

Consumers' Response to Out-of-Stock Situations

by

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Abstract

This study investigates the impact of purchase motivation, price promotion availability, frequency of out-of-stock situations, and urgency of need in an out-of-stock situation on consumers' intensity of negative emotion and the impact of these negative emotions on consumers' behavioral response, word of mouth communication, and store loyalty. One hundred ninety-six students participated in the online survey, where they had to recall an out-of-stock situation within the past three months. Results demonstrated a significant direct effect between urgency of need in out-of-stock situation and consumers' negative emotion. Furthermore, findings showed that the intensity of consumers' negative emotions influences their behavioral response and partially their word of mouth communication. Negative emotion and store loyalty had no significant effect. This study's findings allow retailers to manage stockout situations and minimize consumers' negative emotions due to stockouts.

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List of Abbreviations

OOS	Out-of-Stock
SKU	Stock keeping unit
WOM	Word of Mouth

CHAPTER 1. INTRODUCTION

Offering the right quantity of the right product at the right place at the right time, setting the right price, and meeting the company's financial goals can be very challenging for many retailers (Levy, Weitz, & Pandit, 2011). Another challenge is the occurrence of stockouts, which is reported to be largely due to errors in demand forecasting (Gruen, Corsten, Bharadwaj, 2002). Gruen et al. (2002) examined several studies varying by region, category, and promotion, and estimated a global average out-of-stock (OOS) rate of 8.3 percent. In 2014, Walmart executives reported that they were leaving almost \$3 billion on the table because of stockouts (Rosenblum, 2014). It is important to minimize the inventory investment while simultaneously avoiding the occurrence of stockouts in order to prevent lost sales and profit (Levy et al., 2011).

Because stockouts often result in lost sales, they are likely to influence a company's future as well as current profits (Mantrala et al., 2009). Clearly, OOS issues can lead to both short- and long-term financial losses (Narayanan, 2003; Verhoef & Sloot, 2006; Zinn & Liu, 2001). Short-term financial losses due to stockouts occur when consumers postpone the purchase, cancel the purchase altogether (i.e., decide not to purchase), or switch to another store (Kim & Lennon, 2011); these losses are estimated at four percent of sales (Gruen, Corsten, & Bharadwaj, 2002). Long-term financial losses can also occur because stockouts lead to consumer dissatisfaction, negative word of mouth (WOM), reduced patronage intentions (Fitzsimons, 2000; Zinn & Liu, 2001), and diminished store loyalty (Ehrental & Stölzle, 2013).

Problem Statement

Stockouts for apparel products are usually higher than stockouts for grocery products because of the high demand uncertainty and the large number of stock keeping units (SKUs)

required to maintain an ‘in-stock’ position (Hammond & Kohler, 2000). The complexity of apparel retailers’ assortment can lead to poor store execution because it is difficult for apparel retailers to see what sizes or colors are on the shelves and what sizes or colors are missing in a short amount of time (Buzek et al., 2015). Further, the large amount of stock necessary to provide an adequate assortment contributes to the difficulty of maintaining an accurate stock assortment. For example, an apparel retailer selling women’s pants stocks ten styles in six colors with nine sizes requires 540 SKUs in women’s pants just to have 1 pair in each style, color and size combination (SKU). Normally, several pairs are carried in each SKU, especially in the more popular styles, sizes and colors, further illustrating the complexity of maintaining an ideal inventory assortment. Almost \$27.2 billion were lost in apparel and footwear sales in the United States in 2008, largely due to OOS situations (Buzek et al., 2015). According to Narayanan (2003), over a third of women are not able to purchase their desired apparel product because their size was OOS. In addition to these issues, demand for apparel varies substantially depending on the season, weather, price promotions, holidays, and other events. Thus, the retailer of hedonic products, such as apparel, needs to maintain an accurate inventory assortment amidst constantly fluctuating customer demand. Providing a more accurate inventory assortment can lead to reduced inventory costs and minimize lost sales by balancing costs of stockouts and costs of carrying inventory. Further, utilitarian products such as groceries are more easily substituted than apparel products because consumers can easily switch to another size or brand (Sloot et al., 2005). Switching to another size or brand is not as easy with hedonic products, such as apparel items.

Several researchers have examined stockouts for product categories such as apparel (Kim & Lennon, 2011), cereals, margarine (Campo, Gijbrecchts, & Nisol, 2000), jewelry (Zinn & Liu,

2001), detergent, kitchen towels, milk, personal hygiene, and toys (Helm et al., 2013). However, most OOS studies have just assumed certain products were either hedonic or utilitarian and have investigated the effects of stockouts on consumers' response for either utilitarian products, such as cereal, margarine or groceries in general (Campo et al., 2000; Verbeke, Farris, & Thurik, 1998), or in one case, for apparel products classified by the researchers as hedonic (Kim & Lennon, 2011). Sloot, Verhoef, and Franses (2005) included both hedonic and utilitarian products; however, they categorized their products as either utilitarian or hedonic based on food experts' evaluations, including managers and academics. For example, products such as eggs, milk, margarine, and detergent was classified as utilitarian and cigarettes, salty snacks, beer, and cola as hedonic (Sloot et al., 2005). It is risky to unilaterally categorize specific products as utilitarian or hedonic because whether a product is perceived as hedonic or utilitarian depends largely on consumers' purchase motivation (Pham, 1998). Utilitarian products are purchased primarily because of functional, practical, and instrumental reasons (Batra & Ahtola, 1991; Strahilevitz & Myers 1998) whereas hedonic products are purchased primarily for experience, excitement, and fun (Hirschman & Holbrook, 1982). Consumers' responses to OOS situations may differ depending on their purchase motivation (hedonic vs. utilitarian). However, none of the existing literature has paid attention to whether consumers' purchase motivation is utilitarian or hedonic and further how this may affect consumers' responses to OOS situations.

Another important consideration is that assuring product availability is even more difficult during promotions because these special circumstances can increase difficulty of accurately predicting stock levels required to meet demand. Research has shown that consumers often respond to a stockout for products at full price by switching to another brand in an equal price category (Walter & Grabner, 1975). However, if the desired OOS product is at a

promotional price, switching to another brand may not be possible because consumers may not be able to find a comparable product at the same price, and higher priced products may not be an acceptable substitution (Gruen et al., 2002). Furthermore, postponing the purchase of the desired product may not be possible because the promotional prices usually last for only a limited time. According to Gruen et al. (2002), the OOS level for promotional priced items are higher than the OOS level of full priced items (2:1 ratio). Several other studies showed similar results (e.g., Berger, 2003; Consulting, 1996), confirming the increased difficulty of accurately predicting stock levels required to meet demand during promotions. Helm, Hegenbart, and Endres (2013) predict that consumers facing an OOS situation for products at a promotion price would feel even more disappointed than consumers who are facing an OOS situation for the product at the full price, perhaps because they cannot choose a substitute at the same price. However, they did not test this prediction.

A few researchers have used a theoretical framework, such as the economic theory, to explain the impact of OOS situations. Although economic theory suggests that rational consumers would maximize utility in an OOS situation by choosing the alternative product with the next highest utility, much research shows that consumer behavior is not necessarily rational or logical (Rook & Fisher, 1995). Further, economic theory does not capture emotional reactions that are likely to play a part in consumers' responses to stockouts. Consumers who are frustrated with OOS situations may cancel the purchase, even when switching to an alternative is the best way to maximize utility. Therefore, the discrepancy-evaluation theory of emotion may be a more appropriate framework for examining the impact of an OOS situation on consumers' responses (Mandler, 1984). Previous researchers have used the discrepancy-evaluation theory of emotion to explain the relationship between stockouts and emotional response (Kim & Lennon, 2011).

Recurrent OOS situations are likely to lead to multiple interruptions between consumers' expectation and their reality, which in turn leads to stronger negative emotions (Kim & Lennon, 2011; Mandler, 1984). Kim and Lennon (2011) examined the impact of one versus two OOS situations finding that consumers who faced multiple OOS situations experienced stronger negative emotion than consumers who faced only one OOS situation. Based on Kim and Lennon's (2011) and Mandler's (1984) findings, there is reason to expect that the frequency of OOS situations affect consumers' negative emotions. The potential cumulative effect of repeated stockouts over a period of time was not considered in Kim and Lennon's (2011) study. Researchers have alluded to a potential cumulative effect of repeated stockouts over a period of time (Emmelhainz et al., 1991; Schary & Christopher, 1979); however, no published research has examined this effect.

Furthermore, the urgency of need must be considered because several researchers have found that urgency of need impacts consumers' behavioral response to stockouts. For example, several researchers found that consumers with high urgency of need tend to substitute the desired product whereas consumers with low urgency of need tend to delay the purchase (Kim & Lennon, 2011; Zinn & Liu, 2001).

In disappointing purchase-related events, such as OOS situations, consumers often experience negative emotions such as anger and disappointment (Yi & Baumgartner, 2004) due to discrepancies between the consumers' expectation of product availability and the reality of stockouts of desired products. Based on the discrepancy-evaluation theory of emotion (Mandler, 1984), the amount of negative emotion experienced by consumers as a result of an OOS situation may differ by purchase motivation in the OOS situation, price promotion availability in the OOS situation, the frequency of experiencing an OOS situation, and the urgency of need in an OOS

situation. If consumers' responses to OOS situations differ as a function of purchase motivation, price promotion availability, frequency of experiencing an OOS situation, and urgency of need, it is particularly important to better understand how consumers' negative emotions experienced differ for each situation. Therefore, this study examines the effect of purchase motivation (hedonic vs. utilitarian) in an OOS situation on the level of negative emotion experienced, the effect of price promotion availability (promotional price and full price) in an OOS situation on the level of negative emotion experienced (i.e., OOS situations for products at a promotional price vs. products at full price), the effect of the frequency of OOS situations on the level of negative emotion experienced, and the effect of urgency of need in OOS situation on the level of negative emotion experienced.

Several researchers have examined the impact of stockouts on consumers' behavioral response (Campo et al., 2000; Sloot et al., 2005; Van Woensel, van Donselaar, Broekmeulen, & Fransoo, 2007; Verbeke et al., 1998; Zinn & Liu, 2001); but, just knowing the behavioral response to OOS situations does not really help to understand why consumers respond to stockouts in a certain way. Previous studies show that emotions are likely to influence consumers' purchase intention (Baker, Grewal, & Levy, 1992), retail preference, and store selection (Dawson, Bloch, & Ridgway, 1990). Understanding the negative emotions resulting from stockouts and the relationship between these negative emotions and consumers' actual (though recalled) behavioral responses to stockouts may provide insight as to why consumers respond to stockouts in a certain way. Kim and Lennon (2011) examined the relationship between negative emotion caused by OOS situations and consumers' perception of the store, decision satisfaction, and behavioral intent; however, no published research has examined the potential effect of negative emotions resulting from exposure to OOS situations on consumers'

behavioral response. This study will examine the effect of consumers' negative emotion experienced in an OOS situation on their recalled actual behavioral response (i.e., switching stores, switching products, switching brands, and canceling the intended purchase) to an OOS situation.

Further, there is little extant information on the potential impact of stockouts on consumers' WOM communication. WOM communication is affected by consumers' satisfaction (Bearden & Teel, 1983; Oliver & Swan, 1989; Yi, 1990) and plays an important role in the reputation of the company (Allsop, Bassett, & Hoskins, 2007; Day, 1980). Thus, negative WOM is likely to negatively impact the company's reputation. Kim and Lennon (2011) examined the impact of negative emotions on consumers' behavioral intent, which they defined as consumers' purchase intent and intent for WOM communication, finding that negative emotion was negatively related to behavioral intent. However, the intent for WOM communication refers only to the state of mind to complete the act, not actual WOM communication. Because emotions are known to affect WOM (Zeelenberg & Pieters, 2004), this study examined the relationship between the negative emotions experienced in an OOS situation and consumers' actual WOM communication about the store.

Last, there is little extant information on the potential impact of stockouts on store loyalty. Store loyalty, or consumers' commitment to a particular store (Bloemer & De Ruyter, 1998; Kiesler, 1968; Lastovicka & Gardner, 1977), decreases with their dissatisfaction (Fornell, Johnson, Anderson, Cha, & Bryant, 1996). Dissatisfaction, in turn, is positively related to negative emotions (Khalaf, Rasli, & Ratyan, 2013). Thus, it is expected that negative emotion may lead to less satisfaction and therefore to reduced store loyalty. Osman (1993) found that loyal consumers visit their favorite store first, are more committed to purchase products from a

particular retailer, and are less willing to shop other retailers than non-loyal consumers.

Therefore, store loyalty can influence a retailer's current and future sales, suggesting that strong store loyalty is a sustainable competitive advantage (Levy et al., 2011).

Research examining the impact of consumers' store loyalty on their behavioral response to OOS situations (Helm et al., 2013) shows that store-loyal consumers are more likely to switch to another product or brand, postpone, or cancel their purchase when the desired product is OOS, whereas consumers who are not store loyal are more likely to switch to another store (Helm et al., 2013). However, just knowing the behavioral response to OOS situations does little to determine how and why an OOS situation will diminish consumers store loyalty. Kim and Lennon (2011) examined the impact of negative emotion on store image (i.e., the way consumers perceive a store) finding that stronger negative emotions lead to less favorable perception of store image. According to previous research, store image is positively related to store loyalty (Lessig, 1973; Sirgy & Samli, 1989), which means that a favorable store image is likely to result in more store loyalty (Hirschman, 1981). In order to understand the effect of stockouts on consumers' store loyalty, this study examines the relationship between the negative emotion experienced in an OOS situation and consumers' store loyalty.

Purpose

The purpose of the study is to provide a better understanding of the OOS phenomenon by including important contextual factors (i.e., purchase motivation, price promotion availability, frequency, and urgency of need) in OOS situations and consumers' responses to different stockouts. The objectives of the study are:

- (1) To investigate the effect of consumers' purchase motivation (hedonic vs. utilitarian) in an OOS situation on the level of negative emotion experienced.
- (2) To examine the effect of the price promotion availability (promotional price vs. full price) in an OOS situation on the level of negative emotion experienced.
- (3) To investigate the effect of the frequency of OOS situations on the level of negative emotion experienced.
- (4) To examine the effect of consumers' urgency of need in an OOS situation on the level of negative emotion experienced.
- (5) To investigate the effect of the negative emotion experienced in an OOS situation on consumers' recalled actual behavioral response to an OOS situation, WOM communication, and store loyalty.

Significance of the Study

Understanding how consumers respond to different OOS occurrences, for example hedonic versus utilitarian, can improve retailers understanding of the OOS phenomenon by adding important contextual factors in stockouts – purchase motivation, price promotion availability, frequency of stockouts, and urgency of need. It might allow retailers to determine what products are most important to the consumers based on their response to OOS and to ensure availability of these items to prevent lost sales. For example, hedonic products might be important because consumers are more likely to switch to another store when the desired hedonic product is OOS instead of switching to a substitution (i.e., different item or brand). As another example, a product at promotional price might be important because consumers may not be able to switch to another brand or postpone the purchase as the promotional prices usually last for

only a limited time and higher priced products may not be an acceptable substitution (Gruen et al., 2002). Therefore, retailers may need to focus more effort on avoiding stockouts for hedonic and promotional priced products in order to prevent lost sales. A better understanding of how consumers respond to different OOS occurrences might help retailers anticipate customers' reactions to different OOS situations and make better informed decisions regarding potential stockouts.

Although researchers suggest that factors such as purchase motivation and price promotion availability in an OOS situation may influence consumers' emotional response, earlier literature on this topic is fragmentary and does not provide a comprehensive picture of the nature of the relationship between these variables. Since purchase motivation and price promotion availability in an OOS situation may impact consumers' responses to the OOS situation, it is important for retailers to gain a better understanding of these relationships. As the impact of purchase motivation and price promotion availability has not been previously used to better understand consumers' negative responses to OOS situations, this study will extend the external validity of this phenomenon.

Further, understanding the negative emotions resulting from stockouts, based on the discrepancy-evaluation theory of emotion, and the relationship between these negative emotions and consumers' responses to stockouts, such as behavioral response, WOM communication, and store loyalty, may provide insight as to why consumers respond to stockouts in a certain way. Retailers need to focus on understanding why consumers respond to stockouts a certain way in order to identify and provide acceptable alternatives to OOS victims that will prevent long-term financial losses, which can occur because consumers disseminate negative information concerning a store or because they will not revisit a store.

Knowing more about how consumers respond to different OOS occurrences and why they respond to stockouts a certain way can help retailers better understand the nature of consumers decision processes, and future studies may investigate meaningful links between these factors (i.e., consumers' purchase motivation, negative emotion, and behavioral response) and important customer demographic variables such as gender and age.

Definition of Terms

Full price: The initial retail price often referred to as the manufacturer's suggested retail price (MSRP) (Levy et al., 2011).

Hedonic purchase motivation: Purchases based primarily on the experience, excitement, and/or fun provided (Hirschman & Holbrook, 1982).

Negative emotion: A negative, intense, and high conscious affective state (due to stockouts) that influences consumers' mental processing and behaviors (Kim & Lennon, 2011).

Promotional price: A price that is less than the regular retail price (Levy et al., 2011), which typically used as a short term incentive, tactically designed to push customers to purchase (Cox & Brittain, 2000; Gilbert & Jackaria, 2002).

Purchase motivation: "Motivations to engage in retail shopping including both utilitarian and hedonic dimensions" (Childers, Carr, Peck, & Carson, 2001, p. 511).

Stockout or out-of-stock: A situation in which the specific item consumers want to purchase is not available (Kim & Lennon, 2011).

Store image: "The way consumers perceive the store based on their evaluation of store attributes" (Kim & Lennon, 2011, p. 12).

Store loyalty: Consumers' favorably biased attitude and behavioral response toward a store (i.e., revisit), expressed over time (Bloemer & De Ruyter, 1998).

Urgency of need: "A felt need to initiate and complete an act in the immediate or near future" (Swain, Hanna, & Abendroth, 2006, p. 523).

Utilitarian purchase motivation: Purchase based primarily on functional, practical and instrumental reasons (Batra & Ahtola, 1991; Strahilevitz & Myers, 1998).

Word of mouth communication: Dissemination of information concerning a brand, a product or a service through consumer-to-consumer communication (Arndt, 1967; Chen, Wang, & Xie, 2011).

CHAPTER 2. LITERATURE REVIEW AND HYPOTHESES

In Chapter 2, research related to negative emotion and the discrepancy-evaluation theory are reviewed to support the conceptual framework and specific hypotheses for this study, followed by literature on purchase motivation in OOS situations, price promotion availability in OOS situations, frequency in OOS situations, urgency of need in OOS situation, behavioral response to OOS situations, WOM communication, and store loyalty.

Discrepancy-Evaluation Theory of Emotion

The discrepancy-evaluation theory of emotion (Mandler, 1984) suggests that negative emotions result largely from differences between a consumer's expectation of product availability and the actuality of the stockout. Knowledge and information are organized by cognitive structures (Mandeler, 1984). Cognitive structures include schemas that originate largely from interaction with the environment (Mandler, 1984; Rumelhart & Ortony, 1978; Rumelhart, 1980) and are used to organize our perceptions of experiences with different events (Mandler, 1984; Miller, Galanter, & Pribram, 1960). In turn, these schemas or cognitive structures influence one's perception and evaluation of new events (how one perceives a situation) (Mandler, 1984). Therefore, it can be said that schemas (i.e., developed from past experiences with the relevant events and objects) affect the perception and evaluation of the current environment, and thus one's expectations (Kim & Lennon, 2011). Unmet expectations can be problematic because they are inconsistent with one's actual experiences (Mandler, 1984). For example, when you go to a store you expect to find the product you are looking for because of your existing shopping schema; thus finding the product unavailable would be inconsistent

with expectations and would interrupt the dominant expectations, which is the currently active schema.

In this case, consumers may not be able to readily assimilate the information into their current working schema because of the occurrence of a mismatch (Mandler, 1984). Thus, the consumers' expectations are violated, which leads to discrepancies in their usual ways of thinking or acting. These discrepancies result in autonomic visceral arousal, which in turn, is likely to result in negative (or positive) emotion (Mandler, 1984). Just as "a telephone call during dinner from a pestiferous salesman results in annoyance" (Mandler, 1984, p. 177); an OOS situation when shopper expected to purchase their desired product may result in frustration, disappointment, and even anger. OOS situations are disappointing purchase-related events in which consumers often experience negative emotions such as anger and disappointment (Yi & Baumgartner, 2004). Researchers have supported the notion that emotion is likely to influence consumers' purchase intention (Baker et al., 1992), retail preference, store selection (Dawson et al., 1990), and approach/avoidance behavior (Hui, Dube, & Chebat, 1997).

Based on their cognitive structure, or schema, shoppers assume the product they desire will be available, thus experiencing an OOS situation results in a discrepancy between expectation and reality (Kim & Lennon, 2011) and this discrepancy is likely to lead to negative emotions (Mandler, 1984). Based on both theory and previous research (Kim & Lennon, 2011; Mandler, 1984), it can be expected that stockouts of the desired product will lead to discrepancies between the consumers' expectation and the reality, and these discrepancies will in turn lead to more negative emotions. Therefore, negative emotion was used as a mediating variable between three contextual factors (i.e., purchase motivation in an OOS situation, price

promotion availability in an OOS situation, and frequency of OOS situations) and behavioral response to an OOS situation, WOM communication, and store loyalty in this study.

Purchase Motivation in an OOS Situation

Considerable research demonstrates that consumers' purchase behavior varies for utilitarian versus hedonic products (Batra & Ahtola, 1991; Strahilevitz & Myers, 1998). For utilitarian products purchased primarily because of functional, practical, and instrumental reasons (Batra & Ahtola, 1991; Strahilevitz & Myers, 1998), research has shown that consumers will respond to OOS situations by either switching the product, the brand, or the store (Campo et al., 2000; Sloot et al., 2005; Zinn & Liu, 2001). Or, consumers may postpone the purchase until later or cancel the purchase altogether for utilitarian products (Campo et al., 2000; Sloot et al., 2005; Zinn & Liu, 2001). Switching to a different product or brand is the most common response to stockouts of utilitarian products such as grocery products (Campo et al., 2000; Sloot et al., 2005; Van Woensel et al., 2007; Verbeke et al., 1998) because in most OOS situations for grocery products, the costs of switching to another store, postponing the purchase, or even canceling the purchase all together are higher than the costs of substitution (Kim & Lennon, 2011). For example, consumers looking for a particular cereal product and finding it OOS may more easily achieve their shopping goals by substitution (i.e., switching to another cereal brand or size) than by switching to another store, postponing or canceling the purchase altogether.

However, many products, such as apparel and accessories, are perceived as hedonic products, purchased primarily for the experience, excitement, and fun (Hirschman & Holbrook, 1982). These hedonic products are often purchased to obtain emotional and affective satisfaction (Jun, Ham, & Park, 2013) and to experience pleasure or symbolic satisfaction (Batra & Ahtola,

1991). There may not be an acceptable substitution for many hedonic purchases because the emotional and affective satisfaction may not be achieved if the shopper is forced to find a substitute product. Further, the pleasure experienced or the desired symbolic satisfaction may be lost with a substitute product. For example, consumers looking for a particular pair of jeans and finding it OOS may not easily be able to achieve their shopping goals by substitution (i.e., switching to another size).

Examples of hedonic products include designer clothes, music, sports cars, luxury watches, and chocolates (Khan, Dhar, & Wertenbroch, 2005); whereas microwaves, detergents, or home security systems are likely to be considered utilitarian products (Dhar & Wertenbroch, 2000; Hirschman & Holbrook, 1982; Strahilevitz & Myers, 1998). However, the determination of whether a product is utilitarian or hedonic depends largely on the perceptions of the consumers (Khan et al., 2005) and their purchase motivation (Pham, 1998). That is, individual consumers may have different views on whether products are utilitarian and hedonic (Khan et al., 2005) depending on their purchase motivation and expected use of the product (Pham, 1998) because usage and consumption motives are central to determining whether a product is perceived as hedonic or utilitarian (Pham, 1998).

Kim and Lennon (2011) predicted that when faced with an OOS situation, consumers are more likely to switch to another product or brand when shopping for a utilitarian product and to postpone or cancel the purchase altogether when shopping for a hedonic product as it is more difficult to find a suitable alternative when shopping for many hedonic products such as apparel items. Additionally, researchers predict that consumers facing stockouts for hedonic products, such as fashion apparel products, will experience stronger emotional responses than consumers facing utilitarian stockouts, such as groceries, because “hedonic consumption refers to

consumers' multisensory images, fantasies and emotional arousal in using products" (Kim & Lennon, 2011; Hirschman & Holbrook, 1982, p. 93). However, they did not actually test this prediction.

Given that consumers are influenced by their emotions (Scherer, 2003), and that consumers' behavioral intention (Bagozzi, Baumgartner, & Pieters, 1998), evaluation (Schwarz, 1990), and information processing (Isen, 1987) are affected by their emotions, it is expected that emotion may also play a role in consumers' response to OOS situations. Because negative emotions, such as disappointment, frustration, and anger, are likely to occur when consumers' in-stock expectations are violated, and because hedonic purchases are, by definition, more emotionally driven than utilitarian purchases, it is reasonable to expect a stronger emotional response among consumers facing an OOS situation for hedonic products. Generally, when consumers shop for hedonic products, their emotions are highly engaged (Hirschman & Holbrook, 1982); thus, they are likely to be influenced by their emotions as their purchase decisions are based largely on pleasure or satisfaction (Sloot et al., 2005). Further, it seems likely that the discrepancy between consumers' expectation of product availability and the actuality of the stockout will be greater for hedonic products because consumers are less likely to find an acceptable substitution, resulting in further disappointment, frustration, and anger. Thus, the following hypothesis was proposed:

H1. Consumers purchasing products for hedonic reasons will experience stronger negative emotions when facing a stockout than consumers purchasing products for utilitarian reasons.

Price Promotion Availability in an OOS Situation

According to Gupta (2013), price promotion availability (promotional price vs. full price) affects the “desire of the consumer to buy the product right away” and restricts the freedom of the consumer to delay purchase decision (p. 19). Youn and Faber (2000) found that marketer controlled cues (or triggers associated with buying), such as products on sale, were directly associated with immediate purchase because these external cues increase the desire of the consumer to purchase a product right away (Gupta, 2013). These external cues can trigger the desire to purchase the product immediately (Wansink 1994; Youn & Faber 2000) because consumers fear that delaying the buying decision will result in a lost opportunity (Gupta, 2013).

Among others, apparel retailers frequently offer temporary price discounts or sale prices to entice price sensitive consumers to purchase these products and thereby increase their store sales (Inman & McAlister, 1993). However, these price discounts can cause large variations in consumers’ demand because more consumers feel the urge to purchase the product right away when the price is discounted, leading to increased difficulties in maintaining product availability (especially for fashion apparel products where replacement inventory may not be immediately available) (Levy et al., 2011). Thus, stockouts are more likely to occur among retailers offering frequent price promotions than retailers with everyday low pricing (Levy et al., 2011).

Research has shown that consumers switch to another brand in the same price range, when the desired product they are looking for is OOS (Walter & Grabner, 1975). However, none of the published research reviewed has examined how consumers react to OOS products that are at promotion prices. For example, an OOS situation where the shopper is eager to purchase their desired product right away to obtain the promotional price may result in more frustration and disappointment than when the shopper expected to purchase their desired product at full price.

The full price offer may be perceived as less urgent because the price is not likely to increase and acceptable substitutes are more likely to be available. However, when the desired OOS product is offered at a reduced or promotional price, consumers may not be able to find an equally priced substitution for the desired product. Helm et al. (2013) predicted that consumers facing an OOS situation for promotional priced products experience more disappointment than consumers who are facing an OOS situation for full priced products as it would be more difficult, if not impossible, to find an equally priced alternative; however, they did not actually test this prediction.

Based on the discrepancy-evaluation theory of emotion (Mandler, 1984), the discrepancy between consumer's expectation of product availability and the actuality of the stockout is likely to be greater for promotional priced products than for full priced products because consumers are eager to purchase a promotional priced product right away and the price for a substitution is likely to be higher. Further, consumers experiencing greater discrepancy between their expectation and the actuality are likely to experience greater negative emotions (cf. Mandler, 1984). The following hypothesis was proposed:

H2. Consumers will experience stronger negative emotions when the OOS product is at a promotional price than when the OOS product is at full price.

Frequency of OOS situations

The frequency of OOS situations impacts consumers' negative emotions (Kim & Lennon, 2011). Consumers experience stronger negative emotions when they confront two OOS situations in the same store than when they confront only one OOS situation (Kim & Lennon, 2011). Furthermore, Zinn and Liu (2001) suggest that two or three OOS situations are likely to

have a stronger negative effect compared to a single OOS situation because of the cumulative effect, though they did not empirically test this prediction.

In general, “the way we feel determines what we do and remember and also influences what we take in and pay attention to” (Mandler, 1984, p. 275). For example, when a shopper has already experienced an OOS situation, which may have led to frustration, disappointment, and anger, he/she might evaluate another OOS situation even more negatively. The shopper may feel even more frustration, disappointment, and anger because he or she recalls the first OOS situation and the associated negative emotions.

Based on both the discrepancy-evaluation theory of emotion and previous research, it can be expected that the discrepancy between consumers’ expectation of product availability and the actuality of the stockout will be greater for multiple stockouts than for a single stockout because of the cumulative effect, which in turn, leads to greater negative emotions (Kim & Lennon, 2011; Mandler, 1984; Zinn & Liu, 2001). Thus, the following hypothesis was proposed:

H3. Consumers will experience stronger negative emotions when they experience multiple OOS situations than when they experience just one OOS situation.

Urgency of Need in an OOS Situation

The need to obtain a product immediately can create a sense of urgency. Several researchers examined the relationship between urgency of need and consumers’ behavioral response to stockouts and found that consumers are more likely to substitute the desired product when the urgency of need is high because they do not have time to postpone the purchase (Kim & Lennon, 2011; Zinn & Liu, 2001). However, consumers without time restrictions (i.e., low urgency of need) are more likely to delay the purchase (Kim & Lennon, 2011; Zinn & Liu,

2001). For example, a consumer who needs to buy a birthday gift that same day may more easily achieve his or her shopping goals by substitution than by switching to another store, or by postponing or canceling the purchase altogether. Thus, urgency of need in OOS situations influences consumers' behavioral response to OOS situations (Kim & Lennon, 2011; Zinn & Liu, 2001). Even though consumers with high urgency of need are more likely to substitute the desired OOS product, when the urgency of need is high and the desired product is OOS, shoppers may feel even more frustration, anger, and disappointment than when the urgency of need is low. They may be forced to purchase a less desirable substitution for the desired product right away, which further increases frustration and anger. The expectations of product availability are likely to be higher for consumers with high urgency of need, leading to increased discrepancy and thus to stronger negative emotion (Kim & Lennon, 2011; Mandler, 1984).

H4. The intensity of urgency of need in OOS situation will positively influence consumers' negative emotion.

Behavioral Response to an OOS Situation

Research shows that consumers facing an OOS situation typically respond by (1) switching to another product, (2) switching to another brand, (3) switching to another store, (4) postponing the purchase, or (5) canceling the purchase (Campo et al., 2000; Kim & Lennon, 2011; Sloot et al., 2005; Van Woensel et al., 2007; Verbeke et al., 1998; Zinn & Liu, 2001). Prior research has measured various consumer responses to OOS situations including switching products, switching brands, switching stores, postponement, and cancellation of purchase (Campo et al., 2000; Helm et al., 2013; Sloot et al., 2005; Zinn & Liu, 2001). Based on these studies (Campo et al., 2000; Kim & Lennon, 2011; Sloot et al., 2005; Van Woensel et al., 2007;

Verbeke et al., 1998; Zinn & Liu, 2001), three main behavioral consumer responses will be distinguished in the this study: (1) switching to another product or brand in the same store: switching to another product of the same brand or purchasing another brand within the same product category in the same store, (2) canceling the purchase: dropping the intended purchase completely, and (3) switching to another store: going to another store to buy the product that is OOS.

Increased dissatisfaction due to OOS issues lead to increased negative emotions (Khalaf et al., 2013), suggesting that consumers who experience stronger negative emotion are more likely to switch to another store to purchase the OOS product or to drop the intended purchase completely rather than switching to another product or brand within the same store, leading to the following hypotheses:

H5. In response to an OOS situation, consumers with stronger negative emotions are more likely to cancel the purchase or switch to another store, whereas consumers with weaker negative emotions are more likely to switch to another product or switch to another brand within the same store.

WOM Communication

Consumers' experiences and their resulting emotions influence their WOM communication when recommending a store to others or deciding on future purchase intentions (Kim & Lennon, 2011). Negative experiences, such as negative shopping experience, can lead to negative WOM communication (Anderson, 1998); conversely, positive shopping experiences can lead to positive WOM communication (Anderson, 1998; Otto, Payne, Parry, & Hunt, 2005). When a product has been publicly scrutinized due to negative WOM, the chances that the

product will be purchased are decreased while exposure to positive WOM for the same product will increase its overall evaluation and purchase intentions (Arndt, 1967; Bone, 1995; Burzynski & Bayer, 1977; Webster, 1991). According to Richins (1983), dissatisfaction leads to greater WOM communication than satisfaction. Dissatisfied consumers are more likely to engage in negative WOM than satisfied consumers in positive WOM communication (Anderson, 1998). For example, research found that dissatisfied consumers engage in twice as much WOM communication than satisfied consumers (Technical Assistance Research Program, 1981).

With today's virtual communication capabilities, the impact of WOM is increased tremendously due to the ease of spreading information and preferences electronically (Cheung & Thadani, 2010; Dumenco, 2010). Electronic WOM allows consumers to immediately share information about their experiences with the public (Hennig-Thurau, Gwinner, Walsh, & Gremler, 2004). These electronic WOM statements, based on positive, neutral, or negative experiences with a product, service, brand, or company (Kietzmann & Canhoto, 2013), are available to everyone through the Internet (Kietzmann & Canhoto, 2013). Today's most popular websites and social media pages have over a billion users (Kietzmann & Canhoto, 2013), thus comments about a product or retailer are likely to contribute to many consumers' perceptions of the product or store (Richins, 1983). Whenever consumers experience negative emotions or unpleasant surprises, they are more likely to communicate with others about their experiences (Derbaix & Vanhamme, 2003); further, regret and disappointment lead to increased negative WOM (Zeelenberg & Pieters, 2004). Thus, if consumers are angry, disappointed, and frustrated with their store experience, there is an increased chance that they will respond with negative WOM (Zeelenberg & Pieters, 2004). Because the intensity of negative emotions can affect WOM communication (Zeelenberg & Pieters, 2004), the following hypothesis is proposed:

H6. The intensity of negative emotion will positively influence consumers' negative WOM communication.

Store loyalty

Store loyalty is important because loyal consumers devote their time and money to a particular store (Kiesler, 1968; Lastovicka & Gardner, 1977) and may feel committed to re-purchase or support their favorite store (Oliver, 1997; Reichheld & Sasser, 1990; Dick & Basu, 1994). For example, switching to another store to purchase the product that is OOS and dropping the intended purchase completely could be partially due to a lack of store loyalty as store loyal consumers are more committed to purchase products from a particular retailer and are less willing to switch to another store to purchase the OOS product than non-loyal consumers (Osman, 1993). Store loyalty may be viewed as both behavioral and attitudinal (Verbeke et al. 1998; Campo et al. 2000; Sloot et al. 2005; Zeithaml, 2000). Consumers who purchase and use a good or service at the same place regularly are behaviorally loyal (Parasuraman, Zeithaml, & Berry, 1988; Woodside, Frey, & Daly, 1989; Zeithaml, Berry, & Parasuraman, 1996); consumers who feel positive and committed to a good or service are attitudinally loyal (Thomas, 2013).

Ehrenthal and Stölzle (2013) predicted that stockouts lead to dissatisfied consumers and diminished store loyalty because the store could not meet the consumers' in-stock expectations, which is likely to result in negative emotion (Mandler, 1984); however, they did not empirically test this prediction. Kim and Lennon (2011) found that negative emotion caused by stockouts is related to consumers' perception of the store image. Since store image is related to store loyalty (Sirgy & Samli, 1989), one might expect that negative emotion caused by stockouts will also diminish store loyalty. Furthermore, store loyalty decreases as consumers' satisfaction decreases

(Fornell et al., 1996). Consumer satisfaction can create an emotional connection between the store and the consumer, especially when the store meets or exceeds consumer expectations (Khalaf et al., 2013) and that emotional connection is likely to influence store selection (Dawson et al., 1990). If consumers' emotional and affective satisfaction is not achieved because the desired product is OOS, they may not feel any loyalty to select the store again. The following hypothesis was proposed:

H7. The intensity of negative emotion will negatively influence the level of store loyalty.

Figure 1 presents the conceptual framework of this study representing the hypotheses proposed.

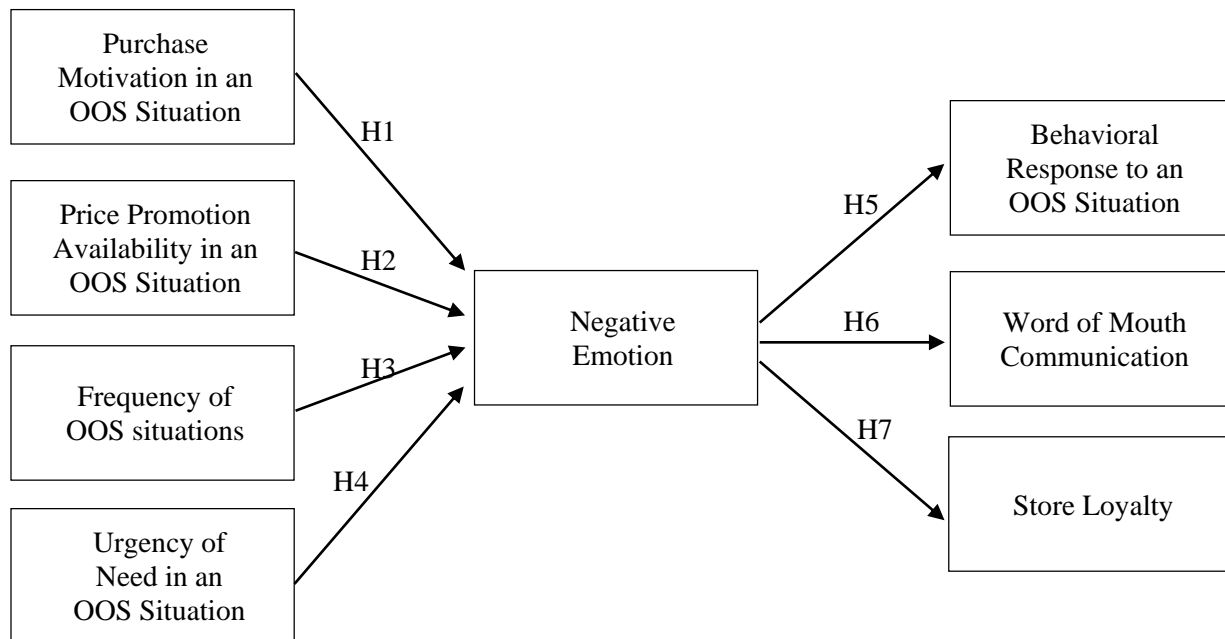


Figure 1. Conceptual Model and Hypotheses

CHAPTER 3. METHODOLOGY

Chapter 3 describes the research design, sample procedure, sample characteristics, instrumentation, and data collection and analysis that were used to collect and analyze empirical data to examine the research hypotheses.

Research Design

An online survey was used to collect data to examine (1) the impact of four independent variables (i.e., purchase motivation, price promotion availability, frequency of occurrence, and urgency of need) on consumers' negative emotions when the desired product is OOS, and (2) the impact of the participant's resulting negative emotions (when the desired product is OOS) on their behavioral response to the OOS situation, WOM communication, and store loyalty.

Sampling Procedure and Sample Characteristics

The millennial generation is appropriate for this study because millennials have a great impact on the economy, are targeted more than previous generational cohorts, and have significant purchasing power (Howe & Strauss, 2007). Millennials, born between 1980 and 1995 (Ng & Gossett, 2013), are expected to comprise the next big customer group and change the consumption demand of almost everything (Searcey, 2014). University students represent only a small segment of millennials (Holliday & Li, 2004); however, millennials who pursue a university degree are a major source of hiring for skilled jobs (Ng & Gossett, 2013) and thus are likely to affect the economy (Howe & Strauss, 2007). Further, a sample of university students was suitable for this study's purpose of testing the discrepancy-evaluation theory of emotion than generalizing the general population characteristics (Calder, Phillips, & Tybout, 1981). Finally, as

it was not possible to collect information from a representative sample of United States consumers because of budget constraints, a sample of university students was surveyed.

A convenience sampling procedure was used to recruit both female and male students enrolled at Auburn University who are age 19 or older. The accessible population was students from a variety of classes across Auburn University, including students enrolled in the College of Human Sciences, Raymond J. Harbert College of Business, and Samuel Ginn College of Engineering. Selected instructors were contacted personally via email to ask for permission to survey their class and request that they provide extra credit to incentivize student participation. After permission was granted by the instructors of the selected classes, an email invitation including the purpose of the survey, time commitment, reminder of voluntary participation, description of incentive for participation, contact information of the researchers, and a link to the survey website was sent to the students. All participation was on a voluntary basis. After three weeks, the link to the survey was deactivated and the promised incentives delivered.

Data Collection Procedure

A link in the invitation email led participants to the survey website. First, all participants were asked to recall the last time they experienced a stockout within the past three months. Then, participants were asked if they have experienced a stockout within the past three months. If they answered with yes they were asked to name the store where they experienced the stockout, to indicate the specific product they wanted to purchase but was OOS, and to tell whether there was any type of price promotion/discount going on for the product they wanted to buy during their shopping trip. Participants then completed items to indicate their urgency of need, hedonic/utilitarian purchase motivation toward the desired product and the frequency of

experiencing OOS situations in that store over the past three months. Further, participants were asked how they felt about the OOS situation (i.e., their recalled negative emotions resulting from the OOS situation), their recalled behavioral response to the stockout, their recalled WOM communication following the OOS situation, and their current loyalty toward the store. Last, they completed demographic questions. If they answered with no to the first question (i.e., if they have experienced a stockout within the past three months), their answers were not used.

After participants completed the survey, a thank you page appeared including a link that led them to a website where participating students may provide their course number and name to receive extra credit. A list with all participants was given to the respective instructors so they can provide extra credit. Since this is a separate link, any information needed to give instructors' information about a student's participation will not be associated with student responses recorded during the study.

Instrumentation

An online, self-administered questionnaire (see Appendix D), including measures of purchase motivation in OOS situation, price promotion availability in OOS situation, frequency of OOS situation, urgency of need in an OOS situation, negative emotions, behavioral response to OOS situation, WOM communication, and store loyalty, was used to collect the data for this study. Demographic characteristic questions such as gender, age, academic standing, and ethnicity, were included at the end of the survey.

Negative Emotion

Participants' negative emotions caused by stockouts were measured using the 14 item measure of negative emotions relevant to OOS situations developed by Kim and Lennon (2011) (see Table 1). In this study, participants were asked to recall how they felt when facing the stockout instead of how they currently feel after experiencing the stockout (Kim & Lennon, 2011) to measure negative emotion experienced during the recalled stockout. A 7-point scale (where 1 = not at all and 7 = very much) was used instead of the original 5-point scale to be consistent with the other scales in this study. Because a single factor model was found to be most relevant for their study, Kim and Lennon (2011) used the sum of the 14 item scores (the higher the scores, the stronger the negative emotion) to measure the negative emotion construct. The alpha for this scale was .97 (Kim & Lennon, 2011).

Table 1

Negative Emotion Measure

Source	Measurement Items
Kim and Lennon (2011)	Aggravated
	Agitated
	Angry
	Annoyed
	Anxious
	Disappointed
	Discouraged
	Frustrated
	Irritated
	Mad
	Sad
	Unhappy
	Unpleasant
	Upset

Urgency of Need in an OOS Situation

A three-item time availability measure developed by Beatty and Ferrell (1998) was adapted to measure participants felt urgency of need in OOS situations (see Appendix G). The three 7-point Likert agree-disagree statements were modified to focus on the limited time availability and the need for purchasing a particular product instead of just the limited time availability for a particular shopping trip (see Table 2). The first item “I have limited time available to me for this particular shopping trip” was changed to “I had limited time to purchase this particular item” and “I am not rushed for time on this shopping trip” was changed to “I was rushed to purchase this particular item.” The last item “the amount of time pressure I feel on this shopping trip could be described as: *none/very high*” was replaced by “I needed this particular item right away” in order to measure urgency of need. In order to identify low and high urgency of need in the OOS situation based on this time availability scale, an overall time availability score was computed for each subject. A median split was then conducted by time availability scores to group the participants above the median as high urgency of need in OOS situation and those below the median as low urgency of need in OOS situation. The composite reliability for the original time availability scale was acceptable at .66, the convergent and discriminant validity was supported, and the scale was found to be unidimensional (Beatty & Ferrell, 1998).

Table 2

Urgency of Need Measure

Source	Measurement Items
Adapted from Beatty and Ferrell (1998)	<ol style="list-style-type: none">1. I had limited time to purchase this particular item.2. I was rushed to purchase this particular item.3. I needed this particular item right away.

Purchase Motivation in an OOS Situation

The two-dimensional hedonic/utilitarian scale developed by Voss et al. (2003) consisting of ten 7-point semantic differential scales (five measuring the utilitarian and five measuring the hedonic dimension of consumer attitudes) was used to determine the extent to which the consumers' purchase motivation was utilitarian or hedonic (see Table 3). Participants were asked to mark the answer that best reflects their reasons for wanting to purchase this item, in order to measure consumers' purchase motivation. This ten-item scale psychometrically performs better than their original 24 item hedonic/utilitarian scale; has good composite reliability (.93 for the utilitarian dimension and .95 for the hedonic dimension) and discriminant validity (Voss et al., 2003) (see Appendix E).

Table 3

Purchase Motivation Measure

Source		Measurement Items
Voss, Spangenberg, and Grohmann (2003)	Hedonic	dull/exciting
		not delightful/delightful
		not fun/fun
		not thrilling/thrilling
		enjoyable/unenjoyable (r)
	Utilitarian	practical/impractical (r)
		necessary/unnecessary (r)
		functional/not functional (r)
		helpful/unhelpful (r)
		effective/ineffective (r)

Price Promotion Availability in an OOS Situation

To measure the price promotion availability in the OOS situation, participants were asked if there was any (type of) price promotion or discount going on for the product they wanted to buy. Participants were able to choose between yes or no.

Frequency of OOS situations

To measure the frequency of the OOS situation, participants were asked how many times they have experienced a stockout in this store in the past three months. This study included the occurrence of the stockouts (i.e., past three months) in order to examine the cumulative effect of stockouts over time. Participants were able to choose between the following responses: (1) one time, (2) two times, or (3) three or more times; past findings have shown that a most consumers will not go back to a store after experiencing two or three stockouts (Convenience Store News, 1998).

Behavioral Response to an OOS Situation

Based on prior research, three (mutually exclusive) behavioral OOS responses were examined (1) switched to another item or brand in this store, (2) canceled the purchase, or (3) switched to another store to purchase the item. Participants were asked what they did after discovering the desired product was OOS during their shopping trip.

WOM Communication

Most previous WOM measurement scales have focused on a single dimension, such as valence of WOM communication (Burzynski & Bayer, 1977), volume of WOM (Higie, Feick, &

Price, 1987), or WOM content (Bone, 1992). In this study, two WOM dimensions from Goyette, Ricard, Bergeron, and Marticotte's (2010) WOM measures (see Appendix F) are identified to measure WOM communication after experiencing an OOS situation. WOM intensity and WOM valence are examined separately in order to increase precision and understanding of the WOM construct. Goyette's et al.'s (2010) multidimensional scale provides information about the scope of how much is being said (intensity), the favorability of what is being said (positive or negative valence), and what is being said about a store (content). This information allows one to determine if the valence being expressed is compatible with the content or if the intensity correlates with the valence or the content (Goyette et al., 2010).

Six scale items were adapted from Goyette's et al. (2010) to measure respondents' WOM communication resulting from their OOS shopping experience. Minor wording revisions were necessary to convey a more complete concept of WOM communication after facing a stockout. Two WOM intensity items from Goyette et al. (2010) were used in this study. Consumer-to-consumer communication can be personal or impersonal, such as communication in person, by phone, email, or mailing list (Goyette et al., 2010). Most researchers have included only one communication channel, such as online reviews (Chevalier & Mayzlin, 2006), e-mail (Berger & Milkman, 2012) or face-to-face communication (Berger & Schwartz, 2011; Godes & Mayzlin, 2009) when investigating WOM. However, including several communication channels (rather than only one channel) may be important to examine the consumer's use of different communication channels for WOM and the total potential impact of negative WOM on a business. Goyette et al. (2010) noted that various popular electronic communications, such as Facebook confirm the omnipresence of WOM, but they did not include these communication outlets in their WOM measurement scale. In this study, the examination of WOM

communication through electronic media, including Facebook, Twitter, Instagram, email, phone (talk and/or text), and blog, as well as face-to-face WOM communication may add an important component of WOM intensity as electronic communication media allow for a much greater impact of WOM. Therefore, one of the WOM intensity items, “I spoke of this company to many individuals,” was expanded to address various electronic WOM and face-to-face WOM communication avenues, such as “I spoke of this store through Facebook” and “I spoke of this store face-to-face” (see Table 4) in order to improve the comprehensiveness of WOM activities, volume, and dispersion. “WOM activity includes all items associated with the action of engaging in WOM” (Goyette et al., 2010, p. 10), WOM volume includes the scope of WOM, and WOM dispersion includes the “extent and diversity of virtual communities in which conversations on a given product are found” (Godes & Mayzlin, 2004, p. 90).

Two positive valence WOM items from Goyette et al. (2010) were modified to change the positive valence to negative valence, such as changing “I recommended this company” to “I have not recommended this store” (see Table 4) to measure the effect of consumers’ negative emotions caused by stockouts on their WOM communication. Additionally, two negative valence WOM items from Goyette et al. (2010) were used in this study (see Table 4). The original WOM content items from Goyette et al. (2010) were not used in this study because these items were not relevant to the study. A 7-point Likert scale (1 = strongly disagree, 7 = strongly agree) was used for all WOM responses. The reliability for WOM intensity was .69, for positive valence WOM was .89, for negative valence WOM was .82, and for WOM content was .80 in the original study (Goyette et al., 2010).

Table 4

WOM Communication Measure

Source	Measurement Items
Adapted from Goyette, Ricard, Bergeron, and Marticotte (2010)	I have spoken about this store more frequently than about any other store.
	I have spoken of this store through Facebook.
	I have spoken of this store through Twitter.
	I have spoken of this store through Instagram.
	I have spoken of this store through email.
	I have spoken of this store by phone or text.
	I have spoken of this store through a blog.
	I have spoken of this store face-to-face.
	I have not recommended this store.
	I have not recommended people to buy products from this store.
I have mostly said negative things about this store.	
I have spoken unfavorably of this store.	

Store loyalty

Consumers' store loyalty was measured with a four-item store loyalty measure developed by Reynolds and Beatty (1999) (see Appendix H). In order to simplify the scale, all scale items were modified to replace "company name" with "this store"; for example, "I am very loyal to (company name)" was changed to "I am very loyal to this store." Four 7-point Likert scale items (1 = strongly disagree, 7 = strongly agree) were used to measure store loyalty (see Table 5). The composite reliability for this store loyalty scale was acceptable at .91 (Reynolds & Beatty, 1999) and convergent and discriminant validity was supported (Reynolds & Beatty, 1999).

Table 5

Store Loyalty Measure

Source	Measurement Items
Reynolds and Beatty (1999)	I am very loyal to this store.
	I am very committed to this store.
	I don't consider myself a loyal store customer. (r)
	I don't plan to shop at this store in the future. (r)

Demographic Characteristics

Participants were asked questions about their gender, age, academic standing, and ethnicity. To measure the participants' gender and ethnicity, a nominal scale was used and to measure the participants' academic standing an ordinal scale. Moreover, an open-ended scale was used to measure the age of the participant.

CHAPTER 4. DATA ANALYSIS AND RESULTS

Chapter 4 describes the data analysis procedures used for this study and results from the analyses. All the statistical analyses were conducted by using the Statistical Package for the Social Sciences (SPSS) 22.

Sample Demographics

A convenience sampling procedure was used to recruit both female and male students enrolled at Auburn University who are age 19 or older. The accessible population was students from a variety of classes across Auburn University. A total of 504 of the 901 students invited to participate completed the online questionnaire, yielding a response rate of 55.9%. Before the analysis, the responses of 140 students were excluded because they have not experienced an OOS situation within the past three months and 42 participants because they left over 20% of the items unanswered or they were under 19 years old. In order to identify whether the participant's purchase motivation in the OOS situation was primarily hedonic or utilitarian, the mean of each participant's hedonic and utilitarian scores was determined. Then a median split by hedonic purchase motivation scores was used to identify the participants as high or low in hedonic purchase motivations. Another median split by utilitarian purchase motivation scores was used to identify participants high or low in utilitarian purchase motivations. Participants at the median were equally added to both groups. Participants with high hedonic motivation means and low utilitarian purchase motivation means were grouped as hedonic and participants with low hedonic and high utilitarian purchase motivation were grouped as utilitarian. Although it was expected that most participants would score high in only one purchase motivation (either hedonic or utilitarian), several participants scored high in both hedonic utilitarian motivations whereas

others scored low in both hedonic and low utilitarian purchase motivation. Instead of excluding all those participants, those whose hedonic mean was greater than their utilitarian mean by one or more points (as measured on the 7 point Likert scale) were identified as hedonic and those whose utilitarian mean was greater than their hedonic mean by one or more were identified as utilitarian. Participants with similar or equal means were excluded, leaving a useable sample of 196 participants.

The demographic profile of the usable sample included 51 (26%) male and 145 (74%) female students with a mean age of 22.70 years ($SD = 5.797$). Most of the students were between 19 and 23 years old (82.7%). The largest percentage of participants were White/Caucasian (80.1%), followed by Asian (8.2%), Black/African American (7.1%), other (3.1%), and Hispanic/Latino (1.5%). In terms of class standing, many students were juniors (27.0%), followed by sophomores (23.5%), graduate students (21.4%), seniors (17.9%), freshmen (7.7%), and other (2.5%).

Exploratory Factor Analysis

Exploratory factor analyses were conducted to define the dimensions underlying existing measurement instruments to verify unidimensionality before creating composite scales for all the variables. Factors that had eigenvalue greater than one were retained for interpretation (Fabrigar et al., 1999). Additionally, reliability analyses using Cronbach's alpha were performed on each of the multi-item scales. The reliability analysis demonstrated an adequate to good reliability for each scale since α was greater than 0.7.

Negative Emotion

Fourteen negative emotion items (Kim & Lennon, 2011) were subjected to principal component analysis with Varimax rotation to assess the dimensionality of the data (see Table 6). Even though, three factors had eigenvalue greater than 1, the first factor extracted had an eigenvalue over 8 explaining 57.54% of the variance. The second and third factor had an eigenvalue of 1.44 and 1.02 explaining very little variance. Further, the scree plot of the negative emotion scale shows that there is one factor that precedes the last large drop. Consistent with the findings of Kim and Lennon (2011), it was decided that a one-factor model would be more appropriate for this scale.

Table 6

Exploratory Factor Analysis of Negative Emotion Scale

Items	Factor Loadings
Agitated	.846
Irritated	.837
Mad	.824
Upset	.823
Frustrated	.821
Angry	.805
Aggravated	.798
Unhappy	.793
Unpleasant	.768
Discouraged	.728
Annoyed	.688
Sad	.651
Anxious	.624
Disappointed	.533
% of variance explained	57.539
Cronbach's alpha	.941
Eigenvalue	8.055

Urgency of Need in an OOS Situation

The three urgency of need items (Beatty & Ferrell, 1998) were subjected to principal component analysis with Varimax rotation to assess the dimensionality of the data. One factor explaining 69.54% of the variance was extracted based on eigenvalues, cumulative variance, and inspection of the scree plot suggesting a unidimensional factor structure (see Table 7).

Table 7

Exploratory Factor Analysis of Urgency of Need Scale

Items	Factor Loadings
I was rushed to purchase this particular item.	.900
I had limited time to purchase this particular item.	.861
I needed this particular item right away.	.732
% of variance explained	69.543
Cronbach's alpha	.777
Eigenvalue	2.086

Purchase Motivation in an OOS Situation

Before conducting the exploratory factor analysis for the purchase motivation scale, all utilitarian items were reverse coded, as well as, the “enjoyable – unenjoyable” hedonic item. Then, ten purchase motivation items (Voss et al., 2003) were subjected to principal component analysis with Varimax rotation to assess the dimensionality of the data. As expected, two factors were extracted explaining 69.44% of the variance based on eigenvalues, cumulative variance, and inspection of the scree plot (see Table 8). The interpretation of the two factors as hedonic purchase and utilitarian purchase motivations was in keeping with Voss et al. (2003) two-

dimensional scale. Based on the reliability analysis, one hedonic item (enjoyable/unenjoyable) was removed due to its low item-total correlation value (.463).

Table 8

Exploratory Factor Analysis of Purchase Motivation Scale

	Factor	
	Hedonic	Utilitarian
Dull/exciting	.905	
Not fun/fun	.878	
Not delightful/delightful	.847	
Not thrilling/thrilling	.820	
Enjoyable/unenjoyable (r)	.612	
Helpful/unhelpful (r)		.876
Functional/not functional (r)		.866
Effective/ineffective (r)		.826
Necessary/unnecessary (r)		.794
Practical/impractical (r)		.768
% of variance explained	32.864	36.575
Cronbach's alpha	.874	.885
Eigenvalue	3.286	3.658

WOM Communication

Twelve WOM items (Goyette et al., 2010) were subjected to principal component analysis with Varimax rotation to assess the dimensionality of the data. Three factors were extracted explaining 75.45% of the variance, based on eigenvalues, cumulative variance, and inspection of the scree plot. Items that load on the first dimension suggest it represents online intensity WOM, the second dimension suggest it represents negative valence WOM, and the

third dimension suggest it represents offline intensity WOM (see Table 9). Two negative valence WOM items (“I have not recommended this store” and “I have not recommended people to buy products from this store”) was removed because these two items suggest inaction rather than negative WOM.

Table 9

Exploratory Factor Analysis of WOM Communication Scale

	Factor		
	Online Intensity WOM	Negative Valence WOM	Offline Intensity WOM
I have spoken of this store through Instagram.	.917		
I have spoken of this store through Twitter.	.897		
I have spoken of this store through Facebook.	.887		
I have spoken of this store through a blog.	.811		
I have spoken of this store through email.	.760		
I have mostly said negative things about this store.		.911	
I have spoken unfavorably of this store.		.895	
I have not recommended this store.		.860	
I have not recommended people to buy products from this store.		.843	
I have spoken of this store face-to-face.			.890
I have spoken of this store by phone or text.			.831
I have spoken about this store more frequently than about any other store.			.691
% of variance explained	38.482	23.811	13.155
Cronbach's alpha	.922	.906	.766
Eigenvalue	4.61	2.857	1.579

Store loyalty

Before conducting the exploratory factor analysis for the purchase motivation scale, two items (“I don’t consider myself a loyal store customer” and “I don’t plan to shop at this store in the future”) were reverse coded. Then, the four store loyalty items (Reynolds & Beatty, 1999) were subjected to principal component analysis with Varimax rotation to assess the dimensionality of the data. One factor explaining 61.31% of the variance was extracted based on eigenvalues, cumulative variance, and inspection of the scree plot (see Table 10).

Table 10

Exploratory Factor Analysis of Store Loyalty Scale

	Factor
I am very loyal to this store.	.921
I am very committed to this store.	.910
I don’t consider myself a loyal store customer. (r)	.701
I don’t plan to shop at this store in the future. (r)	.532
% of variance explained	61.311
Cronbach’s alpha	.774
Eigenvalue	2.452

Hypotheses Testing

The data analysis for this study is discussed in context of each hypothesis. The mean scores for each of the factors (i.e., urgency of need, negative emotion, online intensity WOM, negative valence WOM, offline intensity WOM, and store loyalty) were used in the main analysis for hypothesis testing. Hypothesis 1, 2, 3 and 4 predicted direct effects of purchase motivation, price promotion availability, frequency of stockouts, and urgency of need on

consumers' negative emotions after experiencing a stockout. To test hypothesis 3 about frequency of OOS, the responses for “two times” and “three or more times” were grouped together as “multiple” OOS situations in order to examine the difference between one versus multiple OOS situations.

Subsequently, hypotheses 1, 2, 3, and 4 were tested using ANCOVA with purchase motivation in an OOS situation, price promotion availability in an OOS situation, and frequency of OOS situations as the independent variables, urgency of need in an OOS situation as the covariate variable, and negative emotions as the dependent variable. Results failed to show main effects between consumers' purchase motivation in an OOS situation and their negative emotions [$F(1, 187) = .338, p = .562, \text{partial } \eta^2 = .002$], between price promotion availability in an OOS situation and negative emotions [$F(1, 187) = .032, p = .858, \text{partial } \eta^2 < .001$], or between frequency of OOS situations and consumers' negative emotions [$F(1, 187) = .042, p = .838, \text{partial } \eta^2 < .001$]. Therefore, hypotheses 1, 2, and 3 were not supported. The means and standard deviations for each of the variables are in Table 11.

Table 11

Negative Emotion Means and Standard Deviations

		<i>M</i>	<i>SD</i>	<i>N</i>
Purchase Motivation	Utilitarian	4.04	1.182	94
	Hedonic	4.35	1.380	102
Price Promotion Availability	Promotional Price	4.22	1.091	49
	Full Price	4.19	1.360	147
Frequency	One time	4.13	1.279	115
	Multiple Times	4.29	1.320	81

However, results showed that hypothesis 4 was statistically significant [$F(1,187) = 16.761, p < .001, \eta^2 = .082$] such that consumers with high urgency of need experience greater negative emotion after experiencing a OOS situation than consumers with low urgency of need. Further, results of a simple regression analysis revealed that urgency of need accounted for 7.4% of the variation in consumers' negative emotion and the standardized coefficient for urgency of need ($b^* = .272$) indicated that urgency of need was positively related to consumers' negative emotion as hypothesized. Thus, hypothesis 4 was supported.

Additionally, the ANCOVA results showed there were no interactions between (1) price promotion availability and frequency of stockouts on negative emotion [$F(1,187) = 2.101, p = .149, \eta^2 = .011$], (2) price promotion availability and purchase motivation on negative emotion [$F(1,187) = 2.790, p = .097, \eta^2 = .015$], (3) frequency of stockouts and purchase motivation on negative emotion [$F(1,187) = .576, p = .449, \eta^2 = .003$].

Hypothesis 5 predicted a direct relationship between consumers' negative emotion and their behavioral response to an OOS situation, which was tested using a chi-square test with negative emotions as the independent variable and behavioral response to OOS situation as the dependent variable. To test hypotheses 5, the negative emotion scores were divided into weak, medium, and strong negative emotions. The Pearson Chi-Square test indicated that the relationship between consumers' negative emotion experienced by stockouts and their behavioral response towards an OOS situation is statistically significant ($\chi^2 = 11.661, df = 4, p = .020$) such that consumers with stronger negative emotions are more likely to cancel the purchase or switch to another store, whereas consumers with weaker negative emotions are more likely to switch to another product or switch to another brand within the same store. Therefore, hypothesis 5 was supported (see Table 12).

Table 12

*Negative Emotion * Behavioral Response Cross tabulation*

		Behavioral Response			
		BR1 ^a	BR2 ^b	BR3 ^c	Total
Negative Emotion	weak	31	23	16	70
	medium	16	25	24	65
	strong	13	21	27	61
Total		60	69	67	196

^aBR1: I switched to another item or brand in this store, ^b BR2: I canceled the purchase, ^c BR3: I switched to another store to purchase the item.

Hypothesis 6, predicting a direct relationship between negative emotions and WOM communication, was tested using simple regressions with negative emotion as the independent variable and online intensity, negative valence, and offline intensity WOM communication as the dependent variables. Results showed that negative emotion has a significant effect on online intensity WOM [$F(1, 194) = 7.527, p = .007, b^* = .193, R^2 = .037$] such that consumers' with stronger negative emotion engage more in online intensity WOM communication. Negative emotion accounted for 3.7% of the variation in online intensity WOM communication. Furthermore, negative emotion has a significant effect on negative valence WOM [$F(1, 194) = 11.299, p = .001, R^2 = .055$]. The standardized coefficient for negative emotion ($b^* = .235$) indicated that negative emotion was positively related to negative valence WOM. Thus, results support that the intensity of negative emotion positively influences consumers' negative valence WOM communication such that consumers' with stronger negative emotion engage more in negative valence WOM communication. Last, findings failed to show that negative emotion has

a significant effect on offline intensity WOM [$F(1, 194) = 2.524, p = .114, b^* = -.113, R^2 = .013$]. Thus, hypothesis 6 was partially supported.

Hypothesis 7, predicting a direct negative effect between negative emotion and store loyalty, was tested using simple regression with negative emotion as the independent variable and store loyalty as the dependent variable. Results indicated that the relationship between the intensity of negative emotion and the level of store loyalty is not statistically significant [$F(1, 194) = .245, p = .621, b^* = -.035, R^2 = .001$]. Thus, hypothesis 7 was not supported.

CHAPTER 5. DISCUSSION AND CONCLUSION

Chapter 5 discusses the findings related to the relationships among the constructs of this study. The theoretical and managerial implications of the findings and the limitations of this study are also explained, followed by suggestions for future research.

Discussion

The purpose of this study was to examine how consumers respond to stockouts from the perspective of discrepancy-evaluation theory of emotion. Table 13 provides a summary of all of the results of the hypotheses testing for this study.

Table 13

Hypotheses Testing Results

Hypotheses		
H1	Consumers purchasing products for hedonic reasons will experience stronger negative emotions when facing a stockout than consumers purchasing products for utilitarian reasons.	N/S
H2	Consumers will experience stronger negative emotions when the OOS product is at a promotional price than when the OOS product is at full price.	N/S
H3	Consumers will experience stronger negative emotions when they experience multiple OOS situations than when they experience just one OOS situation.	N/S
H4	The intensity of urgency of need in OOS situation will positively influence consumers' negative emotion.	S
H5	In response to an OOS situation, consumers with stronger negative emotions are more likely to cancel the purchase or switch to another store, whereas consumers with weaker negative emotions are more likely to switch to another product or switch to another brand within the same store.	S

N/S = Not Supported, P/S = Partially Supported, S = Supported

(continued)

Table 13 (continued)

H6	The intensity of negative emotion will positively influence consumers' negative WOM communication.	P/S
H7	The intensity of negative emotion will negatively influence the level of store loyalty.	N/S

N/S = Not Supported, P/S = Partially Supported, S = Supported

First, this study investigated how four contextual factors (purchase motivation, price promotion availability, frequency of OOS situation, and urgency of need) influence consumers' intensity of negative emotion (see Table 13, H1, H2, H3, and H4). Findings failed to support that consumers' negative emotion differentiate significantly by purchase motivation (hedonic or utilitarian), price promotion availability (promotional price or full price), and frequency of stockouts (one time vs. multiple times). This may have been because negative emotions often come and go quickly, so even though participants were asked to recall their emotions; it is likely that they did not accurately recall an emotion from three months ago. Hence, future studies may need to examine consumers' negative emotions right after the OOS situation by using experiments. With respect to hypotheses 4, results show that the main effect of urgency of need in an OOS situation on consumers' negative emotion was significant ($p < .001$), such that when urgency was greater, the resulting negative emotion experienced was significantly greater than when urgency was weaker. This finding was consistent with previous research suggesting that consumers' expectations of product availability are likely to be higher for consumers with high urgency of need, leading to increased discrepancy and thus to stronger negative emotion (Kim & Lennon, 2011; Mandler, 1984) and suggest that retailers must be prepared to address these issues, especially when customers feel urgency of need.

Second, this research investigated how negative emotion elicited by stockouts influences consumers' behavioral response, WOM communication, and current store loyalty (see Table 13, H5, H6, and H7). The findings of this study supported hypothesis 5 predicting that consumers' negative emotion resulting from stockouts had a significant impact on their behavioral response in such a way that consumers with stronger negative emotions are more likely to cancel the purchase or switch to another store, whereas consumers with weaker negative emotions are more likely to switch to another product or switch to another brand offered in the same store. These findings were consistent with previous literature generally supporting the significant impact of stockouts on consumers' behavioral response (Campo et al., 2000; Sloot et al., 2005; Van Woensel, van Donselaar, Broekmeulen, & Fransoo, 2007; Verbeke et al., 1998; Zinn & Liu, 2001); however, the relationship between negative emotion and behavioral response to stockouts has not been examined. Knowing that negative emotions caused by stockouts influence consumers' actual behavioral response to the OOS situation can provide insight as to why consumers respond to stockouts in a certain way and suggest that retailers must mitigate consumers' emotions to prevent them from not revisiting the store and/or from spreading negative information, which can lead to long-term financial losses and thus negatively influence a company's profits (Mantrala et al., 2009).

Results of hypothesis 6 show that consumers' negative emotion positively influences their online intensity and negative valence WOM actions. Some previous research support the impact of emotion on consumers' perception of the store, decision satisfaction, behavioral intent (Kim & Lennon, 2011), purchase intention (Baker, Grewal, & Levy, 1992), retail preference, and store selection (Dawson, Bloch, & Ridgway, 1990); however, the impact of emotion on consumers' WOM communication about the store was not investigated in previous studies.

These findings show that the main effect of negative emotion on WOM communication was significant for the online intensity WOM ($p = .007$) and negative valence WOM ($p = .001$) and were consistent with prior literature suggesting that consumers who experience negative emotions are more likely to communicate with others about their experiences (Derbaix & Vanhamme, 2003) and that disappointment lead to increased negative WOM (Zeelenberg & Pieters, 2004). Nowadays, social networking enables consumers to share their negative emotions with a worldwide audience. For example, customers experiencing dissatisfaction and negative emotions after facing an OOS situation are able to share their negative experience right away on social networking sites or even on the company's website. Negative WOM through social media, including Facebook, Twitter, Instagram, and blogs, can further influence other consumers' perceptions of the store (Pitt, Berthon, Watson, & Zinkhan, 2002; Richins, 1983). According to several researchers, dissatisfied consumers engage in negative WOM because they may want to vent about what offended them (Jung, 1959), reduce anxiety, and warn others, or they may just want revenge (Allport & Postman, 1947). Hence, knowing that negative emotions caused by OOS situations lead to negative WOM communication is very important since negative WOM can cause enormous damage, such as long-term financial losses (Fitzsimons, 2000; Zinn & Liu, 2001), or even ruin a company. Therefore, retailers need to mitigate those negative emotions to minimize the resulting negative WOM communication.

Additional findings of this study showed that 58.3% of the participants experienced the OOS situation in a store, whereas 41.7% experienced the OOS situation online. Future research may examine consumers' negative emotion from stockouts online versus in the store and how their responses toward the OOS situation differ.

One reason that hypothesis 7 predicting a negative relationship between the intensity of negative emotion and the level of store loyalty was not supported could be due to not distinguishing between behavioral and attitudinal store loyalty. Consumers who purchase and use a good or service at the same place, on a regular bases, are behaviorally loyal (Parasuraman, Zeithaml, & Berry, 1988; Woodside, Frey, & Daly, 1989; Zeithaml, Berry, & Parasuraman, 1996); whereas consumers who feel positive and committed to a good or service are attitudinally loyal (Thomas, 2013). Although, findings show that negative emotions caused by stockouts impact consumers' attitude towards the store (negative valence), consumers' behavioral loyalty might not change if switching to another store is inconvenient or other factors, such as favorite salesperson, is at the offending store (c.f., Kim & Lennon, 2011). For example, consumers who purchase products at the same store because other stores are far away or too expensive, both related to increased costs are behaviorally loyal. They might experience negative emotion after facing the stockout; however, their behavioral loyalty may not change if there are no acceptable alternatives. Hence, future studies may just want to investigate the effect of negative emotions on consumers' attitudinal loyalty.

Theoretical Implications

Negative emotion was found to successfully predict consumers' behavioral response and WOM communication (online intensity and negative valance WOM), providing support for the discrepancy theory of emotion that discrepancies between expectation and actuality (in this case stockouts) lead to negative emotion and that intensity of negative emotion impacts consumers' response to stockouts. Further, findings show that the impact of frequency of OOS situations on negative emotion will be moderated by urgency of need such that when urgency is greater, the

resulting negative emotion will be greater (for both one and multiple stockouts). This suggests that when consumers experience multiple stockouts, greater urgency of need may cause more serious interruption to their shopping experience than when urgency of need is weak, which also shows that Mandler's (1984) discrepancy-evaluation theory of emotion can explain and predict consumers' responses to OOS situations. In summary, this study importantly highlights the integral role of negative emotions in OOS situations and suggests that actions to mitigate negative experiences can reduce negative responses to OOS situations.

Practical Implications

Although retailers strive to offer the right quantity of the right merchandise in the right place at the right time to meet their financial goals, the avoidance of stockouts is not always possible. However, retailers using RFID are able to reduce OOS situations by up to 50 percent and instead increase their sales by up to 2-7 percent by improving the inventory accuracy and on-shelf availability of the store (Roche, 2014). For example, the results of a pilot program showed that American Apparel was able to improve their inventory accuracy from 70-75 percent before RFID, to 99 percent after RFID in one of their stores in October 2007 (RFID Sherpas LLC, 2008). Even though retailers are able to minimize OOS situations using the RFID method, occurrences of stockouts are likely to be unavoidable.

This study offers practical insights for retailers to best manage OOS situations in order to minimize the negative impact of OOS. These findings show that OOS situations may force consumers with greater urgency of need to purchase a less desirable substitution for the desired product due to their time restriction causing them to feel more negative emotion. Further, it was found that these resulting negative emotions can affect consumers' behavioral response to OOS

situations and their negative WOM communication. By knowing that negative emotion plays an important role in OOS situations, retailers must mitigate consumers' negative emotions in order to reduce negative responses. First, retailers need to be able to find out what the individual consumer needs and how strong his or her negative emotions are after experiencing a stockout; for example, by training their sales associates to always being attentive to the needs and feelings of their customers and to directly approach them. Thereupon, sales associates can address individual needs of the consumers and offer compensation, such as coupons, for consumers' next purchase to minimize their negative emotions and to avoid negative WOM communication. However, if the consumer's urgency of need is high, and/or the consumer is really upset (i.e., strong negative emotions), sales associates may need to offer an acceptable alternative product for the similar price right away; although they would need to be empowered with the authority to offer alternatives for a similar price. In summary, findings suggest that retailers that are able to mitigate consumers' negative emotions can reduce negative behavioral responses, such as cancelling the purchase or switching to another store to purchase the item, and negative WOM communication and thus prevent lost sales and profit.

Limitations and Recommendations for Future Research

The measurement procedure used for frequency of OOS situations denies the validity of hypothesis 3. This study may have yielded better results if participants would have been asked "how many times have you experienced a stockout in this store prior to the recalled stockout" instead of "how many times have you experienced a stockout in this store in the past 3 months"; thus, this measure would have only included events that occurred before the emotional response to the OOS situation and the validity would not have been denied. Furthermore, the assumption

of equal variances was violated for price promotion availability [promotional price ($n = 49$) versus full price ($n = 147$)] and for frequency of OOS situations [one time ($n = 115$) versus multiple times ($n = 81$)], which cannot be controlled.

Participants were asked to recall the last time they experienced a stockout within the past three months. During a 3-month period participants' evaluation process may have been influenced by many different factors. For example, if participants experienced the stockout three months ago, they might have experienced something positive in the store since then, which could have reduced their negative emotions and restored their store loyalty. Further, after three months they might not remember how disappointed and angry they were. Participants' negative emotions, WOM communication, and store loyalty may have changed over the past three months without them being aware of it. Future might interview people right after the experienced stockout by using experiments.

In addition, the sample used in this study consisted of students who may respond differently to OOS situations compared to other consumer segments such as working professionals. Therefore, a wider sample, including different age groups and consumer segments, may allow a broader generalization of the study's findings. Further, most of the participants were women (74%) and White/Caucasian (80.1%), which is another limitation of the result's variability of results. Future research could benefit from having an equally distributed sample. Finally, most of the participants were motivated by extra credit and may not have given the task serious consideration.

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APPENDIX A

Approval Letter and Information Letter [Protocol # 15-112 EP 1503]

Dear Ms. Metzger,

Your protocol entitled "Consumer response to out of stock situations" has received approval as "Expedited " under federal regulation 45 CFR 46.110(7).

Official notice:

This e-mail serves as official notice that your protocol has been approved. A formal approval letter will not be sent unless you notify us that you need one. By accepting this approval, you also accept your responsibilities associated with this approval. Details of your responsibilities are attached. Please print and retain.

Electronic Information letter:

You may begin your study using the information letter to which you have already added the IRB approval information. *Please send us the actual electronic letter with a live link for our files.*

Expiration:

Your protocol **will expire on March 18, 2016**. Put that date on your calendar now. About three weeks before that time you will need to submit a final report or renewal request.

If you have any questions, please let us know. Best wishes for success with your research!

Susan

IRB / Office of Research Compliance

115 Ramsay Hall (basement)

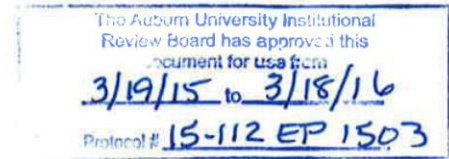
Auburn University, AL 36849

(334) 844-5966

irbadmin@auburn.edu (for general queries)

irbsubmit@auburn.edu (for protocol submissions)

APPENDIX B



INFORMATION LETTER

Department Letterhead information

(NOTE: DO NOT AGREE TO PARTICIPATE UNLESS IRB APPROVAL INFORMATION WITH CURRENT DATES HAS BEEN ADDED TO THIS DOCUMENT.)

INFORMATION LETTER

for a Research Study entitled

"Consumer Response to Out-of-stock Situations"

You are invited to participate in a research study to examine consumers' responses to out-of-stock situations as part of my thesis. The study is being conducted by Tamara Metzger, Graduate Student, under the direction of Dr. Sandra Forsythe, Wrangler Professor in the Auburn University Department of Consumer and Design Sciences. You are invited to participate because you are an Auburn student and are age 19 or older.

What will be involved if you participate? Your participation is completely voluntary. If you decide to participate in this research study, you will be asked to complete a questionnaire. Your total time commitment will be approximately 15 minutes.

Are there any risks or discomforts? We assure that the participation in this study would put you in no physical or psychological risks other than the minimal inconvenience of completing the survey.

Are there any benefits to yourself or others? Benefits to others may include a better understanding of the OOS phenomenon and a better control of inventory levels while also meeting consumer demand.

Will you receive compensation for participating? To thank you for your time you will be offered one extra credit for the class from which you are recruited from. You will need to check with your instructor as to how the one extra credit will be allocated in that course.

If you change your mind about participating, you can withdraw at any time by closing your browser window. If you choose to withdraw, your data can be withdrawn as long as it is identifiable. Once you've submitted anonymous data, it cannot be withdrawn since it will be unidentifiable. Your decision about whether or not to participate or to stop participating will not jeopardize your future relations with Auburn University, the Department of Human Sciences, Business, Engineering, or Education.

Any data obtained in connection with this study will remain anonymous. We will protect your privacy and the data you provide by not collecting IP or email addresses from research participants. Information collected through your participation may be published in a professional journal, and/or presented at a professional meeting.

APPENDIX B (continued)

If you have questions about this study, please contact Tamara Metzger at tzm0023@auburn.edu or Dr. Sandra Forsythe at forsya@auburn.edu.

If you have questions about your rights as a research participant, you may contact the Auburn University Office of Research Compliance or the Institutional Review Board by phone (334) 844-5966 or e-mail at IRBadmin@auburn.edu or IRBChair@auburn.edu.

HAVING READ THE INFORMATION ABOVE, YOU MUST DECIDE IF YOU WANT TO PARTICIPATE IN THIS RESEARCH PROJECT. IF YOU DECIDE TO PARTICIPATE, PLEASE CLICK ON THE LINK BELOW.
YOU MAY PRINT A COPY OF THIS LETTER TO KEEP.

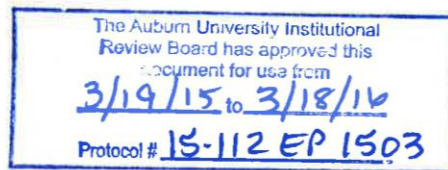
Tamara Metzger 4/1/2015

Investigator Date

Co-Investigator Date

The Auburn University Institutional Review Board has approved this document for use from March 19, 2015 to March 18, 2016. Protocol #15-112 EP 1503.

[LINK TO SURVEY](#)



APPENDIX C

E-mail Invitation for Online Survey

Dear AU student,

I am a graduate student in the Department of Consumer and Design Sciences at Auburn University. I would like to invite you to participate in my research study to examine consumers' responses to out-of-stock situations. You may participate (or may not participate) if you are an Auburn student and are age 19 or older.

Participants will be asked to complete a questionnaire. The total time commitment will be approximately 15 minutes.

I would appreciate if you participate in this online survey by April 20th, 2015. Participants will be given one extra credit that is determined by your course instructor for the participation in this study. Your personal information will not be associated with your responses to the survey questions.

If you would like to know more information about this study, an information letter can be obtained by sending me an e-mail. If you decide to participate after reading the letter, you can access the survey from a link in the letter.

If you have any questions, please contact me at tzm0023@auburn.edu or my advisor, Dr. Forsythe, at forsysa@auburn.edu.

Thank you for your consideration,

Tamara Metzger

APPENDIX D

Study Survey

DIRECTION: Recall the last time you experienced a stockout within the past 3 months.

Stockout or out-of-stock is when a specific item a consumer wants to purchase is not available.

Have you experienced a stockout in the past 3 months?

- Yes
- No

In which store did you experience the stockout?

What was the specific item you wanted to purchase but was out-of-stock?

Was there any type of price promotion/discount going on for the item you wanted to buy during your shopping trip?

- Yes
- No

APPENDIX D (continued)

Please indicate your level of agreement with each of the following statements.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
I had limited time to purchase this particular item.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was rushed to purchase this particular item.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I needed this particular item right away.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please mark the circle that best reflects your reasons for wanting to purchase this item.

Dull	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Exciting
Not delightful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Delightful
Not fun	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Fun
Not thrilling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Thrilling
Practical	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Impractical
Necessary	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Unnecessary
Functional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Not functional
Enjoyable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Unenjoyable
Helpful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Unhelpful
Effective	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ineffective

Was the stockout you experienced online or in a store?

- online
- in a store

APPENDIX D (continued)

How many times have you experienced a stockout in this store in the past 3 months?

- one time
- two times
- three or more times

Rate each of the following to indicate how you felt when facing the stockout?

	Not at all		Neutral			Very much	
Aggravated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agitated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Annoyed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anxious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Disappointed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discouraged	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Frustrated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Irritated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unhappy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unpleasant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Upset	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What did you do after the selected item was out-of-stock during your shopping trip?

- I switched to another item or brand in this store.
- I canceled the purchase.
- I switched to another store to purchase the item.

APPENDIX D (continued)

Please indicate your level of agreement with each of the following statements.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
I have spoken of this store much more frequently than about any other store.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have spoken of this store through Facebook.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have spoken of this store through Twitter.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have spoken of this store through Instagram.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have spoken of this store through email.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have spoken of this store by phone or text.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have spoken of this store through a blog.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have spoken of this store face-to-face.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have not recommended this store.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have not recommended people buy products from this store.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have mostly said negative things about this store.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have spoken unfavorably of this store.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

APPENDIX D (continued)

What is your current opinion about this store?

Please indicate your level of agreement with each of the following statements.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
I am very loyal to this store.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am very committed to this store.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't consider myself a loyal store customer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't plan to shop at this store in the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

DIRECTION: Please answer the following questions by checking the appropriate selection, filling in the blanks, or writing up your answer.

What is your gender?

- Male
- Female

What is your age?

APPENDIX D (continued)

Which of the following ethnic groups do you consider yourself to be a member of?

- White/Caucasian
- Black/African American
- Asian
- Hispanic/Latino
- Other (Please specify below)

Academic Standing

- Freshman
- Sophomore
- Junior
- Senior
- Graduate
- Other (Please specify below)

APPENDIX E

Hedonic/Utilitarian items: Original items (Voss et al., 2003)

Utilitarian items	Effective/ineffective
	Helpful/unhelpful
	Functional/not functional
	Necessary/unnecessary
	Practical/impractical
	Beneficial/harmful
	Useful/useless
	Sensible/not sensible
	Efficient/inefficient
	Unproductive/productive
	Handy/not handy
	Problem solving/not problem solving
Hedonic items	Not fun/fun
	Dull/exciting
	Not delightful/delightful
	Not thrilling/thrilling
	Enjoyable/unenjoyable
	Not happy/happy
	Unpleasant/pleasant
	Not playful/playful
	Cheerful/not cheerful
	Amusing/not amusing
	Not sensuous/sensuous
	Not funny/funny

APPENDIX F

Original Word-of-Mouth Dimensions and Statements (Goyette et al., 2010)

WOM dimensions	Statements
WOM intensity	<ul style="list-style-type: none">• I spoke of this company much more frequently than about any other e-services company.• I spoke of this company much more frequently than about companies of any other type.• I spoke of this company to many individuals.
Positive valence WOM	<ul style="list-style-type: none">• I recommended this company• I speak of this company's good sides.• I am proud to say to others that I am this company's customer.• I strongly recommend people buy products online from this company.• I mostly say positive things to others.• I have spoken favorably of this company to others.
Negative valence WOM	<ul style="list-style-type: none">• I mostly say negative things to others.• I have spoken unflatteringly of this company to others.
WOM content	<ul style="list-style-type: none">• I discuss the user-friendliness of its website.• I discuss security of transactions and its Internet site.• I discuss the prices of products offered.• I discuss the variety of the products offered.• I discuss the quality of the products offered• I discuss ease of transactions.• I speak of the rapid delivery.• I speak of the company's notoriety.

APPENDIX G

Original Time Available Scale (Beatty & Ferrell, 1998)

Item/Construct	Standardized Loading	T-Value	Composite Reliability
Time Availability			.66
I have limited time available to me for this particular shopping trip	.70	13.48	
I am not rushed for time on this shopping trip	.56	11.11	
The amount of time pressure I feel on this shopping trip could be characterized as: high/low	.62	12.22	

APPENDIX H

Original Loyalty to the Company Scale (Reynolds & Beatty, 1999)

Item/Construct	Standardized Loading	T-Value	Composite Reliability
Loyalty to the company			.91
I am very loyal to (company name).	.87	19.05	
I am very committed to (company name)	.90	20.95	
I don't consider myself a loyal (company name) customer. (r)	.85	18.29	
I don't plan to shop at (company name) in the future. (r)	.74	15.05	