THE EFFECTS OF SELF-CONTROL FAILURES ON RISKY CREDIT CARD USAGE

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Self-control theory offers insights for explaining why consumers resist or succumb to buying urges. We examine self-control failures in terms of behavioral, psychological, and social constructs and assess their impact on credit card debt by college students. Specific antecedent variables examined included debt management failures (psycho-behavioral), locus of control (psychological), impulsivity (psychological), status/materialism (social) and financial anxiety (psychological). Our findings show that self-control failures in combination with poor debt management practices and financial anxiety lead to higher credit card debt. Self-control failures in the form of debt-extending financial management practices and materialistic/status seeking tendencies contributed most in our model.

INTRODUCTION

Managing internal self-control mechanisms has important ramifications for individual and societal welfare and represents one of the most important decision domains in consumer behavior (Gal & Lui, 2011; Ponchio & Aranha, 2008). Broadly, self-control is a stable personality trait associated with the capacity to resist temptation, maintain self-discipline, and break harmful habits (Baumeister, 2002; Tangney, Baumeister, & Boone, 2004). Research shows that consumers exhibiting higher levels of self-control are better able to manage their judgments, regulate their emotions, and resist buying and consumption impulses (Baumeister, Bratslavsky, Muraven, & Tice, 1998; de Ridder *et al.,* 2012). This internal regulation process is particularly challenging for individuals susceptible to materialistic and/or status driven purchasing tendencies (Eastman, Iyer, & Thomas, 2013; Eastman & Iyer, 2012), increasing the frequency and magnitude of their self-control lapses (Bernthal, Crockett, & Rose, 2005; Chaudhuri, Mazumdar, & Ghoshal, 2011). Self-control theory is receiving increased research attention for explaining why consumers resist or succumb to buying urges, and especially those that require taking on additional financial debt (Wilcox , Block, & Eisenstein, 2011)

The Marketing Management Journal
Volume 24, Issue 2, Pages 149-161

Self-control failures in the form of materialistic, status-seeking, or impulsive-driven credit card purchases are especially problematic for college students and are the result of irrational decision making stemming from a buy now, pay later mentality associated with credit card purchases (Amar, Ariely, Ayal, Cryder, & Rick, 2011; Bearden & Haws, 2012). Such failures impact not only the actual debt outcomes that these impulses may produce, but also the emotional and mental state wrought by these decisions (Gal & Liu, 2011). The consequences of high rate student debt and debt-shifting activities are often severe (Norvilitis, Szablicki, & Wilson, 2003; Robb & Pinto, 2010). Students with high debt report daily emotional stress, low self-esteem, decreased confidence in managing economic resources, and diminished psychological well-being (Goetz, Cude, Nielsen, Chatterjee, & Mimura, 2011). These psychosocial outcomes lead to greater default on student loans, bankruptcies, damaged credit history, lower employment, success, and, in some cases, attempted suicides (Berg *et al.,* 2010; Compton & Pfau, 2004).

Understanding the significance of these issues, public policy makers and scholars have called for research that examines the factors that impact risky credit card use by college students and how to protect and educate vulnerable student consumers (Slowik, 2012). Recent studies have investigated issues such as impulsivity (Pinto & Mansfield, 2006; Wang & Xiao, 2009), social status and materialism (Limbu , Huhmann, & Peterson, 2012), financial anxiety (Nga, Yong, & Sellappan, 2011), and locus of control (Pirog & Roberts, 2007). Despite this growing stream of research, lacking are comprehensive frameworks that investigate how the integration of behavioral and psychological processes contribute to risky credit behaviors of college students (Chudry, Foxall, & Pallister, 2011; Limbu *et al.*, 2012; Xiao, Tang, Serido, & Shim, 2011). Especially needed is integrative research investigating antecedent behavioral, psychological, and social conditions that motivate credit card use and abuse (Chan, Chau, & Chan, 2012; Peltier, Pomirleanu, Endres, & Markos, 2013).

The purpose of this study is to help fill this gap by examining how self-control lapses and the associated stressors impact card debt (Harrison, 2012; Limbu *et al.*, 2012; Pirog & Roberts, 2007). We extend the literature by studying these phenomena through the lens of behavioral, psychological, and social constructs, including (1) debt management control (psycho-behavioral), (2) locus of control (psychological), (3) impulsivity (psychological), (4) status/materialism (social) and (5) financial anxiety (psychological) and (5). We thus extend the self-control construct beyond traditional boundaries. We further contribute to the literature through an increased understanding that credit card debt is a function of multiple internal and external constructs. Our measures are highly reliable and impact total credit card debt. Our findings have important implication for helping students manage debt spending and debt reduction.

LITERATURE REVIEW AND MODEL DEVELOPMENT

Self-Control

Self-control is relevant to an extensive array of behaviors, including consumer buying processes. The extant literature for the most part finds that individuals with higher levels of self-control are better able to regulate their emotions, thereby resisting buying urges and potentially illogical decisions (Baumeister *et al.*, 1998). High self-control has been found to positively impact a variety of quality of life measures (Tangney, Baumeister, & Boone, 2004). Conversely, low self-control has been associated with many societal problems, including poor purchase decisions (de Ridder, Lensvelt-Mulders, Finkenauer, Stok, & Baumeister, 2012). While low self-control individuals may withstand many of the buying urges confronting them, they find it difficult to control themselves all the time (Wenzel, Conner, & Kubiak, 2013). Because consumers are continually confronted with buying opportunities in-store, online, and elsewhere, those finding it harder to self-regulate are thus likely to have diminished resistance resources (Gal & Liu, 2011).

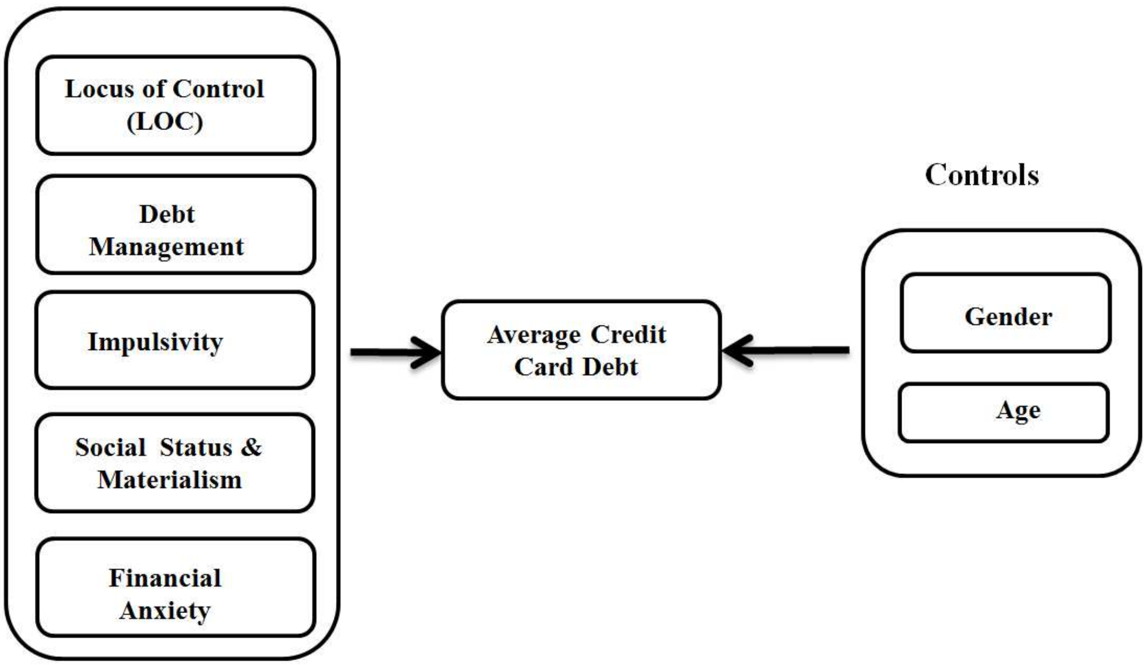
Although self-control is typically studied in terms of specific positive or negative outcomes, scholars and policy makers are increasingly interested in ”post-failure” decisions as a result of initial self-control breeches (Zemack-Rugar, Conner, & Kubiak, 2012). Investigating post-failure self-control behaviors is relevant for a number of reasons. First, a single self-control lapse represents only one in a series of potential decision failures (Dholakia, Gopinath, & Bagozzi, 2005). The Role of desires in sequential impulsive choices. For example, chronically high credit card debt is commonly the result of both impulsive buying opportunities and then the failure to pay off debt in a timely manner. Second, how consumers recover (or fail to recover) from initial self-control lapses are further amplified with associated psychological stressors (Mewse, Lea, & Wrapson, 2010).

We examine extant interdisciplinary research along with marketing literature to identify antecedents for both positive and negative credit card usage. We frame our antecedent variables from the perspective of self-control theory, showing how positive and negative self-regulation habits impact debt. As Figure 1 shows, the antecedent variables in our model include impulsivity, status/materialism, debt management, locus of control, and financial anxiety.

Impulsivity

Impulsive buying as a self-control mechanism has been characterized in terms of an aimless, less thoughtful and alluring decision making process (Lai, 2010; Rook & Fisher, 1995). Rook and Fisher (1995) argued that impulsivity is a character idiosyncrasy assisting critical preposition with brief attention for long-term

FIGURE 1:
Credit Card Model



results. Impulsive behavior can also be defined as abrupt and accidental buying behaviors initiated to achieve instant gratification beyond financial provision (Sengupta & Zhou, 2007; Thomas & Kolbe, 2012). The concept of instant gratification results in conflict between the desire to consume versus the discipline to battle temptation (Hoch & Loewenstein, 1991; Zhang & Shrum, 2009). Ease of credit card usage heightens the dexterity and eagerness to purchase items while setting aside financial burdens to a later date (Bernthal *et al.*, 2005; Verplanken & Sato, 2011). Point-of-purchase stimuli, logos, advertisements, discounts, product design, marketing channel innovation, and sale promotions are efforts to activate factors of impulsive behavior (Jones, Reynolds, Weun, & Beatty, 2003; McCall, Trombetta, & Gipe, 2004). College students often have low restraints and are more likely to be attracted to instant benefits (Baumeister, 2002; Strayhorn, 2002), and can effortlessly use their credit card without a prompt depletion of money (Soman, 2001). College students with high impulsive buying behaviors are going to uphold credit card use and charter insecure financial action (Mansfield, Pinto & Parente, 2004; Peltier *et al.*, 2013; Plunkett & Buehner, 2007).

H_1: Impulsivity is positively related to credit card debt.

Materialism/Social Status

Many consumers appraise themselves and others according to their possessions, lifestyles and social status (Bernthal *et al.*, 2005; Eastman & Iyer, 2013; Eastman, Iyer, & Thomas, 2013). A need for respect, favorable in-group considerations, and envy from others impact status consumption, often in the form of conspicuous purchases made to increase the likelihood of social acceptance (Chaudhuri1 *et al.,* 2011; Gentina, 2014). Self-control failures are thus due to the inability to resist purchase urges driven by the need to belong or to convey one's persona to others (Peltier *et al.*, 2013). From a debt perspective, Ponchio & Aranha (2008) found that materialistic and status purchases are major predictors of the likelihood to installment payback plans, and especially for those with lower income. For some students, credit card usage is directly related to social status through the purchase of visible, material possessions (Limbu *et al.*, 2012); suggesting that students can establish and prolong social status by means of credit card use and acquisition (Nga *et al.*, 2011; Roberts, 1998; Wang & Xiao, 2009). This social-self assimilation occurs through the purchase of physical items such as clothing, cosmetics, and other products and services that convey success and status (Robb & Pinto, 2010). Roberts & Jones (2001) found that students have a relationship with power, prestige, and excessive buying, which demonstrates how students purchase products to impress others. Students who sense profound social status through materialistic purchases view debt accrual as an investment decision instead of a flighty habit (Dwyer, McCloud, & Hodson, 2011).

H_2: Social Status/Materialism is positively related to credit card debt.

Debt Management

Research suggests that most people, including college students, underestimate potential debt accumulation (Amar *et al.*, 2011). Understanding how to manage debt is important because the majority of students are deficient in credit and money management (Goetz *et al.*, 2011), a deficiency that transfers beyond high school to college (Chen & Volpe, 1998). Students with superior debt management skills are less likely to accrue high credit card debt (Hayhoe, Leach, Turner & Lawrence, 2000) and are better at solving financial problems (Hogart, Hilgert, & Kolodinsky, 2004; Mansfield & Pinto, 2007).

We examine debt management from two interrelated perspectives - behavioral and psychological tendencies. Debt management from a behavioral standpoint relates to debt repayment activities (Amar *et al.*, 2011). Specifically, once credit card debt is accumulated, those with a greater propensity to make debt payments are likely to have lower long-term balances (Amar *et al.*, 2011; Navarro -Martinez *et al.*, 2011). Unfortunately, younger consumers tend to repay at lower rates than their parents (Jiang & Dunn, 2012). Relatedly, psychological elements of debt management focus on decision making and overspending when faced with the knowledge that further debt accumulation may be problematic (Sotiropoulos & d'Astous, 2013). High debt consumers may exhibit self-control losses through knowingly making irrational and uncomfortable credit purchases even when they know they cannot afford to go further into debt (Bearden & Haws, 2012; Haws, Bearden, & Nenkov, 2012). Combined, self-control lapses in the form of poor debt management are expected to increase average credit card balances when the immediate consequences of poor debt management decisions are ignored (Joireman, Kees, & Sprott, 2010).

H_3: Poor Debt Management is positively related to credit card debt.

Locus of Control

Locus of Control (LOC) refers to the tendency to interpret one's life outcomes on the basis of potential rewards and punishments (Rotter, 1966). There are two different types of LOC including internal locus of control and external locus of control. Internal LOC consumers feel in control of their behaviors, rewards, and losses (Hoffman, Novak, & Schlosser, 2003; Pinto *et al.*, 2004; Strickland, 1989). Attaining desired outcomes, accepting more responsibility for their actions, and using risk prevention strategies to minimize future losses are characteristics of an internal LOC consumer. Consumers with an external LOC orientation consider that their actions and outcomes are due to outside forces beyond their control. As a consequence, they more freely take charge of their lives through external controls and risk acceptance heuristics (i.e., consumption) in their daily lives (DeSarbo & Edwards, 1996; Kongsompong, 2006).

Limited research has examined how internals and externals differ on credit card attitudes and habits, and particularly with regard to college students (Wang, Wei, & Jiang, 2011). Conceptually, LOC students hold contrary perspectives of credit and money purchasing attitudes (Caputo, 2012; Xiao *et al.*, 2011). Externals tend to have more decisive behaviors toward money and credit, are less likely to be accountable for credit card purchases and shop compulsively, and accrue credit card debt faster (Caputo, 2012; Perry & Morris, 2005; Tokunga, 1993; Wang *et al.*, 2011). Externals are thus less risk adverse regarding debt accrual and carry higher balances than internals (Joo, Grable, & Bagwell, 2003; Plunkett & Buehner, 2007). LOC can be measured by credit card attitudes in terms of the individual paying off the balance with other credit cards or other loans, hiding their debt from other people, buying items to represent their external self-expression, conforming spending habits to others in their social group, and paying back their deficit (Joo *et al.*, 2003; Xiao *et al.*, 2011; Watson, 2009).

H_4: Locus of Control is positively related to credit card debt.

Financial Anxiety

Financial anxiety is an attentive and innate emotional anxiety toward one's personal finances (Shapiro & Burchel, 2012). Shapiro & Burchel (2012) note that financial anxiety can be measured through abstract reports of financial patterns and is a definite construct of consumer anxiety and depression. Inordinate buying induces more anxiety (O'Guinn & Faber, 1989; Pinto *et al.*, 2004), provoking a phase of supplementary shopping in order to pacify ensuing stress (DeSarbo & Edwards, 1996). Excessive credit card debt has been linked to higher levels of consumer anxiety (Hayhoe *et al.*, 2000; Pinto *et al.*, 2004; Roberts & Pinto, 2001). Credit card debt has also been associated with high stress, indigent self-esteem, and an arbitrary state of mind (Compton & Pfau, 2004; Norvilitis *et al.*, 2003). Students with higher levels of financial stress may both regret their self-control failures yet feel anxiety in the form of their inability to curtail future credit card use (DeSarbo & Edwards, 1996).

H_5: Financial Anxiety is positively related to credit card debt.

RESEARCH METHOD

Sample

A total of 322 students enrolled in a marketing class at a Midwestern university participated in the study. The questionnaire was approved by the University's Institutional Review Board. Students were given extra credit for their participation, though none of their responses were linked to them. Table 1 provides the profile of respondents. Consistent with most beginning business courses, the sample had more males than females (57% vs. 43%) and most of the students were between 20-22 years old. The majority of students had access to one (66.7%) or two (23.9%) credit cards. While about half of these students pay-off their balance each month, almost 10% have balances over $500, consistent with risky credit behavior (Xiao *et al.*, 2011). Because debt levels tend to increase between student's junior and senior year, these debt balances are likely to go up for the sample as they near graduation (Ha, 2013).

TABLE 1: Respondent Profile

Gender:	
Male	57%
Female	43%
Age:	
18-20	41.7%
21	31.0%
22	14.6%
23-25	7.6%
26+	5.1%
Number of Credit Cards:	
One	66.7%
Two	23.9%
Three	5.7%
Four or More	3.8%
Total Credit Card Balance:	
Pay balance each month	50.3%
$1–$249	23.0%
$250-499	17.4%
$500-1,000	6.2%
>$1,000	3.1%

Measure Development

A literature review was conducted to identify the behavioral, psychological, and sociological dimensions to include in the study. Most of the questions, although original, were adapted from the literature and were measured via a five-point scale ranging from 1 = "strongly disagree" to 5 = "strongly agree." The dependent measure was self-reported monthly credit balance carried.

Locus of Control (α = .94). Five item measure adapted from Rotter (1966), Roberts & Pinto (2001), Pirog & Roberts (2007), Nga *et al.* (2011).

Social Status and Materialism (α = .81). Four item measure adapted from Nga *et al.* (2011).

Financial Anxiety (α = .80). Seven item measure adapted from Roberts & Pinto. (2001), Nga *et al.* (2011), Pinto *et al.* (2004).

Debt Management (α = .80). Six item measure adapted from Peltier *et al.* (2013).

Impulsivity (α = .73). Three item measure adapted from Rook & Fisher (1995), Pirog & Roberts (2007), Nga *et al.* (2011), Wang *et al.* (2009).

RESULTS

Dimensionality and Reliability

To verify dimensionality, the data were subjected an exploratory principal components factor analysis (Varimax). Those with factor loadings under .40 or that loaded on multiple dimensions were eliminated. The resulting dimensions and items were then evaluated for reliability via an item-to-total correlation analysis. Items with low item-to-total correlations were removed from the analysis. Based on the literature review, we hypothesized five psycho-social-behaviors dimensions, which were supported by the data. All dimension's had coefficient alphas exceeding the criterion level of .70 (Nunnally, 1978). The average communality across all the items was .687 and the factor loadings sufficiently high, indicating that the sample of 322 students is acceptable for determining dimensionality (for a review MacCallum, Widaman, Zhang, & Hong, 1999).

Hypothesis Testing

Using multiple regression, the factor scores for each of the five psycho-social-behavioral dimensions were used as independent variables and regressed against average monthly balance. All five of the dimensions significantly impacted the level of debt carried by respondents (R^2 = .200, F = 15.7, *p* = .000) and in the hypothesized direction, supporting H1-H5 (Table 3). In terms of variance explained, poor debt management had the greatest impact on credit card debt (Std β = .324, t=6.4, p < .001). Status and materialism had the second highest impact (Std β = .200, t=4.0, p < .001), followed by financial anxiety (Std β = .160, t=3.2, p < .01), locus of control (Std β = .135, t=2.7, p < .01), and impulsivity (Std β = .102, t=2.0, p < .05). We repeated the multiple regression analysis using gender and age as control variables. Neither gender nor age was significant. All of the dimensions remained significant and in the same relative order of their impact on average monthly balance.

DISCUSSION AND CONCLUSION

Responding to calls for research examining self -control lapses and credit card debt by vulnerable populations (Peltier *et al.*, 2013; Xiao *et al.*, 2011), our findings offer insight into psychosocial-behavioral antecedents poor decision making on the part of students. Specifically, all four of our self-control variables and financial anxiety had a significant impact on how much debt students carried on their credit cards. Individually, our results corroborate the emerging credit card research showing that external LOC, impulsivity, social status, financial anxiety, and poor debt management lead to higher credit card balances. Collectively we extend the self-control literature by showing that all of these variables impact credit card debt when considered jointly. However, because our sample was limited to one university, validation research is needed to examine this framework in other educational contexts.

A self-control failure in the form of poor debt management was the single highest predictor of credit card debt. Because students tend to lack credit and money management skills, it is critical to build their financial skills early on in their lives (Goetz *et al.*, 2011). For example, parental involvement is a positive mechanism for preparing students for prudent credit card use while attending college (Xiao *et al.*, 2011). Importantly, positive and frequent parental involvement in both the pre- and post-acquisition credit card stages is associated with

TABLE 2:
Factor Loadings and Coefficient Alphas

	LOC	Debt Management	Financial Anxiety	Impulsivity	Status
I have had to use a payday loan to pay my credit card debt.	.915				
I have had to ask my family for money to pay my credit card debt.	.868				
I have had to use a bank loan to pay of my credit card debt .	.832				
I pay credit card balance(s) off with another credit card(s).	.816				
I use my credit card to keep up with my friend's spending habits.	.702				
I "don't" pay credit cards off in full each month (Reversed)		.820			
I typically only pay the minimum balance.		.648			
I use my credit card knowing I don't have the money.		.625			
I often max out my credit card limit.		.623			
I have bought things even thought I couldn't afford them.		.511			
I am uncomfortable with the amount of debt I have.		.487			
Having a credit card makes me feel anxious.			.867		
I look back and regret making credit card purchases.			.765		
I am worried about my credit card spending.			.601		
I am more impulsive when I shop with credit cards.				.770	
With my credit card I buy what I want when I want it.				.768	
I am more likely to buy something if I can pay for it with a credit card.				.752	
I buy items with my credit card to impress people.					.729
Credit cards allow me to express myself to others.					.723
Credit cards are symbols of wealth and prosperity.					.567
What I see on television influences my credit card use.					.460
Variance Explained	20.8%	13.8%	11.8%	11.1%	10.9%
Coefficient Alpha	.94	.80	.80	.73	.81

TABLE 3a:
Multiple Regression Analysis

	Hypothesis	Standardized Beta	T-Value	Sig
(Constant)			34.131	.001
Impulsivity	H_1	.102	2.027	.05
Status	H_2	.200	3.970	.01
Debt Management	H_3	.324	6.426	.001
LOC	H_4	.135	2.682	.01
Anxiety	H_5	.160	3.169	.01
R-Square = .20, F = 15.7, p < .001				

TABLE 3b:
Multiple Regression Analysis With Gender/Age Controls

	Hypothesis	Standardized Beta	T-Value	Sig
(Constant)			6.2	.000
Impulsivity	H1	.108	2.1	.05
Status	H2	.209	4.0	.001
Debt Management	H3	.304	5.8	.001
LOC	H4	.135	2.6	.01
Anxiety	H5	.163	3.1	.001
Gender (Male =1)		.047	.86	ns
Age		.025	.45	ns
R-Square = .20, F = 10.8, p < .001				

lower credit card balances (Limbu *et al.*, 2012; Norvilitis & MacLean, 2010). Educational institutions from K-12 through college graduation must play an active role in informing students about the dangers of high debt levels, and appropriate debt management and reduction skills (Sotiropoulos *et al.*, 2013); possibly in the form of required classes and/or as part of the first-year college experience.

Our research also shows that getting into debt is a function of self-control failures through the acquisition of products and services to gain social status and vis-à-vis materialistic decision making processes. Our findings thus lend support to recent work by Chaudhuri *et al.* (2011) and Limbu *et al.* (2012) linking self-control to materialistic purchase behaviors. Aspirational behavior is often induced via a broad swath of media and advertising. Because college students often must deal with social demands, additional research is needed that offers a broader framework for understanding the role of social pressure in student debt accrual. As with debt management, parental involvement is likely to be an important moderator of the relationship between social status and debt accrual (Norvilitis & MacLean, 2010; Yu, 2011). Research is thus needed that offers greater insight into the role that families play in mitigating how negative social influences impact student debt.

Impulsivity, a lapse in the ability to control buying urges, was positively related to credit card debt in our study. Combined with poor debt management skills, student access to the easy use of credit increased their willingness to nurture self-control losses by forgoing future financial obligations to satisfy their immediate buying needs (Verplanken & Sato, 2011). At the same time marketers often make it easy for students to act on poor self-control decisions at both the credit card acquisition and card usage stages through low introductory offers and short -term deals (Nga *et al.*, 2011). Future research that investigates how students may resist personal and marketer temptations is thus warranted.

Our findings also underscore the notion that active behavioral controls and extending to a future point in time (payments) is a predictor of student debt. Termed locus of control, students with an external orientation were more likely to transfer debt from one credit account to another, leading to greater debt. Unfortunately, this also means that students with an external orientation are less risk adverse when it comes to carrying higher balances (Xiao *et al.*, 2011). Additional research is needed to identify ways to motivate students to act more responsibly when it comes to paying off their debts and to become more internal-oriented related to their credit card decision making practices (Caputo, 2012).

Lastly, we found that financial anxiety leads to higher credit card debt. In many ways financial anxiety leads to a cycle of shopping and self-control failures as a means of alleviating ensuing stress. In particular, students who have financial stressors continue to use their credit card, often through LOC and poor debt management. A possible limitation of our study is that we investigated financial anxiety as a precursor to debt. Future research should thus investigate the extent to which financial anxiety is an antecedent or consequence of high debt and whether it has both pre- and post-debt dimensions.

Our study examined credit card debt as a function of five independent psycho-social-behavioral constructs. We thus encourage research that investigates student credit card debt in non-linear, interactive and other more complex models. Specifically, how do lapses in self-control in one psycho-social-behavioral dimension impact other self-control losses. For example, does social status lead to more impulsive decision-making (or vice-versa)? Understanding the direct and indirect paths to explaining credit card debt and the consequences of that debt offers considerable theoretical and applied insights.

For public policy makers and marketing managers our findings continue to shine a light on the need to protect vulnerable consumers, and especially younger consumers. Passed in 2009, the Accountability, Responsibility, and Disclosure Act (CARD) prohibits companies from issuing credit cards to those under 21 without evidence of the ability to pay or have a co-signer and restricts companies from giving away free gifts as part of on campus marketing practices, bars credit bureaus from disclosing student contact information for mail and other marketing efforts, and mandates disclosure of contracts pertaining or agreements regarding credit card marketing (Peltier et al., 2013). Unfortunately, this law has had only a limited impact on the number of credit cards students gain access to and the reduction of marketing targeting this vulnerable decision group (Hawkins, 2012). As such, additional research is needed on how to protect young consumers and the role that ethical marketing practices play in this process. Of particular interest is a better understanding of how marketing managers may profitably follow the principles of the "triple bottom line," which is based on the notions that profits are measured not only in terms of income, but also the value of social capital and quality of life.

REFERENCES

Amar M., Ariely D., Ayal S., Cryder C.E., & Rick S.I. (2011). Winning the battle but losing the war: The psychology of debt management. *Journal of Marketing Research 48* (Special Issue): S38-50.

Baumeister R. (2002). Yielding to temptation: self-control failure, impulsive purchasing, and consumer behavior. *Journal of Consumer Research 28*(4): 670-676.

Baumeister R.F., Bratslavsky E., Muraven M., & Tice D.M. (1998), Ego depletion: is the active self a limited resource? *Journal of Personality and Social Psychology 74*(5): 1252–65.

Bearden W., & Haws K.L. (2012). How low spending control harms consumers. *Journal of the Academy of Marketing Science 40*: 181–193.

Berg C.J., Sanem J.R., Lust K.A., Ahluwalia J., Kirch M., & An L.C. (2010). A health-related characteristics and incurring credit card debt as problem behaviors among college students. *Internet Journal of Mental Health 6*(2): 1.

Bernthal M., Crockett D., & Rose R.L. (2005). Credit cards as lifestyle facilitators. *Journal of Consumer Research 32*(1): 130-145.

Caputo R.K. (2012). Patterns and predictors of debt: a panel study, 1985-2008. *Journal of Sociology and Social Welfare 34*(2): 7-29.

Chan F.S., Chau A.W., & Chan K.Y. (2012). Financial knowledge and aptitudes: Impacts on college students' financial well-being. *College Student Journal 46*(1): 114-132.

Chaudhuri H.R., Mazumdar S., & Ghoshal A. (2011). Conspicuous consumption orientation: conceptualisation, scale development and validation. *Journal of Consumer Behaviour 10*: 216-224.

Chen H., & Volpe R.P. (1998). An analysis of personal financial literacy among college students. *Financial Services Review 7*(2): 7-28.

Chudry F., Foxall G., & Pallister J. (2011). Exploring attitudes and predicting intentions: profiling student debtors using an extended theory of planned behavior. *Journal of Applied Social Psychology 41*(1): 119-149.

Compton J.A., & Pfau M. (2004). Use of inoculation to foster resistance to credit card marketing targeting college students. *Journal of Applied Communication Research 32*(4): 343-364.

de Ridder D.T.D., Lensvelt-Mulders G., Finkenauer C., Stok F.M., & Baumeister R.F. (2012). Taking stock of self-control: a meta-analysis of how trait self-control relates to a wide range of behaviors. *Personality and Social Psychology Review 16*(1): 76-99.

DeSarbo W.S., & Edwards E. (1996). Typologies of compulsive buying behavior: a constrained clusterwise regression approach. *Journal of Consumer Psychology 5*: 231-262.

Dholakia U.M., Gopinath M., & Bagozzi R.P. (2005). The Role of desires in sequential impulsive choices. *Organizational Behavior and Human Decision Processes 98* (November): 179-94.

Dwyer R.E., McCloud L., & Hodson R. (2011). Youth debt, mastery, and self-esteem: class-stratified effects of indebtedness on self-concept. *Social Science Research 40*: 727-741.

Eastman J., Iyer R., & Thomas S.P. (2013). The impact of status consumption on shopping styles: an exploratory look at the millennial generation. *Marketing Management Journal, 23* (1): 57-73.

Eastman J., & Iyer R. (2013). The relationship between cognitive age and status consumption: an exploratory look. *Marketing Management Journal, 22* (1): 80-96.

Gal D., & Liu W. (2011). Grapes of wrath: the angry effects of self-control. *Journal of Consumer Research 38*(October): 445-459.

Gentina E. (2014), Understanding the effects of adolescent girls' social positions within peer groups on exchange practices. *Journal of Consumer Behaviour 13*: 73-80.

Goetz J., Cude B.J., Nielsen R.B., Chatterjee S., & Mimura Y. (2011). College-based personal finance education: student interest in three delivery methods. *Journal of Financial Counseling and Planning 22*(1): 127-142.

Ha H. (2013). Credit card use and debt by female students: a case study in Melbourne. *Youth Studies Australia 32*(4): 57 – 71.

Harrison T. (2012). Editorial. *Journal of Financial Services Marketing 17*(2): 117 -119.

Haws K., Bearden W., & Nenkov G. (2012). Consumer spending self-control effectiveness and outcome elaboration prompts. *Journal of the Academy of Marketing Science 40* (5): 695-710.

Hayhoe C.R., Leach L.J., Turner P.R., & Lawrence F.C. (2000). Differences in spending habits and credit use of college students. *Journal of Consumer Affairs 34*(1): 113-133.

Hawkins J. (2012). The card act on campus. *Washington and Lee Law Review 69*(3): 1471-1534.

Hoch S.J., & Loewenstein G.F. (1991). Time-inconsistent preferences and consumer self-control. *Journal of Consumer Research 17*(4): 492 – 507.

Hoffman D., Novak T.P., & Schlosser A. (2003). Locus of control, web use, and consumer attitudes toward internet regulation. *Journal of Public Policy and Marketing 22* (1): 41-57.

Hogarth J.M., Hilgert M.A., & Kolodinsky J.M. (2004). Consumers' resolution of credit card problems and exit behaviors. *Journal of Services Marketing 18*(1): 19-34.

Jiang S.S., & Dunn L.F. (2012). New evidence on credit card borrowing and repayment patterns. *Economic Inquiry 51*(1): 394-407.

Joireman J., Kees J., & Sprott D. (2010). Concern with immediate consequences magnifies the impact of compulsive buying tendencies on college students' credit card debt. *Journal of Consumer Affairs 44*(1): 155-178.

Jones M.A., Reynolds K.E., Weun S., & Beatty S.E. (2003). The product-specific nature of impulse buying tendency. *Journal of Business Research 56*: 505- 511.

Joo S.H., Grable J.E., & Bagwell D.C. (2003). Credit card attitudes and behaviors of college students. *College Student Journal 37*(3): 405-419.

Kongsompong K. (2006). Cultural diversities between Singapore and Australia: an analysis on consumption behavior. *Journal of American Academy of Business 9*(2):87-92.

Lai C. (2010). How financial attitudes and practices influence the impulsive buying behavior of college and university students. *Social Behavior and Personality 38*(3): 373-380.

Limbu Y.B., Huhmann B.A., & Peterson R.T. (2012). Are college students at greater risk of credit card abuse? age, gender, materialism and parental influence on consumer response to credit cards. *Journal of Financial Services Marketing 17*(2): 148 - 162.

Lyons AC. (2004). A profile of financially at-risk college students. *Journal of Consumer Affairs 38*(1): 56-80.

MacCallum R.C., Widaman K.F., Zhang S., & Hong S. (1999). Sample size in factor analysis. *Psychological Methods* 4(1): 84 -99.

Mansfield P.M., & Pinto M.B. (2007). Marketing Credit cards to college students: will legislation protect them from excessive debt? *Marketing Management Journal 17*(1): 112-122.

Mansfield P.M., Pinto M.B., & Parente D.H. (2003). Self-Control and credit card use among college students. *Psychological Reports 92*(2): 1067-1078.

McCall M., Trombetta J., & Gipe A. (2004). Credit cues and impression management: a preliminary attempt to explain credit card effect. *Psychological Reports 95*(1): 331 – 337.

Mewse A.J., Lea S.E.G., & Wrapson W. (2010). First steps out of debt: attitudes and social identity as predictors of contact by debtors with creditors. *Journal of Economic Psychology 31*: 1021-1034.

Navarro-Martinez D., Salisbury L.C., Lemon K.N., Stewart N., Matthews W.J., & Harris A.J.L. (2011). Minimum required payment and supplemental information disclosure effects on consumer debt repayment decisions. *Journal of Marketing Research 48*: S60-S77.

Nga J.K.H., Yong L.H.L., & Sellappan R. (2011). The influence of image consciousness, materialism and compulsive spending on credit card usage intentions among youth. *Young Consumers 12*(3): 243-253.

Norvilitis J.M., & MacLean M.G. (2010). The role of parents in college students' financial behaviors and attitudes. *Journal of Economic Psychology 31*: 55-63.

Norvilitis J.M., Szablicki B.P., & Wilson S.D. (2003). Factors influencing levels of credit-card debt in college students. *Journal of Applied Social Psychology 33*(5): 935-947.

Nunnally J.C. (1978). Psychometric theory. New York: McGraw-Hill.

O'Guinn T.C., & Faber R.J. (1989). Compulsive buying: A phenomenological exploration. *Journal of Consumer Research 16*(September): 147-57.

Peltier J.W., Pomirleanu N., Endres M.J., & Markos E. (2013). Psycho-social factors impacting credit acquisition and use by college students. *Journal of Financial Services Marketing 18*(4): 271-284.

Perry V.G., & Morris M.D. (2005). Who is in control? the role of self-perception, knowledge, and income in explaining consumer financial behavior. *Journal of Consumer Affairs 39*(2): 99-313.

Pinto M.B., & Mansfield P.M. (2006). Direct mail credit card solicitation of college students: An exploratory study. *Services Marketing Quarterly 27*(4): 27-34.

Pinto M.B., Mansfield P.M., & Parente D.H. (2004). Relationship of credit attitude and debt to self-esteem and locus of control in college age students. *Psychological Reports 94*: 1405-1418.

Pirog S.F. III, & Roberts J.A. (2007). Personality and credit card misuse among college students: the mediating role of impulsiveness. *Journal of Marketing Theory and Practice 15*(1): 65-77.

Plunkett H.R., & Buehner J. (2007). The relation of general and specific locus of control to intertemporal monetary choice. *Personality and Individual Differences 42*: 1233-1242.

Ponchio M.C., & Aranha F. (2008). Materialism as a predictor variable of low income consumer behavior when entering into installment plan agreements. Journal of Consumer Behaviour 7: 21-34.

Robb C.A., & Pinto M.B. (2010). College students and credit card use: an analysis of financially at-risk students. College Student Journal 44(4): 823 – 835.

Roberts J.A., & Jones E. (2001). Money attitudes, credit card use and compulsive buying among American college students. *The Journal of Consumer Affairs 35*(2): 213 -240.

Roberts J.A. (1998). Compulsive buying among college students: an investigation of its antecedents, consequences, and implications for public policy. *Journal of Consumer Affairs 32*(2): 295-319.

Rook D.W., & Fisher R.J. (1995). Normative influences on impulsive buying behavior. *Journal of Consumer Research 22* (December): 305-313.

Rotter J.B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs 80* (1): 1-28.

Sengupta J., & Zhou R. (2007). Understanding impulsives choice behaviors: the motivational influences of regulatory focus. *Journal of Marketing Research 44*(2): 297-308.

Shapiro G.K., & Burchell B.J. (2012). Measuring financial anxiety. *Journal of Neuroscience, Psychology, and Economics 5* (2): 92103.

Slowik J. (2012). Credit card act II: expanding credit card reform by targeting behavioral biases. *UCLA Law Review 59*: 1992-1341.

Soman D. (2001). Effects of payment mechanism on spending behavior: the role of rehearsal and immediacy of payments. *Journal of Consumer Research 27*(March): 460-174.

Sotiropoulos V., & d'Astous A. (2013). Attitudinal, self-efficacy, and social norms determinants of young consumers' propensity to overspend on credit cards. *Journal of Consumer Policy 36*(2): 179-196.

Strayhorn J.M. Jr. (2002). Self-control: theory and research. *Journal of American Academy of Child and Adolescent Psychiatry 41* (January): 7-16.

Strickland B.R. (1989). Internal-external control expectancies. *American Psychologist 44*(January): 1-12.

Tangney J.P., Baumeister R.F., & Boone A.L. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality 72*(2): 271-324.

Thomas V., Fowler K., & Kolbe R.H. (2011-2012). The implications of the FTC's clear and conspicuous standards for the communication of credit card information to young consumers. *Journal of Financial Services Marketing 16* (3/4): 195-209.

Tokunga H. (1993). The use and abuse of consumer credit: applications of psychological theory and research. *Journal of Economic Psychology 14*(June): 285-316.

Verplanken B., & Sato A. (2011). The psychology of impulse buying: an integrative self-regulation approach. *Journal of Consumer Policy 34*: 197-210.

Wang J., & Xiao J.J. (2009). Buying behavior, social support and credit card indebtedness of college students. *International Journal of Consumer Studies 33*: 2-10.

Wang L., Wei L., & Jiang L. (2011). The impact of attitude variables on credit debt behavior. Nankai *Business Review International 2*(2): 120-139.

Watson S. (2009). Credit card misuse, money attitudes, and compulsive buying behaviors: A comparison of internal and external locus of control (LOC) consumers. *College Student Journal 43*(2): 268-275.

Wenzel M., Conner T.S., & Kubiak T. (2013). Understanding the limits of self-control: positive affect moderates the impact of task switching on consecutive self-control performance. *European Journal of Social Psychology 43*: 175-184.

Wilcox K., Block L.G., & Eisenstein E.M. (2011). Leave home without it? the effects of credit card debt and available credit on spending. *Journal of Marketing Research 48* (Special Issue): S78-90.

Xiao J.J., Tang C., Serido J., & Shim S. (2011). Antecedents and consequences of risky credit behavior among college students: application and extension of the theory of planned behavior. *Journal of Public Policy and Marketing 30*(2): 239-245.

Yu H. (2011). Parental communication style's impact on children's attitudes toward obesity and food advertising. *Journal of Consumer Affairs 45*(1): 87-107.

Zemack-Rugar F., Corus C., & Brinberg D. (2012). The “response-to-failure” scale: predicting behavior following initial self-control failure. *Journal of Marketing Research 49* (6): 996-1014.

Zhang Y., & Shrum L.J. (2009). The influence of self-construal on impulsive consumption. *Journal of Consumer Research 35*(5): 838-850.