Determinants of loan self control: Customer case "Kredit Usaha Rakyat" of Indonesia

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C H R O N I C L E	A B S T R A C T
	Loan Self Control (LSC) can be defined as the ability of self-control related to behavioral control, cognitive control, and decisional control in managing loans or debts for financial welfare. The study aims to determine the factors of loan self-control in Kredit Usaha Rakyat (KUR) banking customers of Micro Small Medium Enterprise (MSMEs) in Indonesia so that they can obtain three-time financing from banks. This study used 87 samples collected by purposive sampling technique. Primary data was collected using an online survey. Factor analysis formed 3 loan self-control factors, namely Behavioral control, Cognitive control and decisional control from 14 indicators tested.

1. Introduction

The Financial Services Authority (OJK) revealed that the total amount of MSME loans throughout Indonesia reached Rp1,376 trillion as of May 2023. Meanwhile, the total bad debts reached Rp53.81 trillion. Most customers like to delay credit payments so that their money is used for other things. In fact, if you don't pay on time, it will have an impact on your financial health and loan repayment. As well as a bad reputation for subsequent credit applications. Self-control plays a key role in managing finances and achieving financial well-being in the future. The ability to refrain from impulsive financial decisions and be able to make wise choices in spending. Low self-control is influential in taking impulsive credit and having more problems with debt repayment, even with high literacy (Bu et al., 2022; Grohmann & Hamdan, 2021) found that interventions focusing on self-control skills were more effective than standard financial literacy training. However, there is research suggesting that psychological factors can predict loan repayment (Gagarina & Shantseva, 2017; Strömbäck, 2020; Yürür, n.d.). Self-control has a significant impact on timely debt repayment (Ganbat et al., 2022; Gathergood, 2012).

2. Literature Review

Self-control is a personal competency that all individuals should have. Individuals who can control themselves will have an impact on themselves, namely behaving well, constructively, and also have harmonious relationships with others, and can control behavior that is not in accordance with social norms. Tangney et al., (2004), states that: "Central to our concept of self-control is the ability to override or change one's inner responses, as well as to interrupt undesired behavioral tendencies and refrain from acting on them".

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The center of the concept of self-control is the ability to override desires, as well as to limit contrary behavioral tendencies by refraining from deviant actions. There are two variables, namely internal variables and external variables that determine individual behavior. The magnitude of external influences can be overcome through the process of self-control (Alwisol & Revision, 2009). This means that although external conditions are very influential, with the ability of self-control individuals can choose which behavior to apply. Self-control is often considered a problem of inconsistency in intrapersonal decision-making time (Xia et al., 2021) through behavior with a financial approach. self-control is a key factor in successful debt management with smooth loan payments. Self-control refers to an individual's ability to control impulses and refrain from actions or decisions that might harm their finances. Individuals with high levels of self-control can better deal with financial pressures without feeling too anxious or burdened (Mpaata et al., 2021; Yilmaz & Karaoglan Yilmaz, 2023). Thus this study is to construct financial behavior by determining the dimensions of financial behavior.

2. Research Methodology

Hurley (n.d.) state that exploratory factor analysis (EFA) can be applied for various purposes. This analysis can be used to reduce many variables into a smaller set of variables (also known as factors or components or dimensions), and also establish the underlying dimensions between measured variables and latent constructs, thus enabling theory formation and refinement. Therefore, this study aims to determine the dimensions of Loan self-control using a questionnaire consisting of 14 indicators, primary data collection with 84 Small and Medium Enterprises (SMEs) who are KUR banking customers, which get financing from banks more than once in Indonesia. The procedure in EFA starts with a sample size adequacy test. Referring to Hair Jr, Black, Babin, and Anderson (2019), this test applies two criteria in assessing the adequacy of data in factor analysis, namely: Kaiser Meyer Olkin Measure of Sampling Adequacy (KMOMSA) and Bartlett's Test of Sphericity. The first criterion is KMO-MSA which must be between 0 and 1. If KMO-MSA exceeds 0.5, it can be considered that the data is suitable for factor analysis. While the Bartlett's Test of Sphericity criteria must be significant ($p<0.05$), therefore it can be concluded that factor analysis is suitable. If the sample size requirements have been met, then the next step is the reduction of a large number of variables into dimensions using principal component analysis (PCA), as one of the factor extraction methods. Some approaches that can be used to determine factor extraction include Eigenvalue, cumulative percent of variance extracted, and scree plot test (Williams et al., 2010). Factors will be formed when the Eigenvalue is more than 1, while the cumulative percent of variance is generated from the eigenvalue. Lorenzo-Seva (2013) explains that if the eigenvalues are summed, the total variance in the correlation matrix will be obtained. The percentage of variance explained from each component can be easily calculated as the corresponding eigenvalue divided by the total variance Hinkin (1998) argues that 60 percent should be the minimum value of the percentage of variance explained.

Another criterion in determining factor extraction is the rotation method. This study uses varimax rotation to represent uncorrelated factors. After the rotation step, the final procedure is to label the extracted factors with reference to relevant theory or research.

3. Result and Discussion

Table 1
Anti Image Correlation

Items	Anti – image Correlation	Items	Anti – image Correlation
LSC1	0.5260	LSC8	0.7070
LSC2	0.6002	LSC9	0.6966
LSC3	0.5548	LSC10	0.7641
LSC4	0.5821	LSC11	0.8201
LSC5	0.7531	LSC12	0.8342
LSC6	0.7821	LSC13	0.7413
LSC7	0.5921	LSC14	0.8001

After validity testing, the next step in Exploratory Factor Analysis or EFA is testing the adequacy of the sample size based on KMO-MSA and Bartlett's Test of sphericity significant at 5%. Based on these two criteria, it means that this study has enough samples to be analyzed using EFA, therefore the process can be continued.

Table 2
Meyer-Olkin Measure of Sampling Adequacy

Meyer-Olkin Measure of Sampling Adequacy.		0.8811
Bartlett's Test of Sphericity	Approx. Chi-Square	608.371
	df	91
	Sig.	0.0000

PCA was used in this study for the scree plot which was demonstrated in Fig. 1 and he number of factors extracted which is based on the eigenvalue > 1.
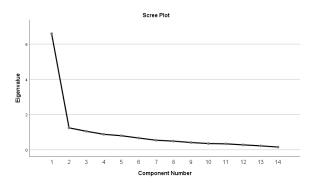

Fig. 1. Scree Plot for Factor Extraction

Supported by the results of factor extraction based on eigenvalues in Table 3, there are five factors that have been extracted from this analysis. Each factor has the following eigenvalue: for the first factor 6,591, the second factor 1,244, and the last factor 1,048. Another criterion in factor extraction is the total cumulative variance. According to Zulaihati and Widyastuti (1998) Hinkin in the minimum cumulative variance value which is accepted in EFA is six percent (60%). The total variance in this study is 63.602 percent.

Table 3
Total Variance explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
LSC1	6.591	47.079	47.079	6.138	43.845	43.845
LSC2	1.244	8.883	55.962	1.788	5.628	59.474
LSC3	1.048	7.485	63.448	1.578	5.128	63.602
LSC4	.876	6.260	69.707			
LSC5	.797	5.695	75.403			
LSC6	.666	4.754	80.157			
LSC7	.540	3.857	84.014			
LSC8	.489	3.495	87.509			
LSC9	.410	2.932	90.441			
LSC10	.353	2.520	92.961			
LSC11	.335	2.393	95.354			
LSC12	.277	1.980	97.334			
LSC13	.222	1.583	98.917			
LSC14	.152	1.083	100.000			

Determination of factor loading on each item and categorization of items to build each factor through the rotation method using Varimax have been completed. Hinkin (1998) in (Zulaihati & Widyastuti, 2020) states that if the value of factor loading is greater than 0.4. The first component or comment factor of 10 question items, namely: question items number 11, 12, 14, 10, 6, 8, 5, 13, 9 and 2. The second component or factor consists of two items, namely items number 1 and 7. The third component or factor consists of two questions, namely 3 and 4. The fourth component or factor consists of two items, namely items number 19 and 13. The details of each factor are illustrated in Table 4.

Table 4
Rotated Component Factor Matrix

	Factor		
	1	2	3
LSC11	.844		
LSC12	.829		
LSC14	.774		
LSC10	.759		
LSC6	.749	.346	
LSC8	.741	-.533	
LSC5	.715		
LSC13	.710		
LSC9	.650		
LSC2	.537		
LSC1	.470	.764	
LSC7	.388	.759	
LSC3	.358		.722
LSC4	.478		.655

Extraction Method: Maximum Likelihood.
a. 3 factors extracted. 8 iterations required.

Table 5
Dimension of Loan Self Control

Dimension	No. of Items	Items of Financial Behavior	Loading
	LSC11	I make a detailed, planned use of borrowed funds	.844
	LSC12	I manage my loan effectively and avoid over-indebtedness	.829
	LSC14	I set a standard amount of debt to achieve my goals	.774
	LSC10	I can't help myself, using business debt for personal needs	.759
	LSC6	I am more worried about what will happen to my finances in the short term than in the long term.	.749
Control Loan Amount Behavior	LSC8	The amount of loan I received was in line with the nominal amount I requested.	.741
	LSC5	The interest rate on the loan is important to me	.715
	LSC13	I prepared a financial plan for smooth installments when applying for the loan.	.710
	LSC9	I have received messages or phone calls reminding me to repay the loan.	.650
	LSC2	My business income per month can meet the loan installment payments.	.576
Cognitive control of interest rates	LSC1	I always look for information regarding loan interest rates	.764
	LSC7	I postpone my loan when it has a high interest rate	.759
Payment Time Decision Control	LSC3	I am disciplined regarding loan repayment	.722
	LSC4	I refrain from using money to repay the loan on time.	.655

4. Conclusion

After the rotation method using varimax, the three factors that have been extracted will be labeled, Behavioral Control of Loan Amount, Cognitive interest rate, Decision Control of payment time, with reference to research by (Averil, 1973). There are several aspects of self-control that are often used to measure a person's self-control in order to have good self-control, namely:

First Behavioral control is the ability of an individual to control themselves over the use of funds to pay off loan installments. This factor consists of 2 components, namely the ability to regulate the use of personal and loan funds and the ability to modify the behavior of using loan funds, including expenditure planning (Diomin, 2020; Grohmann & Hamdan, 2021).

Second Cognitive control is the ability of individuals to control themselves to process unwanted information by interpreting and assessing. Cognitive control consists of two components, namely obtaining information and making judgments. Assess and interpret an event by paying attention to the positive and negative sides, such as interest rates, length of installments (Diomin, 2020; Grohmann & Hamdan, 2021).

Third Decisional control is the ability of individuals to control themselves to choose a disciplined action in paying loan installments, including refraining from using business funds for personal interests. Decision control can help individuals make debt choices, both with an opportunity and freedom for individuals to choose various possible actions (Gomera & Ngollo, 2023; Lie, 2021).

The results of data analysis illustrate that loan self-control in this study is categorized into loan behavioral control, loan cognitive control, loan decisional control.

References

Averil, J. R. (1973). Personal control over aversive stimuli and its relationship to stress. *Psychological Bulletin*, *80*(4), 286–303.

Bu, D., Hanspal, T., Liao, Y., & Liu, Y. (2022). Cultivating self-control in FinTech: Evidence from a field experiment on online consumer borrowing. *Journal of Financial and Quantitative Analysis*, *57*(6), 2208–2250.

Diomin, A. (2020). Financial Self-Control: Links with Credit Behavior and Individual's Social Characteristics. *Sotsiologicheskie Issledovaniya*, *6*, 72–81.

Gagarina, M. A., & Shantseva, A. A. (2017). Socio-psychological peculiarities and level of financial literacy of Russian debtors. *Review of Business and Economics Studies*, *5*(2), 5–22.

Ganbat, M., Badrakh, A., Shijir, B., Altantsatsralt, K., Nemekh, M., & Tseveendorj, N. (2022). Psychological Predictors of Credit Risk in Microcredit: A Microlending Case Study from Mongolia. *Singapore Conference of Applied Psychology*, 43–66.

Gathergood, J. (2012). Self-control, financial literacy and consumer over-indebtedness. *Journal of Economic Psychology*, *33*(3), 590–602.

Gomera, W. C., & Ngollo, M. I. (2023). *The Effect of Self-Control on Loan Repayment Decisions of Women Market Vendors in Mbeya Municipality, Tanzania*.

Grohmann, A., & Hamdan, J. (2021). *The Effect of Self-Control and Financial Literacy on Impulse Borrowing: Experimental Evidence*.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. An analysis of mental wellbeing and mental psychopathology of gifted students by an emotional and social developmental process perspective.

Hurley, A. E. , S. T. A. , S. C. A. , B. M. T. , S. A. , V. R. J. , & W. L. J. (n.d.). *Exploratory and Confirmatory Factor Ana..._ Guidelines, Issues, and Alternatives*.

Lie, T. (2021). *Pengaruh Financial Literacy, Self-Control, Self-Efficacyterhadap Otoritas Pengambil Keputusan Keuangan Rumah Tangga.* Petra Christian University.

Mpaata, E., Saina, E., & Koskei, N. (2021). Does self-control moderate the relationship between social influence and savings behavior among small business owners? *SEISENSE Business Review*, *1*(2), 32–47.

Strömbäck, C. (2020). *Self-Control, Financial Well-Being, and Motivated Reasoning: Essays in Behavioral Finance*. Linköping University Electronic Press.

Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). Self-control scale. *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues*.

Xia, Y., Zhao, J., He, L., Li, Y., & Yang, X. (2021). Forecasting loss given default for peer-to-peer loans via heterogeneous stacking ensemble approach. *International Journal of Forecasting*, *37*(4), 1590–1613.

Yilmaz, R., & Karaoglan Yilmaz, F. G. (2023). Problematic internet use in adults: the role of happiness, psychological resilience, dispositional hope, and self-control and self-management. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, *41*(3), 727–745.

Yürür, S. (n.d.). Investigating Relationships among Personality Characteristics and Repayment Behavior: Quantitative Research in Turkey. *European Proceedings of Social and Behavioural Sciences*.

Zulaihati, S., & Widyastuti, U. (2020). Determinants of consumer financial behavior: Evidence from households in Indonesia. *Accounting*, *6*(7), 1193-1198.

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