



The Effect Of Loss Aversion, Confirmation Bias, And Herd Behavior In Online Loan Decision-Making Among Economics Students In Palembang City

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ABSTRACT

This study was motivated by concerns about the prevalence of online loan (Pinjol) problems that ensnare students, even leading to stress and suicide. This phenomenon highlights the importance of understanding the factors that influence students' decisions to use Pinjol services. Based on previous research findings, there are three relevant aspects of behavioral economics, namely loss aversion, confirmation bias, and herd behavior. This study uses a quantitative approach with the Ordinary Least Square (OLS) multiple linear regression analysis method using EVIEWS 13 software. The results show that the three independent variables, namely loss aversion, confirmation bias, and herd behavior, have a proven effect on students' decisions to take out online loans. These findings confirm that students' economic behavior in the context of online loans is not only influenced by rational factors, but also by psychological and social biases. The implications of this study are expected to form the basis for prevention efforts and financial literacy education so that students can be wiser in managing their financial needs and avoid the trap of online loans.

INTRODUCTION

When online lending (Pinjol) first emerged, it was viewed as an alternative financing solution for both individuals and businesses. However, its growth has raised significant concerns among the public. High interest rates, exorbitant late fees, and unethical collection methods have contributed to these concerns (Financial Services Authority [OJK], 2021). Several cases of online lending issues among students have surfaced, including incidents at Bogor Agricultural University (IPB) where students were deceived, Muhammadiyah University Yogyakarta (UMY) where students were trapped, and a tragic case of a female student in Semarang who committed

suicide due to online loan entrapment (Republika Online, 2023). The impact of Pinjol has extended beyond Java, reaching cities like Palembang, where 484 complaints were recorded in 2023, including those from students (Diaz Erlangga, 2023). Research conducted by the chairperson of the 2023 PDP scheme reveals that students' decisions to use online loans are influenced not only by traditional economic factors but also by behavioral economic factors. Three key behavioral economics phenomena were identified: loss aversion, confirmation bias, and herd behavior (Asma & Ikraam, 2023). However, this research was qualitative and merely identified the presence of these phenomena in students' decisions related to Pinjol.

This study aims to further investigate: (1) whether loss aversion, confirmation bias, and herd behavior significantly influence students' decisions to use online loan services, and (2) what efforts campuses can take to minimize the adverse effects of Pinjol on students. This research is crucial to gain a comprehensive understanding of behavioral economics in student decision-making regarding online loans, enabling the development of effective policies by authorities, especially campuses, to mitigate the negative effects of online loans on students.

LITERATURE REVIEW

Previous studies have revealed the factors underlying students' financial decisions. For example, the study conducted by Phimolsathien (2021), Rokhayati et al. (2022), Rahmadyanto and Ekawaty (2023), and Repi et al. (2021) revealed the factors that influence student financial behavior using a traditional economics approach rather than behavioral economics. Several other studies have revealed student financial behavior using a behavioral economics approach, such as those conducted by Prayudi and Purwanto (2023), Tang and Haryono (2023), and Aprilianti et al. (2023), but they focus more on student investment behavior, such as investment in the capital market, gold, and others. Unlike previous studies, this study offers something new, namely the use of behavioral economics in the approach to analyzing student credit behavior.

Behavioral economics is a branch of economics that emphasizes the psychological, social, and even emotional aspects that influence decision-making. This implies that in their actions, individuals also consider factors such as emotions, beliefs, cultural influences, and cognitive biases that cause humans to deviate from rational decisions (Samson, 2020). Several empirical studies show that economic agents do not only use their rationality in making decisions but are also influenced by behavioral factors (Tversky & Kahneman, 1992; Gill et al., 2018; Cartwright, 2018). These findings show that economic agents can respond emotionally when making investment decisions, which has the potential to cause a number of psychological biases that lead to irrational behavior. The approach in behavioral economics differs from traditional economics, where in traditional economics a person makes decisions aimed at maximizing satisfaction through rational actions, while behavioral economics more often involves irrational actions (Latifiana, 2018). Therefore, in behavioral economics, cognitive biases in decision making are very possible. These cognitive biases include Loss Aversion, Endowment Effect, Confirmation Bias, Herd Behavior, and Survivor Bias (Thaler, 2016). However, in this study, the researcher will limit the discussion to only three cognitive biases, namely Loss Aversion, Confirmation Bias, and Herd Behavior.

Loss Aversion is a behavior where a person is more concerned about potential losses than potential gains. Humans tend to avoid taking risks or experiencing losses rather than pursuing potential gains. For example, a person will usually remember more when they lose \$10 million than when they earn the same amount (Gu et al., 2022). Furthermore, Confirmation Bias is a behavior where a person is stuck on their favorite choice and ignores other alternatives. There may be many other options that are better than the one they have, but individuals usually already like it and tend not to want to find out about others (Wendy, 2021). Meanwhile, Herd Behavior is defined as a behavior where someone is impulsive and follows the actions of others. According to Ouarda et al. (2013), herding behavior can be interpreted as imitating or copying

the decisions of others, which is often used as a shortcut by individuals. There are many cases where people blindly follow others without rationally considering why they should follow the actions of others. Cases of panic buying during the Covid pandemic caused by a shortage of cooking oil, masks, and hand soap are examples of this behavior. However, Isbanah (2019) and Addinpujoartanto and Darmawan (2020) found that herding has a positive effect on investment decision-making. This finding is in line with Hayat's research, which states that herding has a significant effect on decision making (Hayat, 2016)..

METHODS

The variables observed in this study are cognitive bias indicators as follows:

Table 1. Variables Observed

No	Cognitive Bias Aspect	Indicator	Measurement Scale
1	Loss Aversion (X1)	1. Focus on the significant losses incurred by applying for a loan rather than the benefits received. 2. Feelings of concern when there is an increase in Pinjol interest rates 3. Refusing to increase the Pinjol limit when the service provider company experiences problems. 4. The funds received from Pinjol are more important than the funds paid for monthly installments. 5. Avoiding online loans with high interest rates and choosing other credit alternatives outside of online loans.	Likert
2	Confirmation Bias (X2)	1. Only seeking information that supports the decision 2. Paying attention to opinions that align with the decision 3. Using information that is consistent 4. Prioritizing information that fits with one's understanding 5. Sticking with previous decisions	Likert
3	Herd Behavior (X3)	1. Decision to use Pinjol because of imitating others 2. Pinjol is considered a modern lifestyle 3. Pinjol offers that often appear on various media platforms	Likert
4	Decision to take out a Pinjol loan (Y)	1. Recognition of need 2. Information search 3. Evaluation of alternatives 4. Decision to take out a loan 5. Post-loan evaluation	Likert

Source: Hariono, Cahyadi, dan Wijayanti (2023); Leunupun, Kriswantini, dan Madiuw (2022); Rahman dan Abstrak (2019); Khanafi (2020).

Respondents were given closed-ended questions related to the above indicators with the following weightings: Strongly Agree (5), Agree (4), Undecided (3), Disagree (2), and Strongly Disagree (1). The population in this study was students of the Faculty of Economics in Palembang with active status in PDDIKTI in 2024, totaling 11,925 people. Students in Palembang were selected because it is the second largest city in Sumatra, which is experiencing rapid growth in the trade, finance, and information technology sectors and has a large number of Pinjol service users. The sample size was determined based on the Isaac and Michael formula (Rifka et al., 2022):

Figure 1

$$S = \frac{\lambda^2 \cdot N \cdot P \cdot Q}{d^2 (N - 1) + \lambda^2 \cdot P \cdot Q}$$

Dimana:
 S = Jumlah sampel
 λ^2 = Nilai Chisquare
 N = Jumlah populasi
 P, Q = Masing-masing bernilai 0,5
 d = Tingkat signifikansi

With a significance level of 5 percent, the sample size was 373 respondents using stratified random sampling (Pandriadi et al., 2023):

Table 2. Population and Sample

No	Company Name	Population	Percent	Sample
1	Sriwijaya University	2,319	0.20x373	75
2	Bina Darma University	698	0.06x373	22
3	Muhammadiyah University of Palembang	2,669	0.22x373	82
4	Tridinanti University	2,281	0.19x373	71
5	PGRI University	1,082	0.09x373	34
6	Indo Global Mandiri University	974	0.08x373	30
7	IBA University	250	0.02x373	7
8	Catholic University of Musi Charitas	907	0.08x373	30
9	MDP University	745	0.06x373	22
	Total	11,925		373

Source: PDDIKTI

The reason for choosing this university is that all study programs in the Faculty of Economics are accredited at least B or Very Good.

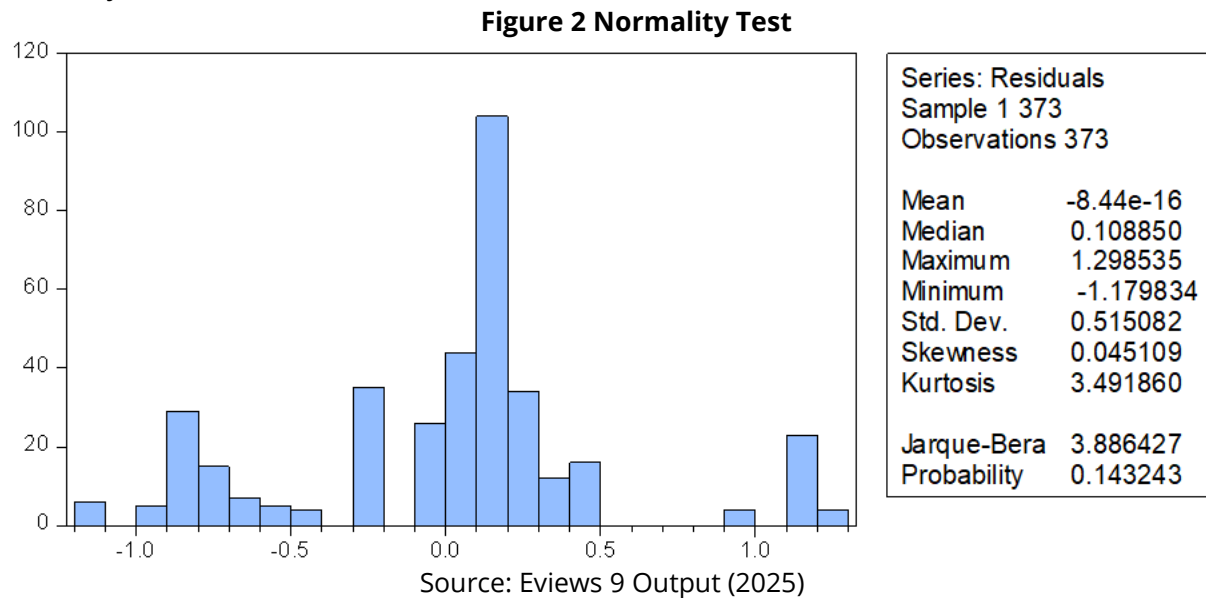
RESULTS

Classical Assumption Test

The classical assumption test is a series of tests conducted to ensure that the linear regression model meets the basic requirements so that the results are valid and reliable. The following is a more detailed explanation of each classical assumption test:

Normality Test

The normality test aims to test whether the residual distribution (the difference between the predicted value and the observed value) follows a normal distribution. If the residuals are not normally distributed, the regression coefficient estimation results may be inefficient and unreliable. The normality test can be performed using the Shapiro-Wilk or Anderson-Darling tests, or visually using histograms or Q-Q plots. Normality requirement: The p-value in the Shapiro-Wilk test or other tests must be greater than 0.05, indicating that the residual data is normally distributed.



The results of the normality test using Jarque-Bera show a p-value of 0.143243, which is greater than 0.05. This means that the residual data is normally distributed. Thus, the assumption of normality in the study of the effects of Loss Aversion, Confirmation Bias, and Herd Behavior on the Decision to Take Out Online Loans among Economics Faculty students in Palembang City is fulfilled, so that the regression model used can be considered valid and reliable for further analysis.

Heteroscedasticity Test

Heteroscedasticity occurs when the residual variance is not constant across the entire range of independent variable values. This can cause parameter estimates to be inefficient and reduce the accuracy of the model. The heteroscedasticity test is usually performed using the Breusch-Pagan test or by looking at the residual pattern on a scatter plot. The requirement for passing the heteroscedasticity test is that there is no clear pattern on the residual plot against the predicted values. The p-value of the Breusch-Pagan test must be greater than 0.05, indicating that there is no heteroscedasticity.

Table 3 Heteroscedasticity Test Results

F-statistic	0.107131	Prob. F(3,369)	0.9559
ObsR-squared	0.324595	Probability of Chi-Square(3)	0.9553
Scaled explained SS	0.393533	Chi-Square Probability (3)	0.9416

Source: Eviews 9 Output (2025)

The heteroscedasticity test results show an ObsR-squared value of 0.324595 with a Prob. Chi-Square(3) of 0.9553. Because the p-value (0.9553) is greater than 0.05, there is no heteroscedasticity. Thus, it can be concluded that there is no heteroscedasticity problem in the

regression model used in the study on the effect of Loss Aversion, Confirmation Bias, and Herd Behavior on the Decision to Take Out Online Loans among students of the Faculty of Economics in Palembang. This regression model can be considered valid because the residual variance is constant across the entire range of independent variable values.

Multicollinearity Test

Multicollinearity occurs when two or more independent variables in the model are highly correlated with each other. This makes it difficult to determine the contribution of each independent variable to the dependent variable. To detect multicollinearity, we use the Variance Inflation Factor (VIF). If the VIF of a variable is greater than 10, it indicates strong multicollinearity. Multicollinearity pass criteria: The VIF values of all independent variables must be less than 10, indicating no high correlation between independent variables.

Table 4 Multicollinearity Test Results

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.002619	54.49104	NA
LOG(X1)	0.003371	140.5397	4.196956
LOG(X2)	0.003014	117.2703	3.287632
LOG(X3)	0.002736	109.6482	2.159032

Source: Eviews 9 Output (2025)

The multicollinearity test results show Variance Inflation Factor (VIF) values for the independent variables Loss Aversion (X1) of 4.196956, Confirmation Bias (X2) of 3.287632, and Herd Behavior (X3) of 2.159032. Since all VIF values are smaller than the general threshold of 10, it can be concluded that there is no significant multicollinearity among the independent variables in the regression model. Therefore, this model can be considered valid, and the coefficient estimates for the variables Loss Aversion, Confirmation Bias, and Herd Behavior can be relied upon without interference from strong relationships between these variables.

Multiple Linear Regression Analysis

Table 3. Multiple Linear Regression Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.344594	0.051176	-6.733568	0.0000
LOG(X1)	0.243911	0.058064	4.200765	0.0000
LOG(X2)	0.361783	0.054895	6.590406	0.0000
LOG(X3)	0.617263	0.052307	11.80077	0.000

Source: Eviews 9 Output (2025)

From the regression results, the following equation is obtained:

$$KP = -0.344594 + 0.243911LA + 0.361783CB + 0.617263HB + e$$

Based on the results of the multiple linear regression analysis conducted in this study, it can be seen that Loss Aversion (LA), Confirmation Bias (CB), and Herd Behavior (HB) influence the decision to take out an online loan (KP) among students at the Faculty of Economics in Palembang. The regression model obtained provides an overview of the extent to which each factor contributes to influencing students' decisions to engage in online borrowing, taking into account relevant psychological factors.

1. Intercept (-0.344594): This value indicates that if all independent variables (Loss Aversion (LA), Confirmation Bias (CB), and Herd Behavior (HB)) are zero, then the Decision to Take Out

an Online Loan (KP) is estimated to be -0.344594. This value is not always meaningful in practical terms, but it provides an overview of the initial position of the model.

2. Loss Aversion (LA) coefficient (0.243911): This coefficient indicates that each one-unit increase in Loss Aversion will cause an increase in the Decision to Take Out an Online Loan (KP) of 0.243911, assuming other variables remain constant. This means that the higher the level of Loss Aversion, the more likely a person is to make the decision to take out an online loan.
3. Confirmation Bias (CB) coefficient (0.361783): This coefficient shows that every one-unit increase in Confirmation Bias will increase the Decision to Take Out an Online Loan (KP) by 0.361783, assuming other variables remain constant. This shows that the stronger the tendency to confirm existing views or information, the more likely a person is to make decisions related to online loans.
4. Herd Behavior (HB) Coefficient (0.617263): This coefficient shows that every one-unit increase in Herd Behavior will cause an increase in the Decision to Take Out an Online Loan (KP) of 0.617263, assuming other variables remain constant. This means that the greater the influence of Herd Behavior, the greater the likelihood that someone will take out an online loan, because they tend to follow the decisions of others.

Coefficient of Determination Test

The coefficient of determination test aims to measure how much the independent variables in the regression model can explain the variation or change in the dependent variable. The R^2 value ranges from 0 to 1, where the closer it is to 1, the greater the proportion of variation in the dependent variable that can be explained by the independent variables. For example, if $R^2 = 0.75$, then 75% of the variation in the dependent variable can be explained by the independent variables, while the remaining 25% is influenced by other factors not included in the model.

Table 4. Coefficient of Determination Test

Adjusted R-squared	0.758429
S.E. of regression	0.133892
S.D. of dependent variable	0.272415

Source: Eviews 9 Output (2025)

Based on the Adjusted R-squared result of 0.758429, it can be concluded that 75.84% of the variation in the dependent variable (Decision to Take Out an Online Loan) can be explained by the independent variables in the regression model, which consist of Loss Aversion (LA), Confirmation Bias (CB), and Herd Behavior (HB). This indicates that the regression model used has a fairly good ability to explain changes in the dependent variable. The S.E. of regression value of 0.133892 describes the standard error of the regression, which shows the average deviation between the predicted value and the actual value. The smaller the standard error value, the better the model's ability to predict the value of the dependent variable. Meanwhile, the S.D. dependent var of 0.272415 shows the standard deviation of the dependent variable, which measures how much the value of the Decision to Take Out an Online Loan spreads from its average value. The smaller the standard deviation value, the more concentrated the data is around the mean. Thus, this regression model shows that the independent variables have a significant influence on the dependent variable, although there are some variations that are not fully explained by the model.

F-test

The F-test is used to test whether the regression model as a whole is significant, i.e., whether at least one of the independent variables has a significant effect on the dependent variable. This test compares the proposed regression model with a model without independent

variables (null model). If the p-value of the F test is smaller than the significance level (usually 0.05), then the null hypothesis stating that all regression coefficients are zero (no relationship) can be rejected, which means that the regression model as a whole is significant.

Table 5. F-test

F-statistic	390.3067	Description: There is an effect
Prob(F-statistic)	0.0000	

Source: Eviews 9 Output (2025)

The F-test results show an F-statistic value of 390.3067 with a p-value of 0.000000. Since the p-value is very small (less than 0.05). This means that the regression model as a whole is significant in explaining the variation in the Decision to Take Out an Online Loan. In other words, at least one independent variable (Loss Aversion, Confirmation Bias, or Herd Behavior) has a significant effect on the dependent variable. Therefore, this regression model can be considered valid and provides a significant contribution in explaining students' decisions to engage in online lending.

t-test

The t-test is used to test the significance of individual regression coefficients, namely to determine whether each independent variable makes a significant contribution in predicting the dependent variable. This test is performed by comparing the t-statistic value with the t-table value or using the p-value. If the p-value for an independent variable is less than 0.05, then that variable has a significant effect on the dependent variable. Conversely, if the p-value is greater than 0.05, then that variable does not have a significant effect in the regression model.

Table 6. t-test

Variable	t-Statistic	Prob.
C	-6.733568	0.0000
Loss Aversion	4.200765	0.0000
Confirmation Bias	6.590406	0.00
Herd Behavior	11.80077	0.000

Source: Eviews 9 Output (2025)

Based on the t-test results, the following can be explained:

1. Intercept (C): The t-statistic value for the intercept (C) is -6.733568, with a p-value of 0.0000. Since the p-value is less than 0.05, it can be concluded that the intercept or constant of this regression model is significant and influences the Decision to Take Out an Online Loan (KP). Although the t-statistic value is negative, this only indicates the direction of the effect, which means that the KP value will decrease if all independent variables are zero.
2. Loss Aversion (LA): The t-statistic value for Loss Aversion (LA) is 4.200765, with a p-value of 0.0000. Since the p-value is much smaller than 0.05, Loss Aversion has a significant positive effect on the decision to take out an online loan. This means that the higher the level of Loss Aversion, the more likely a person is to decide to take out an online loan.
3. Confirmation Bias (CB): The t-statistic value for Confirmation Bias (CB) is 6.590406, with a p-value of 0.0000. With a very small p-value, it can be concluded that Confirmation Bias also has a significant positive effect on the decision to take out an online loan. This shows that the stronger the tendency to confirm existing views or information, the more likely a person is to make decisions related to online loans.
4. Herd Behavior (HB): The t-statistic value for Herd Behavior (HB) is 11.80077, with a p-value of 0.0000. Due to the very small p-value, it can be concluded that Herd Behavior has a very

significant positive influence on the decision to take out an online loan. This shows that the greater the influence of Herd Behavior, the more likely a person is to follow the decisions of others and take out an online loan.

Overall, all independent variables (Loss Aversion, Confirmation Bias, and Herd Behavior) have a significant effect on the Decision to Take Out an Online Loan, as the p-value for each is much smaller than 0.05.

DISCUSSION

Loss Aversion influences the Decision to Take Out an Online Loan

Loss Aversion indicates that individuals tend to feel more pain when facing losses than the pleasure felt when gaining profits of the same value. In the context of the Decision to Take Out an Online Loan (Pinjol), the results of the study show that the higher the level of Loss Aversion, the more likely a person is to decide to take out an online loan. This can be explained by the behavior of individuals who tend to avoid greater financial losses or uncertainty, so they choose to take out online loans as a way to overcome discomfort or fear of losing more.

Confirmation Bias influences the Decision to Take Out an Online Loan

Confirmation Bias refers to the tendency of individuals to seek and believe information that is consistent with their existing views or beliefs, while ignoring information that contradicts them. In terms of the decision to take out an online loan, confirmation bias has a significant influence because individuals tend to seek information that supports their decision to take out an online loan. They are more likely to believe favorable testimonials or promotions and ignore the potential risks or negative impacts of the loan, which ultimately increases the likelihood that they will take out an online loan despite the potential losses.

Herd Behavior influences the Decision to Take Out a Payday Loan

Herd behavior is the tendency of individuals to follow the decisions or behavior of a group, even though they do not fully understand or agree with those decisions. In the context of decisions to take out online loans, herd behavior has a huge influence, because individuals are often influenced by the decisions of others around them, especially among friends, family, or through social media. When many people around them or public figures take out online loans, individuals tend to follow suit without carefully considering the long-term implications, leading to their decision to engage in online lending, even though they may not fully understand the risks.

CONCLUSION

The results of the study show that the three independent variables, namely loss aversion, confirmation bias, and herd behavior, have a proven effect on students' decisions to take out online loans. These findings confirm that students' economic behavior in the context of online loans is not only influenced by rational factors, but also by psychological and social biases. The implications of this study are expected to form the basis for prevention efforts and financial literacy education so that students can be wiser in managing their financial needs and avoid the trap of online loans.

LIMITATION

This study has several limitations that should be considered when interpreting the findings. Firstly, the research was conducted with economics students in Palembang City, which may not fully represent the broader population of students or individuals who engage in online loans. The findings could be specific to this group and may not be generalizable to other regions

or demographic groups with different socio-economic backgrounds or financial literacy levels. Additionally, the data collected for this study relies on self-reported measures, which could introduce biases such as social desirability bias or memory recall bias. Participants may have responded based on what they perceived to be socially acceptable or on their most recent experiences, which could affect the accuracy of the results. Furthermore, the cross-sectional nature of the study limits its ability to make causal inferences, as it only captures a snapshot of decision-making at a single point in time, without considering how these behaviors might evolve or change under different circumstances.

Another limitation is the focus on only three behavioral biases—Loss Aversion, Confirmation Bias, and Herd Behavior—while other potential factors influencing online loan decisions, such as financial literacy, peer pressure, or socio-economic status, were not explored. This study does not account for how these other factors may interact with the biases examined. Future research could expand on these findings by including a broader range of biases and external factors. Additionally, the study's design does not include longitudinal data, which would provide more insights into how individuals' decisions regarding online loans evolve over time. Finally, the research was conducted in Palembang City, where cultural norms and societal expectations may play a significant role in shaping financial decisions, meaning the results may not be applicable to other cultural or societal contexts.

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