Profiling Tourists for Balanced Utilization of Tourism-Based Resources in Kenya

Pius Odunga and Henk Folmer

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Pius Odunga, *Department of Tourism, Moi University*
Henk Folmer, *Department of Economics of Consumer & Household Studies, Wagenigen University*

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Summary

Kenya is predominantly a nature-based tourism destination with wildlife (concentrated in the southern part of the country) and beaches (along the Indian Ocean) accounting for over 85% of the international tourists visiting the country. Other attractions are based on the physical landscape of the country and the culture of the people. Unfortunately, the full potential of culture-based attractions has not been exploited. The over-concentration of tourism activities in wildlife protected areas and on the coastal zone has had inherent problems that include severe environmental degradation. The less visited attractions stand the risk of neglect and could be eroded from the nation's heritage with time. There is need to diversify tourism activities and spread them to other parts of the country by putting more emphasis on non-traditional ones such as cultural excursions. This research profiles tourists based on their preferences as assessed from the number of days they spend at different attraction sites. By associating the characteristics of tourists with various attractions, consumer preference profiles were established. Length of stay, presence of children, travel party size and gender are some of the significant factors that determined the profiles. Profiles can be used in encouraging proportionately more tourists with greater affinity for non-traditional attractions. Besides gender, other factors such as socio-economic status and whether one is travelling as a couple or not, turned out to be significant variables in influencing the resulting expenditure levels.

Keywords: Tourist profiles, Attractions, Culture, Expenditure, LISREL, Kenya

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Address for correspondence:

Pius Odunga
Department of Tourism
Moi University
PO Box 1125
Eldoret
Kenya
E-mail: Pius.Odunga@wur.nl, podunga@yahoo.com

1. Introduction

Kenya lies along the East Coast of Africa covering an area of 586,350 square kilometers with an estimated population of 30 million people. Agriculture is the mainstay of the economy but Kenya is in the process of establishing an industrial base with import substitution and processing industries being established. The country aims at joining the newly industrialized nations (NIC) status by the year 2020. Tourism is currently the second largest contributor to the economy after agriculture. Tourism in Kenya dates back to the 1930's when overseas visitors and explorers had started coming to Kenya mainly for big-game hunting expeditions while others came in search of solitude. These expeditions are referred to by the Swahili word "Safari" . At that time, there was limited tourism infrastructure. Despite increased competition from other destinations, Kenya is still one of the foremost tourist destinations in Africa. Tourism in Kenya is mainly based on natural attractions that include wildlife in its natural habitats as well as beaches. Approximately 10% of the country is utilized for conservation of wildlife and bio-diversity. Game viewing is popular since most visitors to Kenya are predominantly interested in seeing "the big five" (the Elephant, Rhino, Lion, Buffalo, and the Leopard) and other smaller and unique game. Safari is a popular product that has enabled the country to continue growing in the number of visitors. Given the potential significance of the tourism sector, the Government formulated Sessional Paper No.8 of 1969 on the Development of Tourism in Kenya that defined the growth targets that it hoped to achieve. The document also outlined the areas where the Government planned to participate jointly with the private investors in developing the tourist industry. In the 1960's the goal of the government had been to encourage specialized groups from the upper segment of the market to visit the country for big game hunting expeditions and beach tourism. The focus was shifted in the 1970's to target the middle income segment of the market to visit coastal resorts which today accounts for over 60% of visitors to Kenya. Tourists took advantage of the inclusive package tour arrangements to visit the country in large numbers giving rise to mass tourism in Kenya. This resulted in over-concentration of tourist activities in some areas of the country, notably along the coast and in some National Parks and Game Reserves.

According to the World Travel and Tourism Council (WTTC) estimates, tourism in Kenya contributes eight percent to GDP, provide employment for 470,000 people or 1 in every 15 jobs and generated twenty percent of total exports 2001 (Table 1).

Table I: Tourism Revenue to Kenya, Share of Exports and Attractions Visited (1996-2001)

Year	Value in US$ '000	% Share of Total Exports	Visitors to Nature - based Attractions	Visitors to Culture -based Attractions
1996	447,593	*22*	1,530,145	758,800
1997	385,667	*23*	1,402,004	588,100
1998	291,820	*15*	1,073,250	494,230
1999	300,967	*19*	1,533,438	573,125
2000	276,321	*18*	1,644,917	585,069
2001	306,823	*20*	1,650,300	675,800

Source: Central Bureau of Statistics, Economic Surveys (Kenya) and Kenya Tourist Board

Tourism substantially contributes to Kenya's balance of payments, and is only exceeded in export value by tea, which accounts for 28 percent. Horticulture and coffee, the country's other significant foreign exchange earners represent 16 percent and 6 percent share of total exports respectively. As Figure 1 shows, the number of tourists visiting attractions such as cultural sites is low and even showing signs of stagnation. Moreover, it has been substantially lower than the number of visitors to nature-based attractions. Due to these trends, the Government of Kenya has been working on a programme of public sector policy and management reforms since 1999. The focus has shifted from over reliance on high volume-low yield tourism towards the development of alternative forms of tourism that can contribute to conservation and sustainable use of the environment (Akama, 1997). Whereas attention is still focused on tourism segments in which Kenya has comparative advantage, particularly, wildlife, sun, sea and sand, special attention is now also being given to alternative sectors, particularly culture-based tourism. The principle goals are to secure the sustainable use of all tourism resources; optimize the sector's contribution to the national economy and rural development; and ensure the maximization of tourists' satisfaction. Medium term objectives are to increase revenue, specifically through more visitors, increased expenditure per visitor, extension of the length of stay and more repeat visits; and finally enhance and protect the environment so as to improve the country's image by ensuring the sustainability of the tourism resource base.

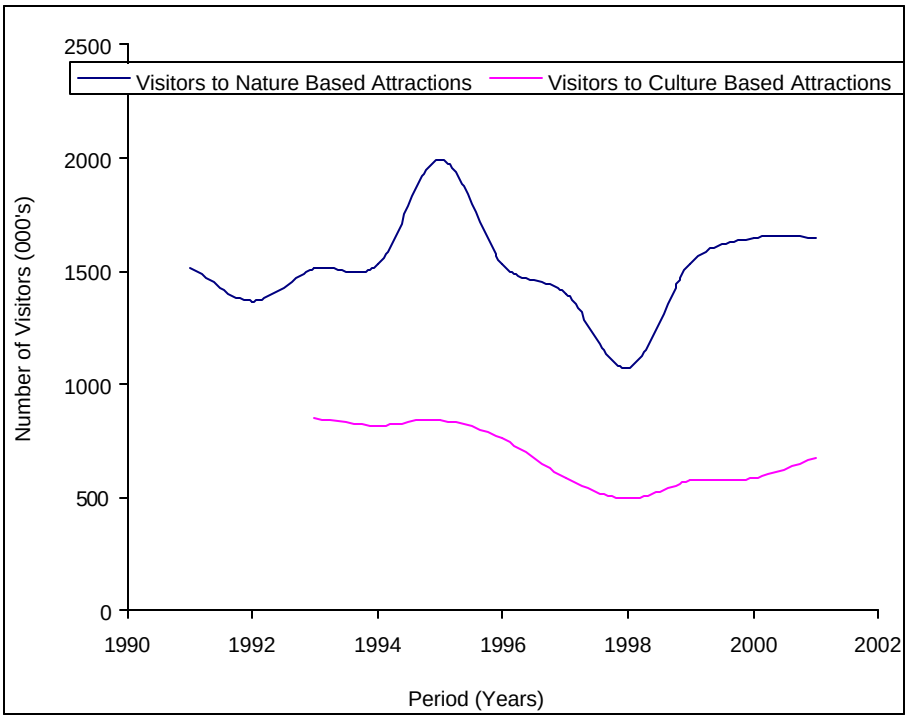

Figure1: Visitations to Attractions

The main objective of this paper is to segment tourists by the type of attractions chosen and profile them in terms of personal characteristics. This makes it possible to formulate sound and strategic marketing policies and programmes. These contribute to the realization of the government policies mentioned above. The organization of this paper is as follows. In section 2 we shall develop a conceptual framework to profile international tourists visiting Kenya. Next, we shall present a brief description of the econometric methodology, i.e. linear structural equations modelling. Finally in section 4, data, empirical results and conclusions are discussed.

2. The Conceptual Framework

Tourists are considered to arrive at product choices by utility maximization. Van Raaij (1986) viewed travel destination as a product, which is partly 'given' and partly 'man-made'. In the 'given' part, there are a number of natural features of tourist destination such as climate, scenery, beaches, mountains, historic and cultural buildings. In the 'man-made' part, there exist features such as hotel and transportation facilities, package tours, and facilities for sports and recreation. These can be adapted to customer preferences subject to budget constraints facing the consumer. The utility attached to a product or service is derived from its attributes. Individuals in their decision-making process evaluate the benefits and costs of competing products before a final choice is made. The final choice is the one that provides the

individual with the highest level of total utility. The utility index provides a framework for evaluating consumer preferences for different alternatives (modified from Papatheodorou, 2001) and is defined as:

$$U_{ij} = f(X_i, Z_j) \quad (1)$$

Where,

U_{ij} is the utility of tourist *i* for attraction *j*

X_i are the characteristics of tourist *i*

Z_j are the characteristics of attractions *j*

Before turning to a discussion of the components of X_i and Z_j we observe that some variables such as socio-economic status are latent. In contrast to observable variables, such as age and income, which possess direct empirical meanings derived from experience, latent variables refer to those phenomena that are supposed to exist but cannot be observed directly.

The reasons why latent variables are not observable is that either the phenomena does not correspond directly to anything that is likely to be measured, or that observations of the phenomena concerned are contaminated with measurement errors (Folmer, 1986). A latent variable can be uni- or multi-dimensional, which depends on the number of viewpoints from which it is defined theoretically. An example of a multi-dimensional latent variable is socio-economic status. An individual's socio-economic status is made up of such components as income, education and occupation. Carnap (1936) has shown that latent variables cannot be replaced by expressions consisting of observable variables only. However, latent variables are given empirical meanings by means of correspondence statements or operational definitions. Such a statement connects a latent variable with a set of observable variables. However, the theoretical terms are merely given partial specifications. On the other hand, theoretical terms have operational implications for relationships among observable variables. In particular, they indicate which observable variables are highly correlated because they are indicators of a given latent variable. In an empirical-analytical theory two kinds of statements can be distinguished:

Theoretical statements, which contain only latent variables; Correspondence statements, which contain both latent and observable variables. The set of statements of the first kind is usually called the main theory and the set of correspondence statements the measurement theory. It is highly desirable to use a particular method to investigate a given theory empirically, which is capable of dealing with both the main and the measurement theories simultaneously. This follows directly from the relationships between both kinds of variables. As mentioned above, latent variables can only be observed by means of observable variables so that relationships among the former can only be estimated by means of the latter. On the other hand, relationships between observable variables, which are indicators of latent variables, only represent partial relationships between the corresponding latent variables (Folmer, 1986).

Variables

The main variables of interest in this paper are the numbers of days spend on wildlife viewing (GAMEDYS), beach activities (BEACHDYS) and cultural excursions (CULTUDYS), and the total expenditure on the trip (TOTALEXP). Below we shall develop a theoretical model for the explanation of these variables that will be the starting point for the empirical analysis in the next section. Variables used to explain and predict a tourist's choices and expenditure can be classified into two broad categories i.e. personal and travel characteristics (Fesenmaier et al., 2003). Personal characteristics encompass socioeconomic status (SES) and demographic characteristics. Travel characteristics include situational factors that distinguish between travel forms. Indicators of the latent variable SES are education (EDUCAT) and occupation (OCCUPAT). Other predictors of the dependent variables are income[3] and demographic characteristics such as age (AGE), gender (FEMALE) and companion status (SINGLE).[4] Trip characteristics are length of stay i.e. number of nights spent in Kenya during the trip (NIGHTS) and group size i.e. number of members in a travel party (GRPSIZE). Children (CHILDPRE)[5] are also taken into account. Below we shall motivate the relevance of each explanatory variable and indicate the expected sign. We observe that various hypothesized relationships are highly tentative and based on ad hoc reasoning, due to the fragmented nature of the literature in the area of profiling tourists in terms of personal characteristics and trip features.

Age

Weaver et al (1994) and Cottrell (2003) found that age was a discriminating demographic variable that influenced holiday behaviour and choices. Younger people tend to be interested in adventurous activities such as wildlife viewing and beach holidays. With advances in age, individuals search for holiday activities that can give them more knowledge and understanding of issues outside their usual environment of life, particularly cultural activities (BongKoo, 2001). In general, people in higher age brackets are willing to spend much more resources in terms of time and money to satisfy their desire to learn about others. Younger people are less endowed with resources for expenditure. From the foregoing, we expect age to have a positive impact on CULTUDYS and on total expenditure and an insignificant or negative impact on GAMEDYS and BEACHDYS

[3] Income is often treated as an indicator of the latent variable socio-economic status together with occupation and education. In the empirical analysis, however, income turned out to be negatively correlated with these variables.
[4] The labels FEMALE and SINGLE are the categories of the dummy variables gender and companion status fixed at 1. The estimated coefficients indicate the differences with respect to the reference cases fixed at zero.
[5] The label CHILDPRE is the category of the dummy children fixed at 1 if children accompany adults.

Single

Couples usually make decisions jointly and compromise on various options (Agarwal and Yochum, 1999). This implies that they are likely to diversify their activities more than singles. In terms of activities undertaken while visiting a destination, we expect couples to visit more attractions besides the primary attraction of interest (usually packaged wildlife safari). Single status is expected to have a negative impact on CULTUDYS and BEACHDYS. Couples prefer being on the beach because it accords them an exclusive and quite environment (Agarwal and Yochun, 1999). We expect couples to spend less than those who are single in per capita terms because of economies of scale (Lawson, 1991).

Presence of children

Individuals accompanied by children are expected to visit attractions with low risks and uncertainties (McKercher, 1998). Cultural activities and beach tourism are safe forms of tourism since they are perceived to have fewer risks. Therefore we expect the presence of children to have a positive impact on BEACHDYS and CULTUDYS. However, the impact on BEACHDYS may not be significant because activities on the beach are less varied than those encountered during cultural excursions. The impact of the presence of children is ambiguous with regard to expenditure. On the one hand, it may have a positive impact on total expenditure because of the need for higher standards of accommodation, transportation, etc. On the other hand, the presence of children may induce discounts to the advantage of the adults responsible for them. We expect the negative impact to outweigh the positive effect.

Female

According to BongKoo (2001), women tend to participate more in cultural activities than men do. This could be the case because alternative forms of attractions are physically and emotionally stressful (in the case of wildlife safari) or because of the genuine interest in such cultural aspects as handicraft. Due to the fact that females tend to be more risk averse than males we expect females to report higher expenses than their male counterparts.

Socioeconomic Status: Occupation and Education

Like age, occupation and education enhances the need for an individual to learn more about other people and how they live in different environments (Mok and Armstrong, 1996). Therefore, travellers who are better educated and have high ranked occupations tend to search for more specific activities and experiences (Zimmer et. al., 1995). Higher socio-economic status increases the possibilities of engaging in people-centered activities due to greater access to information and increased awareness. Therefore, we expect socioeconomic status to have a positive impact on CULTUDYS, and to less extent on GAMEDYS, whereas the impact on BEACHDYS is expected to be negative or insignificant. We also expect higher socio-economic status to have a positive impact on total expenditure due to preference for higher quality service.

Income

More income enables individuals to spend more money during holidays. High-income earners prefer high-class activities and facilities. The impact of income on attraction choices is difficult to predict. It may have a positive impact on GAMEDYS in the sense that it allows people to engage in luxurious kind of activities such as balloon safaris. It may also have a positive impact on BEACHDYS since beach tourism locations are normally served well with regard to concentrations of high quality and standard infrastructure. In summary we expect income to have a positive impact on GAMEDYS and BEACHDYS as well as on EXPENDITURE

Group-size (GRPNUMB)

The nature of travel group has been recognized as an important aspect in defining types of travel choices (Fesenmaier et al 2003). Travel party size is likely to positively impact on the heterogeneity of interests. Large travel parties are likely to have many varied interests to be satisfied within the group. 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 and Lieber, 1985, 1988; Lue, Crompton and Fesenmaier, 1993). Cultural tourism offers a wide variety of attractions ranging from dressing, food, language, and dance to other chores of life. Therefore, we expect that the larger the travel group, the more the number of days devoted to culture and beach based tourism, ceteris paribus. However, the varieties of attractions offered by beach tourism are less heterogeneous and hence the impact may be insignificant. Due to economies of scale, members of large travel groups on average are expected to have low expenditure levels per capita than those travelling in smaller parties.

Length of stay (NIGHTS)

Time budget available for a trip restricts the (geographical) range of travel. Therefore, tourists with limited time budgets are likely to focus on a limited number of activities whereas tourists with more time will tend to diversify their activities (McKercher, 1998). Longer lengths of stay at a destination have the likely influence of increasing the variety of activities undertaken. The possibility that an individual undertakes other activities besides the primary motivation increases. As a result, we hypothesize that more culture and beach based attractions are visited when the length of stay increases. Longer lengths of stay are expected to be associated with higher expenditure. However, due to learning effect this relationship may be negative with regard to average daily expenditure. Therefore, the impact is ambiguous.

Figure II: Path Diagram

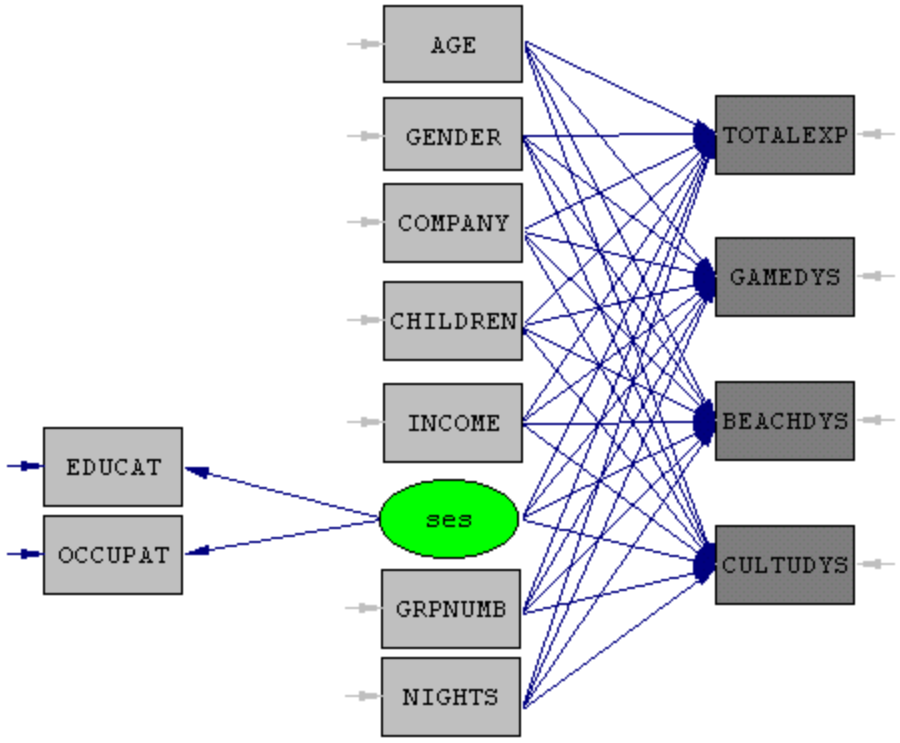

Figure II gives the conceptual relationships amongst the dependent and independent variables including one latent exogenous i.e., socio-economic status (SES). In the next section, we discuss the methodology adopted in analyzing these relationships.

3. Econometric Aspects: the LISREL Approach

An econometric approach that can simultaneously handle latent and observable variables is the LISREL approach. In order to deal simultaneously with both the measurement and the main theory a LISREL model is made up of two related submodels: A latent variables measurement model, which represents the relationships between the latent variables and their observable indicators. A structural model, representing the relationships between the latent variables.

Let $y = (y_1, y_2,..., y_P)^T$ and $x = (x_1, x_2,... x_q)^T$ be vectors of observable endogenous and exogenous variables, respectively.[6] Further-more, let $\eta_1 = (\eta_1, \eta_2,..., \eta_m)^T$ be a vector of latent endogenous variables and $\xi = (\xi_1, \xi_2,..., \xi_n)^T$ a vector of latent exogenous variables. Finally, $\varepsilon = (\varepsilon_1, \varepsilon_2,... \varepsilon_p)^T$ and $\delta = \delta_1, \delta_2,..., \delta_q)^T$ are defined as vectors of measurement errors of y and x, respectively. The relationships between the observed and latent variables are given in the latent variables measurement models (2) and (3)

$y = \Lambda_y \eta + \varepsilon$ (2)

[6] The upperscript "T"denotes the transposed vector or matrix

and

$x = \Lambda_x \xi + \delta$ (3)

where Λ_y and Λ_x are (p x m) and (q x n) matrices of regression coefficients (also called factor loadings).

The structural model consists of a set of relationships among the latent variables:

$\eta = B\eta + \Gamma\xi + \zeta$ (4)

where

B is a m x m coefficient matrix with β_{ij} representing the effect of the j-th endogenous variable on the i-th endogenous variable; Γ is a m x 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;

In connection with, model (2) - (4), the following notation is introduced. The covariance matrices of *e* and δ, which need not be diagonal, will be denoted by θ_ε(p x p) and θ_δ(q x q) and the covariance matrices of ξ and ζ, by φ (n x n) and Ψ(m x m).

The following remarks are in order here. First, for reasons of simplicity but without loss of generality, it is assumed that dependent equations have been removed from the system of equations. Secondly, it is possible to estimate intercept terms of the equations (2) - (4). Such parameters may be of interest in the comparison of different, mutually exclusive, samples. In the present study, however, attention will only be paid to the analyses of single samples. In such analysis, the intercept terms hardly provide any information. Therefore, the assumption is made here, that both the observed and the latent variables are centralized.

Formally:

$E(y) = 0; E(x) = 0; E(\eta) = 0; E(\xi) = 0$ (5)

Thirdly, the following standard assumptions are made:

$E(\varepsilon) = 0; E(\delta) = 0; E(\zeta) = 0$

$E(\eta\varepsilon^T) = 0; E(\xi\delta^T) = 0; E(\eta\delta^T) = 0; E(\xi\varepsilon^T) = 0; E(\varepsilon\delta^T) = 0$ (6)

$E(\zeta\xi^T) = 0; E(\zeta\delta^T) = 0; E(\zeta\varepsilon^T) = 0$

In (5) and (6) "0" denotes a vector or matrix of apropriate order.

Fourthly, multiple observable variables for a latent variable are often preferable and necessary so as to provide a tool for identification (Folmer, 1986). Besides, one single observable variable may be an indicator of more than one latent variable. Finally, as described by, among others, Theil (1971), the problem of multicollinearity arises as a consequence of the occurance of (highly) correlated explanatory variables. It usually leads to the increase of the estimated variances of the estimators of the coefficients of the collinear explanatory variables, so that one may be led to drop variables incorrectly from an equation.

By means of the possibility to handle observable and latent variables simultaneously within one model framework, as in the LISREL case, the consequences of multicollinearity can be mitigated. This can be seen as follows. Collinear explanatory variables, which are indicators of a given latent variable, are dependent variables in one of the latent variables measurement models (2) and (3) and therefore are not removed from one of these models because of their collinear nature. Furthermore, in the structural model the latent variables appear instead of their corresponding observable variables. So, collinear variables are neither removed from the structural model in spite of the fact that they are collinear.

As can easily be seen, model (2) - (4) is a general framework in which several specific models are contained, such as first and second order factor analysis model and the simultaneous equations model with observables only.

Estimation of a LISREL model comes down to minimizing the distance between the sample covariance matrix $Z^T = (g^T, X^T)^T$ and the theoretical covariance matrix Σ which can be expressed in terms of the eight model matrices Λ_Y, Λ_X, b, Γ, Φ, Ψ, Θ_e and Θ_d.[7] The vector of unknown parameters in Σ is denoted p.

In order to be able to draw inferences for the vector p from the variance-covariance matrix of the observable variables, the structure of Σ has to be such as to allow a unique solution of p from Σ. Thus, the vector p has to be uniquely determined by Σ; in other words, the model has to be identified. A necessary condition for identification is that the number of distinct elements in Σ is at least as large as the number of independent parameters to be estimated.

A second necessary condition for identification is that each individual parameter can be separated from the other parameters. This condition is often difficult to test. Furthermore, it is not a sufficient condition. However, the LISREL VIII program gives hints about identification problems. It calculates an estimate of the matrix of second-order derivatives of the fitting function used to estimate the model. Rothenberg (1971) has shown that under quite weak regularity conditions local identifiability is equivalent to non-singularity of the information matrix. Furthermore, the rank of the matrix indicates which parameters are not identified (Jöreskog, 1993). In the case of models with latent variables, the model is not identified if the latent variables have not been assigned measurement scales. The easiest way to fix the measurement scales of the latent variables is to set one l-coefficient equal to 1 for each latent variable. Finally we observe that it is usually possible to fix or to constrain unidentified parameters on the basis of theoretical knowledge or ad hoc reasoning so as to render the model identified. The purpose of assessing a model's overall fit is to determine the degree to which a model as a whole is consistent with the

[7] When the model contains censored or ordinal variables, the covariance matrix used for estimation should be based on canonical, polychoric or polyserial correlation instead of Pearson correlation.

empirical data. There are various indices available for this purpose and these include Minimum Fit Function Chi-Square, Normal Theory Weighted Least Square Chi-Square, Estimated Non-centrality Parameter (NCP), Root Mean Square Error of Approximation (RMSEA), Expected Cross-Validation Index (ECVI), Akaike's Information Criteria (AIC), Fit Indexes (NFI), Root Mean Square Residuals (RMR), Goodness of Fit Indexes (GFI) and the Critical N (CN). The chi-square statistic is normally used to evaluate the overall model fit in covariance structure models. It provides a test of fit in which the null hypothesis is that the model fits the population data perfectly. Also the Normal Theory Weighted Least Square Chi-Square provides a test of fit. The two measures have been challenged in empirical studies for being based on an incorrect premise that a model can fit exactly in a given population. Since a model is an abstraction from reality, the results of these measures need to be validated by other more realistic measures. It's more practical and appropriate to assess the degree of lack of fit of a model (e.g., NCP, RMSEA). NCP and RMSEA focus on errors due to approximation. On the other hand, ECVI considers the overall error i.e. the difference between the population covariance matrix and the model fitted to the sample. ECVI gives an assessment of whether or not a model is likely to cross-validate across samples of the same size from the same population. It also measures the discrepancy between the fitted covariance matrix in the analyzed sample and the expected covariance matrix that would be obtained in another sample of equivalent size. In cases where the researcher is interested in comparing two or more models, the 'null' and 'saturated' models are used for comparability. Under the null model all observed variables are uncorrelated. This is an independent and the most restrictive model. The saturated model is one in which the number of parameters to be estimated is exactly equal to the number of variances and covariances among the observed variables. The model has zero degrees of freedom and hence is 'just identified'. These two extremes form the boundary in which the hypothesized model should fall. Information criteria measures of AIC and CAIC are used to compare models. They attempt to take into account the issue of parsimony in the assessment of model fit by considering the number of estimated parameters. AIC and CAIC are very responsive to departures from multivariate normality. CAIC adjusts the AIC for sample size effects. Root mean squared residual (RMR) measures the fitted residual after getting the difference between a sample covariance (variance) and a fitted/model implied covariance (variance). The fitted residuals are small if the model fit is good. In order to avoid the issue of measurement units, standardized residual are used for assessment of fit. Absolute fit indices assess how well the covariances predicted from the parameter estimates reproduce the sample covariances. In most cases, their computation is relative to the null model defined above. The goodness-of-fit (GFI) is an indicator of the relevant amount of variances and covariances accounted for by the model. This shows how closely the model comes to perfectly reproducing the observed covariance matrix. The adjusted goodness-of-fit index (AGFI) is the GFI adjusted for the degrees of freedom in the model while parsimony

goodness-of-fit index (PGFI) makes a different type of adjustment to take into account model complexity. The relative fit indices show how much better a model fits compared to a baseline model, in most cases the independent model. Another measure of fit is the Critical N (CN) statistic and this differs from the previous fit measures since it shows the size that a sample must reach in order to accept the fit of a given model on a statistical basis.

4 Data and Empirical Results

Data

Data was collected from international tourists who visited Kenya between April 2003 and the same month the following year. Questionnaires were administered at the main airports of Nairobi and Mombasa to a sample of tourists leaving the country after their holidays. Tourists from Europe form about 69% of all holiday-makers to Kenya, North America 7.6%, Asia 5.3%, rest of Africa 9% and 9.1% from rest of the world. The universe of respondents was all international tourists visiting Kenya primarily for holiday purposes.

A first sample was drawn in order to test the data collection instrument. For the next step of data collection we used a stratified random sample based on the above geographical distribution. The sample was divided into mutually exclusive groups based on country of origin and nationality. Each group represented a proportion of the population leaving the two airports. Within each stratum individuals had equal probability of selection, i.e. random sampling was applied within each strata. In the case of scheduled flights, departure schedules were used to cover all possible routes emanating out of Kenya (once in each circle) during the research period. Every fifth person in the queue at the passport section was approached and asked the purpose of her/his visit. In the case of group travel, only the member(s) targeted were interviewed. The interview proceeded for only those who had visited Kenya primarily for holidays. One thousand five hundred and sixty six tourists were interviewed over a total of twenty-eight days spread out over the four seasons of tourism in Kenya (November to January, February to April, May to July and August to October).

Descriptive Statistics

Table II gives descriptive statistics of tourist and trip attributes such as socio-economic and demographic characteristics. Most of those included in the survey fall within the youthful ages of 20 to 39 years. Gender disparity is minimal, while more than a half of the respondents were married or living with partners. Over 43% of the tourists had attained university education indicating a high awareness level.

Table II: Socio-economic, Demographic & Trip Attributes

	Min	Max	Mean	Std. Dev
Age	9	92	38.42	13.953
Group Size	1	24	3.02	3.175
Number of Previous Trips to Kenya	0	05	1.37	3.251
Number of Nights in Kenya on Current Trip	1	90	12.78	7.647
Number of Accompanying Children	0	04	0.13	0.487
	Frequency		**Percentage**	
Education Level				
Elementary	72		4.6	
Secondary	391		24.9	
Post-secondary	394		25.1	
University	677		43.1	
Marital Status				
Married	833		53.1	
Single	398		25.4	
Living with Partner	265		16.9	
Divorced	65		4.1	
Widowed	5		0.3	
Gender				
Male	780		49.7	
Female	786		50.1	
Age				
1-19	74		4.7	
20-29	311		19.8	
30-39	295		18.8	
40-49	222		14.1	
50-59	190		12.1	
60-69	83		5.3	
70-79	19		1.2	
Over 80	1		0.1	

LISREL Model

As observed in section 3, a Lisrel model consists of the measurement and structural sub-models. Below we first discuss the measurement sub-model and then an assessment of the structural and the entire model. Results and their discussion are then presented.

Measurement Model

Socio-economic status (SES) is measured by the highest education level attained (EDUCAT) and category of occupation (OCCUPAT). EDUCAT was used as a reference variable to scale SES by fixing the relevant parameter value to one.

*EDUCAT = 1.00*SES,*

Errorvar = 0.910 (t-value 28.93)

$R^2 = 0.056$

*OCCUPAT = 7.74*SES (t-value 36.64)*

Errorvar =29.95 (t-value 1082.91)

$R^2 = 0.097$

Given the coefficients in the measurement model, occupation category is a more valid indicator of socio-economic status than educational achievement. The loading of occupation is significant at 0.05 level with respect to socio-economic status (SES) as indicated by t-value in excess of 1.96 in absolute terms. This provides validity evidence for this indicator. The error variances of the two indicators are substantial and the multiple squared correlation low implying moderate reliability of the indicators.

As discussed in section 3, we shall focus on the goodness of fit statistics that relate to the lack of fit of the overall model. The NCP of this model is 103.53 and falls within the 90% confidence interval. Therefore, the null hypothesis ($\Sigma \neq \Sigma(\theta)$) that the model does not fit the data perfectly is rejected. The current model is considered adequate with RMSEA of 0.05 since the RMSEA null hypothesis (H_o: RMSEA<0.05) is not rejected. The ECVI for the model is 0.12 and this falls between 0.116 for comparable saturated model and 0.79 for independent model as hypothesized. The value for AIC is 253.53 and for CAIC is 730.25.Both measures fall within those of independent AIC (CAIC) and saturated AIC (CAIC) respectively. Therefore, the hypothesized model falls within the acceptable limits. A measure of standardized residual (RMR) of values below 0.05 is considered indicative of acceptable fit. In this case, this measure is 0.02 and hence the theoretical model has acceptable fit. According to the literature, values of GFI and AGFI should range between 0 and 1 where those values greater than 0.9 are viewed as reflecting acceptable fits while those of PGFI are acceptable even at low levels. In this analysis GFI is given as 0.99, AGFI as 0.94 and PGFI as 0.17. The implication is that the model under study has acceptable fit. All the fit indices have values ranging between 0 and 1 and those close to one indicate good fit. However, NFI values are acceptable even at low levels. The non-normed fit index (NNFI) can take values greater than one. In this case, NNFI is 0.62, CFI is 0.92, and RFI is 0.58 while NFI is 0.91. These indices indicate a reasonable relative fit of the model over an independent model. A rule of thumb in the empirical literature indicating that a model is an adequate representation of the data is if CN is greater than 200. For the present case study the CN is equal to 482.73 and hence the model properly represents the data.

Structural Model

The impact of the endogenous variables on each other was taken into account by estimating the covariances amongst them. The covariance matrix (psi) of the dependent variables was specified as a full matrix and then estimated accordingly. Therefore, the coefficients amongst exogenous and endogenous variables in the gamma matrix are unbiased.

The R^{2}´s are 0.62 for GAMEDAYS, 0.28 for BEACHDAYS, 0.04 for CULTUDAYS and 0.11 for EXPENSES. Except for GAMEDAYS the squared multiple correlation coefficients are low, although this is in line with similar cross-sectional studies in this field of research (Thrane, 2002). Most of the

unstandardized parameter estimates and error variances are significantly different from zero (Table IV) and some of the signs of the parameter estimates are consistent with the hypothesized relationships.

Table IV: Structural Equations

	Ses	Gender (female)	Income	Nights	Age	Company (single)	Children (present)	Grpnumb	Squared Multiple Correlations
Game	6.1210 (2.493)*	2.6371 (1.5598)	-0.0056 (-0.3630)	-0.2444 (-1.5708)	0.1240 (1.6259)	1.4978 (1.9836)*	0.0521 (0.0391)	-1.0380 (0.0391)	0.6208
Beach	-7.3251 (-2.782)*	-3.2344 (-1.6471)	0.0018 (0.0957)	0.7844 (4.5042)*	-0.1077 (-1.2246)	-1.7922 (-2.1200)*	-0.5384 (-0.330)	1.3485 (2.2535)*	0.2865
Culture	-0.1250 (-0.8754)	0.0860 (0.8628)	-0.0010 (-1.0064)	0.0345 (3.9081)*	-0.0039 (-0.8774)	-0.0105 (-0.2446)	0.1661 (2.008)*	0.0694 (2.2895)*	0.0376
Expenses	7.5508 (2.719)*	4.2207 (2.0416)*	0.0096 (0.4914)	-0.2566 (-1.4000)	0.0919 (0.9930)	2.2011 (2.4739)*	0.0216 (0.0126)	-1.0502 (-1.6679)	0.1065

NB: *t-values in brackets * significance at 0.05 level*

Results and Discussion

The duration allocated to cultural excursions is highly related to length of stay, presence of children and size of travel party. Number of days spent viewing wildlife is largely associated with socio-economic status and whether one is travelling as a couple or not. Days on the beach are significantly associated positively with the size of the travel party and negatively with socio-economic and companion status. Socioeconomic status, gender and companion status significantly determines expenditure levels.

As expected, the length of stay significantly increases time allocated to beach and cultural tourism.Tourists with more time at their disposal are expected to 'sample' other attractions available in Kenya after undertaking what the destination is famous for i.e. wildlife safari. Wildlife-viewing normally is sold as a packaged product consumable in few days or a couple of weeks. Therefore, extra time left is usually allocated to other attractions that were not the primary motivators for visiting the destination. Proportionately more of the extra time is allocated for beach rather than cultural tourism. This could be the case because beach tourism is always marketed jointly with wildlife safari. However, the allocation of extra time to cultural tourism is still significant and this implies that there is a potential market for the cultural product that could be targeted for marketing. The negative relationship between length of stay and expenditure (although not significant) in this study may mean that those with low budgets stretch their resources for longer periods since repeat visitation may be more expensive. Companion status is observed to have significant relationship with game and cultural attractions, and expenditure. Single travellers prefer game-viewing safaris and couples prefer beach and cultural tourism according to expectation.

Furthermore singles spent more as hypothesized. Although, the presence of children significantly influences participation in cultural tourism, it is not strongly related to other choice variables and expenditure. Cultural activities may be a safer form of tourism for children due to less travelling distances involved. Activities on the beach are passive and hence interest children for only short periods of time. Some studies have also found that the presence of children does not influence expenditure significantly (Agarwal and Yochum, 1999). Group number or party size effect on the choice and expenditure variables was in accordance with expectations. The variable significantly infuenced the number of days allocated for beach and cultural activities.

Contrary to our expectations, age and income are found to be insignificant in influencing both the attraction choices and the level of expenditure. However, Leones, et al (1998) also found income to be insignificantly related to holiday expenditure. This confirms Fish and Waggle (1996) observation that household expenditure may be a better predictor of travel than current income. Income may not be a significant discriminant with regard to attraction choices due to the effect of packaging of available alternatives and hence limiting choice options. However it is positively associated with expenditure and beach tourism as expected. Age is also not significantly related with the choice variables and expenditure. Again, this may be due to the effects of tour packaging. Pre-arranged packaged tours play a key role in Kenya's tourism industry (Sinclair et. al, 1992). Under tour-packaging, available choices are limited and restricted creating little variations across socio-economic and demographic profiles of individuals. However, as expected age is positively related to expenditure. The relationship to cultural attractions is not according to expectation since it is the younger people who have preference for such attractions. This may be due to the fact that safari tourism requires more in terms of expenditure compared to beach and cultural tourism.

In summary, high spending tourists are those with high socio-economic status, are female and travelling as singles. Tourists with high preference for cultural attractions are those staying for longer time, are accompanied by children (by implication, they are in their middle ages) and travel in large groups. Female tourists show more preference for cultural tourism than their counterparts and are also significant spenders.

In order to promote cultural tourism in Kenya, strategies that elongate the length of stay by tourists are necessary. Diversification of the tourism product on offer is one such possible strategy. Cultural attractions need to be marketed jointly with wildlife and beach products. Although those interested in cultural tourism are not significant spenders, their increased numbers and demand can 'spur' and develop the market for this product. Cultural themes could be developed for specific seasons and periods in order to attract large groups of tourists.

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(lix) This paper was presented at the ENGIME Workshop on "Mapping Diversity", Leuven, May 16-17, 2002
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(lxvii) This paper has been presented at the international conference on "Tourism and Sustainable Economic Development – Macro and Micro Economic Issues" jointly organised by CRENoS (Università di Cagliari e Sassari, Italy) and Fondazione Eni Enrico Mattei, and supported by the World Bank, Sardinia, September 19-20, 2003

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