

Toward a conceptual framework for social media adoption by non-urban communities for non-profit activities: Insights from an integration of grand theories of technology acceptance

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Abstract

This paper describes perceptions of social media as a communication tool and source of information for non-profit activities in non-urban communities. It proposes a conceptual framework predicated on the unified theory of acceptance and use of technology and the information systems success model as theoretical lenses and suggests that four key factors influence the intentions of non-urban communities to adopt and use social media for communication and information of non-profit activities: performance expectancy (i.e. perception of the benefits of using non-profits' social media to enhance performance), effort expectancy (i.e. perception of how easy it will be to use non-profits' social media), social conditions (i.e. expectation of others in non-urban communities to use non-profits' social media), and facilitating conditions (i.e. access to resources and technology as well as self-efficacy with respect to use of non-profits' social media). It also suggests that three key enablers allow non-profits to leverage those key factors: information quality (i.e. quality of information about non-profit activities), system quality (i.e. quality of social media interface and technology used by non-profits), and service quality (i.e. quality of interactions between representatives of non-profits and non-urban communities on social media). Further empirical testing to validate the conceptual framework, using a non-urban community sample, and strategic investments in key enablers and determinants of high impact and significance should help non-profits to develop effective social media strategies to widen their reach to and in non-urban communities.

Keywords: Unified theory of acceptance and use of technology; information systems success model; social media; non-profits; non-urban communities

1 Introduction

In the past, non-profits—i.e. organizations that pursue non-commercial goals (e.g. social advocacy, cause, or welfare, such as human rights and provision of educational and medical services) and use their revenue for these purposes rather than aiming to make a profit—attempted to reach and communicate with their target audience by organizing and publishing via traditional bricks-and-mortar avenues (e.g. carnivals, open days, magazines, newspapers) (Drucker, 2011). However, the rise of Internet and rapid technological proliferation, including in non-urban areas (i.e. semi-urban or semi-rural and rural areas) (Parker, 2015), has led many

non-profits to consider using social media to connect with people and improve their reach (Syrdal & Briggs, 2016). Given that many people in non-urban communities are digital immigrants (i.e. born or brought up before the widespread use of the Internet and digital technologies) rather than digital natives (as is the case in urban areas; Boonaert & Vettenburg, 2011), it is essential for non-profits targeting non-urban communities to have a good understanding of how people in those communities expect to use social media for communication and information relating to non-profit activities. Simply replicating strategies developed for use in urban areas may lead to potential resistance to using social media for non-profit activities amongst non-urban communities. In other words, it may not be possible to achieve critical mass of social media for non-profit activities in these areas if incorrect assumptions are made about social expectations in relation to social media for non-profit activities.

This paper aims to shed new light on this topic through a conceptual framework predicated on the unified theory of acceptance and use of technology that highlights the factors that influence adoption of social media for communication and information relating to non-profit activities by non-urban communities (Venkatesh et al., 2003). It also uses the information systems success model as a theoretical framework for explaining the enablers or facilitators of those factors (DeLone & McLean, 1992, 2003). It is hoped that this conceptual framework, which to the best of knowledge of the authors is the first to conceptually and contextually integrate the two grand theories of technology acceptance to better explain how exactly a particular technology (or technologically-mediated systems, and in this case, non-profits' social media) can be designed to create and satisfy expectancies and conditions required for adoption, will help non-profits to develop effective social media strategies that widen their reach to and in non-urban communities and thus dramatically increase their ability to initiate, innovate, and deliver non-profit activities. In doing so, this paper also answers the call by Lim (2018a, 2018b) in the *Australasian Journal of Information Systems* to revisit and reposition existing theories in information systems and technology as impetuses for greater disciplinary and managerial progress.

2 Social media

Social media is a term used to refer to technologically-mediated platforms (e.g. Facebook, Instagram, Twitter) that enable and facilitate the creation and sharing of information amongst people who are using technological devices connected to digital networks (Lim, 2016; Lim et al., 2012; Soroka et al., in press). More specifically, people on social media can create and share—both individually and collectively—information such as expressions (e.g. emoticons, likes) and comments (e.g. facts, ideas, narratives, opinions) (de la Peña & Quintanilla, 2015; Kietzmann et al., 2011; Sargeant & Shang, 2017). The technological devices people use to access social media, such as desktops, laptops, smartphones, and tablets, are usually connected to the Internet (Müller et al., 2012; Santosa & Wigdor, 2013). More important, social media has increased the extent to which people are connected to each other and able to receive the latest news and events (Lim et al., 2012; Liu et al., 2016; Sargeant & Shang, 2017).

Given the critical mass and power in the form of connectivity and reach characterizing social media, many organizations are now pursuing strategies designed to give them a strong presence on social media to allow them to reach their intended target audience more effectively and communicate with them about products and initiatives. However, most research on social media are concentrated on commercial organizations (Agnihotri et al., 2016;

Kaplan & Haenlein, 2010), especially those targeted in urban areas and communities (Lamberton & Stephen, 2016; Xiang & Gretzel, 2010), and thus, there is limited understanding of how other types of organizations and communities, such as non-profits and non-urban communities, might benefit from using social media, if the right approach was adopted. The social media strategies that prove effective for non-profits and non-urban communities are likely to be different from those used by commercial organizations and urban communities due to the inherent differences in focus (e.g. profit versus non-profit goals) and user characteristics (e.g. digital natives versus digital immigrants). Thus, this study seeks to advance understanding in this area, specifically by shedding new light on how the use of social media for communication and information relating to non-profit activities is viewed by people in non-urban communities.

3 Technology acceptance

Technology acceptance is a concept that encapsulates the perceptions and intentions people have with regard to adopting a particular technology or technologically-mediated product (e.g. goods, services, systems) (Davis, 1989; DeLone & McLean, 1992; Lim & Ting, 2012; Venkatesh et al., 2003). There are many theories of technology acceptance, but this paper focuses on two of the most recent grand theories, namely the unified theory of acceptance and use of technology and the information systems success model, taking them as the starting point for a conceptual framework describing the perceptions and intentions of people in non-urban communities in relation to the use of social media for communication and information relating to non-profit activities.

The unified theory of acceptance and use of technology is a popular grand theory of technology acceptance that was developed by mapping and integrating eight prominent information systems and technology theories (Venkatesh et al., 2003), namely the theory of reasoned action (Fishbein & Ajzen, 1975), the technology acceptance model (Davis, 1989), the motivational model (Davis et al., 1992), the theory of planned behaviour (Ajzen, 1991), a combined theory of planned behaviour and technology acceptance model (Taylor & Todd, 1995), a model of personal computer use (Thompson et al., 1991), the diffusion of innovations theory (Moor & Benbasat, 1991), and the social cognitive theory (Compeau & Higgins, 1995). It contends that user acceptance and use of technology can be explained in terms of four factors, namely performance expectancy, effort expectancy, social conditions, and facilitating conditions (Venkatesh et al., 2003).

The information systems success model is another popular grand theory of technology acceptance; it was developed from existing research on communications, information influence, and management information systems and designed to provide a multidimensional view of information systems success (DeLone & McLean, 1992, 2003; Mason, 1978; Shannon & Weaver, 1949). It proposes, through a temporal, process model, that information systems have several features that vary in quality, namely information quality, system quality, and service quality (DeLone & McLean, 1992, 2003). In turn, these features influence the extent to which an information system elicits the desired responses from target users (e.g. adoption and usage intentions).

More important, this paper contends that to achieve a good understanding of how people in non-urban communities view the use of social media as a source for communication and information relating to non-profit activities, it is essential to integrate the unified theory of

acceptance and use of technology and the information systems success model. More specifically, the unified theory of acceptance and use of technology provides insights into the expectations (i.e. performance and effort) and conditions (i.e. social and facilitating) that are required to encourage non-urban communities to adopt and use social media for non-profit activities, whilst the information systems success model provides insights into how non-profits' should develop a presence on social media and what form their social media content should take if they are to fulfil the conditions needed for non-urban communities to accept the use of social media for communication and information relating to non-profit activities. The integration, in turn, offers a unified view of the key enablers (i.e. information systems success model) and determinants (i.e. unified theory of acceptance and use of technology) of intention to adopt and use non-profits' social media by non-urban communities, which otherwise would not have been possible; that is to say, without the integration, we would be facing a situation comparable to that of a missing puzzle piece (e.g. knowing the enablers, but not the determinants, and vice versa).

4 Digital divide

Digital divide—i.e. the technology adoption gap between entities of varying socioeconomic backgrounds and interests with respect to the access and usage of information and communication technologies and the Internet for a wide variety of activities (OECD, 2001)—is a continuing issue for many developing (e.g. China [Fong, 2009] and Malaysia [Halili & Sulaiman, 2018]) and developed countries (e.g. the US [Burrell, 2018] and the UK [Philip et al., 2017]). Most often, digital divide exists among (i) urban and non-urban communities, which occurs as a result of inequities in Internet access, the level of technical connection and social support, and the ability to search, evaluate, and act on information facilitated by information and communication technologies, among others (DiMaggio et al., 2010; Saleminck et al., 2017), and (ii) for-profit and non-profit organizations, which occurs as a result of different socioeconomic goals (e.g. corporate usage [e.g. across business units and departments] by and commercial goals [e.g. to make a sale] of for-profits versus social impact goals [e.g. community empowerment, emergency preparedness] of non-profits) (Aichner & Jacob, 2015; Durkin et al., 2013; Campbell et al., 2014).

In order for academics to contribute to the agenda of overcoming the digital divide between urban and non-urban communities and between for-profit and non-profit organizations, this paper contends that the integration and contextualization of grand theories of technology acceptance is especially important and must be considered. Specifically, the integration of grand theories will overcome the criticism of theoretical simplicity, which occurs when each theory is taken individually, whereas the contextualization of grand theories will allow for greater practical value to emerge from theorization in academic research (Lim, 2018a, 2018b). In doing so, scholars should be able to precisely offer nuance recommendations for designing technologically-mediated systems (i.e. non-profits' social media) that resonate with intended target communities (i.e. non-urban communities), and thus, satisfy expectancies and conditions required for technology adoption.

5 Conceptual framework

The conceptual framework describes how people in non-urban communities view the use of social media for communication and information relating to non-profit activities (see Fig. 1). It has three main parts: key enablers of social media quality for non-profits, key determinants

of adoption and use of non-profits' social media, and key predictors of non-urban communities' adoption and usage of non-profits' social media. It is important to note that whilst the concepts herein are taken from grand theories of technology acceptance (i.e. unified theory of acceptance and use of technology and information systems success model), they have been adapted to make them applicable to non-profits that wish to use social media to extend their reach to and in non-urban communities.

5.1 Key enablers

The first part of the conceptual framework focuses on the key enablers of social media quality for non-profits. The information systems success model is used to identify and describe three main areas that non-profits should consider when developing their social media presence if they wish to communicate effectively with non-urban communities, namely information quality, system quality, and service quality (DeLone & McLean, 1992, 2003). In the context of non-profits' social media, 'information quality' refers to the quality of information about non-profit activities (e.g. its clarity, trustworthiness, and relevance to target non-urban communities), 'system quality' refers to the quality of their social media interface and technology (e.g. the social media platforms chosen by non-profits should be compatible with those that are used by target non-urban communities; social media plug-ins should run smoothly and robustly on the kinds of devices used by target non-urban communities), and 'service quality' refers to the quality of social media interactions between representatives of non-profits and people in non-urban communities (e.g. communications and responses should be in local dialects or languages and should display empathy and sensitivity to local culture and practices).

5.2 Key determinants

The second part of the conceptual framework explains the key determinants of non-urban communities' adoption and use of social media for communication and information relating to non-profit activities. It uses the unified theory of acceptance and use of technology to identify and describe four key factors that people in non-urban communities are likely to consider when deciding whether or not to adopt and use non-profits' social media: performance expectancy, effort expectancy, social conditions, and facilitating conditions (Venkatesh et al., 2003). In the context of non-profits' social media, 'performance expectancy' refers to the perception of how beneficial it will be to use non-profits' social media to enhance performance (e.g. solving important problems for target non-urban communities), 'effort expectancy' refers to how easy it will be to use non-profits' social media (i.e. how easy it is for people in non-urban communities to become skilful at navigating through and interacting with the non-profits' social media content), 'social conditions' refers to expectation of others in non-urban communities to use non-profits' social media (e.g. buy-in from community and opinion leaders in non-urban communities), and 'facilitating conditions' refers to the accessibility of resources and technology as well as self-efficacy with respect to use of non-profits' social media (i.e. availability of computers, smartphones, and tablets in non-urban communities and the extent of their technological know-how and confidence).

5.3 Behavioural consequences

The third part of the conceptual framework encapsulates the behavioural consequences, for non-profits, of strategic investment in developing effective social media content and a strong social media presence in order to extent their reach to and in non-urban communities.

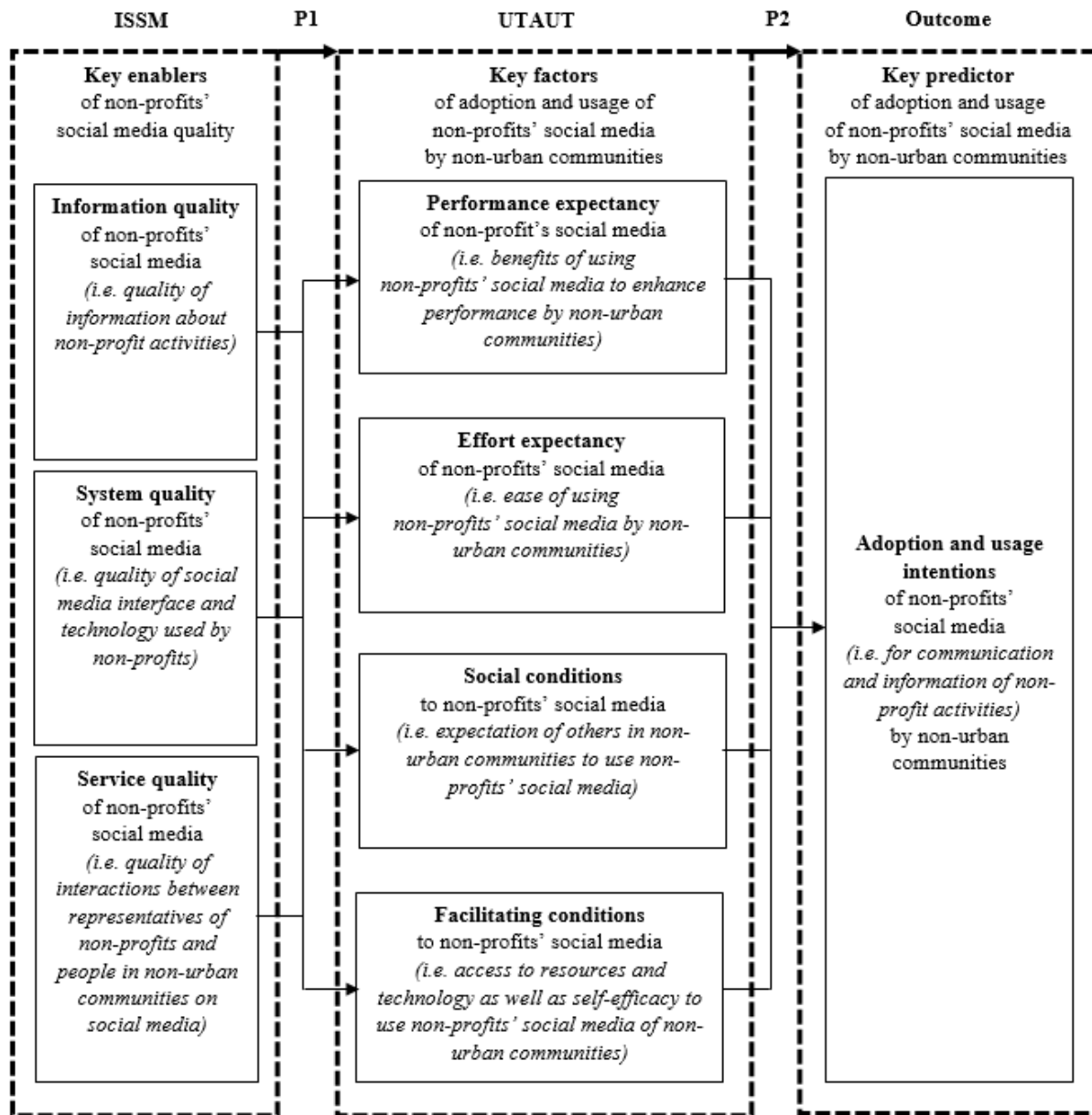
However, it should be noted that though behavioural outcomes can only be accurately measured when target communities actually adopt and use non-profits' social media, it can be predicted from measures of intention to use or recommend non-profits' social media. This approach to predicting the technology acceptance behaviour of target users is consistent with the grand theories of technology acceptance on which the conceptual framework is predicated (DeLone & McLean, 1992, 2003; Venkatesh et al., 2003).

5.4 Propositions

More important, the conceptual framework is built on two important propositions that establish the linkages between its three main parts:

- P1.** Key enablers of non-profits' social media quality (i.e. information quality, system quality, and service quality) are positively related to the key determinants of adoption and usage of non-profits' social media (i.e. performance expectancy, effort expectancy, social conditions, and facilitating conditions) by non-urban communities.
- P2.** Key determinants of adoption and usage of non-profits' social media (i.e. performance expectancy, effort expectancy, social conditions, and facilitating conditions) are positively related to intention to adopt and use non-profits' social media by non-urban communities.

In a nutshell, the conceptual framework posits that non-profits whose social media content and presence are perceived to be of high quality with respect to information, system, and service are likely to create and satisfy, and thus, positively shape more favourable perceptions about the performance, effort required, communal buy-in, and fit in the technological and efficacy conditions necessary to participate and use non-profits' social media, and thus encourage greater intentions to adopt and use non-profits' social media for communication and information about non-profit activities. When these key enablers and factors are present, this overarching encapsulation of conceptual reasoning is in line with the positivistic linearity in spill-over impacts between antecedents and consequences of technology acceptance as conceptualized in the unified theory of acceptance and use of technology and the information systems success model (DeLone & McLean, 1992, 2003; Venkatesh et al., 2003), as well as empirical investigations of grand theories in technology acceptance (e.g. Bhattacharjee et al., 2008; DeLone & McLean, 2004; Guo & Barnes, 2012; Peter & McLean, 2009; Seddon & Kiew, 1996).



Note: P = proposition; ISSM = information systems success model; UTAUT = unified theory of acceptance and use of technology.

Fig. 1 Key enablers and determinants of intention to adopt and use non-profits' social media by non-urban communities

6 Conclusion

In short, the conceptual framework described in this paper posits that in non-urban communities, intention to adopt and use social media as a source of communication and information relating to non-profit activities is influenced by four key factors: performance expectancy, effort expectancy, social conditions, and facilitating conditions. Furthermore, it posits that three key enablers allow non-profits to leverage those key factors: information quality, system quality, and service quality (DeLone & McLean, 1992, 2003; Venkatesh et al., 2003). Notwithstanding the conceptual contributions herein, further empirical testing, using a non-urban community sample (e.g. Dayaks in Sarawak, Malaysia and Torres Strait Islanders in Queensland, Australia), of the propositions and relationships underpinning the conceptual

framework is required. Following that, non-profits should be able to use the information about the impact and significance of key enablers and factors to inform development of effective social media strategies that widens their reach to and in non-urban communities.

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