An analysis of visitor behaviour using time blocks: A study of ski destinations in Greece

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ABSTRACT

This study presents a time-based analysis of activities undertaken by visitors to ski destinations. Only a few marketing studies have examined behaviour in tourism and leisure activities using an analysis based on time blocks. Data collection was undertaken by means of a diary-type semi-structured questionnaire which was administered in face to face interviews with visitors in thirteen ski centres in Greece. Through diary analysis, time periods were classified and used as a means of describing visitor flow and behaviour in various time blocks within a day. Expenditure patterns were identified in relation to specific time blocks relating to the consumption of preferred products and services. The average expenditure per visitor per day was €64.91. The study develops a Time Block Activity Matrix (TBAM), which is constructed using the dimensions of "participation intensity" and "benefit" to position visitor activities in the ski centres. The TBAM is proposed as a strategic tool for structuring decision making in tourism management. Implications for ski destinations are also discussed.

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1. Introduction

The way people spend their time is a common topic of investigation for sociologists, economists and marketing experts (Stinson, 1999). Accounts of how people spend their time provide valuable information about quality of life, social and economic well-being, and patterns of work and leisure. The time diary is the heart of time use analysis, and records in real time all the activities a person engages with on a given day (e.g., housework, free time) (Robinson, 2011; Vaara & Matero, 2011). Time diaries provide data based on actual experience as it happens, which reduces the likelihood of producing errors that result from poor recall or social desirability (Vaara & Matero, 2011).

More qualitative studies (Kenyon, 2006; Leung et al., 2011; Nonis, Philhours, & Hudson, 2006; Prebensen & Foss, 2011) have used a "standard day" diary, which focuses on a typical day in the life of an individual from a particular group or community. However, more recent studies have used a time diary data as the basis for quantitative statistical analyses (Kamruzzaman & Hine, 2012; Kamruzzaman, Hine, Gunay, & Blair, 2011; Vaara & Matero, 2011). The diary method of collecting data has not been used extensively in leisure studies (Dommeyer, 2007), although disciplines such as sociology, medicine and psychology have employed

it. Studies in marketing and market research that use the diary method are still rare (Gotze, Prange, & Uhrovska, 2009; Patterson, 2005; Zarantonello & Luomala, 2011), and they are also rare in tourism (Poria, 2006). However, Patterson (2005) states that, "The use of QDR (qualitative diary research) in marketing and consumer research is not so much maligned, more ignored" (p.142). Moreover, research into leisure can be a useful source of information when a researcher is interested how people's leisure time activities are distributed (Verbeke, 2000). Collecting and analyzing data on how tourists move through time and space is important for the management of product development, planning, facilities development and transportation development, as well as management of the socio-cultural and environmental effects of tourism (Lew & Mckercher, 2006).

This empirical paper examines the way in which visitors to ski resorts in Greece used their time, and the importance of that time allocation for the management of leisure activities. Very few published papers have explored themes related to Greek skiing centres, such as constraints on the leisure activities of visitors, and those few studies are very recent (Andronikidis, Vassiliadis, & Masmanidis, 2008; Andronikidis, Vassiliadis, Priporas, & Kamenidou, 2006). The same is also true of studies of aspects of ski centres on visitors' levels of satisfaction (Priporas, Vassiliadis, & Andronikidis, 2009), and marketing management practices and sustainable marketing strategies (Vassiliadis, Priporas, & Stylos, 2011, 2010).

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The present study has two primary goals. The first was to record and code the way in which visitors to ski resorts used their time, on the basis of data drawn from time diaries that recorded the behaviour of visitors on a daily basis. The second was to build a methodological tool for managers based on the synergetic relationships between time allocation and activities. More specifically, the research objectives of the study reported here are: (1) To record the activities of visitors to ski destinations, before their arrival and during their stay, in real time; (2) To explore the relationships between time allocations and activities undertaken in ski resorts when there are high volumes of visitor movements; (3) To offer a quantitative methodological approach to the analysis of time diary data for high volumes of visitor movements, to replace more traditional methods that have typically involved the identification of qualitative patterns, and (4) To develop a managerial tool for decision making based on the concept of the portfolio of products/activities that are allocated to a time block (Time Block Activity Matrix − TBAM).

The contribution of this paper is twofold. First, it attempts to fill the gap in the tourism literature by examining time distribution and activity allocation of visitors to ski resorts using time diary analysis. Second, based on that analysis, it offers a strategic tool to help ski centre managers in decision making. The rest of the paper is organized as follows. First, an extensive review of the literature on the role of time in tourism is presented. This is followed by a description of the research methodology and a discussion of the main findings, highlighting their exploratory nature. Lastly, conclusions are presented, and limitations and future research opportunities are discussed.

2. Literature review

2.1. The time variable in leisure and tourism research

To some extent consumer behaviour can be described in terms of the recreation activities that an individual seeks (Cordes & Ibrahim, 1996; Getz, 2000; Verbeke, 2000). Recreation activities usually take place when an individual is not occupied with their work. Recreation is performed during an individual's free time and relates to activities that an individual perceives as factors that cause pleasure and satisfaction. Free time includes all time in which somebody is free to do what they choose (Opaschowski, 1997).

Recreation may be considered in relation to leisure or free time. During free time the individual develops positive behaviours which result from the sense of pleasure that recreation brings to the person. Recreation includes activities considered pleasant and significant for the participating individual (Cordes & Ibrahim, 1996), and these might be shopping, sunbathing or exercising. The contemporary individual seeks recreation activities that he/she organizes in different ways within a 24-h period. Thus, the configuration of four basic categories of recreation is suggested, namely home-based recreation, daily recreation, day trips, and tourism (Cooper, Fletcher, Gilbert, & Wanhill, 1993). According to Cooper et al. (1993), leisure should be defined as the remaining time available to individuals after they have covered their basic needs (e.g., diet, clothing, work and sleep). Torkildsen (1999) concludes that leisure is not in itself time, but a form of "leisure use" of time.

Time and situational variables are related factors and can be predictors of a consumer's final decision to buy (Belk, 1975, 1974; Wang & Lee, 2011). As Belk (1974) states, the situation can be explained as "all those factors particular to a time and place of observation which do not follow from a knowledge of personal (intra individual) and stimulus (choice alternative) attributes, and which have a demonstrable and systematic effect on current behaviour" (p. 158). Belk's (1975) theoretical framework is a useful tool for analyzing the impact of situational variables on buying behaviour, since it includes variables that could be managed by

tourism marketers and planners. Time is a variable in the situational analysis framework because it is related to the factor "temporal perspective". Other factors in the framework are physical and social surroundings, task definition, and antecedent states. Mowen (1990) presents a classification of five purchase situational characteristics, namely, physical surroundings, social surroundings, time, task definition and antecedent state. Time, in Mowen's work, is a basic variable for analyzing buying behaviour decisions because it can affect the activity through either its presence or its absence.

Hofferth and Curtin (2003) investigated the amount of time spent on recreational activities by children between the ages of 6–12 years in the USA over the course of one week. The research was based on data collected at the national level (Child Development Supplement (CDS) of the Panel Study of Income Dynamics (PSID)) by means of time diaries. The study focused on three activity categories related to children's social growth as well as the development of their perceptions of the society in which they live. During free time, children performed activities such as exercising and studying, as well as outdoor, religious, home, and shopping activities. The activities that dominate the everyday life of children can be grouped into main categories, namely, exercising, studying and activities at religious sites.

Thorton, Shaw, and Williams (2000) used a space-time budget diary, a variant of the time diary, as a measurement tool. Their research was carried out in 1993 and concerned the behaviour of tourists residing in two different regions of Cornwall. 143 diaries were collected comprising 10,300 h in total. Each diary included daily activities performed between 9 am and 9 pm and the geographic region where the activity was performed. The diaries related to the first six days of the visitors' stay and vary in structure. However, they usually encompass the starting time of the activity, the duration of this activity, its frequency, the sequence of the activities in relation to their frequency during the research period and the geographic site where the activities took place. The research revealed statistically significant differences in the activities of adults who are accompanied by children compared to those who were not. Individuals accompanied by children spend their time on activities such as swimming and playing on the beach. Individuals without children preferred tours in private cars, training and walking, while older individuals without children preferred to relax.

2.2. Time constraint

Equally important is the contribution of constraint analysis in explaining individuals' behaviour related to recreation activities (Jackson, 2005; Klenosky, Gengler, & Mulvey, 1999). Godbey (2005) explains this approach: "Time constrains our lives and our leisure. We are changed and controlled by time more than we change and control it… Time may also constrain our ability to experience leisure as a state of mind… Constraints of time are both constraints to leisure and a necessary condition for leisure to occur. When this is not understood, there is no leisure" (p. 185).

Crawford and Godbey (1987) and Crawford, Jackson, and Godbey (1991) classify constraints in three theoretical categories: intrapersonal, interpersonal and structural constraints. Time is considered as a structural constraint in the form of lack of time, and together with personal preferences affects purchase decision making relating to recreation. Research demonstrates that time constitutes one of the most significant variables in the structural constraint category, and is often combined with a similar variable in the same category, "Too busy with other activities, work or leisure", which also implies lack of time (Walker & Virden, 2005).

Individuals often record a large number of activities in time diaries. This is due to the fact that individuals try to pack in activities that they want to perform in the free time they have available