

## REMAINING ON CURRENT SOCIAL NETWORK SITES: AN UNCONSCIOUS AND CONSCIOUS PERSPECTIVE

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### ABSTRACT

Focusing on social network services (SNSs), this research applies status quo bias (SQB) and proposes a research model for investigating why people continue to use their current SNSs and avoid switching to others. Specifically, this research examined the relationships between habit, interpersonal relationships, inertia, satisfaction, perceived value, and continuance intention. To develop a more efficient research model, this study utilizes conscious interpersonal relationships and unconscious habits as the antecedents of inertia. This study hypothesizes that interpersonal relationships and habit increase an individual's inertia regarding using an SNS, consequently increasing the individual's continuance intention. This study also examines whether satisfaction and perceived value moderate the impact of inertia on continuance intention. Data collected from 458 Facebook users provide support for most hypotheses. Our findings indicate that unconscious and conscious factors both affect individuals' inertia regarding SNS usage; however, unconscious factors are slightly more important than conscious factors. Further, inert users will continue to use their current SNS. In addition, regarding SNS usage, the cognitive evaluation is more important than the unconscious process. The result also indicated that the moderating effect of satisfaction is diminished when perceived value is taken into account. Implications for theory and practice are discussed.

Keywords: Inertia; Habit; Interpersonal relationships; Perceived value; Satisfaction

### 1. Introduction

Social network services (SNSs) can be defined as online services, platforms, or websites that enable the construction and reflection of social networks or social relations among individuals [Chiu & Huang 2015]. As SNSs have grown in popularity, individuals have become increasingly reliant on them to establish and maintain online relationships with others. As a consequence, SNSs have also become an important channel for doing business. The growth of the SNS phenomenon has intensified competition among SNS providers. A recent Piper Jaffray survey [CNBC 2016] suggested that Instagram, Twitter, and Facebook must step aside as Snapchat continues to rule among teens. Eighty percent of respondents said that Snapchat was their favorite SNS, unseating Instagram and Facebook. Meanwhile, Facebook saw the largest decline in usage during the same period. A survey by SimilarWeb, a market intelligence firm, found that people are spending less time on popular SNSs (e.g., Facebook, Instagram, Snapchat, and Twitter) than they were one year ago [ZDNet 2016]. SNSs that used to receive the most attention are now receiving significantly less screen time. Therefore, cultivating people's inertia and enhancing users' intention to continue to use the incumbent SNS is very important for SNS owners.

Kim & Kankanhalli [2009] indicated that when people make a new behavioral decision, status quo bias (SQB) can explain the impacts of the previous status. Status quo bias provides a context-dependent lens to explain why individuals prefer to maintain their current status rather than to change it even though the new status is a better choice [Samuelson & Zeckhauser 1988]. Samuelson & Zeckhauser [1988] argued that individuals' decision making

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between the status quo and a new situation may be biased on internal factors, such as rational decision making (e.g., habit), cognitive misperceptions (e.g., inertia and perceived value), and psychological commitment (e.g., interpersonal relationships and continuance intention). Status quo bias can explain the phenomenon of people tending to choose their current status, i.e., to continue using their current SNS, rather than switching to another SNS.

Verhoef [2003] indicated that past behaviors explain the largest part of the variance in customer loyalty. More specifically, past behaviors in the relationship would represent the inertia effect [Rust et al. 2000]. In other words, customer loyalty may result from inertia [Colgate & Lang 2001]. Polites & Karahanna [2012] proposed that inertia can reflect a bias toward the status quo. They defined status quo inertia as the attachment to, and persistence of, existing behavioral patterns, even if there are better alternatives and incentives to change. The implication here is that people will stay with their current SNS as long as no other force compels them to change. In other words, individuals who have high inertia will be reluctant to change even though the alternatives are more attractive. In addition, past research examined the role of inertia on the organizational or group level [e.g., Kim & Kankanhalli 2009; Kim et al. 2005] and paid less attention to the individual level in information system research. Therefore, it is valuable to understand the antecedents of inertia in the SNS context. According to Rumelt [1995], embedded routines have been identified as a common source of inertia. In addition, inertia can be seen as part of the unconscious mind, and defined as habit persistence [Rumelt 1995]. Therefore, habit is treated as an unconscious antecedent of inertia in this study. In addition to having its source in the unconscious, inertia can be the result of a conscious bias toward the status quo. One explanation given for status quo bias is interpersonal relationships. People can develop and extend their personal social ties in SNSs. Therefore, personal bonds or friendships may inhibit their willingness to switch to a new SNS. Considering the potential financial and social loss or psychological burden of switching, people may remain with a particular service provider even when they are not satisfied with the service received [Fornell 1992]. Thus, using the SQB perspective, this study identifies two antecedents of inertia in the SNS context: conscious interpersonal relationships and unconscious habit.

Ye [2005] indicated that people experiencing inertia tend to prefer the status quo; in other words, they will continue to use their current SNS. However, other studies [e.g., Zhou et al. 2012; Tsai & Huang 2007; Yang & Peterson 2004] have proposed that satisfaction and perceived value are also important antecedents for continuance intention. Therefore, satisfaction and perceived value may affect the relationship between inertia and continuance intention. Thus, this study also examines the moderating role of satisfaction and perceived value in the SNS usage context.

In summary, based on the concept of SQB, the purpose of this study is to examine the conscious (i.e., interpersonal relationships) and unconscious (i.e., habit) antecedents of inertia. This study also examines the moderating role of satisfaction and perceived value. More specifically, this study constructs habit as a second-order construct and also examines whether individuals' satisfaction and perceived value can lower the level of inertia associated with continuance intention toward an SNS. We address the following research questions:

- (1) To what extent do conscious interpersonal relationships and unconscious habit drive inertia?
- (2) Which type of antecedent is more important to inertia: conscious or unconscious?
- (3) Can inertia increase continuance intention toward an SNS?
- (4) Which antecedents have the greatest effect on an individual's continuance intention toward an SNS: inertia, perceived value, or satisfaction?
- (5) Does the level of satisfaction and/or perceived value lower the influence of inertia on continuance intention?

This paper proceeds as follows. First, this study outlines the theoretical underpinnings and discusses the existing literature. Second, we develop a conceptual model and hypotheses. Third, we describe the detailed methodology and data collection process of this research, followed by presenting structural equation modeling analysis with survey data from SNS users. Fourth, we discuss the major findings and highlight the theoretical and practical contributions with recommendations for further research, and also address the research limitations. Finally, the paper concludes in the last section.

## 2. Theoretical Background

### 2.1. Status Quo Bias

Samuelson & Zeckhauser [1988] were the first to identify the concept and coin the term "status quo bias." This particular bias explains why individuals disproportionately make decisions to continue performing an incumbent behavior rather than switching to a potentially superior choice. Status quo bias arises when consumers are reluctant to leave their current provider even if better alternatives are readily available [Neipp & Zeckhauser 1985; Samuelson

& Zeckhauser 1988; Strombom et al. 2002]. Samuelson & Zeckhauser [1988] indicated that individual decision makers are biased toward maintaining the status quo, which means “doing nothing or maintaining one’s current or previous decision.” (p. 7) According to Eidelman & Crandall [2012], consumers’ psychological reasoning support their current choices and can be explained from rational and non-rational perspectives. From the rational perspective, consumers maintain the status quo because they consider the switching costs, status quo values, and risks involved in seeking alternatives. In addition, the non-rational reason may be due to consumers perceiving that they are averting loss [Kahneman et al. 1991] and avoiding regret [Anderson 2003]. Shi et al. [2018] proposed that regardless of the offers of alternative brands and social pressures for a brand change, when the current product has a positive emotional attachment, personal information, and embedded usages, consumers may take a risk aversion attitude in decision making in order to change brands and switch products [Kahneman & Tversky 1979; Samuelson & Zeckhauser 1988; Schwarz 2012].

Previous research has examined the influence of the status quo on information system usage. Many studies have examined information system resistance behavior or switching intention, such as knowledge management systems [Li et al. 2016], cloud systems (PharmaCloud system) [Hsieh & Lin 2018], enterprise systems (New Office Plus system) [Kim & Kankanhalli 2009], and paid online content [Li & Cheng 2014]. In addition, status quo bias has examined the adoption behavior of new systems, such as online health services [Zhang et al. 2017], mobile applications [Zhao et al. 2016], and Google docs [Polites & Karahanna 2012]. However, past studies have focused less on the perspective of incumbent system usage from status quo bias theory, especially SNS usage intention. Compared with enterprises’ information systems that are mostly within a mandatory context for employees, SNS usage is primarily an individual decision. Each person has his/her own social networks on SNSs. Therefore, previous social networks and interpersonal relationships influence individuals’ perceptions of SNSs. Status quo bias can explain why people make decisions to continue an incumbent course of action, rather than switching to a new course of action [Samuelson & Zeckhauser 1988]. Consequently, status quo bias can provide theoretically driven explanations of an individual’s usage intention to the incumbent SNS. Differing from other theories focused on the enablers or facilitators of the adoption or usage of SNS, such as network externalities [Chiu et al. 2013], media system dependency [Huang et al. 2016], and self-disclosure [Huang 2016], status quo bias explains the usage intention of SNSs from the inhibiting perspective. More specifically, when individuals make a decision regarding a new behavior, status quo bias can explain the impacts of the previous status [Kim & Kankanhalli 2009]. Based on the reasons mentioned above, it is suitable to apply status quo bias to explain why people continue to use their current SNSs.

According to Samuelson & Zeckhauser [1988], status quo bias can be explained using three main categories: rational decision making, cognitive misperceptions, and psychological commitment. First, rational decision making is based on an assessment of the relative costs and benefits of change before making a switch to a new alternative. Greater costs than benefits lead to status quo bias. As the theory focuses on bias, Samuelson & Zeckhauser [1988] indicated that costs are the main emphasis of this viewpoint. According to Lindbladh & Lyttkens [2002], habitual behavior is not only effortless, but also efficient since cognitive processing and deliberate control of the individual are minimal. Therefore, habit can save time or decrease the mental effort (i.e., costs saving) involved in decision making [Rosenstein & Grant 1997]. Therefore, habit can be considered as the switching barrier that makes it difficult or costly for people to change SNSs. In this study, we identify habit as a construct from the rational decision making viewpoint.

Second, cognitive misperceptions of loss aversion can also influence an individual’s resistance to switching services. Kahneman & Tversky [1979] indicated that loss aversion is a psychological principle that has been observed in human decision making. Loss aversion can result in status quo bias because even small losses involved in changing from the incumbent situation can be perceived as larger than they actually are. From the perspective of loss aversion, inertia can be defined as user attachment to persistence in using an incumbent information system, even when there are better alternatives [Polites & Karahanna 2012]. In addition, the loss aversion viewpoint of status quo bias qualifies how the perceived value of change is measured [Hsieh & Lin 2018]. Kim & Kankanhalli [2009] and Kahneman & Tversky [1979] indicated that perceived value refers to whether the benefits derived are worth the costs incurred in changing from the status quo to the new system. Consequently, in this study, inertia and perceived value contribute to cognitive misperceptions of loss aversion.

Third, status quo bias may be the result of psychological commitment to an existing behavior. The commitment may be the result of incorrectly factoring in sunk costs, or a desire to maintain cognitive consistency [Samuelson & Zeckhauser 1988]. As Zhang et al. [2017] mentioned, sunk costs can be explained as the greater the number of sources that people have invested in current situations, the greater the probability that they will continue with their current commitments, and therefore their situation is more likely to remain unchanged [Samuelson & Zeckhauser

1988]. Interpersonal relationships refer to the social ties between people in a social network [Garton & Wellman 1997; Wellman et al. 1996]. Prior studies found that the tie strength of interpersonal relationships exerts a remarkable impact on media use [Haythornthwaite 2002, 2005; Haythornthwaite & Wellman 1998]. In other words, people who want to switch to another SNS may consider their invested time and efforts in keeping the social ties in their current SNS. Taking these factors into account, people may have already written many posts, uploaded many pictures, and built up many friendship ties with people in their incumbent SNS. Thus, people who decide to continue to use the incumbent SNS may do so because they are reluctant to cut their losses and have a tendency to justify their previous commitment. Therefore, interpersonal relationships and continuance intention contribute to the psychological commitment viewpoint in this study.

## 2.2. Inertia

Status quo bias is often manifested as inertia [Polites & Karahanna 2012]. According to the Merriam-Webster Dictionary [Merriam-Webster Dictionary 2018], inertia is defined as “remaining at rest or in uniform motion in the same straight line unless acted upon by some external force.” Individual-level inertia is primarily discussed in consumer behavior literature, for instance, Solomon [2007] proposed that inertia is a consistent pattern in which consumers repurchase the same brand almost every time, selecting the same brand out of habit because less effort is required. In this sense, inertia-driven consumers repurchase the same brand passively without much thought [Huang & Yu, 1999]. Therefore, inertia can reflect an unconscious process [Huang & Yu 1999].

Polites & Karahanna [2012] formally defined individual-level inertia as an “attachment to, and persistence of, existing behavioral patterns (i.e., the status quo), even if there are better alternatives or incentives to change (p.22).” They conceptualized inertia as comprising of three types: behavioral, cognitive, and affective. Further, behavior-driven inertia implies that people continue to use a system simply because they have always used it. Cognitive-driven inertia implies that although people know the incumbent system might not be the best, most efficient, or most effective tool, they consciously continue to use it [Rumelt 1995]. Lastly, affective-driven inertia implies that people continue to use the incumbent system because: (1) it would be too stressful to change; (2) they enjoy or feel comfortable using the incumbent system; or (3) they have developed a strong emotional attachment to the present way of doing things [Barnes et al. 2004; Rumelt 1995].

Prior studies have paid little attention to the antecedents of inertia [Huang et al. 2017]. One notable exception is Polites & Karahanna [2012], who constructed the concepts of incumbent system habits and switching costs as antecedents of inertia in order to examine an individual’s intention to use a new system. However, Polites & Karahanna’s study examined the context of information system usage rather than the SNS context. Additionally, they examined new information system usage intention (i.e., Google Docs) rather than SNS (i.e., Facebook) usage intention. Differing from the usage of enterprise information systems, the motivation of SNS usage is voluntary instead of mandatory. People who use SNSs are social-oriented, and they may invest their time and efforts to extend, develop, and maintain their interpersonal relationships. Therefore, considering the invested time and efforts in the incumbent SNS, people may prefer the status quo rather than switch to a new SNS. Moreover, people who experience inertia are seen as avoiding making new decisions [White & Yanamandram 2004], avoiding learning new service routines and practices, and avoiding making comparisons between alternatives [Pitta et al. 2006]. Therefore, when people experience action inertia, they exhibit habitual and routine repeating behaviors [Wu 2011]. Due to the psychological commitment to prior experiences and the desire to minimize thinking costs, people may exhibit habitual and routine repeating behaviors. It helps people simplify the decision making process and save the cost of making decisions [Vogel et al. 2008]. Therefore, to minimize thinking efforts, people may stay with the status quo. Consequently, interpersonal relationships and habits can be seen as the antecedents of inertia in this study.

## 2.3. The Unconscious Antecedent of Inertia: Habit

Triandis [1980] defined habit as “situation-behavior sequences that are or have become automatic ... the individual is usually not conscious of these sequences.” (p. 204) According to Aarts et al. [1998], habitual behavior is an automatic behavioral response that is not preceded by a cognitive analysis process because of the learned association between human behavior and satisfactory results. Verplanken & Aarts [1999] also indicated that habit is a kind of automatic behavior triggered by specific cues in the context of an activated goal. Polites & Karahanna [2012] proposed that habit should be operationalized as a multidimensional and formatively measured psychological concept and constructed by four sub-dimensions: intentionality, awareness, controllability, and mental efficiency [Bargh 1989, 1994; Polites 2009; Verplanken & Orbell 2003]. Polites & Karahanna [2012] indicated that habit is intentional in that it is functional or goal-oriented in nature. People may be unaware of the situational trigger leading them to act out the behavior, or unconscious of how the trigger is activated at the moment it occurs. In other words, habitual behavior exists outside of awareness. Therefore, habit is difficult to control. However, habitual behavior is mentally efficient in that it frees the individual’s attentional resources to simultaneously do other things [Bargh 1994;

Verplanken & Orbell 2003; Polites & Karahanna 2012]. Given the above, habit can be seen as an unconscious exercise in this study.

According to Bargh [1989, 1994], habit can be measured based on four dimensions: awareness, control, mental efficiency, and intentionality with respect to performing a particular behavior. However, habit is intentional in nature because the definition shows that habit is goal-directed [Polites & Karahanna 2012]. Moreover, intentionality is implied for the habit of SNS usage, since an SNS is used to complete an individual's social-related tasks, for example, updating statuses, sending or accepting friend requests, writing posts, and leaving comments or messages. Additionally, habit can be manifested by a combination of high lack of awareness, low controllability, and high mental efficiency. Overall, the dimension of intentionality is not individually constructed into the theoretical model in this study.

Although habit is often confused with inertia, they are two different concepts. Habit is an automatic learned response that is triggered by stimulus cues in the environment. However, inertia is a choice to stay with the status quo even in the presence of better alternatives or incentives to change. Furthermore, habit enables people to defer to the status quo. People can also save costs associated with reanalyzing prior decisions to follow a particular course of action [Samuelson & Zeckhauser 1988]. Therefore, it can be inferred that habit may lead to inertia. Huang et al. [2016] also conceptualized habit and inertia as two different constructs.

#### 2.4. The Conscious Antecedent of Inertia: Interpersonal Relationships

According to Berry & Parasuraman [1991] and Turnball & Wilson [1989], interpersonal relationships in this context refer to the personal bonds that develop between customers and their service provider's employees. In the present study, interpersonal relationships can be seen as the personal bonds that develop between individuals and their friends on SNSs. When people switch their SNS, they may lose their personal bonds or friendships with their current SNS. Businesses could strengthen the interpersonal relationship between customer and supplier by retaining their customers [Berry & Parasuraman 1991; Turnball & Wilson 1989]. People may commit themselves to establishing or developing relationships with other people that offer superior value benefits and effective switching barriers. This kind of relationship provides many benefits, such as fellowship, personal recognition, reducing anxiety [Berry 1995; Kim et al. 2004; Peterson 1995], and a personalized setting. Jone et al. [2000] also conceptualized interpersonal relationships as a switching barrier in the consumer services context. Therefore, interpersonal relationships can be seen as one kind of switching barrier in the SNS context.

Previous studies have defined switching barriers as the degree to which individuals experience a sense of being "locked into" a relationship based on the economic, social, or psychological costs associated with leaving a particular service provider [Rusbult et al. 1988; Allen & Meyer 1990]. This kind of specific relationship increases individuals' dependency because they raise the costs of switching to other alternatives. By switching to an alternative, an individual would lose the accumulated resources, such as their interpersonal social network, posted photos, followed fan pages, SNS groups in which they participated, and the articles they commented on, from the specific relationship that is not readily available from the alternatives. Considering the relationship-specific investment with the incumbent SNS, people tend to prefer the status quo. Therefore, the recognition of interpersonal relationships can be seen as a conscious exercise. Hence, in the present study, interpersonal relationships can be seen as the conscious antecedent of inertia.

#### 2.5. Perceived Value

According to Yang & Peterson [2004], perceived value results from an evaluation of the relative rewards and sacrifices associated with obtaining what is being offered. Therefore, perceived value is considered to be the ratio of the value of a consumer's outcome or input to that of the service provider's outcome or input [Oliver & DeSarbo 1988]. In other words, perceived value can be defined as the individual's overall assessment of the utility of a product or service based on what is received and what is given [Zeithaml 1988, p. 14]. In this study, perceived value is defined as the benefits received from using an SNS, considering the time and effort spent.

#### 2.6. Satisfaction

Satisfaction is widely studied in the fields of information system usage and consumer behavior. For instance, Bhattacharjee [2001] defined satisfaction as the "users' affect with (feelings about) prior information system use (p.359)." Oliver [1981] defined satisfaction in the consumption context as "the summary psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with the consumer's prior feelings about the consumption experience. (p.29)" Eid [2011] defined customer satisfaction as how satisfied consumers are with the offered product or service. According to Hsu et al. [2016], the repetitive behavior intention will depend on whether or not people are satisfied with that behavior. In this study, satisfaction refers to an individual's feelings of pleasure or disappointment resulting from comparing the perceived performance (or outcomes) of SNS usage in relation to his or her expectations.

### 2.7. Continuance Intention

An individual's continuance intention has been defined as "the intention to continue using an IT. (p.75)" [Deng et al., 2010]. Studies have also used this construct to measure individual behavior in several different fields, including information system usage [Bhattacharjee 2001], online auction usage [Wang & Chiang 2009], and SNS usage [Sledgianowski & Kulviwat 2009; Huang et al. 2016]. Therefore, this study models SNS continuance intention as the dependent variable for measuring the subjective probability that an individual will continue to use the same SNS in the future.

### 3. Research Model and Hypotheses

Figure 1 presents the proposed research model for explaining why an individual prefers to use the incumbent SNS rather than choose an alternative. SQB suggests that an individual prefers to remain with the status quo even when better alternatives are available. Following Samuelson & Zeckhauser's [1988] status quo bias categories, this study defines status quo bias in terms of three distinct dimensions: rational decision making in the presence of habit, cognitive misperceptions in the presence of inertia and perceived value, and finally, psychological commitment stemming from interpersonal relationships and continuance intention. Further, based on the concept of SQB, we assume that an individual's choice to continue using the incumbent service can be caused by inertia. Therefore, this study examines the conscious and unconscious antecedents of inertia, i.e., habit and interpersonal relationships. Habit is utilized as a formative second-order construct and is composed of three first-order constructs: awareness, controllability, and mental efficiency. We examine whether inertia increases an individual's continuance intention toward an SNS. This study also examines how satisfaction and perceived value moderate the relationship between inertia and continuance intention.

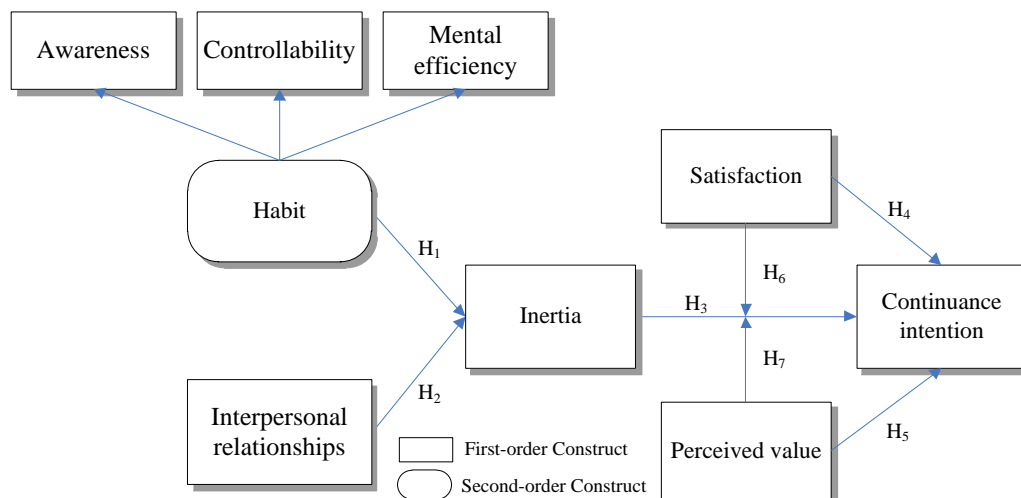


Figure 1. Research Model

#### 3.1. Habit and Inertia

Since habitual SNS users automatically engage in behaviors, they will not reevaluate these behaviors, but will instead simply continue with their existing behavioral patterns [Petty & Cacioppo 1981; Ronis et al. 1989]. In other words, the behaviors may induce inertia. According to Polites & Karahanna [2012], habits enable the individual to automatically defer to the status quo, and save costs associated with having to reanalyze prior decisions to follow a particular behavior [Samuelson & Zeckhauser 1988]. Wood & Quinn [2004] also indicated that considering alternative behaviors can increase stress, leading individuals to become even more committed to their current behavioral patterns. These situations imply that habits are associated with inertia. Therefore, this study proposes the following hypothesis:

H<sub>1</sub>: Habit is positively associated with inertia.

#### 3.2. Interpersonal Relationships and Inertia

In addition to having an unconscious antecedent, inertia can also have a conscious antecedent. Switching barriers, for example, interpersonal relationships, make it costlier for people to change providers [Jones et al. 2000]. Due to potential benefits, such as maintenance or developed relationships with others, people may develop strong personal bonds with the service provider. These benefits may be why people stay with their social network service provider. Gwinner et al. [1998] argued that people commit themselves to establish, develop, and maintain

relationships with a service providing superior valued benefits. They also found that even if an individual perceives the core service attribute as being less than optimal, they may remain in a relationship if they are receiving important relational benefits. Thus, we expect that when people experience strong interpersonal relationships, they will be more likely to stick with the status quo, resulting in greater levels of inertia. Based on the abovementioned, we posit:

H<sub>2</sub>: Interpersonal relationships are positively associated with inertia.

### 3.3. Inertia and Continuance Intention

According to Solomon [2007], inertia-driven consumers make buying decisions without much contemplation. In addition, inert customers are typified as lazy, inactive, or passive [Beckett et al. 2000; Bozzo 2002]. Therefore, inert individuals are seen to avoid making new purchasing decisions [White & Yanamandram 2004], avoid learning new service routines and practices, and avoid making price comparisons among alternatives [Pitta et al. 2006]. In other words, inert customers prefer the status quo [Ye 2005]. Therefore, this study proposes the following hypothesis:

H<sub>3</sub>: Inertia is positively associated with continuance intention toward an SNS.

### 3.4. Satisfaction and Continuance Intention

According to Deci & Ryan [1985], people who feel happy performing an activity are determined and self-motivated to continue that activity. An effective response is associated with extreme agitation, leading to a focus on specific targets. Therefore, the response can have a powerful effect on ongoing behavior [Patterson & Spreng 1997]. Thus, we posit:

H<sub>4</sub>: Satisfaction is positively associated with continuance intention toward an SNS.

### 3.5. Perceived Value and Continuance Intention

Zeithaml [1988] described perceived value as an individual's overall assessment of the utility of a product/service based on what is received and what is given. Sweeney & Soutar [1997] examined the relationship between perceived value and adoption intention. Kim et al. [2007] also noted that perceived value positively affects adoption continuance intention for experienced mobile Internet users in Singapore. Chang & Wildt [1994] found that customer-perceived value is a key contributor to purchasing intention. Hence, this study proposes the following hypothesis:

H<sub>5</sub>: Perceived value is positively associated with continuance intention toward an SNS.

### 3.6. The Moderating Role of Satisfaction

According to Oliver [1997], satisfaction is "the summary psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with a consumer's prior feelings about the consumer experience. (p.27)" Oliver [1997] proposed that satisfaction is an ongoing evaluation of the surprise inherent in a product acquisition and consumption experience. Therefore, satisfaction is primarily an affective evaluative response [Oliver & Swan 1989]. Anderson & Srinivasan [2003] indicated that a dissatisfied customer is more likely to search for information on alternatives and more likely to yield to competitor overtures than a satisfied customer. In other words, a satisfied customer is more likely to develop closer relationships with his or her current retailer and is more likely to take steps to increase dependence on the incumbent retailer. Given the above, it is reasonable to theorize that satisfaction affects the relationship between inertia and continuance intention.

Prior studies have concluded that customer satisfaction is positively related to repeat purchase intention [e.g., Brady et al. 2001; Cronin et al. 2000; Johnson & Fornell 1991; Zeithaml et al. 1996]. Hence, customers make purchases out of a sense of satisfaction (conscious judgment) rather than via the unconscious mind (inertia). The effect of inertia on continuance intention may therefore be decreased by satisfaction. Thus, this study proposes the following hypothesis:

H<sub>6</sub>: Satisfaction negatively moderates the relationship between inertia and continuance intention toward an SNS.

### 3.7. The Moderating Role of Perceived Value

Holbrook [1994] proposed that an individual's perception of value is "the fundamental basis for all marketing activity." (p. 22) Sirdeshmukh et al. [2002] indicated that an individual's perceived value is a superordinate goal, and behavioral intention is a subordinate goal. A superordinate goal is likely to regulate subordinate goals. Thus, people may use an SNS based on their conscious perception of value, rather than via the unconscious mind (inertia). Consequently, perceived value is expected to decrease the effect of inertia on continuance intention. Hence, this study proposes the following hypothesis:

H<sub>7</sub>: Perceived value negatively moderates the relationship between inertia and continuance intention toward an SNS.

## 4. Research Methodology

Drawing from the studies of Chin et al. [1997] and Salisbury et al. [2002], this research is conducted in three phases: (1) the initial item development phase; (2) the instrument testing, refinement, and data collection phase; and (3) the model testing and confirmation phase.

#### 4.1. Initial Item Development

Following Polites & Karahanna [2012], habit is goal-directed and intentional in nature, and intentionality is captured by wording each item in terms of a specific system usage, such as SNS usage, to perform a specific task, for example, a social-related task, as opposed to being captured via separate items [Verplanken & Orbell 2003]. Therefore, intentionality is not measured individually in this study. Overall, following Jarvis et al.'s [2003] judgement rules for determining whether a construct is formative or reflective, habit is constructed as a formative second-order construct which consists of three first-order dimensions: awareness, mental efficiency, and controllability.

Similar to Polites [2009], this study measures habit formatively as a multidimensional psychological construct. The rationale for operationalizing habit as a formative second-order construct is threefold [Petter & Straub 2007]. First, according to the conceptual definition of habit, awareness, mental efficiency, and controllability should be regarded as habit forming rather than the other way around. Second, awareness, mental efficiency, and controllability are clearly unique, distinguishable, and not interchangeable. Third, these three constructs are theoretically independent, i.e., they are not highly correlated. For example, in Polites's [2009] study, the inter-construct correlations among awareness, mental efficiency, and controllability are 0.55, 0.46, and 0.28, respectively, which are not highly correlated. Therefore, habit is operationalized as a formative second-order construct which consists of awareness, mental efficiency, and controllability.

Measurement items (see Appendix A) were adopted from existing literature and were adapted here to the SNS context. Items for measuring the three first-order constructs of habit (awareness, mental efficiency, and controllability) were slightly modified from Polites & Karahanna [2012]. Items for interpersonal relationships were adapted from Jones et al. [2000]. Items for inertia were adapted and modified from Anderson & Srinivasan [2003], Kuo et al. [2013], and Ranaweera & Neely [2003]. Items for measuring satisfaction were adapted from Bhattacharjee [2001]. Items used to measure perceived value were adapted from Levesque & McDougall [1996], Kim et al. [2007], and Sirdeshmukh et al. [2002]. Lastly, items used to measure continuance intention were adapted from Bhattacharjee [2001]. All items measure online users' SNS experiences. The scales have been slightly modified to fit the SNS context. Items are measured on a seven-point Likert scale, with anchors from strongly disagree (1) to strongly agree (7). Appendix A lists the operational definition, sources, and items of the measures.

In addition, we also incorporated gender, age, and Facebook tenure into the research model as control variables. According to Aladwani [2017], age and gender play an important role in online interactions and information technology acceptance, respectively. Venkatesh et al. [2003] also indicated that gender and age have been shown to have a significant impact on users' acceptance of technology. Compared to less experienced users, experienced users are abler to grasp, apply, and benefit from what they have learned before from using a given technology [Ko & Dennis 2011]. Bolton [1998] indicated that tenure duration can predict customer retention. Therefore, for controlling an explanation of the results due to these three variables, we included gender, age, and Facebook tenure as the control variables in this study.

#### 4.2. Instrument Testing, Refinement, and Data Collection

##### 4.2.1. Instrument Testing and Refinement

Both a pretest and a pilot test were conducted to validate the instruments. For the pretest, a questionnaire was provided to three experts with Facebook experience in order to verify the logical consistency, ease of understanding, wording, and appropriateness of the instruments. A pilot test was conducted with 169 users of the target online SNS to confirm the measurement properties of the final items. The results indicated that the measurement model fulfills the criteria for reliability, convergent validity, and discriminant validity.

##### 4.2.2. Data Collection

The research model was tested using data collected from Facebook users in Taiwan. Facebook was chosen as the target SNS because it is the third most popular site in the world [Alexa traffic rankings January 2019], with one billion members. It is the dominant player in the social network industry, growing daily. In order to target Facebook users, a hyperlink leading to the survey website was posted on several Facebook forums on a number of bulletin board systems (BBSs), and the relevant information was published on Facebook. The response rate is the percentage of the selected users in a sample that provided data for analysis. However, all of the respondents in this study were self-selected instead of being invited to participate in the survey. As a result, there is no selected sample (the number of people in the sample is not known) and thus, the response rate cannot be calculated. Chiu et al. [2017] also indicated that the convenience sampling method does not allow for the computation of a response rate. In addition, this survey was conducted in Taiwan and distributed over an approximate six-week period from August 8 to September 22, 2016.

The questionnaire consists of three sections. As Yen & Chang [2015] pointed out, in order to minimize social desirability bias, we follow the advice of Podsakoff et al. [2003] to explain the purpose of this study and to ensure



participant confidentiality in the first section containing brief instructions, the length of the questionnaire, and offering our gratitude for the respondents' participation. We also assure respondents that there are no right or wrong answers and encourage them to answer the questions as honestly as possible. The second section includes 27 questions that record the subjects' perceptions of each factor in mixed order of the research model. The third section consists of five questions capturing respondents' demographic information: gender, age, highest educational level achieved, current occupation, and tenure using Facebook. The respondents are instructed to answer all the questions based on their experience of using Facebook. Twenty randomly selected respondents were contacted via email to obtain their contact information in order to mail them the incentive of US\$10 in cash. For valid questionnaires, the returned questionnaires were initially screened for usability and reliability. The selection criteria were that the respondents had to have experience using Facebook, and only completed and valid questionnaires were used for data analysis. A total of 489 questionnaires were collected in this web survey. The exclusion of 31 invalid questionnaires yielded a total of 458 complete, valid responses for data analysis. Table 1 lists the demographic information of the respondents. The basic demographics of our sample are similar to that of real Facebook users, which showed that males accounted for 47% of the sample and females for 53% [Aslam 2017]. Moreover, SNS studies also showed a similar gender ratio. For example, Shanmugam et al.'s [2016] study of SNSs in Malaysia indicated that 48% of the respondents are male and 52% female; Mamonov & Benbunan-Fich's [2017] research in the United States also showed that 43.8% of respondents were male and 56.2% of respondents were female.

Table 1. Demographic Information of Respondents (N = 458)

Measure	Items	Freq.	Percent	Measure	Items	Freq.	Percent
Gender	Male	199	43.4	Gender	Female	259	56.6
Age	<20	20	4.4	Usage Frequency	Less than once/month	9	2.0
	20–24	62	22.1		Once/month	5	1.1
	25–29	82	18.8		Several times/month	15	3.3
	30–34	101	23.4		Once/week	9	2.0
	35–39	86	13.5		Several times/week	38	8.3
	40+	107	17.9		Once/day	86	18.8
Education	~High school	77	16.8	Membership (in years)	Several times/day	296	64.6
	College	57	12.4		Less than 1 Year	13	2.8
	University	239	52.2		1–2 Years	19	4.1
	Graduate school~	85	18.6		2–3 Years	31	6.8
					More than 3 Years	395	86.2

Due to the research adopting a convenience sample (i.e., the participants were recruited through messages posted on Facebook forums in BBSs and on Facebook rather than by individual invitation), non-response bias cannot be examined by comparing respondents and non-respondents. Therefore, this study used wave analysis [Roberts et al. 2016] in which the sample was partitioned into quartiles based on the time the survey was completed [Boyer & Hult 2005]. The first and last quartile (proxy for non-respondents) were then compared across the respondents. We then compared the first quartile versus the last quartile of the respondents' responses regarding principal constructs. We found no significant difference between the early and late respondents on any of the eight summated measures in the survey (i.e., awareness ( $t=-0.845$ ), mental efficiency ( $t=-1.346$ ), controllability ( $t=-0.498$ ), interpersonal relationships ( $t=-1.610$ ), inertia ( $t=1.025$ ), perceived value ( $t=-0.216$ ), satisfaction ( $t=-0.214$ ), and continuance intention ( $t=-0.291$ )). Therefore, we concluded that non-response bias was unlikely to have had a significant influence on the findings.

#### 4.3. Model Testing and Confirmation

Data analysis utilized the two-step approach recommended by Anderson & Gerbing [1988]. The first step involves the analysis of the measurement model, while the second step tests the structural relationships among latent constructs. The aim of the two-step approach is to establish the reliability and validity of the measures before assessing the structural relationship of the model. This study used SmartPLS 2.0 M3 to analyze both the measurement model and the structural model. The partial least squares (PLS) method places minimal restrictions on measurement scales, sample size, and residual distribution [Chin & Newsted 1999], and it does not impose normality requirements on the data.

##### 4.3.1. Measurement Model

The adequacy of the measurement model was evaluated on the criteria of reliability, convergent validity, and discriminant validity. Reliability was examined using composite reliability values (CR), which should be greater than the threshold of 0.7 to be considered adequate [Fornell & Larcker 1981]. Fornell & Larcker [1981] suggested

two conditions for assessing convergent validity: (1) all indicator loadings should be significant and exceed 0.7, and (2) the average variance extracted (AVE) for each construct should exceed the variance caused by measurement errors for that construct (i.e., AVE should exceed 0.5). As shown in Table 2, all items exhibited a loading higher than 0.7 on their respective constructs, and all the AVEs ranged from 0.773 to 0.929, thus satisfying both conditions for convergent validity.

Table 2. Correlation and the Square Root of the AVE of the Constructs

Constructs	Cronbach's Alpha	Composite Reliability	Mean (STD)	AW	ME	CO	IR	IN	PV	SA	CI
Awareness (AW)	0.956	0.968	4.880 (1.368)	<b>0.940</b>							
Mental Efficiency (ME)	0.877	0.925	4.953 (1.198)	0.497	<b>0.896</b>						
Controllability (CO)	0.937	0.960	4.224 (1.488)	0.724	0.414	<b>0.943</b>					
Interpersonal Relationships (IR)	0.943	0.956	5.873 (1.079)	0.410	0.389	0.266	<b>0.902</b>				
Inertia (IN)	0.877	0.924	5.028 (1.309)	0.684	0.345	0.610	0.395	<b>0.896</b>			
Perceived Value (PV)	0.930	0.956	5.167 (1.040)	0.548	0.425	0.488	0.419	0.663	<b>0.937</b>		
Satisfaction (SA)	0.952	0.969	5.088 (1.127)	0.522	0.449	0.505	0.440	0.623	0.771	<b>0.956</b>	
Continuance Intention (CI)	0.962	0.975	5.631 (1.094)	0.533	0.451	0.425	0.543	0.646	0.730	0.743	<b>0.964</b>

Next, this study assessed discriminant validity by examining the cross-loadings, the correlations among all constructs, and the square root of the AVEs. First, this study used the cross-loading method proposed by Chin [1998a, p. 321]. The loading of each measurement item on its assigned latent variable is larger than its loading on any other construct [Chin 1998b]. Second, the correlations among all constructs are all well below 0.85. Following Kline [1998], this suggests that all constructs are distinct from one another. Third, the square root of the AVE is higher than the correlations among the constructs. This also demonstrates discriminant validity [Fornell & Larcker 1981]. Table 3 shows that the loading of each measurement item on its assigned latent variable is larger than its loading on any other construct, and the cross-loading differences are larger than the threshold of 0.1 [Gefen and Straub 2005]. In addition, as shown in Table 2, the correlations among the constructs are well below the 0.85 threshold. Finally, all the AVE square roots are larger than the construct intercorrelations (see Table 2), demonstrating sufficient discriminant validity.

The use of self-reported data introduces the potential for common method bias in this study. To assess the risk of common method bias, this study performed statistical analyses recommended by Harman [1976], Liang et al. [2007], and Pavlou et al. [2007]. First, we performed Harman's one-factor test. All the variables were entered into an exploratory factor analysis using unrotated principal components factor analysis, forcing us to extract one factor. The merged factor accounted for 49% and less than 50% of the variance. Second, following Liang et al.'s approach, this study constructed a PLS model with a common method factor linked to all the principal constructs' indicators. The results showed that 25 of 27 method factor loadings were not significant, and all of the substantive variances were substantially greater than their method variances. However, both of these approaches are limited and have their critics. We thus followed the guidelines by Pavlou et al. [2007] to conclude that common method bias is highly unlikely, because all of our latent construct correlations were below 0.8 and most were moderate to low. Since common method bias is indicated by extremely high correlations ( $r > 0.90$ ) [Bagozzi et al. 1991], common method bias should not be a serious concern for this study. Furthermore, variance inflation factors (VIF) were used to assess the degree of multi-collinearity. This study conducted a regression analysis by modeling continuance intention as the dependent variable and the other eight variables as independent variables. The VIFs ranged from 1.393 to 2.919, which is well below the suggested threshold of 3 to 5 [Hair et al. 2009]. Therefore, we did not find a significant multicollinearity problem in this study.

Table 3. Loadings and Cross-Loadings

	AW	ME	CO	IR	IN	PV	SA	CI
AW1	<b>0.930</b>	0.451	0.675	0.376	0.652	0.534	0.485	0.506
AW2	<b>0.950</b>	0.470	0.659	0.374	0.631	0.518	0.499	0.507
AW3	<b>0.945</b>	0.451	0.713	0.373	0.658	0.491	0.478	0.486
AW4	<b>0.936</b>	0.495	0.675	0.421	0.630	0.518	0.502	0.506
ME1	0.452	<b>0.875</b>	0.342	0.356	0.301	0.374	0.387	0.406
ME2	0.477	<b>0.928</b>	0.419	0.356	0.334	0.406	0.421	0.432
ME3	0.403	<b>0.884</b>	0.348	0.335	0.291	0.362	0.398	0.372
CO1	0.673	0.371	<b>0.913</b>	0.244	0.529	0.420	0.433	0.370
CO2	0.681	0.392	<b>0.960</b>	0.256	0.590	0.474	0.479	0.414
CO3	0.692	0.408	<b>0.954</b>	0.251	0.604	0.484	0.516	0.416
IR1	0.420	0.360	0.285	<b>0.915</b>	0.401	0.380	0.417	0.491
IR2	0.365	0.357	0.238	<b>0.902</b>	0.341	0.379	0.392	0.505
IR3	0.335	0.361	0.237	<b>0.890</b>	0.342	0.376	0.379	0.490
IR4	0.391	0.347	0.239	<b>0.900</b>	0.351	0.383	0.405	0.477
IR5	0.330	0.330	0.190	<b>0.901</b>	0.341	0.372	0.389	0.488
IN1	0.510	0.263	0.414	0.344	<b>0.861</b>	0.533	0.461	0.543
IN2	0.627	0.297	0.586	0.317	<b>0.926</b>	0.600	0.581	0.600
IN3	0.684	0.359	0.618	0.400	<b>0.899</b>	0.639	0.618	0.590
PV1	0.501	0.370	0.453	0.372	0.603	<b>0.925</b>	0.718	0.648
PV2	0.521	0.417	0.441	0.418	0.616	<b>0.945</b>	0.710	0.697
PV3	0.517	0.407	0.477	0.388	0.643	<b>0.941</b>	0.739	0.705
SA1	0.498	0.420	0.482	0.411	0.602	0.743	<b>0.952</b>	0.705
SA2	0.480	0.442	0.457	0.418	0.582	0.725	<b>0.954</b>	0.700
SA3	0.519	0.425	0.509	0.432	0.602	0.742	<b>0.960</b>	0.724
CI1	0.499	0.441	0.407	0.514	0.617	0.711	0.723	<b>0.963</b>
CI2	0.524	0.434	0.415	0.543	0.620	0.701	0.703	<b>0.965</b>
CI3	0.519	0.428	0.408	0.515	0.631	0.699	0.723	<b>0.964</b>

#### 4.3.2. Structural Model

After confirming the measurement model, the next step in the two-step approach was to validate the structural model [Anderson & Gerbing 1988]. Specifically, we used SmartPLS 2.0 [Ringle et al. 2005] with 500 bootstrap runs to test the structural model and the significance levels of the paths. As Figure 2 shows, all paths exhibited a p-value of less than 0.05, except for the moderating effect of satisfaction. Overall, the research model explains 65.4% of the variance of continuance intention.

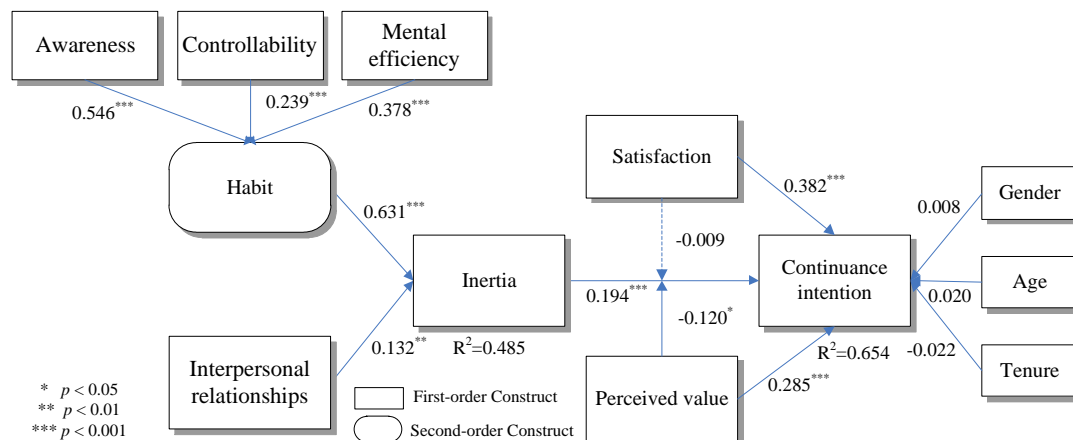


Figure 2. Result of the Research Model

#### 4.3.3. Moderating Effect

With regard to the interactive effect of inertia and perceived value, its effect on continuance intention was negative and significant at the  $p < 0.05$  level. To further examine this interaction effect, a slope analysis diagram was plotted. As shown in Fig. 3, inertia and perceived value were substitutable, and continuance intention was at its

highest level when both inertia and perceived value were high. Conversely, continuance intention was at its lowest level when both inertia and perceived value were low. However, moderate to high levels of continuance intention were observed when either inertia or perceived value was high. It is also interesting to note that only minor differences were associated with the presence of inertia or perceived value versus both inertia and perceived value. This implies that inertia or perceived value can significantly boost continuance intention, and that perceived value, as a moderator, may be of minimal benefit.

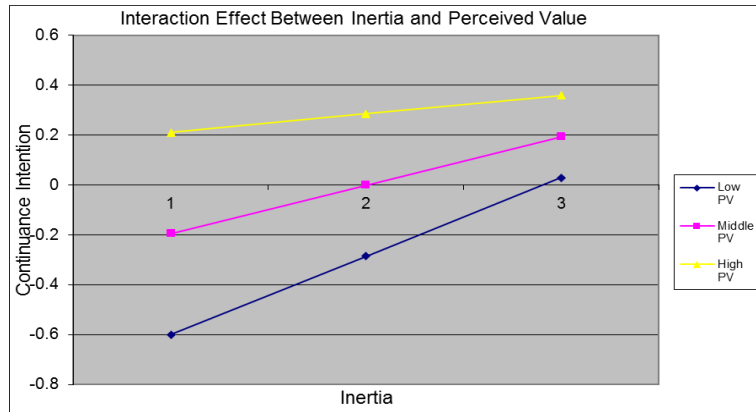


Figure 3. Interaction Effect Analysis

#### 4.3.4. Mediating Effect

Following Vance et al.'s [2015] method, we used bootstrapping to construct confidence intervals (CIs) of the mediation effects of inertia. Compared with Baron & Kenny's [1986] method and the Sobel [1982] method, testing the mediation effect through bootstrapping enables more accurate and powerful statistical computing power [Shrout & Bolger 2002]. We bootstrapped the effects of habit and interpersonal relationships on inertia with 5,000 resamples and did the same for the effect of inertia on continuance intention. In this study, by obtaining 5,000 resamples and specifying a 95% CI, Table 4 reports the 95 percent CIs for the results, as well as whether zero was obtained in the CI, indicating mediation, and whether full or partial mediation was observed. According to Shrout & Bolger [2002], if  $ab$  is nonzero and  $c'$  is zero, this result indicates full mediation. If both  $ab$  and  $c'$  are nonzero, then this result is evidence of partial mediation. The results show that the effects of habit and interpersonal relationships on continuance intention were partially mediated by inertia.

Table 4. Bootstrapped CI Tests for Full and Partial Mediation

Variable	Mediation Test ( $ab$ )			Full/Partial Mediation Test ( $c'$ )			Type of mediation
	95% LL	95% UL	Zero included?	95% LL	95% UL	Zero included?	
Habit	0.377	0.509	No	0.250	0.424	No	Partial
Interpersonal Relationships	0.186	0.324	No	0.148	0.254	No	Partial

## 5. Discussion and Implications

In this study, we examined the conscious (i.e., interpersonal relationships) and unconscious (i.e., habit) antecedents and consequences (continuance intention) of an individual's inertia toward SNSs. Furthermore, this study examined the moderating role of satisfaction and perceived value. Our results provide support for most of the hypothesized relationships in the theoretical model.

As shown in Figure 2, both habit ( $H_1$ ) and interpersonal relationships ( $H_2$ ) were found to increase individuals' inertia. With the exception of the relationship between inertia and continuance intention ( $H_3$ ), the direct effects from satisfaction to continuance intention ( $H_4$ ) and from perceived value to continuance intention ( $H_5$ ), as well as the moderating effect of perceived value ( $H_7$ ), were supported. However, the impact of satisfaction on the relationship between inertia and continuance intention ( $H_6$ ) was not supported.

### 5.1. Summary of the Results

As predicted, both habit and interpersonal relationships have a positive effect on inertia. First, this finding is consistent with prior studies examining the relationship between habit and inertia [e.g., Polites & Karahanna 2012].

According to Samuelson & Zeckhauser [1988], habits are associated with inertia not only because habits enable people to unconsciously comply with the status quo, but also because they can save decision costs. Thus, in this study, people use their existing SNS because they view the habit as beneficial and able to reduce the costs of decision making. Second, as hypothesized, interpersonal relationships positively impact inertia. In other words, people continue to use the incumbent SNS because they do not want to relinquish the relationship-specific investment.

For the antecedents of inertia, the results indicate that unconscious and conscious factors both affect individuals' inertia regarding SNS usage. However, habit ( $\beta = 0.631$ ,  $p < 0.001$ ) is largely more important than interpersonal relationships ( $\beta = 0.132$ ,  $p < 0.01$ ) in relation to the shaping of individuals' inertia. Polites & Karahanna [2012] also indicated that inertia has both conscious and unconscious origins. Therefore, an inert individual may be a habitual user of the incumbent SNS. However, while the use of an incumbent SNS may be automatically triggered by habit, when the individual perceives the time and effort required to switch to another SNS as high, the individual will be even more likely to stay with the status quo, resulting in even greater levels of inertia.

As hypothesized, individuals' inertia ( $\beta = 0.194$ ,  $p < 0.001$ ) toward an SNS increases continuance intention. This is consistent with Rumelt's [1995] description of inertia as "the strong persistence of existing form and function." (p. 2) Therefore, although inert users perceive the presence of superior alternatives, they may be resistant to or simply disinterested in changing their ways [Barnes et al. 2004; Ergün et al. 1999; Rumelt 1995]. In other words, inert users will continue to use their current SNS.

Consistent with prior studies [e.g., Kim et al. 2013; Lu & Hsiao 2010; Choi et al. 2004; Kuo et al. 2009] that examined the impacts of satisfaction and perceived value on continuance intention, our findings indicate that satisfaction and perceived value both have a positive effect on continuance intention. The result implies that it is not only the positive evaluations of SNS usage experiences (i.e., satisfaction) but also the result of mentally weighing the perceived benefits against the sacrifices that are essential contributors to continuance intention. Our findings also confirm that both cognitive (i.e., perceived value) and affective (i.e., satisfaction) responses have an impact on behavioral intention.

Inertia, satisfaction, and perceived value were found to directly and positively influence continuance intention. The total effects of the constructs on continuance intention can be ranked as follows: satisfaction ( $\beta = 0.382$ ,  $p < 0.001$ ), perceived value ( $\beta = 0.285$ ,  $p < 0.001$ ), and inertia ( $\beta = 0.194$ ,  $p < 0.001$ ). According to Bhattacharjee [2001], satisfaction is an emotional response resulting from a cognitive evaluation process, and perceived value is the result of a cognitive comparison process [Eggert & Ulaga 2002]. Therefore, our result indicates that the cognitive evaluation or comparison process regarding SNS usage (i.e., satisfaction and perceived value) is more important than the unconscious process (i.e., inertia).

As predicted, perceived value decreases the impact of inertia on continuance intention ( $\beta = -0.120$ ,  $p < 0.05$ ). However, we were surprised to find that satisfaction does not significantly affect continuance intention. Therefore, an additional PLS analysis was performed, which indicated that the path coefficient of satisfaction increased from -0.009 (not significant) to -0.094 ( $t=2.623$ ,  $p<0.01$ ) when perceived value was removed. The result shows that the moderating effect of satisfaction is diminished when perceived value is taken into account.

Further, to examine the effect of inertia on continuance intention, we also removed satisfaction and perceived value and performed an additional PLS analysis. The result indicated that the path coefficient of inertia has increased substantially from 0.194 ( $p<0.001$ ) to 0.646 ( $p<0.001$ ) when satisfaction and perceived value were excluded from the research model. The result shows that satisfaction and perceived value would dilute the effect of inertia on continuance intention.

Finally, consistent with prior studies [e.g., Chiu & Huang 2015; Kim et al. 2017], we found that gender, age, and Facebook tenure did not significantly influence SNS continuance intention. We concluded that, based on the PLS analysis using 500 bootstraps, the analytical statistics indicated that gender, age, and Facebook tenure did not have bias toward the current results.

## 5.2. Contributions to Research and Theory

Based on status quo bias theory, we proposed a research model to examine the antecedents and consequences of an individual's inertia toward the usage of the incumbent SNS. Our findings reveal several points that are worthy of consideration in theory development. First, we examined an individual's SNS continuance intention from the perspective of status quo bias. SNS usage continuance intention has been examined from many different theoretical perspectives, such as media system dependency theory and uses and gratification theory [Chiu & Huang 2015], network externalities and social identity theory [Chiu et al. 2013], and social penetration theory [Huang 2016]. Less focus has been placed on the perspective of status quo bias. Therefore, this study contributes to the theoretical development of SNS continuance intention based on status quo bias theory.

Second, most discussions on individual-level inertia are found in consumer behavior literature [e.g., Kuo et al. 2013; Ranaweera & Neely 2003; Lin et al. 2015; White & Yanamandram 2004]. There is very little empirical research examining how inertia toward the current SNS may positively affect continuance intention. Our study fills this gap.

Third, when examining why an individual remains with the status quo even in the presence of better alternatives (i.e., inertia), past studies have primarily focused on the conscious sources of such behavior [e.g., Kim & Kankanhalli 2009; Ye et al. 2006]. However, Polites & Karahanna [2012] indicated that inertia can have both conscious and unconscious sources. Therefore, to better understand individuals' inertia regarding SNS usage, conscious (i.e., interpersonal relationships) and unconscious (i.e., habit) antecedents were included in our research model.

Fourth, the simultaneous consideration of inertia, satisfaction, and perceived value reveals that both conscious (i.e., satisfaction and perceived value) and unconscious (i.e., inertia) factors have a positive effect on continuance intention. However, the path coefficients of the conscious factors (0.382 and 0.285) are greater than those of the unconscious factors (0.194). This result highlights the importance of the conscious evaluation process in continuance intention. Therefore, individuals who continue to use the incumbent SNS may rely primarily on the result of evaluated and compared processing regarding SNS usage.

Fifth, contrary to our expectations, satisfaction does not significantly moderate the relationship between inertia and continuance intention. Only when perceived value is removed does the moderating effect of satisfaction become significant. In other words, in the SNS context, the cognitive comparison process (i.e., perceived value) decreases the effect of unconscious inertia on behavioral intention. However, even without taking the cognitive comparison process into consideration, the affective response caused by the evaluation process (i.e., satisfaction) is also found to reduce the effect of inertia on intention. Consequently, in comparison to the affective conscious process, the cognitive conscious process dominates the effect of the unconscious process on behavioral intention.

As our additional PLS analysis of removing satisfaction and perceived value, inertia has a strong effect ( $\beta = 0.646, p < 0.001$ ) toward continuance intention. It is clear that an individual likely continues to use their current SNS because they do not want to change the status quo. In other words, the unconscious mind would dominate the behavior. However, when cognitive evaluation variables (e.g., satisfaction and perceived value) are taken into consideration, the importance of the influence of the unconscious mind on behavioral intention would be decreased. Therefore, this study emphasizes the priority of cognitive evaluation when individuals continued to use an SNS.

Finally, although satisfaction and perceived value are often seen in examining an individual's behavioral intention or loyalty [e.g., Yen 2013; Yang & Peterson 2004; Xu et al. 2015; Kim et al. 2013; Hsu et al. 2015; Kuo et al. 2009; Choi et al. 2004; Lu & Hsiao 2010], these prior studies generally investigated the direct and positive effect of satisfaction and perceived value on behavioral intention or loyalty; fewer studies have focused on the moderating role of satisfaction and perceived value. In this study, we not only examined the direct effect of satisfaction and perceived value on continuance intention, but also incorporated the moderating role of satisfaction and perceived value between inertia and continuance intention in the SNS context. Further, this study highlights the inhibiting effect of cognitive-related factors, i.e., satisfaction and perceived value, to the unconscious factor, i.e., inertia.

### 5.3. Contributions and Implications for Practice

Examining the role of inertia and its sources in the SNS context has practical implications for SNS providers desiring to increase inertia by (1) encouraging habit formation and cultivation, and (2) increasing the perceived barriers to switching, for instance, an individual's largely relationship-specific investment with their current SNS. To encourage individuals' habit formation and to increase perceived switching barriers, SNS managers can offer more convenient and compatible tools or applications for their members. Today, SNS usage has become an indispensable part of our lives. The wide diversity of functions or applications can make everyday life easier and more enjoyable.

First, SNSs managers can develop useful functions that allow members who, for example, love to dine out spontaneously with friends to quickly and easily choose a local restaurant based on independent reviews and the restaurant's menu and available times. Second, SNSs can develop functions related to traffic and navigation. By using such functions, members can share real-time traffic and road information with their social networks to save time and fuel, improving the daily commute for all. Third, we recommend creating functions that ensure members have time for their families by allowing them to manage their family members' schedules, appointments, and activities. Fourth, we recommend creating functions that facilitate the management of daily chores. Using the functions, members can keep track of all their daily tasks and receive notifications on what they should be doing and when.

Satisfaction and perceived value are also important in shaping members' continuance intention. SNS managers can increase member satisfaction by making the interface more attractive and intuitive. For example, SNSs can offer

more novel or fun animated stickers, smileys, emojis, and emoticons to intensify the positive experience of SNS usage. To increase the perceived value, we recommend that SNSs develop applications that bring flights, hotels, and car rental services together. This useful feature increases the value perceived by SNS members who see the SNS as taking the stress out of finding the best prices when booking holiday and business trips.

#### 5.4. Limitations

Despite efforts to conduct this study in a careful manner, this research is still subject to several limitations. First, the generalizability of the results for other SNSs should be examined further since our survey respondents were limited to Facebook users. Second, this study adopted an Internet survey, and the respondents were active users. Thus, our results may be affected by self-selection bias. Third, since this study is cross-sectional, the analytical results for the relationships among the constructs must be viewed as tentative. Fourth, the homogeneity of the sample may limit the generalizability to the general population. Although we are confident that the sample in this study represents a reasonable Facebook user demographic, additional research could target a more heterogeneous sample to overcome this limitation.

### 6. Conclusion

To better understand continuance intention toward the usage of the incumbent SNS, this study examined the antecedents and consequences of inertia from the perspective of status quo bias. Further, this study constructed habit and interpersonal relationships as the unconscious and conscious antecedents of inertia, respectively. Data collected from 458 Facebook users demonstrate the importance of both unconscious (i.e., habit) and conscious (i.e., interpersonal relationships) antecedents in increasing inertia. For continuance intention, although conscious (i.e., satisfaction and perceived value) and unconscious (i.e., inertia) sources have a positive effect on repetitive behavior, conscious factors play a more important role in contributing to continuance intention. Interestingly, we found that satisfaction did not significantly weaken the relationship between inertia and continuance intention. Additional analysis revealed that when the affect and cognition antecedents are considered simultaneously, the moderating role of affect is diluted by the cognitive component. Due to the rapid diffusion of mobile devices and the vast penetration of wireless Internet services, SNSs show a special affinity for mobile devices [Cheng et al. 2014]. People engaging in social interactions on SNSs via mobile applications is now a popular communication style because it enables people to instantly record and share social events through interpersonal network ties. Therefore, future research needs to consider whether the influence of the used device would act to enhance or hinder the unconscious and conscious antecedents of inertia. Overall, we believe that the model proposed in this study is not conceptually limited to SNSs, but should also be applicable to other online services. We hope the model proposed in this study can provide a useful foundation for future work in this important area.

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### REFERENCES

- Aarts, H., B. Verplanken, and A. Van Knippenberg, "Predicting behavior from actions in the past: Repeated decision making or a matter of habit?" *Journal of Applied Social Psychology*, Vol. 28, No. 15:1355-1374, 1998.
- Aladwani, A.M., "Compatible quality of social media content: Conceptualization, measurement, and affordances," *International Journal of Information Management*, Vol. 37, No. 6:576-582, 2017.
- Alexa. "Alexa Top Sites," available at <http://www.alexa.com/topsites>, 2019.
- Allen, N.J. and J.P. Meyer, "The measurement and antecedents of affective, continuance and normative commitment to the organization," *Journal of Occupational Psychology*, Vol. 63, No. 1:1-18, 1990.
- Anderson, C.J., "The psychology of doing nothing: Forms of decision avoidance result from reason and emotion," *Psychological Bulletin*, Vol. 129, No. 1: 139-167, 2003.
- Anderson, J.C. and D.W. Gerbing, "Structural equation modeling in practice: A review and recommended two-step approach," *Psychological Bulletin*, Vol. 103:411-423, 1988.
- Anderson, R.E. and S.S. Srinivasan, "E-satisfaction and e-loyalty: A contingency framework," *Psychology and Marketing*, Vol. 20, No. 2:123-138, 2003.
- Aslam Salman, "Facebook by the numbers: Stats, demographics & fun facts," available at <https://www.omnicoreagency.com/facebook-statistics/>, 2017.
- Bagozzi, R.P., Y. Yi, and L.W. Phillips, "Assessing Construct Validity in Organizational Research," *Administrative Science Quarterly*, Vol. 36, No. 3:421-458, 1991.

- Bargh, J.A. "The four horsemen of automaticity: awareness, efficiency, intention, and control in social cognition," *Handbook of Social Cognition*, R.S. Wyer and T.K. Srull (eds.), Lawrence Erlbaum, Associates, Hillsdale, NJ, pp. 1-40, 1994.
- Bargh, J.A. "Conditional automaticity: varieties of automatic influence in social perception and cognition," *Unintended Thought*, J.S. Uleman and J.A. Bargh (eds.), Guilford Press, New York, pp. 3-51, 1989.
- Baron, R.M. and D.A. Kenny, "The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations," *Journal of Personality and Social Psychology*, Vol. 51, No. 6:1173-1182, 1986.
- Barnes, W., M. Gartland, and M. Stack, "Old habits die hard: Path dependency and behavioral lock-in," *Journal of Economic Issues*, Vol. 38, No. 2:371-377, 2004.
- Beckett, A., P. Hower, and B. Howcroft, "An exposition of consumer behaviour in the financial services industry," *International Journal of Bank Marketing*, Vol. 18, No. 1:15-26, 2000.
- Berry, L., "Relationship marketing of services-growing interest, emerging perspectives," *Journal of Academy of Marketing Science*, Vol. 23, No. 4:236-245, 1995.
- Berry, L.L. and A. Parasuraman, *Marketing Services: Competing Through Quality*, New York: Free Press, 1991.
- Bhattacharjee, A., "Understanding information systems continuance: an expectation-confirmation model," *MIS Quarterly*, Vol. 25, No. 3:351-370, 2001.
- Bolton, R.N., "A dynamic model of the duration of the customer's relationship with a continuous service provider: The role of satisfaction," *Marketing Science*, Vol. 17, No. 1:45-65, 1998.
- Boyer, K.K. and G.T.M. Hult, "Extending the supply chain: Integrating operations and marketing in the online grocery industry," *Journal of Operations Management*, Vol. 23, No. 6:642-661, 2005.
- Bozzo, C., "Understanding inertia in an industrial context," *Journal of Customer Behavior*, Vol. 1, No. 3:335-355, 2002.
- Brady, M.K., C.J. Robertson, and J.J. Cronin, "Managing behavioral intentions in diverse cultural environments: an investigation of service quality, service value and satisfaction for American and Ecuadorian fast-food customers," *Journal of International Management*, Vol. 7, No. 2:129-149, 2001.
- Chang, T.Z. and A.R. Wildt, "Price, product information, and purchase intention: An empirical study," *Journal of the Academy of Marketing Science*, Vol. 22, No. 1:16-27, 1994.
- Cheng, Y., J. Liang, and L. Leung, "Social network service use on mobile devices: An examination of gratifications, civic attitudes and civic engagement in China," *New Media & Society*, Vol. 17, No. 7:1096-1116, 2014.
- Chin, W.W. and P.R. Newsted, "Structural equation modeling analysis with small samples using partial least squares," *Statistical Strategies for Small Sample Research*, R.H. Hoyle (ed.), Sage Publications, Thousand Oaks, CA, pp. 307-341, 1999.
- Chin, W.W., "The partial least squares approach for structural equation modeling," *Modern Methods for Business Research*, G.A. Marcoulides (ed.), Hillsdale, NJ: Lawrence Erlbaum Associates, pp. 295-336, 1998a.
- Chin, W.W., "Issues and opinions on structural equation modeling," *MIS Quarterly*, Vol. 22:7-16, 1998b.
- Chin, W.W., A. Gopal, and W.D. Salisbury, "Advancing the theory of adaptive structuration: The development of a scale to measure faithfulness of appropriation," *Information Systems Research*, Vol. 8, No. 4:342-368, 1997.
- Chiu, C.M., H.Y. Huang, Y.C. Weng, and C.F. Chen, "The roles of customer-brand relationships and brand equity in brand extension acceptance," *Journal of Electronic Commerce Research*, Vol. 18, No. 2:155-176, 2017.
- Chiu, C.M. and H.Y. Huang, "Examining the antecedents of user gratification and its effects on individuals' social network services usage: the moderating role of habit," *European Journal of Information Systems*, Vol. 24, No. 4:411-430, 2015.
- Chiu, C.M., H.L. Cheng, H.Y. Huang, and C.F. Chen, "Exploring individuals' subjective well-being and loyalty towards social network sites from the perspective of network externalities: The Facebook case," *International Journal of Information Management*, Vol. 33, No. 3:539-552, 2013.
- Choi, K.S., W.H. Cho, S. Lee, H. Lee, and C. Kim, "The relationships among quality, value, satisfaction and behavioral intention in health care provider choice: A South Korean study," *Journal of Business Research*, Vol. 57, No. 8:913-921, 2004.
- CNBC. "Snapchat is king among teens as Facebook declines in popularity, survey shows", available at <http://www.cnbc.com/2016/10/13/snapchat-is-king-among-teens-as-facebook-declines-in-popularity-survey-shows.html>, 2016.
- Colgate, M. and B. Lang, "Switching barriers in customer markets: an investigation of the financial services industry," *Journal of Customer Marketing*, Vol. 18, No. 4:332-347, 2001.
- Cronin, J.J., M.K. Brady, and G.T.M. Hult, "Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments," *Journal of Retailing*, Vol. 76, No. 2:193-218, 2000.



- Deci, E.L. and R.M. Ryan, *Intrinsic Motivation and Self-Determination in Human Behavior*, New York: Plenum, 1985.
- Deng, L., D.E. Turner, R. Gehling, and B. Prince, "User experience, satisfaction, and continual usage intention of IT," *European Journal of Information Systems*, Vol. 19, No. 1:60-75, 2010.
- Eggert, A. and W. Ulaga, "Customer perceived value: a substitute for satisfaction in business markets?" *Journal of Business & industrial marketing*, Vol. 17, No. 2/3:107-118, 2002.
- Eid, M.I., "Determinants of e-commerce customer satisfaction, trust, and loyalty in Saudi Arabia," *Journal of electronic commerce research*, Vol. 12, No. 1 : 78-93, 2011.
- Eidelman, S. and C.S. Crandall, "Bias in favor of the status quo," *Social and Personality Psychology Compass*, Vol. 6, No. 3:270-281, 2012.
- Ergün, G., P.R. Stopher, and H.M. Al-Ahmadi, "Captivity revisited," *Journal of Transportation Engineering*, Vol. 125, No. 1:1-7, 1999.
- Fornell, C. and D.F. Larcker, "Evaluating structural equation models with unobservable and measurement error," *Journal of Marketing Research*, Vol. 18:39-50, 1981.
- Fornell, C., "A national customer satisfaction barometer: The Swedish experience," *Journal of Marketing*, Vol. 56, No. 1:6-21, 1992.
- Garton, L.C.H. and B. Wellman, "Studying online social networks," *Journal of Computer Mediated Communication*, Vol. 3, No. 1:JCMC313, 1997.
- Gefen, D. and D.W. Straub, "A Practical Guide to Factorial Validity Using PLS-Graph: Tutorial and Annotated Example," *Communications of AIS*, Vol. 16, No. 1:91-109, 2005.
- Gwinner, K.P., D.D. Gremler, and M.J. Bitner, "Relational benefits in services industries: The customer's perspective," *Journal of the Academy of Marketing Science*, Vol. 26, No. 2:101-114, 1998.
- Harman, H.H., "Modern Factor Analysis," University of Chicago Press, Chicago, 1976.
- Haythornthwaite, C., "Social networks and internet connectivity effects," *Information, Communication & Society*, Vol. 8, No. 2:125-147, 2005.
- Haythornthwaite, C., "Strong, weak, and latent ties and the impact of new media," *The Information Society*, Vol. 18, No. 5:385-401, 2002.
- Haythornthwaite, C. and B. Wellman, "Work, friendship, and media use for information exchange in a networked organization," *Journal of the American Society for Information Science*, Vol. 49, No. 12:1101-1114, 1998.
- Holbrook, M.B., "The nature of customer's value: an axiology of service in consumption experience," *Service quality: New directions in theory and practice*, R.T. Rust and R.L. Oliver (eds.), Sage Publications, Thousand Oaks, CA, pp. 21-71, 1994.
- Hsieh, P.J. and W.S. Lin, "Explaining resistance to system usage in the PharmaCloud: A view of the dual-factor model," *Information & Management*, Vol. 55, No. 1:51-63, 2018.
- Hsu, M.H., C.M. Chang, and L.W. Chuang, "Understanding the determinants of online repeat purchase intention and moderating role of habit: The case of online group-buying in Taiwan," *International Journal of Information Management*, Vol. 35, No. 1:45-56, 2015.
- Hsu, H.M., J.S.C., Hsu, S.Y., Wang, and I.C. Chang, "Exploring the effects of unexpected outcome on satisfaction and continuance intention," *Journal of Electronic Commerce Research*, Vol. 17 No. 3:239-255, 2016.
- Huang, H.Y., "Examining the beneficial effects of individual's self-disclosure on the social network site," *Computers in Human Behavior*, Vol. 57:122-132, 2016.
- Huang, H.Y., L.Y. Lee, and S.P. Shih, "The antecedents of individual's commitments toward continuous using social network site," *Proceedings of the 20th Pacific Asia Conference on Information Systems (PACIS 2016)*, Chiayi, Taiwan, June 27- July 1 2016.
- Huang, H.Y., S.P. Shih, and Y.C. Kuo, "Exploring an individual's inertia toward the social network sites," *the 23rd Americas Conference on Information Systems (AMCIS 2017)*, Boston, MA, August 2017.
- Huang, M.H. and S. Yu, "Are consumers inherently or situationally brand loyal? A set inter correlation account for conscious brand loyalty and non-conscious inertia," *Psychology and Marketing*, Vol. 16, No. 6:523-545, 1999.
- Hair, J.F., W.C. Black, B.J. Babin, and R.E. Anderson, *Multivariate Data Analysis*, NJ, Upper Saddle River: Prentice Hall, 2009.
- Jarvis, C.B., S.B. MacKenzie, and P.M. Podsakoff, "A critical review of construct indicators and measurement model misspecification in marketing and consumer research," *Journal of Consumer Research*, Vol. 30, No. 2:199-218, 2003.
- Johnson, M.D. and C.A. Fornell, "A framework for comparing customer satisfaction across individuals and product categories," *Journal of Economic Psychology*, Vol. 12, No. 2:267-286, 1991.

- Jones, M.A., D.L. Mothersbaugh, and S.E. Beatty, "Switching barriers and repurchase intentions in services," *Journal of Retailing*, Vol. 76, No. 2:259-274, 2000.
- Kahneman, D. and A. Tversky, "Prospect theory: An analysis of decision under risk," *Econometrica*, Vol. 47, No. 2:263-292, 1979.
- Kahneman, D., J.L. Knetsch, and R.H. Thaler, "Anomalies the endowment effect, loss aversion, and status quo bias," *Journal of Economic Perspectives*, Vol. 5, No. 1:193-206, 1991.
- Kim, H., H. Chan, and S. Gupta, "Value-based adoption of mobile Internet: An empirical investigation," *Decision Support Systems*, Vol. 43, No. 1:111-126, 2007.
- Kim, H.W. and A. Kankanhalli, "Investigating user resistance to information systems implementation: A status quo bias perspective," *MIS Quarterly*, Vol. 33, No. 3:567-582, 2009.
- Kim, M.K., M.C. Park, and D.H. Jeong, "The effects of customer satisfaction and switching barrier on customer loyalty in Korean mobile telecommunication services," *Telecommunications policy*, Vol. 28, No. 2:145-159, 2004.
- Kim, M.J., C.K. Lee, and M. Bonn, "Obtaining a better understanding about travel-related purchase intentions among senior users of mobile social network sites," *International Journal of Information Management*, Vol. 37, No. 5:484-496, 2017.
- Kim, S.S., N.K. Malhotra, and S. Narasimhan, "Two competing perspectives on automatic use: a theoretical and empirical comparison," *Information Systems Research*, Vol. 16, No. 4: 418-432, 2005.
- Kim, Y.H., D.J. Kim, and K. Wachter, "A study of mobile user engagement (MoEN): Engagement motivations, perceived value, satisfaction, and continued engagement intention," *Decision Support Systems*, Vol. 56:361-370, 2013.
- Kline, R.B., *Principles and Practice of Structural Equation Modeling*. New York, NY: Guilford Press, 1998.
- Ko, D.G. and A.R. Dennis, "Profiting from knowledge management: The impact of time and experience," *Information Systems Research*, Vol. 22, No. 1:134-152, 2011.
- Kuo, Y.F., C.M. Wu, and W.J. Deng, "The relationships among service quality, perceived value, customer satisfaction, and post-purchase intention in mobile value-added services," *Computers in human behavior*, Vol. 25, No. 4:887-896, 2009.
- Kuo, Y.F., T.L. Hu, and S.C. Yang, "Effects of inertia and satisfaction in female online shoppers on repeat-purchase intention: The moderating roles of word-of-mouth and alternative attraction," *Managing Service Quality: An International Journal*, Vol. 23, No. 3:168-187, 2013.
- Levesque, T. and G.H.G. McDougall, "Determinants of customer satisfaction in retail banking," *International Journal of Bank Marketing*, Vol. 14, No. 7:12-20, 1996.
- Li, Z. and Y. Cheng, "From free to fee: exploring the antecedents of consumer intention to switch to paid online content," *Journal of Electronic Commerce Research*, Vol. 15, No. 4: 281-299, 2014.
- Li, J., M. Liu, and X. Liu, "Why do employees resist knowledge management systems? An empirical study from the status quo bias and inertia perspectives," *Computers in Human Behavior*, Vol. 65:189-200, 2016.
- Liang, H., N. Saraf, Q. Hu, and Y. Xue, "Assimilation of enterprise systems: The effect of institutional pressures and the mediating role of top management," *MIS Quarterly*, Vol. 31, No. 1:59-87, 2007.
- Lin, T.C., S.L. Huang, and C.J. Hsu, "A dual-factor model of loyalty to IT product-The case of smartphones," *International Journal of Information Management*, Vol. 35, No. 2:215-228, 2015.
- Lindbladh, E. and C.H. Lyttkens, "Habit versus choice: the process of decision-making in health-related behavior," *Social Science & Medicine*, Vol. 55, No. 3:451-465, 2002.
- Lu, H.P. and K.L. Hsiao, "The influence of extro/introversion on the intention to pay for social networking sites," *Information & Management*, Vol. 47, No. 3:150-157, 2010.
- Mamonov, S. and R. Benbunan-Fich, "Exploring factors affecting social e-commerce service adoption: The case of Facebook Gifts," *International Journal of Information Management*, Vol. 37, No. 6:590-600, 2017.
- Merriam-Webster Dictionary (2018). In: Merriam-Webster Dictionary. [online] Available at: <https://www.merriam-webster.com/dictionary/inertia> [Accessed 07 January, 2019].
- Neipp, J. and R. Zeckhauser, "Persistence in the choice of health plans," *Advances in Health Economics and Health Services Research*, Vol. 6:47-72, 1985.
- Oliver, R.L., *Satisfaction: A behavioral perspective on the consumer*, New York: McGraw-Hill, 1997.
- Oliver, R.L. and J.E. Swan, "Consumer perceptions of interpersonal equity and satisfaction in transactions: A field survey approach," *Journal of Marketing*, Vol. 53, No. 2:21-35, 1989.
- Oliver, R.L. and W.S. DeSarbo, "Response determinants in satisfaction judgments," *Journal of Consumer Research*, Vol. 14, No. 4:495-508, 1988.

- Oliver, R.L., "Measurement and evaluation of satisfaction process in retail setting," *Journal of Retailing*, Vol. 57:25-48, 1981.
- Patterson, P.G. and R.A. Spreng, "Modeling the relationship between perceived value, satisfaction and repurchase intentions in a business-to business, services context: an empirical examination," *International Journal of Service Industry Management*, Vol. 8, No. 5:414-434, 1997.
- Pavlou, P.A., H. Liang, and Y. Xue, "Understanding and mitigating uncertainty in online exchange relationships: a principal-agent perspective," *MIS Quarterly*, Vol. 31, No. 1:105-136, 2007.
- Peterson, R., "Relationship marketing and the customer," *Journal of the Academy of Marketing Science*, Vol. 23, No. 4:278-281, 1995.
- Petty, R.E. and J.T. Cacioppo, *Attitudes and persuasion: classic and contemporary approaches*. Dubuque, IA: William C. Brown Company Publishers, 1981.
- Pitta, D., F. Franzak, and D. Fowler, "A strategic approach to building online customer loyalty: integrating customer profitability tiers," *Journal of Consumer Marketing*, Vol. 23, No. 7:421-429, 2006.
- Podsakoff, P.M., S.B. MacKenzie, J.Y. Lee, and N.P. Podsakoff, "Common method biases in behavioral research: a critical review of the literature and recommended remedies," *Journal of Applied Psychology*, Vol. 88, No. 5: 879-903, 2003.
- Polites, G.L. and E. Karahanna, "Shackled to the status quo: The inhibiting effects of incumbent system habit, switching costs and inertia on new system acceptance," *MIS Quarterly*, Vol. 36, No. 1:21-42, 2012.
- Polites, G.L., "The duality of habit in information technology acceptance," Unpublished Ph.D. Dissertation, University of Georgia, Athens, GA, 2009.
- Ranaweera, C. and A. Neely, "Some moderating effects on the service quality-customer retention link," *International Journal of Operations and Production Management*, Vol. 23, No. 2:230-248, 2003.
- Ringle, C.M., S. Wende, A. Will, "SmartPLS 2.0." available at <http://www.smartpls.de>, 2005
- Roberts, N., D.E. Campbell, and L.R. Vijayasarathy, "Using information systems to sense opportunities for innovation: Integrating postadoptive use behaviors with the dynamic managerial capability perspective," *Journal of Management Information Systems*, Vol. 33, No. 1:45-69, 2016.
- Ronis, D.L., J.F. Yates, and J.P. Kirscht, "Attitudes, decisions, and habits as determinants of repeated behavior," *Attitude Structure and Function*, A.R. Pratkanis, S.J. Breckler, and A.G. Greenwald (eds.), Lawrence Erlbaum Associates, Hillsdale, NJ, pp. 213-239, 1989.
- Rosenstein, A.W. and A.E. Grant, "Reconceptualizing the role of habit: A new model of television audience activity," *Journal of Broadcasting & Electronic Media*, Vol. 41, No. 3:324-344, 1997.
- Rumelt, R.P., "Precis of inertia and transformation," *Resources in an evolutionary perspective: towards a synthesis of evolutionary and resource-based approaches to strategy*, C.A. Montgomery (ed.), Kluwer Academic Publishers, Norwell, MA, pp. 101-132, 1995.
- Rusbult, C.E., D. Farrell, G. Rogers, and A.G. Mainous, "Impact of exchange variables on exit, voice, loyalty, and neglect: An integrative model of responses to declining job satisfaction," *Academy of Management Journal*, Vol. 31, No. 3:599-827, 1988.
- Rust, R.T., V.A. Zeithaml, and K.N. Lemon, *Driving customer equity: How customer lifetime value is reshaping corporate strategy*, The Free Press, New York, NY, 2000.
- Petter, S., D. Straub, and A. Rai, "Specifying formative constructs in information systems research," *MIS Quarterly*, Vol. 31, No. 4:623-656, 2007.
- Salisbury, W.D., W. Chin, A. Gopal, and P. Newstead, "Research report: Better theory through measurement-developing an instrument to capture consensus on appropriation," *Information Systems Research*, Vol. 13, No. 1:91-103, 2002.
- Samuelson, W. and R. Zeckhauser, "Status quo bias in decision making," *Journal of Risk and Uncertainty*, Vol. 1, No. 1:7-59, 1988.
- Schwarz, G.M., "The logic of deliberate structural inertia," *Journal of Management*, Vol. 38, No. 2: 547-572, 2012.
- Shanmugam, M., S. Sun, A. Amidi, F. Khani, and F. Khani, "The applications of social commerce constructs," *International Journal of Information Management*, Vol. 36, No. 3:425-432, 2016.
- Shi, X., Z. Lin, J. Liu., and Y.K. Hui, "Consumer loyalty toward smartphone brands: the determining roles of deliberate inertia and cognitive lock-in," *Information & Management*, Vol. 55, No. 7:866-876, 2018.
- Shrout, P. and N. Bolger, "Mediation in experimental and nonexperimental studies: new procedures and recommendations," *Psychological Methods*, Vol. 7, No. 4:422-445, 2002.
- Sirdeshmukh, D., J. Singh, and B. Sabol, "Consumer trust, value, and loyalty in relational exchanges," *Journal of Marketing*, Vol. 66, No. 1:15-37, 2002.

- Sledgianowski, D.S. and S. Kulviwat, "Using social network sites: The effects of playfulness, critical mass and trust in a hedonic context," *Journal of Computer Information Systems*, Vol. 49, No. 4:74-83, 2009.
- Sobel, M.E. "Asymptotic confidence intervals for direct effects in structural equation models," *Sociological Methodology*, S. Leinhardt (ed.), Washington, DC: American Sociological Association, pp. 290-312, 1982.
- Solomon, M.R., Consumer Behavior (6th edition), NJ, Englewood Cliffs, Prentice-Hall, 2007.
- Strombom, B.A., T.C. Buchmueller, and P.J. Feldstein, "Switching costs, price sensitivity and health plan choice," *Journal of Health Economics*, Vol. 21, No. 1:89-116, 2002.
- Sweeney, J.C., G.N. Soutar, and L.W. Johnson, "Retail service quality and perceived value," *Journal of Retailing and Consumer Services*, Vol. 4, No. 1:39-48, 1997.
- Triandis, H.C., "Values, attitudes, and interpersonal behavior," *Nebraska Symposium on Motivation, 1979: Beliefs, Attitudes, and Values*, H.E.Jr. Howe, and M.M. Page (eds), University of Nebraska Press, Lincoln, NE, pp. 195-259, 1980.
- Tsai, H.T. and H.C. Huang, "Determinants of e-repurchase intentions: an integrative model of quadruple retention drivers," *Information & Management*, Vol. 44, No. 3:231-239, 2007.
- Turnball, L.R. and D.T. Wilson, "Developing and protecting profitable customer relationships," *Industrial Marketing Management*, Vol. 18, No. 3:233-238, 1989.
- Vance, A., P., Benjamin Lowry, and D. Eggett, "Increasing accountability through user- interface design artifacts: a new approach to addressing the problem of access-policy violations," *MIS Quarterly*, Vol. 39, No. 2:345-366, 2015.
- Venkatesh, V., M.G. Morris, G.B. Davis, and F.D. Davis, "User acceptance of information technology: Toward a unified view," *MIS Quarterly*, Vol. 27, No. 4:425-478, 2003.
- Verhoef, P.C. "Understanding the effect of customer relationship management efforts on customer retention and customer share development," *Journal of Marketing*, Vol. 67, No. 4:30-45, 2003.
- Verplanken, B. and H. Aarts, "Habit, attitude, and planned behaviour: is habit an empty construct or an interesting case of automaticity?" *European Review of Social Psychology*, Vol. 10, No. 1:101-134, 1999.
- Verplanken, B. and S. Orbell, "Reflections on past behavior: A self-report index of habit strength," *Journal of Applied Social Psychology*, Vol. 33, No. 6:1313-1330, 2003.
- Vogel, V., H. Evanschitzky, and B. Ramaseshan, "Customer equity drivers and future sales," *Journal of Marketing*, Vol. 72, No. 6:98-108, 2008.
- Wang, J.C. and M.J. Chiang, "Social interaction and continuance intention in online auctions: A social capital perspective," *Decision Support Systems*, Vol. 47, No. 4:466-476, 2009.
- Wellman, B., J. Salaff, D. Dimitrova, L. Garton, M. Gulia, and C. Haythornthwaite, "Computer networks as social networks: Collaborative work, telework, and virtual community," *Annual review of sociology*, Vol. 22, No. 1:213-238, 1996.
- White, L. and V. Yanamandram, "Why customers stay? Reasons and consequences of inertia in financial services," *Managing Service Quality*, Vol. 14, No. 2/3:183-194, 2004.
- Wood, W. and J.M. Quinn, The power of repetition in daily life: habits and intentions guide behavior. Unpublished Manuscript, Duke University, Durham, NC, 2004.
- Wu, L.W., "Inertia: Spurious loyalty or action loyalty?" *Asia Pacific Management Review*, Vol. 16, No. 1:31-50, 2011.
- Xu, C., D. Peak, and V. Prybutok, "A customer value, satisfaction, and loyalty perspective of mobile application recommendations," *Decision Support Systems*, Vol. 79:171-183, 2015.
- Yang, Z.L. and R.T. Peterson, "Customer perceived value, satisfaction, and loyalty: The role of switching costs," *Psychology and Marketing*, Vol. 21, No. 10:799-822, 2004.
- Ye, C., D. Seo, K.C. Desouza, S.R.P. Sangareddy, and S. Jha, "Post-Adoption Switching Between Technology Substitutes," *Proceedings of the 27th International Conference on Information Systems*, Vol. 116:1941-1958, Milwaukee, WI, 2006.
- Ye, G., "The locus effect on inertia equity," *Journal of Product and Brand Management*, Vol. 14, No. 3:206-210, 2005.
- Yen, C. and C.M. Chang, "Unity is strength: understanding users'group buying behavior in Taiwan from a collectivism perspective," *Journal of Electronic Commerce Research*, Vol. 16, No. 2:109-122, 2015.
- Yen, Y.S., "Exploring Perceived Valuein Social Networking Sites: The Mediation of Customer Satisfaction," *International Journal of Computer and Information Technology*, Vol. 2, No. 3:386-391, 2013.
- ZDNet, "Unfollowing social media: You're falling out of love with Facebook, Instagram, Snapchat, Twitter," available at <http://www.zdnet.com/article/unfollowing-social-media-youre-falling-out-of-love-with-facebook-instagram-snapchat-twitter/>, 2016.

- Zeithaml, V.A., "Consumer perceptions of price, quality and value: A means-end model and synthesis of evidence," *Journal of Marketing*, Vol. 52, No. 3:2-22, 1988.
- Zeithaml, V.A., L.L. Berry, and A. Parasuraman, "The behavioral consequences of service quality," *Journal of Marketing*, Vol. 60, No. 2:31-46, 1996.
- Zhang, X., X. Guo, Y. Wu, K.H. Lai, and D. Vogel, "Exploring the inhibitors of online health service use intention: A status quo bias perspective," *Information & Management*, Vol. 54, No. 8:987-997, 2017.
- Zhao, Q., C.D. Chen, J.L. Wang, and K.J. Wang, "Study of factors influencing mobile ticketing adoption: Status quo bias perspective," *Journal of Marine Science and Technology*, Vol. 24, No. 5:926-937, 2016.
- Zhou, Z., Y. Fang, D.R. Vogel, X.L. Jin, and X. Zhang, "Attracted to or locked in? Predicting continuance intention in social virtual world services," *Journal of Management Information Systems*, Vol. 29, No. 1:273-306, 2012.

## Appendix A. Items and Scales

### Pretest and Pilot Test

The measurement of this study was reviewed by two authors before conducting a pretest and pilot test. The purpose of the pretest was to verify the logical consistency, ease of understanding, wording, and appropriateness of the instruments. Subjects of the pretests included two graduate students and one faculty member who were familiar with Facebook in Taiwan. These three experts had prior Facebook experience. The experts were able to raise questions about the instruments at any time since the pretest was conducted in an open-ended format. Throughout the pretest process, the three experts suggested that the phrasing of certain items could be revised. The wording of the items was slightly revised after adopting the experts' suggestions.

Following the pretest, a pilot test was conducted of which the samples were real Facebook membership. A pilot test was conducted with 196 Facebook memberships. A total of 29 items were received for reliability and factor analysis. The results show that Cronbach's alphas were all above 0.85, which indicates that the measurements were quite consistent with the constructs to be measured. The results of the factor analysis show that the first item of the inertia could not be discriminated from the other items of the same construct, and the factor loading of the fourth item of perceived value was below 0.7. Therefore, the items were removed from further analysis. Twenty-seven questionnaires remained in the measurements. The results indicated that the measurement model fulfills the criteria for reliability, convergent validity, and discriminant validity.

Construct	Operational Definition, Instructions, and Items	Seven-Point Likert Scale
Awareness [Polites & Karahanna 2012]	Individuals who use the SNS without utilizing conscious awareness.	
	Rate the extent to which you agree with the following statements:	
	1. Whenever I need to establish or maintain a relationship with others, I choose to use Facebook without even being aware of having made the choice.	Strongly disagree– Strongly agree
	2. Whenever I need to establish or maintain a relationship with others, I unconsciously start using Facebook.	
	3. Choosing Facebook when I want to establish or maintain a relationship with others is something I do without being aware of it.	
4. Choosing Facebook to establish or maintain a relationship with others is something I do unconsciously.		
Mental Efficiency [Polites & Karahanna 2012]	Individuals who use the SNS to save mental effort.	
	Rate the extent to which you agree with the following statements:	
	5. I do not need to devote a lot of mental effort to deciding whether I will use Facebook to establish or maintain a relationship with others.	Strongly disagree– Strongly agree
	6. Selecting Facebook to establish or maintain a relationship with others does not involve much thinking.	
7. Choosing Facebook to establish or maintain a relationship with others requires little mental energy.		
Controllability [Polites & Karahanna 2012]	Individuals who use the SNS are controllable to a limited extent.	
	Rate the extent to which you agree with the following statements:	
	8. I [would] find it difficult to overcome my tendency to use Facebook to establish or maintain a relationship with others.	Strongly disagree– Strongly agree
	9. It is [would be] difficult to control my tendency to use Facebook to establish or maintain a relationship with others.	
10. It is [would be] difficult to restrain my urge to use Facebook to establish or maintain a relationship with others.		
Interpersonal Relationships [Jones et al. 2000]	The personal bonds that develop between individuals and their friends on the SNS.	
	Rate the extent to which you agree with the following statements:	
	11. I feel like there is a “bond” between at least one friend on Facebook and myself.	Strongly disagree– Strongly agree
	12. I have developed a personal friendship with at least one friend on Facebook.	
	13. I have somewhat of a personal relationship with at least one friend on Facebook.	
	14. I am friends with at least one friend on Facebook.	
15. At least one friend on Facebook is familiar with me, personally.		

<b>Inertia</b> [Anderson & Srinivasan 2003; Kuo et al. 2013; Ranaweera & Neely 2003]	<i>The individuals' continued use of the SNS is undertaken passively and without much thought.</i>		
	Rate the extent to which you agree with the following statements:		
	16. Unless I became very dissatisfied with Facebook, changing to a new SNS would be a bother.	Strongly disagree– Strongly agree	
	17. I would find it difficult to stop using Facebook.		
18. I find it habitual to interact with others from Facebook.			
<b>Satisfaction</b> [Bhattacharjee 2001]	<i>The individual's contentment with his or her prior SNS usage experience</i>		
	Rate the extent to which you agree with the following statements:		
	19. Overall, using Facebook makes me feel pleased.	Strongly disagree– Strongly agree	
	20. Overall, using Facebook makes me feel content.		
	21. Overall, using Facebook makes me feel delighted.		
<b>Perceived Value</b> [Levesque & McDougall 1996; Kim et al. 2007; Sirdeshmukh et al. 2002]	<i>The individuals' overall evaluation of the utility of using the SNS</i>		
	Rate the extent to which you agree with the following statements:		
	22. Compared to alternative SNSs, Facebook offers attractive service costs.	Strongly disagree– Strongly agree	
	23. Compared to alternative SNSs, Facebook charges me fairly for similar services.		
	24. Compared to alternative SNSs, Facebook provides more free services.		
<b>Continuance Intention</b> [Bhattacharjee, 2001]	<i>The individual's willingness to revisit the SNS</i>		
	Rate the extent to which you agree with the following statements:		
	25. If I could, I would like to continue using Facebook in the future.	Strongly disagree– Strongly agree	
	26. It is likely that I will continue using Facebook in the future.		
	27. I plan to continue using Facebook in the future.		