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# **Differences and Similarities between Impulse Buying and Variety Seeking:**

## **A Personality-Based Perspective**

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# **Differences and Similarities Between Impulse Buying and Variety Seeking: A Personality-Based Perspective**

## **Abstract**

Although personality is a key determinant of consumer purchasing decision making, the role of personality traits on impulse buying and variety seeking is not conclusive. This research uses a personality perspective to determine the unique associations between impulse buying tendency (IBT), variety seeking tendency (VST), and the Big Five personality traits within one integrated framework. Based on data from a nationally representative sample of 1,644 Norwegian adults, the results show that while IBT and VST might be correlated, they differ significantly with respect to two major personality aspects: Neuroticism and Openness to Experience. Specifically, the present study indicates that Neuroticism predicted IBT positively and VST negatively, while Openness was a strong predictor of VST and unrelated to IBT.

Keywords: Big Five personality, impulse buying tendency, variety seeking tendency, structural equation modeling.

Advanced electronic devices (e.g., smartphones, tablets) and new ways of shopping online have increased the opportunities to buy products and services more easily and faster than ever before. In this new context, some consumers may be more susceptible to making impulse purchases (Hofmann, Strack, & Deutsch, 2008; Verplanken & Sato, 2011; Zhang & Shrum, 2009) or to looking for variety in different purchase situations (Etkin & Ratner, 2012; Fishbach, Ratner, & Zhang, 2011; Shen & Wyer, 2010). While impulse and varying choice behavior could in fact be due to a number of cues associated with the buying context (e.g., promotions, discounts, and convenience), considerable impulse or switching behavior takes place even in the absence of external factors (Trivedi, Bass, & Rao, 1994). Recent studies note that personality influences the way individuals purchase and have called for an expanded look at which similarities and differences exist between impulse buyers and variety seekers from a personality-trait perspective (Punj, 2011; Sharma, Sivakumaran, & Marshall, 2010; Sun & Wu, 2011; Verplanken & Herabadi, 2001). The importance of investigating personality as a determinant of purchasing behavior stems from the fact that personality is an inborn individual trait which provides a consistent guide to an individual's actions (Carver & Scheier, 2008; Soto, John, Gosling, & Potter, 2010). Thus, how personality characteristics affect consumers' decisions about future purchases is an important research question, and an understanding of the behavioral spectrum of different consumer personalities can help manage these behaviors (Bosnjak, Galesic, & Tuten, 2007).

Several researchers have illustrated how different personality factors relate to impulse buying, impulsivity, variety seeking behavior, or sensation seeking (e.g., Aluja, Garcia, & Garcia, 2003; Bratko, Butkovic, & Bosnjak, 2013; Russo, Leone, Penolazzi, & Natale, 2012; Sun & Wu, 2011; Sharma et al., 2010; Sharma, Sivakumaran, & Marshall, 2014; Verplanken & Herabadi, 2001; Webster & Crysel, 2012). For instance, Sharma et al. (2010) show that consumer impulsiveness has a strong relationship with impulse buying, and optimum

stimulation level has a strong link with variety seeking behavior. Verplanken and Herabadi (2001) provide empirical findings about a significant negative correlation between individuals' conscientiousness and IBT, while other studies (e.g., Sun & Wu, 2011) could not confirm this relationship. Although prior research has made important contributions, it has almost exclusively focused on isolated personality facets (e.g., Aluja et al., 2003) or personality traits (such as consumer impulsiveness and optimum stimulation level) that originate from the personality constructs of impulsivity and impulsive sensation seeking, respectively (Eysenck, 1993; Zuckerman, Kuhlman, Joireman, Teta, & Kraft, 1993). Thus, little is known about the unique similarities and differences that exist between impulse buying and variety seeking from a more general personality trait perspective (Punj, 2011, p. 746). The present study seeks to address this gap by analyzing whether and how five well-known personality traits, the Five-Factor Model or Big Five Theory by McCrae and Costa (1997), relate to IBT and VST.

Specifically, drawing on the theoretical perspectives from the literature on the Big Five Theory (McCrae & Costa, 1997), this study takes a broader personality view, showing that although IBT and VST may seem to be similar behavioral tendencies, they differ significantly in their relationships with two major personality traits, namely, Neuroticism and Openness to Experience. Furthermore, the current research addresses impulse buying and variety seeking as behavioral tendencies independent of a particular product or context. Impulsive-buying tendency is different from impulsive-buying behavior (Sun & Wu, 2011). The study aims to capture those impulsive responses and variety dispositions that remain relatively stable over time and in different contexts (Rook & Fisher, 1995; Van Trijp & Steenkamp, 1992; Verplanken & Herabadi, 2001). In general, previous studies rely on specific cues and contexts that trigger impulse buying and variety seeking (Youn & Faber, 2000). The evidence indicates that personality rarely predicts any isolated behavioral act; rather, personality explains or

predicts trends, typical ways of acting, and behavior over time (Ajzen, 2005; Fleeson & Nofle, 2009). Therefore, in contrast to prior research, the present paper addresses impulse buying as an internal tendency to buy spontaneously or unreflectively independently of a product situation and variety seeking as the tendency to seek variety in order to meet an internal need for stimulation in daily routines and purchasing activities (Rook & Fisher, 1995; Sun & Wu, 2011).

To sum up: the present study extends the previous literature on impulse buying and variety seeking to include the individual's Big Five personality factors in one integrated model. This approach helps marketers to better understand the differences between impulse buying and variety seeking and the major personality facets that contribute to these differences. The conceptualization of impulse buying and variety seeking as general tendencies to behave in a certain way makes it applicable to purchasing events characterized by a broad range of factors, including whether the shopping is done online or offline, the nature of the product, and the retail environment. Thus, the present research applies to an expansive domain of situations of purchasing decisions that have largely gone unstudied by analyses of isolated product or situational factors. A large and representative sample of the Norwegian population is employed to examine the underlying personality mechanisms of IBT and VST via a national survey rather than the convenience samples employed by previous studies and consequently the present research adds to the consumer behavior domain both conceptually and empirically.

## **Conceptual Framework**

### **Impulse Buying Tendency (IBT)**

Researchers approach impulse buying from different perspectives – psychological and economical – highlighting distinct mechanisms that explain impulse buying tendency and

behavior (for a recent review, see Verplanken & Sato, 2011). Early marketing research literature describes impulse buying simply as unplanned purchase behavior (e.g., Stern, 1962), and focuses on the possibility of classifying products as impulse and non-impulse items. Recent research criticizes this approach, arguing that impulse buying is something linked to the individual rather than the product, and that impulse buying can be more than unplanned or unintended behavior. For example, Rook (1987) defines impulse buying as a state where “a consumer experience[s] a sudden, often powerful and persistent urge to buy something immediately” (p. 191).

Verplanken and Herabadi (2001) suggest that IBT is rooted in personality. In the marketing literature, researchers distinguish between *impetus* (buying trait tendency) and *action* (impulsive-buying behavior) (Rook & Fisher, 1995). While impetus is a general trait that is consistent across product categories, action is by nature linked to product and situation. For example, Jones, Reynolds, Weuan, and Beatty (2003) state that IBT is a trait that is “relatively stable, highly consistent, and responsible for exerting a generalized causal effect on behavior [...] a general tendency to purchase items of all product categories (without reason) on impulse” (p. 506). Operationally, this definition implies that IBT is a general action of buying on impulse compared to a product-specific impulse buying tendency such as buying cola brands on impulse or a can of Pepsi in a given store at a specific time or situation. This study defines and measures impulse buying tendency as an internal trait experienced by the consumers (e.g., Youn & Faber, 2000), as a general stable tendency rooted in personality (Verplanken & Sato, 2011), or more specifically, the tendency “to buy spontaneously, unreflectively, immediately, and kinetically” (Rook & Fisher, 1995, p. 306; Sun & Wu, 2011, p. 342; Verplanken & Herabadi, 2001, p.73).

### **Variety Seeking Tendency (VST)**

During the past four decades, research has shown that many consumers seek variety in their behavior. Variety seeking is a person's tendency to switch away from the choice made on the last occasion (Kim & Drolet, 2003), or "the tendency of individuals to seek diversity in their choices of services and goods" (Kahn, 1995, p. 139). This tendency may occur even when variety seeking leads to relatively lower satisfaction with the new choice (Ratner, Kahn, & Hahnemann, 1999). Literature also defines variety seeking based on its antecedents such as internal personal motivations and external, or derived, driving forces based on external situations (Kahn, 1995).

The concept of an optimal level of stimulation (OSL) is central to theories that explain the variety seeking tendency (Sharma et al., 2010). The optimal level of stimulation refers to the amount of stimulation a person likes to receive from all possible internal and external sources, across all possible situations, over time (Zuckerman, 1979). Although researchers differ in their approaches and sources for explaining variety seeking, many of them base their theories on the concept of an optimal stimulation level and sensation seeking, and not on the more activity-specific level such as shopping or consumption (Menon & Kahn, 1995). According to Zuckerman (1994), sensation seeking is a trait defined "by the seeking of varied, novel, complex, and intense sensations and experiences and the willingness to take physical, social, legal, and financial risks for the sake of such experiences" (p. 27).

This study defines variety seeking as an individual (internal) tendency to seek variety in daily routines and activities, based on a personality trait termed 'optimum stimulation level' (OSL), in line with Sharma et al. (2010). This approach implies that VST is independent of preferences for shopping for a particular product in a particular situation (Menon & Kahn, 1995), and in accordance with other studies about consumer variety seeking tendencies and behavior concerning the level to which the construct is defined and assessed (Steenkamp & Burgess, 2002; Van Trijp & Steenkamp, 1992).



## The Conceptual Model

Figure 1 illustrates the conceptual model underlying this research. Without doubt, the Five-Factor Model (FFM) is the most widely adopted model of general personality traits (Fraj & Martinez, 2006). The Big Five factors sometimes have different names in the literature; this study uses Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience as labels (McCrae & Costa, 1997).

Figure 1 about here

Some personality researchers position the concepts of impulsivity and sensation seeking in one conceptual construct such as ‘Impulsive Sensation Seeking’ (Cloninger, Svrakic, & Prybeck, 1993; Eysenek, 1993; McDaniel & Mahan, 2008; Zuckerman, 1994; Zuckerman et al., 1993), while others treat impulsivity and sensation seeking as two distinct constructs (Smith et al., 2007; Whiteside & Lynam, 2001). For example, Webster and Crysel (2012) found a two-factor structure of the ‘Impulsive Sensation-Seeking Scale’ with a correlation of .68 between the impulsivity (Imp-4) and sensation-seeking (SS-4) subscales. They also found that Conscientiousness was negatively related to impulsivity, but not to sensation seeking. Openness to Experience was positively related to sensation seeking, but not to impulsivity. Arguments can be put forward for the discriminant validity of IBT and VST. Initial studies (e.g. Rook, 1987) argue that impulse buying is more emotional than rational, being characterized by responses to negative feelings and the overpowering, uncontrolled urge to buy (Faber & O’Guinn, 2008; Verplanken & Sato, 2011). By contrast, variety seeking implies both an emotional and a more logical and cognitively intensive decision making rooted in the need for change in an attempt to seek diversity (Kahn, 1995). Some empirical evidence exists for very weak associations between the two constructs (e.g., std.  $b = .18$ , in Sharma et al., 2010;  $r = .12$  in Troisi, Christopher, & Marek, 2006). This leads to the first hypothesis:

*H1:* VST is positively associated with IBT.

Extraversion comprises behavioral and emotional characteristics including social dominance, emotional feeling, sociability, achievement, and motor activity (Carver & Scheier, 2008). Researchers have classified these characteristics into two main factors: affiliation, a general disposition of interpersonal engagement, and agency, a manifestation of dominance, exhibitionism, and achievement motivation associated with feelings of pleasure (“liking”) and incentive salience attribution (“wanting”) (Depue & Collins, 1999). Research on addictive and compulsive behavior suggests that the neural system sensitized by pathological behaviors is involved specifically in incentive salience attribution. This process transforms the sensory features of ordinary stimuli so that they become especially salient stimuli that “grab the attention”, are attractive and wanted, thus tempting and guiding behavior to a goal (Robinson & Berridge, 1993). The neural system responsible for incentive salience attribution produces goal directed behavior not only in the absence of subjective pleasure (i.e., a liking effect), but also in the absence of conscious awareness of wanting (Robinson & Berridge, 1993). Similar to addictive behaviors, the psychological process underlying impulse buying sometimes operates outside of conscious awareness (Jones et al., 2003). Although individuals may report that they feel bad, will stop overspending, and be more careful, they are themselves bewildered by the intensity of their impulsive actions. Thus, a possible explanation may be that extraverted individuals buy from impulse as a manifestation of the incentive salience attribution factor, and if the incentive salience attributed to purchasing things and the associated stimuli become pathologically amplified, then impulse buying tendency may arise.

*H2a:* Extraversion is positively related to IBT.

Extraversion is theoretically related with variety seeking through the concept of an “optimal level of stimulation” (Eysenck, 1967; Zuckerman, 1979). According to Eysenck’s arousal theory of extraversion, there is an optimal level of arousal at which performance is maximized. The extraverted individuals are constantly under-aroused and bored and therefore

they are in need of external stimulation to bring them up to an optimal level of performance. In that sense, the extraverts tend to favor exciting, novel, and risk-taking activities to achieve optimal experience (Zuckerman, 1994). Compared to extraverts, introverts are more likely to be over-aroused and therefore tend to be more resistant to decreasing vigilant performance and seeking variety in their behavior. Consistent with this theory, a positive relationship between Extraversion and variety seeking tendency can be expected, which leads to the next hypothesis:

*H2b:* Extraversion is positively related to VST.

Agreeableness is a trait characterized by trust, straightforwardness, altruism, compliance, modesty, and tender-mindedness (McCrae & Costa, 1997). The association of Agreeableness with IBT can be linked to the concept of “stability” (De Young, 2010). Agreeable individuals along with conscientious and non-neurotic individuals display a general tendency toward restraint and a lack of disruption in emotion, motivation, and social relationships (Digman, 1997). They are perfectly willing to compromise or to deny their own needs in order to get along with others. The agreeable individuals are more likely to restrain their impulses in order to avoid a possible amount of deception or negative image in social relationships (De Young, 2010), and a reasonable hypothesis is therefore to expect a negative relation between Agreeableness and impulsivity, including impulse buying tendency.

*H3a:* Agreeableness is negatively related to IBT.

Seeking out varied, novel, or complex sensations and experience, typically has a risk factor associated with it (Roberti, 2004). Zuckerman et al. (1993, p. 759) referred to variety seeking as the “willingness to take risks for the sake of excitement or novel experiences”. In the personality literature, it is often argued that agreeable individuals are typically risk averse (Zuckerman & Kuhlman, 2000), because they intent to avoid doing things which others might disapprove. Generalized risk-taking behaviors across four main areas (drinking, drugs, sex

and gambling) were negatively related to sociability (agreeableness) (Zuckerman & Kuhlman, 2000). The empirical evidence on the relationship between Agreeableness and variety seeking is limited. Some studies by Russo et al. (2012) and Webster & Crysel (2012) found no significant relationship between Agreeableness and sensation seeking and Aluja et al. (2003) found that excitement seeking individuals can be both sociable (i.e. agreeable) as well as unsociable (i.e. no agreeable). Consistent with the theoretical view, however, agreeable individuals may be less likely to be variety (risk) seekers. Subsequently, it is hypothesized that:

*H3b: Agreeableness is negatively related to VST.*

Conscientious individuals are willing to comply with conventional rules, norms, and standards (Hogan & Hogan, 2007). They are thorough, careful, and vigilant and strive for competence, order, dutifulness, achievement, self-discipline, and deliberation. These individuals plan their shopping trips carefully and are less likely to buy unneeded items (Verplanken & Sato, 2011). The conscientious individuals prefer to restrain their impulses and have a tendency to plan and control their behavior (Carver, 2005). Hence, the self-discipline traits that characterize the conscientious individuals should be negatively related to impulse buying and variety seeking. Some studies (Russo et al., 2012; Verplanken & Herabadi, 2001) found a negative bivariate correlation between Conscientiousness (FFPI scale) and IBT. Similar results are found in Bratko et al.'s (2013) study of twins, but Conscientiousness (NEO-FFI scale) and IBT were unrelated when they performed a hierarchical regression analysis where the Big Five personality factors were employed as uncorrelated factors. Based on the theoretical expectations, the following hypotheses are suggested:

*H4a: Conscientiousness is negatively related to IBT*

*H4b: Conscientiousness is negatively related to VST.*

Several theoretical models refer to the relationship between Neuroticism and impulsivity. In the NEO PI-R model, Impulsiveness is a facet of Neuroticism (Costa & McCrae, 1992) and the Abridged Big Five Circumplex for the International Personality Item Pool (AB5C-IPIP; Goldberg, 1999) locates Impulse Control as a facet of Emotional Stability (De Young, 2010). The UPPS model (Whiteside & Lynam, 2001) demonstrates that, in the Big Five, one of the traits most directly related to impulsivity is Neuroticism. Neuroticism involves several characteristics including negative affect, reactivity to stress, lack of the ability to control urges, and inability to delay gratification. Impulse buying tendency may be one manifestation of lack of control, stress reaction, and immediate gratification. Individuals scoring high on lack of control are spontaneous, reckless, careless, and less likely to plan their activities. A generalized lack of control would therefore be a potential factor of impulse buying tendency (Youn & Faber, 2000). Moreover, neurotic individuals have negative emotional states (e.g., anxiety, depressed mood) under everyday life conditions, which may lead them to engage in behaviors (such as buying) that help them to escape from the negative emotional state or at least provide some relief. Finally, neurotic individuals tend toward immediate gratification of their desires (Youn & Faber, 2000) and may have greater difficulties with feeling deprived by not buying something even when the corresponding product does not correspond to their current needs. Three studies (Bratko et al., 2013; Sun & Wu, 2011; Verplanken & Herabadi, 2001) investigated the Neuroticism–IBT relationship. Only one of those studies (Bratko et al., 2013, NEO-FFI scale) found a significant relationship and there are mixed empirical findings regarding the Neuroticism–general impulsivity relationship in Russo et al. (2012, BFQ scale) and Webster and Crysel (2012, BFI scale). Based on the theoretical arguments, the following hypothesis is formulated:

*H5a:* Neuroticism is positively related to IBT.

Theoretically, the neurotic individuals are concerned about the details of how to

accomplish tasks and about the obstacles that are ahead (Jacques, Garger, Brown, & Deale, 2009). They avoid situations where there is uncertainty as regards future outcomes and are more likely to experience negative emotions such as anxiety, fear, sadness, embarrassment, anger, guilt, and disgust in new and complex situations. However, some empirical studies cannot find statistically significant evidence regarding the link between Neuroticism (IPIP, BFQ, and BFI scales) and variety or sensation seeking tendencies (e.g., Dahlen & White, 2006; Russo et al., 2012; Webster & Crysel, 2012). The theoretical arguments lead to the next hypothesis:

*H5b:* Neuroticism is negatively related to VST.

Openness to Experience is the degree to which a person needs intellectual stimulation, change, and variety. Theoretically, Openness and Extraversion are related through a common dimension called Plasticity. Plasticity reflects a general tendency toward exploration and engagement with novel phenomena (DeYoung, 2010). As with Extraversion, it is reasonable to expect that Openness would be positively related with IBT through the incentive salience attribution factor and the associated motivational state that facilitates and guides approach behavior to a goal. However, closer inspection of Openness to Experience provides an additional insight into the nature of Openness as a personality trait. Researchers have found that individuals who score high for Openness have good access to and awareness of their own feelings and this facet may have regulatory or inhibiting effects on impulsive actions (De Young, 2010). Hence, a negative relationship between Openness to Experience and the tendency to buy spontaneously, unreflectively, immediately, and kinetically (i.e., IBT) is likely to exist and this provides the basis of the next hypothesis:

*H6a:* Openness to Experience is negatively related to IBT.

As Openness is a tendency towards exploration and engagement in novel phenomena, open individuals are curious and like to try new things (Jacques et al., 2009). These

individuals are naturally seeking for new situations and will not be apprehensive of trying new products. As an individual with a high need for openness is always looking for new ways to accomplish his needs, trying a new product or service would be a welcomed experience. This action may result in lower levels of anxiety when prompted to try novel activities, situations, or products. Indeed, some previous studies found a significant positive relationship between Openness and sensation seeking (Aluja et al., 2003; Dahlen & White, 2006; Garcia, Aluja, Garcia, & Cuevas, 2005; Russo et al., 2012; Webster & Crysel, 2012) but there is no evidence regarding the relationship Openness–variety seeking. Based on the above arguments, the next hypothesis is stated:

*H6b:* Openness to Experience is positively related to VST.

Thus far, the extent to which the Big Five personality dimensions predict impulse buying and variety seeking tendencies is unclear. Many of the results from the previous studies are inconsistent because: (a) the authors interpreted simple bivariate correlations (e.g., Verplanken & Herabadi, 2001; Webster & Crysel, 2012); (b) they have relied on hierarchical regression analyses without accounting for the intercorrelations between the Big Five dimensions (e.g., Bratko et al., 2013); (c) they considered inadequate scales for assessing personality constructs or have analyzed personality constructs in isolation (e.g., Aluja et al., 2003); and (d) they analyzed sensation seeking instead of variety seeking. As a contribution to the literature, the present study applies a structural equation model that incorporates the measurement error and thus adjusts the correlations and path coefficients appropriately. The study uses a scale of personality traits based on an extended version of the Ten-Item Personality Inventory (TIPI) developed by Gosling, Rentfrow, and Swann (2003), which has been successfully validated against more comprehensive scales like the NEO-FFI (Costa & McCrae, 1992). In addition, the study uses a nationally representative sample. Finally, the

hypotheses refer specifically to variety seeking tendency related to buying behavior where individuals tend to seek diversity in their choices of services and goods.

## **Methodology**

### **Sample and Design**

A sample of the Norwegian adult population (18–74 years old) which was nationally representative with respect to age, gender, and region was recruited randomly to increase the external validity of the findings and partially verify earlier studies which have mainly been conducted using convenience (e.g. student) samples (e.g., Aluja et al., 2003; Bratko et al., 2013; Russo et al., 2012; Verplanken & Herabadi, 2001; Webster & Crysel, 2012). The sample included 1,644 respondents who were selected randomly from a pool of pre-recruited respondents by a professional research agency. A summary analysis of the main characteristics of the sample shows that 50.5% of the participants were male, 68.5% were living as a couple, 31% had lower university education (1–3 years), and 26% had higher university education (4 years or more). The average age was 43 years and approximately 55% of the respondents had an income level between 400,000–900,000 NOK per year (middle class). Individuals completed an online survey about their personality, variety seeking tendencies, and impulse buying tendencies, along with other constructs that are not part of this analysis. The questionnaire was anonymous and the participants received a shopping voucher in exchange for their participation.

### **Construct Measurement**

This study used well-established multi-item scales to measure personality traits and IBT and VST constructs. All items were measured with a 7-point Likert scale anchored at 1 (strongly disagree) and 7 (strongly agree). The measurements of personality traits were based on an extended version of the Ten-Item Personality Inventory (TIPI) developed by Gosling et



al. (2003). All personality items were presented by the heading “I see myself as” followed by unipolar trait descriptive adjectives, and measured on a 7-point Likert scale. TIPI has been validated (e.g., Herzberg & Brähler, 2006) against more comprehensive scales (e.g., BFI, John & Srivastava, 1999; NEO-FFI, Costa & McCrae, 1992) and provides good convergent validity, test-retest reliability, and patterns of predicted external correlates (predictive validity). Several authors (e.g., Hofmans, Kuppens, & Allik, 2008) have used this scale in an attempt to reduce the testing burden on participants. However, because three of the five constructs in TIPI (Gosling, Rentflow, & Swann, 2003) had internal consistency coefficients of .50 or lower, and because a previous test of the TIPI on a Norwegian student sample proved to have high cross-loadings and low internal consistency coefficients for Agreeableness, Neuroticism, and Openness to Experience, this scale has been extended by adding six new items (Table 1). Another reason for this extension was that the original TIPI, with only two items per construct, led to some identification problems when using the structural equation model (Marsh, Hau, Balla, & Grayson, 1998). The additional items were selected from the Norwegian version of the NEO-FFI (Costa, McCrae, Martinsen, Nordvik, & Østbø, 2003).

IBT was measured with 10 items adapted from Verplanken and Herabadi’s (2001) Impulse Buying Tendency Scale (e.g., “I find it difficult to pass up a bargain”) and Rook and Fisher’s (1995) Buying Impulsiveness Scale (e.g., “I often buy things without thinking”). Similar measures to assess impulse buying tendency are used by Beatty and Ferrell (1998) and Ridgway, Kukar-Kinney, and Monroe (2008) (Table 1).

In order to measure VST, this study used five reflective items selected from the Change Seeking Index (CSI) scale developed by Steenkamp and Baumgartner (1995) and frequently used to assess VST (Sharma et al., 2010) (Table 1).

--- Table 1 here ---

## Data Analysis and Results

### Confirmatory Factor Analysis

A confirmatory factor analysis (CFA) was performed to confirm the relationship between the items and their corresponding latent construct (Table 1). Several indices of measurement model fit were considered. The normed fit index (NFI, greater than or equal to .90), the root-mean-square error of approximation (RMSEA, less than or equal to 0.08), and the standardized root-mean-square residual (SRMR, less than or equal to .08) are particularly useful for assessing the model fit (Hu & Bentler, 1999). The results revealed a good approximation of the postulated goodness-of-fit (CFI = 0.91, NFI = .91, RMSEA = .05, 90% confidence interval ranged from .055 to .061; SRMR = .05).

Regarding the construct convergent validity, all the loadings on their corresponding constructs were statistically significant with p-values less than .001. Some of the items that weakened the measure of the latent construct were candidates for deletion and were finally removed to improve the model fit (Hair, Anderson, Tatham, & Black, 2007). Item convergence was assessed through the calculation of construct reliability (CR) and the average variance extracted (AVE) (Table 1). In terms of variance extracted, Conscientiousness and IBT were lower than the 50% standard, and the VST had a somewhat lower value (.45) but still fulfilled the minimum requirement (Chin, 1998). In terms of construct reliability (CR), all constructs exceeded the .70 standard. The combined tests showed evidence to support the convergent validity of the constructs. For discriminant validity, the AVE estimates for each construct were compared with the squared interconstruct correlations associated with that construct (Hair et al., 2007). The AVE values were all greater than the corresponding interconstruct squared correlation estimates (Table 2), indicating no violations of the criteria for discriminant validity.

--- Table 2 here ---

### Checking for Common Method Bias

As common method bias may have confounding effects on the observed relationships between the constructs, particularly when data are self-reported (as in this study), the single-common-method factor approach was checked (Podsakoff, MacKenzie, & Podsakoff, 2003). The measurement model was estimated with a single-method first-order factor added to all the indicators of the latent variables. The fit indices (CFI, NFI, and RMSEA) under the common method factor model were similar to the basic model and the correlation estimates between the constructs remained unchanged between the two models (Podsakoff et al., 2003). On the basis of these results, common method bias was not considered an issue in the current research.

### Testing of Hypotheses

A structural equation modeling analysis with maximum likelihood was performed in Mplus version 5.21 (Muthén & Muthén, 2010). Findings show that (Table 3):

- The partial correlation between IBT and VST after controlling for the effects of the Big Five dimensions, which is typically represented as a correlated error term, is statistically significant ( $p$ -value = .049), and of low magnitude ( $\rho_{\text{partial}} = .06$ ). The evidence shows support for H1.
- The results also indicate that Extraversion is positively and significantly related to IBT ( $b = .13$ ,  $p$ -value < .01) and respectively VST ( $b = .20$ ,  $p$ -value < .001), providing strong support for hypotheses H2a and H2b.
- The relationships between Agreeableness and IBT ( $b = .02$ ,  $p$ -value > .05) and respectively VST ( $b = .02$ ,  $p$ -value > .05) are not statistically significant. There is not sufficient evidence to support H3a or H3b.

- The relationships between Conscientiousness and IBT ( $b = -.16, p\text{-value} < .001$ ) and respectively VST ( $b = -.18, p\text{-value} < .001$ ) are negative and significant, providing strong support to H4a and H4b.
- Neuroticism is positively associated with IBT ( $b = .31, p\text{-value} < .001$ ), providing strong support for H5a, and respectively, negatively associated with VST ( $b = -.20, p\text{-value} < .001$ ) providing strong support for H5b.
- Finally, the results show that Openness to Experience has a negative but statistically insignificant effect on IBT ( $b = -.02$ ) failing to provide support for H6a. Yet, the relationship between Openness to Experience and VST is positive ( $b = .35$ ) and statistically significant ( $p\text{-value} < .001$ ), which supports H6b.

Overall, the analysis reveals similarities between IBT and VST with respect to Extraversion and Conscientiousness, and differences with respect to Neuroticism (opposite signs) and Openness to Experience. No unique relationships between Agreeableness, IBT, and VST were found.

--- Table 3 here ---

## **Discussion**

Although the effects of some personality traits on impulse buying and sensation seeking have been widely examined (Sharma et al., 2010), the present research shows similarities and differences between impulse buying and variety seeking tendencies based on the Big Five personality traits. Specifically, the present study among 1,644 Norwegian adults indicates that different personality antecedents predict IBT and VST. In essence, the present research suggests that high Neuroticism and low Conscientiousness are the two most important personality traits characterizing impulse buyers, while high Openness to Experience and low Neuroticism are the two most important personality traits defining variety seekers. IBT and

VST are partially correlated at 5% level of significance; however, the magnitude of the partial correlation is close to zero, challenging the notion that variety seeking is an underlying motive of impulsive behavior in all domains (Zuckerman et al., 1993).

The results reveal a significant association of Extraversion, also termed as excitement seeking and adventurousness, with VST. Similarly, there is a significant relationship between Extraversion and IBT, which corroborates previous evidence (Bratko et al., 2013; Verplanken & Herabadi, 2001). One facet of Extraversion is spontaneity (Carver & Scheier, 2008), and this characteristic predicts IBT through lack of premeditation and planning.

Agreeableness does not significantly predict either IBT or VST, confirming previous research (Bratko et al., 2013; Verplanken & Herabadi, 2001; Webster & Crysel, 2012). Dahlen and White (2006) show a significant negative relationship between Agreeableness and sensation seeking. However, apart from using the sensation seeking dimension, their study focuses on unsafe driving in a convenience sample of approximately 300 American undergraduate students. Hence, the age cohort might have significantly inflated their results. Agreeableness, along with several other personality traits, can differ dramatically from young adulthood toward adulthood (Soto et al., 2011).

Conscientiousness is significantly and negatively related to both IBT and VST, as anticipated. Conscientious consumers are self-disciplined, goal-directed, inclined to plan, and have the ability to control impulses and reactions. IBT and VST are both classified as hedonic behaviors associated with experiencing emotion and psychosocial motivation, rather than rationality and functional benefits (Sharma et al., 2010; Verplanken & Sato, 2012). This emotional characteristic of IBT and VST explains the negative relation to Conscientiousness. The significant relationships of IBT and VST with Extraversion, Agreeableness, and Conscientiousness support the idea that the two tendencies can have common personality roots (Sharma et al., 2010).

Moreover, the results show a significant positive relationship between Neuroticism (i.e., emotional instability) and IBT. This result reinforces findings on compulsive buying which show that obsessive-compulsive buying and impulse buying are defined by negative emotional traits and mood (Black, 2007; Faber & O'Quinn, 2008; Ridgway et al., 2008; Verplanken & Sato, 2012). Furthermore, the findings show that VST is negatively associated with Neuroticism, suggesting that variety seekers are calm and emotionally more stable individuals than impulsive buyers. The unique and distinct relationship of Neuroticism with IBT and VST has not been previously confirmed (Dahlen & White, 2006; Russo et al., 2012; Sun & Wu, 2011; Verplanken & Herabadi, 2001; Webster & Crysel, 2012). The result of the present study is the first clear evidence of personality differences between IBT and VST. Researchers who initially placed impulsivity and sensation seeking into one conceptual framework (McDaniel & Mahan, 2008; Zuckerman et al., 1993) might argue for a similar relationship.

Another important finding is the distinct relation of Openness to Experience with IBT and VST. Previous studies provide mixed findings of the relationship between Openness and IBT (Bratko et al., 2013; Verplanken & Herabadi, 2001). Despite Openness to Experience correlating with Extraversion (Digman, 1997; Van der Linden, Nijenhuis, & Bakker, 2010), the results show that only Openness explains VST (Aluja et al., 2003; Dahlen & White, 2006; Roberti, 2004; Russo et al., 2012; Webster & Crysel, 2012). Feelings of fantasy, creativity, lively imagination, and intellect define variety seekers, but not impulsive buyers. This finding adds to the idea that IBT and VST can have different roots in the individual personality structure.

### **Practical Implications**

The findings of this study have implications for the understanding, explanation, and prediction of IBT and VST based on individual personality traits, and for diagnosing different personality traits given a particular tendency. Often, such behavioral tendencies cannot be easily described using observable behavior over time, as they involve inferences in terms of unobservable psychological mechanisms (e.g., perceptions, motivations) or external facilitators (e.g., external stimuli). Individuals' personalities can help to explain and infer a significant proportion of variability in buying behavior. While there is still a debate about the degree to which individual differences in behavior are consistent across situations (Carver & Scheier, 2008), there is no doubt that individuals have consistent personalities that guide the patterns of behavior in many situations (Funder, 2010).

The results present an opportunity for retailers who wish to exploit these tendencies. For example, because variety seekers are likely to attend to new stimuli as a consequence of their openness to experience, retailing managers could capitalize on this tendency by introducing creative messages of inquiring intellect, culture, intelligence, and openness. These messages may help re-arouse the interest of the variety seeker by depicting a new or existent product in a different light. Similarly, the results show that impulse buying responses are significantly driven by high neuroticism. Marketers may benefit from associating their products or services with advertisements that use positive emotional appeals such as humorous advertisements, which can easily affect impulse buyers' moods and behavior. Marketing strategies encouraging people to see the bright side of life could benefit marketers, consumers, and businesses during the period of recession facing our global economy (Chien-Huang & Hung-Chou, 2012).

Likewise, the findings may help identify consumers at risk with respect to IBT and design appropriate interventions in order to promote certain buying behaviors. While core personality traits are difficult to change (Carver & Scheier, 2008), altering the buying context

for certain personality types may help reduce the effect of personality traits on IBT (e.g., Youn & Faber, 2000). This effect could be particularly influential for less agreeable, less conscientious, neurotic individuals, who are most likely to act on impulse. It would be advisable to provide support for consumers with behavior, such as consumers who suffer from psychopathological levels of compulsive buying (e.g., Black, 2007). By contrast, strategies to induce more VST may focus on explicitly persuading the public by inducing positive feelings, fun, and creativity to stimulate openness to experience while maintaining emotional stability (e.g., Liao, Shen, & Chue, 2009; Sajeesh & Raju, 2010). In this way, responsible firms can exploit the positive effect of personality on stimulating purchasing and developing positive feelings, while avoiding profiting from negative personality-induced behavior related to impulse buying tendency.

### **Future Research**

This study has several limitations and encourages more research on the personality traits of impulse buying and variety seeking. Personality traits can be classified in different higher-order (Digman, 1997; Van der Linden et al., 2010) or lower-order (Carver & Scheier, 2008; Soto et al., 2011) structures. This study focused on the most popular personality model (Five-Factor Model) of recent years by extending the short version of the Big Five personality traits based on Gosling et al. (2003). Future study on this topic may include other measures of the personality constructs (e.g., BFI, John & Srivastava, 1999; NEO-FFI, Costa & McCrae, 1992), testing whether these versions might have resulted in slightly different tendencies. Other ways to assess IBT are also encouraged (Puri, 1996; Rook & Fisher, 1995), and future studies should include compulsive-buying tendency (Flight, Rountree, & Beatty, 2012; Ridgway et al., 2008) and further explore the relationship between facets of impulse buying and neuroticism. Control mechanisms such as mood (Chien-Huang & Hung-Chou, 2012;



Youn & Faber, 2000), may have influenced the results, and therefore future studies may consider these variables as moderators of the relationships analyzed.

This analysis is based on a Norwegian population sample. Recent findings (Yoon, Suk, Lee, & Park, 2011) have shown, however, that the choices of individuals with collectivistic cultural backgrounds are associated with higher uniformity-seeking tendencies compared to those of individualistic cultural backgrounds. Thus, a cross-cultural study of personality, IBT, and VST would contribute to the external validity of these results. Future research may consider self-regulation and self-control (Vohs & Faber, 2007) to achieve a deeper understanding of IBT. Greater focus on experimental studies in order to identify environmental cues or buying situations that unconsciously activate impulsivity or stimulate sensation seeking is desirable. Finally, this study defines variety seeking as an individual (internal) tendency to seek variety in daily routines and activities (Kim & Drolet, 2003; Steenkamp & Burgess, 2002; Van Trijp & Steenkamp, 1992) independent of preferences for shopping for a particular product in a particular situation (Menon & Kahn, 1995). Future studies could develop and test a scale of general VST at the same conceptual level as IBT (Rook & Fisher, 1995; Verplanken & Herabadi, 2001; Youn & Faber, 2000).

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Figure 1. Conceptual model

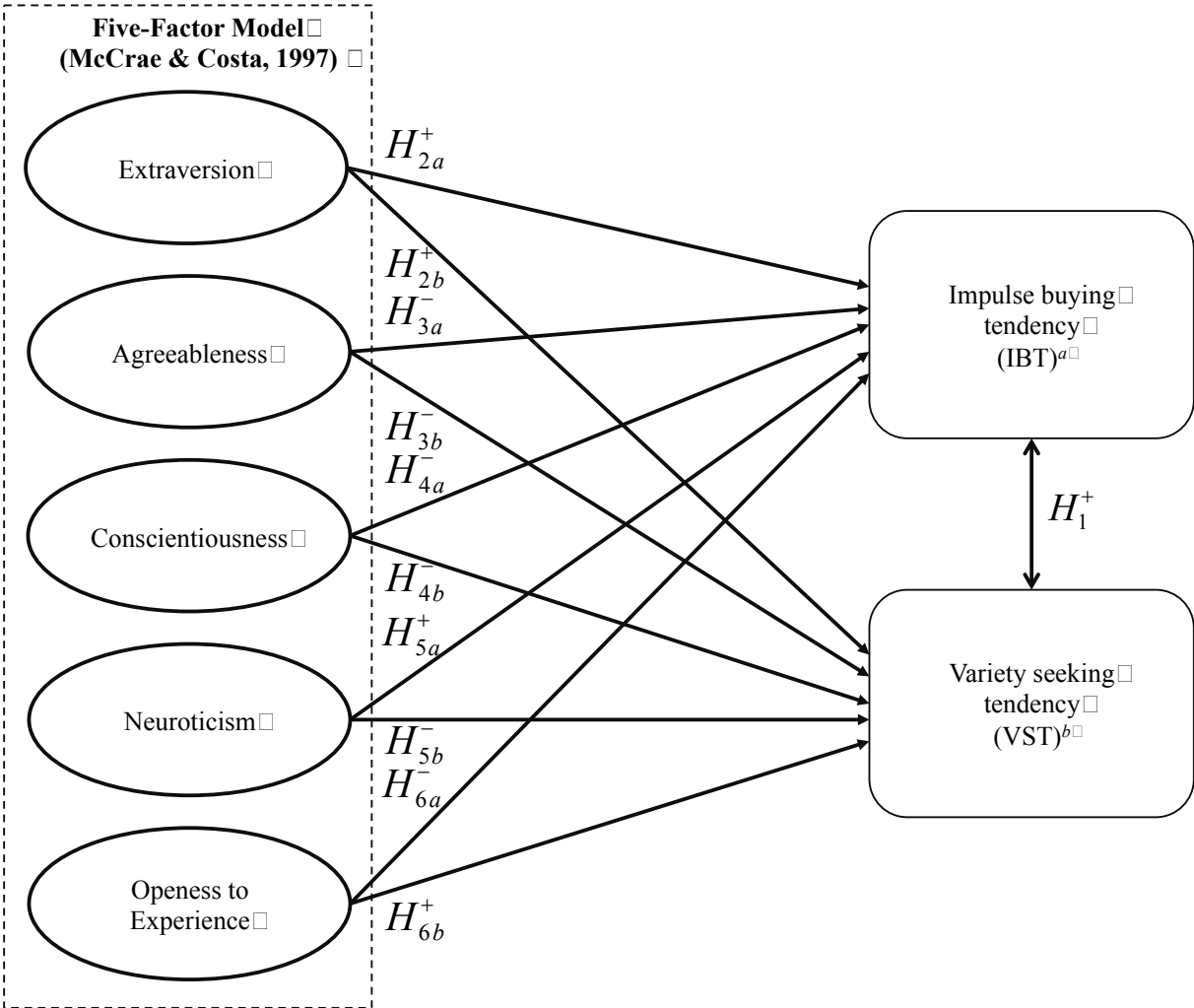


Table 2.  
Estimated correlations of the main constructs

	<b>M</b>	<b>STD</b>	<b>E</b>	<b>A</b>	<b>C</b>	<b>N</b>	<b>O</b>	<b>IBT</b>	<b>VST</b>
<b>E</b>	4.47	1.29	1						
<b>A</b>	5.48	0.98	.43***	1					
<b>C</b>	5.23	1.12	.17***	.29***	1				
<b>N</b>	3.02	1.46	-.34***	-.13***	-.39***	1			
<b>O</b>	4.76	1.24	.46***	.35***	.11***	-.15***	1		
<b>IBT</b>	3.59	1.20	.01 <sup>ns</sup>	.00 <sup>ns</sup>	-.26***	.32***	.00 <sup>ns</sup>	1	
<b>VST</b>	4.21	1.01	.41***	.19***	-.02 <sup>ns</sup>	-.26***	.45***	.03 <sup>ns</sup>	1

*Notes:* E - Extraversion, A - Agreeableness, C - Conscientiousness, N - Neuroticism, O - Openness to Experience. IBT - Impulse buying tendency; VST - Variety seeking tendency. M - mean, STD – standard deviation.

\*\*\* p-value < .001

\*\* p-value < .01

ns – not significant

Table 1.

Measurement scales			
<b>Constructs and Items</b>	<b>Factor loadings</b>	<b>CR</b>	<b>AVE</b>
<i>Extraversion</i>			
Outgoing/enthusiastic	.88	.78	.55
Reserved/quiet (r)	.63		
Chatty/talkative (n)	.70		
<i>Agreeableness</i>			
Sympathetic/warm	.87	.79	.65
Critical/quarrelsome (r)	x		
Kind/friendly to others (n)	.74		
<i>Conscientiousness</i>			
Dependable/self-disciplined	x	.73	.48
Disorganized/careless (r)	.81		
Punctuality/systematic (n)	.54		
Messy/inaccurate (r)(n)	.71		
<i>Neuroticism</i>			
Anxious/easily upset	.82		
Calm/emotionally stable (r)	.49	.77	.53
Nervous/tense (n)	.83		
<i>Openness to Experience</i>			
Open to new experiences/complex	x	.71	.56
Conventional/uncreative (r)	.62		
Creative/lively imagination (n)	.85		
<i>Impulse buying tendency (IBT)</i>			
It is a struggle to leave nice things I see in a shop	.76	.87	.49
Sometimes I cannot resist the temptation to buy something	.71		
Sometimes I feel guilty for having bought something	x		
I'm not the type of person who "falls in love at first sight" with things I see in shops	x		
I can be very excited if I see something I want to buy	.69		
I always see something nice when I go to the store	x		
I find it difficult to pass up a bargain	.66		
If I see something new, I want to buy it	.71		
I like to buy things without thinking much about it	.67		
I sometimes buy things because I like buying things rather than because I need them	.70		
<i>Variety seeking tendency (VST)</i>			
I am constantly seeking new ideas and experiences	.73	.79	.45
I dislike change and variety in daily routine (r)	.57		
I like continually changing activities	.64		

I prefer a routine way of life compared to one full of change (r)	.56
I like to experience novelty and change in daily routine	.78

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*Notes:* “x” the item has been removed due to low loading and in order to increase construct reliability; r” denotes reverse-scored items; “n” denotes new item compared to TIPI-scale.

$CR = (\sum_{i=1}^n L_i)^2 / (\sum_{i=1}^n L_i)^2 + (\sum_{i=1}^n e_i)$ ;  $AVE = \sum_{i=1}^n L_i^2 / n$ , where  $L_i$  – loadings,  $n$  is the number of items, and  $e_i$  is the error variance terms.

Table 3.

Beta coefficients for the model (Structural equation modeling estimates, n = 1644)

<b>Paths From -</b>	<b>To</b>	<b>Std. Est.</b>	<b>t-value</b>	<b>Hypothesis Evaluation</b>
IBT <sup>1</sup> ↔	VST <sup>1</sup>	.06 <sup>*</sup>	1.96	H1: supported
Extraversion →	IBT	.13 <sup>**</sup>	3.23	H2a: supported
Agreeableness →	IBT	.02 <sup>ns</sup>	.65	H3a: not supported
Conscientiousness →	IBT	-.16 <sup>***</sup>	-4.34	H4a: supported
Neuroticism →	IBT	.31 <sup>***</sup>	8.22	H5a: supported
Openness to Experience →	IBT	-.02 <sup>ns</sup>	-.64	H6a: not supported
Extraversion →	VST	.20 <sup>***</sup>	5.06	H2b: supported
Agreeableness →	VST	.02 <sup>ns</sup>	.61	H3b: not supported
Conscientiousness →	VST	-.18 <sup>***</sup>	-5.14	H4b: supported
Neuroticism →	VST	-.20 <sup>***</sup>	-5.68	H5b: supported
Openness to Experience →	VST	.35 <sup>***</sup>	8.57	H6b: supported

Notes: Structural model fit: CFI = .92; NFI = .90; RMSEA = .06; SRMR = .05;  $R^{2(\text{IBT})} = .14$ ;  $R^{2(\text{VST})} = .30$

\*\*\* p - value < .001

\*\* p - value < .01

\* p - value < .05

ns - not significant

<sup>1</sup> The partial correlation between IBT and VST represented as a correlated error term.