Technology Adoption by Tourism Operators in Australia and Brazil: An Institutional Theory Perspective

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Abstract

The exploratory study presented in this paper uses institutional theory to draw attention to institutional isomorphism in the context of information technology adoption by tourism operators. Based on samples collected in Brazil and Australia, it describes and discusses patterns of technology adoption and use regarding email, Websites, social media and e-Commerce. The findings hint at increasing globalization of technology and the tourism industry, leading to very similar adoption results.

Keywords: technology adoption; institutional theory; institutional isomorphism; tourism operators; Brazil; Australia.

1 Introduction

Organizational adoption of information and communication technologies (ICTs) is an important and recurrent theme in tourism research (Buhalis & Law, 2008), with most studies pertaining to traditional technology acceptance models or investigating drivers of adoption according to the Technology-Organization-Environment framework (Gibbs, Gretzel & Noorani, 2016; Wang et al., 2016). Although mentioned as the third big theory of organizational technology adoption and used extensively in the information systems literature (Oliveira & Martins, 2010), institutional theory has only been adopted to a very limited extent in tourism (e.g. de Grosbois, 2016) and especially not pertaining to technology adoption (Gyau & Stringer, 2011). Institutional theory seeks to understand the impact of external factors on organizational behaviours, focusing on the institutional environment in which organizations operate and to which they must conform in order to gain acceptance and legitimacy (Weerakkody, Dwivedi & Irani, 2009). Institutional isomorphism describes the increased homogeneity that emerges from the institutional pressures faced by organizations that operate within particular institutional environments (DiMaggio & Powell, 1983). Using institutional theory, and particularly institutional isomorphism, we seek to identify and explain homogeneity among tourism operators

based on exploratory analyses of two comparative samples of Brazilian and Australian tourism operators.

2 Literature Review

Institutional theory has been praised as a powerful and influential theory that provides alternative explanations to autonomous decision-making and challenges the dogma of efficiency (Greenwood et al., 2008). Institutional theory argues that institutional environments are characterised by rules, regulations and belief systems and exercise influence over the entities within them (Weerakkody et al., 2009). Institutional theory suggests that organizations change their behaviours to not only seek competitive advantages but also to seek legitimization (DiMaggio & Powell, 1983). Institutional isomorphism causes organizations to resemble others in an industry; it suggests that organizational fields follow an evolutionary path that leads from diversity to homogeneity (DiMaggio & Powell, 1983). Such trends have also been described as bandwagon effects in the technology adoption literature (Murphy et al., 2003). DiMaggio and Powell describe three main forces or mechanisms that encourage institutional isomorphism: mimetic, coercive and normative forces. Mimetic forces come into play when there is ambiguity, which is often the case in the context of emerging ICTs. Not able to determine themselves whether a technology will be advantageous, organizations are likely to look at leaders in their field to identify best practices. Coercive mechanisms result from pressures exercised by regulatory forces/powerful players on which others in the organizational field depend. Normative pressures emerge from standards communicated through training, education and certification. The more professionalism there is in an organizational field as evident by the establishment of associations, the more likely such norms exist. Institutional isomorphism therefore stands in stark contrast to the general assumption that technology, and especially e-Commerce diffusion is "an uneven process, among countries as well as among firms" (Gibbs & Kraemer, 2004:125). The goal of this study was to explore institutional isomorphism in the tourism industry.

3 Methodology

Tourism operators of three main industry associations in four important Northeast states in terms of tourism in Brazil (i.e., Pernambuco, Rio Grande do Norte, Bahia and Ceará) were selected to participate in an online survey. In total, 1,616 emails were sent and 109 responses were received (7.2%). After deleting double and incomplete responses, the resulting final sample was 79. The Australian sample was drawn from a 2013 study that used the exact same questions and sampled operators from the same business categories (Tourism Research Australia, 2013). The Queensland portion of the sample (which most closely resembles the Brazilian sample in terms of the type of tourism destinations and products offered) included 232 operators. Previous research has identified considerable differences in technology adoption across tourism sectors and depending on organizational size (Gretzel, Kennedy-Eden & Mistilis, 2014). Thus, a sample of 84 Queensland tourism operators that closely resembled the Brazilian sample in terms of sector and size was selected. The time difference between the studies was mitigated by focusing on technologies that had existed in the market for a considerable time.

4 Findings

4.1 Email and Website Adoption

The findings show identical patterns in terms of e-mail adoption, with 96.4% of Australian tourism operators and 96.2% of Brazilian operators indicating that they have a company-specific email (the rest use personal accounts). The similarity in extent of diffusion is not surprising given the maturity of the technology. In terms of Website adoption, the two samples show again very similar patterns, with 79.8% of Australian tourism operators and 82.7% of Brazilian tourism operators having their own Website. As far as features on these Websites are concerned, tourism operators in both regions seem to have very similar websites (Table 1).

Table 1. Comparison of Website Feature Adoption
(% of tourism operators with a Website who adopted a particular Website feature)

Feature	Queensland	NE Brazil
Description of products/services	97.0	91.8
Links to company's social media sites	59.7	63.9
Links to local/regional/national DMOs	37.3	29.5
Photo gallery	89.6	85.2
Web-based inquiry form	83.6	82.0
User-generated contents	41.8	47.5
Online videos	35.8	29.5
Maps	70.1	59.0

Table 2 summarizes the Website update patterns among Northeast Brazilian and Queensland tourism operators, again showing strong similarities.

Table 2. Comparison of Website Update Frequencies
(% of tourism operators with a Website)

Update frequency	Queensland	NE Brazil
Less often than once a year	4.9	6.3
Once a year	11.5	8.3
2-12 times a year	32.8	31.3
2-4 times a month	26.2	27.1
2-7 times a week	14.8	14.6
Several times a day	9.8	12.5

4.2 Social Media Adoption

Almost identically small percentages of NE Brazilian (11.9%) and Queensland (10.8%) tourism operators maintain a company blog, while pretty much all tourism operators across both samples are represented on Facebook (95.9% NE Brazil and 98.3% QLD respectively). Twitter (37.8% NE Brazil vs. 31.0% QLD) and YouTube (27.0% NE Brazil vs. 25.9% QLD) adoption is not widespread but again very similar in both regions.

4.3 E-Commerce Adoption

The large majority of Queensland tourism operators (90.5%) and NE Brazilian tourism operators (84.8%) take bookings for their products and services. Of those tourism operators who take bookings and have a website, most allow email booking requests from their website (QLD: 88.5%; NE Brazil: 80.8%). With regards to checking availability of products/services on their websites, the majority of these NE Brazilian (59.5%) and Queensland (65.6%) tourism operators allow customers to check both price and availability. Nevertheless, a considerable portion of these tourism operators in both tourism regions do support neither price nor availability checks (NE Brazil: 34.7%; QLD: 26.2%).

5 Discussion and Conclusion

While indicating small differences in some areas of technology adoption, the findings of this exploratory study tell a striking and surprising tale of similarity in two distant yet structurally equivalent destinations. DiMaggio and Powell (1983) describe structural equivalence but also connectedness as fundamental characteristics of an organizational field headed towards homogenization. Palacios-Marqués, Merigó and Soto-Acosta (2015)'s research on hospitality firms in Spain suggests that the use of online social networks increases the innovation capacity of firms. Our research proposes that this happens on a global scale, leading to increased organizational isomorphism in tourism around the world. This isomorphism seems to be even stronger across regions than within, suggesting that organizations might mimic the world leaders in their specific areas or experience mimetic, coercive and normative pressures differently depending on their structural position in a destination network. Almost complete homogenization exists in terms of corporate email and, interestingly, also Facebook adoption (more so than in terms of Website adoption).

Although the results show astonishing isomorphism across the two samples of tourism operators, they also show that within each of the samples there are organizations that resist isomorphic pressures. Described as "laggards" in traditional diffusion of innovation research, these organizations warrant a closer look from an institutional theory point of view as there are currently no indications as to how and why they can legitimize their existence. Overall, the findings suggest new avenues for organizational technology adoption research in hospitality and tourism by emphasizing the need to understand organizational embeddedness in a particular industry, technology adoption related norms, and the existence and role of players that can exercise coercive pressures. The current research only compared two tourism regions and did not have large enough samples to test for industry sector effects.

Thus, there is a great need to extend the research to other areas and also sample regions for heterogeneity in terms of their tourism products and industry structures.

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