1. Introduction

In the past few years, social network services (SNSs) have gained much popularity and consequently become a part of people’s daily routines. Their dramatic diffusion and growing influence on society have increased the commercial value of SNSs. In accordance with this trend, many firms have competitively sought and evaluated the potential benefits of SNSs to achieve their commercial goals. As a result, an increasing number of firms have created community pages in public SNSs (e.g., Facebook and Twitter). These corporate SNS pages are a new way to manage relationships with customers and improve brand image, thus further enhancing customer loyalty and encouraging positive word-of-mouth (WOM) recommendations. Moreover, recent trends show the high business value of corporate SNS pages, which generate a significant proportion of e-commerce traffic. In summary, corporate SNS pages have become an essential part of businesses.

Despite their increasing reliance on corporate SNS pages for business, most companies find it difficult to achieve all of the desired benefits by using a corporate SNS page. For example, Gartner [26] estimated that 80% of social business initiatives will not achieve their intended benefits because of inadequate management and an overemphasis on technology. In addition, according to a survey by Manta [51], 61% of small and medium-sized companies have seen no return on their social media investment. This significant gap between expectation and reality, as a phenomenon, has not yet been examined by information system (IS) scholars. So far, most IS scholars have focused on user behavior in general SNS settings. This is because, at least during the early period of SNS diffusion, they viewed SNSs as communities for human interaction with no commercial purpose. However, consumers have used SNSs to ask companies about their favorite products, access information, participate in company-sponsored events, and communicate with peers of the same corporate SNS page.

In order to enhance the commercial use and value of a corporate SNS page, many firms are agonizing about the ways to induce more people to join and continuously visit their SNS pages. As an example of such activity, firms often offer advantageous incentives such as free prize lottery events. These phenomena raise two important questions for research. First, do people actually perceive
more benefits (i.e., usefulness and enjoyment) if there are more people to communicate with? Second, do incentives really attract users to become regular visitors or perceive more benefits from the system? For the first question, previous studies have showed positive effects of perceived network size on users’ benefits by introducing constructs reflecting the size of potential communication targets, such as referent network size, the number of members (or peers), and network externalities. However, they have mainly examined the direct effect of perceived network size [44,49] and their results are also inconsistent. Lin and Bhattacherjee [44] argued that network size significantly affects both usefulness and enjoyment. Conversely, Lin and Lu [49] found that the number of members is only positively associated with usefulness, while Wu et al. [69] suggested that network externalities do not have any significant impact on usefulness. Regarding the second question of incentives, prior studies have found that usage-based incentives (e.g., point-based reward system) are a salient moderator of the impact of usefulness on continuance intention [6]. In terms of one-time incentives that are generally offered on corporate SNS pages, however, whether they have a positive effect on users’ continuance remains a question. In previous studies, one-time incentives were found to be weak, but sometimes significant [21,59]. Accordingly, it is necessary to discuss those inconsistent and fragmented results and verify how network size and incentives affect consumer’s behavior in the context of corporate SNS pages.

The purpose of this study is to develop a theoretical model to explain the continuance usage of corporate SNS pages. Recent IS studies have revealed diverse approaches toward individual acceptance of SNSs, including examining the impact of information quality and source credibility on information sharing [33], assessing factors that influence trust and perceived risk and their impact on SNS usage intention [50], and studying the corporate use of the SNS as a new effective communication tool within organizations [62]. However, there is neither solid theoretical understanding of the overall SNS structure nor have corporate SNS pages been explored. In order to fill this research gap, we introduce communicative ecology theory (CET), used in the fields of sociology, media, and communications, to explain the effect of technology on both online and offline social networks. As CET applies not only technology but also content and social interaction dimensions from a balanced perspective, we believe that CET can provide a holistic foundation for examining SNSs (including corporate SNS pages). In other words, the dimensions (technological, discursive, and social) of CET can provide a firm foundation for embracing both the social dimension and the theoretical range of existing IS models, thus fully exploiting existing findings on utility-based IS in an SNS context. On the basis of CET, this study proposes a comprehensive research model by validating the independent and moderating factors that encourage end users’ continuance intention. This study aims to advance our theoretical understanding of the overarching dimensions of SNSs, while also exploring the effect of user adoption behavior on corporate SNS pages – a topic which has not yet been covered in IS studies. This study also offers practical insights into organizations, particularly on how they can successfully manage their SNS pages.

2. Theoretical background

2.1. Corporate SNS pages

Social networking services (SNSs) are “applications that enable users to connect by creating personal information profiles, inviting friends and colleagues to have access to those profiles, and sending e-mails and instant messages between each other” [35, p. 63]. This information technology provides a new way for organizations to become involved with users. At present, 87% of Fortune Global 100 companies have hosted their communities on at least one SNS platform to engage with users [9]. Furthermore, 10% of these companies have multiple accounts on Twitter, Facebook, and YouTube, to meet the diverse needs and interests of users. The size of corporate SNS pages has also increased quickly. For example, the average number of corporate Facebook page followers increased by 275% between 2010 and 2012.

Corporate SNS pages offer several benefits. First, they provide an additional communication channel and link to devoted users [32]. Second, they help firms enhance brand image by managing customer relationships, thereby increasing sales and reducing the cost of retaining customers [4]. Third, firms can easily engage with users through corporate SNS pages. New postings are shared directly with users who follow the firm. Fourth, corporate SNS pages help build a trusted location for sharing information related to certain firms. Users are more likely to perceive such consumer-dominated communication channels as reliable [58]. Finally, corporate SNS pages enable firms to access people who are not interested in their work, as the long chain of followers’ friendships helps to diffuse information [66]. Peer recommendations made through an SNS also have a significant impact on the behavior of members’ friends [61]. As the number of corporate ISs, SNS pages provide critical elements that can help achieve success; they should therefore be properly managed to exploit such factors. According to DeLone and McLean [19], the measure that should be chosen for system success depends on the objective of the study. This study proposes end users’ continuance intention as a success measure for corporate SNS pages for the following reasons. First, the primary reason for implementing a corporate SNS page is to build and manage excellent long-term relationships with users [35]. Having a good relationship with customers is helpful for firms in many ways. For example, a positive company image will influence users, making them more likely to intend to purchase the firm’s products. Second, the value of corporate SNS pages is judged by the number of users who visit those pages repeatedly. A sufficient number of users should continuously visit the page and share their opinions [71]; otherwise, a corporate SNS page will lose its value and impact. Finally, continued customer usage has a direct impact on company costs. Acquiring new customers costs five times as much as retaining existing customers [54]. Thus, IS continuance is considered an appropriate success measure for corporate SNS pages.

2.2. Communicative ecology theory

During the last few years, IS scholars have studied online communities, including SNSs, from various perspectives. Among these, a growing interest in social factors has been noticeable. Several IS scholars have taken a new approach to explore the unique characteristics of online communities; perhaps as a result, only few attempts have been made to incorporate social dimensions into the existing theoretical models. Lin [47] constructed a model of the impact of system characteristics (e.g., information and system quality) and social factors (e.g., trust and social usefulness) on the implementation of successful online communities by expanding DeLone and McLean’s IS Success Model. In addition, Kwon and Wen [39] developed a model showing the effect of individual differences (e.g., social identity, altruism, and telepresence) on SNS participants by amending the technology acceptance model (TAM). Lorenzo-Romero and Constantinides [50] examined the effect of the levels of trust and perceived risk associated with SNS participation, also using TAM. Although previous studies have clarified the significance of social factors, their contributions combine particular social perspectives