

## Research Article

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# Analysis of the Determinants of People's Tendency to Go into Debt Mediated by Materialism and Moderated by Financial Literacy

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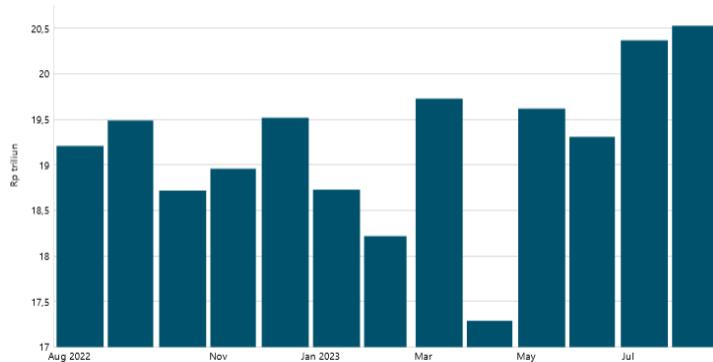
**Abstract:** The increasingly massive development of digital financial services has increased ease of access to credit, but on the other hand, has triggered an increased tendency to incur debt among certain groups, including teachers. This study aims to analyze the determinants of people's tendency to incur debt by examining the role of materialism as a mediating variable and financial literacy as a moderating variable. This study used a quantitative approach with a cross-sectional design. The study population was teachers in Indonesia, with a sample of 416 respondents obtained through convenience sampling techniques and data collection using online questionnaires. Data analysis was performed using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with the help of SmartPLS 4.0. The results showed that indebtedness attitudes have a significant positive effect on consumer debt ( $\beta = 0.139$ ;  $p < 0.05$ ). In addition, impulsivity ( $\beta = 0.306$ ;  $p < 0.001$ ) and debt attitudes ( $\beta = 0.464$ ;  $p < 0.001$ ) had a significant positive effect on materialism, while self-esteem had no significant effect and economic vulnerability had a significant negative effect on materialism ( $\beta = -0.248$ ;  $p < 0.001$ ). Materialism had a significant positive effect on consumer debt ( $\beta = 0.232$ ;  $p < 0.001$ ) and was shown to partially mediate the effect of debt attitudes on consumer debt. In addition, financial literacy significantly moderated the relationship between debt attitudes and consumer debt. The  $R^2$  value of 0.613 indicates that the model has strong explanatory power for materialism, while the  $R^2$  of 0.201 indicates moderate explanatory power for consumer debt.

**Keywords:** Consumer Debt, Materialism, Financial Literacy, Debt Attitudes, Impulsivity.

## Introduction

In recent years, there have been significant changes in financial markets in developing countries. These changes are particularly evident in financial institutions beginning to provide loans to previously unaffordable groups (*unbankedAndunderbanked*), as part of an aggressive effort to achieve national financial inclusion (Azma et al., 2019). In the current context, the acceleration of post-pandemic digital transformation has strengthened the role of non-traditional financial service providers in this ecosystem. Fintech exists to bridge the needs of communities that are not covered by conventional financial services (Salampasis & Mention, 2018). This digital transformation has not only changed the way humans interact with money, but also created new business models such as *Pay Later* and AI-based lending that processes alternative data automatically *real-time* (Sahay et al., 2023). However, this convenience brings new systemic risks; the significant increase in household debt in developing countries today is often attributed to highly instantaneous lending algorithms and aggressive digital promotion (Demirguc-Kunt et al., 2023).

Financial institutions, both digital banks and non-banks, now offer highly flexible lending terms to attract young customers (Mutezo, 2014; Hassan et al., 2024). This phenomenon often leads to over-indebtedness, where borrowers take out unsecured loans due to the much faster and less bureaucratic process compared to traditional banking (Magee, 2011; Hidajat, 2020). Recent research shows that the "digging a hole to cover a hole" behavior on online lending platforms is increasingly prevalent due to low digital financial literacy amidst widespread access to credit (World Bank, 2024).



**Figure 1. The Value of Online Loan Distribution in Indonesia (August 2022 – August 2023)**

Source : (Annur, 2023b)

According to the Financial Services Authority (OJK), in August 2023, fintech lending, or online loans, disbursed in Indonesia reached IDR 20.53 trillion. National online loans disbursed in August 2023 increased by 6.87 percent year-on-year (yoY), with loans disbursed to 13.37 million borrowers down 6.37 percent month-on-month (moM). The amount of loans disbursed increased slightly by 0.78 percent from the previous month, amounting to IDR 20.37 trillion. 10.47 million borrowers, or 78.3 percent of national borrowers, came from Java. Of the total loan value, 39.05 percent, or IDR 8.01 trillion, was disbursed to productive sectors. Specifically, IDR 3.25 trillion was disbursed to wholesale and retail trade, IDR 305.23 billion to agriculture, forestry, and fisheries, IDR 157.68 billion to the manufacturing industry, and IDR 702.47 billion to the accommodation and consumer goods industry. In August 2023, 2,196 conventional financial services institutions collaborated to distribute loans totaling Rp5.92 trillion to institutional lenders (superlenders) (Annur, 2023b).

The Jakarta Legal Aid Institute (LBH Jakarta) received more than 1,300 complaints related to online loan cases in 2018. (Mohammad, 2019). Because not all victims have reported the case, this number is a small estimate. Illegal fintech is dangerous because it can be a vehicle for money laundering, terrorism financing, tax evasion, customer data misuse, and undermine trust in legal P2P platforms (Hidajat, 2020).

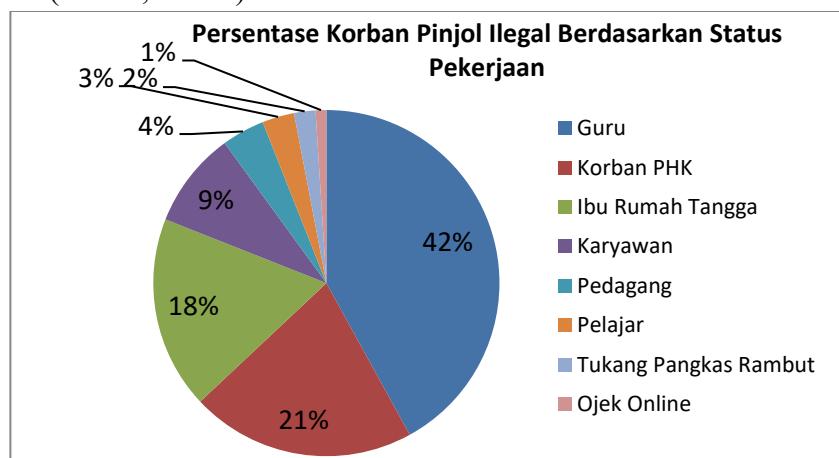
**Table1.** Number of Complaints Regarding Illegal Loans (January-May 2023)

No	Month	Number of
1	January	1,173
2	February	636
3	March	980
4	April	694
5	May	420
	<b>Total</b>	<b>3,903</b>

Source (Annur, 2023a)

From January 1 to May 29, 2023, the Financial Services Authority (OJK) recorded 3,903 complaints from the public regarding fintech peer-to-peer (P2P) lending, also known as illegal online lending (pinjol). The highest number of complaints was received by the OJK in January 2023, with 1,173. The OJK received 636 similar complaints in February 2023, followed by 980 complaints in March 2023, 694 complaints in April 2023, and 420 complaints in May 2023.

Sarjito, Deputy Commissioner for Supervision of Financial Services Business Conduct and Consumer Protection at the Financial Services Authority (OJK), stated that the OJK is working to reduce the number of illegal online lending companies that cause inconvenience to the public. As of May 2023, the credit institutions most frequently complained about were Abadi Dana (25 complaints), Kami Kas (23 complaints), Tunai Kilat (21 complaints), Pinjam Duit (25 complaints), and Super Cash (14 complaints). The public complaints received by the OJK are varied, including threats to disseminate personal information, collecting all contact information on tenants' phones, terrorism and intimidation, and debt collection without a loan (Annur, 2023a).



**Figure 2. Proportion of Illegal Online Loan Victims**

Source : (Annur, 2022)

OJK data shows that many professions are caught in the trust trap. Friderica Widyasari Dewi, Chief Executive of the Financial Services Business Conduct Supervision, Education, and Consumer Protection Division, noted that 42 percent of online loan shark victims are teachers. This is followed by 21 percent of laid-off victims, 18 percent of housewives, 9 percent of employees, 4 percent of traders, 3 percent of students, 2 percent of hairdressers, and 1 percent of online motorcycle taxi drivers (Dwinanda, 2023). Overall, 42 percent of teachers fell victim to illegal loans. The number of honorary teachers and civil servants involved in illegal loans was not disclosed.

These results are particularly interesting because teachers, who are expected to have high literacy, are actually the ones most impacted by illegal online loans. According to the Indonesian Teachers Association, the number of teachers in the Republic of Indonesia will reach 3,357,935 by 2022. Of this number, 1,754,555, or more than 53%, are honorary teachers, and the remaining 1,603,380 are civil servant teachers (Ogen, 2022). Often, non-civil servant teachers do not receive adequate welfare, which causes teaching to be ineffective (Jayani, 2022).

Based on the background that has been explained, the formulation of the problem that will be analyzed in this research is as follows:

1. Is the attitude of being in debt influential on consumer debt?
2. Does impulsivity affect materialism?
3. Does self-esteem influence materialism?
4. What is economic vulnerability? influential materialism?
5. Is the attitude of being in debt influential against materialism?
6. Does materialism mediate the influence of debt attitudes on consumer debt?
7. Does materialism affect consumer debt?

## 8. Does financial literacy moderate attitudes toward consumer debt?

### Literature Review

#### Hypothesis Development

##### The influence of debt attitudes on consumer debt

Theory of Planned Behavior (TPB) proposed by (Ajzen, 2011) The theory aims to predict a person's behavior when they have the ability to control themselves. Essentially, this theory explains how an individual's intention to perform a behavior is influenced by their attitude toward that behavior. Intention is considered the link between personal factors and behavior and is the primary factor determining a person's actions. According to research Chetioui et al. (2021), individuals are more likely to perform a behavior if they have a positive attitude toward it Lebdaoui and Chetioui (2021) also found that people who have a positive attitude towards debt are more likely to have debt than those who dislike debt. The fast and instantaneous lending process, often requiring only a single click, encourages more impulsive behavior in debt decisions. This speed of disbursement reduces the opportunity for individuals to rationally consider financial decisions (Abid et al., 2024). Based on these findings, it can be assumed that debt attitudes have a significant influence on the amount of consumer debt. Therefore, the proposed hypothesis is:

H1: Debt attitudes have a significant positive effect on consumer debt.

##### The influence of impulsivity on materialism

According to Richins and Radmin (1994) Research and theoretical models on debt would be better served by including materialism as a variable. In this context, previous research has shown that impulsivity, self-esteem, economic vulnerability, and attitudes toward debt are key factors influencing materialism (Anderloni et al., 2012; De Matos et al., 2019; Lebdaoui & Chetioui, 2021; Ottaviani & Vandone, 2011) Impulsivity is a personality trait that describes a person's tendency to make decisions quickly without careful consideration Rook and Fisher (1995) This trait affects many aspects of life, including recreation and important decision-making (Sharma et al., 2014). Because impulsive consumers tend to buy goods without planning and full awareness (O'Guinn & Faber, 1987; Ottaviani & Vandone, 2011), this behavior is expected to increase their level of materialism. Exposure to these social consumption standards leads to an increased materialistic orientation, making individuals more susceptible to taking on debt without considering the consequences and future financial burden (Duarte et al., 2024; Zheng et al., 2023). Based on this explanation, the following hypothesis is proposed:

H2: Impulsivity has a significant positive effect on materialism (the higher the impulsive behavior, the higher the materialism).

##### The influence of self-esteem on materialism

Self-esteem is an individual's belief in his or her own worth or value Davis-Kean and Sandler (2001), defines it as a positive or negative attitude toward oneself, including the degree of liking, satisfaction, or feeling of one's worth compared to others. They are more likely to purchase luxury and expensive items through debt to restore self-esteem. This is supported by the findings Pettit and Sivanathan (2011) as well as De Matos et al. (2019), which shows that consumers with low self-esteem often use material purchases to increase feelings of self-satisfaction. These purchases serve as a way to change and improve their perception of themselves Zafar et al. (2021) shows that individuals with low levels of self-esteem tend to be more easily affected by social pressure in digital spaces. This condition arises when individuals compare

themselves with the image of the "ideal self" projected by other people on the internet, giving rise to a perception of self-discrepancy. To reduce this gap, individuals then adopt a materialistic orientation through compensatory consumption, namely the behavior of buying goods as an effort to repair damaged self-esteem or obtain a rapid increase in social status (Jiang et al., 2024). Based on this description, the hypothesis is as follows:

H3: Self-esteem has a significant negative effect on materialism.

### **The influence of economic vulnerability on materialism**

The next factor that influences materialism is economic vulnerability Gesthuizen and Scheepers, (2010) defines economic vulnerability as an individual's ability to generate sufficient income to meet needs, cover expenses, and cope with unexpected events. According to Anderloni et al. (2012), consumers with lower levels of education tend to purchase expensive goods as a means to achieve certain life goals. This suggests that less educated individuals often have lower incomes, making them more economically vulnerable. In the same context, De Matos et al. (2019) as well as Lebdaoui and Chetioui (2021) argue that high levels of economic vulnerability can encourage greater levels of materialism.

However, some literature suggests an alternative view that economic vulnerability can actually suppress materialistic orientations. Individuals in limited economic circumstances tend to prioritize meeting basic needs and maintaining financial stability over pursuing symbolic consumption. Financial pressure and income uncertainty drive a shift in focus toward survival strategies and risk management, narrowing the space for materialism to flourish. Previous research suggests that economic pressure and insecurity can reduce an individual's drive to attain status through material possessions, as limited access to material goods alters life priorities and consumption orientations (Chang & Arkin, 2002; Pieters, 2013). Conversely, materialism is more likely to develop in individuals with higher economic conditions and perceived social mobility, as they have the capacity and opportunity to utilize consumption as a means of expressing status, achievement, and self-identity (Atanasova et al., 2021; Wang et al., 2022). In the context of the digital era, the role of social media further reinforces this pattern, where economic capacity allows individuals to display their lifestyles and possessions online, while financial constraints actually limit these practices and weaken materialistic orientations (Trzcińska et al., 2021; Ozimek et al., 2024). Based on this explanation, the hypothesis proposed is:

H4: Economic vulnerability has a significant negative effect on materialism (the higher the economic vulnerability, the lower the tendency of a person to pursue materialism as compensation).

### **The influence of debt attitudes on materialism**

People tend to adopt behaviors whose attitudes are liked Chetioui et al. (2021). Previous literature suggests that consumers who have more positive attitudes toward debt tend to purchase more, and therefore have higher levels of materialism (De Matos et al., 2019) Gerrans et al. (2022) revealed that increasingly positive attitudes toward digital debt can foster a perception of "false wealth" in individuals. When debt is no longer viewed as a risk or threat, individuals become more likely to internalize materialistic values. Ownership of goods is then perceived as an instant means to achieve happiness and social status, with debt considered a reasonable mechanism for meeting this ideal standard of living (Sharif et al., 2022). Furthermore, Sahi et al. (2025) showed that in the context of fintech algorithms, a permissive attitude toward debt acts as a trigger for the emergence of compensatory materialism. The perception that debt is a normal practice encourages individuals to reduce self-control and focus more on acquiring symbolic goods

to strengthen their self-image, particularly on social media. This finding is supported by Rai et al. (2025), who stated that individuals with a highly accepting attitude toward debt have a lower threshold for materialistic impulses, making them more likely to fall into repetitive consumption patterns oriented towards short-term emotional gratification. Thus, the stronger an individual's positive attitude toward debt as part of their lifestyle, the higher their tendency toward materialism. Based on this description, the following hypothesis is proposed:

H5: Debt attitudes have a significant positive effect on materialism.

### **Materialism mediates the influence of debt attitudes on consumer debt**

Most related research has concentrated on the primary predictors of debt without examining its mediating factors to gain deeper insight into the indirect effects. Materialism has been widely used as a mediating factor in psychology and consumption studies (Gentina et al., 2018; Liang et al., 2016). (De Matos et al., 2019) suggests that materialism can indirectly mediate the influence of all economic, psychological, and emotional factors on debt levels. Therefore, materialism mediates the relationship between attitudes toward debt and debt levels. Sahi et al. (2025) emphasizes that a permissive attitude towards debt alone is not enough to explain the phenomenon of consumer debt explosion without involving the variable of materialism as a mediator. Based on previous research, it can be assumed that materialism mediates the influence of debt attitudes on consumer debt, so the hypothesis proposed is as follows:

H6: Materialism mediates the influence of debt attitudes on consumer debt.

### **Materialism Influences Consumer Debt**

Materialism is defined as the importance placed on the acquisition and ownership of material goods by an individual (Richins, 2004; Richins & Dawson, 1992). Materialism can be considered a personal value, which influences the way individuals interpret their environment. According to (Segev et al., 2015, p. 86): Materialists often become overly focused on purchases and direct their energy and resources toward acquiring material possessions, hoping that this will lead to happiness, life satisfaction, and general well-being. Higher levels of materialism contribute to an increased propensity for debt, as individuals with a materialistic orientation have a stronger drive to acquire material goods as a means of achieving happiness and life satisfaction (Gutiérrez-Nieto et al., 2017; Ponchio & Aranha, 2008; Garðarsdóttir & H. Dittmar, 2012; Watson, 2003). Furthermore, the ease and speed of access to digital lending applications tend to reduce individuals' sensitivity to financial risk. Perceptions of interest charges and potential fines are reduced, while attention is focused more on instantly fulfilling consumptive desires. The "consume now, pay later" orientation encourages individuals to pursue short-term gratification without considering the long-term consequences of debt, thereby increasing vulnerability to excessive debt accumulation (Rai et al., 2025). Based on previous research, it can be assumed that materialism has an influence on consumer debt, so the hypothesis proposed is as follows:

H7: Materialism has an effect on consumer debt

### **Financial literacy moderates the influence of debt attitudes on consumer debt**

Financial literacy is seen as a potential moderator as it may represent a possible solution to help government employees overcome challenges such as dealing with problems with debt as it is argued that financial literacy is a useful skill in the modern financial world that is responsible in short-term and long-term financial decisions (Original, 2022). This moderating variable may be able to shift government

employees' debt intentions from bad debt to good debt, which in turn can improve their financial decision-making and promote healthy financial well-being. Furthermore, many experts recognize the positive impact of financial literacy on access to credit, regardless of the loan source (Dang, 2019). Isyani et al. (2024) emphasize that financial literacy plays a crucial role in reducing the negative influence of behavioral bias and encouraging individuals to make more rational, cautious, and informed financial decisions. Based on previous research, it can be assumed that financial literacy moderates the influence of debt attitudes on consumer debt, so the hypothesis proposed is as follows:

H8: Financial literacy moderates the effect of debt attitudes on consumer debt.

## Method

The research design in this study is quantitative, cross-sectional considered in this study which aims to collective quantitative exploration in testing the moderating effect of financial literacy and materialism mediation in the relationship between debt attitudes and psychological behavior towards consumer debt. This study uses primary data because primary data is more appropriate in the behavioral aspects of social phenomena for decision making compared to secondary data (Uma & Roger, 2016, p. 113).

This study attempts to understand borrowing behavior among teachers in Indonesia. The population used in this study is teachers throughout Indonesia. According to data from the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek), there were approximately 3,396,794 teachers in Indonesia in the odd semester of the 2024/2025 academic year. Of these, 960,633 were male and 2,436,161 were female. In this study, the authors used a convenience sampling technique. Convenience sampling is sampling technique based on the willingness of population members who are met by the researcher and are willing to become respondents to be used as samples (Uma & Roger, 2016, p. 247). Furthermore, respondent accessibility was quite easy, given that the researcher had access to the Subject Teachers' Conference (MGMP) in Indonesia. To determine the sample size for the study, the Slovin formula was used. Sugiyono, (2017) is a formula used to find the sample size that is considered capable of representing the entire population.

Slovin's formula:

$$n = \frac{N}{1 + N(e)^2}$$

n = Sample size

N = Number of teachers based on Ministry of Education, Culture, Research and Technology

e = Percentage of tolerance for accuracy/error

In this study, the confidence level was 95%, meaning the margin of error was 5%. Therefore, the researchers determined the minimum sample size that met the 5% margin of error requirement by entering the margin of error into the Slovin formula.

$$n = \frac{3.396.794}{1 + 3.396.794(0.05)^2}$$

$$n = 399,952 = 400$$

To facilitate dissemination, a digital survey was prepared via Google Forms and distributed using email and social media, so the final number of respondents was 443 respondents.

## Data collection technique

To collect data, this study used primary data obtained through questionnaires, then secondary data obtained from observations of literature studies through academic studies of books; scientific journal articles; documents and credible reports such as regulations and websites of the Financial Services Authority (OJK) and other financial institutions. This study used a questionnaire, respondents were expected to answer each question by selecting one of the available answer options. Based on the variables being measured, questions in the survey were grouped into several groups based on the indicators of each variable. The data collection method used a questionnaire distributed through a Google Forms questionnaire form containing statements used to collect data from government employee respondents who received the questionnaire.

## Data Analysis Techniques

This study used Structural Equation Modeling–Partial Least Squares (SEM-PLS) with the help of SmartPLS 4.0 software. This method was chosen because it is able to test complex research models simultaneously, including direct relationships, mediation effects, and moderation effects, and does not require strict data normality assumptions. The analysis was carried out in two stages: evaluation of the measurement model (outer model) and evaluation of the structural model (inner model). Evaluation of the outer model includes tests of convergent validity (factor loading  $\geq 0.70$  and AVE  $\geq 0.50$ ), discriminant validity (Fornell–Larcker criteria and cross-loading), and construct reliability (Composite Reliability and Cronbach's Alpha  $\geq 0.70$ ).

The inner model was evaluated by assessing the coefficient of determination ( $R^2$ ), predictive relevance ( $Q^2$ ), and path coefficient. Significance testing of the relationship between variables was performed using a bootstrapping procedure with 5,000 subsamples, with the criteria of  $t$ -statistic  $> 1.96$  and  $p$ -value  $< 0.05$ . The mediation effect of materialism was tested through an indirect effect analysis, while the moderation effect of financial literacy was tested using the interaction term between debt attitudes and financial literacy. The mediation and moderation effects were declared significant if the  $p$ -value  $< 0.05$ .

## Results and Discussion

### Respondent Identity

Descriptive analysis in this study describes the characteristic data of 443 respondents based on age, gender, island of residence, educational background, marital status and regular monthly income.

**Table 2. Respondent Demographic Data**

Definition	Optional	Number	Percent
Age	1 = 21 years	15	3.4%
	2 = 22 – 30 years	144	32.5%
	3 = 31 – 40 years	273	61.6%
	4 = 41 – 50 years	10	2.3%
	5 = Over 50 years old	1	0.2%
1. Gender	1 = Female	309	69.8%
	2 = Male	134	30.2%
Residential Island	1 = Java Island	302	68.2%
	2 = Sumatra Island	37	8.4%
	3 = Kalimantan Island	47	10.6%
	4 = Sulawesi Island	47	10.6%

	5 = Papua Island	7	1.6%
	6 = Bali Island	3	0.7%
Educational background	1 = Diploma	97	21.9%
	2 = Bachelor's Degree	303	68.4%
	3 = Bachelor's Degree	43	9.7%
Marital status	1 = Single	180	40.6%
	2 = Married	237	53.5%
	3 = Widow/Widower	26	5.9%
5. Monthly Income	1 = < 2,000,000	40	9%
	2 = 2,000,001 –	185	41.8%
	3 = 5,000,001 –	183	41.3%
	4 = 8,000,001 –	24	5.4%
	5 = > 12,000,000	11	2.5%

Source: processed by researchers (2025)

It can be seen in the table above the results of the percentage calculation of the respondent data, from the results of the data it can be concluded that the identity of the respondents is seen from age, the largest respondents are 31-40 years old as many as 273 respondents (61.6%) and the smallest are 21 years old as many as 15 respondents (3.4%). Next, the largest gender is female as many as 309 respondents (69.8%) and the smallest is male as many as 134 respondents (29.9%). At the level of education, the largest respondents are Bachelor's Degree as many as 303 respondents (68.4%) and the smallest are Diploma as many as 97 respondents (21.9%). The largest marital status of respondents is married (53.6%) and the smallest marital status is Widow/Widower (6%). Furthermore, the largest respondent's income ranges from Rp. 2,000,001 - Rp. 5,000,000 (41.8%) and the smallest respondent's income is in the income range > Rp. 12,000,000 (2.5%). From the data, it is known that 416 respondents had loans in the last 6 months, so that these results will be processed by researchers for research purposes.

### Convergent Validity

Convergent validity is carried out by looking at item reliability (validity indicators) indicated by the loading factor value.

#### a. Loading factor

The results of data processing using SmartPLS, as shown in the figure, show that the majority of indicators for each variable in this study have loading factor values greater than 0.70 and are considered valid. This indicates that variable indicators with loading factor values greater than 0.70 have a high level of validity, thus meeting convergent validity. The results of the validity test for the variables processed using SmartPLS are shown in the following table.

Table 3 Variable Validity Test

	HD	HK	IM	TO	LK	MAT	SB	LK X SB
<b>HD1</b>	0.881							
<b>HD2</b>	0.892							
<b>HK1</b>		0.926						
<b>HK2</b>		0.905						
<b>HK3</b>		0.796						
<b>IM1</b>			0.792					

	HD	HK	IM	TO	LK	MAT	SB	LK X SB
<b>IM2</b>			0.805					
<b>IM3</b>			0.804					
<b>KE1</b>				0.833				
<b>KE2</b>				0.863				
<b>THE 3RD</b>				0.841				
<b>LK1</b>					0.865			
<b>LK2</b>					0.910			
<b>LK3</b>					0.918			
<b>MAT1</b>						0.717		
<b>MAT2</b>						0.706		
<b>MAT3</b>						0.714		
<b>MAT 4</b>						0.802		
<b>SB1</b>							0.911	
<b>SB4</b>							0.881	
<b>LK x SB</b>								1,000

b. **Average Variance Extracted(AVE)**

*Average Variance Extracted(AVE)* describes the amount of variance explained by the items compared to the variance caused by measurement error. The standard is that if the AVE value is above 0.5, it can be said that the construct has good convergent validity. This means that the latent variable can explain, on average, more than half of the variance of its indicators.

**Table 4 Average Variance Extracted (AVE)**

	Average variance extracted (AVE)
<b>HD</b>	0.785
<b>HK</b>	0.770
<b>IM</b>	0.640
<b>TO</b>	0.715
<b>LK</b>	0.806
<b>MAT</b>	0.541
<b>SB</b>	0.803

### Discriminant Validity

Discriminant validity is the extent to which a construct is truly different from other constructs (the construct is unique). Measurement criteria The best recent test is to look at the Herertrout-Monotrait Ratio (HTMT) value. If the HTMT value is  $<0.90$ , then a construct has good discriminant validity (Juliandi, 2018).

**Table 5. Discriminant Validity Model I**

	HD	HK	IM	TO	LK	MAT	SB	LK X SB
<b>HD</b>								
<b>HK</b>	0.509							
<b>IM</b>	0.272	0.370						
<b>TO</b>	0.877	0.587	0.373					

<b>LK</b>	0.566	0.258	0.169	0.653				
<b>MAT</b>	0.467	0.499	0.830	0.598	0.366			
<b>SB</b>	0.238	0.409	0.620	0.270	0.107	0.895		
<b>LK X SB</b>	0.360	0.268	0.120	0.473	0.153	0.386	0.320	

From the image above, it can be concluded that all variables have an HTMT value  $< 0.90$ , meaning that the discriminant validity is good, or is truly different from other constructs (the construct is unique). This shows that all items of the variables Debt Attitude (X1), Impulsivity (X2), Self-Esteem (X3), Economic Vulnerability (X4), Consumer Debt (Y) and Financial Literacy (Z) and Materialism (M) are declared valid.

### Reliability Test Results

Cronbach's Alpha test is used to measure the internal consistency reliability of multiple item scales with the provisions. The value must be  $> 0.70$ . The SmartPLS output results for the composite reliability value can be shown in the following table:

**Table 6. Reliability Test**

	Cronbach's alpha	Composite reliability (rho_c)
<b>HD</b>	0.727	0.880
<b>HK</b>	0.853	0.909
<b>IM</b>	0.720	0.842
<b>TO</b>	0.801	0.883
<b>LK</b>	0.883	0.926
<b>MAT</b>	0.717	0.825
<b>SB</b>	0.755	0.890

The reliability indicators are met for the Chronbach's Alpha and rho\_c values because all variables have values  $> 0.70$ .

### Inner Model Testing (Structural Model)

#### Q2 Predictive Relevance Test Results

In PLS or Partial Least Squares analysis, Q2 is the predictive power of the model. The Q2 criteria are as follows:

- The Q2 Model value of 0.02 indicates that the model has weak predictive relevance.
- The Q2 Model value of 0.15 indicates that the model has moderate predictive relevance.
- The Q2 Model value of 0.35 indicates that the model has strong predictive relevance.

**Figure 7. Q2 Predictive Relevance Test**

	Q2predict	RMSE	MAE
HK	0.217	0.890	0.743
MAT	0.593	0.648	0.433

The conclusion of the Q2 test on Consumer Debt is 0.217, meaning the model has moderate predictive relevance, the model can predict quite well, and the Q2 value on Materialism is 0.593, meaning the model has strong predictive relevance, the model is very good at predicting the dependent variable. This indicates that the relationship between the constructs is very supportive for prediction.

## R-Square Test Results

R-Square is a measure of the proportion of variation in the value of a variable that is influenced (endogenous) and can be explained by the variables that influence it (exogenous). The criteria for R-Square according to (Julandi, 2018) are as follows:

- If the R<sup>2</sup> value (adjusted) = 0.75, it means the model is substantial (strong).
- If the R<sup>2</sup> value (adjusted) = 0.50, it means the model is moderate.
- If the R<sup>2</sup> value (adjusted) = 0.25, it means the model is weak (bad).

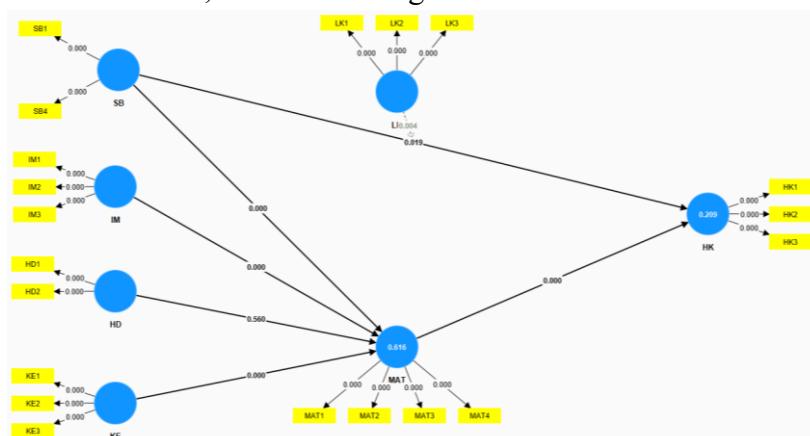
**Table 8. R-Square Test Model**

	R-Square	R-Square adjusted
HK	0.209	0.201
MAT	0.616	0.613

Conclusion from testing the R-Square value on Consumer Debt where the Adjusted R-Square is 0.201, meaning the model is weak, the independent variables are only able to explain 20.1% of the variation in the dependent variable, the remaining 79.9% is influenced by other factors outside the model. PR-Square value testing on Materialism where R<sup>2</sup> Adjusted is 0.613, meaning the model is substantial (strong), the independent variables are able to explain 61.3% of the variation in the dependent variable, the remaining 38.7% is influenced by other factors outside the model. The relationship between constructs in the model can be said to be relevant and strong in explaining the dependent variable.

## Path Coefficient (Direct Effect)

Path Coefficient in PLS-SEM, it is used for The significance of the influence between constructs can be seen from the path coefficient. Probability/ significance value (*P-Value*): If the *P-Value* is  $<0.05$ , then it is significant and if the *P-Value* is  $>0.05$ , then it is not significant.



**Figure 10. Standard Algorithms: Bootstrapping**

**Table 9. Bootstrapping Test**

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T statistic ( O/STDEV )	P Values
HD-> MAT	-0.037	-0.045	0.064	0.582	0.560
IM-> MAT	0.306	0.305	0.060	5,075	0.000
TO -> MAT	-0.248	-0.241	0.062	3,984	0.000
LK-> HK	-0.146	-0.148	0.048	3,049	0.002

MAT-> HK	0.232	0.231	0.064	3,630	0.000
SB-> HK	0.139	0.142	0.059	2,351	0.019
SB-> MAT	0.464	0.463	0.054	8,651	0.000
LKxSB-> HK	0.101	0.102	0.035	2,903	0.004
SB->MAT-> HK	0.108	0.106	0.030	3,632	0.000

**Table 10. Hypothesis Test Results**

Hypothesis	Influence	Original Sample (O)	T statistic ( O/STDEV )	P Values	Results
H1	Debt attitudes towards consumer debt	0.139	2,351	0.019	Hypothesis accepted
H2	Impulsivity towards materialism	0.306	5,075	0.000	Hypothesis accepted
H3	Self-esteem versus materialism	-0.037	0.582	0.560	Hypothesis rejected
H4	Economic vulnerability to materialism	-0.248	3,984	0.000	Hypothesis accepted
H5	Debt attitude towards materialism	0.464	8,651	0.000	Hypothesis accepted
H6	Materialism mediates the influence of debt attitudes on consumer debt	0.108	3,632	0.000	Hypothesis accepted
H7	Materialism towards consumer debt	0.232	3,630	0.000	Hypothesis accepted
H8	Financial Literacy moderates the influence of Debt Attitude on consumer debt	0.101	2,903	0.004	Hypothesis accepted

Based on the results of the hypothesis analysis using SmartPLS, the following findings were obtained:

1. The first hypothesis (H1) is accepted, indicating that debt attitudes have a positive and significant effect on consumer debt behavior. This is indicated by a path coefficient of 0.139, a t-statistic of 2.351, and a p-value of 0.019, which is below the significance level of 0.05.
2. Furthermore, the second hypothesis (H2) was also accepted. Impulsivity was shown to have a positive and significant influence on materialism, with a path coefficient of 0.306, a t-statistic of 5.075, and a p-value of 0.000.
3. In contrast, the third hypothesis (H3) was rejected. Self-esteem did not have a significant effect on materialism, as indicated by a path coefficient of -0.037, a t-statistic of 0.582, and a p-value of 0.560, which exceeded the established significance limit.
4. The fourth hypothesis (H4) was accepted, indicating that economic vulnerability has a negative and significant effect on materialism. The path coefficient was recorded at -0.248, with a t-statistic of 3.984, and a p-value of 0.000. This means that the higher an individual's perceived level of economic vulnerability, the lower their tendency toward materialistic values.
5. The fifth hypothesis (H5) was also accepted. Debt attitudes were shown to have a positive and significant influence on materialism, with a path coefficient of 0.464, a t-statistic of 8.651, and a p-value of 0.000.

6. The sixth hypothesis (H6) was also accepted, indicating that materialism positively and significantly mediates the influence of debt attitudes on consumer debt behavior. The mediation path coefficient was 0.108, the t-statistic was 3.632, and the p-value was 0.000. The mediation that occurred was partial, because both the direct (H1 and H5) and indirect (via materialism) influences were equally significant.
7. The seventh hypothesis (H7) was also accepted. Materialism has a positive and significant influence on consumer debt behavior, as indicated by a path coefficient of 0.232, a t-statistic of 3.630, and a p-value of 0.000.
8. Finally, the eighth hypothesis (H8) was accepted. Financial literacy was shown to positively and significantly moderate the influence of debt attitudes on consumer debt behavior, with a path coefficient of 0.101, a t-statistic of 2.903, and a p-value of 0.004.

### **The influence of debt attitudes on consumer debt**

Debt attitudes have a significant impact on consumer debt. Attitudes toward debt have been shown to significantly influence consumer debt levels. This is reflected in the questionnaire results, where the majority of respondents agreed with the statement that it is okay to go into debt to acquire desired goods. Furthermore, many respondents also indicated a tendency to prefer getting something now and paying for it later. This permissive attitude toward debt is further reinforced by the finding that many respondents do not mind having debt as long as they are confident they can repay it. In fact, most respondents stated they agree to make payments even if the total cost becomes more expensive. These findings indicate that positive attitudes toward debt significantly contribute to consumers' propensity to go into debt.

The direct effect hypothesis concludes that debt attitudes have a significant effect on consumer debt with a path coefficient value of 0.139 and a P-Value of 0.000, meaning it has a positive and significant influence.

These results are in line with previous research. A study by (De Matos et al., 2019) shows that attitudes towards debt are a significant predictor in the formation of financial decisions, especially in the younger generation who tend to view debt as a means to obtain comfort and a certain lifestyle (Abid et al., 2024; Arli et al., 2022; Chetioui et al., 2020; Lebdaoui & Chetioui, 2021; Mahdzan et al., 2023) also found that debt attitudes have a significant influence on consumer debt.

### **The influence of impulsivity on materialism**

Impulsivity is the second most important antecedent of materialism, after the other main variables, with a significantly positive coefficient. This finding indicates that individuals with higher levels of impulsivity tend to have higher levels of materialism, thus providing empirical support for the hypothesis proposed in this study. This result is consistent with previous theory and findings, which state that individuals with impulsive traits tend to be oriented towards short-term gratification and have a greater tendency to value possessions and consumption experiences as important aspects of their lives (De Matos et al., 2019; Duarte et al., 2024; Lebdaoui & Chetioui, 2021; Zheng et al., 2023).

Impulsiveness makes individuals more easily tempted by the momentary urge to acquire goods or services, without carefully considering the long-term consequences. In this context, materialism manifests as a need to immediately satisfy consumer desires. Therefore, the higher a person's impulsivity, the stronger the urge to link personal well-being to material possessions. These findings strengthen the understanding of the close relationship between individual psychological factors, such as impulsivity, and the materialistic value orientations that develop in modern society.

### The influence of self-esteem on materialism

The results of this study indicate that self-esteem does not significantly influence materialism, with a coefficient value of -0.037 and a p-value of 0.560. This p-value exceeding the significance limit of 0.05 indicates that the relationship between self-esteem and materialism in this study is not statistically supported. In other words, differences in individual self-esteem levels do not directly influence their tendency to embrace materialistic values. This finding is supported by questionnaire data, in which the majority of respondents stated that they strongly disagreed with statements regarding self-satisfaction and strongly disagreed with the belief that they were capable of doing things like others. Nevertheless, respondents still showed a positive attitude towards themselves, as reflected by the large number of respondents who agreed with statements indicating acceptance and a positive view of themselves. This indicates that despite some dissatisfaction with personal abilities, respondents generally maintained a positive assessment of their existence. Thus, the dynamics of respondents' self-esteem in this study did not directly encourage an increase in materialistic values, thus strengthening the finding that self-esteem is not a significant factor in shaping materialism.

This finding is in line with several previous studies that also found that self-esteem is not a strong predictor of materialism. For example, research conducted by (Kasser & Ryan, 1993) found that although low self-esteem is often associated with a tendency towards compensatory consumption, this relationship is not always empirically consistent and may be influenced by other factors such as cultural norms or social pressure. Other research by (Chaplin & John, 2007) also shows that in some contexts, self-esteem does not directly drive materialistic behavior, but is rather mediated by other factors such as the search for social status or the need for recognition. This research finding is supported by Mohsin and Tariq (2025), who stated that self-esteem is not a primary predictor of materialism in early adulthood. The influence of materialism is largely determined by personality factors, such as impulsivity and hedonistic orientation, as well as external factors such as social pressure and media exposure, so self-esteem tends to act as a background variable. Similarly, Zawadzka et al. (2022) found that the influence of self-esteem on materialism weakens when individuals are exposed to strong social norms and role models, particularly through social media. In this context, materialistic values are shaped more by external standards than internal self-evaluations, which aligns with this study's finding that positive self-esteem does not automatically influence materialistic tendencies.

Thus, the results of this study strengthen the view that the relationship between self-esteem and materialism is complex and may involve additional psychological mechanisms, such as emotion regulation, social environmental pressures, or childhood experiences, which are not directly reflected only through one's level of self-esteem.

### The influence of economic vulnerability on materialism

The results of this study indicate that economic vulnerability has a significant negative effect on materialism, with a coefficient of -0.248 and a p-value of 0.000. This finding indicates that the higher the level of economic vulnerability an individual perceives, the lower their tendency towards materialistic values. In other words, individuals who feel economically vulnerable are less likely to place material possessions as a top priority in their lives. This result is consistent with the pattern of respondents' answers in the questionnaire, where the majority of respondents indicated disagreement with statements regarding the comfort of living with their current income, the sufficiency of income to cover all expenditures, and financial preparedness to face unexpected events.

This finding is consistent with previous research by (Pieters, 2013), which shows that materialism tends to be lower in individuals with high financial stress because the inability to access or pursue materialistic goods prompts a change in life priorities. Another study by (Chang & Arkin, 2002) also revealed that the perception of economic insecurity can reduce the drive to gain status through material possessions, considering that individuals in such conditions are more focused on survival needs than on social expression through consumption. Perceptions of economic insecurity reduce individuals' tendency to express social status through material consumption, as in uncertain economic conditions the focus is more on survival strategies than social image (Chang & Arkin, 2002). Materialism tends to develop in individuals with higher levels of economic security and perceived social mobility, where consumption is seen as a means of expressing identity and success (Wang et al., 2022; Atanasova et al., 2021). Conversely, economic constraints, including in the digital context, limit individuals' participation in symbolic consumption and the culture of showing off on social media, thereby reducing consumption-based social comparison and suppressing the development of materialistic values (Trzcińska et al., 2021; Ozimek et al., 2024).

### **The influence of debt attitudes on materialism**

The findings of this study indicate that attitudes toward debt have a positive and significant influence on materialism. A coefficient value of 0.464, with a p-value of 0.000, indicates that the more positive or permissive an individual's attitude toward debt, the higher their tendency to embrace materialistic values. Positive attitudes toward debt reflect the perception that debt is a normal part of everyday economic activity, no longer something to be avoided. In this context, debt is viewed not merely as a financial obligation, but as a legitimate means to fulfill consumptive aspirations.

Consumers who view debt as "normal" tend to be more open to purchasing consumer goods even if they are beyond their current financial capacity. This reflects a more materialistic lifestyle, where material possessions are used as symbols of status, achievement, and even self-identity. This orientation aligns with the characteristics of materialistic individuals, who tend to view possessions as a source of happiness and social recognition.

These results are consistent with a number of previous studies. Davies and Lea (1995) found that students with permissive attitudes toward debt tended to view debt as an integral part of modern life (De Matos et al., 2019) also identified that individuals who have an open attitude towards debt tend to be more prone to consumer behavior (Lebdaoui & Chetioui, 2021) extended these findings by adding that attitudes toward debt may strengthen the relationship between materialism and compulsive buying behavior. Meanwhile, (Ponchio & Aranha, 2008) highlights that even among low-income consumers, permissive attitudes towards debt can encourage status-based purchasing behavior. In the context of financial technology developments, Gerrans et al. (2022) explain that positive attitudes toward digital debt can create the illusion of financial capability or "false wealth," due to easy access to credit, which makes individuals feel more economically capable than they actually are. When debt is no longer seen as a risk, individuals become more receptive to materialistic values and view consumption as a quick path to happiness and social status (Sharif et al., 2022). This phenomenon is further amplified by the fintech and social media ecosystems, where permissive attitudes toward debt serve as a trigger for compensatory materialism that weakens self-control and encourages the search for status symbols in the digital space (Sahi et al., 2025). Furthermore, Rai et al. (2025) show that high tolerance for debt lowers the threshold for material desires, leaving individuals vulnerable to falling into repetitive consumption patterns for short-term emotional fulfillment.

### **Materialism mediates the effect of debt attitudes on consumer debt**

To broaden our understanding of the relationship between attitudes toward debt and debt behavior, this study evaluates the role of materialism as a mediating variable (indirect effect). Based on the mediation approach proposed by (Garson, 2015) And (Zhao et al., 2010), mediation is categorized as full if the direct effect becomes insignificant after the mediator is entered, and as partial if the direct effect remains significant but experiences a decrease in influence strength. In this context, the results of the analysis indicate that there is partial mediation of materialism in the relationship between attitudes toward debt and consumer debt, which supports hypothesis H6. The direct effect of attitudes toward debt on debt behavior decreased from a coefficient of 0.247 to 0.108 after the inclusion of the mediator variable materialism, with the p value remaining significant ( $p = 0.000$ ). This indicates that part of the effect of attitudes toward debt on consumer debt is explained by an increase in materialistic orientation. This finding extends previous literature showing that individuals who have positive attitudes toward debt tend to exhibit higher levels of materialism, which in turn increases their propensity to go into debt (d'Astous et al., 1990; De Matos et al., 2019; Lebdaoui & Chetioui, 2021). Thus, materialism is not only a stand-alone value factor, but also functions as a psychological mechanism that bridges consumer attitudes and financial behavior. Sahi et al. (2025) asserted that a permissive attitude toward debt is not directly sufficient to explain the increase in consumer debt, especially in the context of digital finance and fintech algorithms. Materialism acts as a key mediating variable linking attitudes toward debt to actual financial behavior. In the contemporary consumer landscape, individuals do not incur debt solely because they perceive it as acceptable, but rather because of the urge to adapt to the increasingly demanding demands of a materialistic lifestyle. Without a materialistic tendency, a positive attitude toward debt does not necessarily translate into excessive debt behavior.

### **Materialism influences consumer debt**

The results of this study indicate that materialism has a positive and significant effect on consumer debt behavior. A coefficient of 0.232 with a p-value of 0.000 indicates that the higher a person's level of materialism, the greater their tendency to incur debt. This finding reflects that individuals who place a high value on material possessions and status symbols tend to use debt as a means to acquire consumer goods perceived as representing personal and social achievement.

Materialism in this context acts as a psychological drive that drives excessive consumption, often exceeding an individual's actual financial capacity. To address the gap between consumer desires and economic capacity, materialistic individuals tend to seek external financing alternatives, including debt. This finding is consistent with a study by De Matos et al. (2019), which showed that a materialistic orientation significantly contributes to risky financial behavior, including increased consumer debt. Rai et al. (2025) suggested that the ease of obtaining digital loans has the potential to reduce an individual's sensitivity to financial risk. This situation makes consumers less likely to pay attention to interest rates, late fees, and the long-term impact of the debt they take on. As a result, they focus more on fulfilling short-term consumer satisfaction, while often neglecting future financial consequences. This behavioral pattern aligns with the characteristics of individuals with materialistic tendencies, who prioritize instant gratification over long-term financial planning. Thus, materialistic values not only shape consumer preferences but also influence consumers' financing strategies, including the tendency to go into debt to maintain or enhance their social image and status.

### Financial literacy moderates the influence of debt attitudes on consumer debt

The findings of this study reveal that financial literacy significantly moderates the relationship between attitudes toward debt and consumer debt behavior. The interaction coefficient of 0.101 with a p-value of 0.004 indicates that financial literacy has a positive and significant moderating effect. Specifically, this means that financial literacy influences the direction and strength of the relationship between permissive attitudes toward debt and an individual's actual propensity to borrow. A permissive attitude toward debt reflects the view that borrowing is normal, acceptable, and even considered part of everyday financial strategies. Individuals with this attitude tend to have a greater tolerance for debt risk and are more likely to take out loans to meet consumer needs or desires. However, with high financial literacy, the relationship between this permissive attitude and actual borrowing can be reduced.

Financial literacy encompasses the knowledge, skills, and confidence in managing personal finances. Individuals with higher levels of financial literacy tend to be better able to evaluate financial decisions, consider long-term risks, and distinguish between needs and wants. Therefore, even if someone tends to be permissive toward debt, good financial literacy allows them to refrain from taking on debt, or at least be more selective and wise in choosing the type of debt they take on.

This research is also in line with the findings (Isyani et al., 2024), which emphasizes that financial literacy plays a key role in mitigating the negative impact of behavioral biases and supporting more prudent and informed financial decision-making. Therefore, policy interventions or educational programs aimed at improving financial literacy can be an effective strategy in reducing unhealthy consumer debt, particularly among individuals with positive attitudes toward debt.

## Conclusion

Given the large number of teachers caught in online loans (pinjol), the phenomenon of online loans (pinjol) raises significant concerns for the government, policymakers, and academics. This study seeks to empirically address the gap in the literature regarding the economic, emotional, and psychological factors that explain the propensity for debt. Based on the existing literature, we propose and test an integrated conceptual framework to explain debt attitudes, impulsivity, self-esteem, economic vulnerability, materialism, financial literacy, and consumer debt. The current study extends previous findings by analyzing the antecedents of debt among teachers across Indonesia and by measuring consumer debt based on the ratio of income used to repay debt, the time of debt repayment, and the amount of debt in various modalities (home renovation, vehicle ownership, household appliances, tablets, etc.). We also examine the mediating role of materialism in the influence of debt attitudes on consumer debt. The moderating effect of financial literacy is used to test the influence of debt attitudes on consumer debt.

1. Debt attitudes have a significant impact on consumer debt. (accepted)
2. Impulsivity has a significant influence on materialism. (accepted)
3. Self-esteem has no effect on materialism. (rejected)
4. Economic vulnerability negatively impacts materialism. (accepted)
5. Debt attitudes have a significant impact on materialism. (accepted)
6. Materialism mediates the effect of debt attitudes on consumer debt. (accepted)
7. Materialism influences consumer debt. (accepted)
8. Financial literacy moderates the influence of debt attitudes on consumer debt. (accepted)

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