

Digital Credit and Overspending: Assessing the Moderating Role of Financial Literacy among University Students

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ABSTRACT

This study aims to analyze the effect of financial literacy on overspending behavior among paylater service users within the student community of the University of Merdeka Malang. The rising trend of "buy now, pay later" (BNPL) usage among young generations has raised concerns about the emergence of consumptive behavior resulting from low levels of financial literacy. This research adopts a quantitative explanatory approach with a total sample of 400 respondents selected through purposive sampling. Data were collected using an online questionnaire and analyzed using simple linear regression. The results indicate that financial literacy has a negative and significant effect on overspending behavior ($t = -11.296$; $\text{sig} = 0.000$), with a coefficient of determination (R^2) of 0.412. This means that an increase in financial literacy can reduce the tendency for excessive spending by 41.2%. These findings emphasize that sound financial understanding plays a crucial role in shaping rational and responsible consumption behavior. The practical implications highlight the importance of implementing digital financial education programs within the campus environment to encourage students to become smart financial service users oriented toward sustainable financial behavior in the digital economy era.

Keywords: Financial Literacy, Overspending, Paylater, Students, Fintech, Digital Consumption Behavior

INTRODUCTION

The development of digital financial technology (fintech) has brought significant transformation to modern society's consumption behavior, particularly among the younger generation. Innovations in the financial sector have enabled transactions to become faster, more practical, and more accessible, thereby creating a new digital-based consumption pattern. One of the fintech products experiencing substantial growth is the *buy now, pay later* (BNPL) service, more commonly known as *paylater*. This service allows users to purchase goods or services immediately and make payments later, either through installments or full payment. According to a report from the Financial Services Authority (Otoritas Jasa Keuangan, OJK, 2024), the number of paylater users in Indonesia has exceeded 30 million, with the highest growth rate found among individuals aged 18–25. This data indicates that university students are the most active user segment, driven by the ease of registration, minimal requirements, and various promotional offers provided by paylater service providers.

Although paylater offers short-term financial flexibility, its convenience has also given rise to a new consumption phenomenon—the tendency toward overspending or excessive expenditure. Many students use paylater not to fulfill basic or productive needs such as education, but rather to satisfy lifestyle-driven consumption, including purchasing branded clothing, the latest electronic devices, or digital entertainment (Hasanah & Pramudito, 2023). This behavior is often driven by social pressure, promotional discounts, and the ease of transactions that cause users to lose control over their personal financial management. In the long term, such behavior can lead to serious issues such as payment delays, increased debt burdens, and even financial stress due to imbalances between income and expenditure.

Previous studies have shown that a low level of financial literacy is one of the main factors influencing unhealthy financial behavior. Lusardi and Mitchell (2014) emphasize that financial literacy plays an important role in shaping an individual's ability to make rational and well-measured financial decisions. Individuals with good financial literacy tend to be more cautious in using financial products, understand debt risks, and have more mature financial planning. Conversely, a low level of financial literacy often causes individuals to fall easily into consumptive behavior and excessive use of financial instruments without adequate understanding (Atkinson & Messy, 2012). In the context of students, suboptimal financial literacy can become a driving factor for increased dependence on paylater services as a tool for consumptive financing.

However, research that specifically examines the relationship between financial literacy and overspending behavior among students at the University of Merdeka Malang in the city of Malang remains relatively limited. As one of the largest educational cities in Indonesia, Malang has a vast and socioeconomically diverse student population. This diversity makes Malang a relevant context for exploring how financial literacy influences digital consumption behavior among the younger generation. Furthermore, students of the University of Merdeka Malang tend to have higher mobility and greater access to information, which may strengthen their tendency to utilize fintech services.

Therefore, this study aims to analyze the effect of financial literacy on overspending behavior among paylater users within the student community of the University of Merdeka Malang. This research is expected to make a theoretical contribution to the literature on financial behavior in the digital era and provide practical insights for higher education institutions and fintech service providers in designing effective digital financial education programs. Through the improvement of financial literacy, students are expected to develop wiser, more responsible, and financially sustainable consumption behaviors amidst the rapid wave of economic digitalization.

2. Literature Review and Hypothesis Development

2.1. State of the Art of Research

Research on the relationship between financial literacy and individual financial behavior has been a significant topic in behavioral economics and consumer finance over the past two decades. The seminal study by Lusardi and Mitchell (2014) demonstrated that financial

literacy plays a crucial role in shaping rational economic decision-making, including debt management and consumption behavior. Individuals with a high level of financial literacy tend to be more capable of understanding financial risks, managing budgets, and avoiding excessive consumptive behavior.

In a global context, the *buy now, pay later* (BNPL) phenomenon has emerged as a new focus in fintech literature. According to Deloitte (2023), BNPL users in Southeast Asia have increased by more than 200% over the past five years, with the majority coming from younger age groups. Studies in Australia (Ali et al., 2022) and Singapore (Tan & Low, 2023) indicate that university students are the largest user segment, attracted by promotional offers and payment flexibility. However, this convenience also increases the risk of overspending, especially among individuals with low financial literacy.

Research in Indonesia has begun to highlight this relationship in the digital context. A study by Rahmawati (2022) found that financial literacy has a negative effect on the consumptive behavior of paylater users. Similar results were reported by Hasanah and Pramudito (2023), who emphasized that poor financial understanding increases the risk of delayed payments and excessive use of fintech lending services. However, most of these studies focused on the general public or young workers, without specifically examining students at the University of Merdeka Malang, who possess distinct economic characteristics and digital behavior patterns. This indicates a research gap that is relevant to explore further, particularly within the context of university students in Malang City—one of Indonesia's leading educational hubs.

2.2. Concept and Theory of Financial Literacy

Financial literacy is defined as an individual's ability to understand basic financial concepts, manage financial resources effectively, and make rational and responsible economic decisions (OECD, 2020). According to the *Financial Capability Framework* developed by Atkinson and Messy (2012), financial literacy consists of four main dimensions: 1. Financial knowledge, understanding fundamental concepts such as interest, inflation, and risk; 2. Financial skills – the ability to apply that knowledge in real-life contexts, such as budgeting or saving; 3. Financial attitude – the individual's psychological disposition toward money management; and 4. Financial behavior – concrete actions such as controlling expenses and using financial instruments wisely.

In the context of university students, financial literacy is not only measured by cognitive ability but also by discipline and awareness in managing limited financial resources amid exposure to various digital financial products. Research conducted by Potrich, Vieira, and Kirch (2018) emphasizes that students with a high level of financial literacy tend to have a lower tendency to engage in consumptive debt behavior, including the use of credit cards and paylater services.

2.3. Concept of Overspending Behavior

Overspending behavior is defined as expenditure that exceeds an individual's financial capacity, often triggered by emotional impulses or social pressure rather than rational needs (Mowen & Minor, 2015). In the digital context, overspending is frequently associated with the ease of online transactions through mobile applications, promotional discounts, and paylater services that defer payment obligations (Hasanah & Pramudito, 2023).

According to Rook (1987), impulsive consumer behavior represents a form of overspending characterized by spontaneous purchasing decisions made without prior planning. Meanwhile, research conducted by Lim et al. (2020) indicates that such behavior tends to increase among fintech users due to low risk perception and a lack of financial self-control. For university students, overspending can have adverse effects on financial well-being, increase economic stress, and create difficulties in fulfilling academic needs.

2.4. Relationship between Financial Literacy and Overspending Behavior

The relationship between financial literacy and overspending behavior has been widely proven empirically. Individuals with a high level of financial literacy are able to understand the consequences of consumptive debt, manage personal budgets effectively, and avoid impulsive purchasing behavior. Conversely, low financial literacy makes individuals more easily tempted to make unnecessary purchases driven by emotional or social motives (Lusardi & Mitchell, 2014).

In the context of paylater services, the level of financial literacy serves as a determining factor in assessing repayment ability, understanding interest rates and hidden fees, as well as weighing the benefits and risks of usage. Studies conducted by Rahmawati (2022) and Susanti (2023) in Indonesia indicate that financial literacy has a negative effect on overspending behavior among paylater users. This means that the higher an individual's financial literacy, the lower their tendency to engage in excessive spending.

However, the social and economic context of students at the University of Merdeka Malang may introduce new dynamics to this relationship. Students in this program possess a high degree of mobility and inter-campus activity, which can influence their consumption behavior and decisions regarding the use of paylater services. Therefore, empirical research is necessary to examine whether this negative relationship pattern also applies within the context of university students in Malang City.

2.5. Hypothesis Development

Based on the theoretical framework and previous empirical findings, this study proposes the following hypothesis:

H₁: Financial literacy has a negative and significant effect on overspending behavior among paylater users within the student community of the University of Merdeka Malang.

METHODOLOGY

This study adopts a quantitative explanatory approach to analyze the effect of Financial Literacy (FL) on Overspending Behavior (OS) among paylater service users within the student community of the University of Merdeka Malang. The study population consists of 13,000 students. Based on a 5% margin of error, a sample of 400 active paylater users was determined to ensure the representativeness of the findings. The sampling technique employed is purposive sampling, with specific criteria: respondents must be active students at the University of Merdeka Malang and must have used paylater services at least once within the last six months. Primary data were collected through an online questionnaire distributed via Google Forms, while secondary data were obtained from publications of the Financial Services Authority (OJK), Bank Indonesia, and previous studies on financial literacy and digital consumption behavior. The research instrument employs a five-point Likert scale (1 = strongly disagree to 5 = strongly agree) to measure two main variables: Financial Literacy (FL), which includes aspects of knowledge, attitude, and financial behavior; and Overspending Behavior (OS), which includes impulsive buying tendencies, lack of financial planning, and emotional pressure in the use of paylater services. The validity test was conducted using the Corrected Item-Total Correlation ($r \geq 0.30$), while the reliability test employed Cronbach's Alpha ($\alpha \geq 0.70$). Data analysis was carried out descriptively and inferentially using a simple linear regression model, expressed as follows:

$$OS = a + bLK + e,$$

where OS represents overspending behavior, FL refers to the level of financial literacy, a is the constant, b is the regression coefficient, and e denotes the error term. The hypothesis testing was conducted using the t-test at a 5% significance level, assisted by the SPSS version 26.0 software.

4. Results and Discussion

4.1. Research Findings

This study involved 400 active student respondents from the University of Merdeka Malang, proportionally distributed across six faculties: the Faculty of Economics and Business (20%), Law (15%), Social and Political Sciences (17.5%), Engineering (17.5%), Information Technology (15%), and Teacher Training and Education (15%). This distribution reflects the representation of students from various academic disciplines and socioeconomic backgrounds. Based on respondent characteristics, 56.3% were female and 43.7% were male, with the majority aged 19–22 years (72%). Most students reported using Shopee PayLater (42%), followed by GoPayLater (25%), Kredivo (18%), and Akulaku (15%), with a usage frequency of 1–5 times per month. These findings indicate that paylater services have become an integral part of students' regular consumption patterns.

A data quality test was conducted to ensure the reliability of the research instrument. The validity test results showed that all items of the financial literacy variable (12 items) and

the overspending behavior variable (10 items) had Corrected Item-Total Correlation values greater than 0.30, indicating that all items were valid. Furthermore, the reliability test using Cronbach's Alpha yielded $\alpha = 0.871$ for financial literacy and $\alpha = 0.832$ for overspending, both of which meet the criterion for high reliability ($\alpha \geq 0.70$). Therefore, the research instrument was deemed reliable and suitable for use. The classical assumption tests, which included normality, heteroscedasticity, and autocorrelation tests, were also satisfactorily met (normality significance value = $0.200 > 0.05$; Durbin-Watson = 1.874). Hence, the regression model was considered valid for inferential analysis.

Descriptive analysis shows that the financial literacy level of students at the University of Merdeka Malang is relatively high, with an average score of 3.78 on a 1–5 scale. Students generally demonstrate a good understanding of basic personal finance concepts such as budgeting, saving, and price comparison. However, their understanding remains limited regarding aspects such as interest rate risks, hidden fees, and the calculation of effective interest rates in paylater services. Conversely, the average score for overspending behavior is 3.10, indicating that students tend to be moderately impulsive in online shopping, particularly when there are promotions or installment options available. Furthermore, 38% of respondents admitted to having delayed paylater payments due to expenditures exceeding their monthly income, suggesting the emergence of mild financial stress symptoms.

The results of the simple linear regression analysis indicate a significant relationship model between Financial Literacy (FL) and Overspending Behavior (OS), represented by the following regression equation:

$$OS = 25,421 - 0,425LK$$

The negative regression coefficient value (-0.425) indicates that every one-point increase in financial literacy reduces the overspending behavior score by 0.425 points. The t-statistic value of -11.296, which is greater than the t-table value (1.966), and the significance level of $0.000 < 0.05$, demonstrate that financial literacy has a negative and significant effect on overspending behavior. Meanwhile, the coefficient of determination (R^2) value of 0.412 indicates that 41.2% of the variation in overspending behavior can be explained by financial literacy, while the remaining 58.8% is influenced by other external factors.

In general, the results of this study confirm the hypothesis that the higher the level of students' financial literacy, the lower their tendency to engage in excessive spending through paylater services. These findings emphasize that students with a good understanding of financial concepts tend to be more cautious in using digital credit facilities and are able to restrain impulsive tendencies in online consumption. With a high level of statistical significance and a well-fitted model ($F = 127.52$; Sig. = 0.000), this study provides strong empirical evidence that financial literacy plays a substantial role in shaping more rational and sustainable digital consumption behavior among university students.

DISCUSSION

The main findings of this study reinforce the *financial capability theory* proposed by Atkinson and Messy (2012), which states that financial literacy plays a crucial role in

enhancing an individual's ability to make responsible financial decisions. Students at the University of Merdeka Malang with a high level of financial literacy show a lower tendency to use paylater services excessively. This occurs because a good understanding of concepts such as interest rates, debt risks, and budget management helps them make more rational consumption decisions. Conversely, students with low financial literacy are more easily influenced by promotions and discounts offered by e-commerce platforms, which may lead to repeated overspending behavior.

The significant negative correlation between financial literacy and overspending behavior found in this study is consistent with the findings of Lusardi and Mitchell (2014), who demonstrated that financial literacy serves as a protective factor against consumptive behavior in the modern era. In the context of university students, low awareness of the implications of short-term debt and limited understanding of effective interest rates make paylater services appear advantageous, yet potentially deceptive. This result is further supported by the findings of Hasanah and Pramudito (2023), which indicate that paylater users with low financial literacy have a 1.5 times higher risk of late payment compared to users with higher literacy levels. Therefore, financial literacy is not only related to knowledge but also to the ability to control digital consumption behavior

Social factors also influence the relationship between financial literacy and overspending behavior. Students who are socially active and frequently engage in digital media interactions tend to experience social pressure to follow their peers' consumption trends. In such situations, financial literacy functions as a "self-control mechanism" that helps individuals resist consumption impulses driven by prestige or emotion. However, the findings of this study indicate that financial literacy alone cannot completely eliminate overspending behavior, as 41.2% of its influence remains constrained by other variables such as lifestyle, emotional self-control, and digital media exposure. This is consistent with the findings of Lim et al. (2020), who emphasize that financial behavior is shaped by a combination of economic rationality and psychological factors.

In the context of higher education, this research provides an important signal for Merdeka University Malang to integrate digital financial literacy into learning and student activities. Enhancing students' ability to understand technology-based financial products can be achieved through programs such as a Financial Smart Campus initiative, pocket money management training, or collaborations with the Financial Services Authority (OJK) and Bank Indonesia. This step is crucial considering that students belong to a productive age group that is vulnerable to consumptive behavior due to easy access to financial technology. By strengthening financial literacy, they can utilize fintech as a financial aid tool rather than as a source of consumer debt risk.

Theoretically, this study enriches the literature on digital financial behavior among Indonesian university students, particularly in the context of the growing pay-later services. Financial literacy has been proven to be an important determinant in curbing overspending behavior in the era of economic digitalization. Practically, these findings can serve as a basis for educational institutions and fintech service providers to design more effective and sustainable financial education strategies. Financially literate students not only become smart

fintech users but also act as agents of change in fostering a culture of wise and responsible consumption amid the growth of the national digital economy.

CONCLUSION

Based on the results and discussion of the study on the influence of financial literacy on overspending behavior among pay-later service users in the Merdeka Belajar program students in Malang, it can be concluded that the level of financial literacy has a significant relationship with students' tendencies toward consumptive behavior. Students with high financial literacy tend to use pay-later services more rationally, consider their financial capacity before making transactions, and are better able to distinguish between needs and wants. Conversely, students with low financial literacy are more vulnerable to overspending behavior, influenced by emotional factors, promotions, and a limited understanding of interest rates and late payment risks. This condition indicates that improving financial literacy is a crucial aspect of fostering healthy financial behavior in the digital era. Therefore, sustainable financial education strategies are needed through integration into campus curricula, practical training, and collaboration among educational institutions, government, and digital financial service providers to develop a young generation that is financially smart, responsible, and prepared to face the challenges of the modern economy.

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