

THE WILDLIFE TOURISM MARKET TO KENYA (2002–2003)

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ABSTRACT. An understanding of the wildlife tourism market is fundamental for the development of a competitive and sustainable tourism industry. It is imperative to product development and segmentation, especially with regard to understanding trends in the market place. This study was undertaken to understand better the demographic preferences of wildlife tourists and to determine their preferences, expectations, and choices. Various personal and trip attributes of the visitors were considered. A linear structural relationship (LISREL) approach was applied in order to estimate the structural equation systems by using its maximum likelihood estimator. Using data from 1,566 tourists who had completed their holidays in Kenya, it was found that various forms of travel based on packaging do not significantly affect the preferences of tourists. However, tourists' characteristics and their trip attributes have significant effects on these variables. Advanced age, higher socio-economic status, larger group size, and shorter length of stay are associated with higher preference for wildlife viewing.

KEYWORDS. Travel packages, tourist characteristics, trip attributes, LISREL, wildlife viewing, Kenya

INTRODUCTION

Over the last two decades, Kenya has marketed itself as a predominantly wildlife tourism destination with a target of attaining 1 million tourists per annum by the turn of the last century. The emergence of new competing wildlife destinations over the last few years (such as South Africa, Tanzania, Zimbabwe, Uganda, and Namibia), has made this target far-fetched in realization. Nevertheless, Kenya is one of the leading tourism destinations in sub-Saharan Africa, besides South Africa,

Tanzania, and Uganda (Economist Intelligence Unit, 1991; Williams, 1976). Key visitor activities in Kenyan wildlife preserves include game viewing, photography, adventure travel, balloon safaris, walking, lake boating, guided tours, river rafting, horse riding, fishing, cycling, etc. Further, Kenyan parks and reserves provide specialized camping/lodging facilities in divergent locations satisfying a wide range of tourist interests, therefore providing convenient forums for excursions and over-night stays.

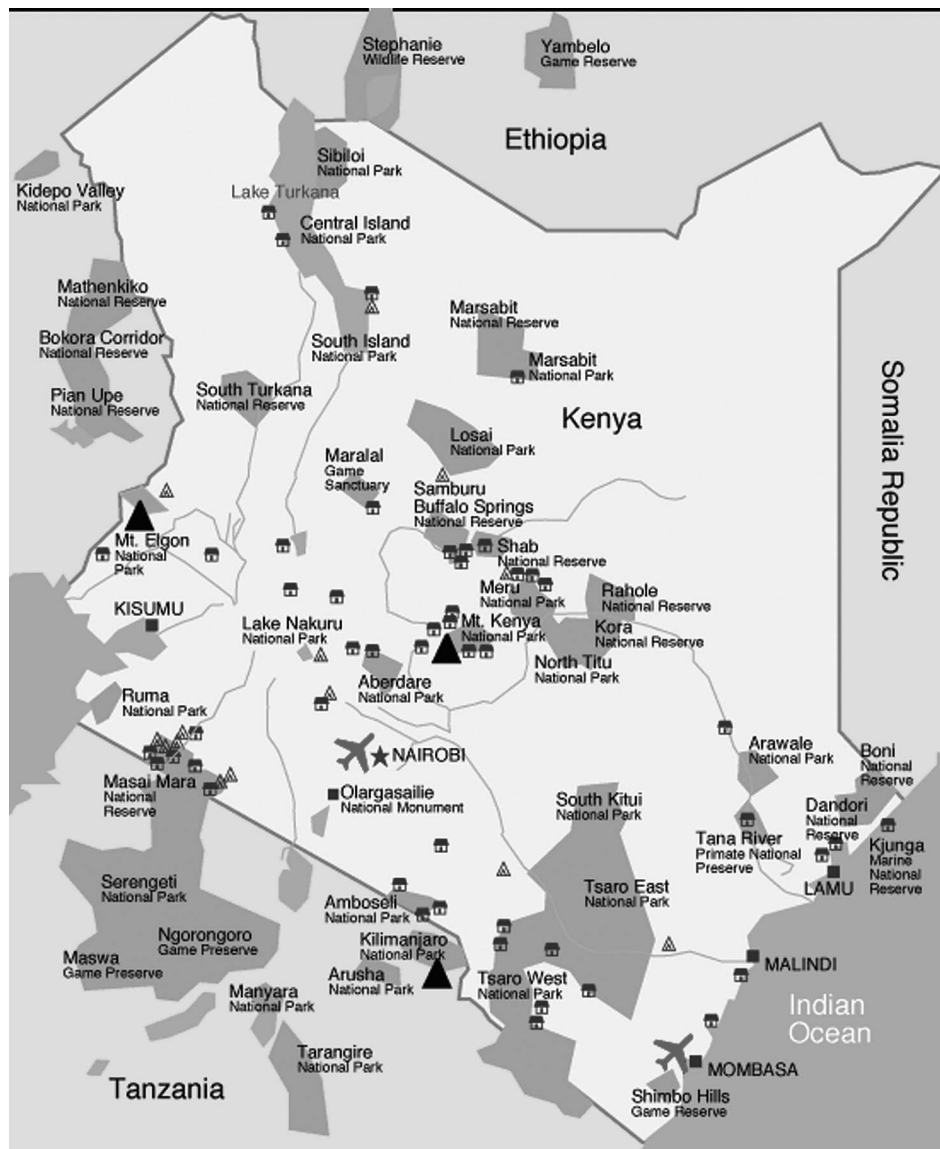
Wildlife preserves in Kenya have been classified as national/marine parks, national

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FIGURE 1. Kenya's Parks and Reserves (Conservation Areas). (Color online only.)



Note. Source: <http://www.kalisimbi.com>

reserves/marine reserves, and game reserves (Figure 1 and Table 1). Each of these protected areas is unique in its diversity, attractions, character, and scenery. Arid and semiarid ecosystems in the plains form the largest percentage of Kenya's famous parks and have a great diversity of easily observable wildlife and fauna. Kenya's mountain parks offer unique scenery and flora, hosting rare mountain game species such as the bongo and forest hog. Lake

ecosystems contain the greatest concentration of birdlife in the world (Sindiga, 1999). These tourist attractions are additionally zoned into seven (7) tourist circuits which are uniquely defined geographical regions comprising various attractions for the purpose of marketing, management, and (or) tourism development.

However, it is important to note that, understanding wildlife tourism demographics is imperative to destination product development

TABLE 1. Profile of Kenyan Protected Areas

No.		Area (km ²)	Year gazetted	District	Classified park category
National park					
1.	Sibiloi	1,570	1973	Marsabit	Scenic & special interest
2.	Central Island	5	1983	Turkana/Marsabit	Scenic & special interest
3.	South Island	39	1983	Marsabit	Scenic & special interest
4.	Malka Mari	876	1989	Mandera	
5.	Marsabit	360	–	Marsabit	Scenic & special interest
6.	Mount Elgon	169	1968	Trans Nzoia	Scenic & special interest
7.	Saiwa swamp	2	1974	Trans Nzoia	Scenic & special interest
8.	Meru	870	1966	Meru	Wilderness park
9.	Kora/Ijara	1,787	1989	Tana River	
10.	Mount Kenya	715	1989	Nyeri/Meru	Mountain climbing
11.	Ndere Island	4	1986	Kisumu	Scenic & special interest
12.	Mau	–	–	–	
13.	Lake Nakuru	188	1967	Nakuru	Premium park
14.	Aberdares	715	1950	Nyeri	Wilderness park
15.	Ruma	120	1983	Homa Bay	Scenic & special interest
16.	Hells Gate	68	1984	Naivasha	Scenic & special interest
17.	Mt. Longonot	52	1983	Naivasha	Scenic & special interest
18.	Fourteen falls	–	–	–	
19.	Oi Donyo Sabuk	18	1967	Machakos	Scenic & special interest
20.	Nairobi	117	1946	Nairobi	Urban safari
21.	Amboselli	392	1974	Kajiado	Premium park
22.	Tsavo West	9,056	1948	Taita-Taveta	Wilderness park
23.	Tsavo East	11,747	1948	Taita-Taveta/Kitui	Wilderness park
24.	Arabuko Sokoke	6	1991	Kilifi	Scenic & special interest
25.	Chyulu	471	1983	Machakos	Wilderness park
Marine parks					
26.	Malindi	6	1968	Kilifi	Marine park
27.	Watamu	10	1968	Kilifi	Marine park
28.	Mombasa	10	1968	Mombasa	Marine park
29.	Kisite	28	1978	Kwale	Marine park
National reserves					
30.	Marsabit	1,198	1962	Marsabit	
31.	Nasolot	92	1979	West Pokot	
32.	South Turkana	1,091	1979	Turkana	Scenic & special interest
33.	Losai	1,806	1976	Marsabit	
34.	Kerio Valley	–	–	–	
35.	Kam Narok	88	1983	Baringo	
36.	Kakamega	4	1985	Kakamega	Scenic & special interest
37.	Lake Bogoria	107	1970	Baringo	
38.	Samburu	165	1963	Samburu	
39.	Shaba	239	1974	Isiolo	
40.	Buffalo Springs	131	1963	Isiolo	
41.	Bisanadi	606	1978	Isiolo	
42.	Rahole	1,270	1976	Garissa	
43.	North Kitui	745	1979	Kitui	
44.	Mwea	68	1976	Embu	Scenic & special interest
45.	Maasai Mara	1,510	1974	Narok	
46.	South Kitui	1,833	1979	Kitui	
47.	Arawale	533	1974	Garissa	
48.	Boni	1,339	1976	Lamu	
49.	Dodori	877	1976	Lamu	
50.	Tana river primate	169	1976	Tana River	Scenic & special interest
51.	Shimba Hills	192	1968	Kwale	Scenic & special interest
Marine reserves					
52.	Kiunga	250	1979	Lamu	Marine park
53.	Malindi	213	1968	Kilifi	

(Continued)

TABLE 1. (Continued)

No.		Area (km ²)	Year gazetted	District	Classified park category
54.	Mombasa	200	1986	Mombasa	
55.	Watamu	32	1968	Kilifi	
56.	Mpunguti	11	1968	Kwale	
National sanctuary					
57.	Maralal	6	1968	Samburu	
58.	Kisumu Impala				
59.	Animal Orphanage				

and segmentation, especially with regard to understanding trends in the marketplace. This article seeks to do just that and further address the following research question: Given the packages chosen for travel, what are the main determinants of wildlife viewing preference in terms of personal characteristics and trip attributes? And in solving this question, the study would seek to understand better the wildlife tourist visiting Kenya. The results of the study would form a basis for targeted and effective destination marketing and further recommend ways of communicating with such target markets better.

Defining Wildlife Tourism

Within tourism literature there is no generalized consensus on a distinct definition of wildlife tourism. A discussion entered into in this section clearly highlights the intricacies involved in arriving at an appropriate definition. Indeed, in order to present a profile of the wildlife-based tourism market to Kenya, it is necessary to initially ascertain an abstract and vivid definition that is valid and operational. Varying definitions of wildlife tourism have been proposed by researchers reflecting diverse literature related to this field. In general, definitions have centered on visitor experiences, visitor activities, or goals. For example, Richards (1996) focused on the intellectual, spiritual, and aesthetic needs of the visitor, while Hughes (1996) suggested that a typology of wildlife-based tourism could be built on a matrix of wildlife-based intent (goals)—primary, incidental, or accidental; and the nature of tourism based interest—specific or non-specific.

Some definitions, however, reach so far as to include the movement of all persons as “. . . they satisfy the human need for diversity, tending to raise the wildlife based level of the individual and giving rise to new knowledge, experience and encounters” (World Tourism Organization [WTO], 2001, p. 6).

Defining wildlife-based tourism becomes more complex by the fact that most definitions of wildlife-based tourism have been too broad to be useful as a basis for discrete statistical anthology. For the purposes of this study, therefore, an operational definition of wildlife-based tourism would be derived through the definition of tourism itself. The United Nations and the WTO define tourism as comprising: “The activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes” (WTO, 2001, p. 5).

It then follows that, if tourism as a whole, is defined according to the activities of visitors, wildlife-based tourism can be then defined according to the wildlife-based activities of visitors. The question remaining, therefore, is what makes an activity “wildlife based” or, to rephrase, when are visitors participating in “wildlife-based activities”? Precisely, what constitutes a wildlife-based experience is open to wide interpretation. For example, to many visitors and service providers, live entertainment plays an important role in the demonstration of “a wild life” (Hughes, 1996). Therefore, a distinctive definition of wildlife tourism activities is necessary to gain a correct implication.

One approach that can be used to defining wildlife-based tourism focuses on actual

behavior and has the advantage of being made operational through existing or additional data, which can be readily collected. For the purpose of this article, therefore, wildlife-based visitors are defined as inbound visitors who attend at least one of the wildlife-based attractions to perform activities delimited in the study's list of activities encountered by the visitors during their visit to Kenya. It comprises of tourist travel to observe wildlife in natural environments and preferably their native habitat. This definition is compatible with the concepts and definitions of both the National Wildlife Leisure Industry Statistical Framework and the Framework for the Collection and Publication of Tourism Statistics (ABS, undated; ABS, 1997).

CURRENT PHILOSOPHY ON WILDLIFE TOURISTS' ROLES AND PREFERENCES

The concept of clearly identifiable tourist behavior or roles has undergone major growth. Cohen (1972), Pearce (1982, 1985) and Yiannakis and Gibson (1989) came up with broad classifications of leisure tourists roles and the activities they undertake at a destination. They suggested that, individuals engage in preferred tourist roles in destinations which provide a balance of *familiarity-strangeness, stimulating-tranquility, high-low, and structure-independence* functions. This meant that some would seek environments that are not usual while others would want environments that are familiar, some want peace and quiet while others, and especially the youth want activity. Each tourist seeks something distinct. In more recent research, Gibson and Yiannakis (2002) investigated the relationship between the roles tourists prefer at destinations in reference to gender and adult life course and the psychological needs; they found out three trends: They concluded that tourists engage in specific roles throughout their life course.

The first trend indicated roles where preferences decrease through the life course, meaning that people were less likely to assume certain roles or engage in certain activities as they grow

older; e.g., action seeking, active sporting, and love for the sun. The second trend implied that we also have cases where preferences for certain roles increase through life courses, they are things the tourists are more likely to adopt as they grow older. These include high class activities, educational activities, and anthropology or need to learn cultures. Finally, the third trend followed that we have roles where preferences vary through the life course and this includes the independent mass tourists and the escapists.

Therefore, this study would seek to provide an empirical basis for explaining wildlife tourist roles and preferences within the destination as a basis of explaining tourist behavior in the destination.

WILDLIFE TOURISM IN KENYA

Like ecotourism and adventure tourism, wildlife-based tourism is attracting global interest. Indeed, its popularity in Kenya has been acknowledged over the last 10 years or so. Wildlife tourism's significance to the Kenyan tourism industry is clearly substantial. In 1996, more than 2 million or approximately 1 in 2 international visitors to Kenya sought at least one wildlife-based experience during their stay. It is however, only one of many destinations worldwide with wildlife-based tourism potential from which travelers can choose. For this reason it is important to understand what conditions tourists' preferences and choices of wildlife-based experiences and, in particular, what aspects of Kenyan wildlife are attractive to overseas visitors. In this line, the next section will seek to provide a basis for conducting the study in Kenya.

RESEARCH PROBLEM

Background to the Problem

Kenya has been pursuing different tourism policies at different times depending on the development objectives set for the sector. One of the main objectives has been to increase gross

earnings by industry. Either low-volume/high-value (alternative tourism) or high-volume/low-value (mass tourism) tourism, or both, could attain this objective. The mixed strategy that encourages both alternative and mass tourism was the first to be initiated toward independence but was later abandoned for alternate single strategies until recently when it was once more reintroduced. The total and per capita revenue yields have fluctuated over the years depending on the strategy adopted. Each strategy is associated with a unique type and quality of tourist. Mass tourism, for instance, encourages high-volume arrivals but low-value clientele that normally adopt all-inclusive tour packages. The alternative strategy leads to low-volume arrivals but up-market tourism which has different travel patterns.

Further, Kenya's tourism policy since its independence in 1963 has been inconsistent, uncoordinated, and partially incomprehensive (Ikiara, 2001). The policy focus at the time of its independence was to encourage a mixture of mass and up-market tourists. During the period 1965–1994, the emphasis was on mass tourism. Later, between 1994 and 2000, policies were geared toward up-market tourists due to the negative effects realized in the preceding period. From the year 2000 to date, the focus has shifted to the strategy adopted for independence where a mixture of mass and upmarket tourists was encouraged. Such erratic changes in policy call for research so as to establish a reliable and flexible policy based on facts.

The Kenyan Tourism Problem

As was observed previously, tourism and especially “wildlife tourism,” is a significant activity in Kenya's economy. However, its relative role in the economy has shown signs of decline over time. This is also true when earnings from the sector are compared to that of the neighboring countries of Tanzania and Uganda. Both these countries and Kenya form the East African Community. Even though their economic structures are almost the same, tourism industries show very different performances.

Tourists visiting Tanzania and Uganda, for instance, seem to have different spending levels. According to World Tourism Organization (WTO) statistics, the per capita expenditure by tourists to these countries is much higher than that of Kenya (the estimates for the year 2001 indicated that receipts per arrival for international tourists visiting Kenya were US\$366 as compared to US\$1,447 for Tanzania and US\$771 for Uganda). Furthermore, tourists to Kenya generally arrive and travel *en masse* compared to those visiting Uganda and Tanzania. Reasons given for this disparity are varied. Travel arrangements have been observed to be the main determinant. Tourists take holidays on different travel packages and under varying trip characteristics. Trip characteristics include length of stay and group size. During the past decade, package tours have become more popular, whereas average length of stay has been decreasing.

This study seeks to identify solutions to why such a trend has been a fad over the years. By conducting such a study, the researchers intended to provide a gestalt understanding of the wildlife tourism market to Kenya and further explore the inherent determinants.

LITERATURE REVIEW

Demographic Factors Influencing Tourist Motivation/Preferences

The selection of the activity to engage in at the destination, the attraction, and the type of holiday is conditioned against a series of varying constraints of which individuals are aware; the final choice is limited because of several reasons; for example, some activities are too expensive, are not suited to the time we have available, or may even involve activities that are beyond our capabilities. We can broadly categorize such constraints as: personal and family influences; e.g., age, stage in the family life cycle and gender, while on the other hand, social and situational factors; for example, tourism and work relationships, social class, and income issues.

Measurement Indicators

Age

The extent to which one participates in tourism is greatly influenced by age, this can be proved by the way tour operators segment their holiday products based on age; for example, those aged 16–24 may not engage in expensive activities or tourism pursuits because of limited income, but they are fond of activities full of fun.

Due to differences in time horizons among individuals, their preferences are not expected to be the same. At a younger age, individuals are likely to have strong interest in spectacular activities such as wildlife viewing. Due to physical demand, the higher-aged individuals will be less inclined to undertake such an activity.

Family Life Cycle

Life-cycle groups people not only by age but also by their marital status and whether they have children. Rapoport and Rapoport (1975) defined four stages: adolescence (15–19 years old), young adults (to late 20s), family establishment (25–55), and later years (55+). However, this classification did not pay attention to single parents, families, gay people, and extended families.

Different stages in the life cycle are characterized by different interests, activities, and opinions, and these translate to different holiday requirements at each stage. It has widely been considered that women decide what activity a family on holiday will engage in, this is because they (women) dominate the information search stage (Thornton, Shaw, & Williams 1997); however, it is very difficult to judge how travel decisions are made because this involves choices, time, activities, etc.

The presence of children in a household has a significant influence on tourism, participation, and patterns; households with children tend to have limited choice of activity, travel date, duration depending on the abilities and tolerance of the children (Dellart, Ettema, & Londh, 1998). Children are an important determining factor of parental holiday satisfaction and can often play a role in the decision-making process, in terms of identifying a holiday desire and

negotiating activities. Children certainly have an effect on tourism behavior (Connel, 2005; Thornton, Shaw, & Williams, 1997); highlight the emergence of toddler tourism, where young children's pester power has played an important role in choice of destination and activities engaged in.

Gender

Tourism has witnessed the empowerment of women and the rise of the lone female traveler, as Kinnaird and Hall (1994) argue, women's travel is often associated with high mystical destinations or voluntary environmental work or just getting away from being in a career (in the family context). Men and women tend to be viewed differently in terms of being travelers; for instance, men who travel alone will generally seek adventurous activities, expedition, or sex tourism. Women may be said to be brave, vulnerable, or even irregular (Kinnaird & Hall), they note that differing socializing process in leisure experience seems to affect tourism behavior, but as Foo et al. (2004) illustrate, motivation is a function of the role of the tourist, they found out that women are more likely to take a passive role in strange environments than men and that men pursue a wide range of leisure opportunities in unfamiliar environments.

International travel on a long-haul trip involves many uncertainties and hence female tourists may not like activities that compound risks. Due to its risky nature, inconvenience, and physical stress, female tourists are expected to have less preference for wildlife tourism. If they choose it at all, they would generally prefer organized tours because they tend to be safer. Although wildlife viewing has traditionally been packaged fully by tour operators in order to minimize uncertainties and risks among other inconveniences, it is expected that female tourists allocate less time to wildlife viewing than men.

Income

Income is an essential factor in determining the demand for tourism commodities. During holidays, costs are incurred and the

tourists pay for services provided at destinations. Expenditure may also be required in the form of specialized equipment for engaging in various recreational activities while at the destination or en route. Studies indicate a positive correlation between income and holiday expenditures and in some cases the increase in the latter is proportionately higher, implying that holiday services are luxury items (Bammel & Burrus-Bammel, 1992). Hence, it is expected that higher income tourists will spend more per day than those with lower income.

Certain attractions, such as wildlife, are popular among high-income earners since they allow them to engage in luxury activities such as "balloon safaris." Convenient and exclusive modes of watching wildlife are normally designed for certain tourists who are willing to pay special prices. Such arrangements include aerial wildlife viewing and exclusive clubs. Income is, therefore, likely to induce proportionately more time allocation to wildlife viewing.

Socioeconomic Status

The socioeconomic status is indicated by a number of factors. Usually education and occupation are adopted as proxies for this latent variable (Mok & Armstrong, 1995). The level of education of an individual tends to influence the preference for certain holiday attractions, facilities, and activities. The amount of education obtained most likely determines the nature of work and holiday activities. By widening one's horizons of interest and enjoyment, education influences the type of activities undertaken and the variety of options that can be considered.

Education itself can also serve as a primary reason for travel. The more educated prefer those activities that require interpretive and expressive skills (Mathieson & Wall, 1982). More educated tourists tend to be more sophisticated in their tastes. They may not, however, be higher spenders. A study of visitors to Hawaii found that visitors with less education spent more per day while on vacation (Mill & Morrison, 2002). The authors suggested that the less educated visitors may equate having fun

with spending money. Higher educated individuals are expected to be more inquisitive, more selective, and more likely to choose a tourism product that is experiential rather than purely hedonic (Kenny & Nankervis, 2001).

Roberts (1970) argued that occupations affect leisure pursuits. Tourism is a compensatory action that is used to offset elements of the day-to-day environment. Manual occupations are physically arduous and therefore may result in the need to spend holidays simply by relaxing or recuperating. Non-manual occupations may create the need for one to acquire extra skills and knowledge in holiday pursuits.

Holiday habits tied to type of occupation may emerge as status attitudes and hence influence the preferences of individuals. Holiday activities are assumed to spill over from, or as compensating for, work experiences. Participation in recreation activities is related both to experience and associations established during the training period and the actual type of employment gained. After reviewing related literature, Zuzanek (1978) concluded that leisure behavior is closely related to the social status and prestige of one's occupation. Individuals in the highest or professional occupations exhibit a greater variety of activities and participate more frequently in activities requiring a certain level of expended energy (Burdge, 1969; White, 1975, as cited in Bammel & Burrus-Bammel, 1992). Certain activities tend to be distributed along the occupational prestige continuum. The amount and degree of creativity demanded by one's occupation is related to holiday patterns. Workers engaged in an occupation that requires application of one's ability are also intellectually active in their holidays.

Workers with undemanding employment do not appear to frequently participate in leisure holiday activities that require planning, coordination, and purposeful action (Godbey & Parker, as cited in Bammel & Burrus-Bammel, 1992). The effect of socioeconomic status on wildlife viewing is expected to be positive. Tourists with higher status have greater preference for wildlife attractions. These forms of attractions have the ability to satisfy specific interests and they provide an opportunity to utilize interpretive and expressive skills that are normally possessed by

those with higher socioeconomic status. Higher status is associated with sophisticated tastes and the need for experiential products that other forms of nature-based tourism such as beach tourism may not adequately provide due to its homogeneity and specificity.

Similar results have been observed in the literature. In their categorization of Japanese tourists to the United States and Canada, Jang et al. (2002) noted significant differences among them with respect to occupation status. Escape/relaxation seekers had a particularly high proportion of white-collar workers while family/outdoor seekers were mainly unemployed or housewives. White-collar workers were the largest occupational group of all the three clusters that included novelty/nature seekers. However, some studies found socioeconomic status to be insignificant as a basis of differentiation. Gitelson and Kerstetter (1990) observed that no significant differences existed between benefits sought and level of education.

Tourists of higher socioeconomic status are expected to visit specific attractions within their interest (Zimmer, Brayley, & Searle, 1995). Therefore, the time allocated to wildlife viewing will be proportionally high among the higher social class since this type of attraction offers a variety of specific and unique interests such as research opportunities on conservation. Tourists with lower social class are expected to be content with only viewing. They will be less interested, for instance, in issues such as human-wildlife conflicts that may require more time to understand. Socioeconomic status is, therefore, positively related to the proportion of time allocated to wildlife viewing.

Group Size

In many cases, tourism is group oriented rather than being an individual consumption activity. In large travel parties, many varied interests have to be satisfied in order to ensure group satisfaction. Since every individual has different expectations from the holiday, a large group may be compelled to visit more destinations than a small one in order to satisfy

members' diverse needs (Fesenmaier & Lieber, 1985, 1988; Lue, Crompton, & Fesenmaier, 1993). Larger group size has a bearing on the heterogeneity of benefits sought (Tideswell & Faulkner, 1999).

Wildlife tourism offers a wider variety of attractions such as camping in diversified locations that may satisfy a wide range of interests. Several institutions such as wildlife clubs provide large groups with convenient forums for excursions. Therefore, large travel groups are likely to allocate proportionately more time to wildlife viewing.

Length of Stay

Length of stay indicates the time available for an individual in a particular destination and is likely to affect preferences and expenditure. For international tourism, duration is measured as time spent in the receiving country for inbound tourism. The "duration of stay" is the measurement used from the standpoint of the destination country or place. We expect that tourists with limited time budgets would prefer attractions that meet a greater variety of interests and that are unique. Therefore, scarcity of time results in activity-intensive consumption. This entails joint consumption either as simultaneous or as consecutive consumption of a variety of attractions. Simultaneous consumption occurs if different activities take place at the same time; consecutive consumption occurs if one jumps from one activity to the other in a certain period. Wildlife and cultural tourism, for instance, can be undertaken simultaneously. Most wildlife sanctuaries are located remotely from the main urban centers and hence they provide opportunities to undertake cultural excursions en route. The idea of activity-intensive consumption can also be applied to the different attractions themselves. Given the heterogeneity of wildlife attractions, tourists with limited time are likely to allocate proportionately more time to them. Wildlife viewing offers opportunities for viewing a wide range of unique animals such as mammals, birds, reptiles, fish, and plants.

Because of its uniqueness, we consider wildlife as a first priority for tourists visiting

Kenya with limited time. An increase of the length of stay is likely to lead to a diversification of activities and hence proportionally less time spent on wildlife viewing. Hence, we expect a negative impact.

Effects of Choice of Attractions on Expenditure

Activities and benefit sought have been used as bases for differentiating the expenditure levels of individual tourists and travel parties. Heterogeneous attractions are associated with high spenders due to their capacity to satisfy wider interests and present more opportunities that obligate expenditure. Spotts and Mahoney (1991) segmented visitors to Michigan's Upper Peninsula based on total party expenditure. Heavy spenders were more likely to engage in recreational activities. Nogawa et al. (1996) studied participants at Japanese sporting events and found that sports tourists differed from traditional tourists in terms of spending patterns, whereby the former recorded higher spending levels. Taylor et al. (1993) found that visitors to historical sites in Wyoming had higher spending levels than those visiting other sites at the same destination. Leones et al. (1998) observed that nature tourists to Arizona spent more per person per day during their stays than did other visitors. Thrane (2002) concluded that greater interest in an attraction enhances expenditure while visiting it.

Wildlife-based tourism is expected to have positive effects on expenditure relative to other tourist activities such as beach or coastal tourism. Wildlife attractions are associated with dispersed travel and greater consumption variety within a destination. Wildlife viewing consumption requires greater diverse inputs in its consumption such as transport and accommodation (Leones et al., 1998). The hypothesized relationships are summarized in Table 2.

The hypothesized relationships in the study are as follows:

- H1: Age is expected to have a positive impact on the proportion of time allocated to wildlife tourism and age-squared a negative impact.*
- H2: Female tourists are expected to have less preference for wildlife tourism.*
- H3: Income is likely to induce proportionately more time allocation to wildlife viewing.*
- H4: Socioeconomic status is, therefore, positively related to the proportion of time allocated to wildlife viewing.*
- H5: Large travel groups are likely to allocate proportionately more time to wildlife viewing.*
- H6: An increase of the length of stay is likely to lead to a diversification of activities and hence proportionally less time spent on wildlife viewing.*

TABLE 2. Hypothesized Relationships Between Tourist Characteristics and Wildlife Preference

Independent variable	Measurement	Hypothesized influence on wildlife tourism
Age	Number of years	+
Agesq	Number of years squared/100	-
Gender	0 = male 1 = female	-
Income	Earnings in Kenya shillings (Ksh)	+
Ses (socioeconomic status)	Proxied by education and occupation status	+
Grpsize (group size)	Number of people in travel party	+
Lenstay (length of stay)	Number of nights spent in Kenya	-

WILDLIFE TOURISM SEGMENTATION REVIEWS

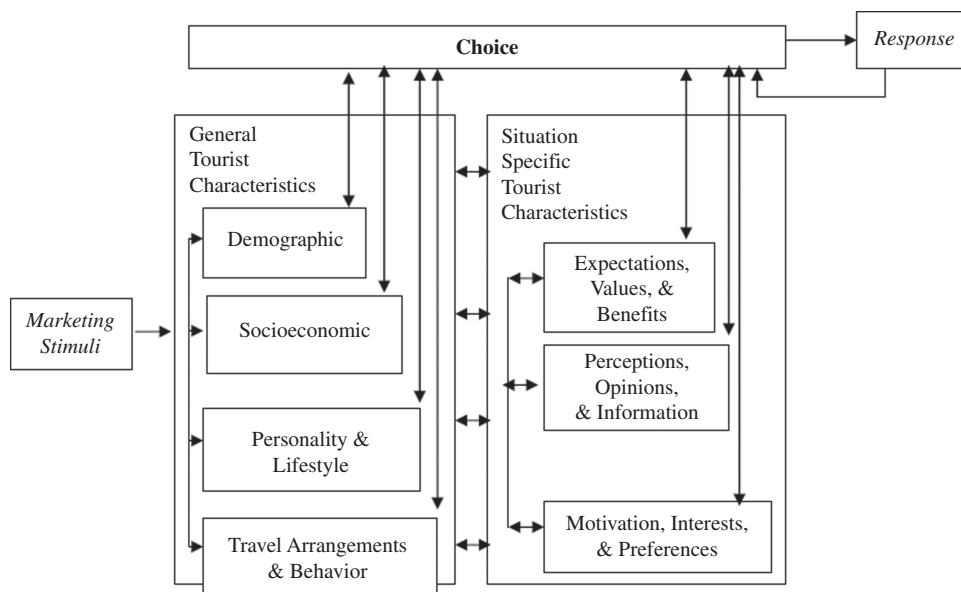
Market segmentation studies recognize that different visitor groups/visitors have different wants. In deed, visitor holiday patterns are neither fixed nor preprogrammed for either individuals or groups. There are many exogenous factors associated with complex relationships influencing participation, choice, spending level, and satisfaction. These factors can be classified at personal/individual, social, and institutional levels.

Personal factors relating to the individual cover stages in life, needs, interests, attitudes, abilities, upbringing, and personality. Social and circumstantial/situational factors encompass time availability, occupation, income, wealth, peer groups, education, and cultural factors. Institutional and support factors imply availability of resources and facilities, awareness, perception of opportunities, holiday costs, accessibility and variety of attractions, and other institutional determinants. There is a multifaceted fusion and interaction among these generic indices. They are highly dynamic and operate individually, covertly, jointly, or collectively and they change over time.

A segmentation basis for distinguishing tourists with different attraction cluster choices and expenditure patterns is formed by the characteristics of consumers. Frank et al. (1972) classified the bases into two classes: *the generic base and situation-specific base* (Figure 2). The generic base is independent of any product or service and independent of specific circumstances faced by the consumers. The situation-specific base is related to the consumer and the commodity and/or specific circumstances. These bases have alternatively been referred to as *behavioristic* (Baker, 1988), *product-instrumental* (Wilkie & Cohen, 1977), or *product specific* (Wadel & Kamakura, 1999). Bases are further classified regarding whether they are *objectively measurable* (observable bases) or have to be *inferred* (unobservable bases).

Specific segmentation bases that have been used in tourism literature include geographic characteristics (Reid & Reid, 1997), demographics (Anderson & Langmeyer, 1982; Taylor, 1987) and psychographics (Schewe & Calantone, 1978; Silverberg, Backman, & Backman, 1996). Detailed psychographics include interests (Sorensen, 1993; Wight, 1996), motivations (Cha, McCleary, & Uysal, 1995; Wight, 1996), opinions (Cohen & Richardson,

FIGURE 2. Generic and Situation-Specific Customer Characteristics Usable as Bases of Segmentation (Adapted From Frank et al., 1972).



1995), and values (Madrigal & Kahle, 1994). Other recent criteria are expenditure (Legoharel, 1998; Mok & Iverson, 2000; Pizam & Reichel, 1979; Sports & Mahoney, 1991), benefits (Harley, 1968; Jang et al, 2002; Shoemaker, 1989, 1994; Woodside & Jacobs, 1985; Yannopoulos & Rotenberg, 1999), activities (Hsieh, O'Leary, & Morrison, 1992; Jeffrey & Xie, 1995; Morrison, Hsieh, & O'Leary, 1994; Moscardo et al., 1996), communication channels (Hsieh & O'Leary, 1993), and tour-packages (Askari, 1971; Sheldon & Mak, 1987). Activity segmentation has been used in conjunction with other psychographic and/or socio-demographic variables in order to efficiently and effectively differentiate and describe target markets (Morrison, 1996).

There is no best variable for segmenting a market, nor is there any set of variables that can be used every time. Either multistage segmentation (Morrison, 1996) or a combination (Kotler et al., 1998) approach appears to be the most appropriate. The tourism industry often deals with fixed products in a confined environment and, at the same time, with quality and services engaged in dynamic interactions (e.g., packaged tours).

Therefore, tourism market segmentation studies take several variables into account. Once a segment has been identified, it is worthwhile to apply a separate marketing and communication strategy that applies different pricing, conditions, communication, and distribution to the segment. Product differentiation is partly based on market segmentation (Oppedijk & Verhallen, 1986). Products, messages, and services can be differentiated in terms of the different segments. In most segmentation studies, consumers are classified in only one segment. In principle, however, it is possible to classify one consumer in more than one segment and thereby create overlapping segments.

As earlier observed, travel arrangements adopted by tourists may be segmented into two divisions; i.e., free independent travel and all-inclusive tour packages. For scientific research, market and communication research segments have to fulfill certain conditions of size and homogeneity (Smith, 1956). These conditions refer to typification of segments, homogeneity,

usability, and strategic criteria (Antonides & Van Raaij, 1998; Kotler, 1988; Mok & Iverson, 1999).

RESEARCH METHOD

International tourists leaving Kenya by air mainly depart from Jomo Kenyatta International Airport (JKIA) in Nairobi or Moi International Airport in Mombasa. The survey was conducted at the two airports. Both chartered and unchartered flights were targeted in order to capture a wide variety of tour packages adopted by tourists for travel. Only tourists visiting for holiday purposes were sampled for the survey as they departed the country. Data were collected from international tourists who visited Kenya between April 2002 and March 2003 the following year.

The sampling design defining the target population and the sampling plan was put in place in order to obtain a sample that could provide consistent and reliable information on the population under study. The universe of respondents consisted entirely of international tourists visiting Kenya for holiday purposes. This study concentrated on this segment of visitors that forms over 78% of departures. A daily survey period of 3 weeks in each quarter of the year was adopted to generate a random sample. All departing aircraft were sampled by interviewing every fifth tourist in the queue (at the immigration section). The unit for the collection and presentation of the tourism statistics was the individual *tourist*. With regard to expenditure statistics, the leader of the travel party was interviewed in addition to the respondent in order to assist in apportioning expenses incurred commonly by the group.

An exogenously stratified random sample was used as sampling strategy. The tourist population was stratified by tourism seasons of November to January, February to April, March to July, and April to October. Given that arrivals are almost evenly distributed throughout the year, relatively similar numbers of questionnaires were administered in each quarter. In the case of scheduled flights, departure schedules were used to cover all possible routes emanating out of Kenya during the research period.

Every fifth person in the queue at the passport section was approached. The total sample was 1,566 tourists of which 1,169 were on inclusive packages and 397 traveled independently. The response rate was about 90% of the planned questionnaires.

DATA ANALYSIS

The model applied involves multiple-scale measurements of latent variables such as socio-economic status of individual tourists. In order to take latent variables into account, specific procedures are adopted. Simultaneous equations methods (SEM) and in particular the LISREL approach have the desirable properties. SEM is an extension of the general linear model (GLM) and it encompasses the other stand-alone models such as multiple regression, path analysis, factor analysis, and the analysis of variance.

The LISREL Model

Since we aim at estimating both latent constructs and relationships between the constructs, we use the LISREL model. The relationships between the observed and latent variables are given in the latent variables measurement equations (1) and (2):

$$y = \Lambda_y \eta + \varepsilon, \quad (1)$$

$$x = \Lambda_x \xi + \delta, \quad (2)$$

where Λ_y and Λ_x are $(p \times m)$ and $(q \times n)$ matrices of regression coefficients (also called factor loadings). The structural model consists of a set of relationships among the latent variables:

$$\eta = B\eta + \Gamma\xi + \zeta, \quad (3)$$

where B is an $m \times m$ coefficient matrix with β_{ij} representing the effect of the j -th endogenous variable on the i -th endogenous variable; γ is an $m \times n$ coefficient matrix with γ_{ij} representing the effect of the j -th exogenous variable on the i -th endogenous variable; ζ is a random vector of residuals.

Estimation

Estimation of the LISREL model comes down to minimizing the distance between the sample covariance matrix

$$Z^T = (\gamma^T, X^T)^T \quad (4)$$

and the theoretical covariance matrix

$$\Sigma \quad (5)$$

Maximum likelihood was adopted as the “default” estimator of LISREL models. The maximum likelihood procedure is based on minimization with respect to the unknown parameters of the non-negative function:

$$F = \frac{1}{2} [\log |\Sigma| + tr(S\Sigma^{-1}) - \log |S| - (p + q)], \quad (6)$$

by means of a modification of the Fletcher-Powell algorithm. In equation (6), $|\cdot|$ stands for the determinant and $tr(\cdot)$ for the trace of the matrix concerned. When ξ , ζ , ε and δ are multivariate normally distributed (and thus the observed variable, z), then:

$$F' = -\frac{1}{2} M [(p + q) \log 2\pi + \log |\Sigma| + tr(S\Sigma^{-1})], \quad (7)$$

is the log-likelihood function of the sample in the case of independent observations.

A necessary condition for the maximum likelihood procedure to give “genuine” maximum likelihood estimates is the normal distribution of the observed variables. However, the distribution of the observables is usually unknown in practice. Maximum likelihood under the assumption of normality (i.e., whereas the distribution actually deviates from normality) may, however, be defended on the basis of the fact that it usually leads to a reasonable fitting function and to estimators with acceptable properties for a rather wide class of distributions.

Maximum likelihood, however, is consistent and asymptotically normal.

Model Judgement and Model Modification

The purpose of model judgement is to judge how well an estimated model fits to the sample data. Various aspects of a LISREL model were considered in this connection. The statistics provided by the LISREL program were related to: the individual parameters; separate equations of the latent variables measurement models and the structural model; the latent variables measurement model for the endogenous and the exogenous variables jointly; the structural model; and subsequently, the model as a whole (i.e., the overall fit).

RESULTS AND DISCUSSIONS

Table 3 presents the means and standard deviations of dependent and independent variables

for the pooled model and for all inclusive and free independent travelers separately.

The total sample for the study is 1,566 tourists of which 1,169 are on inclusive packages and 397 are traveling independently. The descriptive statistics show that the differences between the two travel arrangements are very small. With regard to the pooled/model, the distribution of the sample according to gender is almost even. The average age is about 38 years implying that the group is youthful. Over 95% of the tourists completed secondary or higher level of education. Almost 45% have university education. The respondents are also characterized by high occupational status where only about 12% are in the lower cadre of employment. On average, wildlife tourism takes 34% of their time spent at the destination and 36% for the all-inclusive visitors, while 28% for independent travelers, further indicating that most wildlife tourism enthusiasts prefer more standardized leisure services than the independent travelers.

TABLE 3. Descriptive Statistics of the Sample

Variables	Values	Pooled model	All-inclusive	Free independent travels
Age	Years/10	3.786 (1.355)	3.783 (1.344)	3.796 (1.388)
Gender (%)	Male	49.8	49.5	50.6
	Female	50.2	50.5	49.4
Income per day	Ksh × 10,000	1.042 (1.440)	1.023 (1.376)	1.097 (1.613)
Level of education (%)	Elementary	4.6	4.3	5.5
	Secondary	24.9	26.0	21.7
	Post-secondary	27.1	26.3	29.7
	University	43.4	43.5	43.1
Occupation (%)	Unemployed	4.6	4.0	6.3
	Students	4.8	4.7	5.0
	Housewives	3.1	3.4	2.0
	Manual workers	28.8	27.6	32.2
	Middle level	23.7	23.0	25.7
	Professional	12.5	12.9	11.1
Group size	Executives	22.6	24.3	17.6
		2.924 (2.677)	2.957 (2.647)	2.826 (2.764)
Length of stay	Months	0.426 (0.254)	0.412 (0.227)	0.469 (0.315)
Time allocation (%)	Wildlife	0.342 (0.286)	0.364 (0.289)	0.277 (0.268)

Note. Standard deviations are shown in parentheses.

TABLE 4. Estimated Measurement Parameters of Socioeconomic Status

Variable	Socioeconomic status (SES)
EDUCAT	1.000 (fixed)
OCCUPAT	3.152 (52.266)
Reliability	.88

Note. *t* values are within brackets.

FIGURE 3. Measurement Model of the Study.

$$\begin{bmatrix} \text{wildlife} \\ \text{beach} \\ \text{culture} \\ \text{expenditure} \end{bmatrix} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix} \begin{bmatrix} \text{wildlife} \\ \text{beach} \\ \text{culture} \\ \text{expenditure} \end{bmatrix} + \begin{bmatrix} 0 \\ 0 \\ 0 \\ 0 \end{bmatrix}$$

Measurement Model

With regard to the measurement model, only the socioeconomic status variable had more than one indicator. The indicators were occupational status and education levels of individuals. Education was used as a reference variable for the scale of socioeconomic status by fixing the relevant parameter value to 1 (Table 4). The measurement model is as specified in Figure 3.

The non-fixed indicator loading is significantly different from zero implying that the indicators are valid in their representation of the

socioeconomic status of individuals. The SES construct reliability value equals .880, which is much higher than the desirable level of .600 (Bagozzi & Yi, 1988).

Structural Equation Model

Table 5 shows the coefficients and associated *t* values of the structural equation. The amount of variance in each endogenous variable that is jointly accounted for by the explanatory variables is high (60%) in the case of wildlife tourism. The structural model is as specified in Figure 4.

The impact of age follows an inverted U-curve for wildlife, as hypothesized. Gender does not have a significant effect on the choice of attractions. Income does not have any significant impact on choice. The effect of socioeconomic status on time allocated to attractions is significant and as expected. Higher socioeconomic status is associated with more preference for wildlife viewing. Group size has a positive and strong influence on preference for wildlife viewing. Length of stay is negatively associated with wildlife as hypothesized.

CONCLUSIONS

The purpose of this article was to empirically answer the research questions stated in the introductory section. It particularly focuses

TABLE 5. Estimated Structural Equation Parameters: Aggregate Market

	Wildlife	Beach	Culture	Expenses
Age	.067 (2.062)	.325 (9.147)	-.008 (0.512)	-.041 (1.999)
Agesq	-.067 (1.723)	-.356 (8.374)	.012 (0.646)	.053 (2.195)
Gender	.001 (0.172)	.006 (0.772)	-.0008 (0.235)	-.008 (2.010)
Income	.003 (0.473)	-.001 (0.183)	-.004 (1.560)	.002 (0.482)
Ses	.111 (2.637)	-.100 (2.156)	.048 (2.499)	.142 (5.071)
Grpsize	.021 (7.990)	-.013 (4.279)	.005 (3.734)	.003 (2.104)
Lenstay	-.080 (2.831)	.126 (3.987)	.016 (1.193)	-.138 (9.099)
R²	.615	.603	.742	.267

Note. Absolute *t* values are in parentheses.

FIGURE 4. Structural Model of the Study

$$\begin{bmatrix} \text{wildlife} \\ \text{beach} \\ \text{culture} \\ \text{expenditure} \end{bmatrix} = \begin{bmatrix} 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 \\ \beta_{41} & \beta_{42} & \beta_{43} & 0 \end{bmatrix} \begin{bmatrix} \text{wildlife} \\ \text{beach} \\ \text{culture} \\ \text{expenditure} \end{bmatrix} + \begin{bmatrix} \gamma_{11} & \gamma_{12} & \gamma_{13} & \gamma_{14} & \gamma_{15} & \gamma_{16} & \gamma_{17} \\ \gamma_{21} & \gamma_{22} & \gamma_{23} & \gamma_{24} & \gamma_{25} & \gamma_{26} & \gamma_{27} \\ \gamma_{31} & \gamma_{32} & \gamma_{33} & \gamma_{34} & \gamma_{35} & \gamma_{36} & \gamma_{37} \\ \gamma_{41} & \gamma_{42} & \gamma_{43} & \gamma_{44} & \gamma_{45} & \gamma_{46} & \gamma_{47} \end{bmatrix} \begin{bmatrix} \text{ses} \\ \text{age} \\ \text{agesq} \\ \text{gender} \\ \text{income} \\ \text{grpsize} \\ \text{lenstay} \end{bmatrix} + \begin{bmatrix} \xi_1 \\ \xi_2 \\ \xi_3 \\ \xi_4 \end{bmatrix}$$

on the main determinants of preference for wildlife attractions. The descriptive statistics show the sample distributions between tourists on all-inclusive tour packages and those traveling independently. The descriptive statistics show that the differences between the two travel arrangements are very small. A formal test of the parameters of the LISREL model for the all-inclusive package and the free independent travelers confirms this.

Age, socioeconomic status, group size, and length of stay were found to be the most important determinants of wildlife viewing and beach activities. The most important determinants of culture are socioeconomic status and group size.

It was expected that tourists traveling independently are likely to have higher preference for non-traditional and less packaged attractions. Since tour packaging does not significantly influence preferences, other bases for differentiation need to be adopted during policy formulation. Several tourist characteristics and trip attributes were identified as better bases for differentiation and hence policy formulation. Under the current study, the policy objective is diversification of the current tourism product through the inclusion of non-traditional attractions; i.e., culture.

Tourists in the lower age bracket, those with higher socioeconomic status, those traveling in large groups and staying for shorter periods should be encouraged in order to raise the non-consumptive utilization of wildlife resources through viewing. Targeting tourists with higher socioeconomic status and those traveling in large groups can increase utilization of cultural tourism resources.

POLICY RECOMMENDATIONS

The findings of this research could be used to improve tourism policy in a number of ways. One way is to segment the market because tourists are becoming more sophisticated and more traveled with increased leisure time and greater disposable income. Target market analysis is essential for an effective marketing strategy. Mass markets could be fragmented into niche and special interest markets with specific themes such as nature, wildlife, or cultural tourism. Targeting specific customers means identifying their preferences and travel behavior. Targeting requires the destination to focus marketing attention on selected groups of customers and to design, tailor, and supply products or services to meet their needs because not all customers are alike. Since it is impossible to satisfy all customers in the same way, it is more reasonable to pinpoint and selectively market only to specific niches to ensure the highest returns on marketing resources.

Other ways are to encourage travel in large groups and retain tourists of higher socioeconomic status. This category of tourists was observed to have higher preference for wildlife and cultural tourism activities. In an effort to promote cultural tourism, the interpretive and educative aspects of the product need to be emphasized.

Improve the attractiveness of the destination and encourage short-break holidays. From a marketing perspective, the ultimate goal is often to attract greater numbers of visitors to purchase tourism products or services. To do this, tourism marketers need to understand how their products and services fit their potential customers' preferences.

Preferences were measured by time allocated to specific attractions whereby travel time was added to the on-site time of the main attraction for a particular journey. Since journeys may have multiple objectives leading to the problem of time appropriation, future studies could address this issue. A journey originating in the morning to a game park may involve stopovers at several en-route cultural sites. Use of diaries in recording time use on continuous basis may be useful in assessing preferences based on time allocation among the visited attractions.

Generally, a more comprehensive, holistic, and interdisciplinary approach is recommended whereby the supply side issues of the tourism product are considered. Product attributes and characteristics that influence time allocation among attractions need to be considered in order to assess their relative importance. Significant attributes could then be considered during product development in order to match the needs of the tourists and the respective product features.

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