Excessive Buying: Conceptual Typology and Scale Development

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MOTIVATION

Excessive buying is suggested to be responsible for increases in personal debt and the number of people filing for personal bankruptcy in the U.S. However, academic research on excessive buying is limited. The contributions of this paper are threefold. First, we propose a conceptual definition of excessive buying. Second, building on the “time-inconsistent preferences” and automaticity theory, we propose a typology of excessive buying that captures the complexity of its occurrence. Third, using the proposed typology, a psychometric scale to measure the different types of excessive buying is developed and validated.

DEFINITION OF EXCESSIVE BUYING

We define excessive buying as “an inappropriate individual type of buying behavior whereby consumers repeatedly spend more than what (they think) they can afford”. Two reasons lead us to define excessive buying as a perception-based construct. First, a perception-based definition rules out the influences of external factors (e.g., socioeconomic status) on consumers’ buying behavior. Second, in terms of measurement, a perception-based definition can be easily operationalized by a psychometric scale.

IDENTIFYING THE DIFFERENT TYPES OF EXCESSIVE BUYING

We propose that there are five different types of excessive buying: 1) aspirational, 2) rewarding, 3) remedial, 4) out-of-control, and 5) habitual excessive buying. Excessive buying can be a conscious or unconscious behavior. Based on the “time-inconsistent preferences” theory, conscious excessive buying behaviors is conceptualized as a result of either strong desires or self-control failures. Bargh’s automaticity theory explains why excessive buying might also be a result of unconscious mental processes.

The first three types of excessive buying are motivated by strong desires. Hoch and Loewenstein (1991) imply that a consumer’s desire for owning an object is a summation of: 1) the satisfaction the consumer derives from owning the object and, 2) the deprivation a consumer derives from not owning the object. Sometimes deprivation, induced by adaptation (imagine oneself possessing the object), intensifies desire and the motivation to purchase.

Due to the shift of desire reference point from no-adaptation to adaptation, consumers engage in excessive buying. It is proposed that excessive buying occurs as a result of desire reference point shift induced by social comparisons, positive emotions, or negative emotions.

American consumers constantly make “upward” monetary possession comparisons. When consumers feel that a product may win admiration or status for them, they cannot resist the temptation to buy it at the expense of their long-term economic interests. When consumers are in a positive emotion, they are highly motivated to prolong the positive emotion. As a result, they engage in excessive buying to reward themselves. When consumers are in a negative emotion, they tend to adapt to the notion of possessing surrounding objects so that the negative emotional responses can be alleviated. Consequently, consumers involve themselves in excessive buying.

We refer to excessive buying behaviors driven by social comparisons, positive emotions, and negative emotions as “aspirational”, “rewarding”, and “remedial” excessive buying respectively.

A fourth type of excessive buying is induced by self-control failures. Self-control is a significant determinant of people’s consumption behavior. Excessive buyers often report experiencing self-control failures in a shopping context (Hirschman 1992). Why consumers lose self-control helps us to understand the occurrence of excessive buying. Effective self-control is determined by three ingredients (Baumeister 2002). The first ingredient is “standard”. Standards refer to “goals, ideals, norms, and other guidelines that specify the desired response”. Uncertainty or conflicts in goals make people more susceptible to self-control failures. The second ingredient is the process of monitoring. Self-control is jeopardized when people fail to keep track of their expenses. The third ingredient is whether consumers possess sufficient resources to exercise self-control. Consumers cannot overcome temptation when there is a lack of such resources. We refer to excessive buying driven by self-control failures as “out-of-control” excessive buying.

Finally, a fifth type of excessive buying is induced by habits. We propose that a considerable portion of excessive buying is the result of unconscious mental processes. Consumption goals can be activated and then operated all outside of awareness (Bargh 2002). Especially, similar or familiar features of environment can automatically activate goals associated with the features in the past, leading individuals to act in accordance with the same goals. In a shopping context, when consumers enter familiar stores where they used to commit excessive buying, the same consumption goals that drive consumers to buy excessively will be activated automatically and guide consumers’ buying behavior. We refer to excessive buying driven by habits as “habitual” excessive buying.

SCALE DEVELOPMENT

Based on the proposed typology, a psychometric scale to measure excessive buying is developed and validated by using 2 studies and 233 respondents. Items are generated based on our theoretical typology and qualitative data from a survey research (Richins and Dawson 1992). Items are purified and examined by using confirmatory factor analysis. The analysis results in a 20-item five factor excessive buying scale. The five factors correspond to the five different types of excessive buying. A 9-item scale is also developed to measure the economic and emotional consequences of excessive buying. Reliability and convergent and discriminant validity of the scales are tested. Nomological validity of the excessive buying scale is tested by examining the relationship between the different types of excessive buying and the economic and emotional consequences. Specifically, the model suggests that “habitual” and “out-of-control” excessive buying result in significant economic consequences, while both “remedial” and “rewarding” excessive buying behaviors result in significant emotional consequences. No significant relationship is found between aspirational excessive buying and the economic or emotional consequences.

CONCLUSION

The current research proposes a perception-based definition for excessive buying. This research also suggests that there are five different types of excessive buying. Based on the typology, a psychological scale to measure excessive buying is developed and validated. Future research is needed to refine the current scale.
REFERENCES


SPECIAL SESSION SUMMARY
Psychological Processes in Financial Decision-making: A Consumer Perspective
Eric M. Eisenstein, Cornell University

ABSTRACTS
“Intuitive Compounding: Framing, Temporal Perspective, and Expertise”

Eric M. Eisenstein, Cornell University
Stephen J. Hoch, University of Pennsylvania

Many important financial decisions hinge on a proper understanding of compound interest. For example, decisions on how much and when to invest in a 401(k) plan, whether to refinance a loan, or how to trade off various attributes of a loan instrument (rate, points up front, duration, etc.), cannot be made without a proper understanding of compounding. Furthermore, some judgments that enter into assessments of well-being and happiness, such as whether prices or wages are fair (cf., Bolton, Warlop, and Alba 2003), also depend on a proper understanding of compounding.

When consumers approach such decisions, however, their understanding of this critical concept is frequently quite poor. This problem is exacerbated because the geometric nature of compounding is counter-intuitive even to those who are intellectually familiar with the underlying theory. Furthermore, to accurately choose an option in many of the financial domains outlined above would require substantially greater spreadsheet modeling expertise than is possessed by the vast majority of consumers, which means that there will frequently be a substantial intuitive component to consumer decision-making in these domains.

A limited number of studies (e.g., Wagenaar and Sagaria 1975; Wagenaar and Timmers 1979) have investigated people’s ability to intuitively predict the outcome of an exponential growth process. Most of these experiments were conducted in unfamiliar domains (such as the growth of duckweed on a pond) rather than in the more familiar financial domain. An unfamiliar domain is likely to reduce the ability of participants to transfer any expertise that they might possess—an effect that has been demonstrated repeatedly in other tasks (e.g., the Wason 1968 card task ). Furthermore, previous studies have not specifically looked for expertise effects or examined heterogeneity in the psychological process used to make decisions.

In three experiments, we explored the psychological underpinnings of consumer estimation of compound interest in a heterogeneous population. In particular, we examined differences in processing arising from negative vs. positive framing (e.g., debt, loans, and inflation vs. interest, raises, stocks), and in differences between retrospective and prospective compounding estimation (i.e., what was the cost of a TV in 1970? vs. what will be the cost of a TV in 2030?). Furthermore, we examined the effects of expertise and training on accuracy. The normative theory is simple: given an interest rate, $i$, and a time horizon, $t$, the formula governing compound interest is $FV=PV(1+i)^t$, where $FV$ and $PV$ are, respectively, the future value and present value of the investment, $i$ is the interest rate, and $t$ is the term.

Results demonstrated that the vast majority of people anchor on simple interest (i.e., $FV=PV(1+i)t$), and then adjust their answer upwards. Reliance on simple interest was demonstrated both by analysis of participants’ open-ended responses and by the pattern of coefficients of individual-level models that were fit to respondents’ estimates. Anchoring on simple interest yielded acceptable accuracy for short time periods and for low interest rates, however, massive underestimation resulted for longer time horizons and for higher rates. Most of the major financial decisions that people make during their lives involve either long time periods (e.g., retirement saving, mortgages) or high interest rates (e.g., taking on credit card debt), which makes anchoring on simple interest a pernicious bias. Additional results demonstrated that all respondents found retrospective estimation (i.e., if there are $FV$ dollars in the account today, what $PV$ was invested $n$ years ago at a constant interest rate, $i$?) more difficult than prospective estimation.

Although most participants used simple interest as an anchor and were very inaccurate, a small minority were very accurate in their estimates. Open-ended responses and individual level coefficient estimates revealed that these subjects used a completely different estimation process, the “rule of 72.” The rule of 72 is an accurate approximation of the correct financial formula, the core of which is the realization that $y=72/i$, where $y$ is the number of years that it takes for money invested (or loaned) at an interest rate of $i$ to double in value. If the time horizon is known, the rule of 72 can be used to approximate the effects of compounding by computing the number of doublings implied by $(i, t)$, and then doubling the principle that number of times. For example, if $PV=$1,000, $i=9\%$, $t=24$ years, then an exact computation shows $FV=$7,911. To use the rule of 72, compute $72/9=8$, which demonstrates that money at $9\%$ will double in approximately 8 years. Since the time horizon is 24 years, this represents $24/8=3$ doublings, which will result in a $FV=2^3 * $1,000=$8,000 (error=1%). Note that simple interest would provide an anchor of $FV_{SI}=$1,000 * $9\% * 24=$2,160 (error=72%).

In Experiment 3, we trained participants to use the rule of 72. Compared to an untrained control group, the trained condition realized enormous improvements in accuracy, with no increase in time spent on the task.

Expertise in estimating compound interest is strongly linked to the use of the rule of 72. If consumers anchor on simple interest, they are likely to make errors that have massive impact on their financial well being, including underestimating the cost of long-term loans (such as mortgages), saving too little and too late for retirement, and allowing credit card debt to revolve, rather than aggressively paying it down. Furthermore, the results shed light on the difficulty of learning nonlinear functions, even for those with substantial experience with them. Consumers can be taught to be considerably more accurate in their understanding of compounding in a very short amount of time.

References