The impact of changing seasons on in-destination tourist behaviour

Bob McKercher, Bruce Prideaux and Michelle Thompson

Abstract
Purpose – The purpose of this paper is to develop a conceptual framework that examines the impacts of changing seasons on tourism.

Design/methodology/approach – The paper presents a conceptual process model of the impact of seasons on all aspects of in-destination tourist behaviour. The model is developed from the literature and is then tested using Cairns, Australia as a case study.

Findings – Seasons influence the actual and perceived range of products/experiences available, which dictate the pull features of a destination, that in turn, influence who comes and why they come. Combined the activity sets and visitor profile define in-destination behaviour and, ultimately, satisfaction.

Research limitations/implications – The study fills a needed research gap in two ways. Firstly, it explains conceptually and then tests empirically how changes in seasons affect the delivery of tourism products and experiences. Secondly, it adds significantly to our understanding of the factors that influence in-destination behaviour.

Practical implications – Managerial implications for destination management organisations are identified.

Originality/value – This paper presents a new conceptual process model for a previously unexamined issue.

Keywords Seasons, Motive, Pull factors, Cairns, Product development, Marketing

Paper type Conceptual paper

季节变化对目的地游客行为的影响

摘要
研究目的: 本文提出了一个季节影响目的地游客行为的理论模型。该模型基于文献开发而成, 然后以澳大利亚凯恩斯作为案例进行测试。
研究目的: 本文的目的是开发一个研究季节变化影响旅游的理论框架。
研究结果: 研究发现季节会影响实际和感知的产品或体验的范围, 从而决定一个目的地的吸引力特征, 他们反过来可以影响谁来旅游以及他们来旅游的原因。结合活动和旅游者画像来定义其目的地行为。
研究意义: 本研究从两个方面填补了理论空白。首先，它从概念上解释，然后实证检验了季节的变化如何影响旅游产品和体验的供应。其次，它极大地增强了我们对影响目的地行为的因素的理解。
研究意义：本研究提出了对目的地管理的实践意义。
原创性/价值：本研究针对先前未经考察的问题提出了一种新的理论过程模型。
关键词：季节, 动机，吸引要素，凯恩斯, 产品开发, 营销
文章类型：概念型论文

EL impacto del cambio estacional sobre EL comportamiento DE los turistas EN EL destino

Resumen

 Diseño/metodología/enfoque: El artículo presenta un modelo de proceso conceptual del impacto de las estaciones en todos los aspectos del comportamiento en el destino turístico. El modelo se desarrolla a partir de la literatura y luego se pone a prueba usando Cairns, Australia como estudio de caso.

Objetivo: El propósito de este artículo es desarrollar un marco conceptual que examine los impactos de los cambios de estación en el turismo.

Recomendaciones: Las estaciones influyen en la gama, real y percibida, de productos/experiencias disponibles que condicionan las características de atracción de un destino. Las estaciones, a su vez, influyen en quién viene y por qué viene. Los conjuntos de actividades combinadas y el perfil del visitante definen el comportamiento en el destino.

© Emerald Publishing Limited, ISSN 1660-5373

TOURISM REVIEW

DOI 10.1108/TR-06-2023-0420

Revised 30 July 2023
Accepted 24 August 2023

Received 22 June 2023

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Introduction

This paper adopts a destination-centric approach to examine the impact of changing seasons on tourism. Changes in seasons determine the real and perceived products and experiences available, which in turn influence who is likely to come to a destination and why. Combined these two dimensions determine in-destination tourist behaviour. The main contribution of the paper is the development of a conceptual process model that explains how changing seasons affect the pull features of a destination and the push elements that drive tourists to visit (Dann, 1977). The model is then tested using Cairns, Australia as a case study to verify its operational validity.

Most destinations have to deal with the impacts of changing seasons, for each season determines both available product offerings and the ability of the destination to attract different market segments. While much has been written about “seasonality”, including an edited text (Baum and Lundtorp, 2001) and a detailed technical report by the Australian Cooperative Research Centre for Sustainable Tourism (Lee et al., 2008), remarkably little has been written about the causes of seasonality. Baum and Lundtorp (2001) identified the lack of in-depth research into this issue as a critical issue, while Butler (2001) indicates problems exist in identifying this phenomenon and the reasons for its persistence. These comments made more than 20 years ago still resonate today. Instead, seasonality research tends to focus on four broad themes: causes (Duro and Turrion-Prats, 2019; Hinch and Jackson, 2000; Chung, 2009); impacts on tourist flows (Duro and Turrion-Prats, 2019; Ferrante et al., 2018; Almeida and Kastenholz, 2019; Vergori, 2017; Volo, 2010); opportunities or threats to destinations (Baum, 1999; Baum and Lundtorp, 2001; Chung, 2009; Butler, 1998; Jang, 2004; Koenig-Lewis and Bischoff, 2010); and impacts on local communities, including seasonal workers (Duro and Turrion-Prats, 2019; Jolliffe and Farnsworth, 2003).

“Seasonality” in tourism, though, is the response to seasonal changes. Surprisingly, the more fundamental issue of what a “season” is and how it affects tourism has not been addressed. Volo (2010) argued that a better understanding of the impact of seasons on tourism would lead to more awareness of issues affecting tourist behaviour. Likewise, Koenig-Lewis and Bischoff (2005) also noted a better insight into seasonal behaviour is essential for successful product modification and market diversification.

To date, no comprehensive model examining the complex interplay different seasons have on tourist behaviour has been developed, with Lundtorp (2001) indicating that there is no scientific theory on tourism seasonality. This paper addresses that gap by presenting a conceptual process model of how seasons influence tourism. It is framed broadly within Dann’s (1977) push pull model.

A model of the impact of seasons on in-destination tourist behaviour

The following discussion outlines a process model to explain the role of changing seasons on tourism. The discussion begins with a conceptualisation of what a tourism season is and
how it differs from seasonality, before identifying and explaining the component parts of and the linkages in the proposed model.

It must be appreciated that models are abstract constructs that help us understand real world systems by showing a set of relationships that indicate causality (McKercher and Prideaux, 2020). From a tourism perspective, Getz (1986) described two types of models – process models and theoretical models. The conceptual model illustrated in Figure 1 can be described as a process model, for it shows how different seasons influence all aspects of tourism. Briefly, it illustrates how each season dictates the actual and perceived activity sets available in the destination. Actual and perceived activity sets may be quite different, for a range of institutional and natural factors will affect the appeal of certain available activities. These two elements create destination appeal. These, in turn, influence who is likely to visit and why they visit. Again, the who and why of tourists are interrelated for who visits is a function of why they visit and why they visit influences who visits. The combination of actual and perceived activities and the profile of the visitors will determine in-destination behaviour. While the model appears parsimonious, its operationalisation is subtle and place dependent. The following discussion deconstructs each of the dimensions.

The development of the model is framed broadly within Dann’s (1977) push pull framework. Dann recognised that people were “pushed” to travel for a variety of reasons that relate to anomie or ego enhancement. Others, notably Crompton (1979), extended the range of push factors significantly. “Pull” features of a destination represent those in-destination elements that can satisfy tourists’ needs and wants. Successful destinations match their pull features to the pull elements that drive tourism. This study extends Dann’s theory by considering the antecedent element of changing seasons on the pull dimension and the consequences of the push-pull element to define tourists’ in-destination behaviour.

Conceptualising a tourist season

A “tourist season” is defined as a temporal period dictated by natural, institutional and destination management factors or a combination of some or all elements. It is both context and destination specific, for its defining feature is that seasonal variations offer something that either is unavailable at other times of the year or provides opportunities that certain market segments find more appealing at certain times of the year than at other times. The number and start/end dates of tourist seasons may or may not correspond to traditional calendar seasons. Some destinations may enjoy more than four seasons, while others may have fewer. In extreme instances, only one effective tourist season may exist with the rest of the year classified as “dead” (Lee et al., 2008).

Figure 1 A model of the impact of seasons on in-destination tourist behaviour

Source: Figure by authors
Tourist seasons can be defined in three ways. The first is by natural factors as determined by regular temporal variations in natural phenomena, associated with climatic changes, such as temperature, precipitation, wind and daylight (Baum and Lundtorp, 2001). The second is by institutional or socio-cultural factors as characterised by religious, cultural, ethnic and social considerations (Butler, 2001), including school holidays (Almeida and Kastenholz, 2019; Chung, 2009; Croce and Wöeber, 2010; Butler, 1994). Third, destinations may create their own artificial seasons in an effort to generate increased tourism demand during otherwise low visitation periods.

Seasonality differs from seasons, for seasonality is the response to changing tourist seasons. Butler (2001, p. 5) defines seasonality as a temporal imbalance in the phenomenon of tourism, which may be expressed in terms of dimensions of such elements as numbers of visitors, expenditure of visitors, traffic on highways and other forms of transportation, employment and admissions to attractions. The cause of this temporal imbalance is change in tourist seasons, brought about by natural, institutional or promotional factors.

The start and duration of tourist seasons are location and context specific, for different places offering similar experiences may begin and end on quite different dates. The autumn leaf viewing season (Spencer and Holecek, 2007), for example, starts in early September in parts of Canada but not until late October or early November further south. Likewise, ski seasons are defined by when reliable snowfall can be expected or when reliably low temperatures occur to make artificial snow. In the northern hemisphere, higher altitude and more northerly destinations tend to enjoy longer ski seasons than more southerly and lower altitude places. In other cases, seasons may be determined legislatively, as in the case of consumptive fishing and hunting activities. Each jurisdiction may determine different opening and closing dates resulting in great variance in effective seasons depending on the destination’s home state, province or territory.

Similarly, the destination context is critical. Urban destinations are thought to be more immune from seasonal variations in visitation than rural or resort destinations (Coshall et al., 2015; Fernandez-Morales et al., 2016; Qiang, 2020) and are also more able to attract appealing festivals and events. By contrast, Cuccia and Rizzo (2012) and Qiang (2020) suggest seaside destinations are prone to greater seasonal fluctuations in arrivals, while destinations located in higher northerly or lower southerly latitudes are confronted by a range of natural factors affecting hours of sunshine and extreme temperature variations (Croce and Wöeber, 2010) that will affect product offerings and subsequent visitor profile. While these issues may moderate behaviour, it is felt they exert only a partial influence on demand (Ferrante et al., 2018).

The tourist season defines actual and perceived activity set availability

As illustrated in Figure 1, seasonal changes exert two interrelated impacts on the range of experiences, products and activities available (Becken and Wilson, 2013). On the one hand, seasons may determine the absolute activity set, as some activities are available only at certain times of the year. Skiing, fall colour viewing, hunting, fishing, cycling, golfing, swimming, nature-based tourism, new season wine-tasting and a range of other activities are particularly sensitive to seasonal fluctuations (Becken, 2013; Becken and Wilson, 2013; Mitchell and Hall, 2003; Scott and Lemieux, 2009).

On the other hand, while some products and activities may be available all year round, they are more appealing at certain times of the year than at other times. As an example, the chance to escape winter and experience a more pleasant climate drive grey nomads and snowbirds to travel to warm weather locales (Coates et al., 2002; Hillman, 2013; Vaillon, 2012), even though the climate at such destinations is warm year round. Yet, hot summers hold little appeal in such places for tourists can have a similar experience in their home
communities. Thus, the perception of the desired activity set may play as important a role as the actual activity set when determining the appeal of a place.

Activity sets influence visitor profile and motives

Together the actual and perceived activity sets define the effective pull aspects of a destination. They, in turn, play a vital role in influencing who comes and why they come. Indeed, from a destination-centric perspective, the ability to match the pull features of a destination with the push features that drive attractive market segments is key to successful destination management.

It is well recognised that seasonal variations exist in market segments (Coshall et al., 2015), as some markets face significant constraints that prohibit travel during certain times of the year (Almeida and Kastenholz, 2019; Hinch and Jackson, 2000), while others are more free to travel (Calantone and Johar, 1984; Hillman, 2013; Vaillon, 2012). People who travel during less busy times of year tend to be older, travel as couples or singles and rarely travel with children, while those people who travel in the busiest summer months are disproportionately comprised of younger people or families with children (Kastenholz and Almeida, 2008; Spencer and Holecek, 2007).

Differences in motive have also been observed. Here, the reader is reminded of Pearce’s Travel Career Pattern model (Pearce, 2005, 2011). He argued that trip decisions are influenced by the mix of, and the relative importance placed on, different tiers of motives. Motives can be classified into three broad categories, with core motives relating primarily to novelty, escape, relaxation and relationships. Mid-layer motives are more diverse and can include being close to nature, self-development, self-actualisation and a range of other factors. Outer-layer motives include such features as stimulation and risk taking, social status, romance, nostalgia, isolation and the like. While core motives represent the backbone or skeleton of all travel (Pearce and Lee, 2005), the extent to which they influence travel decisions depends on the relative importance individuals place on them, mid-layer and outer-layer motives.

Hodeck and Hovemann (2016), comparing winter and summer sports tourists in an alpine area in Germany, observed that summer tourists were motivated by core and mid-layer motives while their winter counterparts were motivated in part by mid-layer motives. A similar result was found in a study of millennials in their quest for mountain tourism experiences (Giachino et al., 2020). Summer tourists were particularly motivated by nature and wildlife, relaxation and quiet, while winter tourists were drawn to the destination by sports and its trendy location.

The combination of activity sets and visitor profile dictates in-destination behaviour

Together, the combination of available and perceived activity sets and who visits and what motivates visits produce different trip characteristics (Choe et al., 2019), activity preferences (Kastenholz and Almeida, 2008), behaviour and satisfaction (Geng et al., 2021). Interestingly, the drivers of in-destination behaviour are relatively little understood (McKercher et al., 2021). Instead, most in-destination behaviour studies track tourist movements (Khairi et al., 2019; Zoltan and Masiero, 2012), but because they rely on GPS or big data, are effective in explaining what tourists do, but do not explain why they behave the way they do.

Activities pursued may be highly seasonal. People are more likely to participate in water-based activities during the peak summer season at tropical and subtropical destinations, whereas they may choose to participate in non-water sports during the cooler winter season even though the temperature may be quite temperate (Kastenholz and Almeida, 2008; Tkaczynski et al., 2015). Likewise, some may prefer to engage in touring, cultural and
educational related activities in the low season (Kastenholz and Almeida, 2008; Spencer and Holecek, 2007). Intensity may also vary by season (Spencer and Holecek, 2007).

Finally, all aspects of the model culminate in tourist satisfaction, for experience availability influences destination appeal perceptions, which in turn act as a filter to draw or repel certain segments who will then engage in specific activities from the seasonally available activity set. It is interesting to note, though, that few differences exist in satisfaction throughout the year (Soldic and Smolcic, 2018), suggesting a robust link between destination pull features and market push factors.

A test of the conceptual process model

The previous discussion outlines the component parts of and the rationale for the development of the conceptual process model that examines how changes in season affect in-destination tourist behaviour. This part of the paper presents a case study, testing the model in Cairns, Australia. The purpose of the case study is to validate or otherwise the model. Cairns is a four-season destination located in far north Queensland. It is the starting point for trips to the Great Barrier Reef as well as for visits to rainforests of the Wet Tropics World Heritage Area.

Data for the case study were derived by aggregating the findings of annual exit surveys conducted in the domestic terminal of Cairns International Airport between January 2016 and February 2021, or just before COVID-19 shut down Australian tourism. The same survey questions have been used since 2016 (Prideaux et al., 2018; Pabel et al., 2017). The survey instrument gathered socio-demographic information, information on the visit, travel motives, destination features, activities participated in, places visited and satisfaction. Categorical data were used to report destination features, activities and places visited, socio-demographics and trip variables, except for length of stay and number of previous visits. A five-point Likert scale was used to indicate travel motives, ranging from 1 – not at all important to 5 – very important, and a 10-point scale was used for overall trip satisfaction, ranging from 1 – not satisfactory to 10 – highly satisfactory in accordance with protocols developed by national and state tourism organisations.

This case study focusses on domestic tourists who are more familiar with the perceived seasonal variations in Cairns than international tourists. As such, they are more susceptible to the impact of seasons on perceptions of product/experience availability and other pull factors. The sample is 1916 respondents. Data from various years were tested to ensure internal consistency to confirm they could be aggregated.

Seasonal variations in actual and perceived activity sets

While the absolute activity set in Cairns does not vary from season to season, personal conversations with the head of the local destination management organisation indicate the perceived activity set does. Summer, from December through the end of February, is considered the wet season; autumn runs from March to May, with rainfall subsiding in April; winter occurs between June and August and while the weather is dry and pleasant; spring occurs from September to the end of November, where temperatures warm up and humidity rises.

Many domestic tourists feel it is too cool to swim in the ocean during the autumn and winter seasons, while the hot, humid and rainy summer season makes travel to the Wet Tropics less appealing. As a result, the head of the DMO indicated substantial product substitution occurs as summer visitors prefer ocean-based recreation, while winter visitors head to the inland hinterland and the Wet Tropics World Heritage Area (rainforests). It is also felt that some activities such as walking, hiking, birding and land-based nature-based tourism
activities are more appealing in the winter, while other water-based activities, including kayaking, sailing and swimming hold more appeal in the summer.

**Seasonal changes in visitor profile**

Seasonal variations in the perceived product and experience availability make Cairns an appealing destination to a different mix of demographic market segments (Table 1) that are motivated to travel for different reasons (Table 2) and therefore have different needs and wants. In turn, the combination of seasonal push elements and differing pull dimensions produce marked differences in tourist behaviour (Table 3).

Substantial seasonal differences were noted in both the demographic profile of visitors and their motives throughout the year. Winter draws an older market, while summer visitors tend to be younger. More families with children visit in the autumn period, and they also had the shortest length of stay.

Motives too varied by season. Motives were measured on 17 different variables, with factor analysis producing a four-factor solution that explained about 62% of the variance. Factor 1, labelled “be active” included motives relating to visiting the Wet Tropics, seeing Australian wildlife, experiencing Aboriginal culture, experiencing the natural environment, visiting national parks, visiting World Heritage Areas and learning about the natural environment. This factor explained 25.3% of the variance. Factor 2, labelled “rest, relaxation, climate and cost” explained another 16.4% of variance. It included such motives as rest and relaxation, enjoying a tropical lifestyle, visiting beaches, having fun, pleasant climate and price.

### Table 1 Demographic and trip profile by season

<table>
<thead>
<tr>
<th>Variable</th>
<th>Summer (December – February)</th>
<th>Autumn (March – May)</th>
<th>Winter (June – August)</th>
<th>Spring (September – November)</th>
<th>Test score</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>268</td>
<td>373</td>
<td>580</td>
<td>695</td>
<td>$\chi^2 = 50.494, p &lt; 0.001$</td>
</tr>
<tr>
<td>Travel party composition (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Couple</td>
<td>38.0</td>
<td>43.7</td>
<td>51.2</td>
<td>48.9</td>
<td></td>
</tr>
<tr>
<td>Friends or relatives</td>
<td>29.8</td>
<td>20.4</td>
<td>22.0</td>
<td>22.9</td>
<td></td>
</tr>
<tr>
<td>Family with children</td>
<td>15.9</td>
<td>19.5</td>
<td>14.6</td>
<td>14.2</td>
<td></td>
</tr>
<tr>
<td>Alone</td>
<td>14.3</td>
<td>10.7</td>
<td>8.9</td>
<td>12.6</td>
<td></td>
</tr>
<tr>
<td>Mean age</td>
<td>40.4</td>
<td>48.7</td>
<td>51.9</td>
<td>48.3</td>
<td>$F = 26.896, p &lt; 0.001$</td>
</tr>
<tr>
<td>Household income (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$\chi^2 = 34.532, p &lt; 0.001$</td>
</tr>
<tr>
<td>$&lt; = $31k</td>
<td>20.5</td>
<td>20.2</td>
<td>18.7</td>
<td>17.0</td>
<td></td>
</tr>
<tr>
<td>$32k–$69k</td>
<td>29.9</td>
<td>37.4</td>
<td>38.5</td>
<td>30.4</td>
<td></td>
</tr>
<tr>
<td>$70k–$99k</td>
<td>28.7</td>
<td>25.5</td>
<td>22.5</td>
<td>22.2</td>
<td></td>
</tr>
<tr>
<td>$&gt; = $100k</td>
<td>20.9</td>
<td>16.9</td>
<td>20.2</td>
<td>30.2</td>
<td></td>
</tr>
<tr>
<td>Mean length of stay</td>
<td>7.3</td>
<td>5.8</td>
<td>7.9</td>
<td>7.7</td>
<td>$F = 5.442, p = 0.001$</td>
</tr>
</tbody>
</table>

*Source:* Table by authors

### Table 2 Motives (summary of factor analysis)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Summer (December – February)</th>
<th>Autumn (March – May)</th>
<th>Winter (June – August)</th>
<th>Spring (September – November)</th>
<th>Test score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Being active (25.4% of variance explained)</td>
<td>3.56</td>
<td>3.59</td>
<td>3.67</td>
<td>3.52</td>
<td>$F = 3.124, p = 0.024$</td>
</tr>
<tr>
<td>Rest and relaxation (17.4% of variance explained)</td>
<td>3.93</td>
<td>4.08</td>
<td>4.24</td>
<td>4.14</td>
<td>$F = 15.433, p &lt; 0.001$</td>
</tr>
<tr>
<td>Great Barrier Reef (10.7% of variance explained)</td>
<td>3.72</td>
<td>3.48</td>
<td>3.31</td>
<td>3.44</td>
<td>$F = 6.275, p &lt; 0.001$</td>
</tr>
<tr>
<td>Spend time with family and friends (8.4% of variance explained)</td>
<td>3.16</td>
<td>3.20</td>
<td>2.98</td>
<td>3.18</td>
<td>$F = 3.143, p = 0.024$</td>
</tr>
</tbody>
</table>

*Source:* Table by authors
matching my budget. Factor 3 (10.9%), consisted of two variables, visiting the Great Barrier Reef and snorkelling and swimming, while Factor 4 (8.4%) included spending time with family and visiting friends and relatives.

Being active was relatively more important to winter visitors, as was rest and relaxation. The chance to visit the Great Barrier Reef or to spend time with friends and family seems to play a relatively smaller role in the visit decision. By contrast, summer visitors wanted a Great Barrier Reef experience, while all but winter visitors wanted to travel to spend time with friends or family. Motives and visitor profile cannot be divorced. Older couples represented just over half of all visitors surveyed during the winter months. Likewise, groups of friends and relatives and families constitute almost half of the summer visitor population.

**Seasonal changes in in-destination behaviour**

Differences in perceived activity sets (pull factors) and the profile and motives of tourists (pull factors) throughout the year translate into marked differences in places visited and activities pursued (Table 3). A high degree of substitution of activities was observed, due primarily to natural factors, that influenced the perceived appeal of different activity sets.

The winter tourist for whom the motive of being active was relatively more important than for other groups participated in the most activities during their visit, was more likely to engage in land-based activities, including visiting the Wet Tropics rainforest, and taking the scenic round trip to the market town of Kuranda, which is accessible by cable car and scenic railway. They were less interested in going to the Great Barrier Reef than others. The summer visitor, who tended not to travel with children, but who were motivated by the chance to see the Great Barrier Reef were the most active reef visitors, although they were less likely to participate in land-based activities. Dining was also an important activity for them, as was

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**Table 3** Places visited and activities pursued by season (% visited)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Summer (December – February)</th>
<th>Autumn (March – May)</th>
<th>Winter (June – August)</th>
<th>Spring (September – November)</th>
<th>All</th>
<th>Test score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean number of places visited</td>
<td>5.8</td>
<td>6.0</td>
<td>6.3</td>
<td>5.3</td>
<td>5.8</td>
<td>$F = 11.894$, $p &lt; 0.001$</td>
</tr>
<tr>
<td>Places visited</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visited resort towns</td>
<td>75.4</td>
<td>82.3</td>
<td>85.8</td>
<td>82.3</td>
<td>82.1</td>
<td>$x^2 = 11.217$, $p = 0.011$</td>
</tr>
<tr>
<td>Visited rainforest</td>
<td>63.4</td>
<td>70.5</td>
<td>74.1</td>
<td>64.6</td>
<td>68.5</td>
<td>$x^2 = 17.312$, $p = 0.001$</td>
</tr>
<tr>
<td>Cairns</td>
<td>76.7</td>
<td>73.1</td>
<td>57.7</td>
<td>50.2</td>
<td>60.6</td>
<td>$x^2 = 86.638$, $p &lt; 0.001$</td>
</tr>
<tr>
<td>Kuranda market town</td>
<td>38.7</td>
<td>52.4</td>
<td>54.9</td>
<td>43.0</td>
<td>47.9</td>
<td>$x^2 = 30.129$, $p &lt; 0.001$</td>
</tr>
<tr>
<td>Great Barrier Reef</td>
<td>56.4</td>
<td>47.7</td>
<td>44.5</td>
<td>41.0</td>
<td>45.5</td>
<td>$x^2 = 18.451$, $p &lt; 0.001$</td>
</tr>
<tr>
<td>Mossman Gorge in the wet tropics region</td>
<td>32.0</td>
<td>41.1</td>
<td>45.4</td>
<td>36.5</td>
<td>39.5</td>
<td>$x^2 = 17.849$, $p &lt; 0.001$</td>
</tr>
<tr>
<td>Skyrail cable car</td>
<td>23.3</td>
<td>29.6</td>
<td>36.3</td>
<td>23.8</td>
<td>28.6</td>
<td>$x^2 = 28.261$, $p &lt; 0.001$</td>
</tr>
<tr>
<td>Kuranda Scenic Rail Train</td>
<td>20.7</td>
<td>32.8</td>
<td>32.1</td>
<td>20.6</td>
<td>26.5</td>
<td>$x^2 = 33.850$, $p &lt; 0.001$</td>
</tr>
<tr>
<td>Activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children’s activities</td>
<td>9.0</td>
<td>81.5</td>
<td>51.9</td>
<td>42.8</td>
<td>43.6</td>
<td>$x^2 = 104.791$, $p &lt; 0.001$</td>
</tr>
<tr>
<td>Dining experiences</td>
<td>54.2</td>
<td>30.4</td>
<td>33.1</td>
<td>41.3</td>
<td>39.3</td>
<td>$x^2 = 24.981$, $p &lt; 0.001$</td>
</tr>
<tr>
<td>Coffee culture</td>
<td>21.6</td>
<td>30.4</td>
<td>24.1</td>
<td>32.0</td>
<td>27.9</td>
<td>$x^2 = 9.795$, $p = 0.020$</td>
</tr>
<tr>
<td>Performing arts</td>
<td>7.2</td>
<td>19.6</td>
<td>13.9</td>
<td>14.4</td>
<td>13.9</td>
<td>$x^2 = 9.570$, $p = 0.023$</td>
</tr>
</tbody>
</table>

Source: Table by authors
exploring the city of Cairns. The Autumn visitor, who was more likely to be travelling with
children than others, cited spending time with friends and family as a more important motive
than visitors during other seasons. As such, it is not surprising that they were most likely to
identify activities for children most frequently along with spending time in the city. Spring
visitors were the least active and are less likely to tour throughout the region. Instead, they
prefer to go hiking, view the scenery, go birdwatching and go swimming.

Discussion
This paper developed a process model illustrating how changes in tourist seasons affect all
aspects of tourism, from defining the real and perceived activity sets available, to
influencing who is likely to come and why, and ultimately to dictating seasonal changes in
in-destination tourist behaviour. It is framed broadly within Dann’s (1977) push-pull model,
but extends it by considering the antecedent element of changing seasons that determine
the pull features of the destination, and differences in push features of tourists, and explains
the consequences of the push-pull element to define changes in in-destination behaviour.

Conceptual contribution
The primary theoretical contribution is the development of a conceptual process model
illustrating how changes in season influence tourism behaviour in a destination. Product and
experience availability play a key role in determining what type of person is likely to visit and
why they come. These two dimensions then dictate in-destination behaviour. It is axiomatic
that some products are available only at certain times of the year. However, equally
importantly, many other products are available year round, but their appeal will vary
depending on the season, the availability of substitute products or experiences and their
compatibility with seasonal offerings. The dimensions of the model are both context and
destination specific, for each interacts with others in various combinations to influence
visitor demand. The model addresses a gap in our conceptual understanding of an
important reality that affects almost all destinations and addresses a research need

A second theoretical contribution is the conceptualisation of a “tourist season” that is related
to but distinct from “seasonality”. As the paper argues, a “tourist season” represents the
antecedent conditions that result in observed seasonality. Both may be defined by either
natural or institutional factors, but tourist seasons can also be influenced by the actions of
destination management organisations to generate increased visitation during off-peak
periods. The development of events, festivals and the pursuit of conferences represent
additional actions that can be taken to create a new “season”. As examples, Montreal,
Canada and Melbourne, Australia have created new seasons around their respective
comedy festivals, while Quebec and Ottawa, Canada have developed popular winter
festival seasons to generate increased tourism activity. Other cities have created film and
performance seasons.

A third contribution is the validation of the model through the case study of Cairns, Australia.
This case illustrated that while the absolute product set did not change throughout the year,
the perceived product set did, as certain activities were more popular during the cool, dry
winter season, while others were more popular during the hot, humid summer season.
Significant differences were observed in the seasonal pull appeal of the destination
depending on differences in the appeal of the perceived activity set.

In addition, the paper extends Dann’s (1977) push-pull model by identifying seasonal
changes as antecedents that determine the pull features of a destination. Changes in pull
features influence changes in push factors that entice a different seasonal mix of market
segments to visit. Dann’s model is further operationalised by explaining the consequences
of variable push and pull factors on observed behaviour.
Operational and managerial implications

The impacts of seasons on tourism demand may never be fully resolved, but this study suggests that they can be moderated if destination management organisations (DMOs) appreciate that their product and experience availability will play a key role in determining who visits. The findings suggest that seasonal variations in marketing strategies need to be developed to appeal to different groups of tourists who value the destination’s pull features differently and who, therefore, travel to have different needs met. The model extends the range of options available to DMOs beyond offering events and price discounts to attract off and shoulder season visitors (Kastenholz and Almeida, 2008). Instead, each seasonal market has different needs and wants that can be satisfied by positioning the destination differently by season.

Additionally, the model highlights the dimensions that destinations can and cannot control, but must try to manage. In reality, destinations have little control over naturally and institutionally defined seasons and also on the actual activity sets available. But, they do have some control over non-naturally and institutionally defined seasons, through the development of festivals, events and other activities or experiences that can augment the existing activity set. Importantly, DMOs have a great deal of say over the perception of what seasonal activity sets are available. Appropriate messages can be developed to target push motives and in turn, influence behaviour. Many DMO executives likely are aware of this tactic intuitively, yet this model highlights the connection explicitly.

While seasonal variations in visitor arrivals are a reality destinations must cope with, the process model and the resultant operational implications may help mitigate seasonal impacts. With an understanding of seasonal visitation, and visitors’ push factors driving demand, DMOs can use the model to determine the attractiveness of the destination pull factors. With this knowledge, DMOs have an enhanced capacity to identify and target small segments through seasonal marketing campaigns by matching destination pull factors with changing visitor push factors.

Conclusion

This study sought to understand how changes in seasons influence tourism in a destination. The development and validation of a conceptual process model illustrates how seasonal changes influence the actual and perceived product/experience set, which in turn plays a key role in attracting a different mix of market segments. Importantly, the two pull and push factors combine to produce different in-destination behaviours. The model adds to our theoretical understanding of in-destination tourist behaviour and has important operational implications, especially for Destination Management Organisations. It is suggested that future research assess the generalisability of the model by testing its application across dissimilar destinations that experience significant impacts from seasons.

References


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