LEAPFROGGING AND INTERNET IMPLEMENTATION
BY TOURISM ORGANIZATIONS

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Drawing upon the Diffusion of Innovations (DOI) and technological ideologies, this article develops
three areas for research of successful Internet implementation. The first research area is to operation-
alize and validate measures of successful Internet implementation. The second area calls for investig-
ating how five factors—bandwagon effects, leapfrog effects, cloud computing, open communities,
and system legacy—relate to successful Internet implementation. Finally, this article proposes com-
bining technology ideologies and adopter categories to examine (un)successful Internet implementa-
tion. Diffusion of Innovations covers many aspects of innovation adoption and implementation, but
implementation stage research remains sparse and perhaps no diffusion research has incorporated
moral values towards technology. The article concludes with the contributions of this agenda for
researching successful Internet implementation.

Key words: Leapfrog effects; Diffusion of Innovations; Internet implementation; e-Tourism;
Cloud computing

Introduction

As the Internet approaches 2 billion users
(Internet World Stats, 2010), online tourism
marches forward. Recent tourism statistics show
the Middle East, East Asia and Pacific, and South
Asia, respectively, led in annual inbound tourism
growth (World Tourism Organization, 2010).
Developing areas, such as these countries, usually
adopt new technologies later than developed areas,
such as North America and Western Europe
(Minghetti & Buhalis, 2010). Similarly, tourism
and technology research in developed nations
leads comparable research in developing countries

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Yet tourism businesses in developing areas, as well as any business or organization slow to adopt the Internet, can learn from the early Internet adopters. Successful late adopters can leapfrog prior adopters in successful innovation use (Steinmueller, 2001). Developing countries are best poised to leapfrog in order to catch up with developed nations. For instance, developing countries, such as China and Malaysia, leapfrogged the developed nations to reduce the digital gaps (Xue, 2005). Innovations allow developing countries to leapfrog leading countries, but failure to exploit innovation potential contributes to unsuccessful diffusion (Z. Chen, 1999).

Researchers often use Rogers’ (2003) Diffusion of Innovations (DOI) and his five-adopter categories—innovators, early adopters, early majority, late majority, and laggards—to investigate technology use. Although DOI began explaining how individuals adopt and use innovations, DOI has expanded to organizational adoption and implementation of innovations (McGrath & Zell, 2001; Rogers, 2003).

Adopter categories at the individual and organizational level often differ in innovation implementation patterns (Bradford & Florin, 2003; Peres, Muller, & Mahajan, 2010; Zmud & Apple, 1992). Defining the organizational diffusion stage, adoption or implementation, is vital. The two stages portray different findings (Carter, Jambulingam, Gupta, & Melone, 2001). Compatibility with organizational technology and norms, for instance, was more important to medium–large US firms early to adopt corporate websites than to firms late to adopt websites (Beatty, Hsim, & Jones, 2001).

Most Internet diffusion studies focus on the adoption stage, and factors related to adoption, such as perceived benefits, organizational compatibility, technical compatibility, organizational factors, and social pressure (Dholakia & Kshetri, 2004). Abundant adoption findings enhance diffusion research, but academics note the relative lack of implementation research (Fichman, 2004b; Peres et al., 2010). This article helps fill gaps on organizational adoption and implementation research, focusing on the implementation of tourism websites among developing countries due to the potential and high penetration of Internet technology in the industry (Minghetti & Buhalis, 2010; World Tourism Organization, 2010).

Evolving Tourism Websites

Internet studies suggest that websites evolve from simple to comprehensive (Beatty et al., 2001; Hashim & Murphy, 2007). Websites typically begin offering basic information and over time, add features to enhance visitor interactivity and personalization (Hanson & Kalyanam, 2007). For example, destination websites in two developing countries, Ecuador and Malaysia, often offer just basic information (Karanasios & Burgess, 2008). However, a Malaysian study suggests that some hotels late to adopt websites, leapfrogged the early adopters in offering useful website features (Hashim, Syed-Ahmad, & Murphy, 2008).

Leapfrogging is where an organization, country, or individual late to adopt an innovation advances quickly in using that innovation (Goldenberg & Oreg, 2007; Rosenkranz, 1997; Wu, 2004). An East Asian study, for example, suggested latecomer electronic firms tended to leapfrog in product development (Hobday, 1995). The latecomers’ minor product innovation and improvement strategies outperformed the early adopters’ research, development, and design-led strategies.

Modeling Technology Adoption and Implementation

A quest, academic and applied, is successful technology implementation. Rather than which innovations to adopt, the focus should be which innovations will succeed. Insights into leapfrogging, rapid and successful innovation implementation, could improve organizational technology use and reduce wasted effort on inappropriate technologies. This article integrates five concepts—bandwagon effects, leapfrog effects, system legacy, open communities, and cloud computing—into a model of technology adoption and subsequent implementation (Buyya, Yeo, Venugopal, Broberg, & Brandic, 2009; Fichman, 2004b; W. Kim, 2009). Figure 1 shows the model and associated research areas.

Bandwagon effects and system legacy, respectively external and internal factors, relate to adopting...
a technology. With bandwagon effects, following fashion and fad drives the adoption decision more so than reasoned planning does (Sneddon, Soutar, & Mazzarol, 2011). Similarly, system legacy influence technology adoption due to support of available different platforms and standards to solve the complexity issues. Generally, system legacy refers to software, hardware, a system, or a network that is technically outdated, although often compatible with current technology (LaRose, 2009).

Two Internet trends, cloud computing and open communities, encourage trial due to low costs, easy access, and wide compatibility. Cloud computing, or simply the cloud, is both applications delivered as services over the Internet and data centers that provide these services (Armbrust et al., 2010). Meanwhile, open communities collaborate virtually, often using the cloud, to develop and improve software and services, usually free software and services (Bagozzi & Dholakia, 2006). The web’s lingua franca, HTML, is free to use, works across multiple platforms, and has a strong open community through the World Wide Web Consortium. Likewise, programmers contribute their skills towards improving the Linux operating system. The Linux community has no shareholders to compensate, no marketing costs, and no formal organization (Pitt, Watson, Berthon, Wynn, & Zinkhan, 2006).

After adoption, and a focus of this article, organizational use of an innovation ranges from successful implementation to frustrating abandonment. Assimilation gaps, a symptom of poor implementation and predictor of abandonment, exemplify ineffective technology use (Fichman & Kemerer, 1999; Furuholten & Ørvik, 2006). These gaps often reflect ill-planned adoption, such as when bandwagon effects drive the adoption. Leapfrogging, open communities, system legacy, and cloud computing reduce assimilation gaps and increase successful implementation. Bandwagon effects, however, increase assimilation gaps and hinder successful Internet implementation.

To help develop the factors proposed in Figure 1, this article integrates Kozinets’ (2008) technological ideologies with adopter categories. Rogers’ (2003) adopter categories, from innovators to laggards, illustrate how adopter characteristics and needs differ during the diffusion process. Meanwhile, technological ideologies resemble four homogenous and fluid beliefs towards technology (Kozinets, 2008). The incorporation of ideologies could help researchers understand innovation diffusion, extending the theory from just demographic
characteristics and time of adoption towards innovation beliefs.

This article draws on Figure 1 and the subsequent literature review to develop three areas for research of successful Internet implementation. The first research area is to operationalize and validate measures of successful Internet implementation. Second, research should investigate how five factors—bandwagon effects, leapfrog effects, cloud computing, open communities, and system legacy—relate to Internet adoption and successful implementation. Finally, this article suggests combining technology ideologies and adopter categories to understand the diffusion of innovation, particularly Internet technologies.

Literature Review

Diffusion of Innovations Theory (DOI)

Innovations include new ideas, techniques, practices, objects, and strategies (Tornatzky & Fleischer, 1990). Individuals, groups, and organizations perceive how well an innovation can solve problems and exploit opportunities (Brancheau & Wetherbe, 1990; Rogers, 2003). A popular innovation theory, the Diffusion of Innovations (Fichman, 2000; Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004), has three main applications (Rogers, 2003). It can forecast an innovation’s dissemination pace and pattern among members of a social system. Second, DOI helps explain societal alterations caused by an innovation. Third, the theory helps predict and explain innovation success. These three applications cover two streams, individual and organizational diffusion.

This article draws upon both individual and organizational diffusion (Agarwal & Prasad, 1997; Wolfe, 1994), and focuses on the latter. Compared to individual decisions, organizational decisions—such as, what to adopt and how to use it—are more complicated due to organizational structures (Rogers, 2003). Organizational diffusion comprises both innovation adoption and subsequent implementation throughout the organization (Choudrie & Dwivedi, 2005; Hashim & Murphy, 2007). It is crucial to define diffusion stages as adoption or implementation; different stages portray different findings (Carter et al., 2001).

Adoption

Adoption refers to developing capabilities for using the innovation, such as training and hiring personnel, and acquiring the innovation (Rogers, 2003). Adoption research often investigates factors related to the adoption decision (Fichman, 2000). For instance, studies on the adoption of knowledge management technologies suggest organizational and technological factors, such as centralization, complexity, IT integration, and IT competency relate to adoption (Ryan & Prybutok, 2001; Tornatzky & Fleischer, 1990). Environmental factors also relate to adoption, such as IT consultant advice relating positively with adopting data warehouse technology in Taiwan’s banking industry (Hwang, Ku, Yen, & Cheng, 2004).

Rogers’ (2003) suggests five innovator adopter categories, at both the individual and organizational level: innovators, early adopters, early majority, late majority, and laggards. These adopter categories help explain and predict innovation diffusion (Stafford, 2003). For example, relative to other categories, the innovator Australian biotechnology companies led in risk taking, creativity, and experimentation. The late majority and laggard biotechnology companies, relative to other adopter categories, led in skepticism, reluctance, conservatism, and avoidance (Bernstein, 2008).

Implementation

After adoption, implementation relates to innovation use and organizational performance (Brynjolfsson & Hitt, 2000; Carter et al., 2001; Fichman, 2000; Zhu & Kraemer, 2005). Innovation implementation research helps understand the outcomes and implications of innovation diffusion (Fichman, 2004b; Xiao, Jones, & Lymer, 2002). For example, a postadoption study of IT in an African management college showed little implementation progress 10 years after acquiring the innovation (Furuholt & Ørvik, 2006). Reasons for the failure included poor infrastructure, poor organization, poor top management engagement, knowledge barriers, and staff resistance. Implementation research also studies the implementation rate of innovations (Cooper & Zmud, 1990; Fichman, 2000). For example, the implementation rate of material
resource planning among US manufacturers depended on compatibility with current systems (Cooper & Zmud, 1990).

Finally, a study of enterprise resource planning suggested that consensus in organizational objectives and competitive pressure related positively to organizational performance (Bradford & Florin, 2003). The performance measures included inventory reductions, reduced procurement costs, and improved cash management. Similarly, performance measures are important in studying Internet implementation.

Research Area 1: Successful Internet Implementation

Even though studies examine implementation research, the number of studies is limited and many issues in the implementation stage need investigations (Bernstein, 2008). For example, a postadoption investigation should examine the effectiveness of an innovation throughout the organization (Fichman, 2000). In the context of Internet implementation, a hospitality study discusses the implementation of e-mail and websites (Frey, Schegg, & Murphy, 2003).

Furthermore, studies of websites features and website evolution (Kowtha & Choon, 2001; Law & Hsu, 2006; Murphy, Olaru, & Schegg, 2006) tend to ignore relationships between adopter categories and website performance (Kowtha & Choon, 2001; Law & Hsu, 2006). Yet different adopter categories often reflect different levels of innovation implementation (Fichman, 2004b). Categorization and measurement of successful Internet implementation helps organizations create and improve website performance (Palmer, 2002).

Website performance is a possible measure of successful Internet implementation. Measures of website performance include sales, number of visitors, and satisfaction (Huizingh, 2002). Website performance measures can be objective and subjective. For example, an objective measure could be the number of visitors to a website and subjective measures could be both managerial and user satisfaction with the website (Huizingh, 2002). A series of three studies on website usability, design, and performance suggested five metrics reflected successful website performance: download delay, website organization, interactivity, responsiveness, and website contents (Palmer, 2002).

Steyaert (2004) proposes five categories of website performance, namely consumer awareness, retention, contact efficiency, conversion, and popularity. For example, Google PageRank represents awareness, Alexa Rank represents popularity, and the number of incoming links suggests both popularity and awareness (Murphy & Scharl, 2007; Palmer, 2002).

Given the inherent difficulties and expenses associated with technology implementation, this article proposes success metrics as the first research area.

Research Area 1: Categorize, operationalize, and validate measures of successful Internet implementation.

Research Area 2: Modeling Internet Adoption and Implementation

Bandwagon effects and system legacy relate to successful innovation implementation (Buyya et al., 2009; Fichman, 2004b; W. Kim, 2009). This article examines these two factors, as well as leapfrog effects, cloud computing, and open communities. Figure 1 models these five factors with both Internet adoption and successful Internet implementation.

Leaping Over the Competitors

Research of evolving Internet use suggests similar implementation steps (Doolin, Burgess, & Cooper, 2002; Kowtha & Choon, 2001; Teo & Pian, 2003). These steps portray websites on a development continuum from providing e-mail communication and basic website information to providing personalized services (Hanson & Kalyanam, 2007; Hashim & Murphy, 2007; C. Kim & Galliers, 2004).

For example, a business-to-business model proposes five steps in Internet implementation: 1) an e-mail address, 2) a basic website, 3) website features to encourage prospecting, 4) sales and secure online ordering, and 5) supplier features (Teo & Pian, 2003). A business-to-consumer model proposes three website stages: providing information,
interactivity, and personalization (Doolin et al., 2002; Hanson, 2000). A later model proposes four website stages: simple online presence, interactive marketing, sales and transactions, and personalized and loyalty building features (Hanson & Kalyanam, 2007).

Nonetheless, recent Malaysian research suggests that the website features of late adopter hotels leapfrogged the website features of the early adopters (Hashim et al., 2008). The late adopter websites had more personalized and loyalty building features compared to some early adopter websites. These Malaysian findings contradict the normal sequence of Internet implementation. Some Malaysian hoteliers leapfrogged the early Internet adopters in implementing the Internet. Leapfrog effects positively moderate successful Internet implementation.

Leapfrogging and ICT studies note that supporting infrastructures, requirements and solutions, challenges, and safety relate to successful implementation (Gray & Sanzogni, 2004; Vatanasadakul, Tibben, & Cooper, 2004). Yet, the innovators or early adopters of an innovation do not always lead in implementing the same innovation (O’Connor & Murphy, 2010). In website evolution, some late adopters might move quickly to implement comprehensive website features.

Jumping on the Bandwagon

Bandwagon effects drive organizations to mimic other firms in adopting technology, often without knowing the technology’s benefits (Abrahamson, 1991; Flanagin, 2000; McNamara, Haleblain, & Dykes, 2008). For instance, the low response rate and high rate of bounced e-mails by Singaporean travel agents suggest bandwagon effects (Murphy & Tan, 2003). The travel agents acquiesced to external and internal pressures for a company e-mail address, yet failed to implement answering e-mails as a customer service tool. These travel agents illustrate a gap between acquiring and assimilating an innovation.

Assimilation gaps in postadoption situations help explain the limited use of innovations (Fichman & Kemerer, 1999). Bandwagon effects and the subsequent assimilation gaps relate to poor innovation implementation and help examine leapfrogging (Fichman, 2004b; McBride, 1997; Rogers, 2003).

Despite the relevance of organizational innovation implementation, few studies discuss these two concepts with successful innovation implementation. This article argues that, among other factors, bandwagon effects increase assimilation gaps and thus hinder implementation.

Cloud Computing

Internet standards are essential to enhance interoperable and interconnectedness among individuals and organizations (Friedman, 2006). Standards help organizations collaborate with each other and focus on value added activities (Gifford, 2005). This article suggests three elements related to Internet standards to moderate successful Internet implementation positively, namely system legacy, open communities, and cloud computing.

Cloud computing refers to both hardware and software resources available on the Internet as managed third-party services (Armbrust et al., 2010). Cloud computing is where data storage and applications are available via servers or computers elsewhere in the world, also referred as “the cloud” (W. Kim, 2009). Cloud computing examples include virtual IT (e.g., Amazon EC2, AbiCloud), software applications (e.g., Google Mail), and network storage (e.g., Apple MobileMe, Microsoft SkyDrive) (Knorr & Gruman, 2008; Mitchell, 2010).

Aside from scalability to more numbers of users, cloud computing is a flexible and feasible computing resources (Mitchell, 2010). Furthermore, cloud computing offers cost savings, remote access, real-time collaboration, and low maintenance costs (Buyya et al., 2009; M. Chen, 2003). Cloud computing helps individuals and organizations fulfill their computing needs and subsequently improve the Internet implementation (W. Kim, 2009). Therefore, this article suggests that cloud computing positively moderates both Internet adoption and successful implementation.

Open Communities

Open communities are virtual collaborative efforts open to anyone globally to join and contribute towards a common research problem, such as developing and improving free software or services (Bagozzi & Dholakia, 2006; Bos et al., 2007). Open community products include the Linux operating
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In tourism, a study suggested a Collaborative Travel Agent System to assist tourists obtain reliable travel information and services (Chiu, Yueh, Leung, & Hung, 2009). In tourism, a study suggested a Collaborative Travel Agent System to assist tourists obtain reliable travel information and services (Chiu, Yueh, Leung, & Hung, 2009). Open communities’ principles—sharing source code, independent peer review, improved community system development, and expanding user roles—attract organizations to use these emerging applications (Fitzgerald, 2006). Organizations pocket an immediate advantage with free software. No licensing fees reduce software development time and quality (Nagy, Yassin, & Bhattacherjee, 2010).

Furthermore, cloud computing and open communities decrease system legacy issues and increase organizational focus on innovation rather than finding and managing resources that enable innovation (Aymerich, Fenu, & Surcis, 2008; Knorr & Gruman, 2008). Similar to cloud computing, this article posits that open communities positively moderate both Internet adoption and successful implementation.

System Legacy

System legacy refers to outdated software, hardware, systems, and networks relative to current technology (Buyya et al., 2009; LaRose, 2009; Sutherland & Heuvel, 2002). A key system legacy consideration is successful integration with an innovation (Nah, Lau, & Kuang, 2001; Sutherland & Heuvel, 2002). Organizations often require technical or organizational changes to support the integration between system legacy and innovation (Finney & Corbett, 2007).

Successful integration at the adoption stage subsequently alleviates innovation implementation (De Lucia, Francese, Scanniello, & Tortora, 2008; Kumar, Maheshwari, & Kumar, 2002). For instance, Canadian organizations suggested that successful integration of enterprise resource planning with legacy systems at the adoption stage would improve successful implementation (Kumar et al., 2002). Similarly, a case study of leading Chinese electronics manufacturers implied that system legacy was a critical success factors for enterprise resource planning implementation (Woo, 2007).

Moreover, case studies on enterprise resource planning diffusion by British Airways, National Power UK, Catawba Memorial Hospital, and Zurich Financial Services illustrated serious implementation problems due to poor integration at the adoption stage (Themistocleous & Irani, 2001). Therefore, this article posits that system legacy positively moderates organizational Internet technology adoption and implementation.

In conclusion, to help model successful Internet implementation by tourism organizations, this article suggests:

Research Area 2: Test and refine how five factors—leapfrog effects, bandwagon effects, system legacy, cloud computing, and open communities—moderate Internet adoption and subsequent Internet implementation success.

Research Area 3: Adopter Categories and Technological Ideologies

Finally, this article suggests interpreting Rogers’ (2003) adopter categories by drawing on Kozinets’ (2008) ideological model (Fig. 2). Developed for individual technology consumption, this article applies his model to organizational technology consumption.

The model’s four technology ideologies add depth and richness to Rogers’ five categories and aid both applied and theoretical research of successful Internet implementation. Whereas Rogers categorizes adopters based on when they adopted, Kozinets categorizes individuals based on their feelings towards technology. Different technology ideologies drive adoption over time and across Rogers’ adopter categories. Each innovator category seems to align with one or more ideology. Figure 3 helps illustrate this argument.

At opposite moral views towards technology, Techtopians believe technology is social progress, while Green Luddites lament that technology contributes to destruction of the natural. The Work Machine perspective sees technology as an economic engine and finally, Techspressives enjoy technology for pleasure (Kozinets, 2008). Aligning these four technological ideologies with Rogers’
five adopter categories adds personal feelings to innovation adopters. Rogers’ adopter categories have heterogeneous characteristics and diffusion needs. The technological ideologies emphasize four homogenous and fluid beliefs towards technology. These ideologies shed light on how moral views influence organizational diffusion of innovations in general and across adopter categories.

For instance, the Techspressive ideology aligns neatly with the Innovator adopter category. Techspressive views towards technology are joyful selfindulgence, pleasure, and passion (Kozinets, 2008). Passion in new technology drives Techspressives to try innovations as soon as possible, similar to Innovators being the first to adopt. However, Techspressives that are cost-conscious may resemble Early Adopters characteristics.

Techtopians tend to adopt innovations based on social reasoning (Kozinets, 2008). This utilitarian characteristic resembles Early Adopters and Early Majority, who adopt innovations based on reasons and identify a benefit prior to the adoption decision (Rogers, 2003).

The Work Machine ideology also fits the Early Majority category as they share the Techtopians’ economic growth values. However, Work Machine characteristics, such as demand on innovation efficiencies and high productivity (Kozinets, 2008), resemble the skeptical Late Majority and Laggard categories that tend to adopt an innovation only after the majority has adopted it (Rogers, 2003).

Green Luddites also reflect the Laggard category because of their reluctance, emotion, and passion against innovation. Green Luddites believe that innovation is a threat to traditions, ecosystems, and ways of life (Kozinets, 2008). Therefore, similar to some with a Work Machine ideology, Green Luddites resemble Laggards in that they resist change and are the last group to adopt an innovation.
Technological ideologies help explain the extended organizational Internet adoption and implementation model. For example, the Techtopian and Work Machine ideologies’ focus on economic growth may push organizations to adopt innovations, due to competitor pressure and later face implementation issues, such as exploitation, conformity, and loss of control (Kozinets, 2008). Furthermore, the characteristics of the Work Machine and Green Luddite ideologies could assist explaining the leapfrog effect in successful Internet implementation.

Therefore, based on the confluence of Technological Ideologies and Adopter Categories, this article suggests:

**Research Area 3:** Use adopter categories and technology ideologies to illustrate and understand technology adoption and implementation.

**Methodology**

To investigate the proposed extended model of Internet adoption and implementation, this article suggests both quantitative (Claessens, Glaessner, & Klingebiel, 2002; Geyskens, Gielens, & Dekimpe, 2002) and qualitative methodologies (Gray & Sanzogni, 2004; Hackbarth & Kettinger, 2004). This triangulation approach informs interpretation, conceptualization, and theory generation of the proposed model (Evert, 2005).

Website and e-mail content analysis is one quantitative method to investigate the proposed model. For example, research of leapfrog effects among the top 100 hotel brands conducted content analysis on the hotel domain names (O’Connor & Murphy, 2010). Similarly, a content analysis of Swiss tourism provider’s websites identified Web 2.0 features, such as blogs, podcasting, video blogs, and folksonomies (Scaglione, Ismail, Trabichet, & Murphy, 2010). Meanwhile, to investigate the adopter categories towards successful Internet implementation, this article suggests that studies measure the website age and website updates using the Wayback Machine (Hashim, Murphy, Purchase, & O’Connor, 2010; Howell, 2006).

Researchers should also consider qualitative methodologies, such as case studies, interviews, focus groups, and ethnology (Frenzel & Grupp, 2009; Madlener, 2007; McNamara et al., 2008). For example, case studies examined technology leapfrogging in Thailand (Gray & Sanzogni, 2004) and Africa (Furuhol & Ørvik, 2006). In other instances, focus groups conducted with 40 firms in the Southeastern part of the US explored the firms’ enthusiasm towards leapfrogging strategy on technology implementation (Hackbarth & Kettinger, 2004). This article also argues the need for a comparison of several case studies to identify parsimonious sets of interrelated circumstances that explain the findings observed using the Qualitative Comparative Analysis (QCA) (Fichman, 2004a).

![Figure 3. Adopter categorizations and technological ideologies.](image-url)
Finally, this article proposes ethnography to capture tourism organizations’ experiences and behaviors related to Internet adoption and implementation (Arnould & Epp, 2006). Ethnography research, conducted in a natural setting, involves face-to-face interaction with participants to obtain accurate reflection of participants’ perspectives and behaviors (Ekstrom, 2006). Moreover, ethnography research conducted for a certain period, from days to years, at either single or multisited locations. For example, an ethnographic study examined the symbolism, meanings, and consumption patterns of an online coffee newsgroup community (Kozinets, 2002). Ethnography is a complementary alternative to build understanding of the proposed model.

Conclusion

As part of the growing Internet usage in tourism, this study proposes three research areas to address gaps in the innovation diffusion literature, particularly the implementation stage. This is one of a few articles proposing measures of successful Internet implementation. Secondly, factors such as leapfrog effects, bandwagon effects, cloud computing, open communities, and system legacy add to the dynamic nature of successful Internet implementation and adoption. The extended model in Figure 1 offers theoretical implications for tourism research to understand the overall diffusion of Internet technology. For example, few studies discuss the cloud computing and leapfrog effects with successful Internet adoption and implementation (Buyya et al., 2009; Steinmueller, 2001).

In addition, this article suggests qualitative and quantitative approaches to confirm and challenge the proposed model. In order to contribute to practitioners, researchers should examine the proposed model based on the situational characteristics of tourism industry, such as destination marketing, hotel, and restaurant sectors. For instance, studies could compare the country size, country incomes, Internet accessibility, and digital divide (Minghetti & Buhalvis, 2010). This consideration helps refine the dimensions and factors suggested in the research model.

Biographical Notes

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Jamie Murphy is a Professor at Murdoch University. His background includes European marketing manager for PowerBar and Greg Lemond Bicycles, and a Ph.D. from Florida State University. His academic experience spans continents and includes hundreds of academic publications and presentations, as well as New York Times and Wall Street Journal stories. Professor Murphy’s research focus is effective Internet use. His passion is motivating and mentoring great students.

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