stage, we have to delete data that has a bad influence on the processing process. This is done by mapping the data first.

Figure 2 depicts the spatial arrangement of data deletion within the context of 11 survey findings. The presence of the star symbol signifies that the data lacks substantial support for the process and has the potential to impact the outcomes of the ultimate database evaluation (Kouhia & Stenberg, 1995; H. Zhou et al., 2011). Data marked with a circle symbol may be subject to deletion or retention. Typically, such data exhibits suboptimal quality but does not significantly impact modifications to the dataset.

However, for the purpose of ensuring the stability of the dataset during further processing, it is advisable to remove it.

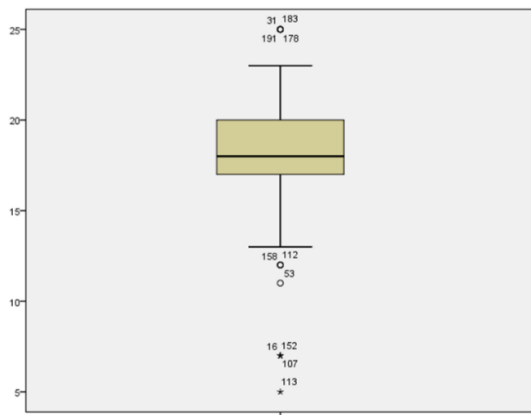


Fig 2. Elimination of Nonconforming Components

After the completion of validity testing, we move on to the next study step, which focuses on assessing the dependency of the initial processing activity, which we call reliability testing. The activity carried out at this stage is to take measurements to evaluate the level of consistency and reliability shown by the instrument or measuring device while assessing the same variable at several points in time or among many participants (Ajismanto & Widyanto, 2020; Hamundu et al., 2021; Sudrajat et al., 2022; Verma et al., 2022). The measurement results are presented in Table 3.

Table 3. Reliability Testing Results

Item	Cronbach's Alpha	Reliability Value	Results
Openness	0,640	0,6	Reliable
Conscientiousness	0,720	0,6	Reliable
Extraversion	0,719	0,6	Reliable
Agreeableness	0,608	0,6	Reliable
Neuroticism	0,834	0,6	Reliable

After the completion of the first procedures, the succeeding phase, known as descriptive statistical testing, will commence. In this phase, our main goal is to give a concise and thorough statistical portrayal of the data that is currently accessible (Meiryani, Riantono, et al., 2022; Subawa et al., 2020). This activity involves a variety of statistical studies performed to identify, organize, and understand the data distribution of certain variables. The tabular representation of the results obtained from the analysis and manipulation of data may be shown in table 4.

Table 4. Descriptive Statistic Testing Results

	N	Minimum	Maximum	Mean	Std. Deviation
Openness	186	10	25	18.54	2.893
Conscientiousness	186	11	25	19.17	3.223
Extraversion	186	5	25	15.05	3.593
Agreeableness	186	12	25	18.28	2.434
Neuroticism	186	5	25	14.80	4.693

	N	Minimum	Maximum	Mean	Std. Deviation
Current	186	6	23	14.8	3.729
Valid N				0	

The preceding action pertains to the first stage of processing. We will now proceed to examine the subsequent step of processing, which builds upon the previous stage. This second stage of processing is often referred to as the classic assumption test. In order to execute the subsequent phase of processing tasks, it is important to first complete the first phase of processing (Liu et al., 2021; Lozano-Aguilera et al., 2014; Pugh et al., 1995). During the second phase of processing, the test activities are categorized into three distinct levels of testing. The three tests that are often used in statistical analysis are normality testing, multicollinearity testing, and heteroscedasticity testing.

The first testing activity involves the assessment of normalcy. A normality test is conducted to assess if the data under consideration is derived from a normal distribution or conversely. During the stage of normality testing, three kinds of tests are often employed: the P-Plot, Histogram, and One Sample Kolmogorov Smirnov Test. The results of processing the P-plot data can be seen in Figure 3.

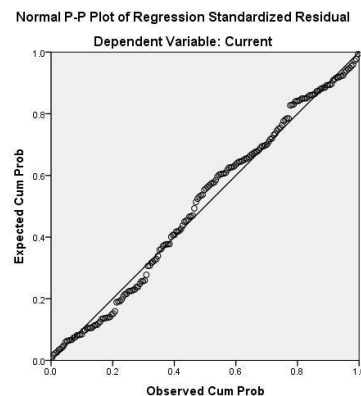


Fig 3. The results of Data Processing Based on the P-Plot

The second test is the normality test; we do it using the histogram test. Based on the data that we manage the skills of data processing can be presented in Figure 4.

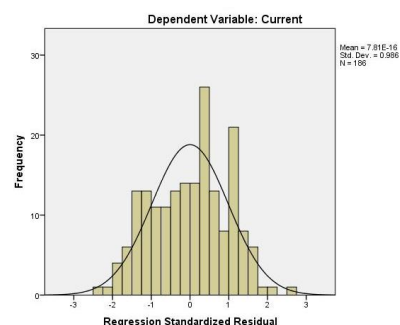


Fig 4. The results of Data Processing Based on the Histogram

Following the completion of the normalization test using three different methodologies, we now move on to the next phase, which involves the multicollinearity test. Based on the analysis of data processing, the presentation of table descriptions can be seen in Table 6.

Table 6. Multicollinearity Test Results

Model	Unstandardized Coefficients			Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta					
1 (Constant)	12.403	3.665		3.384	.001			
Openness (Keterbukaan)	.058	.097	.045	.598	.551	.928	1.078	
Conscientiousness (Kesadaran)	-.101	.088	-.088	-1.156	.249	.920	1.087	
Extraversion (Versi ekstra)	.025	.080	.024	.308	.758	.892	1.121	
Agreeableness (Keramahan)	.027	.118	.017	.226	.822	.888	1.126	
Neuroticism (Neurotisme)	.162	.058	.204	2.785	.006	.985	1.015	

a. Dependent Variable: Current

The concluding phase of the second processing involves doing the heteroscedasticity test, which is visualized using a scatterplot. The findings from the analysis indicate a lack of discernible trends, with the data exhibiting a dispersed distribution centred around the value of zero (Utaya et al., 2020; Weisberg, 2005). This observation suggests the absence of heteroscedasticity symptoms. The outcomes derived from analysing the scatterplot diagram may be seen in Figure 5.

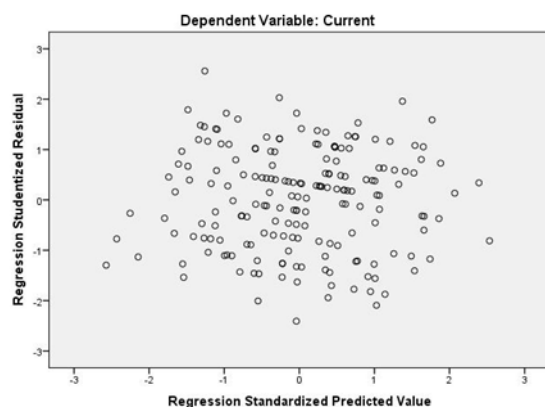


Fig 5. Scatterplot Graph Results

### 3.3. Result of Data Processing

Following the completion of the processing step, the system is now transitioning towards the last phase, often referred to as the outcome. The determination of these outcomes involves the use of two test procedures, namely the T-test and the F-test. The T-test was used to compare the means of two independent groups (Meiryani, Darmawan, et al., 2022; Meiryani, Riantono, et al., 2022). The purpose of this study was to perform a t-test in order to assess the presence of a statistically significant disparity between the two groups in relation to the variable y, which was assessed using a ratio scale. The T-test

findings, as shown in Table 7, were derived from the data test outcomes.

Table 7. T-test results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	30.036	3.102		9.683	.000
Openness (Keterbukaan)	-.260	.086	-.208	-3.014	.003
Conscientiousness (Kesadaran)	-.175	.080	-.153	-2.183	.030
Extraversion (Versi ekstra)	-.266	.070	-.261	-3.790	.000
Agreeableness (Keramahan)	-.275	.106	-.184	-2.592	.010
Neuroticism (Neurotisme)	.133	.053	.168	2.494	.014

a. Dependent Variable: Current

The second result was evaluated using the F-test. A comparative study of the variance of the five groups was conducted using the F-test. An analysis of variance (ANOVA) was conducted to assess the presence of a statistically significant disparity among the means of the various groups (Abdollahpour et al., 2023; Javadi et al., 2023; Ma et al., 2023; Sajjad et al., 2023; Senmar et al., 2023; Song et al., 2023; Vakilabad et al., 2023). The presentation of data processing results may be seen in Table 8.

Table 8. F-test results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	507.034	5	101.407	8.838	.000 <sup>b</sup>
	Residual	2065.202	180	11.473		
	Total	2572.237	185			

a. Dependent Variable: Current

b. Predictors: (Constant), Neuroticism (Neurotisme), Conscientiousness (Kesadaran), Openness (Keterbukaan), Extraversion (Versi ekstra), Agreeableness (Keramahan)

### 3.4 Discussion

Based on the aforementioned operations, namely processing to stage 1, processing to stage 2, and the subsequent data processing results, we may provide the following description of the outcomes: In the component of validity testing results, the results of the validity tests indicate a significant degree of validity, as shown by the R count value exceeding the R table value. A component's lowest score signifies a comparatively low amount of resistance towards the corresponding question, hence making it suitable for use as input in the development process. The findings from the validity tests demonstrate a notable level of validity, as seen by the R Count value surpassing the R Table value.

The lowest score of the component indicates a reduced level of resistance towards the relevant question, rendering it appropriate for use as input in the developmental process. In the context of reliability testing, it may be inferred that the validity test, which relies on statement evaluation, indicates that although

all question levels exhibit reliability, the degree of penalties imposed by P2P lending operators in Indonesia (specifically, agreeableness) receives the lowest score. This might serve as an input in the process of improvement.

The reliability of the validity test is considered satisfactory if the calculated value of Cronbach's alpha exceeds 0.6. Descriptive the statistical analysis conducted reveals that the data shown in Table 4 has been obtained from a sample size of 186 participants, as stated in Column 2. Column 3 denotes the lowest value, while column 4 indicates the highest amount. Column 5 denotes the mean value, whereas the last column (sixth) provides the standard deviation. Based on the findings of the observed comparison, it can be inferred that the mean (fifth column) exhibits a value that surpasses the standard deviation (sixth column), suggesting a favorable assessment of the standard deviation.

Drawing Library: I created a program that generates random shapes on the screen. The program uses a loop to continuously generate new shapes at different positions and sizes. The shapes are drawn using the library's built-in functions. The analysis of the P-Plot data reveals that the observations in Figure 3 demonstrate dispersion around the diagonal line and align with its direction, as shown by the results of the P-Plot test. This observation indicates that the action meets the criteria of normality.

In the study "Data Processing Based on the Histogram: Results and Analysis," the results of the histogram test trials show that the processed data has a bell-shaped distribution with no skewness to the left or right that can be seen. Hence, it may be inferred that the histogram plot depicts a distribution that follows the normal distribution pattern. Figure 4 displays the visual depiction of the processed data.

During the phase of testing for normality using the Kolmogorov-Smirnov test, the third step involves doing the Kolmogorov-Smirnov one-sample test. The analysis of the test dataset reveals that the obtained significance value of 0.091 exceeds the predetermined threshold of 0.05. The findings indicated that the regression model used in this investigation had effectively met the normalcy test. The presentation of test results may be achieved by using Table 5.

The Multicollinearity Test reveals that, when analyzing the data processing, each variable has a tolerance value beyond 0.100 and a VIF value below 10.00. The results of this study indicate that there is no evidence of multicollinearity among the variables. The table description is shown in Table 6.

According to the scatterplot graph, the study reveals a dearth of identifiable patterns since the data has a scattered distribution centered around the zero value. This finding indicates a lack of signs of heteroscedasticity. The results obtained from the examination of the scatterplot diagram are visually shown in Figure 5.

The T-test findings indicate that the openness variable has a significance value of 0.003, which is below the threshold of 0.05. Therefore, it can be inferred that the openness variable exerts a statistically significant impact on the current variable. The variable of conscientiousness has a statistically significant impact on the variable of current, as seen by its significance value of 0.030, which falls below the conventional threshold of 0.05. The variable extraversion has a significance value of 0.000, indicating statistical significance at a significance level of 0.05. Therefore, it can be inferred that the extraversion variable has a substantial impact on the current variable. The variable agreeableness has a significance value of 0.010, which is below the threshold of 0.05. Consequently, we may infer that the agreeableness variable exerts a statistically significant impact on the current variable. The neuroticism variable has a significance value of 0.014, which falls below the threshold of 0.05. Thus, it can be inferred that the neuroticism variable exerts a statistically significant impact on the current variable.

Also, based on the results of the F test, it can be said that the significance value of 0.00, which is less than the 0.05 threshold, means that the variables of openness, conscientiousness, extraversion, agreeableness, and neuroticism have a significant effect on the current variable.

#### 4. Conclusion

Peer-to-peer (P2P) lending represents a commendable endeavour for micro, small, and medium-sized enterprise (MSME) stakeholders to get new capital for company expansion (Fujiwara & Mahajan, 2023; Spaltani et al., 2023; Triandini et al., 2023). However, P2P lending service providers have a distinct challenge in the form of poor creditworthiness (Kim, 2019). The system's simplicity, which relies solely on historical approval data for evaluations, is the anticipated factor causing credit congestion in the provision of recommendations for loan amounts. This study has examined the assessment of an individual's character in relation to their ability to meet responsibilities as a source of optimism. Based on the conducted survey and subsequent analysis of the survey data, it has been observed that the Big Five personality traits are believed to have an impact on individuals' ability to fulfil their financial responsibilities to lenders. It is anticipated that future studies will possess the capability to examine the quantity of suggestions provided to borrowers using the Big Five Personality Assessment.

#### References

Abadi, F. S., Kyavar, M., Nikpajouh, A., Al-Zakerini, S. M., & Ahadi, H. (2020). Structural equation

- modeling of the relationships between executive functions and the percentage of artery blockage in patients with cardiovascular disease: Mediation by the big five personality characteristics. *Iranian Heart Journal*, 21(3), 73–86.
- Abdollahpour, D., Homayouni-Rad, A., Nourizadeh, R., Hakimi, S., & Mehrabi, E. (2023). The effect of probiotic supplementation on episiotomy wound healing among primiparous women: a triple-blind randomized clinical trial. *BMC Complementary Medicine and Therapies*, 23(1). <https://doi.org/10.1186/s12906-023-03980-3>
- Ahiase, G., Andriana, D., Agbemava, E., & Adonai, B. (2023). Macroeconomic cyclical indicators and bank non-performing loans: does country governance matter in African countries? *International Journal of Social Economics*. <https://doi.org/10.1108/IJSE-11-2022-0729>
- Ajismanto, F., & Widyanto, A. (2020). The Effect of Social Media Effectiveness on MSMEs Marketing. *2020 2nd International Conference on Cybernetics and Intelligent System, ICORIS 2020*. <https://doi.org/10.1109/ICORIS50180.2020.9320836>
- Akbar, A., Malik, A., & Warraich, N. F. (2023). Big Five Personality Traits and Knowledge Sharing Intentions of Academic Librarians. *Journal of Academic Librarianship*, 49(2), 102632. <https://doi.org/10.1016/j.acalib.2022.102632>
- Altavilla, C., Pariès, M. D., & Nicoletti, G. (2019). Loan supply, credit markets and the euro area financial crisis. *Journal of Banking and Finance*, 109. <https://doi.org/10.1016/j.jbankfin.2019.105658>
- Amornkitvikai, Y., Tham, S. Y., Harvie, C., & Buachoom, W. W. (2022). Barriers and Factors Affecting the E-Commerce Sustainability of Thai Micro-, Small- and Medium-Sized Enterprises (MSMEs). *Sustainability (Switzerland)*, 14(14). <https://doi.org/10.3390/su14148476>
- Arpaci, I., Karatas, K., Kusci, I., & Al-Emran, M. (2022). Understanding the social sustainability of the Metaverse by integrating UTAUT2 and big five personality traits: A hybrid SEM-ANN approach. *Technology in Society*, 71(July), 102120. <https://doi.org/10.1016/j.techsoc.2022.102120>
- Astadi, P., Kristina, S., Retno, S., Yahya, P., & Agni Alam, A. (2022). The long path to achieving green economy performance for micro small medium enterprise. *Journal of Innovation and Entrepreneurship*, 11(1). <https://doi.org/10.1186/s13731-022-00209-4>
- Banfi, J. T., & Randall, J. G. (2022). A meta-analysis of trait mindfulness: Relationships with the big five personality traits, intelligence, and anxiety. *Journal of Research in Personality*, 101(October), 104307. <https://doi.org/10.1016/j.jrp.2022.104307>
- Banna, H., & Alam, M. R. (2021). Impact of digital financial inclusion on ASEAN banking stability: implications for the post-Covid-19 era. *Studies in Economics and Finance*, 38(2), 504–523. <https://doi.org/10.1108/SEF-09-2020-0388>
- Bano, S., Shah, U. U., & Ali, S. (2019). Personality and technology: Big five personality traits as descriptors of universal acceptance and usage of technology UTAUT. *Library Philosophy and Practice*, 2019.
- Cardaci, A. (2018). Inequality, household debt and financial instability: An agent-based perspective. *Journal of Economic Behavior and Organization*, 149, 434–458. <https://doi.org/10.1016/j.jebo.2018.01.010>
- Cincinelli, P., & Piatti, D. (2021). How inefficient is an inefficient credit process? An analysis of the Italian banking system. *Journal of Risk Finance*, 22(3–4), 209–239. <https://doi.org/10.1108/JRF-08-2020-0184>
- Di Fabio, A., Saklofske, D. H., Gori, A., & Svicher, A. (2022). Perfectionism: A network analysis of relationships between the Big Three Perfectionism dimensions and the Big Five Personality traits. *Personality and Individual Differences*, 199(July), 111839. <https://doi.org/10.1016/j.paid.2022.111839>
- Fujiwara, A., & Mahajan, R. (2023). Innovative Ways to Mobilise Private Sector Capital in Climate Change Adaptation Investments in Developing Countries—Mechanisms and Forward-Looking Vision from Practitioners’ Standpoint. In *Climate Change Management: Vol. Part F5* (pp. 345–364). Springer Science and Business Media Deutschland GmbH. [https://doi.org/10.1007/978-3-031-28728-2\\_16](https://doi.org/10.1007/978-3-031-28728-2_16)
- Gandhi, A., Nurcahyo, R., & Gabriel, D. S. (2021). Identification of challenges and benefits of product certification on micro, small, and medium enterprises (MSMEs) in Indonesia. *Proceedings of the International Conference on Industrial Engineering and Operations Management*, 498–509.
- Gao, H., Li, J., & Wen, H. (2023). Bank funding costs during the COVID-19 pandemic: Evidence from China. *Pacific-Basin Finance Journal*, 79, 102006. <https://doi.org/https://doi.org/10.1016/j.pacfin.2023.102006>
- Gouda, H. (2022). Exploring the effects of learning abilities, technology and market changes on the need for future skills. *Higher Education, Skills and Work-Based Learning*, 12(5), 900–913. <https://doi.org/10.1108/HESWBL-10-2021-0200>

- Gupta, A., & Kumar Singh, R. (2023). Managing resilience of micro, small and medium enterprises (MSMEs) during COVID-19: analysis of barriers. *Benchmarking*, 30(6), 2062–2084. <https://doi.org/10.1108/BIJ-11-2021-0700>
- Hamundu, F. M., Husin, M. H., & Baharudin, A. S. (2021). Accounting information system adoption among Indonesian msms: A conceptual model for cloud computing. *Journal of Engineering Science and Technology*, 16(6), 4438–4451.
- Handayani, B. D., Hajawiyah, A., Harjanto, A. P., & Rahman, M. F. (2023). Analysis of the Use of Accounting Information Technology in MSMEs In Indonesia. *Quality - Access to Success*, 24(195), 115–124. <https://doi.org/10.47750/QAS/24.195.14>
- Javadi, M., Gheshlaghi, M., & Bijani, M. (2023). A comparison between the impacts of lecturing and flipped classrooms in virtual learning on triage nurses' knowledge and professional capability: an experimental study. *BMC Nursing*, 22(1). <https://doi.org/10.1186/s12912-023-01353-2>
- Jiajia, L., Kun, G., Fangcheng, T., Yahan, W., & Shouyang, W. (2023). The effect of the disposal of non-performing loans on interbank liquidity risk in China: A cash flow network-based analysis. *The Quarterly Review of Economics and Finance*, 89, 105–119. <https://doi.org/https://doi.org/10.1016/j.qref.2023.03.005>
- Khorrami, M., Khorrami, M., & Farhangi, F. (2022). Evaluation of tree-based ensemble algorithms for predicting the big five personality traits based on social media photos: Evidence from an Iranian sample. *Personality and Individual Differences*, 188(November 2021), 111479. <https://doi.org/10.1016/j.paid.2021.111479>
- Kim, M. (2019). Credit constraints in the development of India's Micro, Small and Medium Enterprises (MSMEs). *Asia Life Sciences*, 1, 13–23.
- Kouhia, R., & Stenberg, R. (1995). A linear nonconforming finite element method for nearly incompressible elasticity and stokes flow. *Computer Methods in Applied Mechanics and Engineering*, 124(3), 195–212. [https://doi.org/10.1016/0045-7825\(95\)00829-P](https://doi.org/10.1016/0045-7825(95)00829-P)
- Kumar, A., Singh, V. P., & Srivastava, A. (2022). Quality biodiesel via biotransesterification from inedible renewable sources. *Journal of Cleaner Production*, 379, 134653. <https://doi.org/https://doi.org/10.1016/j.jclepro.2022.134653>
- Kumar, D., Sengupta, K., & Bhattacharya, M. (2023). Macroeconomic influences on M&A deal outcomes: An analysis of domestic and cross-border M&As in developed and emerging economies. *Journal of Business Research*, 161, 113831. <https://doi.org/https://doi.org/10.1016/j.jbusres.2023.113831>
- Kumar Singh, R., Mishra, R., Gupta, S., & Mukherjee, A. A. (2023). Blockchain applications for secured and resilient supply chains: A systematic literature review and future research agenda. *Computers & Industrial Engineering*, 175, 108854. <https://doi.org/https://doi.org/10.1016/j.cie.2022.108854>
- Li, J., Zhou, J., & Cheng, Y. (2022). Conceptual Method and Empirical Practice of Building Digital Capability of Industrial Enterprises in the Digital Age. *IEEE Transactions on Engineering Management*, 69(5), 1902–1916. <https://doi.org/10.1109/TEM.2019.2940702>
- Liu, D., Li, S., Yu, Y., & Moustaki, I. (2021). Assessing Partial Association Between Ordinal Variables: Quantification, Visualization, and Hypothesis Testing. *Journal of the American Statistical Association*, 116(534), 955–968. <https://doi.org/10.1080/01621459.2020.1796394>
- Lozano-Aguilera, E. D., Estudillo-Martínez, M. D., & Castillo-Gutiérrez, S. (2014). A proposal for plotting positions in probability plots. *Journal of Applied Statistics*, 41(1), 118–126. <https://doi.org/10.1080/02664763.2013.831814>
- Luo, X., Ge, Y., & Qu, W. (2023). The association between the Big Five personality traits and driving behaviors: A systematic review and meta-analysis. *Accident Analysis and Prevention*, 183(January), 106968. <https://doi.org/10.1016/j.aap.2023.106968>
- Ma, H., Xing, N., Hou, L., Wu, J., Sha, Z., Wang, F., Ji, X., & Guo, Z. (2023). Dicer Inhibits Hepatocellular Carcinoma by Inhibiting the Interleukin 6 Pathway. *Hepatitis Monthly*, 23(1). <https://doi.org/10.5812/hepatmon-134381>
- Mauladi, K. F., Jaya, I. M. L. M., & Esquivias, M. A. (2022). Exploring the Link between Cashless Society and Cybercrime in Indonesia. *Journal of Telecommunications and the Digital Economy*, 10(3), 58–76. <https://doi.org/10.18080/jtde.v10n3.533>
- Meiryani, M., Darmawan, M. A., Gani, E., Heykal, M., Dewi, K., & Siauwijaya, R. (2022). The Effect of Separation of Task Functions and Application of Accounting Information Systems on Efforts to Disclose Accounting Fraud. *ACM International Conference Proceeding Series*, 87–96. <https://doi.org/10.1145/3535782.3535795>
- Meiryani, M., Riantono, I. E., Lidiyawati, L., Teresa, V., & Tanata, G. B. (2022). The Impact of Income Tax Incentives on Taxpayer

- Compliance on Small and Medium Micro Enterprises (MSMEs) in Indonesia. *ACM International Conference Proceeding Series*, 62–67.  
<https://doi.org/10.1145/3545897.3545907>
- Mitra, R., Goswami, A., & Tiwari, M. K. (2022). Financial supply chain analysis with borrower identification in smart lending platform. *Expert Systems with Applications*, 208, 118026.  
<https://doi.org/https://doi.org/10.1016/j.eswa.2022.118026>
- Muslih, M. (2022). Financial Technology: Digital Legal Challenges and Indonesia's Economic Prospects After Covid-19 Outbreak. *Legality: Jurnal Ilmiah Hukum*, 30(2), 255–266.  
<https://doi.org/10.22219/ljih.v30i2.22784>
- Myszkowski, N., Storme, M., Davila, A., & Lubart, T. (2015). Managerial creative problem solving and the Big Five personality traits: Distinguishing divergent and convergent abilities. *Journal of Management Development*, 34(6), 674–684. <https://doi.org/10.1108/JMD-12-2013-0160>
- Naili, M., & Lahrichi, Y. (2022). The determinants of banks' credit risk: Review of the literature and future research agenda. *International Journal of Finance and Economics*, 27(1), 334–360.  
<https://doi.org/10.1002/ijfe.2156>
- Pham, B. T., & Sala, H. (2022). The implications of public expenditures on a small economy in transition: a Bayesian DSGE approach. *Economic Change and Restructuring*, 55(1), 401–431. <https://doi.org/10.1007/s10644-021-09319-7>
- Pugh, E. W., Mandal, D. M., & Wilson, A. F. (1995). A graphical approach for presenting linkage results from a genomic screen. *Genetic Epidemiology*, 12(6), 807–812.  
<https://doi.org/10.1002/gepi.1370120646>
- Rahayu, S. K., Budiarti, I., Firdaus, D. W., & Onegina, V. (2023). DIGITALIZATION AND INFORMAL MSME: DIGITAL FINANCIAL INCLUSION FOR MSME DEVELOPMENT IN THE FORMAL ECONOMY. *Journal of Eastern European and Central Asian Research*, 10(1), 9–19.  
<https://doi.org/10.15549/jecar.v10i1.1056>
- Ravina-Ripoll, R., Galvan-Vela, E., Sorzano-Rodríguez, D. M., & Ruíz-Corrales, M. (2023). Mapping intrapreneurship through the dimensions of happiness at work and internal communication. *Corporate Communications*, 28(2), 230–248. <https://doi.org/10.1108/CCIJ-03-2022-0037>
- Sahoo, P. S. B. B., & Thakur, V. (2023). Enhancing the performance of Indian micro, small and medium enterprises by implementing supply chain finance: challenges emerging from COVID-19 pandemic. *Benchmarking*, 30(6), 2110–2138. <https://doi.org/10.1108/BIJ-11-2021-0668>
- Sajjad, M., Bhatti, A., Hill, B., & Al-Omari, B. (2023). Using the theory of planned behavior to predict factors influencing fast-food consumption among college students. *BMC Public Health*, 23(1). <https://doi.org/10.1186/s12889-023-15923-1>
- Senmar, M., Azimian, J., Noorian, S., Aliakbari, M., & Chegini, N. (2023). Relationship between spiritual intelligence and lifestyle with life satisfaction among students of medical sciences. *BMC Medical Education*, 23(1).  
<https://doi.org/10.1186/s12909-023-04506-8>
- Sharma, S. K., Ilavarasan, P. V., & Karanasios, S. (2023). Small businesses and FinTech: a systematic review and future directions. *Electronic Commerce Research*.  
<https://doi.org/10.1007/s10660-023-09705-5>
- Simpson, S. D., & Bedwell, J. S. (2022). Big Five Aspect Personality Scales and social anxiety severity in a nonpsychiatric sample. *Personality and Individual Differences*, 199(July), 111840.  
<https://doi.org/10.1016/j.paid.2022.111840>
- Siqueira, M. S. S., Nascimento, P. O., & Freire, A. P. (2022). Reporting Behaviour of People with Disabilities in relation to the Lack of Accessibility on Government Websites: Analysis in the light of the Theory of Planned Behaviour. *Disability, CBR and Inclusive Development*, 33(1), 52–68.  
<https://doi.org/10.47985/dcidj.475>
- Song, J.-E., Lee, S., Lee, M. K., & Chae, H.-J. (2023). Ecological factors affecting first-time mothers' satisfaction with Sanhujoriwons (postpartum care centres) from South Korea: a cross-sectional and correlational study. *BMC Pregnancy and Childbirth*, 23(1).  
<https://doi.org/10.1186/s12884-023-05770-8>
- Spaltani, B. G., Alwajdi, M. F., & Putri, U. T. (2023). One-Man Company Policy and Its Impact on Improving Citizen Welfare. *Yuridika*, 38(1), 121–142.  
<https://doi.org/10.20473/ydk.v38i1.37454>
- Subawa, N. S., Widhiasthini, N. W., & Mimaki, C. A. (2020). An Empirical Study of E-Marketplace Acceptance in MSMEs under the Constructs of Effort Expectancy, Social Influence and Facilitating Condition Factors. *ACM International Conference Proceeding Series*, 116–120.  
<https://doi.org/10.1145/3387263.3387288>
- Sudrajat, A., Megawati, L., & Munasto, D. (2022). The Influence of Business Capital and Marketing Strategy on The Development of Msmes. *Quality - Access to Success*, 23(190), 355–361.  
<https://doi.org/10.47750/QAS/23.190.37>

- Triandini, E., Wijaya, I. G. N. S., & Suniantara, I. K. P. (2023). Analysis of Technology Adoption by SMEs Using Technology Organization Environment Model. *Journal of System and Management Sciences*, 13(2), 225–240. <https://doi.org/10.33168/JSMS.2023.0216>
- Uddin, M. H., Akter, S., Mollah, S., & Al Mahi, M. (2022). Differences in bank and microfinance business models: An analysis of the loan monitoring systems and funding sources. *Journal of International Financial Markets, Institutions and Money*, 80, 101644. <https://doi.org/https://doi.org/10.1016/j.intfin.2022.101644>
- Utami, K., & Supriadi, Y. N. (2023). Customer Satisfaction Analysis of Service Quality Bank, Fintech, Cooperative with CSI and IPA Methods. *Quality - Access to Success*, 24(193), 140–153. <https://doi.org/10.47750/QAS/24.193.16>
- Uta, S., Handoyo, B., & Bachri, S. (2020). Transformation of geospatial technology knowledge in pre-service and experienced geography teachers as pedagogical tools in the technological-pedagogical-content knowledge framework. *International Journal of Learning, Teaching and Educational Research*, 19(9), 58–76. <https://doi.org/10.26803/ijlter.19.9.4>
- Vakilabad, R. N., Kheiri, R., Islamzadeh, N., Afshar, P. F., & Ajri-Khameslou, M. (2023). A survey of social well-being among employees, retirees, and nursing students: a descriptive-analytical study. *BMC Nursing*, 22(1). <https://doi.org/10.1186/s12912-023-01321-w>
- Vallet, M. E., Frankenberger, T. R., Presnall, C., Otieno, L., Fu, C., & Lee, E. (2021). Where are the development actors in protracted crises? Refugee livelihood and food security outcomes in South Sudan demonstrate the potential for fragile settings. *World Development Perspectives*, 24. <https://doi.org/10.1016/j.wdp.2021.100366>
- Verma, A., Pathak, D., & Gaur, P. (2022). A Generalised Approach to obtain Characteristic Curve of a Solar PV Module. *2022 IEEE Delhi Section Conference, DELCON 2022*. <https://doi.org/10.1109/DELCON54057.2022.9752869>
- Vijayakumar Bharathi, S., Pramod, D., & Raman, R. (2022). Intention to use Artificial Intelligence services in Financial Investment Decisions. *2022 International Conference on Decision Aid Sciences and Applications, DASA 2022*, 560–566. <https://doi.org/10.1109/DASA54658.2022.975183>
- Weisberg, S. (2005). Applied Linear Regression: Third Edition. In *Applied Linear Regression: Third Edition*. Wiley Blackwell. <https://doi.org/10.1002/0471704091>
- Yang, B., Ma, F., Deng, W., & Pi, Y. (2022). Digital inclusive finance and rural household subsistence consumption in China. *Economic Analysis and Policy*, 76, 627–642. <https://doi.org/https://doi.org/10.1016/j.eap.2022.09.007>
- Zhou, H., Wang, Z., Li, J., & Li, D. (2011). A surface model-based simulation for warpage of injection-molded parts. *Polymer Engineering and Science*, 51(4), 785–794. <https://doi.org/10.1002/pen.21884>
- Zhou, T. (2012). Understanding users' initial trust in mobile banking: An elaboration likelihood perspective. *Computers in Human Behavior*, 28(4), 1518–1525. <https://doi.org/10.1016/j.chb.2012.03.021>