

Not All Debts Are Created Equal: Sensitivity to Debt Type Predicts Financial Health

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Abstract

Financial decisions have important consequences for overall well-being; consequently, recent research in psychology has aimed to understand how people think about debt. Yet, existing work has largely failed to examine how attitudes and behaviors systematically vary as a function of debt type. We demonstrate not only that there are individual differences in attitudes toward high-interest (e.g., payday loans) and low-interest (e.g., car loans) forms of debt, but also that the extent to which an individual finds high-interest debts more aversive than low-interest debts predicts financial health. This relationship cannot be explained by financial literacy, numeracy, or intertemporal discounting. This research is the first to identify sensitivity to debt type as an individual difference important for financial decision making.

Keywords: debt, judgment, well-being, financial health, financial literacy

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Eighty-percent of Americans are debt holders, collectively owing nearly \$13 trillion (Federal Reserve Bank of New York, 2017; Pew Charitable Trusts, 2014). Yet, not all debtors are in dire financial straits. Notably, there are many kinds of debt, ranging from mortgages that are actively subsidized by the government to high-cost payday loans that are banned in 18 states. Recent research by psychologists has begun to explore how people think about debt (e.g., Brown, Taylor, & Price, 2005; Hershfield et al., 2015; Stewart, 2009; Sussman & Shafir, 2012). However, this work has focused on general attitudes toward debt, neglecting potential differences in attitudes toward various forms of debt. In the present paper, we ask whether these differences exist, and if so, whether they matter. Given the financial burden that excessive, high-cost debt places on so many Americans—but also the opportunities that debt can facilitate (e.g., education)—it is imperative to understand the relationship between attitudes toward specific debt types and overall financial well-being. Accordingly, we investigate an unexplored individual difference—sensitivity to debt type—and how it relates to financial health.

The relationship between debt attitudes and financial health could take several possible forms. Having a general debt-averse attitude—while failing to discriminate across debt types—could indicate financial prudence. This blanket caution could help people avoid financial pitfalls and could signal broader financial health. Alternatively, the relationship could be the opposite: a general debt-seeking attitude (irrespective of type) may indicate a willingness to take on financial risks that allow for increased opportunities. However, attending to differences across debt types allows for a third possibility: greater sensitivity to debt type could be associated with a tendency to maximize value across opportunities, allowing people to take advantage of risks while avoiding pitfalls in ways that promote broader financial health.

Debt Attitudes and Behaviors

Prior research has found evidence of debt aversion, but also finds high levels of debt take-up in many circumstances. Researchers have documented debt-averse behavior in laboratory and field settings (Burdman, 2005; Callender & Jackson, 2005; Meissner, 2016; Prelec & Loewenstein, 1998). For example, people sometimes prepay their mortgages to avoid holding debt, even when prepayment is suboptimal (Amromin, Huang, & Sialm, 2007). Holding debt can significantly reduce perceptions of one's own wealth (Sussman & Shafir, 2011) and lead to emotional distress (Brown et al., 2005). Other work has aimed to understand why—despite the prevalence of debt aversion—debt levels are so high, finding that debt may simply be necessary to finance essential expenses (Lea, Webley, & Walker, 1995), is difficult to repay (Hershfield & Roese, 2015; Stewart, 2009), and is at times less psychologically painful to take on compared to using cash (e.g., Morewedge, Holtzman, & Epley, 2007; Prelec & Simester, 2001; Soman, 2001).

Despite this work directed toward understanding debt attitudes, there is scant literature on how people differentiate between various forms of debt.¹ In the current research, we examine attitudes toward different types of debt and ask whether an individual's propensity to distinguish between debt types corresponds to overall financial health. Across three studies—including a nationally representative sample—we find that differences in sensitivity to debt type play a unique role in predicting financial health, even beyond other related factors.

Study 1

Study 1 takes an exploratory approach, examining whether and how attitudes toward debt

¹ However, some theoretical work has distinguished between the uses of different types of debts (e.g., Peñaloza & Barnhart, 2011; Prelec & Loewenstein 1998).

differ across types of debt.

Method

Participants. Using Qualtrics Panels, we recruited a sample representative of the national distribution of Americans with respect to sex, age, and income. All participants first responded to demographic questions. To minimize careless responding, participants were given an attention check in which they were asked how many children they claimed as dependents for tax purposes and were told to respond with the number 19. If potential participants were under 18, not English speakers, failed the attention filter, or fell outside the quotas necessary to ensure a representative sample, they were not permitted to continue the survey. The participants ($N = 527$; 51.6% female, 48.4% male; $M_{\text{age}} = 46.1$, $SD = 16.5$) we analyze are those who passed this initial screening procedure. Target sample size (500) was selected to be sufficiently large (10 times the minimum recommended per cell; Simmons, Nelson, & Simonsohn, 2013) to identify relationships (if they were present), and was determined and pre-registered before data collection began. An additional 27 respondents were recruited by Qualtrics to fill quotas necessary to ensure a representative sample.

Materials and Procedure. Participants were asked to indicate their sex, age, and income to ensure the quotas necessary for a representative sample. If they passed these filters, they answered three questions about their general debt attitudes (general comfort with debt, 1: *not at all comfortable* to 7: *very comfortable*; perception that debt is bad, 1: *not at all bad* to 7: *very bad*; agreement with the statement that debt is sometimes necessary, *agree/disagree*).

We next assessed participants' attitudes toward eight specific types of debt (personal loans, mortgages, credit cards, car loans, checking lines of credit, layaway plans, student loans, payday loans). We assessed debt-specific attitudes using five constructs. Participants first rated

how comfortable they were (1: *not at all comfortable* to 7: *very comfortable*; “comfort”) with each type of debt on a 7-point scale. They then rated how much people would judge them for having (1: *little or not at all* to 7: *very much*; “feeling judged”), how financially wise they think it would be to have (1: *not at all wise financially* to 7: *extremely wise financially*; “financially wise”), and how important it would be to quickly repay (1: *not at all important* to 7: *extremely important*; “fast repayment”) each type of debt. Participants could also indicate that they did not know what the particular debt type was. Finally, “stigma” associated with each debt was assessed using a 5-item measure (e.g., “I would feel exposed if others found out I had...”; Fortenberry et al., 2002).

Participants then answered questions about their general debt behaviors (e.g., “Without exception, I always make loan payments on time”), which types of debts they had held before, and which types of debt were familiar to them.

Finally, participants completed exploratory questions measuring a variety of individual differences (intertemporal discounting, risk preferences, present/future orientation, tightwad-spendthrift scale, 10-item personality scale, optimism scale) before reporting detailed financial and demographic information. The complete list of questions included in Study 1 (as well as in all subsequent studies) can be found in the Supplemental Material.

Results

We pre-registered a classification of the eight debt types into three groups on the basis of typical annual percentage rates in the market: high-interest (payday loans, layaway plans), low-interest (mortgages, student loans, car loans), or mixed (personal loans, credit cards, checking lines of credit). Although there are many ways to classify types of debt, and these debts differ on several dimensions, we refer to high-interest and low-interest debts for simplicity. Mixed debts

were included for exploratory purposes. Since we do not find systematic patterns involving these debts, we do not discuss them further.

Because we are interested in how attitudes toward high-interest and low-interest rate debts differ, we first created composite measures of attitudes toward high-interest and low-interest debts. These were created for each type of attitude measured. The “comfort” and “financially wise” items were reversed-coded (these are henceforth referred to as “discomfort” and “financially unwise”) so that all five constructs were capturing negative attitudes toward the debts. For each of the five constructs, we computed two averages: one measuring the attitudes toward the high-interest debts and another measuring attitudes toward low-interest debts. For example, “discomfort” with low-interest debts took the average of a participant’s discomfort with mortgages, student loans, and car loans. This procedure yielded measures capturing attitudes assessed by each of the five constructs, both for high-interest and low-interest types of debt. We thus had ten measures in total: across low-interest debt types, we calculated overall 1) discomfort, 2) how financially unwise the debts were, 3) feelings of being judged, 4) how fast the debts should be repaid, and 5) stigma; similarly, across high-interest debt types, we calculated overall 6) discomfort, 7) how financial unwise the debts were, 8) feelings of being judged, 9) how fast the debts should be repaid, and 10) stigma.

Although we had pre-registered that we would average the five constructs into a single composite attitudes measure for high-interest debts and a single composite attitudes measure for low-interest debts, scale reliability across the five attitude constructs was low for both high-interest debts ($\alpha = .50$) and low-interest debts ($\alpha = .28$). As a result, to see which of the five constructs were related to one another, the constructs were submitted to principal components factor analyses (varimax rotation). Specifically, we conducted two factor analyses; one included

the five measures of the average attitudes toward high-interest debts, while the other included those same measures of the average attitudes toward low-interest debts. The rotated solutions for the high-interest debts and low-interest debts each yielded one factor with eigenvalues greater than 1 that explained 84% and 73% of the variance, respectively. For both high-interest debts and low-interest debts, two constructs (discomfort and financially unwise) loaded on to the single factor in their respective analyses. Thus, instead of averaging across all five constructs that did not reliably hang together, across all studies, we average across only these two constructs to create composite measures of attitudes toward high-interest debts ($\alpha = .80$) and attitudes toward low-interest debts ($\alpha = .75$). Since 45 participants indicated they did not know one of the 5 debt types when answering questions related to these two constructs, 482 participants remained for subsequent analyses.

Next, we ask whether participants distinguished between the different types of debt (namely, high-interest and low-interest types of debt), or if they instead showed evidence of general debt aversion (i.e., not discerning high-interest and low-interest forms of debt). A Wilcoxon signed-ranks test indicated that participants were more averse to high-interest debts ($Mdn = 4.50$) than they were to low-interest debts ($Mdn = 3.58$), $Z = -11.96$, $p < .001$. Given that the debt attitudes were assessed using 7-point scales, this finding suggests that while the median individual is relatively neutral about low-interest debts, she is averse to high-interest debts. Similar results are obtained if we do not combine the discomfort and financially unwise constructs (both $ps < .001$) or if we instead use the three constructs that did not load on to the same factor as discomfort and financially unwise (all $ps < .001$). We do not identify clear patterns for the other, exploratory, variables collected. For correlations between the exploratory psychological constructs and attitudes toward high-interest and low-interest debt types, see Table

S1 in the Supplemental Material available online.

Study 2

Study 1 found that, in aggregate, people are differentially sensitive to high-interest and low-interest debt types. Study 2 asks whether individual-level sensitivity matters. We examine whether sensitivity to debt type is predictive of financial health, beyond other relevant factors.

Method

Participants. A sample of adults was recruited via Mechanical Turk ($N = 1002$; 48.6% female, 51.1% male, .3% non-binary; $M_{\text{age}} = 36.1$, $SD = 11.4$). Participants were paid \$2 for completing the survey. Target sample size (1000) was chosen to be double that of Study 1 and determined before data collection began. Based on duplicate IP addresses, 16 responses were dropped.

Materials and Procedure. The materials and procedure in Study 2 were similar to those used in Study 1. We first assessed debt-specific attitudes using the same five constructs included and discussed in Study 1. However, in contrast to Study 1, participants in Study 2 did not answer general debt questions or respond to a battery of questions about individual differences. Instead, after assessing their debt-specific attitudes, participants in this study were asked to indicate their emotional responses toward each type of debt, indicating the extent to which they would feel distressed, enthusiastic, upset, and proud on 5-point scales (1: *very slightly or not at all* to 5: *extremely*). These were selected to represent two positive and two negative emotions. Participants also answered questions about intertemporal discounting (included in Study 1), a shortened financial literacy scale (Fernandes, Lynch, & Netemeyer, 2014), and a numeracy scale (Weller et al., 2013).

Next, to assess financial health, we included a question that measures the ability to come

up with funds quickly: “How confident are you that you could come up with \$2,000 if an unexpected need arose within the next month?” (Lusardi, Schneider, & Tufano, 2011). Possible responses included “I am certain I could come up with the full \$2,000,” “I could probably come up with \$2,000,” “I could probably not come up with \$2,000,” or “I am certain I could not come up with \$2,000,” which were coded as 4, 3, 2, and 1, respectively. Participants could also refuse to answer or indicate that they did not know; these were excluded from analyses involving financial health. Finally, all participants reported detailed financial and demographic information.

Results

Because 47 participants indicated they did not know one of the 5 debt types when answering questions related to these two constructs, 939 participants remained for subsequent analyses. As in Study 1, the two constructs “discomfort” and “financially unwise” were averaged to create composite measures of aversion to high-interest debts ($\alpha = .69$) and aversion to low-interest debts ($\alpha = .65$). As in Study 1, participants were more averse to high-interest debts ($Mdn = 5.25$) than they were to low-interest debts ($Mdn = 3.83$), $Z = -21.10$, $p < .001$.

To examine whether sensitivity to debt type predicted financial health, we regressed the financial health measure on the difference between aversion to high-interest and low-interest debts. As shown in Table 1, greater differences between aversion to high-interest and low-interest debts predicted higher levels of financial health ($B = .195$, $SE = .025$, $t(920) = 7.69$, $p < .001$; model 1, Table 1). This relationship between the difference in aversion to high-interest and low-interest debts and financial health persisted even when controlling for income, age, and gender ($B = .120$, $SE = .025$, $t(900) = 4.84$, $p < .001$).

It is possible that sensitivity to debt type is picking up on differences in the positive

(enthusiastic, proud) or negative (distressed, upset) emotions that these types of debts differentially cause. Yet, the relationship between debt type sensitivity and greater financial health is robust when including the difference in the measured emotions from high-interest versus low-interest debt types, and also controlling for income, age, and gender ($B = .135$, $SE = .030$, $t(899) = 4.49$, $p < .001$; model 2, Table 1). Notably, this analysis is specific to the emotions measured and thus we cannot draw conclusions regarding other emotions.

| Variables | Model 1 | Model 2 | Model 3 | Model 4 |
|--------------------------------|-------------------|-------------------|-------------------|-------------------|
| Debt Type Sensitivity | 0.20*** (0.03) | 0.12*** (0.02) | 0.09** (0.03) | 0.09** (0.03) |
| Income (in thousands of \$) | | 0.01*** (0.00) | 0.01*** (0.00) | 0.01*** (0.00) |
| Age | | 0.01*** (0.00) | 0.01*** (0.00) | 0.01*** (0.00) |
| Female | | -0.19** (0.07) | -0.17* (0.07) | -0.16* (0.07) |
| Negative Emotion Differences | | | -0.02 (0.05) | -0.01 (0.05) |
| Intertemporal Discount Factor | | | 1.33*** (0.21) | 1.30*** (0.21) |
| Numeracy | | | 0.05 (0.03) | 0.05 (0.03) |
| Financial Literacy | | | 0.01 (0.06) | 0.01 (0.06) |
| # Experienced Debts (out of 5) | | | | -0.00 (0.00) |
| Constant | 2.51*** (0.05) | 1.64*** (0.13) | 0.51* (0.22) | 0.54* (0.22) |
| Observations | 922 | 905 | 887 | 887 |
| R-squared | 0.06 | 0.18 | 0.24 | 0.24 |

Table 1. Study 2 regression results. DV = Ability to come up with funds quickly. Debt type sensitivity represents the difference between aversion to high-interest and low-interest debt types. Standard errors in parentheses. * $p < .05$, ** $p < .01$, *** $p < .001$

To examine other factors that may underlie the relationship between debt type sensitivity and financial health, we ran an additional regression including intertemporal discounting,

financial literacy, numeracy, income, age, gender, and the emotional difference between high-interest and low-interest debts (composite negative emotion—distressed, upset, proud, enthusiastic; latter two reverse-coded—for high-interest debt minus composite negative emotion for low-interest debt). We find the relationship robust to these measures ($B = .092$, $SE = .030$, $t(878) = 3.04$, $p = .002$; model 3, Table 1). Finally, to account for the possibility that experience with debt is responsible for differences in debt type sensitivity as well as financial health, we ran a final analysis including the number of high-interest and low-interest debt types experienced. This additional factor does not change the results ($B = .090$, $SE = .030$, $t(877) = 3.00$, $p = .003$; model 4, Table 1).

Study 3

Study 2 found that sensitivity to debt type was an important predictor of financial health, beyond other relevant factors. Study 3 aimed to replicate these findings, examine education as an alternative explanation, and test this relationship using an additional measure of financial health.

Method

Participants. A sample of adults was recruited via Mechanical Turk ($N = 1008$; 53.5% female, 45.5% male, 1.0% non-binary; $M_{\text{age}} = 36.3$, $SD = 11.7$). Participants were paid \$1 for completing the survey. Target sample size (1000) was chosen to be double that of Study 1 and determined before data collection began; it was also pre-registered. Based on duplicate IP addresses, 24 responses were dropped.

Materials and Procedure. The methods, analyses, and hypotheses for Study 3 were pre-registered, and the design was far shorter than that used in Study 2. In particular, instead of assessing participants' attitudes toward eight types of debt, we only assessed their attitudes toward the five debt types that were pre-registered as high-interest and low-interest debt types. In

addition, we assessed debt-specific aversion to the two high-interest and three low-interest debt types using only the comfort and financially wise measures examined in Studies 1 and 2. Unlike those in Study 2, participants in Study 3 did not indicate their emotional responses toward each type of debt.

In addition to measuring financial health via a measure of the ability to come up with funds quickly (Lusardi et al., 2011) as we did in Study 2, participants responded to a 10-item financial well-being scale which has been shown to be significantly correlated with financial satisfaction, credit score, and how economic shocks and material hardships are experienced (Consumer Financial Protection Bureau, 2015).

To determine the robustness of any potential relationship between differences in attitudes toward high-interest and low-interest debts and financial health, participants completed an intertemporal discounting task, the full financial literacy questionnaire (Fernandes et al., 2014), and a shortened numeracy scale (Weller et al., 2013). They also reported educational attainment, which was not included in Study 2.

Results

As pre-registered, the two constructs discomfort and financially unwise were averaged to create composite measures of aversion to high-interest debts ($\alpha = .78$) and aversion to low-interest debts ($\alpha = .74$). Because 37 participants indicated they did not know one of the 5 debt types when answering questions related to these two constructs, 947 participants remained for subsequent analyses. Like those in Studies 1 and 2, participants in Study 3 were more averse to high-interest debts ($Mdn = 5.25$) than they were to low-interest debts ($Mdn = 3.50$), $Z = -21.02$, $p < .001$.

As we found in Study 2, debt type sensitivity predicted higher levels of financial health as

measured by the ability to come up with funds quickly ($B = .240$, $SE = .021$, $t(933) = 11.51$, $p < .001$; model 1, Table 2). This relationship held when adding in controls for income, age, and sex ($B = .152$, $SE = .021$, $t(910) = 7.31$, $p < .001$; model 2, Table 2); college education, discounting, financial literacy, and numeracy ($B = .097$, $SE = .021$, $t(880) = 4.58$, $p < .001$; model 3, Table 2); and the number of high-interest and low-interest debt types experienced ($B = .100$, $SE = .021$, $t(879) = 4.72$, $p < .001$; model 4, Table 2).

| Variables | Model 1 | Model 2 | Model 3 | Model 4 |
|--------------------------------|-------------------|--------------------|--------------------|--------------------|
| Debt Type Sensitivity | 0.24*** (0.02) | 0.15*** (0.02) | 0.10*** (0.02) | 0.10*** (0.02) |
| Income (in thousands of \$) | | 0.01*** (0.00) | 0.01*** (0.00) | 0.01*** (0.0) |
| Age | | 0.01* (0.00) | 0.00 (0.00) | 0.01* (0.00) |
| Female | | -0.36*** (0.07) | -0.25*** (0.07) | -0.23** (0.07) |
| College Education | | | 0.18* (0.08) | 0.19* (0.08) |
| Intertemporal Discount Factor | | | 1.36*** (0.20) | 1.29*** (0.20) |
| Numeracy | | | 0.07* (0.03) | 0.06* (0.03) |
| Financial Literacy | | | 0.05* (0.02) | 0.05* (0.02) |
| # Experienced Debts (out of 5) | | | | -0.01*** (0.00) |
| Constant | 2.42*** (0.05) | 1.88*** (0.12) | 0.24 (0.21) | 0.36 (0.21) |
| Observations | 935 | 915 | 889 | 889 |
| R-squared | 0.12 | 0.26 | 0.33 | 0.34 |

Table 2. Study 3 regression results. DV = Ability to come up with funds quickly. Debt type sensitivity represents the difference between aversion to high-interest and low-interest debt types. Standard errors in parentheses. * $p < .05$, ** $p < .01$, *** $p < .001$

Similarly, when running the analysis using the 10-item Consumer Financial Protection Bureau measure as a dependent variable instead, we again found that greater differences between

aversion to high-interest and low-interest debt types predict greater financial health ($B = 2.293$, $SE = .242$, $t(945) = 9.48$, $p < .001$; model 1, Table 3). Table 3 reports full regression results. This relationship held when adding in controls for income, age, and sex ($B = 1.193$, $SE = .238$, $t(921) = 5.01$, $p < .001$; model 2, Table 3); college education, discounting, financial literacy, and numeracy ($B = 1.021$, $SE = .253$, $t(891) = 4.03$, $p < .001$; model 3, Table 3); and the number of high-interest and low-interest debt types experienced ($B = 1.037$, $SE = .253$, $t(890) = 4.10$, $p < .001$; model 4, Table 3).

| Variables | Model 1 | Model 2 | Model 3 | Model 4 |
|--------------------------------|--------------------|--------------------|--------------------|--------------------|
| Debt Type Sensitivity | 2.29*** (0.24) | 1.19*** (0.24) | 1.02*** (0.25) | 1.04*** (0.25) |
| Income (in thousands of \$) | | 0.15*** (0.01) | 0.14*** (0.01) | 0.15*** (0.01) |
| Age | | 0.03 (0.03) | 0.03 (0.04) | 0.05 (0.04) |
| Female | | -3.67*** (0.76) | -3.22*** (0.80) | -3.10*** (0.80) |
| College Education | | | 1.90* (0.92) | 2.04* (0.92) |
| Intertemporal Discount Factor | | | 6.94** (2.37) | 6.40** (2.39) |
| Numeracy | | | 0.19 (0.36) | 0.12 (0.36) |
| Financial Literacy | | | 0.04 (0.23) | 0.05 (0.23) |
| # Experienced Debts (out of 5) | | | | -0.09* (0.04) |
| Constant | 47.01*** (0.54) | 41.23*** (1.36) | 33.81*** (2.52) | 34.68*** (2.55) |
| Observations | 947 | 926 | 900 | 900 |
| R-squared | 0.09 | 0.26 | 0.27 | 0.28 |

Table 3. Study 3 regression results. DV = Consumer Financial Protection Bureau Financial Health Scale. Debt type sensitivity represents the difference between aversion to high-interest and low-interest debt types. Standard errors in parentheses. * $p < .05$, ** $p < .01$, *** $p < .001$

Discussion

Given the extent of financial fragility in the United States, understanding the antecedents of financial health is an important theoretical and practical endeavor. Across three studies, we demonstrate that people have different attitudes toward high-interest and low-interest debts, and that greater differences between these attitudes are predictive of financial health. Other relevant factors (e.g., income, education) do not explain this relationship. To date, attitudes towards debt have been treated in a general manner. The current research shows that not all debts are perceived the same way, and that the propensity to distinguish between debt types is an important and previously unexplored individual difference.

We examined the possibility that sensitivity to debt type is another instantiation of financial literacy, but we did not find support for this hypothesis. Rather than being a measure of what people know or have experienced, our measure instead combines feelings of comfort with holding different types of debt and perceptions of how wise taking on these debts would be. Similarly, we did not find that a person's patience (i.e., discount rate) or general numeric ability explains this relationship.

Future research should thus further explore the mechanisms driving the relationship between debt type sensitivity and financial health. For example, it is possible that a sense of cognitive flexibility underlies this link, allowing people to take situational context into account when making financial decisions. Alternatively, individual differences in mental accounting may lead some people to create more nuanced categories for financial resources. This could allow people, for example, to react differently to debt types that have different consequences for financial health.

Recent work by psychologists has explored how people make financial decisions and

think about debt. The present research furthers this growing body of literature by demonstrating a unique link between debt type sensitivity and financial well-being. It is our hope that psychologists and policymakers will be able to use these insights to help improve financial health.

Author Contributions

All authors developed the concept and designed the studies for this article. A.E. Greenberg conducted the data analyses. All authors wrote and approved the final version of the manuscript for submission.

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