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## Unplanned Purchase Decision Making Under Simultaneous Financial and Time Pressure

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**UNPLANNED PURCHASE DECISION MAKING UNDER  
SIMULTANEOUS FINANCIAL AND TIME PRESSURE**

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## **UNPLANNED PURCHASE DECISION MAKING UNDER SIMULTANEOUS FINANCIAL AND TIME PRESSURE**

### **Abstract**

This research examines responses to marketing tactics when consumers consider personal finances, time availability, and the two combined. When considering extenuating circumstances, consumer purchase intention is often influenced by levels of impulsiveness. Therefore, three experiments examined how financial pressure, time pressure, and consumer impulsive tendencies jointly influence consumer decision making regarding an unplanned purchase. Unlike previous research, results show impulsive and non-impulsive consumers act similarly under time pressure in that purchase intention is enhanced for both; but purchase intention is suppressed for all consumers under financial pressure. When experiencing both simultaneously, financial pressure dictates decision making. The research extends current knowledge regarding consumer decision making and external forces.

**Keywords:** unplanned purchase, financial pressure, time pressure, impulsive behavior

Two global recessions since 2000 have made consumers mindful about spending habits (Boston Consulting Group 2012). At the same time, consumers are feeling an increasing amount of time pressure (Geuens, Brengman, and S'Jegers 2001; Okada and Hoch 2004), which extensive research has shown can have significant effects on information processing and decision making (e.g. Beatty and Smith 1987; Dror, Busemeyer, and Basola 1999; Payne, Bettman, and Luce 1996; Yao and Opewal 2015). However, while past research in consumer behavior has examined the effects of time pressure on information search, decision making, and purchase intention, it has rarely examined the interaction between time pressure and other variables such as financial pressure. This is crucial for marketers as brands that understand how external forces effect consumer behavior are better prepared to manage and withstand a recession in order to maintain growth (Hampson and McGoldrick 2017). The goal of this research, then, is to address this gap by examining consumers' decision making when contemplating an unplanned purchase while they consider time availability, personal finances, and the two combined.

Specifically, the research attempts to answer the following question: When consumers feel the sting of tightening finances, but are presented with an unplanned purchase opportunity under time constraints for an item they previously desired, which behavior will rule the day? Time pressure is a perceived limitation on the time available to consider the information and/or make a decision (Spears 2001; Suri and Monroe 2003), while financial pressure is the perception that one has insufficient financial means and high financial burden (del Rio and Young 2008; Ngo-Metzger et al. 2012). If both financial pressure and time pressure are essential determinants of purchase intention for consumers, what will happen when consumers encounter financial pressure and time constraints simultaneously? And which type of pressure – time or financial –

has a greater effect on consumers under simultaneous pressure scenarios as they consider an unplanned purchase?

When consumers evaluate extenuating circumstances, such as individual economics or restrictive time burdens, their propensity to purchase may be influenced by their level of impulsiveness (Beatty and Ferrell 1998), defined as a predisposition to make choices favoring immediate, hedonic benefits over rewards that are more desirable but distant (Rook and Fisher 1995). This differs from the urge to buy impulsively, which is a state of desire one experiences when encountering an object in a shopping environment (Rook 1987; Dholakia 2000; Mohan, Sivakumaran, and Sharma 2013), and is an antecedent of impulsive buying behavior (Badgaiyan and Verma 2015). Despite this understanding, there appears to be little consensus on the sociopsychological processes driving impulsive buying behavior in consumers or the conditions under which the behavior manifests itself (Sharma, Sivakumaran, and Marshall 2010). While just about everyone engages in impulse purchase behavior (Vohs and Faber 2007), when consumers consider the state of the economy, purchase decision making becomes more complex (Van Steenburg and Spears 2011). Similarly, perceived time pressures affect consumer decision making (Spears 2001) and impulsive purchase behavior (Beatty and Ferrell 1998). However, a review of previous studies found no experiment that examined the interactive effects of financial pressure and time pressure simultaneously when consumer decision making is engaged through an opportunity to make an unplanned purchase, exposing a gap in the research.

Drawing on research in the areas of consumers under financial and time pressure situations, and theoretical and conceptual insight into the domain of consumer impulsiveness, a series of experiments were developed that exerted financial and time pressure on consumers to examine their purchase intention when considering an unplanned purchase. In answering the

calls from Sharma, Sivakumaran, and Marshall (2010) for more research on impulsive behavior and the influence of arousal, and from Gilbride, Inman and Stilley (2015) for research that examines the effects of promotions on unplanned purchases, this research makes the following contributions to marketing theory and practice: (1) it combines an individual factor (impulsive buying behavior) with simultaneous situational factors (financial and time pressures) to explain and predict consumer behavior; (2) it investigates the causal effects of financial pressure and time pressure simultaneously for the first time; (3) it helps determine whether finances or time has a stronger effect on behavioral intention; and (4) it gives marketers some insight into what strategies to adopt when consumers are experiencing an uncertain economy. Ultimately, this research helps explain unplanned behaviors under external pressures and shows how consumer impulsivity moderates these effects.

### **LITERATURE REVIEW AND HYPOTHESES**

Unplanned purchases are spontaneous purchases with no pre-shopping intention to buy a specific product category or product (Beatty and Ferrell 1998), and are often linked to research in impulsive buying behavior (Massara, Melara, and Liu 2014; Ho and Lim 2018). However, while all impulse purchase are unplanned, not all unplanned purchases are the result of impulsive buying behavior (Iyer 1989; Piron 1993). Still, some consumer research (LaCour 2013) estimates that almost 60 percent of all purchases are unplanned, thus demonstrating the need for better understanding of the decision making process that goes into the behavior. To assist, Parboteeah et al. (2009) identified four types of unplanned purchases: (1) *pure unplanned* in which the purchase does not fit the individual's regular buying pattern and has never been considered previously; (2) *suggestive unplanned* that results when an individual experiences a marketing stimuli that creates desire for the product; (3) *reminder unplanned* when an individual is

reminded of their desire for a product after it is presented; and (4) *planned unplanned* when an individual seeks and leverages marketing promotions to make an as yet undetermined purchase. Massara, Melara, and Liu (2014), meanwhile, bifurcated unplanned purchases into those that are impulsive and those that are opportunistic. The former are affectively triggered spontaneous decisions, while the latter are rational decisions made following exposure to a stimulus.

These types of unplanned purchases fit with the concepts of impulsive buying behavior because the buying impulsiveness trait is defined as the extent to which one is prone to make unplanned, instantaneous, or unreflective purchases (Lin and Chuang 2005). In addition, research has found that consumers create mental budgets that include space for unplanned purchases (Stilley, Inman, and Wakefield 2010), thus demonstrating that spontaneous decision making is tied to both situational factors and one's level of impulsiveness. Impulsive buying behavior's predisposition to make choices favoring the immediate (Rook and Fisher 1995) leads to "a struggle between the two psychological forces of desire and willpower" (Hoch and Loewenstein 1991, p. 493). The urge to buy impulsively, which often leads to an unplanned purchase (Bellini, Cardinali, and Grandi 2017), affects decision making when individuals attempt to exercise self-control by diminishing the value of the product in consideration of making an impulse purchase (Hoch and Loewenstein 1991).

Among the first to suggest that impulsiveness reflected the consumers' rather than the products' traits were Rook and Hoch (1985). A decade later, Rook and Fisher (1995) confirmed that impulsive spending is not derived from some special product feature but rather from within the consumer. In their seminal study, they identified five factors that separate high-impulsive consumers from their low-impulsive counterparts: (1) a sudden and spontaneous desire to act creating a sense of urgency; (2) a psychological disequilibrium that leaves one feeling with a

temporary loss of control; (3) a psychological conflict and struggle that may ensue when consumers feel torn between desire and ambivalence toward the product; (4) a reduction in cognitive evaluation of product attributes in spite of a potential increase in overall cognitive activity; and (5) a disregard for the consequences of the consumption behavior.

Impulsive buying behavior has been demonstrated to be an individual difference that affects purchase decisions (Arens and Rust 2012; Jones et al. 2003; Massara, Melara, and Liu 2014) with effects different for those high or low in impulsive tendencies (Stilley, Inman, and Wakefield 2010). Most impulse or unplanned purchases are thought to take place within the confines of the shopping environment with in-store stimuli such as shelf coupons, point-of-purchase displays, and other store-level offers creating positive affective responses in consumers (Badgaiyan and Verma 2015; Mohan, Sivakumaran, and Sharma 2013; Parker and Tavassoli 2000; Walters and Mackenzie 1988). However, Hoch and Loewenstein (1991) demonstrated that economics, time, social visibility, and self-acknowledgment of one's impulsiveness also trigger impulsive behavior. Because individuals develop preferences immediately when prompted by the external environment (Slovic et al. 2007), an unplanned purchase is susceptible to the influence of external stimuli (Ho and Lim 2018) including financial and time pressures. This research adopts the approach conceptualized and previously tested (e.g. Lin and Chuang 2005; Mishra, Sinha, and Koul 2014; Rook and Gardner 1993) that leverages the impulsive buying trait as the moderating measure for consumers making unplanned purchases (see Figure 1).

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Place Figure 1 about here  
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### **Financial and Time Pressures**

Recent research has attempted to examine the interplay of time and money only in the aspect of consumers choosing one or the other. For example, activating time versus money via product



marketing materials has a favorable impact on consumer decisions and attitudes, and makes them more likely to consider one's personal connection to the product (Mogilner and Aaker 2009), unless the connection is based on prestige, in which case attitudes are more affected by activating money cues. Other research has confirmed that time loss is considered more painful than financial loss (Leclerc, Schmitt, and Dubé 1995), and that the perceived surplus of a given resource available to complete a task is more pronounced for time than for money (Zauberman and Lynch 2005).

In one of the few studies that examined the combined effects of pressure on income (as a personal factor) and time (as a situational factor), Van Kenhove and De Wulf (2000) found groups have different perceptions, attitudes, and preferences about shopping in general, and where and how they shop in particular. In another, Badgaiyan and Verma (2015) tested 11 variables in conjunction with impulsive behavior and purchase intention. Among them were money availability, economic well-being, and availability of time. Their survey research found that all three had a significant relationship to impulsive buying behavior, with impulsiveness affected by both short-term and long-term economic well-being, but only money availability affected the urge to buy impulsively.

Financial stress is defined as one's self-evaluation of their financial situation in terms of insufficient financial means and perceived financial burden and/or debt (del Rio and Young 2008; Fox and Chancey 1998; Ngo-Metzger et al. 2012). At this time, consumers often adjust their behavior, exhibiting more self-control and becoming more frugal (Hampson and McGoldrick 2017; Strutton and Lewin 2012; Xiao and O'Neill 2016). Impulsive behavior is most relevant when it contradicts an individual's goal, such as saving money (Baumeister 2002). Thus, self-regulation can diminish some individuals' impulsive spending tendencies, particularly

when long-term goals are considered at the point of decision making. Specifically, consumers with high levels of materialism can control their impulsive tendencies if they perceive a personal level of high economic potential, but those who envision no future economic success will succumb to their impulsive ways (Yoon and Kim 2016).

Conversely, the perception of having money, or increased financial resources, leads to increased impulse purchase decision making (Beatty and Ferrell 1998) because it affects impulsive buying behavior and the urge to buy impulsively (Badgaiyan and Verma 2015). A healthy individual financial position classifies as a weakened restraint because a consumer, whether impulsive or not, may consider that money is no object to obtaining the purchase goal (Vohs and Faber 2007). While money available has a direct effect on impulse purchase (Betty and Ferrell 1998), cost consideration is the method consumers use most often in an effort to resist making impulse purchases (Rook and Hoch 1985).

Impulsive responses normally result when an individual weighs motivation in the face of some stimulus (Baumeister 2002), making it possible to affect impulsive buying behavior through the marketing mix (Youn and Faber 2000). In addition, impulse buyers are more stimulus driven and are more likely to perceive spontaneous buying stimuli (Rook and Fisher 1995). Finally, the perception a consumer has of available finances positively affects both the urge to buy impulsively and impulsive buying behavior, but one's perceived economic well-being only affects the actual behavior (Badgaiyan and Verma 2015). Therefore, it is expected the decision whether or not to make an unplanned purchase will have a similar effect on purchase intent when an individual's perceived financial availability condition is taken into consideration.

**H1:** Financial pressure will have a negative main effect on a consumer's purchase intention when considering an unplanned purchase.

At the same time, individuals have varying abilities to control impulsive tendencies (Rook 1987), and individual differences in impulsive buying tendencies have an effect on impulse purchases (Beatty and Ferrell 1998; Stille, Inman, and Wakefield 2010). For example, Yoon and Kim's (2016) research on materialism discovered that consumers do not engage in impulsive spending when they perceive high economic mobility – defined as an individual's beliefs regarding future economic outcomes based on the steps needed to have upward mobility – but do spend impulsively when economic mobility is low. Their research also revealed that perceived economic mobility functions in the opposite manner when the purchase is a means to achieve financial success. However, because individuals who are high in impulsive tendencies experience more conflict in situations where their self-control is challenged as opposed to their nonimpulsive counterparts (Mukhopadhyay, Sengupta, and Ramanathan 2008) and consumers who exhibit impulsiveness spend more than those who are low in that characteristic (Vohs and Faber 2007), it reasons that impulsive and nonimpulsive consumers will respond differently to financial pressure.

**H2:** The negative effect of financial pressure on purchase intention is stronger for nonimpulsive individuals than impulsive individuals when considering an unplanned purchase.

Time pressure refers to the perceived limitation of time available to process information for decision making (Spears 2001; Suri and Monroe 2003). Therefore, in addition to economic factors, another external variable in consumer decision making that must be investigated is time (Howard and Sheth 1969). Beatty and Ferrell (1998) confirmed that perceived availability of time, in addition to perceived availability of finances, were antecedents to consumers making impulse purchases. Therefore, if time pressure is a perceived limitation on the time available to

consider the information and/or make a decision, a time boundary must be considered when examining self-regulation aspects of impulsive buying behavior in the context of unplanned purchases.

Research has shown that individuals gravitate toward immediate gratification, even if doing so runs counter to their present situation or long-term goals. Impulsive consumers arguably are not goal directed, self-disciplined, or predisposed to develop long-term plans. This spontaneity is also a strong predictor of impulsive consumption behavior because of its lack of planning and premeditation (Olsen et al. 2016). Conversely, nonimpulsive individuals demonstrate more self-control (Baumeister 2002) and are able to postpone gratification. Time pressure limits consumer search activities because it makes it difficult for individuals to process information (Yao and Oppewal 2016). This may lead some consumers to act with immediacy, and others to postpone their decision making and even make fewer impulsive purchases. Specifically, individuals who demonstrate impulsive consumer behavior are more likely to respond to marketing overtures, including ads, visuals, and promotions, as opposed to those who score lower on impulsiveness measures (Youn and Faber 2000).

In a similar vein, Mukhopadhyay, Sengupta, and Ramanathan (2008) found that nonimpulsive consumers demonstrate consistent behavior over time while impulsive consumers experience a higher degree of conflict. However, Badgaiyan and Varma (2015) had mixed results when examining perceived time availability on impulsiveness, finding it positively affected impulsive buying behavior but not the urge to buy impulsively. Finally, other research (e.g., Iyer 1989; Spears 2001) has demonstrated stimuli exerting some sort of time pressure on consumers, such as a deadline to make a purchase (e.g., a sale ending at a specific date or a short-term price

reduction), can leverage impulsive purchase behavior and be effective in increasing purchase intention. Therefore:

**H3:** When considering an unplanned purchase, impulsive consumers will have greater purchase intentions when time pressure is high rather than low, whereas nonimpulsive consumers' purchase intentions will not differ in high and low time pressure conditions.

### **Simultaneous Financial and Time Pressure**

The research questions asked what will happen when consumers encounter financial pressure and time constraints simultaneously, and which type of pressure has a greater effect on consumers during an unplanned purchase situation? With impulsive buying behavior previously shown to act as a moderator (Bressolles, Durrieu, and Giraud 2007; Mishra, Sinha, and Koul 2014; Hubert et al. 2013), it is expected that when financial pressure is low but consumers are exposed to time constraints, a similar line of reasoning as in H3 can be followed and similar outcomes should result. More precisely, nonimpulsive consumers are expected to show a higher degree of self-control, resulting in behavioral consistency under high and low time pressure conditions. In contrast, impulsive consumers, who are low in self-control, are expected to demonstrate more inclinations to purchase the product under time pressure.

Different behaviors are expected, however, when financial pressure is high and consumers' financial resources are extremely limited. Beatty and Ferrell (1998) examined time available (the opposite of time pressure) and money available (the opposite of financial pressure) on consumers' impulse purchases. They found that having sufficient time increased time spent browsing, while improved finances produced more excitement and less frustration among consumers, thus positively affecting consumers' individual impulsive tendencies. Results also

showed that financial availability's effect on impulse purchases was greater than that of time availability (Beatty and Ferrell 1998). While this demonstrated that both finances and time were antecedents of impulsive purchase behavior, it did not examine the simultaneous effects of time pressure and financial pressure as well as their interactions with consumers' inherent impulsivity on purchase intentions.

When people are under financial pressure, time pressure is expected to function as a double-edge sword. For impulsive consumers, who are inclined to follow a hedonic goal-seeking approach, time pressure should increase their likelihood to purchase the product when they are contemplating an unplanned purchase. In this case, impulsive individuals tend to purchase the product because not only are they able to satisfy their desire (instant gratification), but they are also afraid to lose the deal (and potential savings) if they delay their decisions. In other words, these consumers are mainly focused on obtaining the product (gratification) and rationalize their decisions by perceiving their behavior as money saving.

In contrast, nonimpulsive individuals are expected to follow a more realistic approach in their decision making when they are under both financial pressure and time constraints. This group of consumers is likely to see any spending as something that could potentially deplete their financial resources further and thus worsen their economic situation. This is particularly true when they feel the time pressure imposed by marketers. Thus we posit:

**H4:** When *financial* pressure is low and consumers consider an unplanned purchase, (a) impulsive consumers will have greater purchase intentions when *time* pressure is high rather than low, whereas (b) nonimpulsive consumers' purchase intentions do not differ in high and low *time* pressure conditions.

**H5:** When *financial* pressure is high and consumers consider an unplanned purchase, (a) impulsive consumers have greater purchase intention when *time* pressure is high rather than low, whereas (b) nonimpulsive consumers have greater purchase intention when *time* pressure is low rather than high.

### **PRESENT INVESTIGATION**

Three experiments test the research hypotheses of this study (Table 1). Financial pressure and time pressure are investigated in separate experiments in order to avoid any potential confounding or suppression effect of one on the other. More precisely, Experiment 1 tests the effect of financial pressure on impulsive versus nonimpulsive consumers' unplanned purchase decisions, whereas Experiment 2 seeks to examine how time pressure may influence impulsive and nonimpulsive consumers' decisions differently. Finally, these two situation factors are tested simultaneously in Experiment 3, providing empirical evidence for how situational factors interact with consumers' impulsive tendencies in shaping unplanned purchase decisions. All experiments were run in a single wave at a large public university in the United States. Participants were randomly assigned to one of the experimental conditions and presented with a purchase decision scenario in which financial pressure (Experiment 1), time pressure (Experiment 2), or both (Experiment 3) were manipulated. Purchase intentions and impulsive tendencies were measured in all experiments using established measurement instruments. Demographic information was gathered in all experiments to control for any potential effect.

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### **EXPERIMENT 1 – FINANCIAL PRESSURE**

The intent of the first experiment is to test the effect of financial pressure on impulsive and nonimpulsive consumers' purchasing decisions (H1 and H2). Because the research is also intended to determine whether stimuli could trigger impulsive decisions, scenarios proposed that participants had just seen an advertisement that appealed to them. This methodology is based on the *reminder unplanned* purchase type when an individual is reminded of their desire for a product after it is presented (Parboteeah et al. 2009). As discussed, while financial pressure is expected to suppress purchase intentions for both impulsive and nonimpulsive consumers, a more significant effect in intent to purchase is expected for nonimpulsive consumers compared to their impulsive counterparts.

In exchange for course extra credit, 82 undergraduate students from a large public university participated in this experiment. Participants ranged in age from 18 to 39 years ( $M = 21.91$ ,  $SD = 3.41$ ) and slightly more males (51.2%) than females participated. Financial pressure was manipulated whereas consumers' impulsive tendencies were measured in this experiment. More precisely, participants were randomly assigned to one of the two scenarios manipulating financial pressure condition. With financial pressure the perception that one has insufficient financial means and high financial burden (del Rio and Young 2008; Ngo-Metzger et al. 2012), scenarios were developed that emphasized the lack of funds available in one's bank account. The scenario for the high financial pressure condition added additional financial pressures through poor credit, and read:

*You see an advertisement for an expensive product that you've wanted to buy. The ad says it is on sale. You have almost no money in your bank account and have significant credit problems.*



In the low financial pressure condition, the perception of insufficient financial means and financial burden was removed as participants read the following scenario that indicated they had available money and good credit:

*You see an advertisement for an expensive product that you've wanted to buy. The ad says it is on sale. You have money in your bank account and have no credit worries.*

The description of the product being “expensive” was included intentionally to reduce the possibility of participants considering everyday products or items that are necessities. As a manipulation check, respondents were asked to respond to the statement “Based on the scenario, I would have no reason to worry about my financial situation.” A one-way ANOVA examined the adequacy of financial pressure manipulation and found that participants under the low financial pressure condition scored higher ( $M = 4.90$ ) on the manipulation check item (measuring lack of financial concerns) than those under high financial pressure ( $M = 1.71$ ;  $F(1, 80) = 82.843$ ,  $p < .001$ ). Therefore, the manipulation of the financial pressure was successful.

After reading the scenario, participants indicated their purchase intention on five Likert items ( $\alpha = .960$ ) adopted from two purchase intention scales (Baker and Churchill 1977; Chen and Barnes 2007) ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Consumer impulsivity was measured on 12 Likert items ( $\alpha = .859$ ) intended to measure a lack of impulse-control from a scale originally developed by Valence, d'Astous, and Fortier (1988). After providing demographic information, participants were debriefed and dismissed (see Appendix for all scales and items).

## **Results**

The items within each scale were averaged to form their composite scores. Following Aiken and West's (1991) procedure, a multivariate regression model was run with the continuous measure of consumer impulsivity (mean-centered to reduce multicollinearity), financial pressure (contrast-coded: low = - 0.5; high: + 0.5), and their interaction as predictors of purchase intention. The overall regression model was significant ( $R^2 = .538$ ,  $F(3, 78) = 30.256$ ,  $p < .001$ ). The analysis revealed a significant positive effects for consumer impulsivity on purchase intention ( $b = .264$ ,  $t(78) = 2.369$ ,  $p < .05$ ). That is, regardless of their financial pressure conditions, nonimpulsive participants were less inclined to purchase the product compared to their impulsive counterparts. Financial pressure also had a negative and significant effect on purchase intention ( $b = - 2.561$ ,  $t(78) = - 9.258$ ,  $p < .001$ ), supporting H1. Finally, a marginally significant interaction effect was found between consumer impulsivity and financial pressure ( $b = .435$ ,  $t(78) = 1.951$ ,  $p = .055$ ).

A simple slope analysis was then used for to explicate the interaction effect and for demonstration purposes (Aiken and West 1991). While a variety of potential conditional values of moderator can be used for the computation of the simple slopes, it is recommended (Aiken and West 1991) to select values of the moderator that are one standard deviation below the mean (lower level) and one standard deviation above the mean (upper level). It is also recommended to calculate the values of the dependent variable (e.g. purchase intention) associated with each of the simple slopes at a lower and upper value of the moderator (e.g. consumer impulsivity) to plot these relations graphically and to improve interpretability of effects. It is worth noting that these values are calculated to simply aid in the graphing of effects. The slope analyses showed that, as expected, the negative effect of financial pressure on purchase intention was stronger for nonimpulsive participants ( $b = - 3.107$ ,  $t(78) = - 8.012$ ,  $p < .001$ ) than impulsive individuals ( $b =$

– 2.014,  $t(78) = -5.041$ ,  $p < .001$ ). That is, financial pressure reduced nonimpulsive participants' purchase intentions significantly more ( $M_{\text{LOW}} = 5.221$ ;  $M_{\text{HIGH}} = 1.965$ ) than impulsive individuals ( $M_{\text{LOW}} = 5.175$ ;  $M_{\text{HIGH}} = 3.408$ ), supporting H2 (see Figure 2).

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## **Discussion**

These results extend research on impulsive behavior by showing that nonimpulsive consumers exhibit greater self-control than impulsive consumers when exposed to an advertisement for an unplanned purchase. Previous research had only examined impulsive behavior using in-store marketing tactics. Supporting the predictions, this experiment demonstrates that individual financial means has an effect on intent to make an unplanned purchase. In a low financial pressure scenario, product acquisition is perceived as a gain (i.e. making the purchase at a lower price) for both impulsive and nonimpulsive consumers. But under a high financial pressure scenario, the potential for acquisition is perceived as a loss because the purchase situation has worsened. However, nonimpulsive consumers were able to maintain self-control and avoid further pressures by not making the unplanned purchase, while impulsive consumers were not able to worsen their financial situation because of their low self-control. In sum, impulsive consumers are affected by the opportunity to make a reminder unplanned purchase at a greater rate than their nonimpulsive counterparts because they cannot control the buying impulse as well.

## **EXPERIMENT 2 – TIME PRESSURE**

Previous research has found that time pressure effects purchase intention (e.g. Mukhopadhyay, Sengupta, and Ramanathan 2008; Iyer 1989; Youn and Faber 2000). However, in order to combine, for the first time, simultaneous effects of financial and time pressure on consumers, as

examined through the lens of impulsive behavior, a second experiment must be conducted that examines the effects of time pressure on consumers. Therefore, this experiment investigates the effect of time pressure on unplanned purchase intention and whether or not impulsive consumers will respond in a similar manner as nonimpulsive consumers when time pressures increases (see H3). Again, a more subtle marketing tactic (advertising) rather than an overt one (in-store display) was used as the stimulus to affect a reminder unplanned (Parboteeah et al. 2009) purchase situation.

Eighty-four students from the same university participated in this study for course extra credit. Participants ranged in age from 19 to 44 years ( $M = 22.70$ ,  $SD = 4.829$ ) and were equally distributed across gender (51.2% female). In this experiment, time pressure was manipulated whereas consumer impulsivity was measured. Because individuals have difficulty considering time as an independent dimension, and therefore can misjudge when considering how long something might take (Zauberman et al. 2009), specific time frames were leveraged in the scenarios to help participants understand the window of opportunity to make the unplanned purchase. In order to manipulate the time pressure, participants were randomly assigned to one of two scenarios. Because time pressure is a perceived limitation on the time available to consider information and make decisions (Spears 2001; Suri and Monroe 2003), the scenario for the low time pressure condition only emphasized the time limitation for the sale, and read:

*You see an advertisement for an expensive product that you've wanted to buy. The ad says it is on sale only for one week starting tomorrow.*

Since individuals have different perceptions of time, rather than shortening the sales period (i.e., one week), the perceptions of urgency stemming from time constraints were manipulated. More precisely, a phrase was added for the high time pressure condition that indicated the individual

would not be able to make the purchase for several weeks. The combination of difficulty individuals have in judging time (Zauberman et al. 2009), dictated the need to specify a time frame, while time pressure as conceptualized by Spears (2001) and Suri and Monroe (2003) necessitated adding additional time pressures to the low time pressure scenario. Therefore, the high time pressure scenario read:

*You see an advertisement for an expensive product that you've wanted to buy. The ad says it is on sale only for one week starting tomorrow, but you don't get paid for another two weeks and no one else can buy it for you.*

To check whether the manipulation was successful, answers to a Likert-style question – “Based on the scenario, I would be under no pressure to buy the product now rather than later” – was evaluated using a one-way ANOVA. Results showed that participants exposed to the high time pressure condition scored lower ( $M = 2.56$ ) on the manipulation check question (measuring lack of perceived time pressure) than those exposed to the low time pressure condition ( $M = 4.47$ ;  $F(1, 82) = 45.335, p < .001$ ). Therefore, the manipulation of time pressure was successful. After reading the scenario, participants' purchase intentions ( $\alpha = .899$ ) were measured using the same five items as Experiment 1. Consumer impulsivity was also measured using the same 12-item scale ( $\alpha = .852$ ). Participants' demographics were then collected.

## **Results**

Similar to the previous study, the average of the items within each construct were used as its composite score. A regression model included consumer impulsivity (mean-centered), time pressure (contrast-coded: low =  $-0.5$ ; high:  $+0.5$ ), and their interaction as predictors of purchase intention. The overall regression model was significant ( $R^2 = .151, F(3, 80) = 4.742, p < .01$ ). Similar to the previous experiment, the main effect of impulsivity on purchase intention was

significant ( $b = .342, t(80) = 3.024, p < .01$ ); that is, regardless of their time pressure conditions, impulsive participants indicated higher purchase intentions compared to their nonimpulsive counterparts. The effect of time pressure on purchase intention was marginally significant ( $b = .446, t(80) = 1.686, p = .096$ ), indicating that time pressure, overall, marginally increased participants' intentions to purchase the product. Finally, the analysis revealed a significant interaction between impulsivity and time pressure on purchase intention ( $b = -.540, t(80) = -2.385, p < .05$ ).

In order to explicate the interaction effect, slope analysis (Aiken and West 1991) was conducted on the regressions after re-centering consumer impulsivity. The effect of time pressure on purchase intention was positive and significant for *nonimpulsive* participants ( $b = 1.091, t(80) = 2.839, p < .01$ ), indicating that purchase intention for this group was *greater* under high time pressure ( $M = 4.369$ ) than low time pressure ( $M = 3.278$ ). In contrast, the effect of time pressure on purchase intention for impulsive individuals was not significant ( $p > .10$ ), indicating no differences in purchase intentions under high ( $M = 4.542$ ) and low time pressure ( $M = 4.741$ ) for nonimpulsive individuals (see Figure 3). Therefore, H3 is not supported.

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Place Figure 3 about here  
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## Discussion

The study shows that time pressure plays a role in the decision making process for unplanned purchases, but contrary to what other research has found (e.g. Dror, Busemeyer, and Basola 1999; Iyer 1989; Mukhopadhyay, Sengupta, and Ramanathan 2008; Ramanathan and Menon 2006). In the research here, *nonimpulsive* participants in this study made an unplanned purchase almost as frequently as impulsive participants when time pressure was high, while time pressure did not affect the impulsive participants' unplanned purchase decisions. The results show

virtually an interactive effect between consumer impulsive buying behavior and time pressure on unplanned purchase intention but in the opposite direction of what is theorized. In other words, without the constraints of a financial concern, nonimpulsive individuals reduced their self-control and allowed hedonic desires to prevail. Apparently, as the findings suggest, impulsive consumers are more inclined to acquire the product they have desired (as evidenced in the positive main effect of impulsivity), demonstrating their continued lack of self-control, their desire to acquire a product at a lower price, and the positive effects of marketing stimuli. Therefore, one could reasonably expect the effect of time pressure, if any, on them to be minimal.

### **EXPERIMENT 3 – SIMULTANEOUS FINANCIAL AND TIME PRESSURE**

The final experiment extends the findings of the previous experiments and, for the first time, to circumstances under which consumers feel both financial and time pressure at the same time (H4 and H5). Experiment 1 showed that financial boundaries decrease purchase intentions for both impulsive and nonimpulsive consumers. And Experiment 2 revealed that time pressure only increase purchase intentions for *nonimpulsive* individuals and it has no effect for impulsive consumers, who were predisposed to make the purchase no matter the external pressures being faced. This experiment aims to investigate which type of external factor would exert a stronger impact on intent to purchase for each group of consumers. Since the findings of Experiment 2 contradicted the expectations (H3), a different manipulation of time pressure is used in this experiment to ensure those findings are robust and did not result from methodological issues.

Like the previous two studies, experimental design was employed using scenarios that manipulated time and financial pressure, but in four different combinations. In exchange for course extra credit, 222 undergraduate students from the same university participated in this

study. Participants ranged in age from 19 to 54 years ( $M = 23.60$ ,  $SD = 4.836$ ) and were almost equally distributed across genders (54.1% female). Similar to the previous experiments, financial pressure and time pressure were manipulated whereas consumer impulsivity was measured. Again, a reminder unplanned purchase type (Parboteeah et al. 2009) scenario was leveraged, where financial pressures was added to each scenario similarly to Experiment 1 as respondents were told they either had did or did not have sufficient funds or credit. Specific time frames to take action on the potential unplanned purchase were provided to create time-specific conditions (Zauberman et al. 2009) and time pressure was created similarly to Experiment 2 except that the time frame for the product sale was changed from one week to either three days in order to add additional pressure, or three weeks to decrease pressure. Participants were randomly assigned to one of the four pressure conditions that accounted for all possible time and financial pressure combinations. For example, the scenario for high time pressure and high financial pressure read:

*Imagine you see an advertisement for an expensive product you've wanted to buy. The ad says it is on sale for three days starting tomorrow, but you don't get paid for two more weeks. You do not have much money in your bank account and have significant credit problems.*

Conversely, the scenario for low time pressure and low financial pressure read:

*Imagine you see an advertisement for an expensive product you've wanted to buy. The ad says it is on sale for three weeks starting tomorrow. You do have money in your bank account and have no credit problems.*

A third scenario combined the high time pressure “on sale for three days starting tomorrow, but you don't get paid for two more weeks” and low financial pressure “you do have money in your bank account and have no credit problems” elements. The final scenario combined low time



pressure's "on sale for three weeks" and high financial pressure's "you do not have much money in your bank account and have significant credit problems" components.

Perceptions of time availability and money availability were each measured on three items (Beatty and Ferrell 1998), modified for the context of this study and worded such that higher scores showed higher pressure conditions. Both time pressure ( $\alpha = .717$ ) and financial pressure ( $\alpha = .837$ ) scales showed acceptable levels of internal consistency. Items for the time pressure manipulation included "I feel a lot of time pressure right now," "I have limited time available to me at this particular time," and the reverse-coded "I am not rushed for time right now." Statements used to measure the financial pressure manipulation included "I do not feel I can afford to make any unplanned purchase at this time," "I am on a tight budget at this time," and a reverse-coded statement "I feel that I have enough money at this time so that I can splurge a little if I find something I really like." Two separate one-way ANOVAs were run, finding that both manipulations were successful. That is, individuals under high time pressure scored significantly higher on the time pressure scale ( $M = 4.32$ ) than those in low time pressure condition ( $M = 3.97$ ;  $F(1, 220) = 11.257, p < .01$ ). Similarly, participants assigned to high financial pressure scenarios had higher financial pressure scores ( $M = 5.61$ ) than those under low financial pressure ( $M = 3.59$ ;  $F(1, 220) = 192.754, p < .001$ ). After participants read their unique scenario, each was asked to indicate his/her purchase intention ( $\alpha = .961$ ). Consumer impulsivity ( $\alpha = .871$ ) was measured using the same scale from the previous studies. Finally, participants provided demographics.

## **Results**

A multivariate regression model was run (Aiken and West 1991) with impulsivity (mean-centered to reduce multicollinearity), time pressure and financial pressure (both contrast-coded:

low = - 0.5; high: + 0.5), and their two- and three-way interactions as predictors of purchase intention. The overall regression model was significant ( $R^2 = .499$ ,  $F(7, 214) = 30.442$ ,  $p < .001$ ). Consistent with the findings of the previous experiments, the analysis showed that the main effect of consumer impulsivity was positive and significant ( $b = .218$ ,  $t(214) = 2.151$ ,  $p < .05$ ), resulting from lack of self-control in impulsive consumers. In addition, the effect of financial pressure was negative and significant ( $b = - 2.740$ ,  $t(214) = - 13.051$ ,  $p < .001$ ), providing support for the findings of Experiment 1 (H1). That is, regardless of time constraints, financial pressure decreased purchase intentions in all consumers, whether impulsive or not. The regression analysis also revealed a significant two-way interaction between impulsivity and financial pressure ( $b = .799$ ,  $t(214) = 3.949$ ,  $p < .001$ ) as well as a marginally significant interaction between time pressure and financial pressure ( $b = - .738$ ,  $t(214) = - 1.758$ ,  $p = .080$ ). Finally, the results revealed a marginally significant three-way interaction effect ( $b = .761$ ,  $t(214) = 1.880$ ,  $p = .061$ ). No other effect in this model was significant (all  $ps > .10$ ).

To explicate the interaction terms, slope analysis showed that financial pressure had a negative effect on purchase intention for both nonimpulsive ( $b = - 3.577$ ,  $t(214) = - 12.008$ ,  $p < .001$ ) and impulsive participants ( $b = - 1.903$ ,  $t(214) = - 6.366$ ,  $p < .001$ ). Consistent with the findings of Experiment 1 (H2), while financial pressure decreased purchase intentions in both impulsive and nonimpulsive individuals, its effect was stronger for nonimpulsive participants. In addition, the two-way interaction of time pressure and financial pressure on purchase intention was significant for nonimpulsive individuals ( $b = - 1.536$ ,  $t(214) = - 2.578$ ,  $p < .05$ ) but not for impulsive participants ( $b = .059$ ,  $t(214) = .099$ ,  $p > .10$ ).

These two-way interaction effects were further decomposed for low and high financial pressure conditions in order to examine H4 and H5. Under the low financial pressure condition,

the interaction between impulsivity and time pressure was marginally significant ( $b = -.456$ ,  $t(103) = -1.741$ ,  $p = .085$ ). The results also indicated that time pressure had no significant effect on purchase intention for impulsive individuals ( $b = -.191$ ,  $t(103) = -.509$ ,  $p > .10$ ). That is, when financial pressure was low, impulsive participants' purchase intentions did not differ in low ( $M = 5.29$ ) and high ( $M = 5.10$ ) time pressure conditions, providing support for the findings of Experiment 2. In addition, when financial pressure was low, time pressure had a positive and marginally significant effect ( $b = .764$ ,  $t(103) = 1.943$ ,  $p = .055$ ) on purchase intention for the nonimpulsive group. That is, supporting the findings of Experiment 2, *nonimpulsive* participants indicated higher purchase intentions when time pressure was high ( $M = 5.95$ ) rather than low ( $M = 5.19$ ). Therefore, although H4a and H4b were not supported, the findings of Experiment 3 are consistent with those of Experiment 2 (see Figure 4). The only difference is that nonimpulsive participants were even *more* willing to purchase the product under high time pressure when they also knew that financial pressure was low.

A similar procedure was followed to examine H5. Under the high financial pressure condition, the interaction effect between impulsivity and time pressure became insignificant ( $b = .305$ ,  $t(111) = 1.000$ ,  $p > .10$ ). In addition, the effect of time pressure on purchase intention was not significant ( $b = -.132$ ,  $t(111) = -.285$ ,  $p > .10$ ) for impulsive participants. That is, purchase intention for this group of participants did not differ in low ( $M = 3.35$ ) and high ( $M = 3.22$ ) time pressure conditions. Thus, H5a was not supported. Further, when financial pressure was high, purchase intention had a negative and marginally significant effect on purchase intention for nonimpulsive participants ( $b = -.772$ ,  $t(111) = -1.758$ ,  $p = .081$ ). As expected, for this group of participants, purchase intention was higher when time pressure was low ( $M = 2.38$ ) rather than high ( $M = 1.61$ ). Therefore, H5b was supported (see Figure 5).

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Place Figures 4 & 5 about here  
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## **Discussion**

The results of this experiment indicate that financial pressure plays a greater role than time pressure in the intention to make an unplanned purchase. Under a low time pressure scenario, results confirmed the findings in Experiment 1, indicating that consumers' financial boundaries lead to a reduction in intent to purchase, and this reduction is more significant for nonimpulsive consumers who exhibit greater self-control when experiencing a stimulus that creates the opportunity for an unplanned purchase than impulsive consumers. That is, product acquisition is perceived as a gain (i.e. buying at a lower price) for both impulsive and nonimpulsive individuals in a low financial pressure situation; but in the high financial pressure scenario, where purchase is perceived as a loss, nonimpulsive individuals are able to exhibit self-control while impulsive individuals are not.

However, when time pressure is applied through marketing stimuli, both nonimpulsive and impulsive consumers are able to demonstrate self-control and reduce their purchase intention under financial pressure as the purchase is perceived as a loss, triggering risk aversion tendencies in all consumers. Specifically, impulsive consumers exhibited some self-control in the face of a perceived worsened buying situation and were able to avoid further damage by reducing their purchase intention, while nonimpulsive consumers were completely able to avoid further damage and almost adopted a non-purchase approach. But when the financial impingements are released, both types of consumers increase their purchase intention when faced with a marketing stimulus that creates time pressure.

In sum, this experiment shows that when consumers are not financially restrained, time pressure increases purchase intentions for nonimpulsive consumers but not for impulsive consumers. Although these results do not support the predictions (H4a and H4b), they are consistent with the findings of Experiment 2 despite the fact that a different manipulation of time pressure was used. In both experiments, consumers reacted to the time pressure by increasing their purchase intention, despite their individual differences related to impulsive behavior. The findings also show that, as expected, under tough financial conditions, time pressure provokes negative reactions and decreases purchase intentions in nonimpulsive individuals.

### **GENERAL DISCUSSION**

Overall, the results of this research demonstrate that when time pressure and financial pressure are experienced simultaneously, individuals with enough financial resources who typically do *not* respond in an impulsive manner may act more like those that do when time pressures are greater than normal, contradicting previous research. The unexpected effect of time pressure on nonimpulsive consumers was replicated in Experiment 3 despite changing the manipulation. These findings show that there might not be as great a discrepancy between the two types of individuals under certain conditions and lead to a need for additional research in this area. In addition, the findings reveal that when consumers' financial resources are limited, time pressure is not an effective tool for marketers as it provokes a negative reaction in nonimpulsive individuals and has little to no effect on impulsive consumers. This is crucial as, to date, no experiment has been found that creates simultaneous time and financial pressure. Therefore, the results of Experiment 3 can be leveraged by marketers, who must continue creating opportunities for consumer transaction no matter the prevailing economic environment.

This research also adds to the limited body of work that explores the interrelationships between time and money, and their psychological and behavioral consequences. That is, combining individual factor with situational factors to explain and predict behavior is another contribution of this research. The central premise in this work is that when faced with constraints of time or money, individual differences in the predisposition to make unplanned purchases moderates the decision-making process and, ultimately, behavioral intention. Key findings from the research that had not been discovered previously include: (1) financial pressure experienced by consumers appears to have a greater role in purchase decision making than time pressure; (2) when feeling time pressure, consumers low in impulsive tendencies make impulsive purchase decisions at almost the same rate as consumers high in impulsive tendencies; (3) under financial pressure, nonimpulsive consumers are affected by marketing stimuli more than impulsive consumers; and (4) time pressure only influences purchase decisions in nonimpulsive consumers and its direction is dependent upon the absence (positive effect) or presence (negative effect) of financial pressure.

It was Experiment 3 that, for the first time, placed participants under financial pressure and time pressure simultaneously. In this experiment, financial pressure created a decreased desire to make an impulsive purchase in both nonimpulsive and impulsive groups (particularly for nonimpulsive participants), thus replicating the findings of Experiment 1. Time pressure, however, exerted no effect on impulsive participants' purchase intentions (regardless of their financial condition) and only affected nonimpulsive participants (in opposite directions depending on their financial condition). Although the findings of Experiment 3 don't align with previous research and the hypotheses of the study, they confirm the results of Experiment 2. In both experiments, time pressure did not change purchase intention in individuals with impulsive

tendencies when they felt no financial pressure. A plausible explanation for this finding could be that impulsive consumers inherently act in an impulsive manner, which is reflected in their already high purchase intentions, and thus the effect of an external stimulus such as time pressure is expected to be minimal, if any, on the decision to make an unplanned purchase.

Additionally, in both Experiment 2 and Experiment 3, when participants were under no financial pressure, nonimpulsive participants increased their purchase intention under time pressure. This unexpected result lends some support to Youn and Faber's (2002) findings that individuals with high self-control are more likely to respond to sales and bargains. Another possible explanation for time pressure affecting nonimpulsive individuals in an unpredicted manner could come from the previously mentioned goal system theory (Hoch and Loewenstein, 1991). When goals conflict, one may temporarily override the other as part of the control process (Shah and Kruglanski, 2002). In this research, participants' self-control goal may have been temporarily interrupted with their product acquisition goal (Ramanathan and Menon 2006), thus increasing the purchase intention for those who were normally nonimpulsive. This provides opportunities for future research to unpack this phenomenon.

Another explanation may be the personal connection the respondents felt toward the product based on the context of the scenarios presented. Applying the *reminder unplanned* purchase typology of Parboteeah et al. (2009), the product was described as expensive and something that participants had wanted to buy. Activating time cues in consumers may have shifted their attitudes and decisions about the product in terms of favorableness (Mogilner and Aaker 2009). The result is an increase in attitudes toward the product and in the decision-making process regarding purchase intention. Nonimpulsive participants perhaps rationalized their purchase by perceiving themselves as smart shoppers who save money on the product they

wanted for some time. This may also provide some evidence of an increasingly materialistic-driven society, which provides an opportunity for future research.

In sum, while the findings for the financial pressure experiment were similar to results of earlier research, the results of the time pressure experiment were the opposite of what has been discovered previously. This is one of the two main contributions to the field of consumer behavior and decision making. The second is the finding that financial pressure exerts a greater response from individuals than time pressure when consumers experience both at the same time, which no other research has studied. Leveraging impulsive buying behavior as a personality trait that moderates the behavior to predict causality is also unique to the field. As a result, the managerial implications are of particular importance since it can be inferred that time pressure appeals during a time of financial hardship, such as a recession, will have little effect.

### **THEORETICAL CONTRIBUTIONS**

The experiments in this research contribute to theory in three different ways. First, the research revealed that consumers with nonimpulsive buying behavior are affected by time pressure. While previous research (e.g. Dror, Busemeyer, and Basola 1999; Iyer 1989; Mukhopadhyay, Sengupta, and Ramanathan 2008; Ramanathan and Menon 2006) indicated that consumers with nonimpulsive behavioral tendencies are able to dismiss the effects of time pressure, two studies in this research demonstrated the opposite – that nonimpulsive consumers respond to a marketing stimulus that communicates such pressure, and their responses may depend upon whether they are under financial pressure (negative) or not (positive). In other words, when both types of individuals experience an opportunity to make an unplanned purchase for a product that is only available for a certain period of time, nonimpulsive consumers change their purchase intention.



Further research is needed to determine what the underlying motivation was that made these participants increase their purchase intention under such pressure conditions.

Second, the research demonstrated that individuals respond more to financial pressure than time pressure. This was discovered in the third study when respondents were exposed, for perhaps the first time in an experimental setting, to varying levels of financial pressure and time pressure at the same time. Across all scenarios, when financial pressure was high, consumers (whether prone to impulsive buying behavior or not) significantly lowered their unplanned purchase intention. Previous research has indicated that even consumers who often feel the urge to buy impulsively are able to reject making an unplanned purchase when situational factors are negative at some independently determined critical level (Rook and Fisher 1995). But when the financial shackles were removed, intention increased or remained at the same level, thus demonstrating that one's financial situation plays a stronger role in purchase decisions than one's time situation. Previous research to investigate both time and financial pressure did so by simply measuring the two variables (Beatty and Ferrell 1998), or did not apply them equally across all respondents (Van Kenhove and De Wulf 2000), or did not demonstrate causality (Badgaiyan and Verma 2015).

Finally, the experiments add to the body of knowledge on impulsive buying behavior by focusing specifically on one element of the marketing mix – advertisements. Previous research investigating the marketing mix and impulsive behavior had focused on more overt marketing tactics, such as in-store promotions, shelf coupons, point-of-sale displays, and scarcity appeals (e.g. Badgaiyan and Verma 2015; Dholakia 2000; Mohan, Sivakumaran, and Sharma 2013; Youn and Faber 2000). The reason is that most impulse purchases are thought to take place within the shopping environment, with in-store stimuli creating positive affective responses in

consumers (Parker and Tavassoli 2000; Walters and Mackenzie 1988). This research did not rely on these visual tactics. What's more, it did so through scenario-based experiments, which force respondents to imagine the advertisement themselves, thus decreasing even further the overt nature of the stimulus. This opens the door for future research to determine if other elements of the marketing mix used outside the store setting can affect impulsive buying behavior and unplanned purchase intention.

### **MANAGERIAL IMPLICATIONS**

When consumers pull back on spending, the job of the marketing manager gets harder. In an uncertain economic environment, marketers need to know what they can do to affect consumer behavior in their favor, knowing that their customers may be reluctant to spend. Based on these findings, and combined with the results of this research, marketing managers are advised to maintain consistent levels of marketing communications during a recession, while reducing or eliminating any appeals related to scarcity of product or time, or that place a sense of urgency on the consumer. This is because using time pressure messages during a recession will not increase sales. Therefore, marketers should switch types of appeals from scarcity to quality because research has found consumers are more willing to pay a premium for a product during a recession, but only if they believe it's superior in quality (Steenkamp, Van Heerde, and Geyskens 2010).

The results show that even nonimpulsive consumers behave in an impulsive manner and increase their purchase intention when experiencing a stimulus that prompts consideration of an unplanned purchase and increases the time pressure on the individual. At the same time, this time pressure element does not need to be overt, as is often the case in advertisements communicating a limited time frame to make a purchase. However, financial pressures, such as a recession, will

have a dampening effect for consumers because even impulsive consumers can, at times, control their impulsivity (Vohs and Faber 2007), let alone the negative reaction found in this research from nonimpulsive participants. Therefore, using time pressure messages during a recession will not have the desired effect of increasing sales. In bad economic times, marketers are advised to change their advertising content from time sensitive promotions to more brand-oriented messages because the economic environment does have an impact on brand loyalty (Van Steenburg and Spears 2011). As the economy improves and consumer confidence increases, marketers can then implement ad campaigns that feature time pressure arguments as an effective marketing message.

Still, it is important to tap into the characteristics of populations and influence their behavior when they are lured by temptation. The results of this and previous research suggest that targeting impulsivity could result in higher consumer purchase intention, thereby increasing profitability for firms. However, while this may have the result of increasing sales, targeting consumers based on their impulsive tendencies is rife with ethical concerns (Baumeister 2002; Oaten and Cheng 2007; Vohs and Schmeichel 2007). Therefore, marketers should focus on functional impulsive purchases that allow consumers to trust their impulsive instincts rather than dysfunctional purchase because the former leads to higher satisfaction levels while the latter spurs buyer remorse (Bressolles, Durrieu, and Giraud 2007). An economic downturn adds another external factor that consumers consider (Van Steenburg and Spears 2011). Thus, a recession would seem to be a good time for marketing managers to differentiate their brand from competing brands by leveraging quality messages, rather than increasing the pressures consumers feel at the time.

## **LIMITATIONS AND FUTURE RESEARCH**

This study has certain limitations which could be addressed by future research. The research was conducted in a laboratory setting, so it is unclear if the findings will replicate in actual pressure situations. However, a lab provides controlled variation that allows researchers to pinpoint causality by ruling out confounding effects (Falk and Heckman 2009). Still, conducting field experiments where participants are in actual pressure situations to replicate the findings here would increase generalizability for the effects of time and financial pressures on unplanned purchase decision making. The logical next step in this research stream, however, may simply be to conduct additional experiments that provide real advertisements to participants in order to test the results and improve internal validity. Additional variations in this stream could include testing types of products, such as product categories or different levels of product involvement, to identify additional boundary conditions. Also, the channel through which purchases are made is not specified in this research; but in light of the respondents sampled, it would be interesting to study this aspect in the context of offline and online situations as consumer impulsive tendencies are similar in both (Hellmich 2014). For example, will consumers seek instant gratification by purchasing products at a retail store, or is delayed shipping in online purchases acceptable?

The research also is limited by the sample that was tested. University students are, in general, less financially secure than the general population. Though the research used hypothetical scenarios to mitigate participants' present state, and the manipulation check demonstrated the scenarios did, in fact, place the participants in a state of high or low financial pressure, the sample makes for limited generalizability. However, even student samples have produced results as relevant as the same research conducted on different groups (Falk and Heckman 2009). In regard to time pressure, because individuals have difficulty considering time as an independent dimension (Zauberman et al. 2009), this research presented a sale time period

of three days to three weeks. It is unclear whether similar patterns of purchase intention and impulsivity will be observed if the sale time period is changed. For example, companies induce a sense of urgency to buy through advertising tactics that invoke time pressure with messages such as “order by midnight and to receive 30% off on your purchase.” It would be interesting to assess unplanned purchase intention and impulsivity by varying windows of time. In addition, there is more than one type of time limit (e.g. moderate vs. severe) which may impact the decision process in different ways. What’s more, other factors such as past purchase experience have been found to affect purchase intention when combined with time pressure (Huaman-Ramirez and Merunka 2017), providing opportunities for researchers to conduct additional studies incorporating other variables in combination with time pressure.

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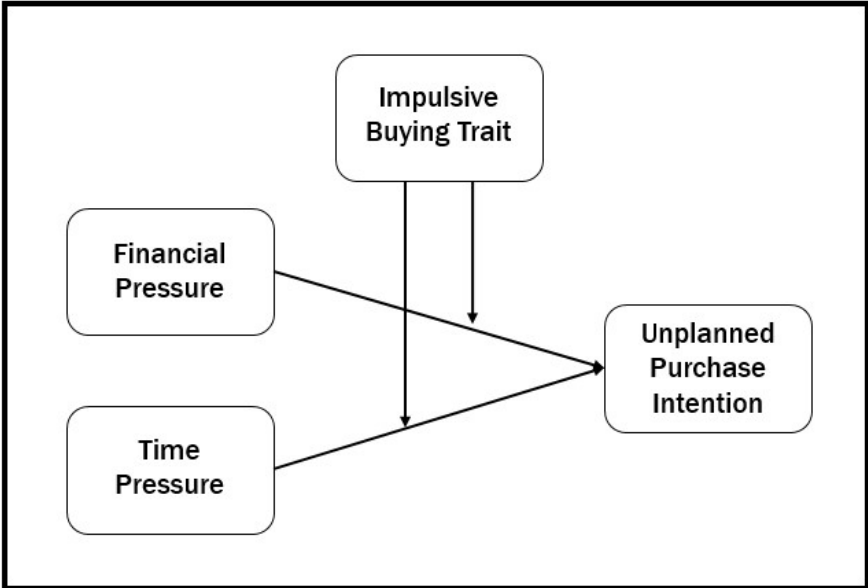
## Appendix

	Experiment 1	Experiment 2	Experiment 3
<b>Impulsive Buying Behavior Scale (1: Strongly Disagree; 7: Strongly Agree)</b>	<i>Standardized Factor Loadings (<math>\lambda</math>)</i>		
1. When I have money, I cannot help but spend part or the whole of it.	0.47	0.24	0.59
2. I am often impulsive in my behavior.	0.61	0.60	0.59
3. For me, shopping is a way of facing the stress of my daily life and of relaxing.	0.84	0.74	0.76
4. At times I have let my feelings of guilt determine whether or not I will buy a product.	0.45	0.43	0.58
5. I often have an unexplainable urge, a sudden and spontaneous desire, to go and buy something in a store.	0.84	0.83	0.78
6. As soon as I enter a shopping center, I have an irresistible urge to go into a shop and buy something.	0.91	0.88	0.80
7. I sometimes feel that something inside pushed me to go shopping.	0.84	0.70	0.76
8. I am one of those people who often respond to direct mail offers (e.g., books, records).	0.35	0.33	0.48
9. I am a spendthrift. (I spend money whenever I feel like it.)	0.06	0.08	0.52
10. There are some things I will not buy for fear of being perceived as irrational in my buying behavior.	0.13	0.12	0.35
11. There are times when I have a strong urge to buy (clothing, books, etc.).	0.73	0.66	0.59
12. I have often bought a product that I did not need, while knowing that I have very little money left.	0.67	0.47	0.50
<i>Cronbach's Alpha (<math>\alpha</math>)</i>	<b>0.859</b>	<b>0.852</b>	<b>0.871</b>
<i>Composite Reliability (CR)</i>	<b>0.684</b>	<b>0.623</b>	<b>0.729</b>
<b>Purchase Intention Scale (1: Strongly Disagree; 7: Strongly Agree)</b>			
1. I would purchase the product.	0.95	0.93	0.98
2. I would buy that product if I saw it in the store.	0.95	0.91	0.97
3. I would seek out the product in order to purchase it.	0.86	0.69	0.91
4. It is unlikely that I will purchase that product.	0.90	0.71	0.77
5. Given the opportunity, I predict that I would make that purchase.	0.89	0.77	0.93
<i>Cronbach's Alpha (<math>\alpha</math>)</i>	<b>0.960</b>	<b>0.899</b>	<b>0.961</b>
<i>Composite Reliability (CR)</i>	<b>0.854</b>	<b>0.785</b>	<b>0.867</b>

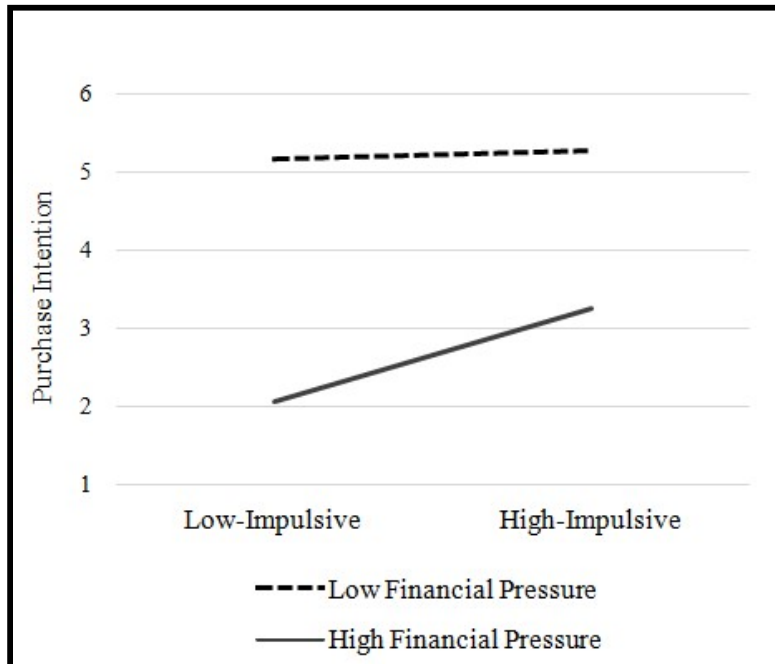
**Table 1: Summary of the experiments and variables used**

Study	Independent Variable(s)	Moderator	Dependent Variable
<b>Experiment 1</b>	Financial Pressure (manipulated) <ul style="list-style-type: none"> <li>▪ Low: -0.5</li> <li>▪ High: +0.5</li> </ul>	Consumer Impulsivity (measured) <ul style="list-style-type: none"> <li>▪ 12-item scale</li> </ul>	Purchase Intention (measured) <ul style="list-style-type: none"> <li>▪ 5-item scale</li> </ul>
<b>Experiment 2</b>	Time Pressure (manipulated) <ul style="list-style-type: none"> <li>▪ Low: -0.5</li> <li>▪ High: +0.5</li> </ul>	Consumer Impulsivity (measured) <ul style="list-style-type: none"> <li>▪ 12-item scale</li> </ul>	Purchase Intention (measured) <ul style="list-style-type: none"> <li>▪ 5-item scale</li> </ul>
<b>Experiment 3</b>	Time Pressure (manipulated) <ul style="list-style-type: none"> <li>▪ Low: -0.5</li> <li>▪ High: +0.5</li> </ul> Financial Pressure (manipulated) <ul style="list-style-type: none"> <li>▪ Low: -0.5</li> <li>▪ High: +0.5</li> </ul>	Consumer Impulsivity (measured) <ul style="list-style-type: none"> <li>▪ 12-item scale</li> </ul>	Purchase Intention (measured) <ul style="list-style-type: none"> <li>▪ 5-item scale</li> </ul>

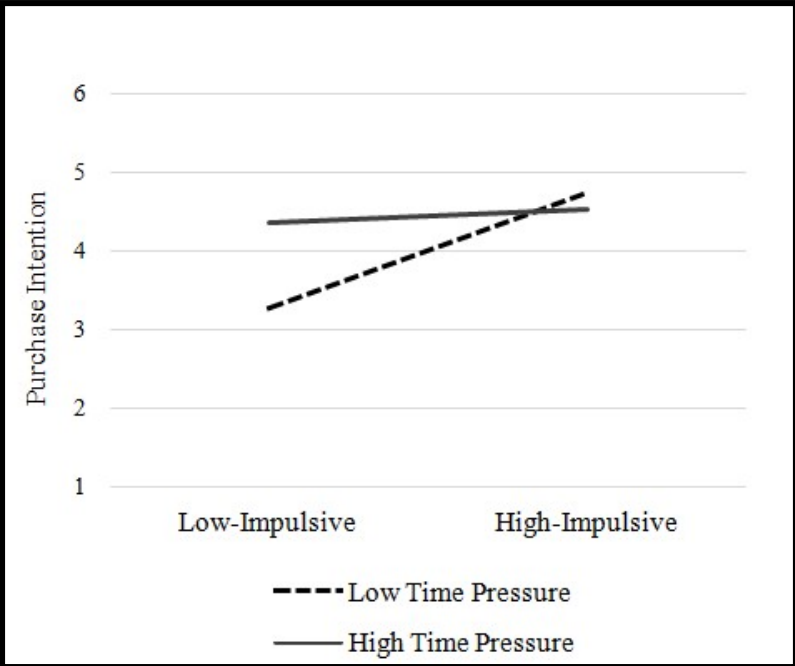
**Figure 1: Interaction model of time and financial constraints on unplanned purchases**



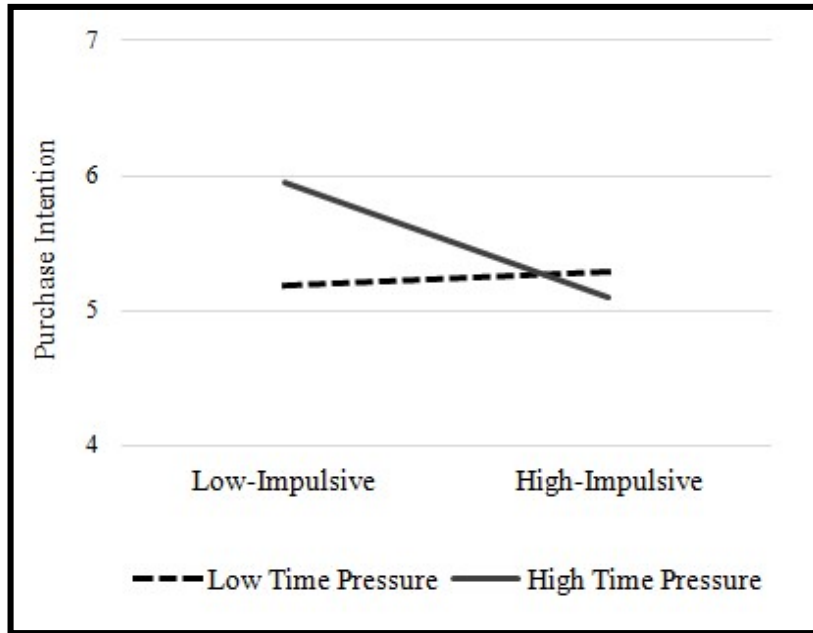
**Figure 2: Interaction between Impulsivity and Financial Pressure**



**Figure 3: Interaction between Impulsivity and Time Pressure**



**Figure 4: Interaction between Impulsivity and Time Pressure  
(Low Financial Pressure Condition)**



**Figure 5: Interaction between Impulsivity and Time Pressure  
(High Financial Pressure Condition)**

