



# Credit Card Cue Effect: Debt-Related Thought as Mediating Variable of Credit Card Cues and Spending

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## ABSTRACT

This study aims to examine the relationship between credit card cues, credit card associations (especially debt-related thought), and spending behavior in Indonesia. The data were collected through an online survey with 400 respondents and analyzed using PLS-SEM. The result showed that credit card cue has significant positive correlation to debt-related thought. Debt-related thought has no significant correlation to spending. Credit card cue has significant positive correlation to spending. Debt-related thought is not able to moderate credit card cues on spending which refers to direct only mediation.

## INTRODUCTION

Indonesia has seen a substantial presence of credit card usage, particularly in urban areas, with approximately 16.51 million credit cards in circulation and transactions totaling 277.05 million Rupiah in 2021 (Credit Card Payments in Indonesia - Xendit, n.d.; Indonesia: Credit Card Transaction Volume 2021 | Statista, n.d.). Additionally, the usage associated with credit cards has been on a consistent upward trajectory, evidenced by a surge in credit card transactions to approximately Rp 323.6 trillion in 2022 (Kapron, 2023).

However, COVID-19 pandemic disrupted economic activity, leading to a decline in credit card usage in Indonesia while digital wallets and digital banking gained prominence as preferred payment methods (2C2P | Popular Payment Methods in Indonesia: What Consumers Want, n.d.). The volume of credit card transactions underwent a decline from 340.25 million transactions in 2019 to 268.21 million transactions in 2020 (Indonesia: Credit Card Transaction Volume 2021 | Statista, n.d.). Post the COVID-19 crisis in 2020, there was a 3% reduction in credit card usage (Credit Card Payments in Indonesia - Xendit, n.d.).

In response to the economic challenges posed by the COVID-19 pandemic, the Indonesian government has implemented a series of measures to support the national economic recovery. With a focus on stimulating GDP, one of the targeted areas is personal spending, particularly in

the aspects of credit card expenditures. As part of efforts to boost credit card spending, Bank Indonesia implemented a reduction in the maximum credit card interest rate from 2% to 1.75% per month, commencing in July 2021 (BI Beri Kelonggaran, Pengguna Kartu Kredit Wajib Tahu, n.d.). The outcome of these programs is an increase in the number of credit card transactions to 277.05 million compared to the previous year's 268.21 million. However, the transaction volume remains below pre-COVID-19 levels.

To augment credit card usage, understanding consumer behavior is crucial. Exploring prior research that indicates credit card cues significantly influence spending tendencies (Feinberg, 1986; Wong & Lynn, 2020), this study aims to delve into the relationship between credit card cues, credit card associations (especially debt-related thought), and spending. This study will explore the mediation effect of debt-related thought on credit card cue and spending.

## LITERATURE REVIEW

### Credit Card Cues

Credit card cues are omnipresent in contemporary society, encompassing visual stimuli like store signs bearing credit card logos denoting acceptable payment methods, the act of utilizing a credit card for transactions, and various credit card advertisements (Wong & Lynn, 2020). These cues evoke the credit card concept and associated interconnected ideas in consumers' subconscious, influencing their perceptions, thoughts, and subsequent behaviors (Bargh & Chartrand, 2000). Previous research has highlighted that exposure to credit card cues leads to diverse outcomes, including increased spending per visit at department stores (Hirschman, 1979), an elevated perception of higher monetary value associated with products (Feinberg, 1986; Shimp & Moody, 2000), a heightened willingness to pay (Prelec & Simester, 2001), increased attention towards product benefits (Chatterjee & Rose, 2012), and an increased readiness to wait for larger yet delayed rewards (Duclos & Khamitov, 2019).

### Credit Card Association

Kamleitner & Erki (2013) discovered that cultural differences can influence the associations and significance attributed to credit cards, impacting the perceived ownership of purchased products. Previous research has consistently identified spending and debt as the most prevalent associations connected with credit cards in consumers' perceptions (Bernthal et al., 2005; Lie et al., 2010; Manning, 2000; McCall & Belmont, 1996; Norvilitis, 2014). Feinberg (1990) elaborates that credit card associations depend on the prevailing economic, social, and historical contexts. During periods of economic affluence, credit cards may be perceived as convenient tools facilitating easier access to goods, fostering positive associations. Conversely, in economic downturns, credit cards might be associated with challenges in repayment, resulting in negative associations. Such negative associations can inhibit spending, whereas positive conditioning can lead to increased spending. Feinberg (1986) also observed that individuals with positive credit card histories tend to have positive associations, exhibiting a positive credit card cue effect, while those with negative credit card histories display negative associations and a corresponding credit card cue effect.

### Spending

Andriani & Nugraha (2018) highlighted that individuals' habitual spending patterns can lead to consumptive behavior and difficulties in managing their finances. The ramifications of poor decisions regarding savings and spending might not immediately manifest but can significantly impact long-term financial stability (Hung et al., 2009). According to Cummins et al. (2009), spending habits can be characterized by three fundamental indicators: planning, saving, and the acquisition of essential goods. The planning concept encompasses an individual's approach to managing their expenditures. The savings concept refers to whether an individual

has a savings plan or not. The purchasing of essential goods concept pertains to the habitual procurement of necessities.

### **Hypothesis development**

#### **a. Credit Card Cue and Debt-Related Thought**

In today's consumer-driven society, individuals are constantly exposed to visual cues associated with credit cards, such as logos and branding. This exposure occurs through various channels, including store signage, personal usage during transactions, and targeted advertisements. These cues trigger the activation of the credit card concept in consumers' minds, leading to the unconscious spread of activation to related concepts. This phenomenon influences subsequent perceptions, thoughts, and behaviors, including credit card associations (Bargh & Chartrand, 2000; Wong & Lynn, 2020). Repetitive exposure to credit card stimuli, through associative conditioning (Feinberg, 1990), strengthens these associations. The most prevalent credit card associations in consumers' minds revolve around spending-related and debt-related thoughts (Bernthal et al., 2005; Lie et al., 2010; Manning, 2000; Mccall & Belmont, 1996; Norvilitis, 2014). Debt-related thoughts arise from the challenges associated with debt repayment, as identified by Lie et al. (2010). Building on existing research, this study proposes the following hypothesis: Credit card cues positively influence debt-related thoughts (H1).

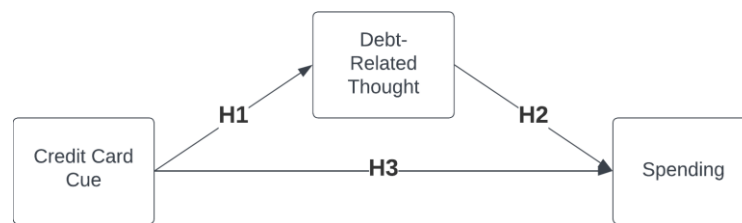
#### **b. Debt-Related Thought and Spending**

Expanding on Feinberg's (1990) work on associative conditioning and the credit card effect, Lie et al. (2010) propose that the influence of credit card cues on spending behavior is contingent upon an individual's pre-existing associations with credit card stimuli. The experiences of an individual, shaped by prevailing social and economic conditions, can determine the nature of these associations. In times of economic downturn, credit cards may become linked with struggles in repaying debt, leading to negative associations through conditioning. These credit card associations, acting as stimuli, can either restrain or encourage spending behavior. Based on previous research, this study proposes the following hypotheses: Debt-related thoughts negatively influence spending behavior (H2).

#### **c. Credit Card Cue and Spending**

Various studies has demonstrated that exposure to credit card cues result in increased consumer spending (Feinberg, 1986; Mccall & Belmont, 1996; Raghbir & Srivastava, 2008). The mere act of using credit cards to make purchases, rather than paying with cash, has been shown to lead to higher expenditures for identical goods (Soman, 2001). Mccall & Belmont (1996) explained that this effect arises from the repeated association of credit card stimuli with the products and services that are typically acquired using credit cards. As a result, spending may manifest as a conditioned response to credit card cues. Consistent with this result, Gan et al. (2016) and Lin et al. (2019) observed that consumers tend to exhibit higher spending behavior when their credit limits are increased. Furthermore, evidence suggests that individuals who heavily rely on credit cards are more prone to overspending compared to those who do not use credit cards (Tokunaga, 1993). Considering the established body of research, this study proposes the following hypothesis: Credit card cues positively influence spending behavior (H3).

The conceptual framework, derived from previous literature, is illustrated in Figure 1 below.

**Figure 1 Conceptual framework**

## METHODS

The data collection process involves the distribution of online questionnaires designed with a quantitative approach. Following the acquisition of the data samples, the subsequent step is data processing. During this stage, any missing values will be eliminated. Subsequently, PLS-SEM will be employed to test the hypotheses.

The study's population comprises Indonesian citizens residing in Indonesia who are over 17 years old. The research employs the Slovin formula (Mweshi & Sakyi, 2020) to determine the appropriate sample size (n) from the given population (N). Solvin formula is as follows:

$$n = \frac{N}{1 + Ne^2}$$

Description:

n = Sample Size

N = Population Size

e = Error Tolerance

The estimated population size for this study comprises approximately 242 million Indonesian citizens aged over 17 years old in 2023 (Indonesia | Demographic Changes, 2022). Using the Slovin Formula, the required sample size for this research is calculated to be 399.99, rounded up to 400 observations, with a 95% significance level.

The independent variable in this study is credit card cues (CCC). This variable is measured by showing participants credit card or cash stimuli at random (Wong & Lynn, 2020). The mediating variable in this study is Credit Card Association especially debt-related thought (DRT). This variable is measured by asking respondents to articulate their thoughts after shown credit card or cash stimuli then the debt-related thought is calculated as a ratio compared to overall thought (Wong & Lynn, 2020). The dependent variable which is spending is measured by requesting respondents to specify the amount they are willing to pay for ten different products. Data is gathered by distributing online questionnaires through Google Forms and online paid surveys.

Partial Least Square Structural Equation Modeling (PLS-SEM) is grounded in ordinary least squares (OLS) regression but holds less rigid assumptions regarding data distribution (Hair et al., 2021). As emphasized by Hair et al. (2019), PLS-SEM is adaptable to various sample sizes and is well-suited for both simple and complex models featuring a limited or extensive number of latent variables, indicators, and interactions. Conducting PLS-SEM involves two primary steps: the measurement model and the structural model. The measurement model emphasizes the relationship between latent variables and their respective indicators, while the structural model delves into the connections among latent variables (Henseler et al., 2009).

## RESULTS

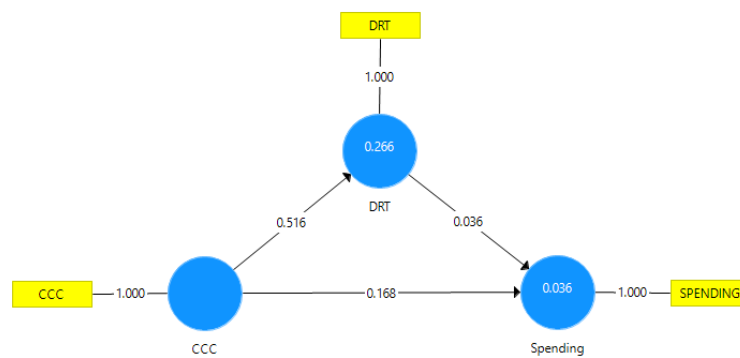
### Measurement Model Analysis

In the assessment, the study evaluates the convergent and discriminant validity of each variable. Convergent validity is analyzed by examining the Outer Loading and Average Variance Extracted (AVE). Meanwhile, to assess discriminant validity, the research employs the Heterotrait-Monotrait Ratio (HTMT). Then reliability and goodness of fit test is carried out.

**Outer Loadings**

According to Hair et al. (1998), an indicator's outer loading, which represents the strength of its correlation with the latent construct it measures, is considered valid if it exceeds the threshold of 0.5. As seen in Figure 2, the outer loadings in this research model exceed 0.5.

**Figure 2 Outer Loadings of Research Model**



**Average Variance Extracted (AVE)**

To establish convergent validity, Hair et al. (1998) recommends that the AVE for each item should exceed 0.5. In Table 1, the AVE values revealed that all variables surpassed the specified threshold. As a result, the study has successfully established convergent validity for all latent variables. The AVE of each item meets the standard and is shown in Table 1.

**Table 1 Average Variance Extracted (AVE) of Model**

No.	Variables	AVE	Result
1	CCC	1.000	Valid
2	DRT	1.000	Valid
3	Spending	1.000	Valid

**Heterotrait-Monotrait Ratio (HTMT)**

Discriminant validity, as defined by Hair et al. (2021), refers to the extent to which a construct is empirically distinct from other constructs within a model. To establish discriminant validity, a construct must possess the ability to capture unique phenomena that are not accounted for by other constructs in the model. Henseler et al. (2015) proposed the HTMT ratio of correlations as a superior measure for assessing discriminant validity compared to other methods. An HTMT value below 0.9 is considered acceptable for discriminant validity, while a value exceeding 0.9 indicates an indiscriminate variable. The HTMT of the model meets the specified standard as shown in Table 2.

**Table 2 Heterotrait-Monotrait Ratio (HTMT) of Model**

	CCC	DRT	Spending
CCC			
DRT	0.516		
Spending	0.187	0.123	

#### a. Reliability Test

The assessment of the model's reliability meets the minimum acceptable standards. Cronbach's alpha values between 0.42 and 0.60 indicate moderate reliability, while values ranging from 0.61 to 0.80 are considered reliable, and values between 0.81 and 1.0 represent high reliability (Dahlan, 2014). Furthermore, when the composite reliability surpasses 0.7, as defined by Nunnally (1967), the items are deemed reliable. The reliability test result of the model is shown in Table 3.

**Table 3 Reliability Test of Model**

Variables	Cronbach's Alpha	Composite Reliability	Results
CCC	1.000	1.000	Reliable
DRT	1.000	1.000	Reliable
Spending	1.000	1.000	Reliable

#### Goodness of Fit

The Standardized Root Mean Square Residual (SRMR) and the Normal Fit Index (NFI) are employed as fit criteria to assess the adequacy of the model. A well-fitted model is characterized by an SRMR value of less than 0.10 or 0.08, as suggested by Hu and Bentler (1999). Moreover, the Normal Fit Index (NFI), which ranges from 0 to 1, indicates a better fit as its value approaches 1. The goodness of fit of the model meets the specified standard as shown in Table 4.

**Table 4 Goodness of Fit of Model**

	Estimated Model	Result
SRMR	0.000	Model Fit
NFI	1.000	Model Fit

#### Structural Model Analysis

The measurement model analysis demonstrated that all variables met the established criteria for validity and reliability. Next is the structural model analysis, where the path coefficients, t-values, and p-values were examined. This procedure enabled the evaluation of the significance of the relationships between the independent variables and the dependent variable. Basic bootstrapping with 500 subsamples, a two-tailed test, and a 99% significance level were employed to statistically determine the significance of the relationships between the variables. To establish statistical significance, the t-statistics value must exceed 1.645. The direct effect and indirect effect path coefficients are shown in Table 5 and Table 6 respectively.

**Table 5 Direct Effect Path Coefficient of Model**

Direct Effects	Original Sample (O)	T Statistics	P Value
CCC -> DRT	0.516	16.029	0.000
DRT -> Spending	0.036	0.491	0.624
CCC -> Spending	0.168	2.904	0.004

**Table 6 Indirect Effect Path Coefficient of Model**

Specific Indirect Effect	Original Sample	T-Statistics	P-Value
CCC -> PFWB -> Spending	0.019	0.483	0.629

## **DISCUSSION**

### **Credit Card Cue and Debt-Related Thought**

The proposed hypothesis, credit card cues positively influence debt related thought is supported by the result of the structural model analysis. The path coefficient between credit card cues and debt-related thought is 0.516, accompanied by a statistically significant p-value of 0.000, indicating a positive correlation. Thus, Hypothesis 1 is supported. A plausible explanation for this outcome lies in the activation of pre-existing credit card associations upon exposure to credit card cues. The formation of credit card associations occurs through the process of associative conditioning, shaped by social, economic, and historical contexts (Feinberg, 1990; Lie et al., 2010). These associations can be established through various means, including social interactions, media exposure, personal experiences, and credit card usage. The pervasiveness of credit card stimuli in the modern environment and the growing popularity of credit cards as alternative payment methods over the past few decades have contributed to the strengthening of credit card associations through associative conditioning (Manning, 2000; Wang & Wolman, 2018). Credit card associations related to debt may arise from the challenges associated with debt repayment (Lie et al., 2010).

### **Debt-Related Thought and Spending**

The proposed hypotheses, debt-related thoughts has negative influence of on spending were not supported by the structural model analysis. The path coefficient between debt-related thoughts and spending was 0.036 with a p-value of 0.624, suggesting no significant correlation. Thus, Hypothesis 2 is not supported. These findings imply that an individual's thoughts about spending and debt may not directly translate into spending behavior. This observation aligns with the findings that spending can be influenced by a multitude of factors beyond mere thought. Tjondro et al. (2023) suggest that compulsive behavior can play a significant role in determining spending habits. Despite possessing knowledge and associations related to credit cards, individuals may make spending decisions based on ingrained habits rather than solely on conscious contemplation of spending and debt implications. Altman (2012) further supports this idea by highlighting the influence of systematic anomalies, cognitive biases, and irrational heuristics in various economic decision-making contexts, including spending choices.

### **Credit Card Cue and Spending**

The proposed hypothesis, credit card cues positively influence spending is supported by the result of the structural model analysis. The path coefficient for the first model is 0.168, accompanied by a statistically significant p-value of 0.004, indicating a positive correlation between credit card cues and spending. Thus, Hypothesis 3 is supported. These findings align with the previous literature on credit card cues and their effect to stimulate spending behavior (Feinberg, 1986; Mccall & Belmont, 1996; J. J. Xiao et al., 2009). Feinberg (1986) explained that repeated exposure to credit card stimuli during transactions fosters associations between credit cards and spending. Credit cards, by enabling deferred payments, introduce a temporal gap between the decision to purchase and the actual payment, which in turn contributes to increased spending driven by credit card cues (Prelec & Loewenstein, 1998).

### **Debt-Related Thought Mediation effect**

The indirect path coefficient of credit card cue, debt-related thoughts, and spending was 0.019 with a p-value of 0.629, suggesting no significant correlation. The direct influence of credit card cue on spending is significant but its indirect effect on spending is not significant. It is referred as direct-only nonmediation (Zhao et al., 2010). Debt-related thought does not mediate the relationship between credit card cues and spending. This means that credit card cues directly influence spending behavior without going through debt-related thoughts. One possible explanation for this finding is that debt-related thoughts may not enough to directly influence

spending. Spending can be influenced by various factors beyond mere such as compulsive behavior, systematic anomalies, cognitive biases, and irrational (Tjondro et al., 2023; Altman, 2012). Another possibility is that debt-related thoughts may only influence spending behavior under certain conditions such as when individuals feeling stressed or anxious about their finances.

## CONCLUSION

Based on the above analysis, it can be concluded that: Credit card cue has significant positive correlation on debt-related thought. This means that credit card cue increase debt-related thought. Debt-related thought has no significant correlation on spending. Credit card cue has significant positive correlation on spending. Debt-related thought is not able to moderate credit card cues on spending which referred as direct-only nonmediation.

## Suggestion

It is important to acknowledge certain limitations that may influence the generalizability and applicability of the findings. First, the study's focus on Indonesia alone and may not be generalizable to other countries with distinct economic, social, and cultural contexts. Differences in these factors could potentially impact the relationships between the variables examined in the study. Second, cross-sectional study design employed in this research may not adequately capture and assess behaviors under long-term conditions. Longitudinal studies, which track participants over an extended period, would provide a more comprehensive understanding of how these variables interact and influence spending patterns over time. Third, a broader range of variables should be considered in future research to provide a more holistic understanding variable that affect spending. Fourth, this study utilized data collected through an online survey, where self-reported spending may be different with real life purchase experiences.

## REFERENCES

- 2C2P | Popular Payment Methods in Indonesia: What Consumers Want. (n.d.). Retrieved June 30, 2023, from <https://2c2p.com/blog/indonesia-payment-methods>
- Altman, M. (2012). Implications of behavioural economics for financial literacy and public policy. *Journal of Socio-Economics*, 41(5), 677–690. <https://doi.org/10.1016/j.socec.2012.06.002>
- Andriani, D., & Nugraha, N. (2018). Spending habits and financial literacy based on gender on employees. *IOP Conference Series: Materials Science and Engineering*, 407(1). <https://doi.org/10.1088/1757-899X/407/1/012089>
- Bargh, J. A., & Chartrand, T. L. (2000). The mind in the middle: a practical guide to priming and automaticity research. In H. T. Reis & C. M. Judd (Eds.), *Handbook of Research Methods in Social and Personality Psychology* (pp. 253–285). Cambridge University Press.
- Berenthal, M. J., Crockett, D., & Rose, R. L. (2005). Scholar Commons Scholar Commons Faculty Publications Sports and Entertainment Management, Department of 6-2005 Credit Cards as Lifestyle Facilitators Credit Cards as Lifestyle Facilitators. In *The Journal of Consumer Research* (Vol. 32, Issue 1). <http://jcr.wisc.edu/>
- BI Beri Kelonggaran, Pengguna Kartu Kredit Wajib Tahu. (n.d.). Retrieved June 30, 2023, from <https://www.bi.go.id/id/publikasi/ruang-media/cerita-bi/Pages/BI-Beri-Kelonggaran-Pengguna-Kartu-Kredit-Wajib-Tahu.aspx>
- Chatterjee, P., & Rose, R. L. (2012). Do payment mechanisms change the way consumers perceive products? *Journal of Consumer Research*, 38(6), 1129–1139. <https://doi.org/10.1086/661730>
- Credit Card Payments in Indonesia - Xendit. (n.d.). Retrieved June 30, 2023, from <https://www.xendit.co/en/blog/credit-card-payments-in-indonesia/>



- Cummins, M., Haskel, J. H., & Susan, J. (2009). Financial Attitudes And Spending Habits Of University Fresmen. *Journal of Economics and Economi Education Research*, 10(1), 23–26.
- Dahlan, M. S. (2014). *Statistik untuk Kedokteran dan Kesehatan*, ed. 6. jakarta: Epidemiologi Indonesia (6th ed.). Epidemiologi Indonesia.
- Duclos, R., & Khamitov, M. (2019). Compared to Dematerialized Money, Cash Increases Impatience in Intertemporal Choice. *Journal of Consumer Psychology*, 29(3), 445–454. <https://doi.org/10.1002/jcpy.1098>
- Feinberg, R. A. (1986). Credit Cards as Spending Facilitating Stimuli: A Conditioning Interpretation. *Journal of Consumer Research*, 13, 348–356. <https://doi.org/10.1086/209074>
- Feinberg, R. A. (1990). The Social Nature of the Classical Conditioning Phenomena in People: A Comment on Hunt, Florsheim, Chatterjee, and Kernan. *Psychological Reports*, 67(1), 331–334. <https://doi.org/10.2466/pr0.1990.67.1.331>
- Gan, C. E. C., Cohen, D. A., Hu, B., Tran, M. C., Dong, W., & Wang, A. (2016). The relationship between credit card attributes and the demographic characteristics of card users in China. *International Journal of Bank Marketing*, 34(7), 966–984. <https://doi.org/10.1108/IJBM-09-2015-0133>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (1998). *Multivariate Data Analysis with Readings* (5th ed.). Prentice-Hall.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R*. Springer International Publishing. <https://doi.org/10.1007/978-3-030-80519-7>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. In *European Business Review* (Vol. 31, Issue 1, pp. 2–24). Emerald Group Publishing Ltd. <https://doi.org/10.1108/EBR-11-2018-0203>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. [https://doi.org/10.1108/S1474-7979\(2009\)0000020014](https://doi.org/10.1108/S1474-7979(2009)0000020014)
- Hirschman, E. C. (1979). Differences in Consumer Purchase Behavior by Credit Card Payment System Previous Assumptions Downloaded from. In © JOURNAL OF CONSUMER RESEARCH (Vol. 6). <http://jcr.oxfordjournals.org/>
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- Hung, A., Parker, A. M., & Yoong, J. (2009). Defining and Measuring Financial Literacy. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1498674>
- Indonesia | Demographic Changes. (2022). Economic and Social Comission for Asia and the Pacific (ESCAP). <https://www.population-trends-asiapacific.org/data/IDN>
- Indonesia: credit card transaction volume 2021 | Statista. (n.d.). Retrieved June 30, 2023, from <https://www.statista.com/statistics/1254968/indonesia-credit-card-transaction-volume/>
- Kamleitner, B., & Erki, B. (2013). Payment method and perceptions of ownership. *Marketing Letters*, 24(1), 57–69. <https://doi.org/10.1007/s11002-012-9203-4>
- Kapron, Z. (2023, August 1). Why Indonesia's Credit Card Market Is Poised For Growth. *Forbes*. <https://www.forbes.com/sites/zennonkapron/2023/08/01/why-indonesias-credit-card-market-is-poised-for-growth/?sh=507de7db1340>
- Lie, C., Hunt, M., Peters, H. L., Veliu, B., & Harper, D. (2010). The “Negative” Credit Card effect: Credit Cards as spending-Limiting stimuli in New Zealand. In *The Psychological Record* (Vol. 60).

- Lin, L., Revindo, M. D., Gan, C., & Cohen, D. A. (2019). Determinants of credit card spending and debt of Chinese consumers. *International Journal of Bank Marketing*, 37(2), 545–564. <https://doi.org/10.1108/IJBM-01-2018-0010>
- Manning, R. D. (2000). *Credit card nation: the consequences of America's addiction to credit*. Basic Books. <https://cir.nii.ac.jp/crid/1130282271220711808>
- Mccall, M., & Belmont, H. J. (1996). Credit Card Insignia and Restaurant Tipping: Evidence for an Associative Link. In *Journal of Applied Psychology* (Vol. 81, Issue 5).
- Mweshi, G. K., & Sakyi, K. (2020). Application of sampling methods for the research design. *Archives of Business Research*, 8(11), 180–193. <https://doi.org/10.14738/abr.811.9042>
- Norvilitis, J. M. (2014). Changes over Time in College Student Credit Card Attitudes and Debt: Evidence from One Campus. *Journal of Consumer Affairs*, 48(3), 634–647. <https://doi.org/10.1111/joca.12043>
- Nunnally, J. C. (1967). Assessment of reliability. *Psychometric Theory*, 206–235.
- Prelec, D., & Loewenstein, G. (1998). The red and the black: Mental accounting of savings and debt. *Marketing Science*, 17(1), 4–28. <https://doi.org/10.1287/mksc.17.1.4>
- Prelec, D., & Simester, D. (2001). Always Leave Home Without It: A Further Investigation of the Credit-Card Effect on Willingness to Pay. In *Marketing Letters* (Vol. 12).
- Soman, D. (2001). Effects of Payment Mechanism on Spending Behavior: The Role of Rehearsal and Immediacy of Payments. In *JOURNAL OF CONSUMER RESEARCH*, Inc. • (Vol. 27).
- Tjondro, E., Hatane, S. E., Widuri, R., & Tarigan, J. (2023). Rational versus Irrational Behavior of Indonesian Cryptocurrency Owners in Making Investment Decision. *Risks*, 11(1). <https://doi.org/10.3390/risks11010017>
- Tokunaga, H. (1993). The use and abuse of consumer credit: Application of psychological theory and research. In *Journal of Economic Psychology* (Vol. 14).
- Wong, K. Y., & Lynn, M. (2020). Credit card cue effect: How mere exposure to credit card cues promotes consumers' perceived financial well-being and spending. *International Journal of Bank Marketing*, 38(2), 368–383. <https://doi.org/10.1108/IJBM-01-2019-0010>
- Xiao, J. J., Tang, C., & Shim, S. (2009). Acting for happiness: Financial behavior and life satisfaction of college students. *Social Indicators Research*, 92(1), 53–68. <https://doi.org/10.1007/s11205-008-9288-6>
- Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, 37(2), 197–206. <https://doi.org/10.1086/651257>