

# THE EBAY ALLURE: COMPULSIVE BUYING, INTERNET ADDICTION AND THE ABILITY TO SELF-CONTROL

*Gerhard Raab, Ludwigshafen University of Applied Sciences, Transatlantic Institute, Turmstrasse 8, D-67059 Ludwigshafen am Rhein, +49-621-5918510, raab@fh-ludwigshafen.de*

*Kathrin Paul, Ludwigshafen University of Applied Sciences, Transatlantic Institute, Turmstrasse 8, D-67059 Ludwigshafen am Rhein, +49-621-5918510, kathrin.paul@fh-ludwigshafen.de*

## ABSTRACT

The study deals with the shopping behavior of eBay-users. Two research streams, research on compulsive buying and research on internet addiction, are related against the background of self-control. The focus is put on the question whether compulsive buying also occurs in the internet. In this study the usage and auction behavior on ebay as a special form of internet usage is chosen. The findings indicate that compulsive buying and internet addiction are related to each other. The ability to self-control shows a negative correlation to both. What's more, the data reveal that the tendency towards compulsive buying has an influence on the bidding behavior of ebay users.

**Keywords:** compulsive buying, ebay, internet addiction, self control, marketing ethics

## INTRODUCTION

Compulsive buying is on the rise. In Germany the proportion of compulsive buyers has risen from 5% in 1991 to 8% in 2001 [13]. Data from other countries point in the same direction [4] [12] [16]. Baumeister [1] has made the case that self-control is a promising concept for consumer research. In light of this statement, scientists have recently tried to explain compulsive buying behavior by linking it to deficits to self-regulation ability [5] [6]. Research has dealt fairly well with this question on a theoretical level. However, until today, no empirical findings were presented that could brighten and confirm the theoretically expected relationship between self-control and compulsive buying.

Secondly, research suggests that sensation seeking and variety seeking exert influence on economic decisions. "Thrill" could be proved to be a decisive motive for participating in the stock market and important for the continuous preference of investors for risky financial decisions [18]. Research also suggests that sensation or variety seeking may stimulate shopping behavior. However, until now, not much is known about the role of sensation seeking in explaining compulsive buying behavior, and empirical data are not available.

Finally, compulsive buying has been examined fairly well in a face to face context in the "real" world. Up to now, not much is known about if, how, and when compulsive buying appears in the "virtualized" real world, that is in the internet. This is a remarkable fact, not least against the background that a rising quantity of consumer goods is being traded, offered, and bought on virtual market places.

Some of these questions will be considered in the following. The aim of the study is to shed some light into the relationship between compulsive buying, internet addiction, the bidding and buying behavior on the internet in the context of ebay auctions, and the ability to self control. Furthermore, the influence of the sensation-seeking motive will be analyzed. For this purpose, hypotheses will be stated and tested, based on a convenience sample of  $N = 424$  ebay-users.

## HYPOTHESES

The following hypotheses are based on the above reflections:

- H1:** There is a positive relationship between the tendency towards compulsive buying and internet addiction.

Against the background self-regulation research the following two theses were postulated:

- H2.1:** There is a negative relationship between compulsive buying and the ability to self control in the context of ebay-use.
- H2.2:** There is a negative relationship between internet addiction and the ability to self control in the context of ebay-use.

With respect to compulsive buying behavior and ebay-use, the following hypotheses are stated.

- H3.1:** Ebay-users with a tendency towards compulsive buying behavior on average visit the eBay-site more often than inconspicuous consumers, that is users who do not show this tendency.
- H3.2:** Ebay-users with a tendency towards compulsive buying behavior report a higher “residence time” on average (i.e., spend more time per visit), on the ebay-site than inconspicuous consumers.
- H3.3:** Ebay-users with a tendency towards compulsive buying behavior execute more transactions on average (i.e., buy more often) on the ebay-site than inconspicuous consumers.
- H3.4:** Ebay-users with a tendency towards compulsive buying behavior spent more money on average on the ebay-site than inconspicuous consumers.

The reported finding that compulsive buying behavior serves the need to release tension [14] leads to the following hypothesis:

- H4:** There is a positive relationship between compulsive buying and the thrill and adventure seeking motive.

## METHOD AND INSTRUMENTS

A convenience sample of  $N = 423$  ebay-users was interviewed by students of the Ludwigshafen University of Applied Sciences (Germany) between November 2-14, 2005. The respondents met the criteria of having made at least two online-transactions on ebay within the last 12 months. The survey was based on quota sampling according to a combination of the two characteristics age and gender. Two age groups were defined, the first ranging from 18 to 29 years, the second from 30 to 40 years. Each age group comprised women and men in equal shares. Interviews were conducted in a face-to-face context. The tendency towards compulsive buying was measured by the SKSK-scale [13]. This screener is an adapted German version of the Compulsive Measurement Scale, developed by Valence, d’Astous and Fortier [17]. The scale consists of 16 items. For each item the extent of agreement or disagreement is expressed on a four-point Lickert scale, ranging from 1 (“I don’t agree”) to 4 (“I totally agree”). The instrument had previously been tested successfully in several surveys in terms of its validity and reliability with an internal consistency in terms of Cronbach’s alpha coefficient of  $\alpha = 0.9166$  in a 2001 representing sample [11]. In the study at hand Cronbach’s alpha coefficient amounts to  $\alpha = 0.89$ .

The screener is based on the assumption that compulsive buying is an extreme form of compensatory buying. A behavior is called compensatory, when it doesn't primarily serve the purposes this behavior is normally dedicated to, but is supposed to compensate deficits resulting from unsolved problems in other areas [9]. Following Faber and O'Guinn [7] [8] respondents were classified as "compulsive buyers" if a cutoff-score of two standard deviations beyond the mean value was reached on the Scale ( $M = 26.4588$ ,  $SD = 9.0571$ ). In doing so, consumers are classified as being "compulsive" in terms of the Scale when they reach a score of 45 or more. This represents a fairly conservative choice. What's more, the cut-off point accords fairly well with the score of 26 self selected compulsive buyers ( $M = 45.2308$ ,  $SD = 10.0968$ ) who were screened before by in depth interviews and psychological instruments, such as self-esteem, psychasthenia, depression, locus of control [15]. Accordingly, consumers were classified as compensatory buyers, if their scores are more than one but less than two standard deviations above the mean.

"Internet addiction" was measured by a 10 item scale, developed by Hahn and Jerusalem [10]. Again, the extent of agreement and disagreement to the items is expressed on a four-point Lickert scale, ranging from 1 ("I don't agree") to 4 ("I totally agree"). An example item is "The internet is always on my mind, even if I am not online", another one: "I often neglect my duties to spend more time in the internet". The reliability of the scale in terms of Cronbach's alpha coefficient scores to  $\alpha = 0.86$  in the present study. Hahn and Jerusalem report a slightly better  $\alpha = 0.92$  for their own study.

For the measurement of the TAS motive, Zuckerman [19] developed the four-dimensional Sensation Seeking Scale (Form V), which was translated into German by Beauducel [2], in clearance with Zuckerman. In the study at hand, the TAS-subscale was used. The subscale consists of 10 items, which are presented in a forced-choice-format. Items express a desire to engage in sports or other activities that provide unusual sensations of speed or defiance of gravity, such as parachuting and scuba diving. An example item is "I sometimes like to do things that are a little frightening". For the German scale, Beauducel, Strobel, and Brocke [3] report an estimated Cronbach's alpha value of  $\alpha = 0.80$ . In the present study the reliability of the scale was  $\alpha = 0.75$ .

For the measurement of self controlled ebay-usage a four item auxiliary scale was developed. The four items express a failure in keeping track of one's bidding behavior on ebay, for example the tendency to go beyond a predefined maximum limit, the tendency to overdraw a pre-committed residence time etc. Some example items are: "After having finished an auction, do you sometimes think your bid was too high?", and "Do you sometimes feel that you've bought more on ebay than initially planned?" Respondents were asked to answer these questions on a four-point scale (1, "almost never"; 2 "rarely"; 3 "often"; 4 "almost always"). Cronbach's alpha coefficient of this four item scale amounts to  $\alpha = 0.68$ .

Finally, some questions were asked to assess selected aspects of the respondents' ebay-usage behavior. The items refer to the frequency of visits on the auction site, the residence time (how long respondents visit the site), the number of transactions they execute on average and the amounts the bidders have paid.

## FINDINGS

The sample description reveals that the specified quotas with respect to gender (male: 51%) and age (18-29 years: 51%; 30-40 years: 48%) were met fairly well. On average the respondents were 29 years old. Compared to the general population, however, the sample is clearly biased towards persons with a higher educational background in general and towards students and academics in general: 44% of the sample are students or university graduates, another 35% hold a final secondary school examination.

Hypotheses 1, H2.1, and H2.2 were tested by Pearson correlation analysis. The result verifies the expected positive relationship between compulsive buying and internet addiction (hypothesis 1): There is a highly significant positive relationship between the tendency towards compulsive buying behavior

and the addictive usage of the internet ( $r = 0.449$ ;  $p < .001$ ). The analysis of the data also verifies hypotheses H2.1 and H2.2. There is a statistically highly significant negative relationship between the tendency towards compulsive buying behavior and the ability to self-control in the context of ebay-usage ( $r = -0.384$ ;  $p < .001$ ); The Pearson correlation coefficient between internet addiction and self-controlled ebay-usage amounts to  $r = -0.378$  ( $p < .001$ ).

The hypotheses of block H3 are only partially fulfilled. The single-factored ANOVA about the effect of compulsive, compensatory and inconspicuous buying behavior provide a highly significant result (H3.1:  $F = 7.318$ ,  $df = 2$ ,  $p = .001$ ; H3.2:  $F = 4.485$ ,  $df = 2$ ,  $p = .012$ ; H3.3:  $F = 8.095$ ,  $df = 2$ ,  $p < .001$ ; H3.4:  $F = 11.690$ ,  $df = 2$ ,  $p < .001$ ). However, examining the multiple comparisons for significant differences between compulsive, compensatory, and inconspicuous buying behavior and the (average) frequency of visits per month (H3.1), the Post Hoc Test reveals a significant difference only between inconspicuous and compensatory buyers ( $p = .013$ ). The effect size in terms of Cohen's  $d$  amounts to  $d = 0.44$ .

Furthermore, the analysis of the multiple comparisons related to differences between compulsive, compensatory, and inconspicuous buying behavior on the one hand, and the averaged residence time on the other hand (H3.2) reveals a significant difference only between inconspicuous, and compulsive buyers ( $p = .043$ ). The effect size is  $d = 0.49$ .

In addition, the examination of compulsive, compensatory, and inconspicuous buying behavior with respect to the (average) number of purchases on ebay per year (H3.3) shows that significant differences only exist between inconspicuous buyers and compensatory buyers ( $p = .04$ ;  $d = 0.38$ ). The difference between inconspicuous and compulsive buyers does not reach statistical significance ( $p = .082$ ). Substantial significance is given on a mid level ( $d = 0.44$ ).

Finally, the Post Hoc Test reveals a significant difference between inconspicuous buyers and compulsive buyers ( $p = .017$ ) with respect to the money spent per year for purchases on ebay (H3.4). The given substantial significance of this difference is considerable ( $d = 0.64$ ). The difference between inconspicuous and compensatory buyers shows some substantial significance ( $d = 0.33$ ), however the result falls short of statistical significance ( $p = .064$ ).

Finally hypothesis H4, stating a positive relationship between the tendency towards compulsive buying and the TAS motive could not be verified ( $r = -0,079$ ;  $p = .106$ ) in this sample.

## **DISCUSSION AND LIMITATIONS OF THE STUDY**

The results indicate that compulsive buying and internet addiction are related to each other. The findings imply that both behavioral disorders are caused by deficits in the ability of self-control. Furthermore, the study has provided evidence that the tendency towards compulsive buying has an influence on the bidding behavior of ebay-users. Consumers with a tendency towards compulsive buying spend more time on the auction site and they spend much more money when they buy items on ebay than inconspicuous consumers. This finding is remarkable, since shopping on the internet has a different quality than buying in shops. For example, on the internet, there is a lack of personal assistance, attention of the social environment and the immediate presence and availability of goods. The findings imply that social motives, generally thought to hold only for physical shopping are actually applied by online consumers as well, in an environment generally held up as a solely functional conduit of shopping. This implication finds support by findings of a study, conducted by Parsons [12] among current online shoppers. Furthermore, the findings of the current ebay study imply that the power of the endogenous attraction of goods and brands might have been underestimated in the past.

Compensatory buyers visit the site more often than inconspicuous and compulsive buyers, but they don't stay as long as compulsive buyers. Their buying frequency is quite similar to the buying frequency of compulsive buyers, but they only spend half of the money. Even if the significance of this difference in spending could not be proved, not least due to the small number of compulsive buyers in the sample ( $N$

= 29), the result is challenging. One possible explanation for these differences could be that compensatory buyers are able to leave auctions earlier than consumers with a tendency towards compulsive buying. Their higher ability to self-controlled ebay-usage may be the cause therefore.

Regarding the relations between internet addiction and the ebay-usage behavior, we can see that internet addicts don't visit the ebay site more often than others. Obviously, the internet provides other possibilities, which are perceived as being more attractive (e.g., online-games, "multi-user dungeons", online-gambling; online-relationships, chats, online-sex etc.). But: if internet addicts visit the ebay site, they stay longer, buy more frequently and spend more money than anyone else. Hence this behavior pattern is similar to the pattern of compulsive buyers. This finding may be explained as well by deficits in the ability of self-controlled ebay-usage.

The expected relationship between the tendency towards compulsive buying and the TAS motive could not be verified in this study. It might be that the TAS-scale in use didn't cover any shopping and consuming behaviors. This point might be of relevance since research suggests a narrowing of the affected consumers' interests. Thus, compulsive buyers are not ready for any other kind of stimulation that is not related to buying.

Some limits of the study have to be acknowledged. The findings have only preliminary character. They are not based on a probability sampling but are derived from an exploratory study. Some of the scales were used as auxiliaries, this holds true particularly to the self-controlled ebay-usage scale. The constricted scale reliability is not convincing. More elaborated scales such as the one developed by Tangney, Baumeister and Boone [16] are necessary, even if they are rather unspecific.

The findings have implications with regard to marketing ethics. In its code of conduct ebay raises the challenging claim: "We are committed to exercising the highest level of ethical standards in everything we do" [4]. In order to meet this responsibility fully, it might be adequate for the company to inform users about the risk of uncontrolled bidding behavior. In another step ebay could offer some self-restricting mechanisms. For example, Casinos in Germany advise problem gamblers to sign a list so that they are not able to enter the location anymore. The same mechanism could prevent ebay-users from non-functional bidding behavior. Furthermore, ebay could develop and make available a self-administered screener that would enable bidders to assess their bidding and buying behavior, if needed.

## REFERENCES

- [1] Baumeister, R.F. (2002), "Yielding to Temptation. Self-Control Failure, Impulsive Purchasing, and Consumer Behaviour," *Journal of Consumer Research*, 28, 670-676.
- [2] Beauducel, André, Burkhard Brocke, and Alexander Strobel (1999), "Construct Validity of Sensation Seeking: A Psychometric Investigation," *Zeitschrift für Differenzielle und Diagnostische Psychologie*, 20, 155-171.
- [3] Beauducel, André, Alexander Strobel, and Burkhard Brocke (2003), "Psychometrische Eigenschaften und Normen einer deutschsprachigen Fassung der Sensation Seeking-Skalen, Form V," *Diagnostica*, 49, 61-72.
- [4] Ebay (2007), "Corporate Governance," <http://investor.ebay.com/governance.cfm>.
- [5] Faber, Ronald J. (2003), "Self-Control and Compulsive Buying," in *Psychology and Consumer Culture*, ed. Tim Kasser and Allen D. Kanner, Washington, DC: American Psychological Association, 169-189.
- [6] Faber, Ronald J. and Kathleen D. Vohs, (2004), "To Buy or Not to Buy? Self-Control and Self-Regulatory Failure in Purchase Behaviour," in *Handbook of Self-Regulation*, ed. Roy F. Baumeister and Kathleen D. Vohs, New York: Guilford Press, 509-524.

- [7] Faber, Ronald J. and Thomas C. O'Guinn (1989), "Classifying Compulsive Consumers: Advances in the Development of a Diagnostic Tool," *Advances in Consumer Research*, 16, ed. Thomas K. Srull and Brian Sternthal, Provo, UT: Association for Consumer Research, 738-744.
- [8] ————— (1992), "A Clinical Screener for Compulsive Buying," *Journal of Consumer Research*, 19, 459-469.
- [9] Grønmo, Sigmund (1988), "Compensatory Consumer Behaviour: Elements of a Critical Sociology of Consumption," in *The Sociology of Consumption*, ed. Per Otnes, Oslo: Solum Forlag, 65-85.
- [10] Hahn, André and Matthias Jerusalem (2003), "Internetsucht: Reliabilität und Validität in der Online-Forschung," in *Online-Marktforschung. Theoretische Grundlagen und praktische Erfahrungen*, („Internet addiction: reliability and validity in online research," in *Online Marketing Research. Theoretical basics and practical experiences*), ed. Axel Theobald, Marcus Dreyer, and Thomas Starsetzki, Wiesbaden: Gabler, 161-186.
- [11] Neuner, Michael, Gerhard Raab, and Lucia Reisch (2005), "Compulsive Buying in Maturing Consumer Societies. An Empirical Re-Inquiry," *Journal of Economic Psychology*, 26, 509-522.
- [12] Parsons, Andrew G. (2002), "Non-Functional Motives for Online Shoppers: Why we Click," *Journal of Consumer Marketing*, 19, 380-392.
- [13] Raab, Gerhard, Michael Neuner, Lucia Reisch, and Gerhard Scherhorn (2005), *Screeningverfahren zur Erhebung von kompensatorischem und süchtigem Kaufverhalten (screening procedure for the survey of compensatory and addictive buying)*, Göttingen: Hogrefe.
- [14] Scherhorn, Gerhard (1990), "The Addictive Trait in Buying Behaviour," *Journal of Consumer Policy*, 13, 33-51.
- [15] Scherhorn, Gerhard, Lucia Reisch, and Gerhard Raab (1990), "Addictive Buying in West Germany. An Empirical Study," *Journal of Consumer Policy*, 13, 355-387.
- [16] Tangney, June P., Roy F. Baumeister, and Angie Luzio Boone (2004), "High Self-Control Predicts Good Adjustment, Less Pathology, Better Grades, and Interpersonal Success," *Journal of Personality*, 72, 271-324.
- [17] Valence, Gilles, Alain d'Astous, and Louis Fortier (1988), "Compulsive buying: Concept and measurement," *Journal of Consumer Policy*, 11, 419-433.
- [18] Wong, Alan and Bernardo J. Carducci (1991), "Sensation Seeking and Financial Risk Taking in Everyday Money Matters," *Journal of Business and Psychology*, 5, 525-530.
- [19] Zuckerman, Marvin (1996), "Item Revisions in the Sensation Seeking Scale Form V, (SSS-V)," *Personality and Individual Differences*, 20, 515.