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How Can We Do More Satisfying Shopping in Mobile Distribution Channels: Focusing on Prudence Shopping Psychology*

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Abstract

Purpose: The aim of this study is to explore the psychological characteristics of mobile shopping users within mobile environment contexts. **Research design, data and methodology:** A conceptual framework based on shopping satisfaction theory was developed, and a research model was proposed to examine the relationships between emotional control (EC), emotional practice (EP), prudential buying tendency (PBT), prudential buying urge (PBU), prudential buying behavior (PBB), and mobile shopping satisfaction (MSS) in mobile distribution channels. To validate the research model, 125 survey responses from mobile shoppers were collected, and the relationships among EC, EP, PBT, PBU, PBB, and MSS were analyzed using the PLS structural equation model. **Results:** The empirical analysis revealed that EC did not impact PBT, EP had a significant effect on PBT. Furthermore, PBT influenced both PBU and PBB, and PBU had a significant effect on PBB. Finally, this study discovered PBB influences MSS. **Conclusions:** This study provides the relationships among EC, EP, PBT, PBU, PBB, and MSS and valuable insights for enhancing consumer shopping satisfaction in mobile distribution channels. Its theoretical contributions include proposing a basis for personalized and differentiated mobile CRM for mobile commerce companies and encouraging further research on prudent purchasing within mobile commerce studies.

Keywords : Prudential Shopping Tendency, Urge, Behavior, Mobile Shopping, Satisfaction, Emotional Control, Distribution

JEL Classification Code: M10, M30, M31, L89

1. Introduction

Mobile shopping has experienced significant growth due to recent advancements in mobile technology (Maduku & Thusi, 2023; Hu et al., 2023). As reported by South Korea's National Statistical Office on March 3, 2023, online shopping transactions in the country reached KRW 17,919.2 billion (i.e., approximately 13.8 billion US dollar) in January 2023, a 6.3% increase (i.e., KRW 1,063.4 billion, that is approximately 82 billion dollar) compared to January 2022. Of these transactions, mobile shopping accounted for KRW 13,492.7 billion (i.e., approximately 10.4 billion US dollar), reflecting a 5.6% rise (i.e., KRW 713.5 billion that is approximately 55 billion dollar) compared to January 2022. Mobile shopping offers users added convenience by enabling them to quickly access shopping information and easily make purchases using their smart devices, making it a more attractive option than traditional internet shopping.

In General, consumers have focused on rational and reasonable shopping activities through various information

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searches in both offline shopping (Hirschman & Holdbrook, 1982) and online shopping (Kim et al., 2009). However, it has been revealed that not only rational judgement but also emotional judgment plays a role in actual offline consumer decision-making (Belk, 1988) and actual online consumer decision-making (Lim & Kim, 2022). Consequently, in this era of advanced technology, it is crucial to comprehend the experiences and emotions involved in the internet and mobile shopping processes. Goleman (1998) emphasized the significance of emotional characteristics (i.e., emotional intelligence) in human behavior. Emotional intelligence is a vital factor in human communication processes (Goleman, 1998). Mobile shopping represents a communication process between buyers and sellers within a mobile shopping environment. As such, emotional intelligence serves as a foundation for fostering more rational shopping behavior by enabling mobile shopping consumers to regulate and practice their emotions.

The mobile distribution channels have recently adopted advanced information technology, such as streamlined shopping processes, effortless information searches, and convenient payment systems (Gao et al., 2023; Chopdar et al., 2022; Thu et al. 2023). This trend has prompted consumers to favor emotional rather than rational shopping experiences (Pappas et al., 2017). In addition, e-commerce companies have been exploiting visual effects to induce consumers' online impulse buying behavior (IBB) (Wells et al., 2011). As a result, impulse buying in mobile shopping activities has surged, giving rise to various issues. Impulse buying is currently being explored from a wide range of perspectives, including consumer sentiment, website design, and consumer behavior (Parboteeah et al., 2009; Wells et al., 2011; Tibert & van Dolen, 2011; Liu et al., 2013). These studies shed light on impulse buying in both offline shopping channels, such as impulse buying tendency (IBT), impulse buying urge (IBU), and impulse buying behavior (IBB) (Stern, 1962; Rook & Fisher 1995), and online counterparts (Hashim et al., 2023; Kimiagari & Malafe, 2021; Sun & Sun, 2024; Xu & Zhao, 2020)

However, research on prudent purchasing behavior remains limited within these contexts. Understanding impulsive purchases is unquestionably essential for mobile commerce companies to develop effective marketing strategies, but gaining insight into prudent purchases is equally crucial. The rationale behind this is that, in order to enhance customer satisfaction, adopting a positive approach is more important than a negative one just as psychology has evolved, initially concentrating on negative psychological phenomena and gradually shifting focus towards positive psychological phenomena. Generally, individuals who manage and practice their emotions effectively display greater prudence compared to those who do not, and consequently, exhibit lower impulsivity (Matthews et al., 2007). Mobile shopping users who utilize their emotions effectively are likely to experience satisfaction from their well-informed, careful decision-making process.

Therefore, this study aims to provide valuable insights for future mobile commerce companies to develop marketing strategies by examining the relationships between emotional control (EC), emotional practice (EP), prudent buying tendency (PBT), prudent buying urge (PBU), prudent buying behavior (PBB), and mobile shopping satisfaction (MSS) throughout the mobile distribution channels.

2. Theoretical Background and Hypotheses

2.1. Conceptual Framework

In recent years, consumers have increasingly favored purchasing products and services through mobile commerce (Chopdar et al., 2022). The driving factor behind this preference for mobile shopping is the convenience it provides. Unlike internet shopping, mobile shopping allows for effortless information searches and product purchases via mobile apps or mobile websites utilizing smartphones (Chopdar et al., 2022). In this study, we endeavor to analyze the relationship between EC, EP, PBT, PBU, PBB, and MSS among users engaged in mobile distribution channels.

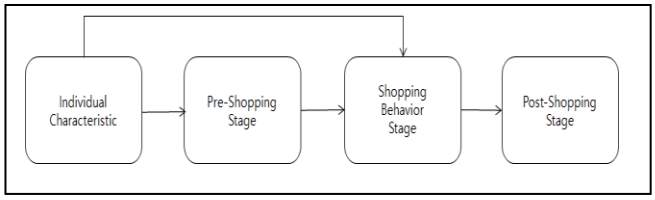

Figure 1: Theoretical Framework

In this study, we employed the post-acceptance model to develop our research framework. The post-acceptance model, also known as the expectation confirmation model, elucidates the continuous process of technology acceptance as proposed by Bhattacherjee (2001). He formulated a post-acceptance model for online banking services by drawing upon the customer satisfaction studies of Oliver (1980) and Oliver (1981), which comprise the expectation confirmation theory. Using this theory, Bhattacherjee (2001) described the ongoing usage intention of internet banking service users. Similarly, in this study, we constructed the framework of the mobile distribution channels. In alignment with the models presented in the research of McKnight et al. (2002), Bhattacherjee (2001), and Kim et al. (2009), segmenting it into pre-shopping, shopping behavior, and post-shopping stages. Consequently, we have developed a conceptual framework, as depicted in [Figure 1].

2.2. Emotional Intelligence

Emotional intelligence has been extensively investigated by various researchers, notably Goleman (1995), Mayer et al. (2000). The core attribute of emotional intelligence is identified as the ability to recognize, regulate, express, and manage one's own emotions as well as those of others (Goleman, 1995; Wong & Law, 2002). Presently, emotional intelligence research is active in fields beyond psychology, including business administration. In particular, it is studied within organizations that emphasize interpersonal relationships and has applications across diverse fields such as marketing, tourism, and management information systems. Zafar et al. (2021) revealed that emotional intelligence has a negative relationship with impulsive buying tendencies. Wei et al. (2023) conducted a study on the impact of online store employees' emotional intelligence and psychological empowerment on customers' intention to repurchase. Fihartini et al. (2023) revealed that emotional intelligence significantly influences shopping satisfaction and loyalty in the online setting.

This study investigates the influence of consumers' emotional intelligence on prudence in a mobile distribution channels. Goleman (1995), Wong and Law (2002) divided emotional intelligence into four components: self-emotion recognition, others' emotion recognition, EC, and EP. Among the four components, EC and EP (e.g., the ability to manage consumers' impulses and prudential willingness) are considered applicable to consumers participating in mobile distribution channels. These components are relevant in terms of expressing needs and prompting actions according to their emotional state (e.g., impulsivity and prudential status) within the shopping environment. Therefore, the research model for this study incorporates the variables of EC and EP to analyze the shopping behavior of mobile users.

2.3. Prudential Buying

Consumers often exhibit a propensity to express their unique individuality during information processing and persuasion, consequently forming urges and taking action to express themselves (Aaker & Lee, 2001). Similarly, in online shopping behavior, individual differences emerge in inclination, urge, and action. Many consumers engage in planned shopping behaviors, while some display unplanned and impulsive shopping tendencies. D'Antony and Shenson (1973) characterized impulsive buying as a sudden desire to make a purchase without prior planning. Likewise, Wolman (1973) contended that impulsivity stems from a tendency to act without thoughtful consideration, driven by a strong urge in impulsive shopping behaviors. In general, impulsiveness triggers IBU (Wells et al., 2011; Lim et al., 2017) and serves as an influential factor that induces IBB (Lim & Kim 2022).

The development of mobile technology, providing a more accessible shopping environment, has further facilitated impulsive buying behavior (Kim et al., 2009; Liu et al., 2013). Numerous studies have been conducted on impulse buying in internet shopping from various perspectives (Wells et al., 2011; Liu et al., 2013; Lim & Kim, 2022). Simultaneously, the surge in mobile technology has led to an increase in IBB on mobile shopping platforms (Chopdar et al., 2022). However, current research on mobile shoppers' impulsive purchases (e.g., relationships among tendencies, urges, and behavior) is insufficient, and studies focusing on prudent purchases, in contrast to impulsive ones, are scarce. Thus, investigating the prudent purchasing psychology and behavior of mobile shopping users is an urgent requirement. Prudence is a tendency to avoid unnecessary risks by adopting a cautious approach, characterized by not acting on impulse and regretting later (Christopher, 2006). In essence, prudence is the opposite of impulsiveness. We posit that, compared to impulsiveness in shopping behavior, prudence reduces subsequent regret or dissatisfaction and increases satisfaction. In this study, we introduce the concepts of PBT, PBU, and PBB as counterparts to IBT, IBU, and IBB, and explore their relationships with prudent buying activities (PBT, PBU, and PBB) and MSS in mobile distribution channels.

2.4. Shopping Satisfaction

Consumer satisfaction in shopping arises from the disparity between the anticipated value of a product prior to purchase and the perceived value after acquisition (Oliver, 1980). Consequently, when the value of goods and services obtained by consumers exceeds expectations, they experience purchase satisfaction (Tse & Wiltonm 1988; Oliver 1980). Customer satisfaction serves as a crucial evaluation metric for business management (Tse & Wiltonm, 1988; Oliver 1980; Fornell, 1992; Anderson et al., 1994). In the United States, the American Customer Satisfaction Index (ACSI) was devised to accurately measure and utilize customer satisfaction (Fornell, 1992). Presently, it is employed as a criterion for customer satisfaction assessment across diverse research areas (Ivanov et al., 2013). For instance, shopping satisfaction is a vital indicator in e-commerce studies (Kim et al., 2004; Ginting et al., 2023; Madhu et al., 2023; Zariman et al., 2023). Ginting et al. (2023) analyzed the impact of e-service quality, e-WOM, and customer trust on customer satisfaction, and ultimately examined their influence on customers' repurchase intentions. Zariman et al. (2023) revealed how the e-service quality of mobile commerce applications impacts the

enhancement of customer loyalty intention behavior among online shoppers using the adapted SERVQUAL model.
In business research, customer satisfaction measurement methods, such as those proposed by Tse and Wiltonm (1988) and Oliver (1980), are used to assess customer satisfaction within the marketing domain.

2.5. Research Hypotheses Development

As previously discussed, emotional intelligence and the shopping decision-making process are interconnected (Lim & Kim 2022). Belk (1988) argued that emotions play a role in the consumer decision-making process within the shopping industry. Among the components of emotional intelligence, EC and EP are particularly relevant to the decision-making process (Lim & Kim, 2022). In essence, emotional intelligence, as a cognitive attribute, influences IBU (Matthews et al., 2007; Lim & Kim, 2022). Thus, we propose that EC and EP impact the decision-making process (e.g., arousal of emotions) in shopping behavior. In other words, consumers who struggle to regulate their emotions may engage more in IBB during shopping. However, EC and EP can also affect prudence. As a result, shoppers who effectively employ their EC and EP abilities are more likely to exhibit prudent purchasing tendencies rather than impulsive buying. In simpler terms, EC and EP are likely to contribute to a higher PBT compared to IPB. Based on this understanding, this study hypothesizes that the EC and EP of mobile shopping users influence PBT.

[H1] Consumer's EC will have a positive (+) effect on their PBT in the mobile distribution channels.
[H2] Consumer's EP will have a positive (+) effect on their PBT in the mobile distribution channels.

As previously discussed, a shopper's IBT influences their IBU. IBT is an individual's shopping characteristic (Lim et al., 2017). Furthermore, in an online shopping environment, impulse purchasing urges are intentional traits that positively impact IPB, a behavioral characteristic (Lim & Kim, 2022). Hilgard (1980) posited that human attitudes consist of cognition, emotion, and behavioral intention. For instance, Lim and Kim (2022) explained that an individual's propensity, a cognitive attribute, affects impulse purchasing urges in shopping behavior. Moreover, an individual's impulsive psychological disposition influences impulse purchasing urges during the decision-making process of shoppers in e-commerce environments (Wells et al., 2011; Liu et al., 2013). The urge to purchase impulsively subsequently affects IPB (Verhagen & van Dolen, 2011). In addition, a shopper's personal propensity, shaped by experience and learning, ultimately influences shopping behavior (Lim & Kim, 2022). Prudent buying, as the opposite concept of impulsive buying, suggests that PBT, PBU, and PBB are also closely related to one another. Based on these discussions, this study proposes the following research hypotheses.

[H3] Consumer's PBT will have a positive (+) effect on PBU in the mobile distribution channels.
[H4] Consumer's PBU will have a positive (+) effect on PBB in the mobile distribution channels.
[H5] Consumer's PBT will have a positive (+) effect on PBB in the mobile distribution channels.

Previous research on offline shopping has shown that consumers typically experience shopping satisfaction or dissatisfaction based on the discrepancy between their pre-shopping product expectations and the perceived product quality after completing an offline shopping experience (Tse & Wiltonm, 1988). Impulsive repurchases generally involve unplanned product buying behaviors by shoppers. As a result, shopping behaviors are impulsive in situations where satisfaction expectations are not formed prior to purchasing a product. Consequently, it is challenging to perceive significant shopping satisfaction under non-prudent circumstances. Similarly, in mobile shopping, users are more likely to meet their expectations when they engage in prudent shopping with thorough information searches and preparation as opposed to impulsive, careless shopping. Based on this discussion, this study proposes the following hypothesis.

[H6] Consumer's PBB will have a positive (+) effect on MSS in the mobile distribution channels.

2.6. Research Model

As outlined in the theoretical background and research hypotheses above, this study presents a research model depicted in [Figure 2]. The model illustrates the relationships among mobile shopping users' EC, EP, PBT, PBU, PBB, and MSS within a mobile distribution channels.

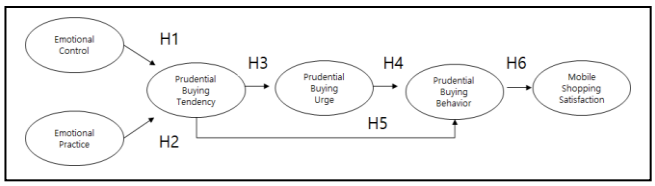

Figure 2: Research Model

3. Survey and Measurement

3.1. Variables

In this study, measurement variables and items are derived from previous research to validate the proposed hypotheses. The conceptual definitions and configurations for each variable's measurement items are as follows.

First, the dependent variable is set as MSS within mobile distribution channels. MSS refers to the overall satisfaction shoppers experience after completing shopping behaviors using their smart-phones. In this study, we adopt the satisfaction scale of Kim et al. (2004), which was initially developed by Lee and Turban (2001) and Spreng et al. (1996). Second, the concept of PBT is derived from the opposite concept of impulsive buying tendency proposed by Rook and Fisher (1995). PBT refers to mobile shoppers' personal propensity to shop prudently in mobile distribution channels. Prudence, a psychological characteristic contrary to impulsivity, is considered one of the individual's personality strength factors (Christopher, 2006). In this study, we develop a PBT scale specifically for mobile shopping users. Third, PBU refer to mobile shopping users' cautious purchasing urges in mobile distribution channels. This concept is derived from various previous studies (Rook & Fisher, 1995; Parboteeah et al., 2009; Wells et al., 2011). Similarly, we develop a PBU scale in this study, referencing Christopher (2006). Fourth, PBB denote consumer actions of carefully considering and shopping within mobile distribution channels. This concept opposes impulsive buying behavior, and we derive measurement variables and items from impulsive buying behavior research (Rook & Fisher, 1995; Verhagen & van Dolen, 2011). Psychologist Christopher (2006) suggested prudence as a characteristic of an individual's personality, and we develop a PBB measure based on the concept of prudence in mobile distribution channels this study. Fifth, EC and EP serve as variables related to individuals' emotions in human communication. Both EC and EP are components of emotional intelligence and based on Wong and Law's (2002) research, we utilize measurement concepts and items.

3.2. Survey

In this study, we employed a 7-point multi-item scale to assess mobile shopping users' EC, EP, PBT, PBU, PBB, and MSS. The survey participants included university students, graduate students, social education center students, and university faculty with prior mobile shopping experience. Data collection was conducted using Google Drive (http://drive.google.co.kr), and statistical analysis was performed using SMART-PLS.

In this study, we collected 125 responses from individuals (e.g., university student, faculty member and university staff) with mobile shopping experience in Republic of Korea. The demographic characteristics of the respondents are as follows: Regarding gender distribution, 73 respondents were male, and 52 were female. In terms of education level, there were 6 high school graduates, 3 college attendees, 1 college graduate, 82 university students, 13 university graduates, 14 postgraduate students, and 6 postgraduate graduates. Concerning occupational characteristics, 103 respondents were students, 15 were office workers, 3 were professionals, 1 was a homemaker, 1 was unemployed, and 2 had other occupations. Examining daily internet usage time, 15 respondents used the internet less than 1 hour, 38 used it between 1 and 2 hours, 37 used it between 2 and 3 hours, 18 used it between 3 and 4 hours, and 17 used it for more than 4 hours. Regarding monthly mobile shopping frequency, 54 respondents shopped once, 33 shopped twice, 14 shopped three times, 11 shopped four times, 8 shopped five times, and 5 shopped more than seven times.

4. Empirical Analysis Results

4.1. Measurement Model

In this study, we assessed the reliability and validity of the measurement model using the Partial Least Squares (PLS) approach. The PLS analysis results, as depicted in Table 1, evaluated the reliability of each study variable using Composite Reliability (CR) and Cronbach's Alpha (CA) (Hair et al., 2013).

Table 1: Reliability and validity

Variables	AVE	CR	CA	References
EC	0.78	0.93	0.91	Wong & Law (2002)
EP	0.72	0.91	0.87	Wong & Law (2002)
MSS	0.74	0.92	0.89	Kim, et al. (2004), Lee & Turban (2001), Spreng et al. (1996).
PBT	0.72	0.84	0.61	Christopher (2006), Rook & Fisher (1995)
PBU	0.75	0.90	0.83	Christopher (2006), Rook & Fisher (1995), Parboteeah, et al., (2009), Wells, et al.,(2011)
PBB	0.69	0.87	0.78	Christopher, (2006), Rook & Fisher (1995), Verhagen & van Dolen (2011)

Generally, CR and CA values of 0.7 or higher are considered satisfactory. The reliability values for EC, EP, PBT, PBU, PBB, and MSS exceeded 0.7, indicating adequate reliability. However, for PBT, the CA value was slightly lower at 0.61, while the CR value was 0.84. Although PBT's CA value was marginally low, it still met the minimum criterion of 0.6 for reliability assessment. Thus, we determined that the variables in this study were generally suitable for empirical analysis.

Table 2: Correlation coefficient and AVE

Variables	EC	EP	MSS	PBT	PBU	PBB

EC	0.88*	·	·	·	·	·
EP	0.45	0.85*	·	·	·	·
MSS	0.09	0.27	0.86*	·	·	·
PBT	0.22	0.32	0.09	0.85*	·	·
PBU	0.15	0.35	0.11	0.71	0.87*	·
PBB	0.30	0.37	0.17	0.76	0.74	0.83*
※ * = the square root value of AVE (Average Variance Extracted)						

Generally, as depicted in Table 2, discriminant validity for the study variables is established when the square root value of AVE (Average Variance Extracted) exceeds the correlation values of other variables (Hair et al., 2013). The measurement variables in this study were found to meet the fundamental requirements for discriminant validity. Specifically, EC equaled 0.88, EP was 0.85, MSS reached 0.86, PBT amounted to 0.85, PBU stood at 0.87, and PBB was 0.83. These values were greater than other correlation coefficients, confirming that the study variables employed in this research satisfy discriminant validity.

4.2. Structural Model Results

Next, to examine the research hypotheses, we analyzed the causal relationships between independent and dependent variables using PLS analysis for the research model. Due to the limited data for the structural model analysis, an empirical analysis was conducted with 1000 bootstrap resampling iterations (Hair et al., 2013). Upon reviewing the structural model analysis results, the explanatory power (R-squared) of this research model was 0.11 for PBT, 0.51 for PBU, 0.65 for PBB, and 0.03 for MSS. Although the explanatory power for some dependent variables in this research model was relatively low, most indicators appeared to have sufficient explanatory power. The results of each hypothesis test are as follows.

The results of H1, H2, H3, H4, H5, and H6 verification, from the perspective of emotional intelligence, are as follows. Firstly, H1, which posited that the EC of mobile shopping users has a positive effect on PBT, was rejected (beta = .1, t-value = .85). In other words, EC was found not to influence PBT. Secondly, H2 asserted that mobile shopping users' EP has a positive effect on their PBT and was supported at a significance level of .01 (beta = .27, t-value = 2.54*). H3 was accepted at a significance level of .001 (beta = .71, t-value = 16.16***). H4, which examined the relationship between shopping users' PBU and PBB in the mobile distribution channels, was accepted at a significance level of 0.01 (beta = .47, t-value = 6.98***). H5 proposed that mobile shopping users with a PBU would perform PBB at a significance level of .001 (beta = .4, t-value = 5.16***). Lastly, H6 was rejected (beta = .17, t-value = 1.88). To summarize, H1 and H6 were rejected, while H2, H3, H4, and H5 were supported.

Table 3: Empirical analysis results

Hypotheses	Beta	t-value	Result
[H1] EC → PBT	.1	.85	Rejected
[H2] EP → PBT	.27	2.54	Accepted*
[H3] PBT → BPU	.71	16.16	Accepted***
[H4] PBT → PBB	.47	6.98	Accepted***
[H5] PBU → PBB	.4	5.16	Accepted***
[H6] PBB → MSS	.17	1.88	Rejected
※ t > 3.30 (p<0.001***), t > 2.58 (p<0.01**), t>1.96 (p<0.05*)			
※ Bootstrapping times = 1000			

5. Conclusions

5.1. Discussions

The findings from this research can be summarized as follows.

First, H1 was rejected, contrary to our initial expectations, indicating that EC did not influence PBT. In this study, PBT is the opposite concept of IBT, which has a strong inverse relationship with emotional intelligence. Generally, emotional intelligence and impulse buying are considered to have a close association (Matthews et al., 2007; Lim & Kim, 2022). Thus, we hypothesized that EC would have a significant impact on PBT. However, the H1 result deviated from our expectations, suggesting a need for more in-depth analysis of the relationship between PBT and EC.

Second, H2 was supported, indicating that EC affected PBB. Therefore, mobile e-commerce companies should recognize the relationship between shoppers' emotional intelligence and prudence, which necessitates segmenting and managing cautious customers through targeted marketing.

Third, H3 was supported, implying that shoppers who effectively use PBT can perform more PBU. As mobile shopping users' preferences and desires are closely related, sales strategies for utilitarian and hedonic products based on this relationship could yield beneficial results.

Fourth, H4 was supported, examining the relationship between PBU and PBB usage within a mobile distribution channels. The results showed that users with PBT engaged in PBU, and those with PBT also performed PBB.

Fifth, H5 was supported, revealing that cautious users with PBU tend to exhibit careful mobile shopping behavior. Accordingly, mobile shopping companies should implement customer relationship management based on these characteristics.

Lastly, H6 was rejected, demonstrating that no relationship exists between PBB and MSS. The rejection of H6 might be attributed to excessive prudence leading to decision-making delays. Generally, excessive information search activities can result in time-consuming problems due to the over-exploration of shopping information. To further investigate the H6 rejection issue, future studies should conduct an in-depth analysis of varying PBB levels (e.g., high, moderate, low PBB) and customer satisfaction.

5.2. Implications

This study examines the impact of emotional intelligence (i.e., EC and EP), prudent buying activities (i.e., PBT, PBU, and PBB) and the effect of PBB on MSS within a mobile distribution channels. The practical and theoretical implications of this study are as follows.

First, this study empirically demonstrates that EC influences purchase prudence (i.e., PBT, PBU, and PBB) in mobile distribution channels. Consequently, EC plays a crucial role in the interactions between mobile shopping users and mobile shopping platforms, such as apps. Mobile commerce companies should, therefore, develop CRM (customer relationship management) and marketing strategies that consider the relationships among EP, EC, PBT, PBU and PBB in the mobile distribution channels.

Second, the practical implications of this study include validating the influence relationship between PBT, PBU, and PBB concerning consumers' prudent buying activities amid the growth of mobile shopping. Conversely, this study does not empirically confirm that PBB significantly affects MSS. Today, mobile commerce companies must strive to enhance the satisfaction of mobile shoppers. In other words, they should focus on creating a mobile distribution channels that encourages greater prudence, preventing issues such as complaints and returns stemming from shopping dissatisfaction. For instance, providing detailed purchasing process guides, comprehensive product descriptions, a simple, secure payment system, and a visually stable shopping environment can promote purchase prudence. These efforts can help mobile commerce companies achieve higher customer satisfaction and foster customer loyalty.

The theoretical implications of this study lie in its introduction of the concept of prudent purchase, countering impulsive purchase, which has garnered attention in business studies, into mobile shopping behavior analysis for the first time. Currently, research on purchase prudence in mobile distribution channels is scarce. Given the high convenience of mobile shopping compared to internet shopping, more careful consumer behavior is necessary to avoid problematic shopping decisions. This study investigates PBT, PBU, and PBB related to prudent purchasing activities in a mobile distribution channels.

Its theoretical contributions include proposing a basis for personalized and differentiated mobile CRM for mobile commerce companies and encouraging further research on prudent purchasing within mobile commerce studies. Furthermore, this study has academic significance in introducing the concept of emotional intelligence (i.e., EC and EP), a variable gaining traction for its critical influence on mobile shopping users' psychology and behavior, into mobile shopping research. Current studies on mobile shopping consumers' buying behavior, which reflect emotional intelligence, are limited. Hence, this research provides a foundation for stimulating continued investigation into the emotional intelligence of mobile shopping users.

5.3. Limitations and Future Study Directions

First, acquiring sufficient data is crucial for obtaining reliable results in a structural equation model's empirical analysis. In this study, the causal relationship between the dependent and independent variables is examined using the bootstrapping method and a small sample size, primarily consisting of college students. Consequently, the results may not be generalizable due to the limited data collected from various mobile shopping user classes. Therefore, caution should be exercised when applying the study's findings to real-world mobile shopping businesses. In future research, obtaining a larger sample size and analyzing various characteristics of mobile shopping users is essential.

Second, Verplanken and Herabadi (2001) suggested that impulse psychology and behaviors differ based on individual tendencies in impulse buying. In this study, consumer characteristics (such as mobile device type, economic level, internet and mobile shopping usage level) are not considered when analyzing the relationships among mobile shopping users' EC, EP, PBT, PBU, PBB, and MSS. This limitation restricts the depth of the analysis in understanding the distinct shopping behavior traits of mobile shopping users. Therefore, future studies should encompass the individual differences of a more diverse mobile shopping user base.

Third, this study faces limitations in verifying the H6 hypothesis, which is derived from previous studies and concerns the relationship between prudent buying behavior and shopping satisfaction. As mentioned above, future research should explore the moderating effect of various levels of PBB and customer satisfaction to provide a more comprehensive understanding.

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