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The Role of Economics in Tourism Postgraduate Research: An Analysis of Doctoral Dissertations Completed between 2000–2010

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Abstract
While economics was one of the first disciplines to inform tourism research its contribution to tourism postgraduate research remains relatively undiscovered; in addition there has been an apparent decline in the influence of economics on tourism research. This research examines the contribution of economics to a subset of tourism doctoral dissertations completed in the United States, Canada, Australia and New Zealand, providing insight into how economic theories and methods have helped shape the field. Based on a content analysis of 118 tourism doctoral dissertations produced between 2000 and 2010 the most common concepts or theories informing tourism economic theses were impact theories, tourism demand and political economics, with quantitative methods dominating. Further research is still needed to determine the consequences of the declining influence of economics on tourism research, scholarship and practice.

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1. Introduction

Economics was one of the first disciplines to inform tourism research, with many economic concepts, theories and methods being prevalent within early tourism literature (Gray, 1982; Hall and Page, 2006; Tribe and Airey, 2007). The importance of economics for tourism originates in the sector's advocacy period of the mid-twentieth century when the tourism industry was experiencing rapid growth and there was a need to ascertain and promote its economic importance to countries (Moyle, Weiler and McLennan, 2013). However, by the end of the 1970s a cautionary platform towards tourism emerged that subdued earlier enthusiasm of the positive impacts of tourism, resulting in the emergence of sustainability concepts and the subsequent criticizing of pure economic methodologies (Jafari, 1990 Gartner, 2004). This resulted in an adaptancy phase, which saw a degree of shifting from a focus on tourism economics toward environmental and socio-cultural studies (Gartner, 2004).

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Regardless, economics has continued to make a significant contribution to the development and evolution of tourism research (Butler, 2004). Economics has achieved notability in tourism research by offering concepts and theories such as supply and demand, the multiplier effect, general equilibrium and capitalist dynamics amongst others (Landesmann and Stehrer, 2006). The relative maturity of the field is evidenced in the fact that there is a dedicated journal (Tourism Economics), there has been growth in the number of tourism economic articles published and there is now breadth and depth to tourism economic research (Song, Dwyer, Li and Cao, 2012; Dwyer, Forsyth and Papatheodorou, 2011).

Although economics has been identified as a key discipline that informs tourism research its contribution to tourism postgraduate research remains relatively undiscovered (Moyle et al., 2013). In particular, there is a distinct absence of research focusing on what economic theories and methodologies are employed by tourism doctoral researchers. This research seeks to examine the contribution of economics to a subset of tourism doctoral dissertations completed in the United States (US), Canada, Australia and New Zealand (NZ), thereby providing insight into how economic theories and methods are helping to shape postgraduate tourism research and the tourism field more generally.

To achieve this objective a content analysis was undertaken of 118 tourism doctoral dissertations identified to be informed by economics since 2000. The tourism economic theses were extracted from a database of 1,888 tourism-focused theses produced between 1951 and 2010. Together with a study of Song, Dwyer, Li and Cao (2012), who investigated recent journal articles published in the Annals of Tourism Research, Tourism Economics, Tourism Management and the Journal of Travel Research, this paper seeks to provide insight into current research trends in the tourism economics field.

2. Literature Review

The earliest attempt to overview the tourism economics field was by Eadington and Redman (1991), who identified demand elasticities, market structure and ownership, economic impacts, and policies as key areas of research. Not long after, Sinclair (1998), investigating methods used in the field of tourism economic development, identified that system-of-equation approach to demand analysis and computable general equilibrium (CGE) modeling for economic impact assessment had emerged in the field. Sinclair, Blake and Sugiyarto (2003) also undertook a review of tourism economic research arguing that it had been overly preoccupied with demand-side research, to the detriment of supply-side tourism economic research. Given the importance of demand-side research in tourism economics a number of articles have reviewed the methods used in these demand studies (Li, Song and Witt., 2005; Song and Li, 2008). Song et al. (2012) acknowledged demand analysis as a cornerstone of tourism economic research, yet noted that new perspectives, from fields such as institutional economics, are emerging. Song et al. (2012) further argued that it is important that tourism research is multidisciplinary and interdisciplinary.

Likewise, Dwyer, Forsyth and Papatheodorou (2011) argue that while mainstream economic methods (such as demand modeling, forecasting and impact analysis) continue to feature in tourism economics, new areas have emerged such as game theory, chaos theory and climate change. Moreover, tourism economics has been identified as becoming increasingly quantitative, but there are still areas that require further application such as ecological economics, poverty alleviation and sustainable development. Importantly, according to Dwyer et al. (2011), tourism economics has generally attracted fewer researchers compared with other topics within the broader economic discipline.

Tourism economics has adopted advanced econometric techniques, tourism satellite accounts, general equilibrium models, cost-benefit analysis and scenario planning (Eadington

and Redman, 1991; Dwyer, Forsyth and Spurr, 2004). As already noted, both the demand and supply side of tourism have been researched, including international demand, wages, income and employment generation, competition, prices, characteristics of tourism products and the use of scarce resources, such as labor, capital, land and environmental resources (Lim, 1997; Song and Li, 2008). More recently, institutional and evolutionary economics have emerged within tourism economics (McLennan, Ruhanen, Ritchie and Pham, 2012). All the same, only a very small number of studies have set about to explore the tourism economics field, especially the contribution of economics to tourism doctoral dissertations.

Kim (1998) undertook a content analysis of articles from the Journal of Travel Research and Annals of Tourism Research finding that economics was the top subject area. Likewise, Jafari and Aaser (1988) investigated 149 US tourism doctoral theses produced between 1951 and 1987, finding that the largest proportion of tourism theses were influenced by economics (26%). In a similar study of American and Canadian doctoral dissertations from 1987 to 2000 Meyer-Arendt and Justice (2002) determined that recreation (26%) far surpassed economics (7%) as the most influential discipline on tourism doctoral theses. Huang's (2011) study of doctoral dissertations in China found economics (21%) to be the discipline engaged in the largest number of doctoral tourism theses, leading Huang to conclude that the disciplinary context of doctoral tourism research in China has emulated the focus in US and Canadian tourism theses of the 1970s and 1980s, suggesting that economics is often a founding discipline for tourism research.

Weiler, Moyle and McLennan (2012), in a comprehensive analysis of nearly 2,000 doctoral theses completed in the US, Canada, Australia and NZ over a 60-year period, noted that of the main disciplines informing doctoral research, economics had the greatest decline as a proportion of all tourism theses ($p<0.001$). Weiler et al. (2012) observed that this trend was particularly noticeable in the US and Australia, where economics had originally been a founding discipline, as compared to Canada and NZ where there was no significant change in the number of tourism theses using economics as a discipline, possibly due to the low base from which they started.

Delving further into the issue of the proportionate decline in economics in tourism doctoral research in the US, Canada, Australia and NZ, Moyle et al. (2013) determined that 53% of the tourism economic theses were multidisciplinary, also being informed by environmental studies (31), political science (23), geography (12), sociology (12), and parks and recreation (10). Given the large number of tourism theses produced in the US most of the tourism economic theses (68%) were also produced in this country, followed by Australia (23%), Canada (5%) and NZ (4%). Tourism economic theses were identified to represent a larger proportion of all tourism theses in the US (12%), followed by Australia (11%), NZ (8%) and Canada (8%) between 1951 and 2010. Moyle et al. (2012) argued that, given the significant decline in tourism economic theses as a proportion of all tourism theses, there is a need to understand the changes occurring in tourism postgraduate research and to explore the consequence of the decline in the influence of economics in tourism research. Therefore, the purpose of this paper is to explore the theories and methods that contributed to a subset of the tourism economic doctoral theses produced between 2000 and 2010.

3. Method

This research drew on four online databases of doctoral research to identify and compile a comprehensive list of tourism-focused theses completed in the US, Canada, Australia and NZ between 1951 and 2010. To identify tourism-focused doctoral theses search terms were identified from previous studies (Hall and Pedrazzini, 1989; Meyer-Arndt and Justice, 2002; Weiler and Laing, 2008), including hotel, hospitality, leisure, tourism, tourist, travel, tour, recreation, holiday, vacation, guide, trip and heritage. This process resulted in over 20,000

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dissertations being assessed for inclusion in the study, of which 18,000 were excluded based on analysis of the abstracts, researcher judgment and validation by two other researchers. Data collected from each thesis in the database included the author, year of completion, title, academic department, faculty, university, country, subject area, abstract, keywords and number of pages for 1,888 valid tourism-focused doctoral dissertations. A list compiled by Jafari and Ritchie (1981), and subsequently updated by Goeldner and Ritchie (2006), was then used to code the theses into different disciplines. More detail about the methods and limitations are included in Weiler et al. (2012).

Since the first tourism economic thesis was produced by W.W. Goldsmith in 1968 at Cornell University 211 tourism theses have been informed by economics up until 2010, representing 11% of all tourism doctoral theses in the US, Canada, Australia and NZ. The present research drew on Weiler et al.'s (2012) database by extracting the tourism economic theses identified between 2000 and 2010, resulting in 118 theses examined in the present study. The theses which were identified to draw on the discipline of economics were then coded by concept/theory and method in Excel. In instances where the dissertation was listed in Weiler et al.'s (2012) database but not all the theory and method information was available in the abstract the dissertation was accessed from the individual university's electronic library to identify the missing data. This was necessary for approximately 13% of the theses in the database.

To code the concepts/theories and methods this study used a hybrid approach between grounded theory and being informed by categories identified in previous tourism economic review articles discussed in the literature review (see for example Song et al., 2012). Thus, concepts/theories were coded into available categories and if no appropriate category could be found the theses were coded using a grounded approach. An independent researcher reviewed the coding of a selection of dissertations as well as a list of 11 abstracts deemed difficult to code.

Data were then analyzed using descriptive analysis, as well as pair-wise correlations, t-tests and chi-square tests where possible. Limitations of the data include the relatively small sample size (despite the comprehensive collection strategy) and the possibility that some 2010 theses may be missing due to the fact that not all of the most recent theses may have been uploaded to the databases at the time of data collection.

4. Results

As already noted, between 2000 and 2010 there were 118 tourism economic theses produced in the US, Canada, Australia and NZ, representing 9% of all tourism doctoral theses completed during that period. This is proportionately lower when compared to the 16% produced prior to 2000 (Moyle et al., 2013).

4.1. Concepts and theories used in tourism economic postgraduate research

The number of concepts or theories informing each of the 118 doctoral theses ranged from 1 to 5, with a mean of 1.7. Around 46% of the tourism economic theses analyzed drew on just one concept or theory, followed by 39% drawing on two and 10% drawing on three concepts or theories. The most common set of concepts or theories drawn on in the tourism economic theses was impact theories, such as general equilibrium and the multiplier effect which were used in 24% of all theses. This was followed by tourism demand (19%) and political economics (18%). There was a significant (Pr=0.002) decline in impact analysis between 2000–2004 (with 18 theses produced) and 2005–2010 (with just 10 theses produced). Notably, despite its significant growth in tourism research more broadly, climate change only arose as a concept in two of the 118 tourism economic theses, suggesting that there may be a significant lack of up-and-coming tourism economic researchers having expertise in climate

change. Table 1 presents a list of the key concepts and theories identified in economics-focused tourism postgraduate research between 2000 and 2010.

Table 1: Concepts or theories informing tourism economic doctoral theses, 2000–2010

Concepts or theories	Number of tourism economic theses	Percent of all tourism economic theses	Number of tourism economic theses 2000–2004	Number of tourism economic theses 2005–2010
Impact theories (general equilibrium, multiplier)	28	24%	18	10
Tourism demand	22	19%	9	13
Political economics (policy and planning)	21	18%	7	14
Sustainability	12	10%	3	9
Tourist behavior (consumer demand theory/behavioral economics/preferences)	11	9%	2	9
Structural transitions	10	8%	5	5
Forecasting/scenarios	10	8%	5	5
Community-focused development/sustainable livelihoods	8	7%	2	6
Market entry/exit/intervention/failure/mergers/ acquisitions	6	5%	3	3
User pay/willingness-to-pay/expenditure patterns /price	6	5%	1	5
Globalization	6	5%	0	6
Land/resource use	6	5%	2	4
Welfare/poverty	6	5%	1	5
Labor force	6	5%	3	3
Ecology/conservation	6	5%	2	4
Systems theory	5	4%	2	3
Economic development	5	4%	0	5
Crises and disasters/risk management	4	3%	1	3
Investment	3	3%	2	1
Host guest interaction/support for tourism development	3	3%	1	2
Supply	3	3%	2	1
Stakeholders	3	3%	2	1

Note: Fewer than three theses also drew on tax, tourist experiences, tourism statistics/model development, knowledge management/social capital, cluster theory/network theory/collaboration theory, specialization, climate change, substitution, diffusion of innovations, equity/justice and carrying capacity.

4.2. Methods and approaches used in tourism economic postgraduate research

As expected, the majority of the tourism economic theses analyzed in this study used quantitative methods (60%), followed by qualitative (26%) and mixed methods (14%), where mixed methods is defined as the use of both quantitative and qualitative methods. While there was only a slight increase in quantitative methods between 2000–2004 and 2005–2010 (up 15%), theses using qualitative and mixed methods more than doubled over the same periods. This has resulted in quantitative methods falling from 70% of tourism economic theses in 2000–2004 to 54% of theses in 2005–2010 (Table 2).

Table 2: Methodologies used by tourism economic theses 2000–2010

	2000–2004		2005–2010		2000–2010	
	Theses	%	Theses	%	Theses	%
Quantitative	33	70	38	54	71	60
Qualitative	10	21	21	30	31	26
Mixed Methods	4	9	12	17	16	14
All Tourism Economic theses	47	100	71	100	118	100

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The number of individual method techniques (such as interviews, forecasting or CGE modeling) used per thesis ranged from 1 to 7 with a mean of 2.2 and a median of 2. Around 40% of tourism economic theses used just one method, followed by 30% using two and 13% using three methods. The most commonly employed method was interviews, which was used in 25% of theses (Table 3). This is notable, as interviews are generally associated with qualitative research. The reason for this is possibly associated with the vast number of different quantitative techniques in tourism economics (thus resulting in no single stand-out quantitative method) and the prevalence of interviews in qualitative and mixed method research (present in 64% of these studies).

The most apparent change in methodology across the decade was an increase in the use of case studies, up from 6% of tourism economic theses in 2000–2004 to 21% in 2005–2010. In addition, the application of content analysis was up from 4% of tourism economic theses in 2000–2004 to 15% in 2005–2010. Other econometric techniques such as panel data and structural equation modeling were up 15 percentage points from 2% of tourism economic theses in 2000–2004 to 17% in 2005–2010. At the same time there was a decline in the use of input-output modeling (I-O), which was down from 15% of tourism economic theses in 2000–2004 to 3% in 2005–2010. Furthermore, the use of indices, matrices, frameworks, accounting or guidelines was down from 19% of tourism economic theses in 2000–2004 to 8% in 2005–2010.Table 3 presents a summary of the methods used in tourism economic theses from 2000 to 2010.

Table 3: Methods used by tourism economic theses 2000–2010

Method	Theses	%	2000–2004	2005–2010
Interviews	30	25	10	20
Surveys	21	18	6	15
Case studies	18	15	3	15
Econometric forecasting	18	15	7	11
Observation	17	14	4	13
Econometric model of tourism demand and preferences	15	13	7	8
Indices, matrices, frameworks, accounting or guidelines	15	13	9	6
Other econometric techniques	13	11	1	12
Content analysis of secondary data	13	11	2	11
Historical analysis, archival analysis or oral histories	13	11	6	7
Willingness-to-pay techniques	11	9	4	7
Informants	10	8	4	6
Input-output (I-O) modeling	9	8	7	2
Scenarios	6	5	3	3
computable general equilibrium (CGE) models	5	4	2	3
Other multipliers or impact models	5	4	4	1
Photo analysis or visual material analysis	5	4	2	3
Focus groups	4	3	0	4
GIS or spatial data	3	3	2	1
Delphi	3	3	0	3
Cost-benefit analysis	3	3	0	3
Discourse analysis	3	3	0	3
All Tourism Economic Theses	118	100	47	71

Note: Fewer than three theses also used media analysis, grounded theory, stakeholder analysis, system dynamics modeling, the Cat-Pac method, Symbolic interactionist analytical framework, RES modeling, factor analysis, lifecycle analysis, demand curves, critical literacy, field notes, network analysis, interpretative analysis and explanation building analytic techniques.

4.3 Relationship between concepts/theories and methods

This research identified that some concepts and theories were more likely to use certain methods than others. For example, economic development utilized an average of 3.8 and host guest interaction used an average of 3.0 different types of methods per study. In contrast, theses relating to investment used just 1.3 and market entry/exit/acquisitions used 1.5 methods per thesis. Due to the number of theses in the area, political economics and impact theories used the highest number of different methods across all theses in the areas, with 21 and 19 different methods being used respectively. Conversely, due to fewer theses in the areas of investment and willingness-to-pay, theses in these areas used the fewest different methods with just 4 and 7 methods respectively.

Where sample size was sufficient it was possible to determine that some concepts and theories were highly correlated with particular methods to address their research questions. Applying this approach, tourism demand theses were highly correlated with methods such as econometric models of tourism demand and preferences ($p<0.001$, 41% of tourism demand theses or nine theses), followed by econometric forecasting ($p=0.003$, 36% of tourism demand theses or eight theses). Theses relating to tourists' behavior most commonly used willingness-to-pay methods (four theses or 36% of tourist behavior theses), econometric models of tourism demand and preferences (four theses or 36% of tourist behavior theses). Tourist behavior theses also commonly used interviews (four theses or 36% of tourist behavior theses).

Political economic theses were most likely to use interviews (eight theses or 38% of political economic theses) or case studies (seven theses or 33% of political economic theses), with political economic theses being highly correlated with case studies ($p=0.011$) and observation ($p=0.042$). Theses relating to structural transition were most likely to use interviews (six theses or 60% of structure/transition theses), followed by surveys (four theses or 40% of structure/transition theses) and observation (four theses or 40% of structure/transition theses). Structural transition theses were highly correlated with interviews ($p=0.008$). Labor force theses commonly used interviews (four theses or 67% of labor force theses) and historical analysis (four theses or 67% of labor force theses).

Theses on sustainability were highly correlated with surveys ($p=0.023$, five theses or 42% of sustainability theses). Similarly, theses relating to community development / sustainable livelihoods most commonly used surveys (four theses or 50% of theses related to the concept). Theses relating to impact theories were most likely to use I-O (eight theses or 29% of impact analysis theses) and were highly correlated with I-O ($p<0.001$) and CGE models ($p<0.001$). Forecasting and scenario planning theses were most likely to use econometric forecasting models ($p<0.001$, six theses or 60% of theses related to the concept). Other concepts and theories had too few numbers in each cell to investigate the correlation with, or in some cases even the frequency of, the methods employed.

5. Discussion and Conclusion

Since the first English-language tourism-focused doctoral thesis was completed in the US in 1951 tourism has had rapid growth as a subject of doctoral dissertations, with around 1,888 tourism-focused doctoral theses having been completed in the US, Canada, Australia and NZ (Weiler et al., 2012). While Jafari and Aaser (1988) found early on that economics was the key discipline informing tourism research in North America and Huang (2011) found the same in China's emerging tourism research field a more recent study by Weiler et al. (2012) found that economic research as a proportion of all tourism theses in the US, Canada, Australia and NZ had significantly declined since 2000 ($p<0.001$), particularly in US and Australian theses. This raises the question of whether, if Kim's (1998) study were replicated

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today, economics would feature among the top subject areas in tourism research in key tourism journals.

Some may argue that this is not necessarily a bad thing, as it suggests an increased disciplinary breadth and maturity in the field of tourism (Tribe and Airey, 2007). However, it may also indicate stagnation in the development of tourism economics research and may lead to an under-supply of graduates with the capacity to undertake tourism research underpinned by economic theory in coming years. This lack of tourism economic researchers may be acutely noticed within the government sector, where economics and econometrics are desirable qualities, possibly leading to employment of economists and researchers with little to no tourism background (Weiler et al., 2012). Investigating this issue further, Moyle et al. (2013) found that 53% of the tourism economic theses completed between 1951 and 2010 were multidisciplinary. Yet to date there has been little exploration of the concepts or theories and methods used in tourism economic research. Thus there may be deficiencies and gaps in particular theories or methods being used in tourism economics.

This paper therefore makes an important contribution to the tourism economic literature. In particular, it finds that there has been a decline in tourism economic doctoral research as a proportion of all tourism doctoral research, but it delves deeper into this issue to determine the nature and scope of economics-focused tourism postgraduate research in the past decade. Eadington and Redman (1991) recommended that tourism economic research should investigate inter-sectoral linkages, tourism demand and impact assessments. From this research it appears that doctoral scholars have adopted this recommendation, with impact analyses and tourism demand featuring as the most common concepts or theories drawn upon in tourism economic doctoral dissertations. This paper determined that the most common concepts or theories drawn on in the tourism economic theses were impact theories, tourism demand and political economics. This supports Dwyer et al. (2011) who indicated that mainstream economics (such as demand modeling, forecasting and impact analysis) are key underpinning concepts of tourism economics. This also corroborates, to some extent, Song et al. (2012) who suggested that demand analysis is a key area of study in tourism research, although compared with publications within tourism academic journals impact analyses are more frequent in the tourism economic doctoral theses than tourism demand studies. The implications of the focus on impact theories (such as general equilibrium and the multiplier effect) suggests that tourism economic research may be overly focused on the economic benefits of tourism, so it is encouraging to see this focus has declined in favour of concepts such as sustainability.

Dwyer et al. (2011) determined that tourism economics has been identified as becoming increasingly quantitative over time, following trends in the broader economic literature. However, the present study found that while this research found that the majority of tourism economic theses used quantitative methods, followed by qualitative and mixed methods, there has been substantial growth in the use of qualitative and mixed methodology tourism economic research in doctoral theses. This has actually resulted in a decline in quantitative methods as a proportion of all tourism economic theses across the decade.

The highest proportion of tourism economic theses drew on just one method, with the most common method being interviews. Some concepts and theories were more likely to use more methods than others. The most apparent changes in methodology across the decade was an increase in the use of case studies, content analysis and other econometric techniques such as panel data and structural equation modeling. The growth in case studies and content analysis reflects the rise in the use of qualitative techniques, while the rise in additional

econometric techniques reflects the increasing sophistication of methods in economics and their increasing adoption in tourism economic research.

Sinclair (1998) indicated that impact analysis was limited to the use of I-O analysis, with CGE models receiving little attention. Considering this issue, Dwyer and Spurr (2010) stated that "the study of the economic impacts of tourism shocks has recently undergone a 'paradigm shift' as a result of the use of computable general equilibrium (CGE) models in place of input-output (I-O) models." (p. 4). This study confirms that tourism economic theses relating to impact theories were most likely to use I-O; however, following the comments by Dwyer and Spurr (2010), there has been a decline in the use of I-O modeling across the decade. However, there is yet to be a rise in the use of CGE modeling in tourism economic doctoral dissertations.

A number of economic theories/concepts and methods were notably absent from the tourism economic theses. Song et al. (2012) suggested that game theory should be used within tourism while Dwyer et al. (2011) argued that emerging areas of tourism economics included game theory, chaos theory and climate change. Yet between 2000 and 2010 no tourism economic doctoral dissertation was underpinned by game theory. Moreover, the relative lack of tourism economic theses relating to climate change suggests there may be a need to focus postgraduate research students in this area to ensure the tourism industry is equipped to tackle approaching challenges. Otherwise there may be a significant lack of up-and-coming tourism economic researchers equipped to deal with climate change.

Clearly there is a need to ensure that outstanding tourism economic postgraduate research students are attracted to the field to ensure tourism research remains sufficiently informed by the discipline of economics. Future research is needed to determine the factors contributing to the decline in the influence of economics on postgraduate tourism research and to explore the consequences for tourism economic research, scholarship and practice. A limitation of this research was the small number of tourism economic theses produced between 2000 and 2010, which restricted the depth of analysis able to be undertaken. Future research should aim to expand the current research to the full dataset of 211 tourism economic theses and beyond just the tourism economic theses to the entire database of tourism theses, thereby allowing comparisons in theories and methods across the 60 years of tourism doctoral research and between the disciplines informing tourism research. Studies replicating the current method could also be undertaken in other countries, particularly those which are non-English speaking.

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