TRAIT PREDICTORS OF ONLINE IMPULSIVE BUYING TENDENCY: A HIERARCHICAL APPROACH

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# TRAIT PREDICTORS OF ONLINE IMPULSIVE BUYING TENDENCY: A HIERARCHICAL APPROACH

**Tao Sun and Guohua Wu**

The Internet represents a new marketing channel that can stimulate buying impulsiveness. With Mowen's 3M model as a theoretical framework, this paper examines the trait predictors of this online buying tendency. Buying impulsiveness (surface trait) is positively affected by Internet addiction (situational trait), need for arousal (elemental trait), and need for material resources (elemental trait). It is negatively affected by task orientation (compound trait). Emotional instability (elemental trait) has a positive effect on Internet addiction. Conscientiousness (elemental trait) has a positive effect on task orientation. Theoretical and practical implications are provided.

Impulsive buying is a prevalent phenomenon in our consumer society. Marketing innovations in the postindustrial world have made it easier than ever for consumers to make impulsive purchases (Rook 1987). The emergence of television shopping channels and the Internet makes products and services more accessible for impulsive buyers (Kacen and Lee 2002). In theory, consumers will be more reluctant to engage in impulse buying that is socially visible (Rook and Fisher 1995). When consumers shop online, with relative social anonymity, they may feel less inhibited about impulsive buying.

Extensive research has been conducted on the correlates of impulsive buying tendency in the offline context. However, little is known about the factors related to this buying tendency during online transactions. Consumers vary in their impulsive buying tendency (Rook and Fisher 1995), which is treated as a personality trait (Jones et al. 2003; Puri 1996). With Mowen's 3M model of personality and motivation as a theoretical framework (Mowen 2000), the current study develops a hierarchical structure of trait predictors of impulsive buying tendency in an online context.

The paper starts with a review of theoretical backgrounds on impulsive buying tendency and the 3M model of personality and motivation. A series of hypotheses are proposed next, which is followed by descriptions of methods and results. The paper ends with discussions of academic, practical, and future research implications.

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## DEVELOPING A HIERARCHICAL TRAIT MODEL

### Impulsive Buying Tendency

Conceptualized as buying impulsiveness, impulsive buying tendency is defined as "a consumer's tendency to buy spontaneously, unreflectively, immediately, and kinetically" (Rook and Fisher 1995, p. 306). For the purpose of the current paper, impulsive buying tendency and buying impulsiveness are used interchangeably. It is misleading for some researchers to use the measure of impulsive buying tendency as a substitute for impulsive buying behavior. Impulsive buying tendency is different from impulsive buying behavior, as the former captures a relatively enduring consumer trait that produces urges or motivations for the latter (Zhang, Prybutok, and Strutton 2007). Consumers with a buying impulse may not necessarily act on it, as some factors can mediate the relationship between the impetus and the behavior. For example, the correlation between impulse-purchase trait and impulse-purchase behavior is moderated by the normative evaluation of the impulse-purchase behavior (Peck and Childers 2006; Rook and Fisher 1995). From a hierarchical perspective, Beatty and Ferrell (1998) find that situational variables (e.g., time)

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and individual difference variables (e.g., impulse buying tendency) influence a set of endogenous variables (e.g., affect) and ultimately impulse purchase.

As a precursor variable of impulsive buying behavior, impulsive buying tendency is related to a series of demographic and personality factors. For example, in a study on Taiwanese adolescents (Lin and Lin 2005), buying impulsiveness is positively associated with age and the amount of pocket money available. Based on their lab experiments, Zhang and Shrum (2009) found that those whose independent self-construals were activated had more positive attitudes toward consuming beer at that moment than did those with interdependent self-construals and that this effect was shown to be mediated by the felt (state) level of impulsivity. Buying impulsiveness is also positively correlated with lack of control (impulsivity), stress reaction (negative emotionality in response to daily hassles), and absorption (sensitivity to external and imaginal stimuli) (Youn and Faber 2000). It is related positively to extraversion and negatively to conscientiousness and autonomy (Verplanken and Herabadi 2001). More research has been called for to investigate the mechanisms that connect personality to impulse buying (Verplanken and Herabadi 2001), particularly in the offline context. A study of trait predictors of online impulsive buying is particularly needed, as a relative lack of social constraints online may make personality traits more prominent determinants of online impulsive buying. Using Mowen's 3M model as a theoretical framework, the current study explores a hierarchical set of personality traits that predict online impulsive buying tendency. Next, we review the 3M model and proposes a series of hypotheses.

## The 3M Model of Motivation and Personality

Rooted in both personality and evolutionary perspectives, Mowen's 3M model assumes that "more abstract, cross-situational traits influence narrower situation-specific behavioral tendencies, which in turn influence behavior" (Mowen, Park, and Zablah 2007, p. 591). The model covers four hierarchical levels of personality traits: elemental traits, compound traits, situational traits, and surface traits (from the most abstract to the most concrete). Resulting from genetics and individuals' early learning histories, *elemental traits* represent basic personality dimensions, which include the "big-five" personality traits (neuroticism or emotional instability, introversion, agreeableness, conscientiousness, and openness to experience), need for arousal, need for material resources or materialism, and need for protecting and enhancing body resources. *Compound traits,* derived from the effects of elemental traits, culture, and subcultures, are cross-situational in nature (Mowen, Park, and Zablah 2007). Examples include task orientation and self-efficacy. As the enduring dispositions to behave within a general situational context, *situational traits* are influenced by both elemental and compound traits. Examples include value consciousness and sports interest. *Surface traits* represent enduring dispositions to act in specific behavioral contexts. They result from the effects of elemental, compound, and situational traits, and context-specific environments. Sports participation and healthy diet lifestyles are examples of surface traits. The 3M model is a partial mediation model, as elemental traits can directly influence surface traits (Mowen, Park, and Zablah 2007). The model has been applied to various consumer behavior contexts, such as volunteer behavior (Mowen and Sujan 2005), traveling behavior (Scott and Mowen 2007), online shopping (Bosnjak, Galesic, and Tuten 2007), and word-of-mouth communications (Mowen, Park, and Zablah 2007).

In our model, four elemental traits serve as exogenous variables (emotional instability, conscientiousness, need for arousal, and need for material resources). Compound traits include self-efficacy and task orientation. Internet addiction is employed as a situational trait. These traits were chosen because they were found to be most relevant to buying impulsiveness in the previous literature. Online impulsive buying tendency is entered as a surface trait (endogenous variable), as it represents an enduring disposition to act in the specific online consumption context.

## Hypothesized Relationships

### *Situational Trait*

*Internet Addiction.* A psychological dependence on the Internet, Internet addiction is characterized as an impulse-control disorder (Young 1998). Lack of control is positively related to impulse buying tendencies (Youn and Faber 2000). It seems that both Internet addiction and buying impulsiveness are positively related to lack of self-control. The prolonged exposure of Internet addicts to online stores not only can increase their opportunity to become impulsive buyers, but also may serve to deplete their self-regulatory resources, which can lead to online impulsive consumption tendencies (Vohs and Faber 2007; Zhang and Shrum 2009). Thus, we develop the following hypothesis:

*Hypothesis 1: Internet addiction is positively related to online impulsive buying tendency.*

### Compound Traits

*Self-Efficacy.* Self-efficacy is one's belief about his or her ability to achieve designated levels of performance (Bandura 1994). It is about one's exercise of control (Bandura 1997). Internet addiction, an impulse-control disorder, is negatively related to refusal self-efficacy of Internet use (a belief that one can intentionally resist or refuse to use the Internet under a high-risk situation, such as when the computer is turned on) (Lin, Ko, and Wu 2008). Self-efficacy is also negatively related to consumer impulsiveness (Mowen 2000). Unregulated buying (including impulsive buying) is caused by deficient self-regulation, represented as a state in which conscious self-control is diminished (LaRose 2001). Thus, we hypothesize:

*Hypothesis 2a: Self-efficacy is negatively related to Internet addiction.*

*Hypothesis 2b: Self-efficacy is negatively related to online impulsive buying tendency.*

*Task Orientation.* Task orientation represents an enduring disposition to set goals and complete tasks (Mowen 2000). The impulse-purchase trait is characterized by a lack of salient purchase goals—at least at the beginning of a shopping experience (Peck and Childers 2006). Consumers who know what they want may be less likely than others to develop buying impulses:

> Uncertain or conflicting goals undermine the basis for self-control and make people more susceptible [to buying impulses]. People who go to the mall with no particular purchasing goal in mind, for example, are more promising candidates. (Baumeister 2002, p. 671)

It is also possible that individuals with task-oriented and deadline-driven tendencies are less likely to wander away from their goals and become addicted to the Internet. Therefore, we hypothesize:

*Hypothesis 2c: Task orientation is negatively related to Internet addiction.*

*Hypothesis 2d: Task orientation is negatively related to online impulsive buying tendency.*

### Elemental Traits

*Materialism.* The need for material resources is defined as "the need to collect and possess material goods" (Mowen 2000). Materialism is positively related to task orientation (Mowen 2000), as one's need for material possessions may contribute to goal-oriented behavioral tendencies. Materialism is negatively related to impulse control (Rose 2007), the lack of which can be exhibited in an online setting (e.g., Internet addiction) or purchase situations (e.g., buying impulsiveness). Impulsive buying represents an unplanned purchase characterized by a subjective bias toward immediate possession (Rook and Gardner 1993, p. 3). Previous research has identified a positive relationship between materialism and buying impulsiveness (e.g., Belk 1985; Mowen 2000). Although no research has reported a relationship between materialism and Internet addiction, we propose that Internet addiction, a form of impulse-control disorder, may be also driven by an inner need for material resources. Therefore, we have the following hypotheses:

*Hypothesis 3a: Materialism is positively related to task orientation.*

*Hypothesis 3b: Materialism is positively related to Internet addiction.*

*Hypothesis 3c: Materialism is positively related to online impulsive buying tendency.*

*Conscientiousness.* Conscientiousness represents a need to maintain order, precision, and accuracy in completing tasks (Mowen 2000). Conscientiousness is positively related to task orientation and self-efficacy (Mowen 2000), and negatively related to Internet addiction (Yang, Lei, and Liu 2006) and impulse buying tendency (Mowen 2000; Verplanken and Herabadi 2001). Therefore, we hypothesize the following:

*Hypothesis 3d: Conscientiousness is positively related to task orientation.*

*Hypothesis 3e: Conscientiousness is positively related to self-efficacy.*

*Hypothesis3f: Conscientiousness is negatively related to Internet addiction.*

*Hypothesis 3g: Conscientiousness is negatively related to online impulsive buying tendency.*

*Emotional Instability.* Emotional instability is a tendency to be moody and temperamental. Emotional distress contributes to breakdowns in self-control (Baumeister, Heatherton, and Tice 1994). Impulse buyers are more emotionalized compared to nonimpulse buyers (Weinberg and Gottwald 1982). Emotional instability is negatively related to self-efficacy (Mowen 2000), and positively related to consumer impulsiveness (Mowen 2000). Impulse buying may serve as a mood-regulating function for some people (Youn and

Faber 2000). A study of Chinese adolescents reveals that the Internet addiction group is more neurotic (emotional instability) than the control group (Cao and Su 2007). Therefore, we hypothesize the following:

*Hypothesis 3h: Emotional instability is negatively related to self-efficacy.*

*Hypothesis 3i: Emotional instability is positively related to Internet addiction.*

*Hypothesis 3j: Emotional instability is positively related to online impulsive buying tendency.*

*Need for Arousal.* The need for arousal describes individual differences in chronic need to increase levels of stimulation (Mowen 2000). Individuals are motivated to maintain an optimum level of stimulation and will try to adjust the stimulation level when it becomes too high or too low (Mowen 2000). Need for arousal is positively related to self-efficacy and task orientation (Mowen 2000). The variety and high levels of excitement that are attributed to impulse buying distinguish it from more rational consumer decision making (Rook 1987). Impulsiveness is related to sensation seeking and emotional arousal (Raju 1980; Rook 1987; Weinberg and Gottwald 1982). Trait impulsiveness is significantly correlated with thrill seeking (Weun, Jones, and Beatty 1998), and the psychological need to maintain a relatively high level of stimulation (Gerbing, Ahadi, and Patton 1987). Internet dependents score significantly higher on overall sensation seeking than nondependents (Lin and Tsai 2002). Based on the above findings, the following hypotheses are developed:

*Hypothesis 3k: Need for arousal is positively related to task orientation.*

*Hypothesis 3l: Need for arousal is positively related to self-efficacy.*

*Hypothesis 3m: Need for arousal is positively related to Internet addiction.*

*Hypothesis 3n: Need for arousal is positively related to online impulsive buying tendency.*

## METHODOLOGY AND ANALYSIS

### Sample

The data for this study were collected online from a convenience sample of 381 college students. One hundred forty-five students attended a state university in northern New England and 236 were enrolled at a state university in southern California. The subjects were offered extra class credits to participate in the survey. The survey included items that measure basic personality traits, Internet addiction, and online impulsive buying tendency. The average age of the respondents was 22.6 years, with a range of 19–43 years. Of the subjects surveyed, 87.7 percent were 25 or younger, and 61.4 percent were female. The subjects comprised 54.9 percent Caucasian Americans, 14.7 percent Hispanic Americans, and 11.8 percent Asian Americans.

### Measures, Reliability, and Validity

All the items used for the study were taken from established scales, with some adapted to the online context. The four elemental traits and two compound traits were taken from Mowen (2000). The original Internet addiction scale (Young 1998) contains 20 items. Because of the length of this scale, we identified five items with high factor loadings and developed a five-item measure of Internet addiction as a situational trait. To measure online impulsive buying tendency, the nine-item buying impulsiveness scale by Rook and Fisher (1995) was adapted to reflect impulsivity in an online context; for example, "I often buy things spontaneously," was reworded to "I often buy things online spontaneously." Confirmatory factory analysis results showed that the standardized loading for one item was below the widely accepted minimum of 0.40 (Ford, MacCallum, and Tait 1986) (i.e., "I carefully plan most of my online purchases"; reverse coded). In addition, the variance of the item accounted for by the latent construct (online impulsive buying tendency) was also much lower than that of the other eight items. As a result, this item was dropped from the scale. The measurement items for each of the above constructs are shown in Tables 1 and 2.

To test the validity and reliability of those constructs, we used Amos version 4 to develop two measurement models, with each containing four theoretically related constructs to ensure acceptable estimate-to-observation ratios (Bentler and Chou 1987). The first confirmatory factor analysis model (Model 1) includes emotional instability, conscientiousness, need for material resources, and need for arousal. The second model covers task orientation, self-efficacy, Internet addiction, and online buying impulsiveness. After two pairs of error terms were allowed to be correlated (i.e., between the error terms "touchy" and "testy more than others," and the error terms "Acquiring valuable things is important to me" and "Like to own nice things more than most people"), the fit indices for Model 1 were acceptable ($\chi^2$ = 208.55, degrees of freedom [df] = 111, Tucker–Lewis index [TLI] = 0.97, comparative fit index [CFI] = 0.98, root

**Table 1**
**Measurement Model 1**

| Constructs | Items | Standardized Regression Weights | Significance Level |
|---|---|---|---|
| Emotional Instability | Moody more than others | 0.88 | 0.00 |
| CR = 0.90 | Temperamental | 0.89 | 0.00 |
| AVE = 0.63 | Touchy | 0.66 | 0.00 |
| | Testy more than others | 0.77 | 0.00 |
| | Emotions go way up and down | 0.76 | 0.00 |
| Conscientiousness | Orderly | 0.87 | 0.00 |
| CR = 0.91 | Precise | 0.83 | 0.00 |
| AVE = 0.73 | Organized | 0.91 | 0.00 |
| | Efficient | 0.79 | 0.00 |
| Need for Arousal | Drawn to experiences with an element of danger | 0.74 | 0.00 |
| CR = 0.85 | Seek an adrenaline rush | 0.88 | 0.00 |
| AVE = 0.60 | Enjoy taking risks more than others | 0.95 | 0.00 |
| | Like the new and different rather than the tried and true | 0.42 | 0.00 |
| Need for Material | Enjoy buying expensive things | 0.89 | 0.00 |
| Resources | Enjoy owning luxurious things | 0.91 | 0.00 |
| CR = 0.88 | Acquiring valuable things is important to me | 0.71 | 0.00 |
| AVE = 0.66 | Like to own nice things more than most people | 0.72 | 0.00 |

*Notes:* Model 1 fit indices: $\chi^2 = 208.55$, df = 111, TLI = 0.97, CFI = 0.98, RMSEA = 0.05. Subjects were asked to indicate how often they feel or act a particular way on a nine-point scale from "never" to "always."

mean square error of approximation [RMSEA] = 0.05). After two pairs of error terms were allowed to be correlated (i.e., between the error terms "I often buy things online spontaneously" and "'Just do it' describes the way I buy things online," and the error terms "Sometimes I felt like buying things online on the spur of the moment" and "I buy things online according to how I feel at the moment"), the fit indices for Model 2 were also acceptable ($\chi^2 = 363.92$, df = 162, TLI = 0.95, CFI = 0.96, RMSEA = 0.06). Based on the results from the two measurement models, composite reliability (CR) and average variance extracted (AVE) were calculated to estimate each construct's internal consistency. The results provided good support for internal consistency, as each CR was greater than 0.7 and each AVE was greater than 0.5 (Hair et al. 1998) (Tables 1 and 2).

The results from the two measurement models also demonstrated convergent validity for each construct, as all items loaded significantly on their respective constructs ($p < 0.01$) (see Tables 1 and 2). To evaluate the discriminant validity of each construct, we compared the correlation coefficient for each possible pair of latent constructs with the square root of the AVE for each construct. The square root of each AVE exceeded every possible correlation coefficient, in strong support of the discriminant validity for each construct (Tables 3 and 4). The acceptable reliability and validity indicators gave us enough confidence to proceed with the structural model (Fornell and Larcker 1981).

## RESULTS

Our structural modeling began with a partial mediation model in which paths were created from elemental traits (conscientiousness, emotional instability, need for arousal, and need for material resources) to compound traits (task orientation and general self-efficacy), situational trait (Internet addiction), and surface trait (online buying impulsiveness); from compound traits to situational trait and surface trait; and from situational trait to surface trait. Multi-item indicators were used for each of these traits. After five pairs of error terms were allowed to be correlated (including the four aforementioned pairs and the error terms between "'I see it, I buy it' describes me in online transactions" and "Sometimes I am a bit reckless about what I buy online"), the results produced acceptable fit statistics ($\chi^2 = 1{,}064.56$, df = 598, TLI = 0.94, CFI = 0.95, RMSEA = 0.05) (Figure 1). Next, a full mediation model was run in which paths were created from elemental traits to compound traits, from compound traits to situational trait, and from situational trait to surface trait. The fit statistics for the model were acceptable ($\chi^2 = 1{,}476.09$,

**Table 2**
**Measurement Model 2**

| Constructs | Items | Standardized Regression Weights | Significance Level |
|---|---|---|---|
| Task Orientation | Long-term goal oriented | 0.86 | 0.00 |
| CR = 0.88 | When doing a task, I set a deadline for completion | 0.71 | 0.00 |
| AVE = 0.66 | Set long-term goals for the future | 0.96 | 0.00 |
| | Approach tasks in a serious manner | 0.66 | 0.00 |
| Self-Efficacy | I feel in control of what is happening to me | 0.68 | 0.00 |
| CR = 0.82 | I find that once I make up my mind, I can accomplish my goals | 0.85 | 0.00 |
| AVE = 0.60 | I have a great deal of willpower | 0.79 | 0.00 |
| Internet Addiction | How often do you feel preoccupied with the Internet when offline or fantasize about being online? | 0.76 | 0.00 |
| CR = 0.93 | How often do you find yourself anticipating when you will go online again? | 0.78 | 0.00 |
| AVE = 0.58 | How often do you try to cut down the amount of time you spend online and fail? | 0.73 | 0.00 |
| | How often do you find yourself saying "just a few more minutes" when online? | 0.78 | 0.00 |
| | How often do you lose sleep due to late-night logins? | 0.75 | 0.00 |
| Online Buying | I often buy things online spontaneously | 0.70 | 0.00 |
| Impulsiveness | "Just do it" describes the way I buy things online | 0.82 | 0.00 |
| CR = 0.93 | I often buy things online without thinking | 0.88 | 0.00 |
| AVE = 0.63 | "I see it, I buy it" describes me in online transactions | 0.88 | 0.00 |
| | "Buy now, think about it later" describes me in online transactions | 0.86 | 0.00 |
| | Sometimes I feel like buying things online on the spur of the moment | 0.69 | 0.00 |
| | I buy things online according to how I feel at the moment | 0.72 | 0.00 |
| | Sometimes I am a bit reckless about what I buy online | 0.76 | 0.00 |

*Notes:* Model 2 fit indices: $\chi^2 = 363.92$, df = 162, TLI = 0.95, CFI = 0.96, RMSEA = 0.06. Task orientation and self-efficacy were measured on a nine-point scale from 1 = "never" to 9 = "always"; Internet addiction was measured on a five-point scale from 1 = "not at all" to 5 = "always"; and online buying impulsiveness was measured on a five-point scale from 1 = "strongly disagree" to 5 = "strongly agree."

**Table 3**
**Correlation Coefficients Between Constructs and Comparison with AVE in Model 1**

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Emotional Instability | (0.79) | | | |
| 2. Conscientiousness | −0.06 | (0.85) | | |
| 3. Need for Arousal | −0.01 | −0.12 | (0.77) | |
| 4. Need for Material Resources | 0.17 | 0.20 | 0.16 | (0.81) |

*Note:* The numbers in parentheses are the square root of each AVE value.

df = 615, TLI = 0.90, CFI = 0.91, RMSEA = 0.06). A chi-square difference test revealed that the partial mediation model (the initial model) provided a better fit than the full mediation model ($\chi^2$ difference = 411.53, df difference = 17, $p < 0.001$).

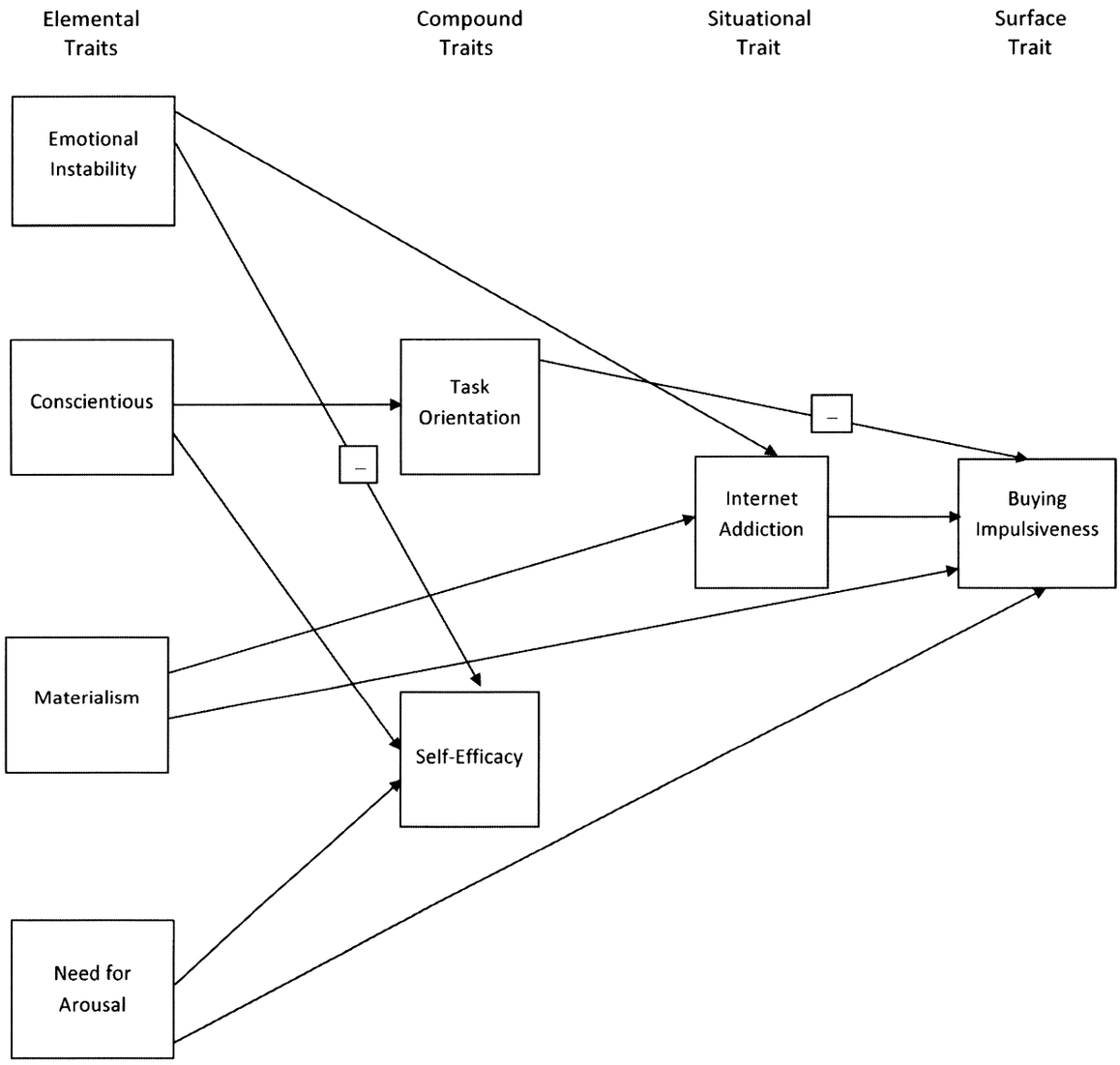
In the initial model that we accepted, multiple elemental traits accounted for 37 percent of the variance in task orientation and 30 percent for general self-efficacy. A combination of elemental and compound traits accounted for 11 percent of the variance in the situational trait of

**Table 4**
**Correlation Coefficients Between Constructs and Comparison with AVE in Model 2**

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Task Orientation | (0.81) | | | |
| 2. Self-Efficacy | 0.55 | (0.77) | | |
| 3. Internet Addiction | −0.03 | −0.13 | (0.76) | |
| 4. Online Buying Impulsiveness | −0.12 | −0.13 | 0.29 | (0.79) |

*Note:* The numbers in parentheses are the square root of each AVE value.

**Figure 1**
**Modified Hierarchical Model on Antecedents and Consequence of Online Buying Impulsiveness**




*Notes:* $\chi^2$ = 1,064.56, df = 598, TLI = 0.94, CFI = 0.95, RMSEA = 0.05. For the sake of simplicity, this figure demonstrates significant relationships only. All the relationships are positive, except for those marked by (−). All the error terms are omitted for the clarity of presentation.

Internet addiction. Finally, a combination of elemental, compound, and situational traits accounted for 19 percent of the variance in the surface trait (online impulsive buying tendency).

As expected, the following hypothesized relationships were supported: positive relationship between Internet addiction and online impulsive buying tendency (H1: $t = 4.17$, $p < 0.01$), a negative relationship between task orientation and online impulsive buying tendency (H2d: $t = -1.98$, $p < 0.05$), positive relationship between materialism and Internet addiction (H3b: $t = 2.27$, $p < 0.05$), positive relationship between materialism and online impulsive buying tendency (H3c: $t = 4.38$, $p < 0.01$), positive relationship between conscientiousness and task orientation (H3d: $t = 9.64$, $p < 0.01$), positive relationship between conscientiousness and self-efficacy (H3e: $t = 7.94$, $p < 0.01$), negative relationship between emotional instability and self-efficacy (H3h: $t = -3.85$, $p < 0.01$), positive relationship between emotional instability and Internet addiction (H3i: $t = 3.45$, $p < 0.01$), positive relationship between need for arousal and self-efficacy (H3l: $t = 3.63$, $p < 0.01$), and positive relationship between need for arousal and online impulsive buying tendency (H3n: $t = 2.15$, $p < 0.05$).

The following hypothesized relationships were not supported: negative relationship between self-efficacy and Internet addiction (H2a: $t = -1.23$, $p = 0.22$), negative relationship between self-efficacy and online impulsive buying tendency (H2b: $t = -1.75$, $p = 0.08$), negative relationship between task orientation and Internet addiction (H2c: $t = 0.98$, $p = 0.33$), positive relationship between materialism and task orientation (H3a: $t = 0.88$, $p = 0.38$), negative relationship between conscientiousness and Internet addiction (H3f: $t = -1.78$, $p = 0.08$), negative relationship between conscientiousness and online impulsive buying tendency (H3g: $t = 1.35$, $p = 0.18$), positive relationship between emotional instability and online impulsive buying tendency (H3j: $t = -0.67$, $p = 0.50$), positive relationship between need for arousal and task orientation (H3k: $t = 1.75$, $p = 0.08$), and positive relationship between need for arousal and Internet addiction (H3m: $t = 1.07$, $p = 0.28$).

## DISCUSSION AND CONCLUSION

In summary, buying impulsiveness was positively affected by two elemental traits—need for material resources and need for arousal. It was also affected negatively by task orientation (compound trait), and positively by Internet addiction (situational trait). Internet addiction was positively affected by two elemental traits—need for material resources and emotional instability. Both task orientation and self-efficacy were positively affected by conscientiousness (elemental trait). Self-efficacy was also affected negatively by emotional instability, and positively by need for arousal. Contrary to our expectations, self-efficacy was not a direct predictor of either Internet addiction or online buying impulsiveness; and conscientiousness was not a direct determinant of these two variables. Emotional instability did not affect online impulsive buying tendency. Need for arousal and task orientation did not affect Internet addiction. Task orientation was not influenced by either need for arousal or need for material resources.

### Theoretical Implications

Previous research on buying impulsiveness has been mostly conducted in a traditional brick-and-mortar setting. Little is known about the factors that may trigger or inhibit impulse purchasing during online transactions (Zhang, Prybutok, and Strutton 2007). This study extends previous research on buying impulsiveness by examining its trait predictors in an online context. Like its offline counterpart, online buying impulsiveness was found to be positively related to materialism. In addition to confirming previously established relationships, the current study identified new correlates of online impulsive buying tendency: task orientation (negative), Internet addiction (positive), and need for arousal (positive). Although online buying impulsiveness was not directly affected by emotional instability, it can be affected by this elemental trait through the mediation of Internet addiction. Conscientiousness can affect online buying impulsiveness through the mediation of task orientation.

Impulse buying is influenced by time, location, personality, economic, and cultural factors (Stern 1962). The relative lack of normative influence online might have rendered noneconomic and noncultural factors more salient in influencing online buying impulsiveness, such as e-commerce stimuli and personality traits. Our contribution lies in an identification of certain trait predictors of online impulsive buying tendency. This can also be a weakness for our study, as our model failed to include external factors. Popular e-commerce sites, with their extensive uses of attractive features, are able to diminish self-regulation. Being attracted to external stimuli creates a conditioned response that overwhelms the rational buying decision (LaRose and Eastin 2002). Future research can look at how personality traits interact with external environmental stimuli to influence online buying impulsiveness. Another limitation of our hierarchical trait model is that it only includes one

situational trait, which may explain why only 19 percent of the variance in online buying impulsiveness was accounted for. Future research can employ more potential situational traits, such as online trusting intentions, susceptibility to interpersonal influence online, and online value consciousness. Future studies can also add potential outcome variables of online buying impulsiveness to the hierarchical model, such as regret (Dittmar and Drury 2000), emotional trauma, and financial trouble (Rook 1987).

## Practical Implications

Consumers' information processing can be affected by their self-schema (Fiske and Taylor 1984). For instance, those with a competitive personality tend to be more attracted to messages with a competitive theme (Mowen 2004). Similarly, online retail messages that focus on the themes of materialism and need for arousal should be more effective for reaching online impulsive buyers. One example of an online need-for-arousal theme might be an online clothing site with a popup window demonstrating the effect on a consumer of selected clothes and accessories. An example of a site with an appeal to materialism is Frys.com, a popular electronics discounter. The site features "weekly specials." Retailers try to stimulate impulsive buying through strategic product placement and point-of-purchase advertising displays. This strategy has also been applied to the online context. For example, Amazon.com relies on recommendation agents to showcase its consumers more items that are either similar to or related to those planned purchase items. Amazon.com also implements a patented "1-Click" shopping function that saves online shoppers time and effort in entering credit card information prior to their purchases. This 1-Click strategy effectively deprives online consumers of an opportunity to review their order(s) and charge amount. While Amazon.com's recommendation agents may serve to trigger one's impulsive buying tendency by expanding consumers' consideration set, this 1-Click function may suppress consumers' task orientation tendency and turn online buying impulsiveness into online buying behavior.

Consumer impulsiveness contributes significantly to credit card misuse among college students (Pirog and Roberts 2007). Our findings can help social marketers recognize inner motivations for online buying impulsiveness so that they can design proactive strategies to curb online buying impulse and credit card misuse among college students. Online shoppers tend to have a double identity—shoppers and computer users (Koufaris 2002). Shoppers interact with a Web site as both a store and a technology system (Zhang, Prybutok, and Strutton 2007). This additional layer of the Internet as a shopping medium makes it imperative to understand the relationship between the Internet and buying impulsiveness. As our research indicated, emotional instability and materialism had positive effects on Internet addiction, which in turn positively affected online buying impulsiveness. Along another path, conscientiousness positively affected task orientation, which negatively influenced online buying impulsiveness. From a public policy perspective, young Internet addicts, identifiable through their personality traits of materialism and emotional instability, can benefit from early education about the consequences associated with online impulsive buying. Consumer advocacy groups and government agencies can also set up social intervention programs to encourage young consumers to become more deadline driven and goal oriented so that they can be further inoculated from online buying impulsiveness.

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