

Antecedents and consequences of impulsive buying: Can impulsive buying be understood as
dysfunctional emotion regulation?

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Abstract

We use data from a large national survey (N=109,000) to examine antecedents and outcomes of buying impulsiveness. Our results are consistent with an account of impulsive buying as arising out of both promotion focused and prevention focused self-regulation systems. Our results also support an account of impulsive buying as a form of compensatory emotion regulation. Contrary to accounts in the retail management and marketing research literature we find high buying impulsiveness to be associated with significant and sizeable adverse financial outcomes.

Introduction

In the wake of a world-wide recession brought on by the collapse of a credit bubble associated with the overextension of credit by banks and the over-indulgence in credit-fuelled spending by consumers, it seems timely to examine the antecedents and outcomes of impulsive buying behaviour. Rook and Fisher define impulsive buying as a consumer's tendency to buy spontaneously, unreflectively and, immediately, (Rook & Fisher, 1995), and see impulsive buying as a relatively stable behavioural trait, albeit subject to situational influences.

There has been disagreement in the literature on the extent to which impulsive buying represents an adaptive or maladaptive behaviour. In particular, research in the field of consumer and retail marketing has often argued that impulsive buying either leads to positive outcomes or is harmless. Researchers in this tradition argue for example that: “impulse buying is not always viewed negatively by consumers, but represents a rational alternative to more time-consuming search behaviors” (Hausman, 2000: 413); that there are important “socio-psychological benefits of shopping and impulse purchasing” (Bayley & Nancarrow, 1998: 113); that apparently irrational and choiceless buying behaviour can be understood as an automatic matching of environment and patterns of action from memory, amounting to a cognitively efficient means of achieving goals (Malter, 1996); and that impulsive buying may be understood as an act of freedom in which the need for analytical evaluation is obviated because the products ‘rightness’ is experienced directly (Thompson, Locander, & Pollio, 1990).

Building on such accounts of impulsive buying as a positive or at worst harmless activity, many researchers in this field go on to make recommendations for retail and marketing

practice as to how potentially impulsive consumers may be identified and targeted; and for maximising the conditions likely to encourage impulsive purchases. For example: “The results of this study offer implications for retailers on understanding and encouraging impulse buying in their stores” (Jones, 2003: 506); “Marketers need to understand [impulsive buying] behaviour in order to formulate appropriate marketing strategy, allocate marketing budget below-the-line and design effective marketing tactics..... In such instances the acts may be normatively positive and leave the shopper feeling good” (Bayley & Nancarrow, 1998). Others have recommended that profiles of highly impulsive shoppers be identified so that promotions can be targeted at them (Beatty & Ferrell, 1998); and that retailers may want to encourage more impulsive buying behaviour among their shoppers “in order to enhance customer satisfaction”(Lee, 2008: 271).

By contrast other streams of research literature have emphasised the potential adverse outcomes of impulsive buying behaviors. In particular consumer welfare research, often focusing on the more pathological end of the impulsive buying spectrum (compulsive buying behaviour), highlights the association of impulsive buying with debt problems including credit card debt(Joireman, Kees, & Sprott, 2010).

More recent work (as we discuss below) suggests that impulsive buying may act as a form of self-regulation behaviour to manage mood and reinforce or avoid threats to identity (Verplanken & Sato, 2011).

In this paper we present evidence from a large scale survey that a) supports this self-regulation view of impulsive buying; and b) shows impulsive buying to be dysfunctional in that it is strongly associated with a wide range of negative financial outcomes.

Impulse buying as self-regulative behaviour

Self-regulation is the process by which we seek to bring ourselves into alignment with relevant goals. Higgins' (1997, 1998) regulatory focus theory builds on the basic hedonic principle that people approach pleasure and avoid pain to propose that people are guided by two distinct self-regulatory systems; one with a focus on promotion of the pleasure associated with desired end-states and the other with a focus on prevention of the pain associated negative outcomes.

In a recent review of research on impulsive buying Verplanken and Sato (2011) propose an integrative self-regulation account of the antecedents of impulsive buying. In particular they seek to explain evidence for an association between both positive and negative emotions and impulsive buying and argue that consumers may be motivated to make an impulsive purchase by both prevention and promotion motives. They propose that impulsive buying can be understood in terms of both self-regulation systems; promotion focused and prevention focused motives. Within their framework, promotion focused motives for impulsive buying involve the desire to promote desired outcomes, particularly the promotion or enhancement of positive emotions. Prevention-focused motives for impulsive buying involve the desire to avoid bad outcomes; in particular the need to repair or distract from negative emotions and moods. Kemp and Kopp (2011) offer a related account of consumption (especially impulsive consumption) as a form of emotion regulation. Consumers may engage in impulsive buying to enhance or protect positive emotions, or to ameliorate negative emotions. Kemp and Kopp offer evidence from two experimental studies that consumers are more likely to engage in purchase of hedonic goods when either experiencing either positive or negative emotions (compared with a neutral emotional state), but that the effect of negative emotions on

impulsive buying was significantly lower for study participants who habitually use intentional cognitive emotion regulation strategies.

Thus an important class of explanation for impulsive buying behaviour is that it is used both as a strategy for the up regulation or maintenance of positive mood and for the down-regulation of negative mood.

A large data set (N=109,472) from a UK nationwide survey including data on impulsive buying, personality and emotion regulation gives us the opportunity to test this account.

Behavioural approach and avoidance

Chronic individual differences in prevention focus and promotion focus are associated with personality differences. Carver and White (1994) developed the Behavioral Inhibition Scale (BIS) and Behavioral Approach Scale (BAS) to assess individual differences in the sensitivity of these systems. BIS measures the sensitivity of the individual to negative stimuli; and BAS the sensitivity to reward. Whilst Carver and White designed their scales to be unidimensional their studies and later studies have found BAS to have three sub-components of Drive, Fun Seeking and Reward Responsiveness.

This trait level variability in individuals' regulatory focus offers the opportunity to examine the relationship between impulsive buying behaviour and the two different regulatory systems.

If impulsive buying is underpinned by both promotion-focused motives and prevention-focused motives, we should expect to find an association between impulsive buying and both sensitivity to pleasure and sensitivity to pain.

While the need to down regulate negative emotions will be greater for those high in BIS, we would expect that the desire to experience or enhance positive emotions will be greater for those high in BAS.

Thus we test:

H1: Higher sensitivity to positive stimuli (promotion system) as measured by the Behavioural Approach System will be associated with higher levels of impulsive buying.

H2: Higher sensitivity to aversive stimuli (prevention system) as measured by the Behavioural Inhibition System will be associated with higher levels of impulsive buying.

Antecedent focused and outcome-focused emotion regulation

People choose situations and modify situations; situations require attention and appraisal; and lead to an emotional response. Attempts to manage emotions, then, may focus at any of these stages. Situations may be selected or avoided, and they can be modified. Attention can be focused on particularly emotionally salient elements of a situation; distractions can be sought to avoid emotion; situations may be appraised in a particular fashion or reframed to modify an emotional response; and responses may be modulated or suppressed.

Particular attention has been paid in recent research to the difference in outcomes between *antecedent* focused-emotion regulation strategies, which seek to change emotions before emotion responses have become fully activated and *response-focused* regulation strategies, which modify behaviour and emotion expression once the emotion response is underway.

At the broadest level, Gross (2002) distinguished between antecedent-focused and response-focused emotion regulation strategies. Antecedent-focused strategies refer to things done

before the emotion response tendencies have become fully activated and have changed our behaviour and peripheral physiological responding. Response-focused strategies refer to things done once an emotion is already underway, after the response tendencies have already been generated. The most studied example of an antecedent focussed regulation strategy is cognitive reappraisal which involves deliberately reframing a stimulus to change how you feel about it. The most studied example of an antecedent-focused emotion regulation strategy is expressive suppression which involves suppressing outward display of emotion.

A substantial body of existing research shows reappraisal strategies to reduce experience of negative emotion and increase experience of positive emotion reduce physiological arousal in response to emotion stimuli. In contrast suppression strategies reduce experience of positive emotions and either leave unaffected or increase experience of negative emotions and increase physiological arousal in response to emotion stimuli. Further, suppression strategies are costly in terms of cognitive effort and physiological response (Gross & Thompson, 2007). As Baumeister and colleagues have shown, self-regulation resources are limited (Baumeister, 2002; Baumeister, Bratslavsky, Muraven, & Tice, 1998; Muraven & Baumeister, 2000). Suppression is costly in self-regulation resources whilst not reducing the experience of negative emotion

If impulsive buying acts as a form of emotion regulation, we should find that habitual use of other (less costly) forms of emotion regulation reduces dependence on impulsive buying for self-regulation purposes. Thus those who habitually use reappraisal strategies should have less need for other forms of emotion regulation, such as impulsive buying, to enhance mood or down-regulate negative emotion. In contrast, habitual use of suppression strategies is likely to lead to greater need for mood enhancement or repair.

In particular we would hypothesise that:

H3. Habitual use of reappraisal strategies for emotion regulation will be associated with lower levels of impulsive buying.

H4. Habitual use of suppression strategies for emotion regulation will be associated with higher levels of impulsive buying.

Impulsive buying behaviour and adverse financial outcomes

If impulsive buying can be understood as a form of self-regulation, this does not mean it is necessarily dysfunctional. Some have argued (e.g. Bayley & Nancarrow, 1998; Hausman, 2000) that impulse buying represents a rational alternative to more time consuming search behaviours.

Many studies, either tacitly or explicitly, treat impulsive buying as either positive or harmless in that they make recommendations for retailers on how impulsive buying behaviour may be increased. For example:

“...the profiles of high impulsives...may be identified, so that promotions and events can be targeted at those individuals” (Beatty & Ferrell, 1998: 188);

“ The results of this study also offer implications for retailers on understanding and encouraging impulse buying in their stores.” (Jones, 2003: 510);

" Marketers need to understand such consumer behaviour in order to formulate appropriate marketing strategy, allocate marketing budget below-the-line and design effective marketing tactics..... In such instances the acts may be normatively positive and leave the shopper feeling good” (Bayley & Nancarrow, 1998: 99).

Others have argued that impulsive buying, at the least in its more extreme forms, is dysfunctional, being associated with significantly adverse outcomes such as debt, depression and marital discord (Joireman et al., 2010; O'Guinn & Faber, 1989).

Given that it is research which has a strong retail focus, which most readily argues that impulsive buying is either beneficial or harmless, we consider this question deserves rather closer scrutiny. Thus we test:-

H5: Buying impulsiveness will be associated with greater difficulty in making ends meet and greater risk of adverse financial life events.

Methods

The data for this study were collected as part of a broader UK wide omnibus survey of attitudes to money and financial affairs conducted in collaboration with the BBC. The online survey was publicised on a primetime BBC 1 consumer affairs programme on several regional radio programmes and through the BBC website. A total of 109,472 people participated in the survey. 53.3% were women and 46.7% were men. Average age of participants was 46.7 years.

Measures

Control measures: We control for age (in years), gender, wealth (respondents were asked to estimate total wealth by making separate estimates for value of house, other physical assets, and financial assets), total income, self-reported social class, highest educational qualification, and financial knowledge (a ten item test of financial literacy, scored as the sum of the correct answers).

Buying Impulsiveness: We used Rook and Fisher's (1995) Buying Impulsiveness Scale. The original scale consists of 9 items. We shortened the scale to five items due to space constraints in the survey, choosing the five items loading most strongly on the single factor in the original study. Sample items "I see it, I buy' it describes me.", "I often buy things without thinking". Alpha = 0.90.

Making ends meet: The UK's Financial Services authority carried out a baseline survey of financial capabilities and on the basis of a factor analysis identified five core financial capabilities. We used four items from their 'Making ends meet' factor. All items were among the highest loading on this factor and focused on outcomes rather than attitudes.. "Which of these statements best describes how well you are keeping up with your bills and credit commitments at the moment" (1 - 'real problems behind with many things' to 5 - 'fine, no difficulties); 'I am very organised when it comes to managing my money day to day' (1 - 'disagree strongly' to 5 - 'agree strongly'); In the last 12 months, how often have you run out of money before the end of the week/month, or needed to use your credit card or overdraft to get by?' (1 - 'Always' to 5 - 'Never'); "In the last five years have you found yourself in financial difficulties? By that we mean three months or more behind with payments on your regular commitments" (1 - 'no', 5 'Yes'). Alpha = 0.75.

Adverse financial life events index: We asked study participants if they had experienced any of the following adverse financial life events in the last five years: bankruptcy, repossession of house; repossession of car, repossession of other goods bought on credit, missing one or more payments on a loan or mortgage, denial of credit, unexpected overdraft (1 - 'yes', 0- 'no'). We used Mokken analysis to estimate a latent scale underlying the index. H score = 0.69, item (reliability rho=0.67) H scores ranged from .46 to .69; indicating a good fit to the

Mokken assumptions. Mokken scaling is a probabilistic version of Guttman scaling, which assumes items follow a hierarchy as in Guttman scaling with those highest in the hierarchy implying the truth of the items below. However, in Mokken scaling, if an item is true, items lower in the hierarchy are assumed to be ‘probably’ true. The H score is a measure of the extent of violations of the hierarchical structure with a higher H score indicating fewer violations.

Emotion Regulation: We used the Emotion Regulation Questionnaire (Gross, 2002) to measure habitual use of an intentional cognitive strategy for emotion regulation (reappraisal) and an outcome focussed strategy (expressive suppression).

BIS/BAS: we used Carver and White’s BIS/BAS scale to assess chronic prevention focused and promotion focussed self-regulation.

Analysis

On inspection Buying Impulsiveness revealed a significantly non-normal distribution. Further examination revealed this to be a left censored normal distribution. (Left or right censoring is a common outcome of shortening scales). Non-normality can lead to significant bias in estimates of coefficients in ordinary least squares regression, so for our first analysis testing H1 to H4 we adopted a Tobit analysis (Long, 1997), using proc qlim in SAS; which adjusts parameter estimates and standard errors to account for the censored distribution. In testing H1 to H4, we control for age, gender, income, wealth, social class, education and financial knowledge.

Similarly, both making ends meet and the adverse financial life events index had non-normal distributions. The making ends meet scale was right censored with a high proportion of scores at the top of the scale (similar to the original FSA study). The adverse financial events index was effectively count data. Thus in our first analysis, to test H5, with making ends meet

as dependent variable, we used Tobit analysis. In the second analysis with the adverse financial life events index as DV we used negative binomial regression which is suitable for an independent variable constructed from count data (Long, 1997). Finally, since the effects reported in the analysis of the adverse financial events index are likely to be most influenced by the more common/less extreme events, we also carried out a logistic regression analysis for the extreme event of bankruptcy. Since bankruptcy is a rare event (1.3%, 1412 cases in our sample of 109454 answering the question), we used a rare events adjusted version of logistic regression (King & Zeng, 2001).

In testing H5, we control for education, social class, age and gender. We do not control for wealth or income since currently reported wealth and income are likely to be outcomes of events such as bankruptcy rather than precursors and social class will function as some control for likely prior levels of wealth and income.

Results

Table 1 reports the results of the Tobit regression on Buying Impulsiveness. H2 is supported with a positive coefficient for BIS (greater BIS associated with greater Buying Impulsiveness). H1 is partially supported with higher BAS Drive and BAS Fun Seeking associated with higher Buying Impulsivity. However there is a small but significant negative association between BAS Reward Responsiveness and Buying Impulsiveness.

H3 and H4 were concerned with the relationship between emotion regulation and Buying Impulsiveness. Both hypotheses were supported with Reappraisal showing a significant inverse relationship with Buying Impulsiveness and Expressive Suppression showing a positive association with Buying Impulsiveness.

We also see that Buying Impulsiveness decreases with age, is higher for women than men, decreases with wealth and social class but increases with income and decreases with Education and Financial Knowledge.

Table 1: Tobit Regression on Buying Impulsiveness

	Model 1		Model 2	
	coefficient	t-value	coefficient	t-value
(Intercept)	7.65	98.50**	6.95	95.02**
Age (10yrs)	-0.45	-29.92**	-0.11	-7.59**
Female	1.56	44.53**	1.74	49.19**
Wealth	-0.21	-13.34**	-0.24	-15.89**
Income	0.18	16.85**	0.16	16.42**
Education	-0.37	-28.16**	-0.36	-29.20**
Financial Knowledge	-0.49	-27.17**	-0.39	-23.21**
Social Class	-0.09	-6.25**	-0.14	-10.81**
BIS			0.56	30.83**
BAS Reward Responsiveness			-0.18	-8.40**
BAS Drive			0.73	36.57**
BAS Fun Seeking			1.92	95.42**
Suppression			0.26	15.44**
Reappraisal			-0.49	-29.28**
Log likelihood	-312397		-303555	
R ²	0.06**		.20**	
Δ R ²			.14**	

R² is a pseudo R², calculated as the squared correlation between predicted and observed values of buying impulsiveness. N=109375. ** p<0.0001

Turning to the relationship between financial outcomes and Buying Impulsiveness (H5), Table 2 reports results of the Tobit regression on Making Ends Meet and Table 3, the results of the Negative Binomial Regression on the Adverse Financial Life Events Index.

Table 2: Tobit Regression on Making Ends Meet

Parameter	Model 1		Model 2	
	Estimate	t Value		
Intercept	18.02	949.19**	17.85	979.84**
Age (z-score)	1.22	92.85**	1.04	82.27**
Female (z-score)	-0.91	-35.49**	-0.60	-24.21**
Education (z-score)	0.36	25.78**	0.24	17.61**
Social Class(z-score)	0.66	47.48**	0.63	46.67**
Buying Impulsivity(z-score)			-1.19	-96.26**
R ²	.12**		.19**	
ΔR^2			.07**	
Log Likelihood	-254903		-250363	

** p<0.001. R² is a pseudo R², calculated as the squared correlation between predicted and observed values of buying impulsiveness

Table 3: Negative Binomial Regression on Adverse Financial Events Index

	B	Std. Error	Exp(B)
Intercept	-.834**	.0082	.434
Female	-.001	.0110	.999
Age (z-score)	-.328**	.0062	.720
Education (z-score)	-.082**	.0059	.921
Social Class (z-score)	-.228**	.0061	.796
Buying Impulsivity (z-score)	.238**	.0052	1.269
Likelihood ratio Chi Square (5 d.f.) = 8995.67**			
Pseudo Rsq = 0.08**			

** p<0.001. R² is a pseudo R², calculated as the squared correlation between predicted and observed values of buying impulsiveness

Considering the control variables we see that ability to make ends meet increases with age, education and social class and is lower for women than men.

Buying Impulsivity shows a significant inverse association with Making Ends Meet, as hypothesised; explaining 7% of unique variance and with a greater effect size than education

and social class combined.

We turn next to the Adverse Financial Events Index. All the control variables show significant associations with adverse financial events with the exception of gender.

Experience of adverse financial events in the last five years decreases with age, education and social class. Buying Impulsivity is, as hypothesised, significantly associated with the Adverse Financial Events Index. Examining the exponential of the coefficient suggests a 1 standard deviation increase in Buying Impulsivity to be associated with a 27% increase in the Adverse Financial Events Index.

Turning to our logistic regression analysis we find buying impulsiveness to have a significant coefficient ($p < 0.0001$) such that with control variables held at mean values an increase in buying impulsiveness of 1 standard deviation is associated with a relative increase in the likelihood of bankruptcy of 31%, while the relative change in likelihood of bankruptcy across the observed range of values for buying impulsiveness amounts to 295% (absolute predicted likelihood of bankruptcy ranging from 0.007 to 0.021).

Discussion

Our findings are broadly consistent with the integrative self-regulation view of impulsive buying. There is a positive association between buying impulsiveness and both BAS Drive and BAS Fun Seeking suggesting a relationship between impulsive buying and promotion focussed goals. At the same time we also see a positive association between BIS and buying impulsiveness suggesting there is also a link between impulsive buying and prevention focussed goals. These findings are consistent with impulsive buying deriving from both promotion focused and prevention focused hedonic goals

There is a small negative association between reward responsiveness and buying impulsiveness. However, the meaning of this finding is unclear since Reward Responsiveness is the only BAS subscale which correlates markedly with BIS.

The results for emotion regulation are also consistent with a self-regulation view of impulsive buying. Buying impulsiveness is positively associated with habitual use of an expressive suppression emotion regulation strategy and inversely associated with habitual use of a reappraisal emotion regulation strategy. Thus the results are consistent with impulsive buying being used as a compensatory mechanism for poor internal emotion regulation; what Kemp and Kopp (2011) describe as 'emotion regulation consumption'.

Contrary to accounts that treat impulsive buying as unproblematic we find evidence of significant and sizeable relationships between trait buying impulsivity and multiple measures of adverse financial outcomes. People with higher levels of trait buying impulsivity are more likely to have problems making ends meet, more likely to experience adverse financial events and have a higher probability of experiencing bankruptcy. Taken together our findings offer support for the view that an important element of impulsive buying behaviour amounts to a dysfunctional approach to emotion regulation.

There are important policy implications. Given the relationship between impulsive buying and adverse financial outcomes in the population, it seems reasonable to suppose that the net effect of the considerable efforts made by retailers to encourage impulsive buying may significantly increase levels of financial distress in the population. Our findings also raise ethical questions for retailers and researchers who promote the exploitation of shoppers who are high on trait buying impulsiveness.

While the sample we have relied on is large and has significant variation in all variables studied, the study does have some important limitations. First, the sample while large is self-

selected raising the prospect that it differs from the general population in some key regards, in particular since participation depends on a survey announced on television and conducted via the internet it will significantly under sample from the poorest groups. Second, since the data is cross-sectional we can make no firm attributions about causality and our results are always open to explanation via alternative causal paths to those we have proposed.

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