Tourism and the Seasons

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Learning outcomes

This chapter will provide you with:

1. An understanding of how climate and weather influence global seasonal tourism demand.
2. An appreciation of how institutional seasonality exacerbates the effects of natural seasonality.
3. An awareness of how seasonal tourism demand will alter as a result of climate change.

Introduction

This chapter focuses on climate as a key causal factor and determinant of seasonality. It will explore our understanding of how climate acts as an important construct to patterns of tourism in various parts of the world. It will illustrate how the weather in both the generating regions and the destination areas produces 'push' and 'pull' factors influencing tourism demand. It will also assess how institutional seasonality exacerbates the effects of natural seasonality creating peaks in tourism demand. Finally, the chapter will examine how global warming is changing the seasons, redistributing climatic assets among tourism regions and influencing global tourism demand.

Climatic variation and tourism demand

Weather is the atmospheric conditions over a short period of time and is affected by a number of factors including temperature, humidity, cloud cover, wind and precipitation. Climate is the weather averaged over a long period of time and represents the conditions anticipated at a specific destination and time. Climate defines the length and quality of tourism seasons in leisure destinations and determines a destination's attractiveness, such as the temperature, snow conditions, and wildlife productivity and biodiversity. Therefore, it is a principal driver of global seasonality in tourism demand (Mintel, 2012; UNWTO, 2008).

Climatic seasonality represents a significant challenge for the tourism sector due to the uneven nature of demand for visitor attractions and accommodation, and the relatively fixed nature of the supply of capacity and resources (Hadwen et al., 2011). Seasonality is driven by the permanent 22.5 degree tilt of the earth's axis as it orbits around the sun, which means that throughout the year different parts of the planet's surface are exposed to direct solar rays which impact the environment and human behaviour (Ulijaszek & Strickland, 2009). It is summer in the northern hemisphere when it's tilted towards the sun, winter in the southern hemisphere when it leans away from the sun and vice-versa. Correspondingly, climatic seasonality is less marked at the equator compared with higher latitudes, both north and south. The variation in sunlight at different times of the year influences global wind patterns, ocean currents and atmospheric moisture levels, which also contribute to seasonality together with the earth's topography, particularly altitude. While this natural seasonality has been considered to be relatively permanent and predictable, there is increasing evidence that the seasons are changing because of global warming, which is discussed later in the chapter.

Crucially for tourism, the weather changes in each season, in both the generating regions and the destination areas and this produces push and pull factors influencing tourism demand (Figure 3.1).

Climatic seasonality and its attendant differences in weather between tourists' origin areas and their intended holiday destinations is a key influence on tourists' decision making. In addition to this natural seasonality, 'institutional seasonality' (Butler, 1991), as discussed in the previous chapter, a combination of religious, social and cultural factors, also affects demand.

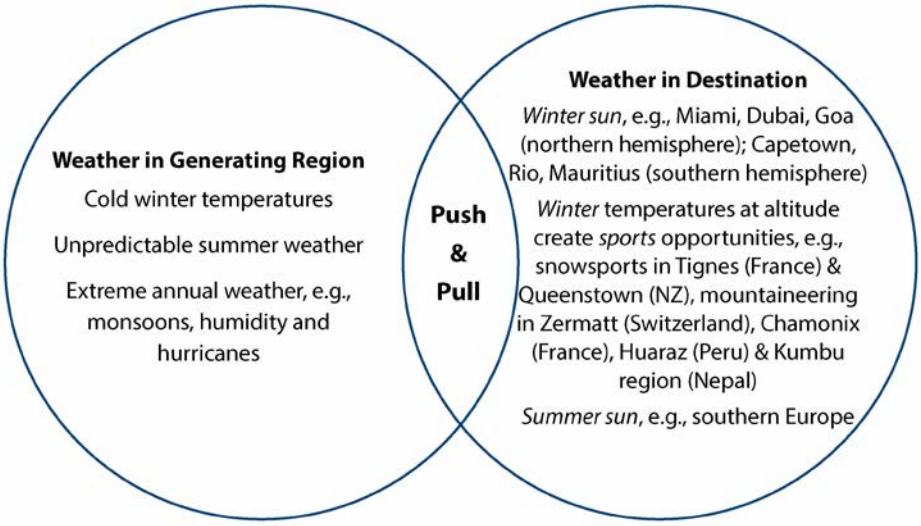

Figure 3.1: Climatic push and pull factors in tourism

Institutional causes include the timing of school and work holidays, individual preference for the traditional peak season, whether or not destination resorts are in fashion, and the programming of festivals and events at tourist destinations. For example, while tourist visitation to areas in eastern Australia was found to be driven primarily by climatic seasonality (Hadwen et al., 2011), Mediterranean destinations, e.g. Sicily, despite having a favourable all year-round climate, experience a single summer peak in demand because of the influence of institutional seasonality (Cuccia & Rizzo, 2011). By comparison, some destinations e.g., Uganda experience 'two peak' seasonality. Uganda's tourism peaks in July/August and December/January reflect both weather patterns and the summer and Christmas holidays, respectively in its key European and North American markets. Therefore, although tourism is a climate-dependent industry, many destinations owe their popularity to their agreeable climates during traditional holiday seasons, but this compatibility of climatic and institutional seasonality is likely to be challenged by global warming and its impact on climate change.

Seasonal variation and visitation

Seasonal variation in tourism visitation is influenced by a number of factors including the attributes of a destination, the characteristics of the generating region and the specific markets being targeted. As a result, destinations in

the same region, e.g., Europe, can experience different degrees of seasonality because of competition for both intra- and extra-European visitors. From an empirical perspective, seasonal patterns of tourism have been classified in a number of ways from destinations with a 'single peak' summer season typical of Mediterranean coastal areas, to destinations with a 'peak and shoulder season' (or minor peak before the off season), through to 'two peak' destinations such as mountain resorts with summer and winter seasons (López-Bonilla et al., 2006). In addition, there are also 'no peak' destinations with low tourism seasonality e.g., cultural city destinations. To date, there have been few large-scale geographical analyses of tourism seasonality (Coshall et al., 2015); however, some examples of seasonal variations and tourism visitation in tropical, temperate and sub-arctic locations will help to illustrate the impact of climatic and institutional seasonality on tourism patterns, notwithstanding the regional and national contexts (Table 3.1).

Table 3.1: Seasonal variations and tourism visitation in tropical, temperature and sub-arctic locations

Location	Climate	Major Destinations
Tropical areas		
Located between 23.5° north and south of the Equator	Receives more direct sunlight than the rest of the planet Hot and humid 'tropical' climate Temperatures of at least 18°C High annual rainfall Little climatic variability	Queensland, Australia; Kauai, Hawaii; Seychelles; Cook Islands; South East Asia, inc. Vietnam, Cambodia, Thailand, Malaysia,Bali
Temperate areas		
Located between 35° and 50° north and south of the Equator	Four distinct seasons Warm summers, cold winters and moderate shoulder seasons Mean temp. −3°C to 18 °C Two climates: maritime (cool summers and mild winters) continental (hot summers and very cold winters)	West coast of North America, Western Europe and southern parts of Australia and New Zealand (Maritime) Central parts and east coast of North America, Eastern Europe and Asia (Continental)
Sub-arctic areas		
Located between 50° and 70° north of the Equator	Some of the most extreme seasonal temperature variations Long winters with temperatures below −50°C in extreme cases Summers are warm, but short (max. 3 months) with temperatures sometimes reaching 26 °C	Alaska, Canada, Siberia, northern Scandinavia, northern Scotland, Iceland and the Shetland Islands

Tropical areas

Even at this latitude, with less climatic variation than in temperate areas to the north and south, managing tourism seasonality is still a concern. For example, Singapore must consider institutional seasonality and variation in expenditure between national visitor segments, in addition to climatic seasonality in its key market areas. Japan and China represent the main geographic markets. China is the largest market, but Japanese tourists' expenditure is higher by comparison (Hui & Yuen, 2002). Visitation from Japanese tourists consistently peaks in July/August and December, but while it would seem preferable to stimulate demand in the spring and autumn, Japan's pleasant weather and absence of school holidays at these times constrain this option. Therefore, despite the over-demand for facilities and amenities at the peak times, Singapore prefers to attract more Japanese tourists or encourage them to extend their stay.

Figure 3.2: Phu Quoc Island, Cambodia: a tropical tourism destination.
Author's image

Temperate areas

While climatic seasonality can be a key issue affecting visitation to destinations in the temperate zone, these areas include many of the world's major tourism cities, e.g., New York, London, Paris, Moscow and Beijing – 'no peak' destinations – which attract leisure visitors in all seasons because of their distinctive cultural attractions (Rutty & Scott, 2010). Moreover, most of the

world's population lives in this climatic zone and given the unpredictability of summer weather in many temperate areas and the fact that destinations with sunshine boast the highest tourism demand, the temperate climate is a major push factor in global tourism, including the largest single flow of tourists in the world from temperate northern Europe southwards to the Mediterranean's predictable sunny weather.

Figure 3.3: Morzine, France: a snow sports destination located in a temperate area. Author's image

Sub-arctic areas

These areas experience high climatic seasonality with respect to tourism flows and visitor activities, but tourism has grown significantly since the late 2000s, including winter cruise passengers. For example, Northern Norway, inspired by the success of Finnish Lapland, now offers northern lights tours and snow-based products to offset the effects of their extreme seasonality (Jaeger & Viken, 2014). However, prospective tourists' negative images of winter conditions in subarctic areas, and both intrapersonal and structural constraints, have continued to limit winter visitation despite recent changes in visitor perceptions relating to the aesthetic qualities of winter landscapes, romantic notions of snow and darkness, and both soft adventure and soft exploration tourism.

Case study: Winter sun - spring break in Miami

'Spring break' in Miami illustrates the interplay of climatic and institutional seasonality with respect to the appeal of the tropical climate for students on their spring break from university, which is typically taken in March and centres on the destination's beaches. While climatic preferences and thresholds for beach tourism vary according to visitor origin (Rutty & Scott, 2013), the allure of the weather in the 'Sunshine State' reigns supreme, particularly for those wishing to escape the sub-zero temperatures in northern US states. The country's top ranked spring break destination also offers free beachfront events, music festivals, nightclubs and bars along the 88 ocean front blocks of Miami Beach. Nevertheless, Bill Talbert (2015), CEO of Greater Miami Convention & Visitors Bureau's argues that "*destinations aren't about geography, they're about psychology…about a feeling*" This is exemplified by media induced impressions of Miami. Over and above its tangible assets, the city's cool, edgy image as portrayed in film and television, despite crime statistics to the contrary, is a significant pull factor for the spring break demographic. While South Florida's reputation as a drug-related crime capital did have a negative impact on tourism in the 1980s, the *Miami Vice* television series in 1984 transformed the city's identity. This stimulated inbound tourism, positive global brand awareness, the growth of Miami's advertising and fashion industries, and when Will Smith released his hit single, *Welcome to Miami* in 1998, the city region transitioned into mainstream tourism (Bohn, 2009). Currently, around 500,000 students take their spring break in Florida, a third of all U.S spring breakers. As such, this market makes an important contribution to Greater Miami's tourism industry and illustrates the impact of both climatic and institutional seasonality on the destination.

Impacts of annual and unusual weather patterns on tourism flows

Whilst good climate is a motivator for travel, expectations of poor weather and climate may constrain tourism to a destination. In particular, annual weather events such as cyclones, tornadoes and hurricanes can disrupt tourism activity in both the long-term and short-term. So too can sporadic and unusual weather patterns, such as El Niño (warm) and La Niña (cold), events which occur when the Pacific Ocean near the equator becomes significantly

warmer than usual triggering or intensifying weather extremes across the world (WMO, 2016). Such extreme weather events, increasingly frequent in the first two decades of the 21st Century have included flooding in South America and East Africa, droughts in southern Africa, increased tropical cyclones in the Pacific, blizzards in the USA, cold and wet summers in Europe and drought in South East Asia and Australia.

Both annual and unusual weather events can impact the environment, tourism resources and infrastructure and they can alter tourists' perceptions of a destination's attractiveness and perceptions of risk and personal safety (Hall, 2018). For example, seasonal monsoons in the Nepalese Himalaya bring considerable rain lasting from a few hours to a few days, resulting in landslides, damaged roads and tourist trails, making it impossible for tourists to enjoy activities such as trekking, bird watching, elephant riding and sightseeing (Nyaupane & Chhetri, 2009). In addition, periodic water shortages during dry seasons can restrict water-based tourism activities. Accordingly, this restricts year-round tourism demand in Nepal. Conversely, whilst El Niño/La Niña can constrain tourist arrivals, when in the country of origin, they could also induce residents to travel to warmer countries. For example, La Niña in the USA acts as a push factor on tourist arrivals to the Philippines, rather than the tropical climate in the Philippines being a pull factor (Saverimuttu & Varua, 2014). Climate change will make such weather events more frequent and extreme, providing less time for physical and human systems to recover and it may result in long-term environmental deterioration (Hall, 2018).

Tourism is a highly climate-sensitive economic sector. A change in climate "*will alter seasonal tourism demand by creating, deteriorating or improving climatic conditions at destinations and in source markets*" (UNWTO, 2008, p.103). Tourists are flexible, and they will respond to climate change impact by substituting the place, timing and type of holiday, even at short notice (UNWTO, 2008). Therefore, it is expected that there will be a redistribution of climatic assets among tourism regions. Currently, projections of tourism demand as a result of a change in climate resources remain geographically limited to Europe (IPCC, 2018; Mintel, 2012; UNWTO, 2008). For example, winter sun destinations may see increasing competition from cities as cities become warmer in winter months. The Mediterranean is projected to become warmer and subject to more frequent heatwaves and tropical nights in the summer, making it less desirable at that time of year and more attractive in spring and

autumn. Tourists from Northern Europe, who dominate international travel, are likely to spend more holidays in their own country or region as it becomes more suitable for tourist activities year-round. It is predicted that those who live in the warmer Mediterranean countries will also travel to these temperate countries in the summer. Winter sports destinations will continue to see a decline in natural snow and shortened ski seasons. Even with increased snowmaking, the ski industry is projected to contract with fewer operating ski areas, altered competitiveness among and within regional ski markets and a reduction in overnight stays. "*Consequently, there will be winners and losers at the business, destination and national level*" (UNWTO, 2008, p.61).

More flexible institutional holidays would help, as it would enable tourism demand to spread across a larger number of months and destinations (UNWTO, 2008). If institutional holidays remain the same, the geographic distribution of tourism is likely to be intensified in specific areas. For example, destinations like the Mediterranean resorts that will become too hot will not only see a decrease in visitation during the summer, but also during the shoulder seasons as institutional holidays will restrict people from visiting. However, an ageing population could increase demand in the shoulder seasons due to an increase of retirees and empty nesters who are not subject to the constraints of school holidays or professional responsibilities (Mintel, 2012).

In recent years, the global temperature has exceeded or been close to 1°C above the pre-industrial period (1850-1900) (IPCC, 2018). Global warming has already affected the environmental conditions which are a critical resource for tourism. Mountain, island and coastal destinations are particularly sensitive to climate change, as are destinations that are nature-based (Mintel, 2012; UNWTO, 2008). However, if the global temperature exceeds the Paris Agreement goal of 1.5°C and reaches 2°C, it may result in long-lasting and irreversible changes (IPCC, 2018). These include the erosion of beaches, coral bleaching, changes in snow cover, the loss of some ecosystems and reduced aesthetic appeal of landscapes (Mintel, 2012; UNWTO, 2008). Excess water due to extreme weather events, such as flooding and El Niño, will impact both natural and cultural heritage attractions, making these destinations less appealing to tourists. Furthermore, a 2°C warmer world would reduce European tourism by 5% with losses up to 11% for southern Europe (IPCC, 2018). Limiting global warming to 1.5°C would substantially reduce the probability of erratic wind and precipitation patterns, heavy flooding,

extreme drought, and more intense heatwaves and tropical storms (typhoons and hurricanes). It will also reduce the retreat of glaciers and polar ice caps and a warming ocean surface temperature which are contributing to a rise in the sea level (IPCC, 2019).

These climate change impacts are leading to places being labelled as 'last chance' tourism destinations (Dawson et al., 2015). Consequently, 'last chance to see' tourism markets are developing where travellers visit these destinations before they are substantially degraded by climate change or to view the impacts of climate change on landscapes, seascapes, natural resources and/or social heritage (Dawson et al., 2015; IPCC, 2018); for example, to see vanishing glaciers, polar bears, historic sites and indigenous cultures. In turn, tourists are further deteriorating the destinations they are travelling to see and therefore accelerating their decline.

Case study: Climate change and ski tourism

Demand for ski-tourism is dependent on institutional seasonality (school holidays, half term and Easter), yet crucially, it relies on specific climatic conditions and is vulnerable to climate change. Natural snow depth and early snowfall have been found to have a positive impact on demand. Conversely, if snow conditions are poor, ski tourists will substitute spatially and visit another destination, substitute temporally and delay the trip or ski less often, or substitute for an alternative holiday activity (Steiger et al, 2019; UNWTO, 2008). Resorts above 2500m, where snow conditions are better, benefit from spatial redistribution of tourism demand (Mintel, 2019). Temporal substitution results in increased demand peaks, such as in January and February in the northern hemisphere when the snow is more reliable and alters the seasonal distribution of skier visits (Steiger et al., 2019). By comparison, activity substitution, which will reduce overall skier visits, is less common.

Recent seasons have been characterised by poor snowfall and extreme weather conditions which have contributed to declining participation (Mintel, 2019). Skiers have adapted by selecting ski areas that have greater snow-making capacities, invested in comfortable high-speed lifts and diversified their tourism products (Mintel, 2019; Steiger et al., 2019; UNWTO, 2008). This requires large capital investments and increased operating costs, forcing many smaller ski areas to close. Diversifying into four-season destinations increases and spreads tourism demand throughout the year and increases revenues (Steiger et al., 2019). For example, mountain biking on

snow, winter music festivals, cricket on ice and indoor sky diving offer new activities for both winter and summer seasons (Mintel, 2019). These activities also speak to Millennials' and Gen Zs' desire for experiences. This is the world's biggest consumer group and whilst Baby Boomers and Gen Xers still dominate winter sports, they are an aging population. Finally, to mitigate snow condition concerns and to foster demand, ski resorts have introduced web cameras with real-time display of snow conditions on ski slopes and snow reports on social media (Steiger et al., 2019).

Conclusion

Weather and climate are the principal resources and constraints for global tourism demand patterns. They are considered consciously or implicitly throughout the tourists' planning process as significant motivators and important influences on destination choice, the timing of visitation and on overall visit satisfaction (Rutty & Scott, 2013). As such, the seasonality of tourist visitation to a given destination is strongly influenced by climate in both the origin and destination areas, but also by the complex interplay of other environmental, institutional, social and cultural variables together with tourism market and destination characteristics which together produce a range of push and pull factors. The relative importance of climatic and other factors, notably holiday periodicity, varies across the world according to climate zone and, in most zones, climate is the main factor influencing visitation seasonality.

Climate change is anticipated to have important consequences for tourism demand from the global to the destination scale. It will result in tourists substituting the place, time and type of holiday, therefore altering traditional seasonal destinations, such as the Mediterranean in the summer and mountain destinations in the winter. There is no evidence to suggest that climate change will reduce global tourism demand, instead the impact will occur at a destination level, as climate change shifts demand to other destinations that offer a more attractive climate (UNWTO, 2008). Consequently, given the prominence of climate, particularly temperature, for seasonal tourism patterns, advancing our understanding of tourists' climate needs regarding optimal and threshold visitation conditions and their variation by destination and visitor origin will be critically important for accurate forecasting of seasonality patterns as our global climate changes.

Self-reflection questions for students

1. How do climate and weather influence tourism demand?
2. Does seasonal variation in tourism demand always result from a combination of natural and institutional factors?
3. Identify a destination where climate change is influencing temporal demand, either positively or negatively. For example, reducing/lengthening the duration tourists stay in the destination or changing the time of year they visit. What is the destination doing to mitigate/encourage this change in demand?
4. Explain El Niño and La Niña and discuss the impact these events have on tourism, giving examples.
5. It is predicted that the Mediterranean will become seasonally 'too hot' for tourism within a few decades due to global warming. What are the implications for destinations in this part of Europe?
6. How can you personally make a contribution to reducing global warming and climate change?

References

Bohn, L. (2009) A brief history of spring break, *Time Magazine*, **173**(12), 14-15.

Butler, R.W (1991) Seasonality in tourism: Issues and implications, in T. Baum & S. Lundtorp (eds.), *Seasonality in Tourism, Advances in Tourism Research Series*, London: Routledge, pp. 5-18.

Coshall, J, Charlesworth, R. & Page, S. J. (2015) Seasonality of overseas tourism demand in Scotland: A regional analysis, *Regional Studies*, **49**(10), 1603-1620.

Cuccia, T. & Rizzo, I. (2011) Tourism seasonality in cultural destinations: Empirical evidence from Sicily, *Tourism Management*, **32**(3), 589-595.

Dawson, J., Lemelin, R., Stewart, E. & Taillon, J. (2015) Last chance tourism: A race to be last?, in M. Hughes, D. Weaver & C. Pforr (eds), *The Practice of Sustainable Tourism: Resolving the paradox*, Abingdon: Routledge, pp. 133-145.

Hadwen, W.L., Arthington, A.H., Boon, P.I., Taylor, B. & Fellows, C.S. (2011) Do climatic or institutional factors drive seasonal patterns of tourism visitation to protected areas across diverse climate zones in Eastern Australia?, *Tourism Geographies*, **13**(2), 187–208.

Hall, C. M. (2018) Climate change and its impacts on coastal tourism: Regional assessments, gaps and issues, in A. Jones and M. Phillips (eds), *Global Climate Change and Coastal Tourism: Recognizing Problems, Managing Solutions and Future Expectations*, Boston: CAB International, pp. 27–48.

Hui, T-K & Yuen, C.C. (2002) A study in the seasonal variation of Japanese tourist arrivals in Singapore, *Tourism Management*, **23**(2), 127–131.

Intergovernmental Panel on Climate Change (IPCC) (2018) Special Report: Global Warming of 1.5°C. Retrieved from: https://www.ipcc.ch/sr15/

Jæger, K. & Viken, A. (2014) Sled dog racing and tourism development in Finnmark, in A. Viken and B. Granås (eds.), *Tourism Destination Development: Turns and Tactics*. Farnham: Ashgate, pp. 131-152.

López Bonilla, J.M., López Bonilla, L.M. & Borja Sanz Altamira, B.S. (2006) Patterns of tourist seasonality in Spanish regions, *Tourism and Hospitality Planning & Development*, **3**(3), 241-256.

Mintel (2012) Tourism and Climate Change – International – June 2012. Retrieved from: https://reports.mintel.com/display/590197

Mintel (2019) Winter sports in Europe – September 2019. reports.mintel.com/display/924170

Nyaupane, G. P. & Chhetri, N. (2009) Vulnerability to climate change of nature-based tourism in the Nepalese Himalayas, *Tourism Geographies*, **11**(1), 95-119.

Rutty, M. & Scott, D. (2010) Will the Mediterranean become 'too hot' for tourism? A reassessment, *Tourism and Hospitality Planning & Development*, **7**, 267-281.

Rutty, M. & Scott, D. (2013) Differential climate preferences of international beach tourists, *Climate Research*, **57**, 256–269.

Saverimuttu, V. & Varua, M., (2014) Climate variability in the origin countries as a 'push' factor on tourist arrivals in the Philippines, *Asia Pacific Journal of Tourism Research*, **19**(7), 846-857.

Steiger, R., Scott, D., Abegg, B., Pons, M. & Aall, C. (2019) A critical review of climate change risk for ski tourism, *Current Issues in Tourism*, **22**(11), 1343-1379.

Talbert, B. (2015) https://skift.com/2015/09/10/interview-miami-tourism-ceo-explains-the-essence-of-destination-branding/ Accessed 15th October 2020.

Ulijaszek, S.J. & Strickland, S.S. (Eds.) (2009) *Seasonality and Human Ecology*, Cambridge: Cambridge University Press.

United National World Tourism Organisation (UNWTO) (2008) *Climate Change and Tourism – Responding to Global Challenges.* https://www.e-unwto.org/doi/book/10.18111/9789284412341

World Meteorological Organisation (WMO) (2016) *Exceptionally strong El Niño has passed its peak, but impacts continue.* public.wmo.int/en/media/press-release/exceptionally-strong-el-niño-has-passed-its-peak-impacts-continue