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Why do people purchase virtual goods? A uses and gratification (U&G) theory perspective

Abstract

Few literature studies have investigated the relationships between different uses and gratifications (U&G) of mobile instant messaging (MIM), continuation, and purchase intentions. To address this gap, the researcher aimed to examine the influence of the content, social, process, and technology U&Gs of
MIM, continuation intentions of MIM, and purchase intentions towards virtual goods. A comprehensive research model was developed based on the U&G theory, which was tested using cross-sectional data from 309 Japanese MIM users. The study considered six different U&Gs of MIM as independent variables and purchase intentions towards stickers and continuation intentions towards MIM as dependent variables. The study results suggest that exposure U&G has a significant positive association with MIM sticker purchase intentions. The entertainment and affection U&G are positively associated with continuation intentions towards MIM use. The study contributes to the literature by investigating six U&Gs that motivate MIM users to have both positive purchase intentions towards virtual goods, such as stickers, and continuation intentions toward MIMs. The study has significant theoretical and practical implications for both researchers and practitioners who are interested in virtual goods, the virtual economy, MIM apps, social media, new media, and the service economy.

Keyword: Continuation intentions, mobile instant messaging, purchase intentions, social media, uses and gratifications

1. Introduction

The emergence of mobile instant messaging (MIM) apps has changed the entire landscape of communication practices. MIM apps provide new ways of sharing content; for example, MIM users can share different forms of content, such as text, audio, voice, photos, and videos, anytime and anywhere with one or more MIM users. Notably, the number of monthly users using mobile messaging is projected to rise to 2.48 billion in 2021 (Clement, 2019). Another area that has attracted attention in the context of MIMs is the use of virtual goods, such as stickers. Japanese-invented emojis and stickers have become popular across MIMs, and “emoji” was recognized as a popular word in 2015 by the Oxford Dictionary (Liu, Liu, Chang, & Chou, 2019).

WeChat and LINE are two well-known MIM apps that provide stickers to their customers. Notably, LINE MIM app earned USD 270 million per year from selling stickers (MacDonald, 2016). Similarly, on
WeChat, nearly 45 billion messages are sent daily, many including stickers (Chinese Marketing, 2019). However, despite the increasing popularity and increase in the usage, MIMs are constantly challenged by threats from within as well as from competing platforms (Wu, Lu, Gong, & Gupta, 2017). The key challenges include a saturated market and tough competition from competing MIM apps. In addition, most MIM apps offer similar feature sets, have no real usage fees from MIM users apart from Internet cost, and lack any unique feature-set (Wu et al., 2017). These challenges pose a significant threat to their growth and even to the survival of MIM apps. Furthermore, switching cost and asset specificity are low, and thus retention of users is an issue. This is a problem faced by many other services, including mobile gaming. For instance, Pokémon Go received a tremendous response when it was released in July 2016; however, soon, the users started losing interest, and there was a general lack of customer stickiness (Chen, Lu, & Luor, 2018).

The challenges are related to user acquisition and the retention point to the exigency of studying the drivers of adoption behaviors along with continuation intentions of MIM users (Ashraf, Hou, & Ahmad, 2018). An understanding of consumer behaviors in relation to these apps enables service providers to formulate effective strategies (Oghuma, Libaque-Saenz, Wong, & Chang, 2016). Continuation intentions towards MIM have been the focus of some studies in the past (e.g., Dhir, Kaur, & Rajala, 2018; Kaur, Dhir, Chen, & Rajala, 2019; Oghuma et al., 2016); however, scholars argue that the accumulated body of knowledge is still limited (Ashraf et al., 2018). In addition, virtual goods, such as stickers represent a source of revenue for MIM operators. Therefore, the investigation of factors that can potentially influence the purchase of virtual goods, including intentions and actual purchase, is both timely and essential.

Taking cognizance of the economic importance, emerging research interest, and calls for a more in-depth investigation of MIM apps, this study involved an examination of the factors influencing MIM continuation intentions as well as sticker purchase intentions. The uses and gratifications theory (UGT), a
popular theoretical framework from the communication and psychological literature, was utilized (Katz, Haas, & Gurevitch, 1973; Quan-Haase & Young, 2010). The current research considered six different U&G of the MIM apps, namely content (i.e., information seeking, exposure), process (i.e., entertainment and escape), social (i.e., social sharing), and technology U&G (namely affection) aspects. This line of inquiry is consistent with the suggestions of recent literature that has recommended new initiatives to understand the purchasing intentions and actual purchasing behaviors in the context of virtual goods (Bleize & Antheunis, 2019). The following research questions (RQs) are addressed:

**RQ1**: What is the relationship between different MIM U&Gs and intentions to purchase MIM stickers?  
**RQ2**: What is the relationship between the MIM U&Gs and intentions to continue using MIMs?

To achieve the objectives of the study, a cross-sectional survey with young adult MIM users (aged 20-24 years) from Japan was administered. The choice of Japan as the geographic area of research is in response to the calls for studying consumer behaviors towards MIMs in Asian countries (Schmitt, 2015). Young adults were chosen as the target segment because existing research argues that this age group represents critical consumers of online social media platforms (SMPs) (e.g., Smith & Anderson, 2018).

The study results suggest that the entertainment and affection U&Gs have significant positive associations with continuation intentions, while exposure U&G is positively associated with MIM sticker purchase intentions. The novelty of the present research is that it develops and tests a model that concurrently investigates both the virtual goods purchase intention on MIM and the continuance intention towards MIM itself. Furthermore, the selection of the Japanese sample addresses the increasing interest of scholars in studying consumer behaviors with reference to Asian economies.

The remainder of the article is structured as follows. Section 2 provides the theoretical background of the study and discusses relevant prior literature on UGT, continuation, and purchase intention. Section 3 illustrates the research model, Section 4 discusses the data and methods, and
Section 5 presents the results. Section 6 presents the discussion and study implications followed by a conclusion in Section 7.

2. Background of the Study

2.1. Uses & Gratification Theory (UGT)

The UGT is a well-utilized theoretical framework for explaining the different motives and reasons behind the use of any given medium (Gan, 2017). The UGT assumes that consumers are active, selective, and motivated to use a given medium (Quan-Haase & Young, 2010). Scholars have utilized the UGT to understand the different U&G that is sought from the use of a specific medium (Dhir, 2016; Dhir, Chen, & Chen, 2017). Moreover, UGT is applied to explain why people tend to use a specific medium to satisfy their needs (Katz, Blumler, & Gurevitch, 1974). Media scholars have reasoned that the UGT provides a user-centered viewpoint on the different social and psychological motives sought from a given medium (Leung & Wei, 2000). Despite being a theory that originated in the pre-digital boom era, scholars recently invoked UGT in studies related to the Internet and SMP adoption (Dhir, 2015; Dhir, Chen, & Nieminen, 2015; Dhir & Tsai, 2017). Furthermore, scholars have utilized the UGT to study the motives behind the use of newer forms of media use (e.g., photo-tagging, photo-sharing, specific features of new media, and instant messaging) (Dhir, 2016; Dhir, Chen, & Chen, 2017; Gan & Li, 2018; Malik, Dhir, & Nieminen, 2015). Prior research shows that the U&Gs of SMPs have a significant influence on continuation intentions (e.g., Yen, Lin, Wang, Shih, & Cheng, 2018), purchase intentions (e.g., Aluri, Slevitch, & Larzelere, 2016), use intentions, and actual use behavior (e.g., Gan, 2017).

Prior UGT literature is classified into three broader categories. The first includes studies examining the motivations behind the use of traditional media (e.g., television, newspaper) (Elliott & Rosenberg, 1987). The second group comprises studies related to Internet and SMP use (Dhir, 2015; Dhir, Chen, & Nieminen, 2015; Dhir & Tsai, 2017). The third group consists of studies investigating the U&G of newer forms of media, which is the most recent (e.g., photo-tagging, photo-sharing, specific features of new media) (Dhir, 2016; Dhir, Chen, & Chen, 2017; Malik, Dhir, & Nieminen, 2015).
In the context of SMPs, scholars broadly agree on the different U&Gs sought by users based on their use. This includes experiencing pleasure, fun, relaxation, socializing and self-status seeking, affection, convenience, social sharing, exposure, information seeking, creating and managing online self-presentation, and even escaping from real-life problems (Dhir, 2016; Dhir, Chen, & Chen, 2017; Hicks et al., 2012). In addition, scholars classified these different U&G into four broad categories, namely content, process, social, and technology U&G (Li, Liu, Xu, Heikilä, & van der Heijden, 2015; Sundar & Limperos, 2013).

2.2. UGT & Continuation Intentions

Prior research shows that the U&G of SMPs have a significant influence on continuation intentions (Ku, Chen, & Zhang, 2013), use intentions (Luo, Chea, & Chen, 2011), purchase intentions (Cheung & Lee, 2009), and use behavior (Cheung, Chiu, & Lee, 2011). Similarly, prior studies showed a positive relationship between U&Gs and satisfaction (Kim, Kim, & Nam, 2010) and loyalty (Kim, 2011).

It remains an uncontested fact that media U&G have a significant influence on user intentions, but it which specific media U&Gs have a significant influence on intentions across the different forms of media remains unknown. For example, prior SMP literature links information seeking, entertainment, social sharing, and affection U&G with continuation intentions (Li et al., 2015; Park, Kim, Shon, & Shim, 2013) and use intentions (Joo & Sang, 2013). In comparison, Xu, Ryan, Prybutok, and Wen (2012) found that only process and content U&G predicted SMP use, while Li et al. (2015) found that process, content, and social U&G significantly influenced continuation intentions to use SMP games. In addition, limited prior literature reports inconsistent findings regarding the relationships between media U&G and user intentions. For example, studies have suggested that escape positively influences continuation intentions (e.g., to play online games; Li et al., 2015) and use intentions (Joo & Sang, 2013). In contrast, Xu et al. (2012) and Yang and Lin (2014) found that escape is not a significant predictor of the useful intentions of SMP users. There are two possible reasons for these inconsistencies. First, scholars considered different
types of U&G; for example, some considered all four classifications of media U&G, while others focused only on a subset of various media U&G. Second, it is possible that the relationship between media U&G and use intentions is platform-dependent, meaning that the findings change when different forms of SMPs are considered. Consequently, it is important for scholars to investigate the relationships between media U&G and use intentions by utilizing a comprehensive number of media U&G. Thus, this research considered six different U&G of MIM apps.

2.3. UGT & Purchase Intentions

Purchase intentions represent the likelihood of the purchase of a given product or service by a consumer (Dodds, Monroe, & Grewal, 1991). Moreover, purchase intentions are the result of the user’s pre-purchase satisfaction (Chen, Hsu, & Lin, 2010). In the present study, purchase intentions regarding virtual goods (i.e., LINE stickers) were investigated. According to an estimate, the selling and purchasing of goods on SMP surpassed the $30 billion mark in the US alone (Zhou, Zhang, & Zimmermann, 2013), and the virtual goods economy surpassed the $15 billion mark in 2016 (Venrock, 2016). The market for virtual goods is relatively new and is growing at a fast pace; however, studies examining the proliferation of the virtual economy are limited. Prior literature has not yet extensively examined the relationship between different U&G of SMP and purchase intentions regarding virtual goods. The limited prior literature shows that the enjoyment and entertainment U&Gs (Aluri et al., 2016) and the social interaction U&G (Aluri et al., 2016) significantly influence purchase intentions. In comparison, the present research investigated the relationship between six different types of MIM U&Gs and intentions to purchase virtual goods (i.e., LINE Stickers).

3. Research Methods

3.1. Research Model

The researchers utilized the UGT to understand the relationship between the different U&Gs of a MIM app (i.e., LINE), intentions to purchase virtual goods (i.e., LINE stickers), and intentions to continue
using MIM. Scholars argue that the examination of individual motivations is important because these motivations relate to actual technology use (Quan-Haase & Young, 2010). Similarly, extensive prior literature utilized the UGT and shows a significant influence of different U&Gs on use intentions (Gan, 2017; Luo et al., 2011). Consequently, the UGT can provide a well-grounded and closely fitting theoretical framework for understanding the associations between U&G and purchase and continuation intentions regarding MIM use.

This research considered a multidimensional structure representing six different U&Gs sought by MIM users, namely information seeking, escape, entertainment, exposure, social sharing, and affection. The different U&Gs of MIM predict the purchase and continuation intentions (see Figure 1). The six-factor U&G structure for MIM has been developed from prior new media literature (e.g., Dhir, Chen, & Chen, 2017), while other measures, namely purchase intentions and continuation intentions, were drawn from prior literature (see Table 1).

The researchers selected LINE to represent MIM apps because many prior studies focused on LINE. It is not only quite popular in countries such as Japan but also had 194 million users worldwide in 2019 (Iqbal, 2019). For instance, Hou, Shiau, and Shang (2019) examined whether cognitive absorption can explain LINE users’ satisfaction during messaging. In comparison, Liu et al. (2019) examined the download willingness and purchase intention related to LINE stickers. In addition, scholars investigated purchase intentions towards LINE stickers (e.g., Lin, Lee, & Pao, 2018; Yang, Huang, & Su, 2017).

3.2. Hypotheses

3.2.1. Information seeking

Information seeking is defined as the purposeful seeking of information in one’s day-to-day routine to solve problems that are not directly linked to one’s occupation or certain performance (Savolainen, 1995). In the context of the present study, MIM users engage in information seeking U&G by using MIM to
obtain information, to learn how to do certain things, and also to obtain the latest news about their social circles, families, and general happenings. Scholars reason that information seeking is one of the main reasons for the use of SMPs (Joo & Sang, 2013). Moreover, information seeking is one of the main U&G for social commerce (Hicks et al., 2012), employees’ usage of enterprise SMP (Liu & Bakici, 2019), and promoting health through MIMs (Zhang & Jung, 2019). The limited prior literature indicates a positive association between information seeking and use intentions (Joo & Sang, 2013) as well as continuation intentions (i.e., indirectly via perceived usefulness; Park et al., 2013). Thus, it is likely that information seeking U&G also drives the purchase and continuation intentions of MIM users. Therefore, we hypothesize:

**H1.** Information seeking U&G positively influences the intentions to purchase MIM stickers.

**H2.** Information seeking U&G positively influences the intentions to continue using MIM.

### 3.2.2. Escape

Escape refers to avoiding the real world to forget the different pressures and worries of one’s real life (Xu et al., 2012). Escape is a crucial U&G sought by SMP users (Hicks et al., 2012). Similarly, escaping is one of the motives of mobile gaming for university and high school students (Bulduklu, 2017). Prior studies show that escape positively influences continuation intentions (e.g., regarding online games; Li et al., 2015), indirectly influences use intentions (Joo & Sang, 2013), and directly influences use behavior (e.g., weekly WeChat use; Pang, 2016). In contrast, some studies report that escape U&G is not a significant predictor of SMP use intentions (Xu et al., 2012). Here, we hypothesize that escape U&G positively influences purchase and continuation intentions.

**H3.** Escape U&G positively influences the intentions to purchase MIM stickers.

**H4.** Escape U&G positively influences the intentions to continue using MIM.

### 3.2.3. Entertainment
Entertainment U&G refers to the perceived entertainment, fun, and enjoyment as a result of their MIM use (Ducoffe, 1996; Koufaris, Kambil, & LaBarbera, 2001). Scholars agree that the entertainment U&G are among the most significant predictors of new technology use and of social commerce (Hicks et al., 2012) and that they have a positive influence on the different media usage-related dependent variables (Hicks et al., 2012). Scholars found that entertainment U&G significantly influences continuation intentions (Li et al., 2015) and indirectly influences use intentions (Joo & Sang, 2013). Similarly, perceived enjoyment, which is related to entertainment U&G, is linked with intentions to purchase virtual goods (Mäntymäki & Salo, 2013). Lim and Kumar (2019) revealed entertainment as a key brand online social networking (BOSN) gratification that predicts BOSN commitment. Consequently, we also hypothesize that entertainment U&G is likely to significantly influence purchase and continuation intentions.

H5. Entertainment U&G positively influences the intentions to purchase MIM stickers.

H6. Entertainment U&G positively influences the intentions to continue using MIM.

3.2.4. Exposure

Exposure refers to broadening one’s thinking and obtaining information related to a variety of relevant issues. MIM users seek exposure U&G through MIM use, such as by obtaining a variety of information and a wide range of exposure and knowing about educational opportunities for the broadening of their thoughts and lifestyles. Exposure U&G is a type of content U&G. Although some prior research shows a significant indirect influence of content U&G (i.e., information seeking) on use intentions (Joo & Sang, 2013; Park et al., 2013), it is not yet known whether a similar relationship (direct or indirect) exists in the case of exposure. In the context of sticker use, it may be intuitively expected that the use of stickers in messages would signal exposure to a certain way of living that is trendy and informed. Thus, we drew inspiration from prior findings on content U&G and hypothesize that exposure U&G significantly influences the purchase and continuation intentions of MIM users.

H7. Exposure U&G positively influences the intentions to purchase MIM stickers.
H8. Exposure U&G positively influences the intentions to continue using MIM.

3.2.5. Social Sharing

Social sharing refers to the active exchange or sharing of information by the users of a given platform for social reasons, such as posting, sharing, and retweeting information or experiences that could be helpful for others. In this present study context, social sharing refers to the use of MIM for sharing one’s own experiences, likes, and happy moments with others. Social sharing significantly influences use intentions (Yang & Lin, 2014) and continuation intentions (Li et al., 2015). Similarly, Su and Chen (2019) revealed that social gratification is a key gratification in TV-smartphone multitasking; however, it is not yet known whether social sharing also influences purchase intentions. It is also not known whether social sharing influences continuation intentions and purchase intentions in the context of MIM apps. Thus, we present the following hypotheses:

H9. Social sharing U&G positively influences the intentions to purchase MIM stickers.

H10. Social sharing U&G positively influences the intentions to continue using MIM.

3.2.6. Affection

Affection U&G refers to the use of MIM apps for expressing appreciation and care for others, showing encouragement and concern, and helping others in general (e.g., friends, peers, and family; Leung, 2007). Affection is considered a significant U&G for traditional instant messaging (Grellhesl & Punyanunt-Carter, 2012) as well as MIM apps, such as WeChat (Pang, 2016). Similarly, Quan-Haase and Young (2010) observed that affection is an important U&G for instant messaging but is less important for SMPs. This could be a possible reason for fewer investigations involving affection U&G in the SMP literature. In the present study context, affection refers to the use of MIM for sharing care for others, affection for family, and showcasing friendship bonds with friends. Prior literature suggests that affection significantly influences use behavior (e.g., it significantly predicts weekly WeChat use for each WeChat session; Pang, 2016) and that it indirectly influences continuation intentions (Park et al., 2013). In contrast,
scholars have not determined whether affection significantly influences the purchase and continuation
intentions of MIM apps. Therefore, we present the following hypotheses:

**H11.** Affection U&G positively influences the intentions to purchase MIM stickers.

**H12.** Affection U&G positively influences the intentions to continue using MIM.

4. Research Methodology

4.1. Study Procedure and Participants

Data collection was carried out with MIM users from Japan. A total of 309 young adults (aged 20 to 24
years) participated in this study. The research involved the collection of data from young adults who had
the experience of using MIM as well as virtual stickers. Young adults were chosen as the target segment
because this group is one of the most prolific users of messaging apps, and scholars have investigated this
group in this context (e.g., Harari et al., 2019) Data collection was carried out using an Internet-based
survey. Participation was anonymous and voluntary. Informed consent was obtained from all the study
participants via survey instructions at the beginning of the study. The study participants evaluated the
different measures of our research model using a 5-point response scale where never = one and always =
five.

4.2. Data analysis

The data analysis was performed using SPSS 24.0 and AMOS 23.0. The data analysis was carried using
the recommendations of Anderson and Gerbing (1988). The first step involved an examination of the
measurement model, while the second included the execution of the structural model. Both these steps
have their own specific contributions to the final data analysis and to answering the different research
questions and addressing the hypotheses of this study.

5. Results

5.1. Measurement model
We performed a confirmatory factor analysis (CFA) as part of the execution of the measurement model using the robust Maximum Likelihood algorithm (Reinartz, Haenlein, & Henseler, 2009). The CFA confirmed that the measurement model possesses a good model fit with $\chi^2/df$ (Chi-square ratio degrees of freedom) = 2.47, comparative fit index ($CFI$) = 0.92, Tucker–Lewis Index ($TLI$) = 0.91, and root mean square error of approximation ($RMSEA$) = 0.07 (Byrne, 2001).

### 5.2. Validity and Reliability

We established the content validity of the study measures based on the fact that all the items used for measuring different study measures were taken from prior literature. This indicates that the considered study constructs have already been empirically validated in the existing literature by different researchers in various contexts. Furthermore, it also means that these study measures have been examined by expert reviewers and readers during the process of reviewing and including them in their research. This practice of measuring the study measures by drawing them from existing literature ensured that the present research measures had sufficient content validity.

Face validity was achieved by (a) validating the instrument by a panel of four students with skills in designing and conducting questionnaire-based studies and (b) running a pilot study with a representative target population using the initial version of the questionnaire.

The study measures possess sufficient convergent validity because the factor loadings of all the study measures were well above the recommended threshold value of 0.50 (Anderson & Gerbing, 1988), the composite reliability (CR) values of the study constructs were greater than 0.70 (DeVellis, 2003), and the average variance extracted (AVE) was above 0.50 and less than the corresponding CR values (Fornell & Larcker, 1981; see Table 2).

The study measures possess sufficient discriminant validity because the intercorrelations among the different study constructs were less than .80 (Campbell & Fiske, 1959), the AVE values were greater than the corresponding values of the average shared variance (AVE) and the maximum shared variance.
(MSV) (Barclay, Higgins, & Thompson, 1995), and the square root of the AVE was greater than the correlation between study measures (DeVellis, 2003; see Table 2).

The study measures possess measurement reliability because their CR values all exceeded 0.70 (DeVellis, 2003).

5.3. Structural Model

The structural model was estimated to establish the validity of the proposed research hypotheses for the study (see Figure 2). The structural model returned a good model fit with $\chi^2/df = 2.46$, $CFI = 0.92$, $TLI = 0.91$, and $RMSEA = 0.07$ (Byrne, 2001). The structural model explained 25.2% of the variance in the purchase intentions and 18% of the variance in the continuation intentions. The hypotheses H6 and H12 are supported because entertainment ($p < 0.001$) and affection ($p < 0.05$) U&Gs have significant positive associations with continuation intentions. H7 is supported because exposure U&G ($p < 0.001$) has a significant positive association with the intentions to purchase MIM stickers (see Table 3). The remaining hypotheses are not supported. The percentage variance explained in the dependent variables is low, but prior methodological literature suggests that values as low as 10% are also acceptable (Falk & Miller, 1992). A percentage variance of 20% is considered quite high (Hair, Ringle, & Sarstedt, 2011).

6. Discussion

We utilized a popular theoretical framework of UGT to investigate how the different MIM U&Gs influence the intentions to purchase MIM stickers as well the intentions to continue using MIM. This line of investigation is consistent with the prior literature that emphasizes the need for new initiatives aimed at a better understanding of the purchasing behavior of virtual goods (Bleize & Antheunis, 2017). The research model based on the UGT was tested with 20- to 24-year-old young adult MIM users from Japan.
using a web-based cross-sectional study. The measurement and structural model had good model fit indices, and the study measures possess sufficient validity and reliability.

**RQ1** investigated the relationship between MIM U&Gs and the intention to purchase MIM stickers. The study findings suggest that only exposure U&Gs significantly influence purchase intentions towards stickers. This finding is consistent with prior literature, which suggests that content gratifications influence purchase intentions (Joo & Sang, 2013; Park et al., 2013). The possible reason for this finding could be that MIM stickers enable users to broaden their thinking and lifestyles (e.g., when stickers are actively used in the conversation), and thus users are likely to purchase the stickers for the satisfaction of their exposure U&G. The insignificant role of the remaining MIM U&Gs in influencing purchase intentions toward virtual goods must be further explored before any conclusion can be drawn. There could be potential mediating and moderating variables that influence the association as revealed by several recent studies in the case of the influence of media U&G on purchase intentions. For example, Mortazavi, Esfidani, and Barzoki (2014) found that SMP U&G indirectly influences purchase intentions through electronic word-of-mouth. Chen, Yu, and Li (2016) found that information seeking and escape indirectly affect repurchase intentions via satisfaction. Aluri et al. (2016) found that information seeking indirectly influences purchase intentions via satisfaction.

**RQ2** examined the relationship between MIM U&Gs and the intentions to continue using MIMs. The study findings suggest that only the entertainment and affection U&Gs significantly influenced continuation intentions. This finding is consistent with prior literature that has also consistently shown that entertainment U&G drives social commerce (Hicks et al., 2012) and that it is also a significant predictor of use and adoption (Hicks et al., 2012; Li et al., 2015). Similarly, prior literature indicates that affection U&G significantly influences continuation intentions (Park et al., 2013) and use behavior (Pang, 2016). In comparison, the findings of this study suggest that the remaining four U&Gs do not share any significant association with continuation intentions. There are two possible reasons that can explain this
inconsistency. First, the contexts of the prior studies that have suggested a significant influence of different U&Gs on use intentions were SMPs and online communities and not MIM, as in the present study. Second, several studies show that different types of U&G indirectly influence use intentions through different mediating variables. Joo and Sang (2013) found that process U&G (pass the time, escape) and content U&G (e.g., information seeking) have indirect effects on use intentions via perceived usefulness and ease of use. Similarly, other empirical investigations show that the influence of information seeking on use intentions is mediated by attitudes (Hausman & Siekpe, 2009; Lim & Ting, 2012) and flow experience (Hausman & Siekpe, 2009). The most recent study demonstrated that escape and information-seeking indirectly influence continuation to revisit via satisfaction (Chen et al., 2016).

6.1. Theoretical implications

The study findings advance the literature on MIMs. First, we utilized a popular media and psychological theory, the UGT, to examine the influence of different types of U&G on the intentions to purchase virtual goods, such as stickers, as well as intentions to continue using MIMs. This enabled a valuable contribution to the emerging literature on the relationship between media U&G, use intentions, and continuation intentions, which has remained underexplored in the literature thus far. This investigation is consistent with the recommendation of recent literature that has called for urgent steps to be taken to understand the determinants of purchase intentions (Bleize & Antheunis, 2017).

Second, in the specific context of MIMs, the present study significantly contributes to the limited yet mushrooming literature on MIM apps by utilizing an extensive number of measures of U&G (e.g., the six-factor model). The findings provide scholars with new insights into virtual goods purchasing behavior in MIM environments, particularly MIM stickers.

Third, the results show that only exposure U&G significantly influences purchase intentions towards virtual goods, while entertainment and affection U&Gs significantly influence continuation
intentions towards MIM. This indicates that future researchers should incorporate these gratifications into the investigation of MIM users’ purchase and continuation intentions.

Lastly, in consonance with the extended literature, the considered U&G may have an indirect influence on purchase continuation intentions, even in MIM environments. This implies that while this study has captured direct associations between U&G and intentions towards MIMs, potential indirect associations remain unexamined. The study findings for both RQ1 and RQ2 suggest that future research should investigate the different mediating variables between U&G, continuation, and purchase intentions. Future scholars can examine the different significant mediating variables, such as attitude, satisfaction, trust, and word-of-mouth, between MIM U&G, continuation, and purchase intentions.

6.2. Practical Implications

This study has various practical implications for researchers, practitioners, and MIM service operators. The study findings could also be of particular relevance to those who are interested in service-oriented business models and those interested in revenue generation from virtual goods. First, the different forms of online SMPs (including MIM apps) are considered instrumental in influencing the choices and decision-making processes of consumers, including use and purchase behaviors (Mangold & Faulds, 2009). Therefore, organizations as well as businesses are actively utilizing online SMPs, including MIM apps, to directly reach their existing and prospective consumers (Kim & Ko, 2012); however, to strengthen customer relationships and to maintain customer satisfaction and loyalty among their customers, businesses should focus on motives that may enhance customer engagement.

Second, the present study findings provide considerable new insights into service providers regarding their clients’ continuation intentions towards MIMs. For example, the current study findings clearly show that entertainment, affection, and exposure U&Gs are powerful variables that significantly influence intentions in an MIM context. This implies that fun, enjoyment, exposure, and affection are key factors in ensuring continued usage. Therefore, service providers should focus on improving the fun
features of MIMs and should also ensure that some new entertaining features and updates are made available at regular intervals. This would give users something to look forward to, and they might continue to use a particular app in anticipation.

Finally, the different MIM service operators, such as LINE, are likely to operate in a similarly saturated and fiercely competitive environment. Consequently, MIM service operators should focus on transforming their existing offerings to generate more revenue from the sale of virtual goods (e.g., stronger purchase intentions and an actual high purchase of stickers). Our findings revealed that content U&G, such as exposure, process U&G, such as entertainment, and technology U&G, namely affection, significantly influence user intentions. Therefore, MIM service operators as well as practitioners should focus on providing and supporting the entertainment and exposure needs of their consumers. In this way, their consumers will be actively engaged with their platform in addition to continuing to purchase their goods or services (Kim & Ko, 2012). They can do so by offering stickers that are topical and relevant to contemporary issues so that the exposure U&G of the users is satisfied.

7. Study Limitations and Future Work

The present study has some limitations, but these limitations offer new avenues for future research on this topic. First, the study participants were recruited from a single country, namely Japan. Thus, the study findings might have some culture-specific orientations. Consequently, the applicability of the present study results to a broader population of MIM users beyond Japan is unwarranted. Similarly, the applicability of the findings to other age groups might not be possible. In addition, the present study recruited LINE users, and therefore the study findings are specific to LINE use. Therefore, the applicability of the study findings to other MIM app users, such as users of WeChat, WhatsApp, and Snapchat, is not known. Third, the present study was cross-sectional, so causal relationships between the study variables cannot be investigated; however, despite these limitations, the study makes a notable contribution to the existing literature.
We recommend possible future directions for other scholars. First, scholars should perform a similar line of investigation using our research model and study measures but with other MIM apps. This will enable the scholarly community to gauge the generalizability of the present study findings, such as whether the current study findings on LINE are also valid in the context of other MIM apps. Second, it would be interesting to investigate whether there are any cultural or age-specific findings in our results. Therefore, in future research, MIM app users from countries other than Japan should be recruited. Lastly, scholars should investigate the causal relationships between different U&Gs and purchase and continuation intentions through longitudinal investigations.

References


Figure 1. Research Model
### Table 1. Factor loadings of measurement and structural model

<table>
<thead>
<tr>
<th>Study Measures (Reference)</th>
<th>Measurement items</th>
<th>SM</th>
<th>MM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exposure (EXP)</strong>*</td>
<td>EXP1: MIM has broadened my thinking and lifestyle.</td>
<td>.73</td>
<td>.73</td>
</tr>
<tr>
<td></td>
<td>EXP2: One can learn about educational opportunities using MIM.</td>
<td>.81</td>
<td>.81</td>
</tr>
<tr>
<td></td>
<td>EXP3: MIM provides a wider range of exposure (lots of information).</td>
<td>.87</td>
<td>.87</td>
</tr>
<tr>
<td><strong>Social Sharing (SS)</strong>*</td>
<td>SS1: MIM helps me share my own experiences with others.</td>
<td>.87</td>
<td>.87</td>
</tr>
<tr>
<td>(Dhir et al., 2017)</td>
<td>SS2: MIM helps me share my own likes with others.</td>
<td>.90</td>
<td>.90</td>
</tr>
<tr>
<td></td>
<td>SS3: MIM helps me to share happy moments with others</td>
<td>.60</td>
<td>.60</td>
</tr>
<tr>
<td><strong>Entertainment (ENT)</strong></td>
<td>ENT1: I use MIM because it is entertaining.</td>
<td>.79</td>
<td>.79</td>
</tr>
<tr>
<td>(Dhir et al., 2017)</td>
<td>ENT2: I use MIM because it is fun.</td>
<td>.84</td>
<td>.84</td>
</tr>
<tr>
<td></td>
<td>ENT3: I use MIM because I enjoy it.</td>
<td>.88</td>
<td>.88</td>
</tr>
<tr>
<td><strong>Information Seeking (IS)</strong></td>
<td>IS1: Through MIM, I can get information.</td>
<td>.75</td>
<td>.75</td>
</tr>
<tr>
<td>(Dhir et al., 2017)</td>
<td>IS2: Through MIM, I can learn how to do things</td>
<td>.86</td>
<td>.86</td>
</tr>
<tr>
<td></td>
<td>IS3: Through MIM, I learn about the latest news</td>
<td>.67</td>
<td>.67</td>
</tr>
<tr>
<td><strong>Escape (ESP)</strong>*</td>
<td>ESP1: I use MIM to play roles different from those played in real life.</td>
<td>.74</td>
<td>.74</td>
</tr>
<tr>
<td>(Dhir et al., 2017)</td>
<td>ESP2: I use MIM to put off something I should be doing.</td>
<td>.92</td>
<td>.92</td>
</tr>
<tr>
<td></td>
<td>ESP3: I use MIM to get away/escape from what I am doing.</td>
<td>.71</td>
<td>.71</td>
</tr>
<tr>
<td><strong>Affection (AFF)</strong>*</td>
<td>AFF1: MIM is used to show care for others.</td>
<td>.84</td>
<td>.84</td>
</tr>
<tr>
<td>(Dhir et al., 2017)</td>
<td>AFF2: MIM is used to show affection for family</td>
<td>.75</td>
<td>.75</td>
</tr>
<tr>
<td></td>
<td>AFF3: MIM is used to show the friendship bond with others.</td>
<td>.87</td>
<td>.87</td>
</tr>
<tr>
<td><strong>Purchase Intentions (PI)</strong></td>
<td>PI1: I will frequently purchase MIM stickers.</td>
<td>.72</td>
<td>.72</td>
</tr>
<tr>
<td>(Hsu &amp; Lin, 2015)</td>
<td>PI2: I have the intention to buy MIM stickers.</td>
<td>.81</td>
<td>.81</td>
</tr>
<tr>
<td></td>
<td>PI3: I think it is a good idea to buy MIM stickers.</td>
<td>.75</td>
<td>.75</td>
</tr>
<tr>
<td><strong>Continuation Intentions (CI)</strong></td>
<td>CI1: I intend to continue using MIM rather than to discontinue its use.</td>
<td>.92</td>
<td>.92</td>
</tr>
<tr>
<td>(Bhattacherjee, 2001)</td>
<td>CI2: I intend to use MIM rather than other alternatives.</td>
<td>.73</td>
<td>.73</td>
</tr>
<tr>
<td></td>
<td>CI3: I will continue using MIM in the future.</td>
<td>.83</td>
<td>.83</td>
</tr>
</tbody>
</table>

**Note.** SM = factor loadings from structural model, MM = factor loadings from measurement model
Table 2. Validity and reliability of study measures

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>CR</th>
<th>AVE</th>
<th>MSV</th>
<th>ASV</th>
<th>CI</th>
<th>IS</th>
<th>ESC</th>
<th>ENT</th>
<th>EXP</th>
<th>SS</th>
<th>AFF</th>
<th>PI</th>
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<tr>
<td>CI</td>
<td>4.12</td>
<td>0.81</td>
<td>.87</td>
<td>.69</td>
<td>.12</td>
<td>.05</td>
<td>.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS</td>
<td>3.12</td>
<td>1.06</td>
<td>.81</td>
<td>.57</td>
<td>.42</td>
<td>.24</td>
<td>.29</td>
<td>.77</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESC</td>
<td>1.75</td>
<td>0.92</td>
<td>.84</td>
<td>.63</td>
<td>.21</td>
<td>.08</td>
<td>-0.07</td>
<td>.06</td>
<td>.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENT</td>
<td>2.99</td>
<td>1.11</td>
<td>.88</td>
<td>.70</td>
<td>.45</td>
<td>.29</td>
<td>.34</td>
<td>.65</td>
<td>.30</td>
<td>.84</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>EXP</td>
<td>2.43</td>
<td>1.08</td>
<td>.85</td>
<td>.65</td>
<td>.56</td>
<td>.34</td>
<td>.15</td>
<td>.64</td>
<td>.46</td>
<td>.67</td>
<td>.81</td>
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<tr>
<td>SS</td>
<td>3.02</td>
<td>1.12</td>
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<td>.64</td>
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<td>.21</td>
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<td>.71</td>
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<tr>
<td>AFF</td>
<td>2.66</td>
<td>1.12</td>
<td>.86</td>
<td>.68</td>
<td>.56</td>
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<td>.75</td>
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<tr>
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<td>0.98</td>
<td>.80</td>
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<td>.43</td>
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<td>.41</td>
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<td>.76</td>
</tr>
</tbody>
</table>

Note: Standard Deviation = SD, Composite Reliability = CR, Average Variance Explained = AVE, MSV = Maximum Shared Variance, ASV = Average Shared Variance, Exposure = EXP, Social Sharing = SS, Entertainment = ENT, Information Seeking = IS, Escape = ESP, Affection = AFF, Purchase Intentions = PI, Continuation Intentions = CI
Figure 2. Results of structural model testing
Table 3. Results of hypotheses (#H) testing

<table>
<thead>
<tr>
<th>H #</th>
<th>Hypothesis</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>IS U&amp;G positively influences the PI</td>
<td>No</td>
</tr>
<tr>
<td>H2</td>
<td>IS U&amp;G positively influences the CI</td>
<td>No</td>
</tr>
<tr>
<td>H3</td>
<td>Escape U&amp;G positively influences the PI</td>
<td>No</td>
</tr>
<tr>
<td>H4</td>
<td>Escape U&amp;G positively influences the CI</td>
<td>No</td>
</tr>
<tr>
<td>H5</td>
<td>Entertainment U&amp;G positively influences the PI</td>
<td>No</td>
</tr>
<tr>
<td>H6</td>
<td>Entertainment U&amp;G positively influences the CI</td>
<td>Yes</td>
</tr>
<tr>
<td>H7</td>
<td>Exposure U&amp;G positively influences the PI</td>
<td>Yes</td>
</tr>
<tr>
<td>H8</td>
<td>Exposure U&amp;G positively influences the CI</td>
<td>No</td>
</tr>
<tr>
<td>H9</td>
<td>Social sharing U&amp;G positively influences the PI</td>
<td>No</td>
</tr>
<tr>
<td>H10</td>
<td>Social sharing U&amp;G positively influences the CI</td>
<td>No</td>
</tr>
<tr>
<td>H11</td>
<td>Affection U&amp;G positively influences the PI</td>
<td>No</td>
</tr>
<tr>
<td>H12</td>
<td>Affection U&amp;G positively influences the CI</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Declaration of interests

☒ The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

☐ The authors declare the following financial interests/personal relationships which may be considered as potential competing interests:
Highlights

- Continuation and purchase intentions were examined in a mobile instant messaging (MIM) context
- The uses and gratification (U&G) theory was utilized as a theoretical lens
- The relationships between MIM U&Gs, continuation, and purchase intentions were examined
- Cross-sectional data involving 309 MIM users from Japan were utilized
- Exposure U&G was positively associated with purchase intentions towards virtual goods
- Entertainment and affection U&Gs were positively associated with continuation intentions