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# Fear of Missing Out: Scale Development and Impact on Brand Loyalty

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FEAR OF MISSING OUT: SCALE DEVELOPMENT AND IMPACT ON  
BRAND LOYALTY

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Charles Ambler, Ph.D.  
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Zhuofan Zhang

2018

## **Dedication**

For my husband, my son, and my parents,  
who give me unconditional love and support.

FEAR OF MISSING OUT: SCALE DEVELOPMENT AND IMPACT ON  
BRAND LOYALTY

by

ZHUOFAN ZHANG, MBA

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## **Abstract**

The trend on experiential marketing has propelled a new wave of studies examining the underlying motivations of individual's desire for experiential consumption: keeping updated with new trends, trying new brands, spending on experiential products, or seeking new brand experiences. Some authors contend that individuals' desire for new experiences derives from a concept called Fear of Missing Out (FoMO). Although the term FoMO is gaining attention in the social media literature, there is little conceptual and empirical research exists on the topic. In this dissertation, I attempt to fill this gap by conceptualizing, defining, and measuring the construct. In addition, I examine the relationship between FoMO and brand loyalty. To do so, I organized the dissertation in three essays.

In essay 1, I reviewed the extant literature on FoMO, created a conceptual framework of the construct and proposed avenues for future research. I began the essay by discussing the limitations of past definitions and proposed a new definition of FoMO. Different from previous definitions that view FoMO as a fear of missing out on social media comments and trends, my definition does not confine the feeling of missing out to a specific context. Based on theories of motivation, I defined FoMO as fear of missing an experience that can help the individual attain a personal or social goal. This definition can be used to investigate the relationship of FoMO with marketing concepts in different contexts. Contrary to previous conceptualizations, which view FoMO as a reflection of social comparison, I contend that FoMO occurs when the individuals utilize experiences to shape their expected self. I draw from self-determination theory to support this conceptualization. Essay 1 ends with a discussion on the potential theoretical contributions associated with FoMO and offers avenues for future research.

In essay 2, based on standard scale development procedures and 4 rounds of data collection (Total N = 1,303), I developed a reliable, valid, and context-free scale of FoMO. Contrary to past FoMO scales, which are limited to the context of social media, the new FoMO scale applies to a wide range of marketing contexts. I began the essay by discussing general issues of scale development such as whether the construct is one-dimensional or multi-dimensional, and whether the model is reflective or formative. Then, I followed the steps of item generation, initial analysis (EFA), scale purification (CFA), and tested convergent, discriminant, and nomological validity. The analysis resulted in a reliable and valid two-dimensional 9-item scale.

In essay 3, I examined the effect of FoMO on emotional attachment and brand loyalty. Though previous studies have shown a positive relationship between brand experience, emotional attachment, and brand loyalty, the role of FoMO was not considered. Thus this essay examined, for high FoMO individuals, whether the attachment generated through a brand experience turns into brand loyalty or not. Because FoMO can be emanate from either internal or external motives, FoMO can interfere with consumers' subjective judgment of benefits and motivate consumers to conduct exploratory behavior on new brands. Accordingly, individuals with high level of FoMO will not easily commit themselves to the brand-self relationship through enactment of loyalty behavior. The results of an experiment support these theoretical arguments.

This dissertation contributes to marketing theory by offering a definition and theoretical conceptualization of the construct of Fear of Missing Out. In addition, this dissertation offers a reliable and valid scale that researchers can use to develop nomological networks and test the impact of FoMO in consumer behavior. For managers, I show that FoMO can affect how



consumers engage with brands and begin the discussion on how FoMO may or may not lead to brand loyalty. This is the first investigation of FoMO in the context of branding.

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# **Introduction: Experiential Consumption and Brand Experience**

## **1.1 Background**

Recently, business and marketing reports have identified a growing trend among young generations of consumers towards experiencing rather than owning products. According to Morgan (2015), consumers' spending habits have changed dramatically, as reflected by the increasing share of consumer spending on live experiences and events. Millennials' spending on experiences is considerably different from older generations, who place a higher value on material purchases (Schultz 2015). A study by The Harris Group (2015) found that more than three in four millennials – born between 1980 and 1996 – prefer to spend more money on experiences than on material things. Following this trend, several industries are adapting an experience-oriented environment to attract consumers who crave experiences (Saiidi 2016).

In a similar study Wallman (2015) documented that the number of clothing items American consumers purchased in 2007 is nearly twice as many as the number purchased by American consumers in 1991. However, this figure has stopped growing since 2012. Wallman proposed that one of the most important reasons for this change is the rise of experiential consumption, which refers to the consumption of fun, hedonic, or emotional experiences through TV streaming videos, live concerts, travel, and other leisure activities. In addition, Wallman found that consumers are switching from consuming traditional luxury goods (e.g. watches, handbags) to consuming experiential luxury products such as travel, video games, and extreme sports, among others.

Marketing scholars have long acknowledged and examined the consumption experience (e.g., Hirschman and Holbrook 1986). The recent trend on experiential consumption, however, has propelled a new wave of studies examining experiential and hedonic consumption. Scholars have examined several topics such as expert versus novice consumer experiences (Clarkson, Janiszewski, and Cinelli 2013), motivation for experiential consumption (Keinan and Kivertz 2010; Novak, Hoffman, and Duhachek 2003), company strategies to enhance customer experiences (Lemon and Verhoef 2016), and experience authenticity (Beverland and Farrelly 2010). A common conclusion of these articles is that experiential consumption plays an essential role in individuals' daily life as consumers seek to broaden experiential consumption knowledge (Beverland and Farrelly 2010; Clarkson et al. 2013), develop their appreciation of future consumption experiences (Hoeffler, Ariely, and West 2006), and reinforce their "experiential" identities (Keinan and Kivertz 2010).

Due to an increasing importance of experiential consumption, branding scholars have introduced a concept called "brand experience." A brand experience refers to "sensations, feelings, cognitions, and behavioral responses evoked by brand-related stimuli that are part of a brand's design and identity, packaging, communications, and environments" (Brakus, Schmitt, and Zarantonello 2009). In other words, a brand experience is a personal response to brand related stimuli. Brand managers organize events, concerts, or gatherings to stimulate sensations, feelings, and other responses toward the brand. Experiential consumers tend to seek out brands that can provide them with these distinct and unforgettable experiences (Zarantonello and Schmitt 2010). Furthermore, Zarantonello and Schmitt's (2010) showed that the relationship between brand attitudes and purchase is stronger for consumers who are inner-directed and hedonistic than for consumers who are utilitarian-oriented. This finding suggests that brand

related behavior such as brand loyalty (which refers to as “the attachment that a customer has to a brand” according to Aaker 1991) may be stronger for consumers who seek out experiential consumption driven by inner motives such as sensations and emotions. Iglesias, Singh, and Batista-Foguet (2010) further tested the role of brand experience in brand loyalty and found that affective commitment is a mediator variable between brand experience and brand loyalty. This finding implies that consumers build strong emotional responses through brand experience that can lead to brand-related behavior such as satisfaction, commitment, and loyalty. Some scholars have also investigated consumers’ brand experiences in the context of internet-based marketing. For example, Ha and Perks (2005) found out that online communities that share brand experiences can increase other consumers’ familiarity with the brand.

In general, brand experience is an under-researched topic that has both theoretical and practical implications regarding the positive influence on brand commitment, brand satisfaction, and brand loyalty. As Brakus et al. (2009) stated, though experiences arise in various settings investigated by marketing scholars, most research focuses on experiences of the product attributes and product categories instead of experiences provided by brands, which highlights the importance of future research on consumer experience with brands. Thus, a goal of this dissertation is to examine antecedents and consequences associated with the concept of brand experience.

## **1.2 Research Gaps and Questions**

Investigations on brand experience have focused on the relationship between brand experience, brand familiarity (which refers to as product-related experiences accumulated by



consumers, Ha and Perks 2005), affective commitment (which refers to as consumers' emotional attachment to brand, Iglesias, Singh, and Batista-Foguet 2010), and purchase intentions (which refers to as consumers' intentions to buy brands, Zarantonello and Schmitt 2010). Despite these enlightening investigations, little is known about consumers' motivations to engage in experiential brand consumption and its consequences on brand loyalty.

The examination of antecedents and consequences of experiential brand consumption will contribute to the development of a nomological network of causal relationships associated with the concept of brand experience. In addition, this examination will help practitioners understand how to develop brand loyalty and reduce brand switching behavior in the context of experiential consumption.

Therefore, in this dissertation I investigated the following research questions:

- 1) What motivates consumers to seek out brand experiences?
- 2) What is the role of FoMO in explaining impact of experiential brand consumption on brand-related constructs?

### **1.3 Structure of the Dissertation**

This dissertation is organized in a three-essay format. In Essay 1, I reviewed the literature on FoMO and developed a conceptual framework for FoMO in the context of experiential consumption. This first essay discussed how past research on FoMO is confined to the context of social media and provides theoretical support for the applicability of this construct in the broader context of experiential brand consumption. Particularly, based on the Self-determination Theory of motivation I proposed that individuals experience FoMO due to their

innate need to satisfy the gap between their “desired state” and “current state.” Individuals who view experiential capital as a desirable end goal in life will tend to experience FoMO, engage in experiential consumption, and switch brands more often.

Essay 1 also discusses past definitions of FoMO, created a conceptual framework of the construct and proposed avenues for future research. This conceptual work envisions novel ideas, integrates ideas from different areas, and inspires debating (MacInnis 2011). Furthermore, Yadav (2010) has noted that conceptual papers that propose new ideas and develop well-built constructs are important to the advancement of knowledge.

Essay 2 articulated a rigorous method for the measurement of FoMO. This second essay discussed standard procedures of scale development as well as considerations pertaining to reliability and validity (including face validity, convergent validity, discriminant validity, nomological validity). This essay also proposed that FoMO should be measured using reflective rather than formative indicators. Importantly, the second part of essay 2 described three studies conducted to develop a reliable and valid FoMO scale. This new scale will foster research on FoMO in several marketing and consumption contexts.

Essay 3 examined the relationship between Fear of Missing Out and consumer brand behavior. This third essay shed light on the potential negative consequences of FoMO on brand choice. Specifically, I found a positive relationship between FoMO and consumer emotional attachment but no relationship between FoMO and brand loyalty. I argued that these effects are due to consumers’ need to restore their insecurity and find objects to attach their emotions to. On the other hand, consumers are struggling with whether they should commit to brands due to high emotional attachment or engage in brand switching when they do not want to miss out on new brand experiences.

## **1.4 Contribution of the Dissertation**

This dissertation contributed to the theoretical understanding of experiential consumption of brands, as well as the empirical examination of FoMO in marketing and consumption field. Specifically, essay 1 has theoretical contribution to FoMO in experiential consumption research. Specifically, based on self-determination theory I proposed that FoMO (Fear of Missing Out) is an antecedent of consumers' desire for brand experiences. Scholars have introduced FoMO to examine consumers' behavior in social media research; however, less attention has been paid to FoMO in other consumption contexts. As indicated before, compared with material consumption research, experiential consumption is under-researched and its importance is being largely overlooked. Accordingly, another contribution of this study is the examination of FoMO in the context of the brand experience, revealing how FoMO impacts consumers' attitudes toward experiences and experiential consumption.

Essay 2 contributed to the development of a context-free, reliable, and valid scale of the construct, facilitating the future research of FoMO in marketing and consumption area. Very different from the past research which constrained the construct in mainly social media context, this essay proposed that FoMO is widely observed in marketing and consumption (including experiential consumption), and future research should emphasize its theoretical importance and underlying psychological mechanism to understand consumers' exploratory behavior, brand switching, novel seeking, and materialistic behavior.

In essay 3, I did contribution of introducing the concept of FoMO to brand experience context, examining the effect of FoMO on emotional attachment and brand loyalty. I proposed that consumers' desires for experiential brands is positively related to emotional attachment and

brand loyalty. For practitioners, the investigation of FoMO in experiential consumption and brand experience provides insights for how brand managers should respond to consumers' updating needs for new experiences. Since consumers would like to experience various brands for improvement of "experiential CV" as well as development of potential for future experiential consumptions, brand managers need to create experiential elements in the brand that target consumers' internal motives (such as pleasure and gratification) as well as external motives (such as presentation of self-identity in social groups). For example, when a hotel brand promotes a vacation package, it can enhance the variability of the service experience by noting that each stay is different, rather than promoting a uniform experience. Additionally, since Fear of Missing Out is a strong predictor of consumers' emotional attachment but not brand loyalty, it is important for marketers to pay attention to enhance the novel features of products to prevent high tendencies of consumer switching to rival brands. I proposed that brands that are able to create diverse, but consistent, experiences will enjoy higher levels of emotional attachment and brand loyalty.

## **Essay 1: Fear of Missing Out and Experiential Brand Consumption**

In Essay 1, I discussed the limitations of past definitions of FoMO, and proposed the new definition of the construct which does not confine the specific context it is applying to. I defined FoMO as fear of missing an experience that can help the individual attain a personal or social goal. FoMO occurs when the sentiment towards catching up with the expected self in seeking satisfaction through simply experiences. By reviewing the literature on FoMO, I created a conceptual framework of the construct and proposed avenues for future research.

### **2.1 Introduction**

Experiential consumption refers to “the use of a product or service where the use itself offers value” (Saxena 2009, p.157). Some scholars proposed that experiential consumption is intrinsically motivated. For example, Hoffman and Novack (1996), explained that the consumption of physical products is goal-driven and motivated by extrinsic benefits such as utilitarian or social value. On the other hand, they contended that experiential consumption, is less goal-driven and motivated by intrinsic benefits such as hedonic value (e.g., satisfaction or enjoyment). This perspective, however, is obsolete.

In this dissertation, I contended that experiential consumption can be extrinsically motivated and goal-driven. If the benefits of experiential consumption were only intrinsic, why would individuals post their consumption experiences on social media or public blogs? They could simply save photos or videos in private albums. Individuals post their experiences to accumulate experiential capital that provides extrinsic value such as social status and prestige. As discussed in the introduction, prior to the internet era, tangible goods were commonly used as

symbols of social status and prestige because of their visibility. Having a limited collection of luxury items presented in the living room is one way of showing off to friends how the family is affluent and prosperous. Currently, however, the internet and social media allow individuals to use their experiential capital in a similar way. Nowadays, individuals can show off by sharing photos or videos of “experiences” on social media. Not only that, but “experiencing” life can become a symbol of success in life.

I proposed that experiential consumption is goal-driven. Individuals can set experiential goals to increase their experiential capital, increase their social status, prestige, or attain happiness and success. For this reason, individuals that perceive their experiential capital as relatively low can feel anxiety, fear, and lack of control.

Specifically, in this study I proposed that individuals’ eagerness of keeping updated with new trends, what others are doing, trying new brands, spending on experiential consumption, and other related activities are associated with a construct called Fear of Missing Out (FoMO). Scholars and practitioners have introduced the concept of Fear of missing out (FoMO) to examine people’s behavioral tendencies on social media. However, there is a lack of research on FoMO in the marketing field regarding how FoMO guides consumer behavior in other contexts.

## **2.2 What is Fear of Missing Out?**

Fear of Missing Out (FoMO) is a relatively new concept in academic research. Table 2.1 shows current definitions. My analysis of the definitions is the following. Two widely cited definitions are the ones by Przybylski et al. (2013) and by JWT Intelligence (2012). According to Przybylski et al. (2013), FoMO refers to “a phenomenon characterized by the desire to stay

continually connected with what others are doing and a pervasive apprehension that others might be having rewarding experiences from which one is absent” (p.1841). Individuals perceive that others may have a better time or better “experiences” compared with themselves. One important point of this definition emphasizes the “experiences” that one encounters that can be rewarding or advantageous.

Another similar definition is from JWT Intelligence website (2012) which refers to FoMO as “the uneasy and sometimes all-consuming feeling that you are missing out, that your peers are doing something, are in the know about, or in possession of more of something better than you.” This definition is concerned with how individuals perceive and respond to the external stimulus of what others are doing, and involves “social comparison” of oneself and others as well.

A limitation of the definition proposed by Przybylski et al. (2013) and the definition by JWT Intelligence (2012) is that they both constrain the individual within a social media context. These definitions refer to feelings of fear from the desire to relate to other people’s experiences. This context-specific approach limits the applicability of FoMO in other contexts, such as experiential consumption.

In addition, the definitions by Przybylski et al. (2013) and JWT Intelligence are constrained by the idea that FoMO is the result of one’s comparison against others. Though previous research has supported that “being left behind”, “being absent” etc. are essential components of FoMO (e.g. Przybylski 2013), some scenarios that motivate consumers to be part of an experience do not involve comparing one-self with other people. For example, when a person sets a personal goal to travel to a special place, he or she may set that goal as part of a

personal and intimate “bucket” list, not to compare his life with others. FoMO can also derive from a process of “comparison” between individuals’ “expected state” and “current state.”

TABLE 2.1 TABLE OF DEFINITIONS OF FOMO

Author (Year)	Definition
Herman (1996)	The fear and anxiety of missing out on an exciting opportunity or interesting event that will possibly bring some kind of perceived reward
Riordan, Flett, Hunter, Scarf, and Conner (2015)	The uneasy and often all-consuming sense that ‘friends or others are having rewarding experiences from which one is absent
Salem (2015)	A kind of anxiety, a sense that you will be inadequate or left behind if you don’t react
Przybylski, Murayama, DeHaan, and Gladwell 2013	A phenomenon characterized by the desire to stay continually connected with what others are doing and a pervasive apprehension that others might be having rewarding experiences from which one is absent
JWT Intelligence	The uneasy and sometimes all-consuming feeling that you are missing out, that your peers are doing something, are in the know about, or in possession of more of something better than you
Gil, Chamarro, and Oberst (2015)	A concept that aims to describe the feeling that something is happening on social networks and you are not a part of it

In sum, FoMO can be triggered either by comparison with other people or even comparison with previous, present, or future self. Generally, the expected state emphasizes what one would like to achieve but cannot due to various constraints. Accordingly, individuals have



motivations to decrease the discrepancy between “expected state” and “current state.”

Comparison with others can be one reflection of observation of the discrepancy between the two states. More discussions about the comparison between “expected state” and “current state” will be delineated in the part of FoMO’s theoretical foundations - motivation and goal theories.

Herman (1996) on his official website defined FoMO as “the fear and anxiety of missing out on an exciting opportunity or interesting event that will possibly bring some kind of perceived reward.” This definition is based on the diagram Herman has developed to understand the underlying mechanism of FoMO: when availability of different options to choose from exists, one will develop “conceived ability to exhaust,” which will then lead to an imagination of revolving around what important thing the individual is missing, and eventually FoMO is formed based on the imagination of the “missing.” Generally speaking, Herman’s understanding of FoMO is based on the “fear of missing due to time or resource (e.g. money) constraints.” Because of those constraints, fear of missing out is unavoidable in anyone’s daily life. The proliferation of FoMO was supported in his later research which estimates that 70% of the grown-ups in both developed and developing countries encounter certain levels of FoMO. Furthermore, Herman explained FoMO as the consequence of varieties of opportunities. This explains the reason technology boosts the new height of individual’s FoMO when one is exposed to technological revolution such as social media. Because individuals have intentions of seeking and experiencing varieties, FoMO occurs due to the cognitive and emotional activities related to the desire for exhausting all opportunities. Furthermore, individuals’ desire for exhausting all opportunities can be driven both externally (such as seeking for higher social status) and internally (such as satisfy experiential needs). For individuals externally driven, they strive for opportunities that make them superior or advanced compared with others; for individuals

internally driven, on the other hand, they emphasize obtaining opportunities for pleasure, entertainment, and happiness.

Specifically, there are three underlying assumptions of Herman's definition of FoMO: one assumption is there are many options or opportunities for individuals to choose from; the second assumption is individuals have motivation to exhaust all opportunities; and the third assumption is individuals cannot have seized all the opportunities due to resource constraints (such as time and money). Despite the fact that individuals have many options to choose most of the time, and they cannot "experience" all the options in reality, choosing "one from the many / several from the many" is not necessarily the required condition to trigger FoMO. In other words, individuals do not need to "exhaust all available opportunities" to eliminate FoMO. For example, in many social conditions such as social media, individuals simply feel FoMO because their friends went to one event but they could not; when one see his or her friend posted photos of a vacation in a tropical area, he or she may feel FoMO because others have more rewarding or joyful experiences. Therefore, Herman's definition of FoMO is not context-free either: though experiencing varieties is a common reflection of FoMO, one may feel FoMO not because of incapability of exhausting diversities or availabilities of the options but due to the jealousy of others' one-time experience one is being absent. This definition is consequently only suitable for coping with the context of varieties of options one needs to decide to choose from.

Salem's (2015) definition, by contrast, is broader in nature: FoMO refers to "a kind of anxiety, a sense that you will be inadequate or left behind if you don't react" (p.1971). Salem (2015) used a different approach of "HCT (human communication technology)" to explain FoMO. According to Salem (2015), FoMO is considered as emotional reflex to alert that comes from different sources such as social media. In other words, FoMO is more like the feeling of

anxiety towards uncertainty on different topics of alerts. In this way, individuals who have higher levels of FoMO may trigger the processing of more signals (e.g. scanning, discarding) from alerts. It becomes quite common for people who have high levels of FoMO to frequently check alerts from social media so as to reduce the level of uncertainty. However, people with high levels of FoMO may receive more information than one can process and consequently experience information “overload” which can lead to negative emotions such as stress and even more severe health problems. Compared with the definition proposed by Przybylski et al. (2013) and the definition by JWT Intelligence (2012), this definition is not constrained by social context since alerts can come from various sources though social sources are among the primary ones; compared with definition proposed by Herman (2012), this definition does not emphasize the condition of varieties of opportunities but rather the uncertainty of single or multiple events or opportunities available for humans to process. Therefore, this definition is specifically applied to describe the fear of missing a relevant opportunity that is related to different contexts, such as social media and experiential consumption. Nevertheless, the definition still emphasizes the important social functions underlying the psychological mechanism.

A limitation of Salem’s (2015) definition is that it does not include the concepts of relevance and comparison. To describe FoMO more precisely, the detailing elements that constitute the FoMO should be listed along with the definition. Firstly, FoMO should be related to some stimulus or alerts related to goals that individuals are concerned with. For example, not able to participate in a social event posted on social media makes people Fear of Missing Out because it may impact the individuals’ status in a social group. Another scenario can be individuals are concerned about missing out on something closely relevant to their goal of happiness or satisfaction. In other words, the alerts or stimulants can be from both material size,

which emphasize possession or ownership of physical goods important and relevant to life, and experiential which highlights the participation in an event or opportunities one regards as valuable and influential to life.

Consequently, it is important to consider elements of “relevance” and “comparison” when defining the construct of “FoMO.” As the above definitions indicate, some of definitions focus on the feeling of fear related to something occurring in social activities in which peers participate but one is excluded. Though it is important to emphasize the important social aspects underlying the psychological mechanism of FoMO, the definition of FoMO should not be only constrained to the context of social activities.

Furthermore, previous definitions attempted to answer the question of why and how do people feel when they miss opportunities others attend, when they are not part of certain social events, when someone has some resources better than you do, or when someone has more information on what is happening. On top of these points, “comparisons” seem to dominate the thinking of “why others are better than me” and induce the negative emotions of not able to exhaust every available opportunity.

Based on the above argument of limitations of past definitions of FoMO, I defined FoMO as fear of missing an experience that can help the individual attain a personal and/or social goal. Because this definition does not confine the specific context (e.g. social media) the construct is applying to, it is stable across all situations, and in a consequence constructing the theoretical foundation to broadly assess the link between FoMO and the environment.

In this study I argued that the motivation of experiential consumption is derived from both intrinsic (e.g., enjoyment) and extrinsic needs (e.g., status) (e.g. Belk et al. 2003). These intrinsic and extrinsic needs will generate goal-oriented behavior. Consumption experiences

become relevant when they can serve as means to attain individual goals. FoMO is likely to occur when an individual misses an experience that is relevant to a personal or social goal. For this reason, FoMO can be related to any type of consumption experience not only to experiences on social media, social networks, or group purchase behavior.

I further contended that a FoMO can occur even when there is no social comparison but instead when the sentiment towards “catching up with the expected self” in seeking satisfaction through simply “experiences”. Last but not least, defining FoMO as a negative emotional reflex to alerts that come from different sources is a context-free definition (Salem 2015), but including specific elements that distinguish FoMO from other related constructs such as Fear of Being Left Out, Fear of Being Obsolete is also necessary for construct definition. To clarify the uniqueness of FoMO, it is important to point out two essential elements - relevance and comparison – are essential to the definition of FoMO. Relevance and comparison, as two important and pertinent aspects scholars need to pay attention to in order to explain the construct in the broader context. In general, the present study argues that comparison between present self (current state) and future self (expected state) is another motivation for FoMO-related attitudes and behaviors.

### **2.3 Literature Review on FoMO**

Przybylski et al. (2013) pioneered this topic. They pointed out that FoMO is related to social media in the sense that it is characterized by individual’s desire to be informed and continuously connected with other people’s experiences. FoMO explains why some individuals particularly check update information on social media. Przybylski et al. (2013) took a motivation-based perspective to explain the motivational, emotional, and behavioral correlates of

the construct. Adopting self-determination theory, the study argued that FoMO can be explained as a self-regulatory limbo deriving from deficits in basic need satisfaction. The paper developed three studies to test the measurement of FoMO construct, the relationship between FoMO, demographic and individual difference factors (whether FoMO serves as a mediator factor), and social media engagement. The results showed that individuals with low efficacy, low autonomy and low relatedness reported higher levels of FoMO, and FoMO was positively related to social media engagement.

Other researchers have examined negative consequences of Fear of Missing Out. For example, Elhai et al. (2016) examined the positive relationship between FoMO and problematic smartphone use, indicating that FoMO is a significant predictor of overuse of smartphone and social media. Additionally, in a study conducted by Hogan (2015), the results indicated that participants with FoMO report lower overall satisfaction with their life, less social connections, and a higher propensity to behave dishonestly. In a similar study, Riordan et al. (2015) studied the relationship between FoMO and negative consequences associated with alcohol use. They concluded that FoMO is a risk factor for alcohol-related consequences and it is important to consider the factor of FoMO when addressing alcohol-related behavior such as increased total consumption quantity of alcohol, feeling badly about self, and impulsive behavior. The studies conducted by Przybylski et al. (2013) also suggested a negative relationship between FoMO, mood and life satisfaction.

It should be emphasized that the problem of FoMO is exacerbated in the era of social media. Social media considerably alters the relationship between individuals and societies (e.g. Kaplan and Haenlein 2010). Social media is regarded as a comprehensive information passage for individuals' up-to-date personal life, active participation in social events, expressing opinions

and comments on product information, sharing experiences of certain events, and peer-to-peer interaction. Especially along with the popularity of smartphones, individuals are able to receive up-to-date social information. Furthermore, social media provides individuals opportunities to not only socially interact with others but also enrich their own personal experiences (Ong et al. 2011; Ellison, Steinfield, and Lampe 2007).

When Kozak (2015) explained the relationship between social media and FoMO, he highlighted that social media provides a platform for individuals to “see” rather than “imagine” what other people are busy with, strengthening one’s feeling about what he or she is exactly missing. As a result, social media becomes a tool of judging the quality of life and level of experiences. By spilling into all parts of people’s daily life rather than just work or entertainment, social media enables individuals to share and discuss discernible differences between each other’s lives. Based on this notion, the concept of FoMO should be discussed in any other contexts involving “self-sense of comparison” such as broader contexts of experiential and material consumption. Also, previous research indicated that the sharing mechanism, as a specific element of social media, is well supported by goal-directed intentions and behavior (Katz, Blumler, and Gurevitch 1974). For example, studies have suggested that individuals share their comments and opinions for various psychological motivations, such as self-promotion (e.g. Buffardi and Campbell 2008) and reputation (Tennie, Frith, and Frith 2010). Although psychological motivations related to social media were widely explained by grand motivation theories (e.g. self-determination theory), it is also noticeable that studies on the self-motives and social motives in extensive consumption research is important in explaining the relationship between FoMO and involvement in general consumption (including both materialistic and hedonic/experiential consumption). Although the past studies have not clearly explained the

foundation of motivation theories in delineating FoMO in general consumption context, they nonetheless asserted the importance of studying psychological incentives and mechanisms of various motivations as a starting point of explaining how FoMO can be explored theoretically in other contexts apart from social media contexts.

## **2.4 Theoretical Background**

The examination of FoMO in experiential consumption is supported by self-determination theory (Deci and Ryan 1985). The central tenet of the self-determination theory is that individual's intrinsic motivation to become self-determining effects their choices and determines their behavior (Deci and Ryan 1985). Specifically, individual wellbeing emanates from the satisfaction of the three basic psychological needs: competence, autonomy, and relatedness. These needs motivate goal-oriented behavior to achieve, maintain, and improve quality of life (Whemeyer 2001). People who are self-determined should be able to manage their choices more effectively than those who are not.

The desire of fulfilling self-determination makes individuals subject to comparison between “expected self / future self-state” and “current / present self-state.” This comparison creates needs which can be satisfied through experiential consumption. Thus, research on FoMO in consumption contexts should not be limited to simply social functions of seeking out social comparisons, positive self-presentation, building social capital, and nurturing social relationships. Rather, consumption can be related to purely individual needs.

Mithaug (1993) has emphasized the concept of “expected state” and “current state” to explain individual's incentive for self-determination and consequent behavior. The gap between



expected state and existing state can trigger the individual's incentive to resolve the incongruity and achieve the expected state. The path from the discrepancy to the resolution of incongruity can be mediated by Fear of Missing Out as Figure 2.1 shows, which illuminates that desire for paving the path to achieve the expected state is driven by Fear of Missing Out on the opportunities to fill the gap between existing state and expected state. Ryan and Deci (2000) have also emphasized the intrinsic desire for self-growth and mental balance as motivation to function properly in the environment. Individuals have inherent nature of persistently seeking out solutions to fulfill their psychological needs to maintain the balance of self and environment. As stated before, comparison between existing state of "who they are, what they are doing" with the expected state of "who they want to be, what they want to do" results in the identification of a need. The comparison exists when individuals observe the difference between himself / herself with others, or the difference between present and future self. As Mithaug (1993) indicated, the optimal situation occurs when individuals are able to match their capacity (which come from the management of resources such as time, energy) with accessible opportunities. The relationship between individuals' capacity and opportunity determines the consequence of problem solving, as the key of self-determination is to remove the discrepancy between the existing state and expected state. In this way, one essential elements of Fear of Missing Out – comparison – can be explained by individuals' perception of the expected state and how individuals use self-determination to solve the discrepancy through comparisons. The inability to engage in experiential consumption to fulfill a need generates FoMO.



FIGURE 2.1 DIAGRAM OF SELF-DETERMINATION ON FOMO

The explanation of another important element of FoMO – “relevance” also requires the climax of self-determination theory since the common characteristics of motivation theories are used to explain how individual achieve goals through essential variables such as competence, value of tasks, and determination elements. For example, according to the motivation theory, there are three essential psychological elements for self-determination – competence, autonomy and relatedness (Deci and Ryan 2000). Other motivation theories shed light into the cognitive and affective attributes to explain individuals’ motivational behavior. With the intention of unifying those perspectives, I would like to cite Keller (1983) who incorporates different motivation theories in order to comprehend common attributes shared in the theories. The shared attributes are, according to Keller (1983), attention, relevance, confidence, satisfaction, and volition. Among all the shared attributes, relevance typically means how the activities can help accomplish individuals’ goals and how individuals value the tasks or activities dependent on how much value related to the final goals (Keller 1983). In other words, those activities that are not relevant to the individuals’ personal or social goals are considered not triggering the FoMO, whereas activities that are relevant to individuals’ personal or social goals are what FoMO people are concerned about.

In a common context in which individuals seek for fulfilling social goals, awareness of others’ experiences may elicit one person’s cognitions and emotions toward the self. In other

words, comparing with others is an external-driven motivation to stimulate individuals' desire for reducing the discrepancy for the gap between self and others. However, as stated before, the motivation for filling the gap can also be internally driven. For example, individuals may perceive the gap between "expected me" and "current me" as they have expectations regarding the "status" of internal satisfaction of experiencing things. One may wonder whether he or she gained enough experiences when he or she sees someone sharing enjoyable and interesting experiences, or when he or she simply feels internal satisfaction is not at a sufficient level. Hence, one can develop Fear of Missing Out (FoMO) if he or she feels being left out on up-to-date information and experiences and have both internal and external motivations to catch up.

In conclusion, the motivation for gaining "experiences" through experiential consumption is not only related to experiential elements but also goal-directed. With the aim of achieving various goals (e.g. personal goals, social goals, etc.), individuals have motivations to resolve the discrepancy between "current state of self" and "expected state of self," driven by both intrinsic motives (e.g. happiness, satisfaction) and extrinsic motives (e.g. maintaining social relationships). Accordingly, Fear of Missing Out (FoMO) occurs when individuals miss experiences that can help them resolve the discrepancy between "current" state and "expected" state.

## **2.5 Future Research of FoMO in Marketing**

A potential contribution of this study is to extend the study of FoMO beyond the context of social media into experiential consumption research. Specifically, this study can provide a platform to investigate why individuals have both intrinsic and extrinsic motivations to engage in

experiential consumption. This contribution is important in light of evidence suggesting that individuals indeed have trend of switching from traditional material and physical consumption to new modes of experiential consumption that indicates gaining “experiences” without owning the product. The theoretical models built on the FoMO can further indicate the relationship between individuals’ psychological needs, motivation, and consumption outcomes.

FoMO presents an opportunity for marketing researchers to explore the relationship between FoMO and marketing / consumption consequences. For example, does FoMO lead to individuals’ motivations to try new product features? What is the relationship between FoMO and individuals’ brand switching behavior? Can we predict that individuals who have high levels of FoMO will be less loyal to brands? Since the current studies mainly focus on examining FoMO effect in social media research, future research on how FoMO affects consumer behavior remains an unexplored research topic.

Furthermore, past research has not examined specifically antecedents and consequences of FoMO in broader research areas. Though past research has tapped into the examination of psychological correlates of FoMO, none of these studies have systematically introduced the potential antecedents and consequences of FoMO. Figure 2.2 shows a diagram of potential antecedents and consequences of FoMO. Specifically, can psychological traits and problematic psychological affections initiate FoMO? Additionally, can FoMO be linked with problematic behavioral responses and what can be possible antecedents and outcomes of FoMO in a marketing context? Can FoMO be caused by different external stimulants in consumer purchasing situations? Those questions are also unresolved but important for companies and managers. Since physical consumption can also be associated with FoMO, investigating the product features and context features that impacts individuals’ FoMO levels can help scholars

discover new response mechanism of FoMO in consumer behavior research. Last but not least, there is a lack of general context-free scales of FoMO that could be used in broader research contexts. As one focus on this dissertation, the next essay will generate and validate a scale of FoMO and the scales' ability of predicting the consumer's brand loyalty and switching behavior.

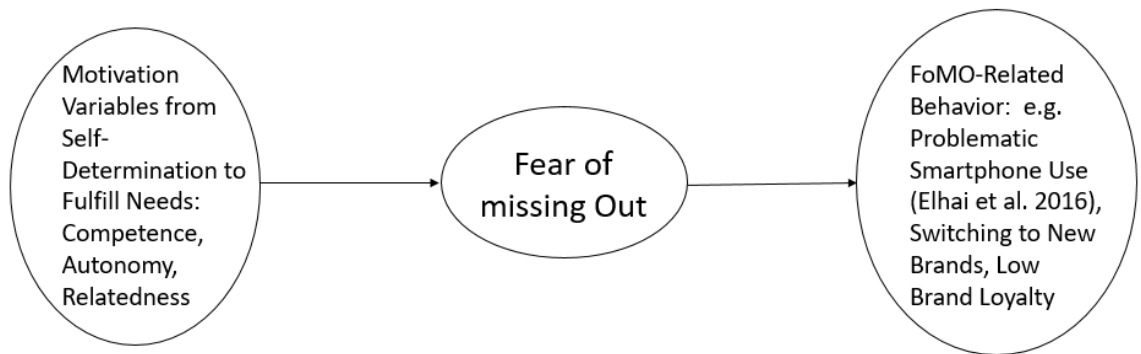


FIGURE 2.2 POTENTIAL ANTECEDENTS AND CONSEQUENCES OF FOMO

## ESSAY 2: SCALE DEVELOPMENT

The focus of Essay 2 was to develop a reliable and valid context-free scale of FoMO. To accomplish this goal, I conducted three studies to generate initial analysis, purified scale items, and examined reliability and validity of the scale. The Table 3.1 summarizes the key findings in this essay.

TABLE 3.1 KEY FINDINGS IN SCALE DEVELOPMENT OF FOMO

Purpose		Sample	Findings
Study 1	Item Generation and Initial Analysis	238 Undergraduate Students (for item generation) 392 Undergraduate Students (For Initial Analysis: EFA)	26 initial items based on qualitative study are reduced after EFA process, a final pool of 9 items is generated
Study 2	Scale Purification	392 Undergraduate Students from Study 1 (CFA) 236 Undergraduate Students (Convergent and Discriminant Validity)	CFA shows good model fit for second-factor model, significant better than one-factor model and two-construct model; AVE shows good convergent validity; the comparison between AVE and Squared Correlations shows good discriminant validity
Study 3	Testing Nomological Validity	437 Qualtrics Participants	The result shows correlation of FoMO and materialism

### 3.1 Introduction

Fear of Missing Out (FoMO) is a relatively new concept in academic research. Early investigations examined (FoMO) in the context of social media behaviors. Accordingly, current FoMO scales were limited to the context of social media. To investigate FoMO in other consumption contexts, a reliable, valid, and context-free scale of FoMO is lacking.

The focus of Essay 2, therefore, was to develop a reliable and valid context-free scale of FoMO. To accomplish this goal, I followed a mixed approach (Hinkin 1998). On the one hand, the process involved a deductive procedure which emphasizes current theoretical frameworks and definitions to develop scale items to measure the construct. On the other hand, the procedure

also considered an inductive approach by relying on qualitative analysis to generate additional items.

This scale development study addressed several issues: first, based on the FoMO definition I delineated in Essay 1 I started with the operational measure of the construct. In order to achieve this goal, I discussed general issues of scale development, including a discussion of whether the scale should be a reflective or formative model. I then discussed how to assess the reliability and validity of the scale. Then the scale development was composed of the following studies: Step 1 was item generation and initial analysis based on EFA and CFA. A scale of 9 items from two dimensions (personal and social dimension) was created. Study 2 conducted convergent and discriminant validity, and the results showed a better model fit of secondary-factor model with two dimensions. Study 3 further tested nomological validity and supported a positive relationship between FoMO and materialism.

### **3.2 Construct measurement**

According to Bagozzi and Fornell (1982), a theoretical construct refers to “an abstract entity which represents the true, nonobservational state or nature of a phenomenon.” Since psychometric rigor is a central issue for researchers to deal with (Stanley and Spence 2014), it is important to provide a rigorous method for measuring FoMO. In order for the operationalization of constructs, it is necessary to indicate variables that can be valid representation of the constructs (Hox 1997; Kerlinger and Lee 1999) since constructs need to be converted to observable indicators for the construction of empirical variables (Teas and Palan 1997). To

identify scale indicators, it is important to discuss two questions: 1) is FoMO multidimensional or one-dimensional? 2) is FoMO a reflective or formative variable?

According to Edwards (2001), a one-dimensional construct refers to one that has a single theoretical concept whereas a multidimensional construct refers to one that has multiple distinct but related dimensions but cannot be explained by a single overall concept. Regarding the dimensionality of the construct, past research has not specified whether FoMO has one-dimensional or multidimensional structure. For example, to measure FoMO, Przybylski et al. (2013) built a 10-item Likert scale from “1 = not at all true of me” to “5 = extremely true of me.” The questionnaire was based on the understanding of how individuals feel when they miss out experiences with a one-dimensional structure. However, in the study of Abel, Buff and Burr (2016), the resulting 10-item scale based on factor analysis delineated that the construct has three dimensions: “sense of self”, “social interaction,” and “social anxiety.” However, though Abel et al. (2016) have identified FoMO as multidimensional, they did not explain the reason the construct should be measured using multidimensional structure. The whole study lacks reliability and validity examination. The conclusion based on the mere factor analysis lacks theoretical rigor.

Generally, in certain contexts such as social media, the past measures can be useful, but the scope of these measures determine that they cannot be applied to other contexts. It is accordingly important to create a reliable, valid, context-free FoMO scale that address as the limits of the aforementioned measures. Mowen and Voss (2008) suggested that the established construct domain is necessary for conceptualization and measurement of the construct.

Accordingly, the process using a combination of theory and empirical examination is more



favorable. To address the validity and reliability of the scale I created, the validation statistic techniques was performed with the purpose of evaluating the rigor of the measures.

As a consequence, one of the major objectives of this essay is to explain the fundamental theoretical assumptions inherent so as to explain why FoMO is a multidimensional construct. As Venkatraman (1989) indicates, the determination of the dimensions of constructs should be based on theoretical background rather than empirical data. In other words, the scale development process should follow a theoretical explanation of dimensionality of construct and then go through examination in the empirical studies. If the research determines dimensions based on merely the factor analysis of the empirical data, it may lack of stability when examined in other tests.

To reveal that FoMO is multidimensional in nature, the two essential components – comparison and relevance – emphasize both personal and social aspects underlying the mechanism of FoMO: First, regarding the “comparison” of FoMO, individuals attribute being disadvantageous in comparison between expected state and current state to fear of missing events or information. The discrepancy between expected state and current state can be reflected by both comparison with future personal goals and the comparison with others in social relationships. The perception of “being left out” arises from a goal of making achievement on both personal and social standings. Excluding either will not yield a comprehensive understanding of personal or social motives underlying feeling of FoMO. Secondly, speaking of “relevance” of FoMO, individual inferred catching up with latest information or news on the basis of what they regard as most relevant or important for both personal and social purposes. Though there exists the distinction between personal purposes and social purposes, these two dimensions are present in every domain but may elicit different magnitudes depending on

specific contexts. For example, certain contexts such as purchase of smartphone for individual use may be predicted largely by personal dimensions of FoMO for purposes of fulfilling internal desires; however, social motives such as owning the same smartphone as social groups advise can elicit the importance social dimensions of FoMO.

Similarly, the importance on social and personal aspects of FoMO can vary in degree for everyone. Depending on the context, there can be variation as to how “relevant” or important personal or social aspects are to an individual. Consequently, the relevance of experiences to relieve FoMO will depend on one’s subjective judgment. Taking an example of consumption, FoMO can be related to consumption experiences of not only satisfying one’s intrinsic improvement of life (personal aspects) but also of relating to friends who have the same consumption experiences on social platforms. Interestingly, most of the empirical studies have examined the personal goals in contexts such as consumption and purchases, yet the social aspects as motives to avoiding being left out on information or events is also relevant.

Accordingly, in order to provide a more comprehensive theoretical framework of FoMO, it is imperative to emphasize both personal aspects and social aspects related to the construct. As stated before, it is not only essential to understand the distinguishing characteristics of personal and social dimensions but also necessary to realize that these two dimensions are present in every domain but may elicit different magnitudes dependent on contexts. Furthermore, despite the importance of theoretical understanding of FoMO components, a well-developed scale is also important to elaborate the components. Before measuring FoMO, I would like to give a clear definition of FoMO and the higher-order factor structure of the construct:

In this investigation, I proposed that FoMO involves a fearful feeling that missing or not in attendance of something will make one left behind, and hinder accumulation of either personal

capital (personal / self-motive focus) or social capital (social-motive focus) or both. Formally, FoMO is a fear of missing an information or experience that can help the individual attain personal or social goals. Since two types of goals are involved and those two goals can be present in contexts, I specified that FoMO involves two dimensions: a personal focus dimension and a social focus dimension. While the personal focus dimension of FoMO involves personal interest of fulfilling internal needs such as pleasure and happiness, the social focus dimension of FoMO involves fear of missing social events or activities desired by social needs. These two dimensions will determine an algebraic function of Fear of Missing Out score as an aggregate model defined by Law, Wong, and Mobley (1998). Based on the definition of FoMO, this construct is anticipated to have a higher-order factor structure composed of two reflective first-order dimensions – personal focus and social focus, as illustrated in Figure 3.1. The reflective nature of the model will be explained in the following paragraphs.

### **3.3 Relationship between Construct and Measurement: A Reflective Model**

The second issue I would like to address is whether the relationship between scale items and the construct is formative or reflective (Edwards and Bagozzi 2000). According to Bollen and Lennox (1991) and Jarvis et al. (2003), reflective models have theoretical foundations in classical test theory which assumes the observed variation in the measures rooted in the relationship between true and error score. Accordingly, a reflective measurement model following classical test theory follows a causality from the underlying construct to specific measures, which indicates that items comprising the scale have only a reflective function of the underlying construct (Bagozzi 1994). In other words, a reflective model has a relationship

pointing from latent construct to the empirical indicators. If the construct changes, the reflective model will also change scale items; if scale items are changed or deleted, the construct will not change. Furthermore, according to previous scholars (e.g. Bagozzi 1994; Edwards 2011), all the items in the reflective model should be highly correlated in nature since all observed indicators are pointing from the same construct.

The debate over whether a measurement model should be reflective or formative is due to the argument that reflective measures cannot sufficiently reflect the relationship between latent constructs and measures (Bollen and Lennox 1991; Jarvis et al. 2003). In other words, these scholars have pointed out that there are models in which a latent construct is contributed by observed indicators, which refer to as formative models. A formative model, in contrast, typically means indicators contribute to the construct rather than reflect the construct (Fornell 1982, Jarvis et al. 2003). According to Law et al. (1999), a formative construct is the aggregate of indicators and error term is linked with at the construct level instead of at the indicator level. The formative models have relationships pointing from the indicators to the constructs. Those formative indicators should all be selected to represent the construct, which means that if an individual indicator is removed from the model, it will definitely impact the meaning of the construct. The nature of the model determines that the indicators should not be highly correlated.

With the intention of judging whether the model of this study is formative or reflective, I intend to use criteria suggested by Jarvis et al. (2003) regarding (a) whether indicators should be seen as defining characteristics of the construct, (b) whether the changes in indicators will lead to changes in construct, (c) change in meaning of construct will not lead to changes in indicators, (d) indicator should not share a common theme, (e) omitting indicator will alter the conceptual domain of construct, (f) change in value of one indicator is not unavoidably lead to the changes

of values of other indicators, and (g) the indicators should not have the same antecedents and consequences. Based on this criteria, examining the indicators of the dimensions of FoMO should follow a reflective relationship between dimension constructs (personal FoMO and social FoMO) and their indicators, as Figure 3.1 presents. While the personal focus dimension of FoMO involves personal interest of fulfilling internal needs such as pleasure and happiness, reflected by indicators such as disconnection, falling behind, not experiencing, regret, and others, the social focus dimension of FoMO involves fear of missing social events or activities desired by social needs, reflected by indicators such as social exclusion, loneliness, social group, social fit, and other related social-oriented aspects.

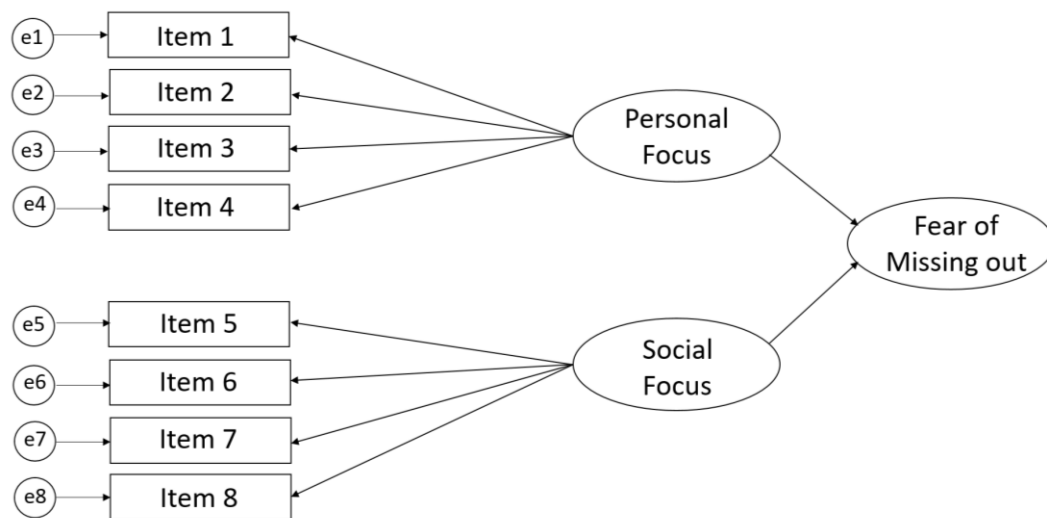


FIGURE 3.1 FOMO: CONCEPTUAL MODEL

### 3.4 Measurement Reliability and Validity

In order to ensure the quality of the scales, researchers need to evaluate reliability and validity of measurement as indication of quality of measurement. Specifically, content validity,

construct validity (including both convergent validity and discriminant validity), nomological validity and reliability will be assessed during the scale development process. Hence there are two main issues to address in this part: 1) the difference between reliability and validity, 2) the procedure to test reliability and validity.

Firstly, validity refers to “the degree of alignment between a term’s definition (its defining attributes, including its operationalization) and its extension (the phenomena “out there” that the term is intended to capture)” (Gerring 2001). In other words, the validity of scales means that it measures what it intends to measure (Carmines and Zeller 1979). There are several types of validity that concerned in this study: convergent validity “the degree to which two or more attempts to measure the same concept are in agreement” (Bagozzi and Phillips 1982), discriminant validity “the degree to which measures of distinct concepts differ,” (Bagozzi and Phillips 1982) and nomological validity “the degree to which predictions based one concept are formed within the context of a larger theory.”

With the aim of testing convergent and discriminant validity, study 2 checked whether the indicators that are supposed to be related to same factor will present a high degree of correlations while the indicators that are supposed to relate to different factors show a low degree of correlations (Fornell and Larcker 1981). Specifically, Composite Reliability index and Average Variance Extracted index (Fornell and Larcker 1981) will be calculated to ensure the adequate convergent validity and discriminant validity. According to Fornell and Larcker (1981), AVE and CR are widely used to assess the degree of shared variance between the latent variables in the model. To ensure nomological validity I specified the nomological network in which the relationship of the construct FoMO and other constructs is hypothesized so as to test theoretical

relationships between the construct and related antecedents and consequences (Peter and Churchill 1986).

Reliability is defined as “the tendency toward consistency found in repeated measures of the same phenomenon” (Carmines and Zeller 1979). A measurement scale is reliable if it indicates the same value when applied to same phenomenon. According to Nunnally and Bernstein (1994), the reliability of items can be supported by evaluating the degree to which the consistency remains for all the items derived from the scale, which refers to as internal consistency of the scale. In order to evaluate the internal consistency, a common method is to compute coefficient alpha or split half correlations (Nunally and Berstein 1994). As stated in the previous section, I expect a high correlation within dimension indicators, but not necessarily a high correlation between the indicators of the two dimensions. Also, Gerbing and Anderson (1988) have mentioned the necessity of measuring unidimensionality before assessing reliability. So the study will follow this procedure.

### **3.5 General Steps of Scale Development Process**

Past research suggested the techniques to evaluate validity and reliability of scales. For example, Fornell (1982) suggested first-generation criteria (EFA, Cronbach’s alpha) and second-generation criteria (CFA). The superiority of second-generation criteria, compared with the first-generation criteria, is that first-generation criteria overlooks the hypothetical relationship between constructs but simply use the measurement model to explain the phenomenon. So this study tested both: the measurement model and the structural model (theoretical model) to test the dimensionality of FoMO.

The scale development process followed steps suggested by Churchill (1979), Gerbing and Anderson (1988), and Mowen and Voss (2008). The first step was item generation. The construct and its two dimensions were defined. Study 1 will focus on item generation and initial analysis based on a qualitative analysis. However, to avoid the priming issue from pre-definition of dimensionality of the construct, the investigation of FoMO was based on broad definition of the construct. Participants were not be notified about how many dimensions the construct should have. Based on the results of a qualitative study, an initial pool of items was be generated. The next step was to provide the validation of scales based on three additional studies. First, I tested the psychometric properties of the scale, unidimensionality (EFA) and reliability (Cronbach's alpha). Next, I evaluated convergent and discriminant validity of the scale based on CFA analysis. Finally, I created a broader theoretical model including key construct FoMO and other related constructs to test nomological validity.

### **3.6 Study 1: Item Generation and Initial Analysis**

The goal of the study was to generate an initial item pool that reflects the dimensions of the construct in a concise and complete way. Since how the construct is measured should be determined by the definition of the construct (Jarvis et al. 2003, Mowen and Voss 2008), it is essential to examine the construct domain. According to the definition of FoMO stated before, the construct should grasp the elements of relevance as well as comparison. Furthermore, a context-free construct can be applied to various contexts for future research without constraints of specific research settings. Additionally, since the construct is theoretically two-dimensional, the empirical test should reflect two dimensions. However, in order not to constrain the empirical



testing based on pre-defined dimensions, the initial pool of items was collected from the sample that has no information about dimensionality of the construct FoMO.

Specifically, I generated the initial pool of items based on a qualitative study conducted with 238 undergraduate students from a mid-western university. Basically, participants were asked about their general feelings and opinions when they encounter Fear of Missing Out. They were provided with the general information and scenarios about FoMO instead of the specific two-dimensional concept. The reason was to avoid priming effect: if participants are informed of the two dimensions of construct in advance, it may activate the priming effect which makes participants intentionally think about the construct from two-dimensional perspectives. Then the responses may not reflect the participants' real opinions due to priming manipulation.

The answers from the questionnaire were then analyzed by 3 professional coders in order to generate scale items. The criteria of scales chosen in the study are: 1) there is no reflection of confusion between construct and antecedents of the construct in the scale; 2) the scales are validated in the later studies; 3) the scales should embrace the exact meaning of construct; 4) items of the scale that reflect other related but different construct should be omitted.

To ensure that the initial items are fully representative of the construct, a group of seven Ph.D. business students performed a face validity check of the items. Students evaluated how much each item reflected the construct by using a 1 – 5 Likert point scale from 1 “not representative at all” to 5 “extremely representative.” The two construct dimensions in this study are reflective models. In reflective models, a sample of indicators can be selected from a large pool. Accordingly, some indicators can be removed from the model without altering the meaning of the construct (Bollen and Lennox 1991). Accordingly, six out of thirty-two items that received

an average of less than 2 were dropped after evaluation. The remaining 26 items are shown in the Table 3.2.

To identify a probable structure of factors of FoMO, I conducted exploratory factor analysis (EFA) based on a new sample of 392 undergraduate students from a large university in the southwest United States. To support that the data was appropriate for conducting factor analysis, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy has shown a value of .96, which is higher than the .8 criteria, and Bartlett's Test of Sphericity is significant ( $\chi^2 = 6761.30$ ,  $df = 253$ ,  $p < .000$ ). The extraction method was principal component analysis with rotation method of oblimin. The results showed a two-factor solution, which is consistent with the theoretical argument that FoMO is a two-dimensional construct. The first factor, with an eigenvalue of 11.88, and the second factor, with an eigenvalue of 2.25, explained a cumulative variance of 61.45%. The items with pool loading ( $< .5$ , Hair et al. 1998) or high cross-loadings were dropped (per item per time).

### **3.7. Scale Purification and Confirmatory Factor Analysis**

Furthermore, since the goal of scale development of FoMO is to create a reliable, valid scale with a small number of items through the EFA process, I carefully analyzed not only the factor loadings and cross loadings of items but also the scale brevity. Previous studies have suggested that a short scale that is composed of essential and concise items is better than a long scale which may lead to respondent fatigue (Netemeyer, Bearden, and Sharma 2003). A long-item scale may also artificially inflate Cronbach's alpha and increase the risk of potential cross-loadings with other scales. Domain sampling theory contends that the number of potential items

used to measure the construct is a researcher's judgment (Voss and Mowen 2008). Based on these criteria, the items were further refined based on high loadings, low cross-loadings, brevity, practicability, and researcher's interest. After dropping unnecessary items, I selected 9 items (5 for the personal dimension and 4 for the social dimension). These items dismiss redundancy and capture the meaning of construct.

Table 3.3 shows the final 9-item scale. The scale items showed high internal consistency reliability. Cronbach's alpha is .90, the reliability of the items in the personal dimension (Cronbach's alpha = .86), and the social dimension (Cronbach's alpha = .92) are all greater than general benchmark of .6 (Cronbach 1951). The corrected item-to-total correlations of the dimensions are above the general benchmark of .5 (Bearden, Netemeyer and Teel 1989). Table 3.4 presents the detailed item-to-total correlations and Cronbach's alphas of two dimensions. In sum, the data supported the reliability of the 9-item two-dimensional scale.

In order to validate the two-factor solution from the EFA, I conducted a separate Confirmatory Factor Analysis (CFA) to test the dimensionality of the scale, as suggested by Gerbing and Anderson (1988). Figure 3.2 shows the standardized regression weights for CFA of the FoMO scale. I ran the CFA using AMOS (Steenkamp and Baumgartner 2000). Thus, I excluded nine cases from the analysis due to missing data in at least 1 item. I included a total of 386 cases in the analysis.

TABLE 3.2 CLEANED ITEMS AFTER INITIAL ITEM POOL AND FACE VALIDITY  
CHECK

Items

1. I feel sad about missing events / opportunities
2. I feel curious about the information about events / opportunities
3. I feel anxious that I did not experience the event / opportunity
4. I feel I am disconnected with what is going on in life
5. I have a sense of uncertainty if I don't know what I missed out
6. I am dissatisfied about current state of life after missing the opportunity
7. I feel lost or don't know what to do if I miss the opportunity
8. I feel motivated to make sure of catching up events / opportunities next time
9. I believe I am falling behind compared with others
10. I feel anxious because I know something important or fun must have happened
11. I feel sad that I was not capable of participating in event due to constraints of other things
12. I fear that I don't have what everyone else has or I can't do what others are able to do
13. I feel regretful of missing the event / opportunity
14. I try to convince myself the opportunity / event is not that important
15. I can't stop thinking about what was going on in the event
16. I try to find out what I have missed
17. I feel jealous of my friends who attended event
18. I think my social groups view me as unimportant (when I miss events / opportunities)
19. I am anxious about not joining my social groups for event
20. I think I am not welcomed by my social groups (when I miss events / opportunities)
21. I think I do not fit in social groups (when I miss events / opportunities)
22. I have a sense of loneliness when my friends attend events without me
23. I feel disconnected with my social groups (when I miss events / opportunities)
24. I think I am excluded by my social groups (when I miss events / opportunities)
25. I feel ignored / forgotten by my social groups (when I miss events / opportunities)
26. I keep thinking that my friends are having fun in the event

Note: Item 1-16 are personal items, Item 17-26 are social items

TABLE 3.3 FACTOR LOADINGS FOR THE FOMO ITEMS

Item	Factor		M	SD
	1	2		
<i>1 Factor: Personal Dimension</i>				
P1 I feel anxious when I did not experience events / opportunities	0.82		4.28	1.65
P2 I believe I am falling behind compared with others when I miss events / opportunities	0.66		3.81	1.84
P3 I feel anxious because I know something important or fun must have happened when I miss events opportunities	0.82		3.73	1.74
P4 I feel sad if I am not capable of participating in events due to constraints of other things	0.82		4.03	1.77
P5 I feel regretful of missing events / opportunities	0.83		3.85	1.74
<i>2 Factor: Social Dimension</i>				
S1 I think my social groups view me as unimportant when I miss events or opportunities		0.78	2.63	1.62
S2 I think I do not fit in social groups when I miss events / opportunities		0.94	2.73	1.68
S3 I think I am excluded by my social groups when I miss events / opportunities		0.94	2.61	1.6
S4 I feel ignored / forgotten by my social groups when I miss events / opportunities		0.88	2.7	1.66

The chi-square statistics for the two-factor model showed that  $\chi^2 = 44.66$ ,  $df = 25$ ,  $p = .009$ . Though a non-significant chi-square indicates a good model fit, chi-square statistic can be sensitive to larger sample size (e.g. Hu and Bentler 1999). Thus I used  $\chi^2/df$  (in this model,  $\chi^2/df < 1.78$ , which is less than 2) ratio to support that the model has a good fit (Bollen 1989).

TABLE 3.4 ITEM-TO-TOTAL CORRELATIONS AND CRONBACH'S ALPHAS

	Item-to-total Correlation	Cronbach's Alpha
<b>Personal Focus</b>		0.86
P1	0.6	
P2	0.63	
P3	0.73	
P4	0.69	
P5	0.74	
<b>Social Focus</b>		0.92
S1	0.71	
S2	0.8	
S3	0.87	
S4	0.87	

I also evaluated the model based on other important indicators: I examined GFI (goodness of fit index, recommended level of .90), CFI (comparative fit index, recommended level of .90), TLI (Tucker-Lewis Index, recommended level of .90), and RMSEA (Root mean square error of approximation, should be less than recommended level of 0.05). As predicted, all the aforementioned indices showed a good model fit: GFI = .97, CFI = .99, TLI = .987 (Schermelele-Engel, Moosbrugger, and Muller 2003), and RMSEA = .045 (Browne and Cudeck 1993).

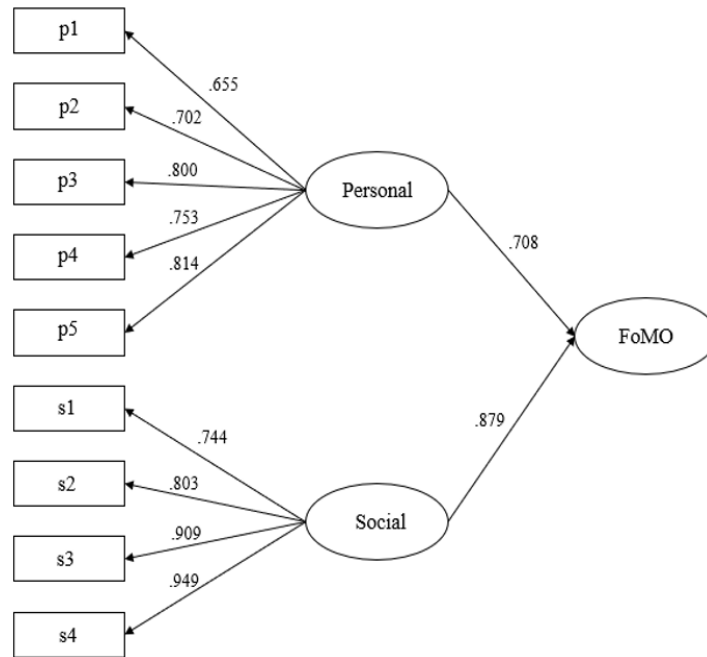


FIGURE 3.2 STANDARDIZED REGRESSION WEIGHTS FOR CFA OF THE FOMO SCALE

To further examine that a second-order model with two first-order factors is the best representation of the structure of the data, two models were compared: I expect to see a second-order model has better fit than one-factor model, as indicated in Figure 3.3.

As expected, one-factor model had poor model fit with unsatisfactory  $\chi^2$ , degree of freedom,  $\chi^2/\text{df}$ , CFI, NFI TLI, and RMSEA. The second-order model, however, indicated a better fit. The indicators of model fit are presented in the Table 3.5. The chi-square difference test showed that the second-order model has a significant better fit ( $\Delta\chi^2 = 482.51$  (2 df);  $p < .01$ ).

TABLE 3.5 INDICATORS OF CFA FOR ONE-FACTOR AND TWO-FACTOR SOLUTIONS

Model	$\chi^2$	df	$\chi^2/df$	NFI	CFI	TLI	RMSEA
One-Factor Model	527.166	27	19.525	0.764	0.772	0.696	0.219
Second-Order Model	44.66	25	1.786	0.98	0.991	0.987	0.045

### 3.8 Study 2: Testing Convergent and Discriminant Validity

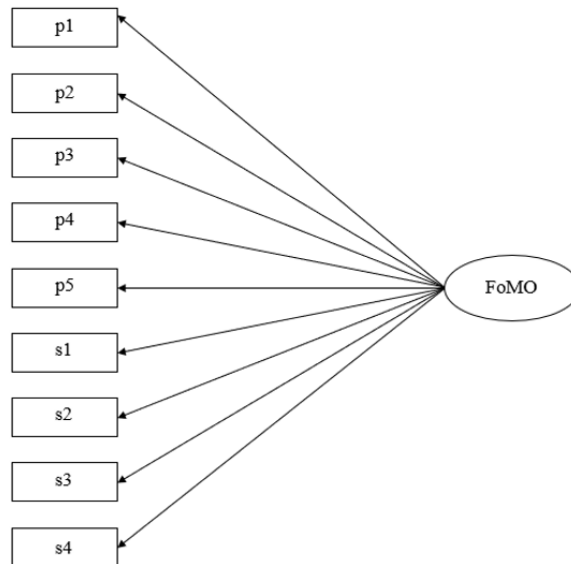
The next step was to evaluate the convergent and discriminant validity of the two-dimensional scale, I conducted a Confirmatory Factor Analysis (CFA) using a new sample of 236 student participants from a midwestern university. The sample size was 236.

Before assessing the convergent and discriminant validity in the study, I examined the reliability of the scales by checking Cronbach's coefficient alpha. I expect that the Cronbach's coefficient alpha of the whole FoMO scale, personal focus dimension, social focus dimension would be all be above the threshold of .6 (Cronbach 1951). The Cronbach's alpha for the construct FoMO was .90 (with an alpha of .86 for personal dimension and an alpha of .91 for social dimension), which was above the threshold. Also, I tested Composite Reliability for the construct (CR = .94) and two dimensions (CR for Personal Dimension = .86., CR for Social Dimension = .92), which provided additional evidence of scale reliability for further test (Fornell and Larcker 1981).

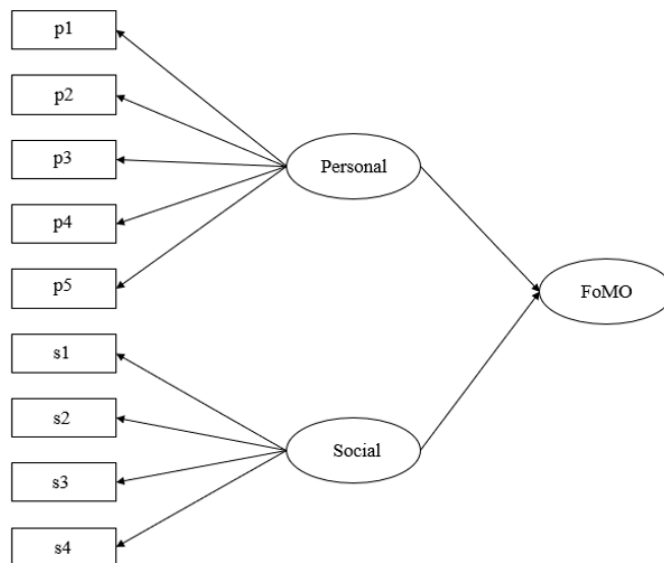
In order to test convergent validity, I expected the items would load on the designated dimension rather than on the other dimension. I expected the average variance extracted would be higher than the recommended level of .5 (Bagozzi and Yi 1988) as another indicator of good convergent validity. As predicted, the AVE value for the construct FoMO was .63 (with AVE for



the personal dimension was .56, and the AVE for the social dimension was .73), which are all beyond the .5 criteria.



One-Factor Model



Second-Order Model with Two First-Order Factors

FIGURE 3.3 MODEL FIT TEST: ONE-FACTOR MODEL AND TWO-FACTOR MODEL

To further examine the convergent validity, I compared Model 1 (a second-order factor model with two first-order factors, which are personal and social dimensions) and Model 2 (a model with two independent constructs, named personal and social dimensions) with respect to model fit using Structural Equation Model (SEM) (AMOS). I expected to see Model 2 would fail the fit tests. I expected that CFA would suggest the Model 1, which indicates that a structure of second-order factor model with two first-order factors, would provide the best representation of data. The two models are indicated in Figure 3.4.

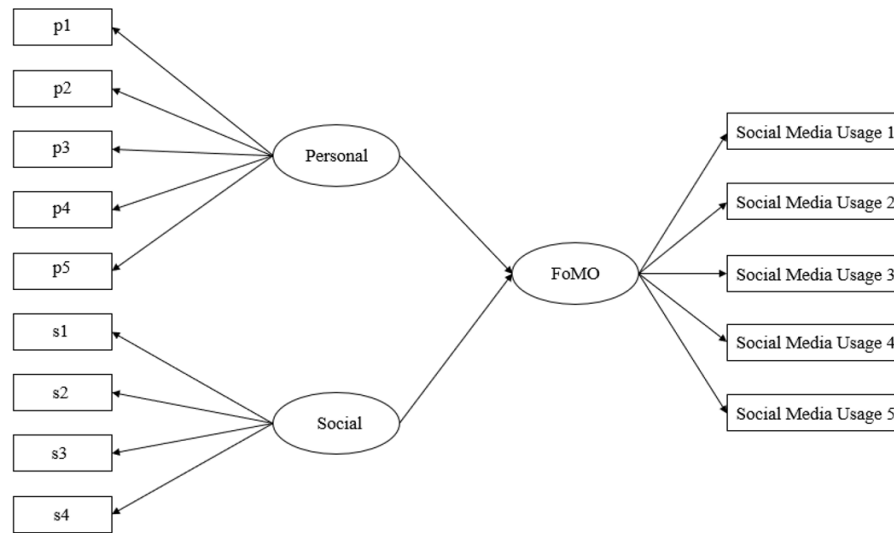
In order to test the convergent validity, I examined the two models in related to a construct, social media usage. Previous research has argued about the role of FoMO in social media related behavior. For example, Alt (2015) has presented the positive link between FoMO and social media engagement (which includes social engagement, news information engagement, and commercial information engagement). It is then reasonable to argue that as essential activity of social media engagement, social media usage can be predicted by Fear of Missing Out.

Social media usage was measured by a 5-item scale using the following sentences: “I often check my friends’ status on social media”, “I often check social media to get information about events and information”, “I check social network sites to see what’s going on at least once per day”, “I always use social media to get to know about the world”, and “I often use social media to connect with my friends and social groups”. The participants responded on a 7-point Likert type scale ranging from 1 (strongly disagree) to 7 (strongly agree). The results was as predicted that a second-order model with two first-order factors was the best representation of the structure of the data. Model 2 (two-construct model) had poor model fit with unsatisfactory  $\chi^2$ , degree of freedom,  $\chi^2/df$ , CFI, NFI TLI, and RMSEA. Model 1 (second-order model), however, indicates a better fit. The indicators of model fit are presented in the Table 3.6. The

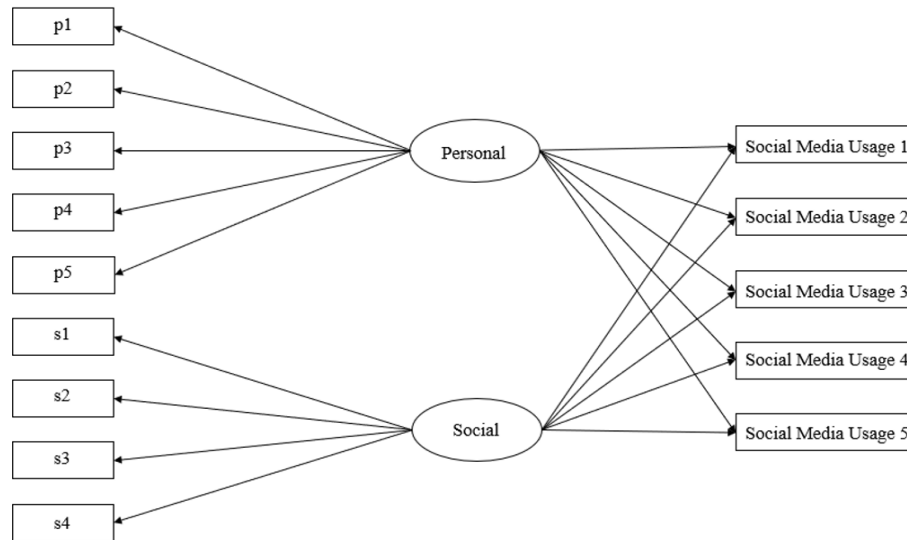
chi-square difference test also supported that Model 1 has better model fit ( $\Delta\chi^2 = 406.98$  (3 df);  $p < .01$ ).

TABLE 3.6 INDICATORS OF CFA FOR SECOND-ORDER MODEL AND TWO-CONSTRUCT MODEL

Model	$\chi^2$	df	$\chi^2/\text{df}$	NFI	CFI	TLI	RMSEA
Second-Order Model	107.78	74	1.456	0.942	0.981	0.977	0.044
Two-Construct Model	514.767	71	7.25	0.725	0.75	0.68	0.163



Model 1: Second-Order Model



Model 2: Two-Construct Model

### FIGURE 3.4 MODELS USED TO TEST CONVERGENT VALIDITY

To test discriminant validity which means items that measure the dimension “personal focus” and dimension “social focus” should be distinct. I expected the squared root of the AVE of each construct would be higher than the correlation coefficient between it and any other dimensions in the model, which can indicate sufficient discriminant validity (Fornell and Larcker 1981). The scale was tested in relation to the Novelty Seeking scale and Consumer Susceptibility to Interpersonal Influence scale.

Previous studies have suggested that novelty seeking behavior is a segment of curiosity and exploratory tendencies (Peterson and Seligman 2004). According to Peterson and Seligman (2004), novelty seeking behavior is described as “an emotional-motivation state facilitating the search for stimulation occasioned by novelty, complexity, uncertainty, or conflict, irrespective of specific questions or problem.” Novelty seeking behavior can be internally driven by the need to avoid boredom (Fowler 1965) or externally driven by environmental stimuli (Berlyne 1967), which has similar manifestation as FoMO. For example, individuals with high level of FoMO will tend to search new information, events, etc. about the environment, while individuals who exhibit novelty seeking behavior may search for new stimuli in the environment. Furthermore, novelty seeking behavior can be regarded as individuals’ motivation to resolve incongruity between current state (perception) and ideal state (expectation) (Hebb 1949). Thus, FoMO and novelty seeking share the theoretical foundation.

On the other hand, consumer susceptibility to interpersonal influence refers to the need to conform to the social groups’ expectations with respect to purchase decisions, information seeking, etc. (Bearden, Netemeyer, and Teel 1989). Based on self-determination theory, relatedness refers to the need to experience satisfactory interpersonal relationships (Deci and

Ryan 1985, 2000). Self-determination theory also emphasizes the importance of social contexts in which individuals seek development and well-beings through healthy social interactions (Deci and Ryan 2000). For example, the dynamic interaction between individual and others can be reflected by susceptibility to interpersonal influences in consumer choice decisions. Accordingly, FoMO and consumer susceptibility to interpersonal influence also have same theoretical foundations and should be related.

In one word, consumers' motivations to satisfy their personal and social needs persistently can be manifested by phenomena of FoMO, novelty seeking, and consumer susceptibility to interpersonal influence. Thus, it is important to examine whether FoMO correlates to highly with novelty seeking scale and consumer susceptibility to interpersonal influence scale, in which they were intended to differ.

I used the same student sample (sample size = 236) to test the discriminant validity of FoMO. Novelty seeking was measured with items such as “I often seek out information about new products and brands”, “I like to go to places where I will be exposed to information about new products and brands”, etc. on a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree) (Manning, Bearden, and Madden 1995). One item was removed because it was reversed. Consumer susceptibility to interpersonal influences was measured with 5 items taken from (Bearden, Netemeyer, and Teel 1989, 12-item scale) such as “It is important that others like the products and brands I buy”, “When buying products, I generally purchase those brands that I think others will approve of”, etc based on a 7-point Likert-style scale ranging from 1 (strongly disagree) to 7 (strongly agree). A CFA is conducted and AVE (Average Variance Extracted) is calculated. According to Fornell and Lacker (1981), AVE should be above .5 to support adequate measures. In this study, the AVE of FoMO is .63 (with .55 for personal

dimension and .73 for social dimension), the AVE of novelty seeking is .62, and the AVE of consumer susceptibility to interpersonal influence is .59, which are above the criteria. The squared correlation between FoMO and novelty seeking is .04, while the squared correlation between FoMO and consumer susceptibility to interpersonal influence is .07, which means the AVE value of each item is higher than the squared correlations between the items. This supports the discriminant validity between the three measures. Table 3.7 shows a summary of results.

### **3.9 Study 3: Testing Nomological Validity**

In order to test nomological validity of the FoMO, I evaluated the relationship between FoMO and materialism. Previous studies have suggested that materialism is rooted from higher-order psychological needs such as developing self-concept and building social relationships (Burroughs et al. 2013). As motivation is heightened to become a better well-being (Deci and Ryan 2000), consumers try to fulfill personal and social needs with acquisition of material goods. In other words, material goods may be utilized as way to resolve self-discrepancies and achieve the ideal self. On the other hand, individuals' motivations for not missing out on experiences, information, events, etc. are rooted from same motivations of personal and social needs: for example, becoming knowledgeable about brands and products, frequent and persistent seeking for new brands products, keeping updated with what products and brands others purchase are all manifestation of resolving self-discrepancies between current self and ideal self. Thus, FoMO and materialism rest on many of the same theoretical foundation.

TABLE 3.7 EFA AND CFA WITH FOMO AND MEASURES OF NOVELTY  
SEEKING AND CONSUMER SUSCEPTIBILITY TO INTERPERSONAL INFLUENCE

Construct	EFA Components				CFA	
	1	2	3	4	Standardized Loading	Average Variance Extracted
<b>Fear of Missing Out</b>						
Personal Dimension						
1. I feel anxious when I do not experience events/opportunities	0.186	0.075	<b>0.8</b>	0.165	0.655	
2. I believe I am falling behind compared with others when I miss events/opportunities	0.068	0.012	<b>0.715</b>	0.287	0.702	
3. I feel anxious because I know something important or fun must have happened when I miss events/opportunities	0.185	0.21	<b>0.685</b>	0.321	0.8	
4. I feel sad if I am not capable of participating in events due to constraints of other things	0.061	0.055	<b>0.791</b>	0.159	0.753	
5. I feel regretful of missing events/opportunities	0.063	-0.005	<b>0.769</b>	0.277	0.814	0.558
<b>Social Dimension</b>						
1. I think my social groups view me as unimportant when I miss events/opportunities	0.035	0.113	0.277	<b>0.773</b>	0.744	
2. I think I do not fit in social groups when I miss events or opportunities	-0.054	0.159	0.28	<b>0.809</b>	0.803	
3. I think I am excluded by my social groups when I miss events or opportunities	0.071	0.147	0.293	<b>0.852</b>	0.909	
4. I feel ignored or forgotten by my social groups when I miss events or opportunities	0.084	0.141	0.31	<b>0.854</b>	0.949	0.731
<b>Novelty Seeking</b>						
1. I often seek out information about new products and brands	<b>0.788</b>	0.033	0.026	0.064	0.748	
2. I like to go to places where I will be exposed to information about new products and brands	<b>0.842</b>	0.063	0.033	-0.054	0.803	
3. I like magazines that introduce new brands	<b>0.802</b>	0.032	0.14	-0.038	0.772	
4. I frequently look for new products and services	<b>0.881</b>	0.012	0.059	0.07	0.872	
5. I seek out situations in which I will be exposed to new and different sources of product information	<b>0.849</b>	0.007	0.086	0.004	0.831	
6. I am continually seeking new product experiences	<b>0.838</b>	0.07	0.098	0.093	0.824	
7. I take advantage of the first available opportunity to find out about new and different products	<b>0.698</b>	-0.003	0.123	0.044	0.652	0.622
<b>Consumer Susceptibility to Interpersonal Influence</b>						
1. It is important that others like the products and brands I buy	0.012	<b>0.794</b>	-0.047	0.227	0.767	
2. When buying products, I generally purchase those brands that I think others will approve of	-0.041	<b>0.849</b>	0.007	0.127	0.801	
3. If other people can see me using a product, I often purchase the brand they expect me to buy	0.063	<b>0.827</b>	0.137	-0.003	0.779	
4. I like to know what brands and products make good impressions on others	0.083	<b>0.783</b>	0.099	0.026	0.722	
5. I achieve a sense of belonging by purchasing the same products and brands that others purchase	0.049	<b>0.803</b>	0.076	0.154	0.784	0.595

To understand the nomological validity of FoMO in relations to materialism, I examined that theoretically related constructs are empirically related as well. I collected a new set of data from Qualtrics Data Collection Panels. The sample size was 437. To measure materialism, the items were chosen from 7-item materialism scale developed by Richins (1984). The materialism scale included items such as “It is important to me to have really nice things”, “I would like to be rich enough to buy anything I want”, among others. based on a 7-point Likert type scale ranging from “strongly disagree” to “strongly agree.” Cronbach’s alpha for FoMO using new sample was .93, while Cronbach’s alpha for materialism scale was .82, which indicated high internal consistency reliability. Using the Pearson correlation coefficient, there was a positive relationship between FoMO and materialism ( $.53, p < .01$ ), thus providing evidence for an empirical relationship between FoMO and materialism. Furthermore, regression analysis was further conducted to assess the predictive power of FoMO as independent variable in predicting the dependent variable, materialism. Regression analysis showed significantly result ( $t = 12.45, b = .51, p < .001$ ). Thus, nomological validity of FoMO was supported: specifically, the individuals who have high level of FoMO tend to have high level of materialism as well. The empirical relationship can be explained by the motivation theory: as individuals feel anxious or motivation to gain life goals, they have the fearful feeling of do not miss experiences or physical goods that are related to personal and social goals. Thus, for individuals who crave experiences, they will also crave attaining physical goods to accumulate their personal and social capital. Consuming experiences and physical goods are highly related.



### **3.10 General Discussions**

In this essay, I developed a general context-free scale for the construct of – Fear of Missing Out. The study describes the rigorous theoretical development and refinement of scale. One strength of this study is the use of a strong theoretical foundation, describing the underlying two dimensions of the construct, as well as the new definition of FoMO developed in Essay 1 guided the scale’s content domain and generation of initial item pool. The items were then assessed using both samples of students and samples of both student and Qualtrics participants to test factorial structure, model fit, convergent validity, discriminant validity, and nomological validity.

Though the study has well-defined theoretical basis and psychometric support, there are several limitations to the current study. The initial item generation and scale purification are based on the student sample. Future studies should validate the scale’s model fit, convergent and discriminant validity using diverse and general populations. Furthermore, the nomological validity only tests the correlation between FoMO and materialism. It is important to note that because FoMO is an important construct related to marketing and consumption, further work should test FoMO’s nomological validity in other marketing contexts. The examination of FoMO with other constructs, such as materialism, novelty seeking, among others, illuminates the importance of investigating the construct in the brand-related context. That is the primary research goals in Essay 3, a further study testing the nomological validity of FoMO in experiential branding environment.

### **Essay 3: FoMO and Brand Loyalty**

The purpose of this essay was to test the relationship between brand experience, emotional attachment, and brand loyalty. Though previous studies have shown a positive relationship between brand experience, emotional attachment, and brand loyalty, the role of FoMO was not considered. Because FoMO can be emanate from either internal or external motives, FoMO can interfere with consumers' subjective judgment of benefits and motivate consumers to conduct exploratory behavior on new brands. Accordingly, individuals with high level of FoMO will not easily commit themselves to the brand-self relationship through enactment of loyalty behavior. This theoretical argument was supported by experimental designs.

#### **4.1 Introduction**

Nowadays, more and more companies deliver stimulating brand experiences in order to enhance customers' emotional attachment to brands and gain brand loyalty. For example, hotel brand Marriot has interactive and experiences that focus on warmth, comfort, homey feelings through look, feel, touch of the objects and physical activities related to hotel brand will lead consumers to have a satisfying experience and affiliate such valuable experience to the brand itself. Place brands (e.g., tourist destinations) form emotional connections between consumers and places through memorable experiences conferring both sensory (e.g. look, feel, touch of the place) and intellectual information (e.g. knowledge and information about the place). Interactive experiences can be an effective marketing approach to create consumers' emotional connection with the brand and help consumers form attachment to brands.

The experiential benefits from brands is well established in previous studies (e.g. Holbrook and Hirschman 1982; Schmitt 1999). A brand experience refers to sensory, affective, intellectual and behavioral interactions between consumers. These interactions can occur when consumers search, purchase or consume a branded product (Brakus, Schmitt and Zarantonello 2009; Schmitt, 1999). These interactions create hedonic benefits for the consumer. Voss, Spangenberg, and Grohmann (2003) explained the difference between utilitarian and hedonic benefits of brands. Utilitarian benefits are concerned with functional outcomes of brand usage while hedonic benefits involve consumers' experience with brand attributes. While utilitarian benefits involve practical attributes, hedonic benefits include symbolic and experiential attributes. Compared with utilitarian benefits, experiential brand benefits have a stronger effect on eliciting consumers' positive emotions (Carrol and Ahuvia 2006).

Brands that provide predominantly hedonic benefits convey stronger emotions and become part of a consumer's identity. Symbolic benefits can communicate brand meaning to satisfy consumers' social approval and self-expressive needs (Liang and Wang 2004). Accordingly, hedonic brands can help consumers express and shape their identity (Fournier 1998).

Additionally, previous studies have shown a positive relationship between brand experience and emotional attachment. For example, Brakus, Schmitt and Zarantonello (2009) proposed that brand experience may elicit emotional attachment. Emotional attachment reflects the emotional bond connecting individuals and brands (Jimenez and Voss 2014). Thus, emotional attachment is triggered by stimulation of positive emotional response to enticing benefits by interacting with brands. As previous studies indicated, when individuals have a satisfying experience, they will then affiliate such valuable experience to the brand itself to build

positive emotions (Carrol and Ahuvia 2006). The more experiences individuals have with brands, the stronger feeling they have to build and retain the positive emotional bond (Brakus, Schmitt and Zarantonello 2009). Positive emotions through frequent interactions with high experiential brands can help consumers have self-enhancement and foster a strong brand-self connection to let the brand become an important component of the self. Emotional attachment reflects a strong connection between self and the brand.

Experiential brands, that emphasize specific brand features, can enhance brand differentiation by shaping unique consumer experience. Because a brand experience is co-created through consumer-brand interaction, the brand experience becomes a distinctive, unique, active, engaging and personal “emotional memory” that relates to consumers own identity. Individuals perceive a “unique experience” as way of shaping their own “self-differentiation.” Brands that provide consumers with desired brand experience can strengthen emotional attachment.

According to Aaker (1991), brand loyalty refers to “the attachment that a customer has to a brand.” As Aaker (1991) indicates, it is essential to examine brand loyalty because loyal customers are easier to manage (and less expensive) compared to new customers. Despite the wide examination of theoretical concept of brand loyalty, past studies have contended that emotional attachment to a brand is a major indicator of developing brand loyalty (e.g. Thomson et al. 2005, Carrol and Ahuvia 2006). These studies suggested that a higher level of emotional attachment will cause consumers’ higher propensity for commitment loyalty to brands. Thus, the positive effect of emotional attachment on brand loyalty signals the importance of investigating the relationship between emotional attachment and brand loyalty in the brand experience context.

This essay examined whether the attachment generated through a brand experience turns into brand loyalty or not. When consumers are emotionally attached to tangible products,

consumers tend to cherish and protect those goods (Jimenez and Voss 2013). Individuals seek to be close to those objects to feel secure, safe, and elicit a desired affective state. The presence of those goods or the feeling of possession creates a positive affect. It is not the memory of the good, but its actual possession what creates value. For example, some individuals may go out their way to preserve an old family car in storage. The mere memory of the car is not enough. The possession of the good is necessary even if interaction is limited. When individuals become attached to a brand that sells tangible goods, individuals tend to repurchase the good to elicit memories and feelings. “I had a Rolex” is less meaningful than “I have a Rolex.”

In contrast, experiences are intangible. Individuals may collect experiences as a way to increment their experiential capital comprised of affective memories and emotional stories that shape their self-concept. The memory of the experience alone adds value. For example, individuals may take pride that they have visited several countries, attended concerts, or performed a number of jobs. These experiences add to their experiential capital. For this reason, experiences may elicit a sentiment of emotional attachment, but may not translate to re-purchase as the re-experience is not necessary to maintain the value of the experience. Some individuals may consider visiting Paris once in their life, or experiencing Disney once. The popular saying of “Been there done that” could capture the value of an experience.

Consequently, brand experiences may still elicit attachment but may not lead to re-purchase.

This study tries to fill the gap by investigating the moderation role of FoMO in the effect of brand experiences on emotional attachment and brand loyalty. The present study intends to answer the following research question: 1) is the relationship between brand experiences, emotional attachment, and brand loyalty moderated by different levels of FoMO? 2)

Will people with high level of FoMO tend to build stronger or weaker emotional attachment in high or low brand experiential context? 3) If people who have a high level of FoMO have stronger or weaker emotional attachment towards a brand, will they also build stronger or weaker brand loyalty?

I propose that Fear of Missing Out moderates the relationship between brand experience, emotional attachment, and brand loyalty. Because FoMO can be emanated from either internal or external motives, FoMO can interfere with consumers' subjective judgment of benefits that satisfy internal or external needs delivered in the brand experiences. For example, in the context of experiencing new brands, individuals' Fear of Missing Out can motivate them to conduct exploratory behavior on new products and brands, trying new brand experiences, updating new brand experiences on social media, among others, and thus interfere with their strengthened brand relationships through brand experiences. Accordingly, a person's loyalty or commitment to a brand can be influenced by an emotional bond and relevant connection with brand, which is reflected by emotional attachment, and exploratory behavior on new brand experiences, which is manifested by Fear of Missing Out on experiences. Driven by personal and social motives, individuals with different levels of FoMO may elicit different emotional responses towards brand experiences, thus moderating consumers' emotional attachment and brand loyalty.

## **4.2 Theoretical Foundation and Hypotheses**

Past studies have examined the relationship between consumers' feelings of fear, brand attachment, and consumption. For example, terror management provides some insights regarding use of fear appeals. Terror management theory contends that the terror of knowing that we will

die one day generates anxiety and low self-esteem. To cope with these negative feelings, individuals attempt to restore their self-esteem by enhancing their self-concept. Because brands can help individuals create and communicate their identities, brands are an instrumental tool to reduce existential anxiety and enhance self-esteem (Rindfleisch, Burroughs, and Wong 2009). Individuals can learn other coping strategies to cope with existential insecurity such as wealth accumulation and building affection for luxury brands (Kasser and Sheldon 2000).

Fear of Missing Out is closely associated with stress, anxiety and insecurity. Past research shows that FoMO can trigger social engagement behavior such as social media usage (Przybylski et al. 2013; Alt 2015), addiction (Blackwell, Leaman, Trampusch, Osborne, and Liss 2017), problematic smartphone use (Elhai et al. 2016), and alcohol use (Riordan et al. 2015).

Adolescents with a high level of FoMO experienced more stress when not being popular on social media such as Facebook and when not belonging on Facebook (Beyens, Frison, and Eggermont 2016). Moreover, higher level of Fear of Missing Out is related to more depressive symptoms, less mindful attention, and more physical symptoms (Baker, Krieger, and LeRoy 2016). The above studies shed light on the fact that FoMO is linked with psychological issues such as insecurity, and may result in unique consumption behavior: people with high level of FoMO has special demand for such emotional attachment and connection through brand experiences because of security.

Self-determination theory is widely used in explaining the relationship between FoMO and behavior. Because Fear of Missing Out is linked to low levels of basic need satisfaction (Przybylski et al. 2013), when individuals are experiencing unfulfilled needs, they are motivated to conciliate unsatisfied needs by building unique consumption behavior to relieve the feeling of anxiety and insecurity. The feeling of insecurity can come from an inability to satisfy both

personal and social goals. For example, when individuals have FoMO due to incapability of maintaining a close social relationship when social groups attend the important events without the person, the person's insecure feeling may be relieved by affiliating himself/herself to objects such as certain brands and products. Another scenario would be an individual who is unable to fulfill personal goals in life and have feeling of self-doubt and insecurity. The person may develop an emotional attachment to the object to enhance self-identity because brands function as an important component of extended self. Shaping emotional attachment, accordingly, becomes one way for individuals to cope with insecurity through consumption of goods and experiences. Furthermore, because experiences are more linked to a person's self-identity because of unique experiences consumer build interacting with brand, consumers with high level of FoMO, which indicates high level of insecurity, would like to build stronger emotional attachment to high experiential brands. In other words, building emotional attachment towards brands can be utilized as way to resolve self-discrepancy, restore the sense of security, and avoid insecure feeling of inability of achieving the ideal self.

Thus, for people with a high level of FoMO, they tend to develop more fears and insecurity regarding "not experiencing like others." The underlying insecurity may lead individuals to seek out experiences, but also initiate high FoMO individuals' seeking behavior of attached brands to increase security. High experiential brands, because of its special characteristics of linking self to brand through distinctive and personalized experiences, it can relieve more insecure feelings of self-esteem and self-identity. Thus, the following hypothesis is proposed:



***Hypothesis 1: There is a positive association between FoMO and emotional attachment towards high experiential brands.***

Though past research suggested that when individuals have strong emotional attachment, they may easily commit themselves to the maintenance of the brand-self relationship through the enactment of loyalty behavior (e.g. Oliver 1999). It is true that when individuals have attachment to brands, they may spend more time, money, resources in order to maintaining the brand relationship and emotional bond. However, the previous studies are based on the notion that consumers have solely emotional dependency on the brand that they will persistently gain comfort, happiness, and security through the brand-self relationships. This assumption may not true for people with high level of FoMO: they tend to seek new brand experiences in order to satisfy their both internal needs, such as satisfaction, happiness, as well as their external needs, such as status in social groups. Because emotional attachment is an intense liking for the brand (e.g. Thomson et al. 2008), and experiential brand can usually satisfy consumers' desire for immediate hedonic gratification (Holbrook and Hirschman 1982), it may not sufficiently help to form a long-term commitment to brand for individuals who have high level of FoMO on novel and different brand experiences.

Furthermore, as previously discussed, FoMO can be triggered by personal and/or social motives (Deci and Ryan 1985). As the fear of missing out is the product of negative emotions on missing opportunities and experiences, high FoMO individuals have natural motivations to want themselves become an active part of exciting and valuable experiences. Accordingly, individuals who feel FoMO adapt their attitudes and behaviors to avoid actions that make one being left out compared with expected self or others. That is, when individuals feel FoMO they

will engage in behaviors aimed at not “falling behind,” especially when they see friends post fun experiences on social media but they cannot share the same experiences. They even want to have mastery of new things in order to show the “best self.” In the context of brand purchase and experience, Fear of Missing Out occurs when individuals are not informed about pleasant and fascinating experiences by interacting with brands. To avoid FoMO, individuals actively engage in various brand experiences and keep updated with latest information about brands. For example, since online brand communities fulfill individuals’ needs for learning about brand news, other consumers’ opinion on brands, companies’ events related to brands and others, it is believed that FoMO can be relieved through entertainment and communication when actively participating in brand community activities.

Furthermore, because Fear of Missing Out is linked to low levels of basic need satisfaction (Przybylski et al. 2013), when individuals is experiencing unfulfilled needs, they are motivated to conciliate unsatisfied needs with exposing to more new experiences to relieve the feeling of anxiety and insecurity. As a learned coping strategy, the acquisition of new experiences will relieve the feeling of insecurity and stress. Fear of Missing Out facilitates individuals’ motivation of seeking novel brand benefits especially if they perceive as a novel brand benefits are superior to old ones. For example, when consumers learned from the social media about new brand experiential benefits, they made the attempt to join and engage with new brand benefits. Further they would like to purchase the brand in order to gain those benefits. The motivations of experiencing new brand benefits come from both personal focus or social focus, such as internal variety-seeking, social comparison, peer pressure and others.

Though brand benefits can continuously be provided through brand experiences and personal interactions with a brand (Brakus et al. 2009), the brand experiential benefits will not be

considered as “new” unless new brand benefits will be introduced. It is then reasoned that even if brand benefits elicit individual’s emotional attachment, the Fear of Missing Out will motivate individuals to seek out new brand benefits provided by either rivalry brand or updated edition of brand. Driven by personal or social motives, seeking novel brand benefits helps consumers release concerns and anxiety elicited by new anticipation of brands. Furthermore, the habit of experiencing new brands will lead individuals to focus merely on exposing to new information and fulfilling new anticipation rather than building commitment with existing brand benefits. In other words, when Fear of Missing Out is activated, individuals will not be satisfied about the currently used brand. As a result, Fear of Missing Out will interfere with individuals’ establishment of brand loyalty even if they have strong emotional attachment towards the brand. Figure 4.1 presents the theoretical model of the relationship between brand experience, emotional attachment, and brand loyalty, as proposed. Thus the following hypothesis is provided:

***Hypothesis 2: There is a negative association between FoMO and brand loyalty towards high experiential brands.***

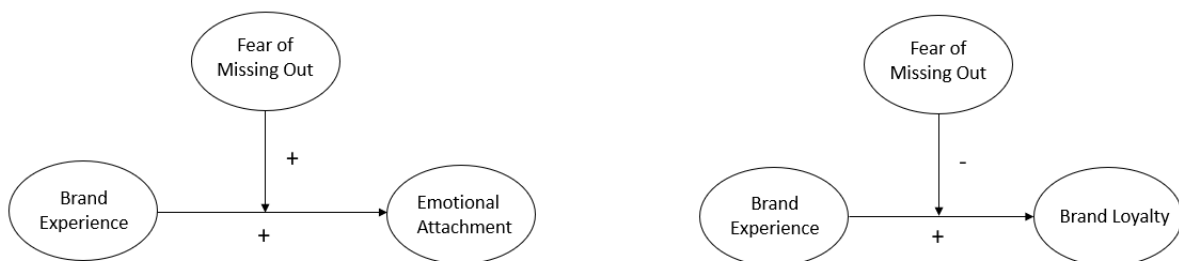


FIGURE 4.1 THEORETICAL FRAMEWORK OF FOMO IN BRAND RELATIONSHIPS

### 4.3 Empirical study

The purpose of this study was to test the hypotheses that individuals with high level of FoMO tend to build stronger emotional attachment towards high experiential products but will not have higher brand loyalty towards highly experiential products. It should be emphasized that because brand loyalty has both attitudinal and behavioral level (Chaudhuri and Holbrook 2001), this study only examines the attitudinal level of brand loyalty (which refers to as repurchase intention) since attitudes are antecedents of behaviors.

A total of 376 undergraduate students from a midwestern university participated in an online survey in exchange for extra credit. Participants were randomly assigned to one of three (high/medium/low) conditions. Brand experience was manipulated. Emotional attachment and brand loyalty were dependent variables.

At the beginning of the study, participants were told that they were about to evaluate an experiential brand they were familiar with. They were asked to read the instruction of what experiential brands are. Then participants were randomly assigned to one of three conditions: in the high-experiential brand condition, participants were asked to report a high experiential brand they were familiar with and were told that a high experiential brand means a brand that involves high level of brand experiences; in the medium experiential brand condition, participants were asked to report a medium experiential brand and were told that a medium experiential brand means a brand that involves medium level of brand experiences; the low-experiential brand condition, participants were asked to report a low experiential brand and were told that a low experiential brand means a brand that involves low level of brand experiences. After writing the

brand they were familiar with, participants answered a questionnaire containing manipulation checks, dependent variables, and demographics.

The scale items that were used to test brand experience is taken from four-dimensional (sensory, affect, behavioral, intellectual) scales developed by Brakus, Schmitt, and Zarantonello (2009). Participants evaluated a total of 12 items (4 dimensions) such as “I engage in physical actions and behaviors when I use this brand”, “This brand results in bodily experiences.”. in a 1-7 Likert-type scale ranging from 1 “strongly disagree” to 7 “strongly agree” (Cronbach’s alpha = .874). The scale items that were used to test emotional attachment asked participants “how much emotional attachment do you have towards this brand” developed by Jimenez and Voss (2007) in a 1-7 Likert-type scale ranging from 1 “no emotional bond”, “not emotionally connected”, “not linked by feelings”, “no feelings of attachment” to 7 “a strong emotional bond”, “emotionally connected”, “linked by feelings”, “strong feelings of attachment” (Cronbach’s alpha = .967). To measure brand loyalty, participants were asked to evaluate 3 items of brand loyalty scale in a 7-point Likert-type scale ranging from 1 “strongly disagree” to 7 “Strongly agree”. The three items used in the scale were “I intend to buy this brand in the near future”, “I would actively search for this brand in order to buy it”, “I intend to buy other products of this brand” developed by Algesheimer, Dholakia, and Hermann (2005) (Cronbach’s alpha = .833). In order to measure participants’ level of FoMO, participants were asked to evaluated the statements such as “I feel anxious when I do not experience events/opportunities”, “I believe I am falling behind compared with others when I miss events/opportunities,” from the FoMO scale developed in Essay 2 in a 1-7 Likert-type scale ranging from 1 “strongly disagree” to 7 “strongly agree” (Cronbach’s alpha = .896).

The final sample included 368 responses; 8 cases were deleted, because of missing values. As hoped, the manipulation was successful. Particularly, pairwise comparisons between groups indicated that participants in low experiential condition reported lower brand experiences ( $M = 2.99$ ), participants in medium experiential condition reported medium brand experiences ( $M = 4.08$ ) while participants in high experiential condition reported high brand experiences ( $M = 5.06$ ,  $p < .001$ ).

Hypothesis 1 stated that people with high level of FoMO tend to have stronger emotional attachment compared with people with low level of FoMO in high experiential products rather than low experiential products. In order to test the hypothesis, a two-way ANOVA was presented with FoMO (high vs. medium vs. low) and experiential brand conditions (high vs. medium vs. low) as independent variables and emotional attachment as dependent variable, because FoMO is a continuous variable, FoMO was transformed to a categorical variable based on three levels: low level ( $M \leq 3$ ), medium level ( $3 < M < 5$ ), and high level ( $M \geq 5$ ). The original results merely showed a significant main effect of experience conditions. Tybout et al. (2001) has pointed out that when ANOVA does not show a significant two-way interaction, a pairwise comparison to test for the simple effect can be conducted to further examine the moderation relationships. The pairwise comparison results indicated that participants with high level of FoMO ( $M_{\text{high}} = 5.342$ ) have significantly higher emotional attachment compared with participants with low level of FoMO ( $M_{\text{low}} = 3.900$ ,  $p = .016$ ) and medium level of FoMO ( $M_{\text{medium}} = 4.062$ ,  $p = .020$ ) in merely high experiential brand condition. There are no significant difference of emotional attachment between participants with low level of FoMO and participants with medium level of FoMO ( $p > .5$ ) There are no significant differences of emotional attachment among participants with high, medium, and low level FoMO in both low and medium experiential brand conditions

( $p > .5$ ). Table 4.1 presents a summary of cell size, mean as well as standard deviation across three FoMO levels.

TABLE 4.1 CELL SIZE, MEAN, STANDARD DEVIATION ACROSS CONDITIONS WITH EMOTIONAL ATTACHMENT AS DEPENDENT VARIABLE

	High FoMO	Medium FoMO	Low FoMO	Comparison
High Experiential				
Cell Size	19	68	35	$p = .016$ (high vs. low)
Mean	5.342	4.063	3.9	$p = .020$ (high vs. medium)
Standard Deviation	1.671	1.699	2.068	$p > .1$ (medium vs. low)
Medium Experiential				
Cell Size	21	61	40	$p > .1$ (high vs. medium vs. low)
Mean	3.583	3.631	3.419	
Standard Deviation	2.133	1.882	2.067	
Low Experiential				
Cell Size	21	58	44	$p > .1$ (high vs. medium vs. low)
Mean	2.06	2.504	2.21	
Standard Deviation	1.488	1.604	1.625	

Dependent Variable: Emotional Attachment

Hypothesis 2 stated that people with high level of FoMO who have stronger emotional attachment will show weaker brand loyalty. In order to test this hypothesis, a two-way ANOVA was performed with FoMO levels and Experiential condition as independent variables and brand loyalty as dependent variable. As expected, the original ANOVA only showed main effect of experience conditions. The pairwise comparison was then conducted (Tybout et al. 2001) and showed insignificant mean difference of brand loyalty among participants with high, medium, and low level of FoMO. Specifically, in high experiential brand condition, there are no significant difference of brand loyalty among three groups ( $M_{\text{high}} = 5.96$ ,  $M_{\text{medium}} = 5.24$ ,  $M_{\text{low}} = 5.44$ ,  $p < .1$ ). Figure 4.2 shows the graphic representation of the cell means with dependent

variable as emotional attachment and brand loyalty (Cumming, Fidler, and Vaux 2007). Thus, hypothesis 2 was not supported.

TABLE 4.2 CELL SIZE, MEAN, STANDARD DEVIATION ACROSS CONDITIONS WITH BRAND LOYALTY AS DEPENDENT VARIABLE

	High FoMO	Medium FoMO	Low FoMO	Comparison
High Experiential				
Cell Size	19	68	35	
Mean	5.965	5.245	5.448	p > .1 (high vs. medium vs. low)
Standard Deviation	1.111	1.519	1.367	
Medium Experiential				
Cell Size	21	61	40	
Mean	5.286	4.967	5.05	p > .1 (high vs. medium vs. low)
Standard Deviation	1.343	1.359	1.306	
Low Experiential				
Cell Size	21	58	44	
Mean	3.905	4.69	4.25	p > .1 (high vs. medium vs. low)
Standard Deviation	1.399	1.284	1.336	

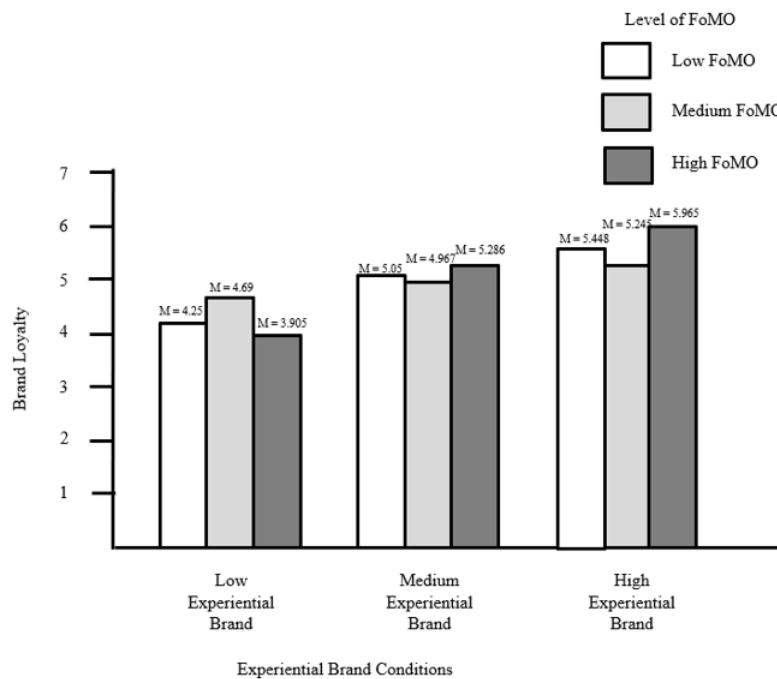
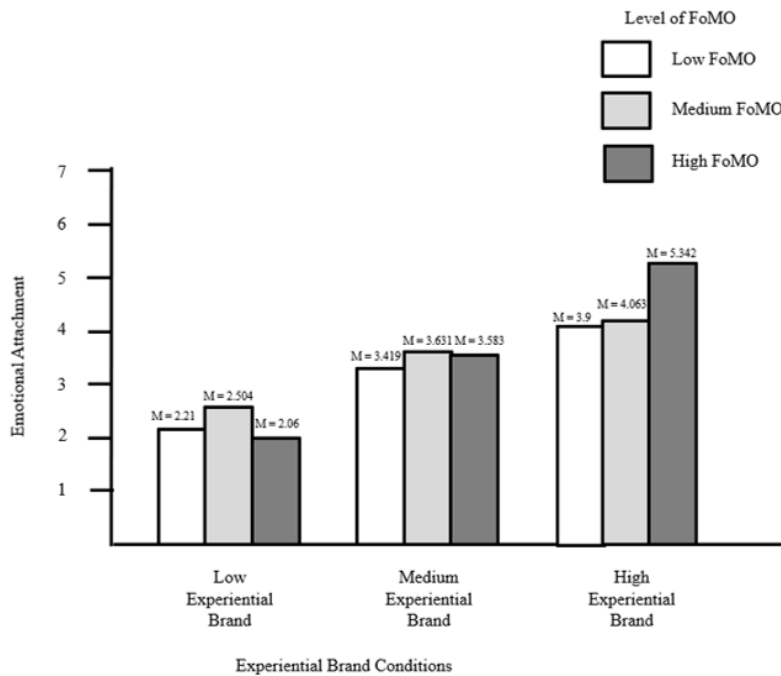
Dependent Variable: Brand Loyalty

## 4.4 Discussion

This research examined how FoMO impacted emotional attachment and brand loyalty when considering brand experiences and perspectives of insecurity. The main study showed that when individuals with high FoMO are consuming high experiential brand, they tend to develop stronger emotional attachment. However, brand loyalty does not differ because individuals also have motivations to conduct exploratory behavior, seeking new and novel brand experiences while not willing to stay with same brands. As a preliminary study, this research contributes to the moderation role of FoMO in branding-related context, and sheds light on the future research



on people's perception of "emotions" and "love" towards brand, as well as their relevant branding behavior such as brand loyalty, brand switch intention, among others.



#### FIGURE 4.2 MEAN DIFFERENCE ACROSS THE CONDITIONS WITH EMOTIONAL ATTACHMENT AND BRAND LOYALTY AS DEPENDENT VARIABLE

Though this research has both theoretically and empirically examined the relationship between FoMO and brand-related constructs, there are some limitations of the study which provides opportunities to refine and extend research in the future studies. First, while the present results show that participants with high level of FoMO have stronger emotional attachment, but not brand loyalty. It remains unclear how participants perceive their emotions toward the brands they have chosen. Future studies can examine how people perceive the “emotion” or “love” towards the brand. For example, it can be argued that people with high level of FoMO tends to perceive brand “emotion” or “love” as short-term relationship: love have meaning of “exciting”, “passionate”, “intense” which will be thrilling but fade faster. Fear of Missing Out will make people frequently switch to experience new brands as people with high level of FoMO do not perceive love as long-term “commitment.” This is also related to the phenomenon of hedonic adaptation – when people develop love to new hedonic experiences in order to gain pleasure and become a perceived “better self.” Future studies can link individuals’ FoMO level with their perception of love, and explore the underlying motivation of exposure to new experiences and less commitment to old ones.

Second, though the study has contended that individuals with high level of FoMO will not build brand loyalty towards highly experiential brand despite their stronger emotional attachment, it still remains unknown whether this argument is supported by types of brand benefits consumers gain from experiential brands vs. physical brands. Specifically, when consuming experiences, individuals develop valuable and precious experiences that they regard as “one-time” life experience on their bucket list, and will no longer intend to repurchase

experiences one more time. If this argument is supported, it will have managerial implication: brands that promote pure hedonic experiences will run the risk of being a one-time deal for consumers. Once consumers obtain such brand experiences, they will no longer come back. Accordingly, long-term commitment and brand loyalty will not be constructed. Future research can examine whether consumers regard experiential consumption as fulfilling goals in a “bucket list”, and frequently move from one experience to the next, and whether consumers treat experiential brands as “memory” rather than “investment” for future.

Third, while the present findings support that the reason why people with high level of FoMO have stronger emotions toward brands is the insecure feelings they have about themselves, it still lacks of theoretical foundation of the link between anxiety, insecurity and FoMO. If FoMO on experiences rather than physical goods have stronger effect on restoring a sense of psychological security, does it explain that more and more people have acquisition of experiences rather than physical goods (including luxury goods) because of lack of security? Past studies have only examined when people experience mortality salience, they would like to accumulate more wealth or have more affection for luxury brands (Kasser and Sheldon 2000). However, few research has linked consumption experiences with people fear of insecurity. Future research can examine whether insecurity is an antecedent of FoMO and explore whether FoMO is linked to psychological problems and problematic consumption behavior such as addiction to consuming experiences.

In general, this research has several implications for marketers. Marketers generally use various cues related to emotional attachment in their advertisement to attract consumers. A general suggestion based on our research is that for individuals with high level of FoMO, they may have a more favorable response to emotional cues in the advertisement, especially when

advertisement is about new experiences related to products and brands. The consumption package should also emphasize the experiential elements as appeal to consumers with high level of FoMO. Moreover, for high FoMO consumers, marketers should also intentionally associate their products and brands with secure feelings. Our research suggests that high FoMO consumers tend to perceive the current brands as security base and build strong emotional attachment, but at the same time have curiosity to explore more novel experiences on brands. The promotion strategy of the company should relieve the feeling of insecurity (such as providing customer support, warranty, etc.) and simultaneously introduce new brand experience features or experiential functions to make consumers stay loyal to the brand.

## **General Discussion, Managerial Implications, and Future Research**

The current research concentrated on a construct newly introduced in social media research: Fear of Missing Out. In essay 1, I expand the conceptualization of FoMO beyond the narrow scope of social media. I contend that FoMO relates to consumer behavior in many other contexts such as experiential consumption and brand relationships. In addition, contrary to previous conceptualizations of FoMO as emanating from social comparisons, I propose that FoMO can be the result of social and personal factors. Fear of Missing Out on experiences can be intrinsically driven by reasons such as an individual's desire to fulfill curiosity, obtain satisfaction from exploratory behavior, novelty seeking, and variety seeking, among others. FoMO can be extrinsically driven by the individual's desire to fit in social groups and do not fall behind compared with others.

Essay 1 also introduces a new definition of FoMO. Past studies do not confine two essential elements – relevance and comparison – when defining the construct. It is important to clarify that people only generate FoMO when they encounter experiences that are related to their goals (goal-driven behavior) and they would like to have motivation to compare with their future self (resolving self-discrepancy). Based on the two elements of FoMO, this study defines FoMO as “fearful feeling of missing experiences that are related to personal or social goals.” This definition indicates that FoMO should be derived from both personal and social motives, which is supported by self-determination theory. According to self-determination theory, FoMO is emanated from three basic psychological needs: competence, autonomy, and relatedness. The desire of resolving the self-discrepancy between current self-state and expected self-state motivates individuals to seek experiential consumption. This is an expansion of the previous

studies that confine the context in which individuals' desire for reducing the discrepancy for the gap between self and others.

Essay 2 is an extension of Essay 1 regarding the definition and conceptual development of construct. In order to investigate FoMO in marketing and consumption contexts, it is imperative to have a reliable, valid, and context-free scale. The scale development approach is following mixed approach emphasizing theoretical foundation as well as qualitative analysis. The study discusses the dimensionality of the construct and contends that FoMO is two-dimensional in nature because two essential components (relevance and comparison) emphasize both personal and social aspects underlying the mechanism of FoMO. After constructing the theoretical foundation, three studies (including four rounds of data collection) are conducted.

Study 1 is item generation and initial analysis. The initial pool of items is based on qualitative study and coding procedure. Before identifying the probable structure of factors, the study also conducted face validity check. The exploratory factor analysis (EFA) supports a two-factor solution, which is consistent with the theoretical argument. For scale brevity purpose, the initial 16 items are reduced to a final list of 9-item. Further the confirmatory factor analysis (CFA) is conducted separately on the same sample to validate the two-factor solution from the EFA. CFA shows a good model fit for a two-factor model (better than one-factor model).

Then the convergent and discriminant validity are examined based on the collection of a new sample (Study 2). To confirm the convergent validity, the average variance extracted is higher than the recommended level, and second-order factor is proved to be better than two-construct model. To verify the discriminant validity, the scales was tested in relation to two other constructs: novelty seeking scale and consumer susceptibility to interpersonal influence scale. The results show that AVE value of each item is higher than the squared correlations between the

items, which supports the discriminant validity between the measures. Also, one-factor model (three constructs are loading into same construct) versus three-factor solution (three constructs are loading into three distinctive constructs, with FoMO as a second-order factor model) are compared and three-factor model has significantly better model fit.

Study 3 tests nomological validity on a new sample of Qualtrics participants. The results show a strong correlation between FoMO and materialism, which supports that theoretically related constructs are empirically related as well. Nomological validity is supported.

Essay 3 examines the relationship between FoMO, brand experiences, emotional attachment, and brand loyalty. Though experiential benefits from brands and brand experiences are well established in the previous studies, past studies have not examined the importance of moderation role of FoMO since FoMO can interfere with consumers' subjective judgment of benefits that help consumers build brand loyalty. The fear appeals are supported by terror management theory and consumers' insecurity. As Fear of Missing Out is linked to low levels of basic need satisfaction, individuals are motivated to conciliate unsatisfied needs to relieve feeling of anxiety and insecurity. The insecurity feeling and FoMO can be emanated from both personal and social aspects. Accordingly, the insecurity and FoMO behavior can have two types of effects: one effect is on the consumers' tendency to seek out experiences that are highly linked to self-esteem and self-identity; another effect is consumers' stronger emotional attachment to high experiential brands to resolve self-discrepancy and restore the sense of security. Thus, the study hypothesizes that individuals with high level of FoMO tend to build stronger emotional attachment towards high experiential brands, but will not build stronger brand loyalty even if they have stronger emotional attachment towards high experiential brands.

To test the hypotheses, I conducted an online survey among undergraduate students. The pairwise comparison results indicate that participants with high level of FoMO have significantly higher emotional attachment compared with participants with lower level of FoMO. This result is significant only in high experiential brand condition. However, the brand loyalty among participants has not significant difference, which supports the hypothesis. This research is a preliminary study of examining FoMO's role in brand-related context, and has managerial implications. For example, marketers should emphasize emotional cues in the advertisement and it will be more effective for high FoMO consumers if experiential elements are highlighted in the advertisement. Furthermore, due to high FoMO consumers have both tendency for emotionally attaching to brands as security base, and exploratory behavior on new brand experiential features, marketers should call attention to relieving FoMO consumers' insecure feelings as well as introducing new brand features routinely to help consumers be loyal to the brand.

In sum, I extend the domain of FoMO as a construct that can motivate consumer behavior beyond social media. To my knowledge, this dissertation is the first investigation to relate FoMO to brand experience and brand loyalty. This contribution is important because marketers start to appeal to consumers' desire for new brand experiences. A broad conceptualization and measure FoMO will allow marketers to investigate several questions such as: how are marketing strategies designed in order to differentiate the brand experiences? Do individuals tend to consume more on experiential marketing category rather than traditional physical luxuries? What are motivations behind that? The current studies linked FoMO with insecurity to explain consumers' emotional attachment to brand experiences. Does it mean that the phenomenon that more and more consumers would like to consume experiential luxuries such as vacations is



because of feeling of insecurity? Future studies can examine the insecure feeling and FoMO behavior in experiential and physical luxury categories.

Future research should examine consumers' motivations for acquiring experiences. For both personal and social motives, individuals would like to have a better "Experiential CV." However, if FoMO is related to exploratory behavior, do people prefer more varieties (width of experiences) or more exploration within the same experience category (depth of experiences)? Some people would like to experience and reach depth in one domain and become an expert, and others may want to experience different domains as experienter. How do FoMO people choose? Furthermore, since FoMO is an orientation toward experiencing different opportunities and events, do people who have high level of FoMO have greater curiosity? What are curiosity level and optimal stimulation level of FoMO people? If FoMO people would like to have experiences with novelty, does it mean they would like to have more thrill and adventure seeking that make their "Experiential CV" looks more excellent? What are their levels of willing to take risks? Future research can examine the positive affect of FoMO on motivating individuals to seek novel experiences, including their preference for width of experiences or depth of experiences.

Another avenue for future research is the link between FoMO and insecurity. Does it mean that FoMO is a negative emotion and have other negative emotions (such as anxiety, depression) as antecedent? Though past studies have examine the relationship between FoMO and problematic behavior, it still remains unclear whether FoMO will be only related to negative emotions and negative consequences. Furthermore, as current studies support the relationship between FoMO and emotional attachment, does it mean that emotional attachment can also be negative? Past studies identify emotional attachment as positive emotions, and thus lead to positive brand outcomes such as brand loyalty, brand commitment, among others. If emotional

attachment can also be “negative,” does it indicate that the link between emotional attachment and brand loyalty is ineffective under negative brand relationship conditions? Future studies can further examine the relationship between FoMO and emotional attachment, and identify a clearer role of FoMO regarding the function of positive or negative emotion in brand-related research.

Future investigations can also examine whether or not people have unlimited energy for seeking experiences related to their personal and social goals. An interesting question would be: will people exhaust from FoMO? When there is “too many experiences” to choose from, with plenty of varieties on experience categories, will it demotivate people’s motivation of not missing out on experiences? Past studies have suggested that when people have varieties of choice, it may make people defer their choice and feel less satisfied (Iyengar and Leppar 2000). Does it occur to FoMO people as well? How will it impact people’s feeling of FoMO and their decision making process? Future studies can examine the stimulation level of FoMO, how FoMO people choose from different varieties, as well as people’s negative feeling when facing with fact that they certainly cannot experience everything.

In conclusion, the current study provides some investigation on the phenomenon of FoMO and consumption behavior – why do consumers prefer experiences rather than owning products now? What are motivations behind FoMO on experiences? It also enlightens the research of experiential brand consumption as more companies start to provide consumers distinct and unforgettable brand experiences. In general, FoMO and related consumption and brand behavior is an under-researched topic that has both theoretical and practical importance. I hope the current research will stimulate future researchers to further explore the FoMO topic, and instill the concept in the experiential consumption, physical consumption, as well as branding contexts.

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## **Appendix A Instruments for Data Collection**

### **PART I Instruments for Study 1 (Essay 2)**

In the next pages you will be asked to provide your thoughts and feelings regarding products and brands.

What is the first thing that comes to your mind when thinking about "fear of missing out"? What is the most correct word to describe your feeling?

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## PART II Instruments for Study 2 (Essay 2)

Q1 Read the statements and state how much you disagree or agree with them.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I feel sad about missing events / opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel curious about the information about events / opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel anxious when I did not experience events / opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel I am disconnected with what is going on in life when I miss events / opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a sense of uncertainty if I don't know what I missed out	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q2 Read the statements and state how much you disagree or agree with them.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I am dissatisfied about current state of life after missing opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel lost or don't know what to do when I miss opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When you read this statement, please choose "strongly disagree"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel motivated to make sure of catching up events / opportunities next time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe I am falling behind compared with others (when I miss events / opportunities)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q3 Read the statements and state how much you disagree or agree with them.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I feel anxious because I know something important or fun must have happened (when I miss events / opportunities)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel sad if I am not capable of participating in events due to constraints of other things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I fear that I don't have what everyone else has or I can't do what others are able to do (when I miss events / opportunities)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel regretful of missing events / opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to convince myself opportunities / events are not that important	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

(when I miss  
events or  
opportunities)

I can't stop  
thinking  
about what  
was going on  
in the event  
(when I miss  
events /  
opportunities)

I try to find  
out what I  
have missed

I feel jealous  
of my friends  
who attend  
events

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Q4 Read the statements and state how much you disagree or agree with them.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I think my social groups view me as unimportant (when I miss events / opportunities)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am anxious about not joining my social groups for events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think I am not welcomed by my social groups (when I miss events / opportunities)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think I do not fit in social groups (when I miss events / opportunities)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When you see this statement, please choose "agree"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a sense of loneliness when my friends attend events without me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel disconnected with my social groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

(when I miss  
events /  
opportunities)

I think I am  
excluded by  
my social  
groups (when  
I miss events  
/  
opportunities)

I feel ignored  
/ forgotten by  
my social  
groups (when  
I miss events  
/  
opportunities)

I keep  
thinking that  
my friends  
are having  
fun in the  
events

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

### Part III Instruments for Study 3 (Essay 2)

You will be asked to answer some questions about consumer tendencies and feelings for missing events.

Q1 Read the statements and state how much you disagree or agree with them.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I feel anxious when I did not experience events / opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe I am falling behind compared with others (when I miss events / opportunities)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel anxious because I know something important or fun must have happened (when I miss events / opportunities)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel sad if I am not capable of participating in events due to constraints of other things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel regretful of	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

missing  
events /  
opportunities

I think my  
social groups  
view me as  
unimportant  
(when I miss  
events /  
opportunities)

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

I think I do  
not fit in  
social groups  
(when I miss  
events /  
opportunities)

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

I think I am  
excluded by  
my social  
groups (when  
I miss events  
/  
opportunities)

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

I feel ignored  
/ forgotten by  
my social  
groups (when  
I miss events  
/  
opportunities)

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------



Q2 Read the statements and state how much you disagree or agree with them.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I often seek out information about new products and brands	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to go to places where I will be exposed to information about new products and brands	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like magazines that introduce new brands	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I frequently look for new products and services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I seek out situations in which I will be exposed to new and different sources of product information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q3 Read the statements and state how much you disagree or agree with them.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I am continually seeking new product experiences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I go shopping, I find myself spending very little time checking out new products and brands	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I take advantage of the first available opportunity to find out about new and different products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When you see this statement, please choose "somewhat disagree"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I rarely purchase the latest fashion style until I am sure my friends approve of them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

It is  
important  
that others  
like the  
products  
and brands  
I buy

☐☐☐☐☐☐☐☐

When  
buying  
products, I  
generally  
purchase  
those  
brands that  
I think  
others will  
approve of

☐☐☐☐☐☐☐☐

If other  
people can  
see me  
using a  
product, I  
often  
purchase  
the brand  
they expect  
me to buy

☐☐☐☐☐☐☐☐

I like to  
know what  
brands and  
products  
make good  
impressions  
on others

☐☐☐☐☐☐☐☐

I achieve a  
sense of  
belonging  
by  
purchasing  
the same  
products  
and brands  
that others  
purchase

☐☐☐☐☐☐☐☐

If I want to  
be like  
someone, I

☐☐☐☐☐☐☐☐

often try to  
buy the  
same  
brands that  
they buy

I often  
identify  
with other  
people by  
purchasing  
the same  
products  
and brands  
they  
purchase

To make  
sure I buy  
the right  
product or  
brand, I  
often  
observe  
what others  
are buying  
and using

If I have  
little  
experience  
with a  
product, I  
often ask  
my friends  
about the  
product

I often  
consult  
other  
people to  
help choose  
the best  
alternative  
available  
from a  
product  
class

I frequently  
gather



information  
from  
friends or  
family  
about a  
product  
before I  
buy

## Part IV Instruments for Study 4 (Essay 2)

Q1 Read the statements and state how much you disagree or agree with them.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
It is Important to me to have really nice things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would like to be rich enough to buy anything I want	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'd be happier if I could afford to buy more things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It sometimes bothers me quite a bit that I can't afford to buy all of the things I would like	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People should place emphasis on material things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It's really true that	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

money can  
buy  
happiness

The things  
I own give  
me a great  
deal of  
pleasure



## Part V Instruments for Experimental Design (Essay 3)

In the next section, you will be about to evaluate an experiential brand you are familiar with.

Q1 Please write a *high experiential brand* you are familiar with (which means a brand that involves high level of brand experiences).

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Q2 Please write a medium experiential brand you are familiar with (which means a brand that involves medium level of brand experiences).

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Q3 Please write a low experiential brand you are familiar with (which means a brand that involves low level of brand experiences).

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Q4 Read the statements and state how much you disagree or agree with them.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
This brand makes a strong impression on my visual senses or other senses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find this brand interesting in a sensory way	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This brand appeals to my senses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This brand induces feelings and sentiments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have strong emotions for this brand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This brand is an emotional brand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I engage in physical actions and behaviors when I use this brand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

This brand  
results in  
bodily  
experiences

☐☐☐☐☐☐☐☐

This brand  
is action  
oriented

☐☐☐☐☐☐☐☐

If you see  
this  
statement,  
please  
choose  
"agree"

☐☐☐☐☐☐☐☐

I engage in  
a lot of  
thinking  
when I  
encounter  
this brand

☐☐☐☐☐☐☐☐

This brand  
makes me  
think

☐☐☐☐☐☐☐☐

This brand  
stimulates  
my  
curiosity  
and  
problem  
solving

☐☐☐☐☐☐☐☐

Q5 Read the statements and state how much you disagree or agree with them.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I intend to buy this brand in the near future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would actively search for this brand in order to buy it	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I intend to buy other products of this brand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q6 How much emotional attachment do you have towards this brand?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
No emotional bond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	A strong emotional bond
Not emotionally connected	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Emotionally connected
Not linked by feelings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Linked by feelings
No feelings of attachment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strong feelings of attachment

## Appendix B IRB Approval for Data Collection



**THE UNIVERSITY OF TEXAS AT EL PASO**  
Office of the Vice President for Research and Sponsored Projects  
**Institutional Review Board**  
El Paso, Texas 79968-0587  
phone: 915 747-8841 fax: 915 747-5931

**FWA No: 00001224**

DATE: January 13, 2017

TO: Zhuofan Zhang

FROM: University of Texas at El Paso IRB

STUDY TITLE: [993597-1] Exploratory Study on FOMO and Its Relationship to Social Media Usage

IRB REFERENCE #: College of Business Administration

SUBMISSION TYPE: New Project

ACTION: DETERMINATION OF EXEMPT STATUS

DECISION DATE: January 13, 2017

REVIEW CATEGORY: 45 CFR 46.101(b)(2)

Thank you for your submission of New Project materials for this research study. University of Texas at El Paso IRB has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

Exempt protocols do not need to be renewed. Please note that it is the Principal Investigator's responsibility to resubmit the proposal for review if there are any modifications made to the originally submitted proposal. This review is required in order to determine if "Exemption" status remains.

We will put a copy of this correspondence on file in our office.

If you have any questions, please contact the IRB Office at (915) 747-8841 or [irb.orsp@utep.edu](mailto:irb.orsp@utep.edu). Please include your study title and reference number in all correspondence with this office.

cc:



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Office of the Vice President for Research and Sponsored Projects  
**Institutional Review Board**  
El Paso, Texas 79968-0587  
phone: 915 747-8841 fax: 915 747-5931

**FWA No: 00001224**

DATE: April 24, 2017  
TO: Zhuofan Zhang  
FROM: University of Texas at El Paso IRB  
STUDY TITLE: [1053345-1] Scale Development of Fear of Missing Out  
IRB REFERENCE #:   
SUBMISSION TYPE: New Project  
ACTION: DETERMINATION OF EXEMPT STATUS  
DECISION DATE: April 24, 2017  
REVIEW CATEGORY: 45 CFR 46.101(b)(2)

Thank you for your submission of New Project materials for this research study. University of Texas at El Paso IRB has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

Exempt protocols do not need to be renewed. Please note that it is the Principal Investigator's responsibility to resubmit the proposal for review if there are any modifications made to the originally submitted proposal. This review is required in order to determine if "Exemption" status remains.

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cc:



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Office of the Vice President for Research and Sponsored Projects  
**Institutional Review Board**  
El Paso, Texas 79968-0587  
phone: 915 747-8841 fax: 915 747-5931

**FWA No: 00001224**

DATE: December 8, 2017

TO: Zhuofan Zhang

FROM: University of Texas at El Paso IRB

STUDY TITLE: [1136482-1] FoMO Scale Development Further Study

IRB REFERENCE #: College of Business Administration

SUBMISSION TYPE: New Project

ACTION: DETERMINATION OF EXEMPT STATUS

DECISION DATE: December 8, 2017

REVIEW CATEGORY: 45 CFR 46.101(b)(2)

Thank you for your submission of New Project materials for this research study. University of Texas at El Paso IRB has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

Exempt protocols do not need to be renewed. Please note that it is the Principal Investigator's responsibility to resubmit the proposal for review if there are any modifications made to the originally submitted proposal. This review is required in order to determine if "Exemption" status remains.

We will put a copy of this correspondence on file in our office.

If you have any questions, please contact the IRB Office at (915) 747-8841 or [irb.orsp@utep.edu](mailto:irb.orsp@utep.edu). Please include your study title and reference number in all correspondence with this office.

cc:

## **Vita**

Zhuofan Zhang received the MBA degree from Oklahoma State University and the BS in Accounting degree from Hefei University of Technology in 2011 and 2014, respectively. She is currently a PhD Candidate at Department of Marketing and Management at University of Texas at El Paso. Her research interests include experiential marketing, branding strategy, social media, digital marketing, international marketing and cross-cultural studies. She has published at the top conference proceedings such as American Marketing Association Conference and Academy of Marketing Science Annual Conference. She also taught several courses when she was an assistant instructor at University of Texas at El Paso. The major courses she taught are Principles of Marketing and International Marketing.

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This dissertation was typed by Zhuofan Zhang.