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Research note

Individual tourism systems

Bob McKercher [a,*], Denis Tolkach [b], Ni Made Eka Mahadewi [c], Dewa Gde Ngurah Byomantara [c]

[a] School of Hotel and Tourism Management, The Hong Kong Polytechnic University, Hung Hom, Hong Kong Special Administrative Region
[b] James Cook University, Cairns, Qld, Australia
[c] Bali Tourism Polytechnic, Nusa Dua, Bali, Indonesia

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ABSTRACT

This research note tests the proposition that unique tourism systems exist through an analysis of participation in attractions and activities among a sample of free and independent tourists who visited Bali, Indonesia.

Tourism is conceptualised as a system comprised of a series of inter-dependent component parts (Leiper, 2004; McKercher, 1999; Mill & Morrison, 2009; Morrison, Lehto, & Day, 2018). Tourism systems can be evaluated in a number of ways, ranging from as broad as the entire phenomenon of tourism, to narrower perspectives of in-destination behaviour and other means. Neil Leiper (1990, 1992) argued some 30 years ago, though, that there is no such thing as a single tourism system and instead each tourist operates within his or her own unique system. These systems may overlap with other systems when tourists participate in the same activities or visit the same attractions, but ultimately, they are discrete. As he noted, "the number of actual whole tourism systems is huge, because every itinerary route followed by one or more tourists represents (and re-creates) a unique system" (Leiper, 1992, p. 47). The net result is a rather complex and stochastic set of behavioural patterns.

His views contrast with much of the prevailing literature at the time where it is assumed that tourists with similar interests engage in like activities. The genesis of this proposition can be traced back to Poon's (1988, 1994) work whereby she felt the mass market had fractured and instead had been replaced by a series of special interest market segments. Tourists are then pigeon-holed into specific categories with the assumption that their behaviour is limited to activities that reflect these categories. The practice of grouping and segmenting tourists serves a number of purposes. It has certainly opened up a vast array of research opportunities for academics to explore a range of increasingly finer subsets of tourism (Franklin & Crang, 2001). It is statistically convenient, enables broad conclusions to be drawn about markets and enables generic models to be developed. Moreover, businesses and destination management organisations can speak in superlatives. Importantly as well from a tourism education standpoint, promulgation of such a notion helped justify tourism as a legitimate field of research in its formative years and helped create a shared sense of belonging among academics who for many years struggled to have their research regarded as credible (Dann, Nash, & Pearce, 1988; Tribe, 1997). But, it comes at the cost of increasing 'silofication' of tourism where tourists in a destination tend to be labelled as belonging to discrete segments with the assumption that their behaviours are limited to activities that reflect that segment's desires.

While Leiper's (1992) idea has been influential in developing a range of tourism models, the authors believe much of his work has not received the attention it deserves. One of the reasons is that many of his ideas have not been supported by empirical evidence, with Hall and Page (2010) noting that empirical evidence often came from observation and personal experience. To date, little or no empirical research has tested whether tourists indeed operate in unique tourism systems or display broadly similar behaviour patterns, especially as far as in-destination consumption is concerned. This research note tests the proposition that unique tourism systems exist through an analysis of participation in attractions and activities among a sample of free and independent tourists who visited Bali, Indonesia.

Data were collected through a convenience sample of tourists in Bali during the autumn of 2019. Interviews were conducted by students from the Sekola Tinggi Pariswaisata Bali (hereinafter called the STP Bali). Interviewers were trained by staff from STB Bali who also supervised the data collection activities. The survey instrument consisted of four parts. The first and second part gathered basic trip and motivation data. The last part gathered standard demographic data. The third section, and the focus of this paper, asked respondents to identify all activities they participated in or attractions they visited from a list of 36 of the most

* Corresponding author.
E-mail addresses: bob.mckercher@connect.polyu.hk (B. McKercher), denis.tolkach@jcu.edu.au (D. Tolkach), eka.amahadewi@ppb.ac.id (N.M.E. Mahadewi), byomantara@stpbali.ac.id (D.G.N. Byomantara).

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popular activities/attractions in Bali. They were then asked to indicate which attractions/activities, if any, played a key role in their decision to visit Bali. This list was developed in consultation with the authors, and by gathering tourist information, scanning brochures and searching other promotional collateral. A total of 659 useable questionnaires were completed that documented actions of tourists, with 612 respondents also indicating which attractions/activities influenced their trip decision.

Data were entered onto an SPSS spreadsheet. Attractions were ordered by popularity and then coded with a letter code signifying an individual visitation or participation. For example, 'beach activities' was most popular and was thus coded 'a', while the second most popular activity of 'eating different types of food' was coded 'b', and so forth until the least popular activity of 'attending a cooking class' which was coded 'M'. Coded results were then transferred into a Word file, where further manipulation created a unique alphabetical string to signify participation in the various activity sets participated in by each visitor. For example, a case where participation was limited to beach activities, general sightseeing and visiting temples would be coded as 'acd', while another case limited to beach activities, shopping, having a spa or massage and visiting waterfalls was coded 'aehi'. A theoretical set of combinations equal to $2^{36}-1$, or roughly 42 billion could be developed from the 36 activities or attractions. Of course, in practice, the actual number of possible discrete combinations was limited to the sample size.

On average tourists identified a mean of 13 different activities or attractions during their typical one week stay. The figure ranges from 12 people who identified only three activities/attractions to two who identified 35 of the 36 items on the list.

Table 1 shows the number of discrete combinations reported for the entire sample, as well as for each of the attractions or activities examined. The first column identifies the activity or attraction under investigation. The second the number of people who participated in that attraction/activity. The third column shows the number of unique activity set combinations that happened to involve that activity, while the fourth column shows the percent of unique activity sets. For example, of the 563 people who said they participated in beach activities, a total of 553 different combinations of activities that happened to involve going to the beach were identified. The last column shows the largest number of common sets of activities identified, with for example, again, only three people displaying the same set of activities that involved spending time at a beach.

Table 1 illustrates just how diverse and highly individualistic in-destination behavior is. Indeed, with very few exceptions virtually everyone participated in his or her own unique tourism system, with each visitor picking and choosing from the many activities or attractions available to create personalized itineraries. Moreover, while a small number of duplicate activity sets were observed among people who visited the most popular attractions, almost all visits to less popular attractions were part of discrete sets. Further testing revealed no differences between first time and repeat visitors. Each was as likely as the other to display unique system patterns.

It is possible that some overlap is noted by common activities pursued. For example, tourists interested in a specialist activity could visit a variety of attractions or participate in a range of activities that reflect the specialist interest. And, depending on the number of items measured, it may appear that their movements are quite distinct when in fact they are thematically linked, resulting in the appearance of unique patterns when none may exist. To test whether identifiable activity-based segments could be identified, the data set was recoded to group similar thematically based activities into one homogeneous group. For example, people who participated in any of the nine activities/attractions that represented cultural tourism were coded into one 'cultural' group.

Five activity based clusters were identified, with the results reported in Table 2. The results reveal, again, virtually no commonality in behavior, even when controlling for like activities. Those who participated in one or more adventure, cultural, leisure or wellness activities or showed a tendency to visit built attractions continued to move in their own unique tourism systems, with little or no overlap observed in other activities pursued.

The study also asked participants to identify those activities or attractions that played a key role in their decision to visit. This question sought to determine if clear patterns existed across sets of like attractions. Table 3 lists the 15 most common attractions/activities identified that influenced visitation. Again, the vast majority of participants identified discrete combinations of activities. While the variability is not

Table 1
Discrete activity and/or attraction sets visited.

Activity/ Attraction	n	Number of discrete combinations	% of discrete combinations	Largest number of people displaying the same activity set
All	659	647	98.2	3
Beach activities	563	553	98.2	3
Eating different types of food	505	495	98.0	3
General sightseeing	471	464	98.5	3
Visiting temples	446	445	99.8	2
Shopping	418	410	98.1	3
Stay in resort	391	380	97.2	3
Visit rice terraces	387	383	99.0	3
Spa or massage	379	375	98.9	3
Visit waterfalls	332	329	99.1	3
Visit Sacred Monkey reserve	325	321	98.8	3
Visit Ubud	279	277	99.3	2
Bars and nightclubs	277	271	97.8	3
Visit palaces	268	267	99.6	2
Scuba or snorkeling	237	235	99.2	3
Attend dance performance	212	212	100.0	0
Bali coffee plantation	203	202	99.5	2
Visit Bali Cultural Park	196	196	100.0	0
Hiking and/or cycling	173	173	100.0	0
Surfing	172	171	99.4	2
Garuda Wisnu Kancana cultural park	162	162	100.0	0
Mt Batur for sunrise	152	151	99.3	2
Photo tours	137	137	100.0	0
Yoga	131	130	99.2	2
Hot springs	131	131	100.0	0
Attend a festival	123	123	100.0	0
Agung River/ volcanos	113	113	100.0	0
Wellness tourism in general	112	112	100.0	0
Bali zoo	109	109	100.0	0
Waterparks	104	104	100.0	0
Tattoo or henna	85	85	100.0	0
Whitewater rafting	83	83	100.0	0
Elephant Park	76	76	100.0	0
Traditional healing	76	76	100.0	0
ATV or quad bike	64	64	100.0	0
Visit Turtle island	60	60	100.0	0
Attend cooking class	59	58	98.3	2

Table 2
Discrete activity and/or attraction sets by thematic domain.

Activity/ Attraction	Number of activities or attractions included in the themed area	n	Number of discrete combinations	% of discrete combinations
Adventure and nature based	10	413	408	98.8
Built attractions	7	325	319	98.2
Cultural	9	516	501	97.1
Leisure	5	648	612	94.4
Wellness tourism	4	379	374	98.7

Table 3
Discrete activities or attraction sets that influenced the visit decision.

Activity/ Attraction	n	Number of discrete combinations	% of discrete combinations	Largest number of people displaying the same activity set
All	612	531	86.8	5
Beach activities	307	252	82.1	5
Visiting temples	200	176	88.0	5
Eating different types of food	169	141	87.0	4
General sightseeing	162	132	81.5	5
Visit rice terraces	158	131	82.9	5
Scuba or snorkeling	124	111	89.5	5
Spa or massage	114	100	87.7	4
Visit waterfalls	104	95	91.3	2
Stay in resort	100	89	89.0	3
Shopping	84	68	81.0	4
Bars and nightclubs	72	61	84.7	3
Surfing	60	52	86.7	5
Mt Batur for sunrise	60	57	95.0	2
Visit Turtle island	60	60	100.0	0
Attend cooking class	59	58	98.3	2
Visit Sacred Monkey reserve	49	48	98.0	2
Visit Ubud	39	37	94.5	2

as large as it is in the Tables that analyzed behaviour, suggesting some consolidation, still more than 80% of people who identified an activity identified unique combinations of other activities that influenced their decision to visit.

Interestingly, the results from this study largely conform to the findings of a much smaller, earlier study focussed on the urban tourism destination of Hong Kong (McKercher, 2004). Both studies support the mass-individualism hypothesis and moreover, challenge the belief that there is typical or average tourist behavior, either in the overall visitation patterns or by thematically based activity segment. Moreover, the findings challenge the belief that identifying which activities influence the decision to visit effectively predict behaviour. It also challenges the discredited but still widely used method of identifying special interest tourism markets solely on the basis of analyzing participation in certain activities and then inferring trip purpose or underlying motive (McKercher & Chan 2005). This study revealed unequivocally that one cannot draw conclusions about segments based on their visitation patterns to individual or thematically linked activities alone. The observation that people visited temples, means only that – they visited temples - and cannot be interpreted a reflection of a cultural motive. Instead, the only conclusion that can be drawn is that people who visit temples also participate in a wide array of other activities.

The findings demonstrate the complex nature of tourism systems. While it may be possible to map an individual's behaviour pattern, when combined the collective patterns appear to be stochastic and therefore unpredictable, as anyone who has tried to interpret GPS data can attest. Yet an element of underlying order is a common feature of complex systems. Here the underlying order is reflected by the attractions or activities where individual systems overlap. A clear hierarchy of attractions or activities is evident, even though individual systems may be quite diverse.

The study has a number of managerial implications. To begin, thinking of tourists in the aggregate oversimplifies and grossly underreports the incredible diverse nature of touristic consumption. This observation is especially prescient when those activities that influenced visitation are considered. It is, perhaps, unsurprising that great diversity is observed in behaviour given the array of attractions and activities available in a place like Bali. This finding largely confirms the existence of primary, secondary and tertiary attractions, where visits to lower order attractions may serve no greater purpose than simply passing time between visits to higher order ones (Kantanen & Tikkanen, 2006). Yet, great diversity was also noted when those activities that influenced the visit decision were analyzed. Here, special interest theory suggests one would have expected a greater element of continuity across the sample.

The findings also highlight the limitations of adopting activities-based segmentation as a means of identifying discrete groups of tourists, for there is no commonality among activities, even when controlling for thematically based groupings. Instead, it is important to consider tourists as complex individuals who will behave differently from each other, and whose behaviour is unpredictable. Providing visitors with many personalized options on how to spend their holiday is a much better option than focusing on a common pattern of activities and visitor satisfaction with a generic itinerary.

Moreover, they challenge the belief in the uniformity of the so-called special interest market, especially in multi-product destinations. Diverse sets of attractions and activities play a role in the decision to visit, with no obvious specialist interest combinations. The findings also highlight the benefits of generic marketing activities to promote the destination's full array of attractions to satisfy tourists' needs. The trend is against conformism, towards personalization and towards active holidays. The research tracking individual tourist behavior in destinations has achieved good progress to-date (Hardy et al., 2017). This is one avenue for further research in understanding individual tourism systems, based on actual data rather than abstract categories. Personalization in tourism has become closely related to information technologies (e.g. Buhalis & Amaranggana, 2015, pp. 377–389), however what we call for is a more humanistic approach to study of tourist behavior.

Lastly, the study suggests it is more beneficial to understand motives that underlie behaviour than simply analysing behaviour patterns. The vast array of discrete behaviour patterns indicates the limitations inherent in such an analytical strategy. Instead, more insights can be gained by understanding the why of travel, more so than the what, for why people travel and what motivates them to select destinations should have an impact on their behaviour patterns.

Tourism is a complex activity that defies simple classification, with each tourist displaying idiosyncratic behavioural patterns. This study supports Leiper's contention of the existence of individual tourism systems that overlap at attractions and/or activities.

Author contributions

Mckercher: Conceptualization, Methodology, Validation, Formal analysis, Data Curation, Writing - Original Draft, Project administration, Funding acquisition. Tolkach: Conceptualization, Writing - Review & Editing, Project administration, Funding acquisition. Mahadewi: Methodology, Validation, Investigation, Resources, Writing - Review & Editing, Supervision. Byomantara: Methodology, Validation, Investigation, Resources, Writing - Review & Editing, Supervision.

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Bob McKercher (bob.mckercher@polyu.edu.hk) is a professor in The Hong Kong Polytechnic University's School of Hotel and Tourism Management. He has wide ranging research interests. He received his PhD from the University of Melbourne in Australia, a Masters degree from Carleton University in Ottawa, Canada and his undergraduate degree from York University in Toronto, Canada.

Dr. Denis Tolkach (denis.tolkach@jcu.edu.au) is a Senior Lecturer in Tourism and Hospitality at the College of Business, Law & Governance, James Cook University, Cairns. He has previously worked as an Assistant Professor at the School of Hotel and Tourism Management, The Hong Kong Polytechnic University. Dr Tolkach completed PhD at Victoria University, Melbourne. He has taught a variety of Tourism and Hospitality subjects, including Ethics & Social Responsibility, Contemporary Issues in Tourism, Ecotourism in Rural and Developing Regions. His research interests are in tourism in Small Island Developing States, ethics of tourism and sustainable tourism

Ni Made Eka Mahadewi is Associate Professor of Bali Tourism Polytechnic (hereinafter called Bali Tourism Institute or Sekolah Tinggi Pariwisata Nusa Dua Bali/STP Bali) and the Head for Research Centre and Community Services. Her research interests include Tourism Destination Management, Event and MICE Management and Consumer Behavior in Tourism. Eka Mahadewi has worked in the tourism field since 1990. She graduated from Diploma Tourism Management; Bachelor in Tourism Business; Master in Tourism Studies and Phd in Tourism Planning and Development program.

Mr. Dewa Gde Ngurah Byomantara, M.Ed is a Director of Bali Tourism Institute (Sekolah Tinggi Pariwisata Nusa Dua Bali). He has been taking part in developing tourism in Indonesia especially in Bali. He has background in developing Human Resources having graduated from Teacher Training for English Language Teaching of Exeter University UK. He has been involved in the tourism industry and tourism study since 1987 in Bali and also has consulted in tourism development at Lambata resort Island in East Nusa Tenggara, Indonesia.