On the effects of perceived value in the mobile moment

Jessica Hsiaofen Chen [a,*], Jen-Ruei Fu [b]

[a] National Chi Nan University, Taiwan
[b] National Kaohsiung University of Applied Sciences, Taiwan

ABSTRACT

Given that mobile phone photography has increased dramatically in popularity, people's social networking behaviors are becoming more and more visual. Numerous image-based applications and social media are taking advantage of this growing popularity of visual content viewing, editing, and sharing, creating a new phenomenon, *image-based social networking*. Many image-based social apps are developed as multipurpose systems, offering a variety of kinds of value to their users. This study proposes three kinds of mobile value – *hedonic, utilitarian* and *sociability* – to measure users' perceptions of image-based apps, and explores how the three kinds of value impact user satisfaction and long-term behavioral intentions. The proposed model was empirically validated using a field survey of 500+ respondents. Both hedonic and sociability value can be provided by an image-based app, but not the utilitarian value, which can increase users' willingness to pay. The resulting knowledge supports the understanding of various kinds of value by pointing out their different effects on continuance intention and willingness-to-pay. The results also indicate that men and women are affected by different kinds of mobile value when considering using an image-based app. The value that men perceive from an image-based app is generally lower than that perceived by women. Because the value configuration of an app will characterize its market position, the research findings provide implications for app vendors to develop their marketing strategy and to design the best monetization model based on the value configuration of their products.

© 2017 Elsevier B.V. All rights reserved.

1. Introduction

Based on their affordances and reach, *social networking sites* (SNSs) such as Facebook and Twitter are now a popular way for individuals to connect, communicate, and share content with others. Given that mobile phone photography has increased dramatically in popularity, people's social networking behaviors are becoming more and more visual. Numerous image-based applications (apps) and social media are taking advantage of this growing popularity of visual content viewing, editing and sharing, creating a new phenomenon, *image-based social networking*. Image-based social media such as Flickr, Pinterest, and Instagram have matched this trend with exponential growth (Moritz, 2016). Besides, many image-based apps with powerful editing functions and filters also support connection with popular SNSs. Individuals can not only take quality pictures easily, but can also edit and share these pictures on the go.

While SNSs have attracted a great deal of attention from researchers, few studies have investigated related issues in image-based social networking. In such networking, mobility, context, and real time are more strongly emphasized than in text-based social networking. People take pictures and share them in the truth of the moment to express their emotions, feelings, and the immediate context of that moment. As image-based social networking has taken the Internet by storm, it is important to investigate the unique value of image-based social apps that induced this storm.

Further, because many image-based apps have social networking features, they usually adopt the freemium model to increase their subscriber base. The competition in freemium economics and in a traditional buyer/seller market are quite different. The challenges are not only because of the number of free apps available in the market, but also because of the strong functionality offered by free apps. The bounty of freeware means that free apps have set high expectations for what should be paid for (Gartner, 2014). The value users expect and perceive of an app in their initial experience of it will determine their long-term behavioral intentions (Hsu and Lin, 2015). A research question is thus encountered: What consumption value can motivate consumers' continuous use of and purchasing intentions regarding image-based apps?

The purpose of this study is to investigate how various kinds of values differ in their relationships with users' satisfaction and long-term behavioral intentions when using image-based apps. Besides the two recognized different kinds of consumption value (hedonic and utilitarian), in this study, we developed a third

* Corresponding author.
 E-mail addresses: jessica@ncnu.edu.tw (J.H. Chen), fred@cc.kuas.edu.tw (J.-R. Fu).

dimension of consumption value by emphasizing the social value provided by mobile apps. The rest of the paper is organized as follows. First, we discuss the relevant literature and background and propose the hypotheses, followed by a discussion of the research method and the results of the model estimation. The final section presents a discussion of the findings, conclusions and some implications for researchers and practitioners.

2. Theory and hypotheses

2.1. Image-based social networking

As the proverb goes, "a picture is worth a thousand words." The visual expressive nature of an image is now examined alongside a new social nature whereby images can function as visual tools for communication, and social networking behavior has shifted massively from text-centric to visual-centric (Alshawaf, 2016). As Diamond (2013) indicated in his book, visual content has a more powerful connection with and persuasion of customers than text-alone content. Many text-centric SNSs have thus started to integrate more flexible and better-quality options to include visual content for their users. Visual content is graphic-centric, including images such as infographics posted on blogs, photographs on Instagram, and pins on Pinterest (Carter, 2014). Unlike text content that requires time and effort to be produced and understood, visual content is easier, faster, and cheaper to generate and digest than text content. Therefore, instead of expressing themselves in words, individuals are now using visual media to share and communicate (Moritz, 2016). The text people share on Facebook and Twitter is shorter than that on blogs, and people are moving towards more visual communication with social media such as Pinterest (Walter, 2012). It has also been found that a post including images can increase others' engagement such as by clicking, re-sharing, replying, or favoring across the board (Bakhshi et al., 2015).

The shift to visual content also encourages the massive growth of image-based tools. Such image-based apps let amateurs create and share images in ways previously restricted to professionals (Gómez Cruz and Meyer, 2012). Many image-based apps that originally revolved around visual content began to implement social networking features, and have finally become social media themselves (Ellison, 2007). A photo not only expresses a user's thoughts and feelings, but also shows the context and moment of the shot. Because visual content is usually shared immediately, image-based social networking changes the way people communicate and behave. The effect and mode of using visual content is very different from using text in that social, location, and mobile elements are more important in image-based than in text-based social networking.

2.2. Freemium

Image-based apps play a key role in forming image-based social networking. Most image-based apps adopt an economic model called a *freemium*. This is a combination of two words, *free* and *premium*, and has become the dominant business model used by Internet start-ups and mobile app developers (Kumar, 2014). Apps adopting the freemium model provide free services with limited features and capacity for trial use. Because the marginal cost of digital products is very low, a freemium model allows new ventures to scale up, and attracts a consumer base with a small traditional sales force. Users get basic features at no cost and can pay to access richer functions. Most free apps using the freemium model gain revenue from the advertisements, purchase in apps, and the fee of premium offerings.

Unfortunately, in spite of the explosive growth in mobile app downloads, free apps accounted for over 90% of downloads in the Android market (Appbrain, 2016; Gartner, 2014), greatly challenging

developers of paid apps. In light of this, for app developers, the number of active users plays a more important role than the number of downloads in consideration of attracting advertisers and promoting paid versions in a freemium model. Regarding users' active behavior in relation to a mobile app, this study focuses on the post-acceptance of users rather than on their initial acceptance.

2.3. Users' post-acceptance and their long-term behavioral intentions

Bhattacherjee (2001) has proposed a post-acceptance model to investigate the continuance intention of information system (IS) usage, emphasizing the importance of long-term behavioral intentions. Adapting the *expectation confirmation model* (ECT), Bhattacherjee (2001) argued that a user's perceived usefulness and satisfaction will depend upon the extent to which her expectations of a system are confirmed. Users with high confirmation tend to elevate their perceived usefulness of the system; otherwise, their disconfirmation will reduce such perceptions

Expectation confirmation is thus the baseline level against users' perceived value and satisfaction with a system which then re-enforces a continuous intention of use. Given that image-based social media such as Flickr or Instagram usually adopt the freemium model and are subscription-based, their subscribers' continuous use and intention to pay for premium services will be a major driver of market expansion and financial return. Based on the post-acceptance model, this study investigates the influence of different values on a users' continuance intention and willingness-to-pay for the premium offerings of image-based apps. Fig. 1 illustrates the conceptual framework.

The research model proposes that satisfaction and perceived values are the salient determinants of users' long-term behavioral intention. According to Oliver (2014), the word satisfaction is derived from the Latin *satis* (enough) and *facere* (to do or make). Thus, products and services satisfy people by providing what is sought to the point of being enough (Oliver, 2014). The extent of satisfaction depends on the evaluation that a product/service provides a pleasurable level of consumption-related fulfillment (Oliver, 2014). Hence, satisfaction is a consumer's summary psychological state and fulfillment response. It occurs at the end of the consumer's processing activities and not necessarily when the product/service outcomes are immediately observed (Oliver, 2014). A consumer is satisfied if the consumption experience is at least as good as it was supposed to be. We may predict that if a user gets what he/she wants from an image-based app, such as enough filters and effects, then he/she will be psychologically fulfilled. Because there is a lot of competition in the image-based app market, the needs of individuals for image sharing and edition could vary greatly. A user is satisfied if the service provided by an image-based app is not much different from her expectations.

In marketing research, a consumer's satisfaction is considered to be highly correlated with behavioral responses such as repurchase intention, loyalty, and *willingness-to-pay* (WTP) more (Cronin et al., 2000; Homburg et al., 2005; Oliver, 2014). *WTP* is the maximum amount of money a customer will spend for a product/service, representing the value that a person assigns to consumption or experience in monetary units (Homburg et al., 2005). Their study found that consumers' cumulative satisfaction rather than transaction-specific satisfaction has stronger impacts on their WTP. This is consistent with the expectations formation hypothesis in economics. Adaptive expectation theory emphasizes the importance of past events in predicting future outcomes (Mlambo, 2012). In light of the theory, individuals will form their future decisions based on what is happening currently. Many image-based apps satisfy their users by providing strong ability of easy editing and sharing of photos. Creating a beautiful photo and sharing it with others will usually make people feel good and have a sense of accomplishment.