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An investigation into the market segments of coastal visitors: Evidence from Greece

Coastal vistors' interests are important components for implementing effective tourism plans and establishing thorough coastal tourism management. Factor analysis was implemented in view of eliciting respondents' judgments concerning destination choice attributes and features. Based on factor scores, cluster analysis was then implemented as a means of defining market segments that reflect consumers with similar needs. Eight factors were extracted while three distinct market segments were found: cost sensitive, demanding beach users and accommodation oriented visitors. The resulting segments, were compared on the basis of specific variables organized under the following framework: destination attributes, travel behaviour isuues and sociodemographic characteristics. Multiple discriminant analysis confirmed the validity of the cluster solutions. The research findings offer important implications for marketing purposes in light of experiencing sustainable regional coastal planning based on the defined segments.

Keywords: visitors, interests, segments, coastal tourism

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Introduction

The coast is considered to be the favorite destination choice of 63% of holiday makers while the general trend is to improve the quality of visitors' experiences and achieve sustainable development (European Commission, 2000). By its definition coastal tourism is based on a unique resource combination at the interface of land and sea offering diverse amenities while it includes a wide range of activities that take place in coastal waters and zones (UNEP, 2009). Similarly, Hall (2001, p.2) claims that coastal tourism "embraces the full range of tourism leisure and recreationally oriented activities that take place in the coastal zone and off shore waters". A tourism product can be defined as a bundle of benefits, activities and services that constitute the entire tourism experience (Medlik & Middleton, 1973) or "a satisfying activity at a destination place" (Jefferson & Lickorish, 1988, p. 211).

Van der Merwe et al. (2011) clearly state that a wide range of attributes correlate coastal sites and marine destinations with tourist experience. Supportively, by identifying how vistors' interests and judgments are translated into destination attributes is essential to perceive consumptive behaviors, and decode travelers' needs and wants. To this extent, Kozak (2001) asserts that motivation factors assist the identification of attributes that are to be promoted and define markets in which tourist motives can be linked to destination features and resources. Destination attributes can be defined as the benefits that tourists seek or expect to receive and experience when visiting a particular destination (Frochot & Morrison, 2000).

The purpose of this study is to define market segments based on consumer motivations as a function of factor – cluster analysis and advance customer driven tourism

products as a leading example for achieving sustainable tourism policy, specifically applied to coastal zones. Customer driven means that the customer leads the way, its voice is the primary focus and customer's satisfaction provides the constancy of purpose vital to success (Barkley & Saylor, 2001). To be more accurate, this study seeks to achieve three objectives: (1) to identify the underlying dimensions of motivations of beach visitors using a factor analysis (2) to segment this coastal tourism market with similar needs using a cluster analysis; and (3) to illustrate how an understanding of the different visitor segments can be used in improving visitor experiences in view of better perceiving the destination's relative ability to provide value and influence tourists to visit the area again.

Issues such as visitation patterns and motivations, tourist behavior and benefits sought have been overlooked in the current empirical literature concerning beach destinations in Greece. This is despite the fact that tourism literature has emphasised the importance of market segmentation if effective tourism plans are to be implemented. By applying a regional approach to the study of tourism in the state, it is hoped that the results will provide state officials and planners, with a better understanding of the dynamic nature of coastal users' criteria and priorities in view of achieving strong positioning marketing. One particular aim of the study is to contribute to the discussion of appropriate market segmentation criteria and the use of multivariate statistical methods in tourism marketing research offering a bottom up perspective. At present, this is a relevant question in Greece, which is seeking to involve tools and techniques for optimizing resources and processes in view of establishing competitive customer driven tourism products.

Theoretical Framework

With the ever increasing diversity and selection of tourism products in the tourism market, it is not surprising to see a growing interest in identifying factors and variables which affect tourism product choice. In this respect, Mansfeld (1992, p.401) claims that "an analysis of the motivational stage (which generates the whole process) can reveal the way in which people set goals for their destination-choice and how these goals are then reflected in both their choice and travel behaviour". Dann (1977) suggests that the push-pull framework can be used in view of examining the motivations that shape travellers' behaviour. This concept involves the theory that "people travel because they are pushed and pulled to do so by "forces" which are called motivation factors" (Baloglou & Uysal, 1996, p.2). It has been claimed that people travel because they are pushed by their own internal forces and simultaneously pulled by the external forces of the destination and its attributes (Cha et al., 1995; Uysal & Jurowski 1994).

The push factors are socio-psychological motives whereas the pull factors are motives emerged from the destination rather than the traveller himself (Crompton, 1979). Mill &Morrison (1985) argue that pull factors affect the destination selection process of visitors (when, where and how people travel). The pull factors are those factors that attract the individual to a specific destination once the decision to travel has been made (Oh et al., 1995). Although many researchers have used the push-pull framework to empirically examine the tourism market (Crompton, 1979; Epperson 1983; Oh et al., 1995; Baloglu & Uysal, 1996) little attention has been paid of examining the pull factors or destination-based attributes to cluster the tourists on the basis of similar perceptions (Sangkipul, 2008). For instance, Wong (2011) argues that although researchers have shed light on various push motives that influence event travel decisions (Raybould, 1999; Smith & Costello, 2009), event studies are just beginning to understand the role of pull factors in event tourism (Comas & Moscardo, 2005). Hu & Ritchie (1993) consider the tourism destination as a package of tourism facilities and services which is composed of a number of multi-dimensional attributes.

As the field of coastal tourism continues to develop, the need for identifying destination attributes that satisfy visitor motives remains a crucial issue in fulfilling their expectations. As a result, pull factors have been a popular subject for research in the tourism literature (Prayag & Ryan, 2011). Supportively, Dann (1981, p. 191) states that pull factors both respond to and reinforce push motivation factors. Zhang (2009) states that pull factors are attributes consisting of tangible resources that shape travellers' perceptions and expectations. Witt & Mountinho (1989) suggest that there are three important components of destinations that make them attractive or act as pull factors to visitors: static factors including climate, distance to travel facilities, historic/cultural features, and natural/cultural landscapes; dynamic factors including accommodation and catering services, personal attention, entertainment/sports, political atmosphere, and trends in tourism; and current decision factors consisting of marketing strategies and prices. Features, attractions or attributes of the destination itself, such as beaches, water/marine-based resources, recreation facilities, natural scenery, cultural attractions, entertainment, shopping and parks are conceptualized as pull factors (Kim et al., 2003; Yoon & Uysal 2005). Jang & Wu (2006) claim that natural and historic environments, cost, facilities, safety, and accessibility can be deemed as pull factors. Such pull factors induce individuals to visit a destination once they have been influenced by socio-psychological needs to travel (Crompton, 1979; Dann, 1981; Uysal & Hagan, 1993). Kim et al (2003) argue that destination choice emanates from tourists' assessment of

attributes and their perceived utility value. Given that destination attributes vary among tourism destinations knowledge on how people perceive destination attributes is of fundamental importance in providing suitable offers and developing sustainable tourism policies. As a direct consequence, segmenting tourism markets based on pull factors should provide useful implications for destination marketers in developing appropriate marketing strategies to approach the desired market segments.

Segmenting tourism markets

Market segmentation is justified on the grounds of achieving greater efficiency in the supply, promotion, and delivery of purpose-designed products that identify demand, satisfy the needs of target segments and increase cost effectiveness in the marketing process (Park & Yoon, 2009). In this perspective, Middleton (2002) defines market segmentation as the process of dividing a total market such as all visitors, or a market sector such as holiday travel, into segments for effective management purposes. Segmentation effectiveness depends on arriving at segments which are measurable, accessible, substantial, actionable and differentiable (Kotler et al., 2001). In the literature, the usefulness of market segmentation in tourism market and travel research has long been recognized and acknowledged (Mazanec, 1984; Cha et al., 1995; Jang et al., 2004; Molera & Albaladejo, 2007; Pesonen, 2012). The literature extensively discusses two principal approaches for segmenting markets including *a-priori* and *post-hoc* or *a posteriori* (Hanlan et al., 2006). "A-priori" segmentation is when the variable used as a criterion to divide a market is known in advance whereas post hoc segmentation is when there is no knowledge about distinct segments, and a set of variables is used as the base for segmenting purposes (Chen, 2003).

The growth of coastal tourism and the new tourist behavior patterns constitute a reason for a more in-depth research into the nature and intentions of visitors. Beane & Ennis (1987) argue that there are two reasons for market segmentation: the first is to find prospects for further product development, and the second is to perceive what consumers want so as to form relevant strategies. In today's tourism literature, a very large number of studies use different descriptors and discriminating variables for segmentation purposes including benefits sought (Loker & Perdue, 1992; Frochot & Morrison, 2000), novelty seeking (Weaver et al., 2009), motivations (Cha et el. 1995; Madrigal & Kahle, 1994), travel expenditure (Mok & Iverson, 2000), activities (Sung et al., 2000), personality traits (Plog 2002), behavioural characteristics (Formica & Uysal, 1998), lifestyles (Lee & Sparks, 2007) and personal values (Thrane, 1997). Socio-demographic variables such as, age, gender, income,

education and occupation may not be appropriate as a primary basis for segmenting tourist markets and may be considered as poor predictors of tourist behavior (Frochot & Morrison, 2000; Johns & Gyimothy, 2002). Nevertheless, demographic factors are accessible and measurable and are likely to remain useful as a framework to guide management thinking and this may explain the combined use of demographic and other segmentation bases (Tkaczynski et al., 2009).

Alegre & Cladera (2006, p.288) argue that tourists depict a disposition to "try out different experiences" rejecting conventional mass tourism. It seems necessary, then, to expand studies which enable providers and managers to define potential market segments which perceive and use the natural resource differently seeing the beach as a heterogeneous market rather than a homogenous entity. Hennessey et al. (2012) segmented the market of first time visitors to an island destination. The results indicated three distinct segments from an activity based perspective: culture-oriented, active, and casual visitors. The key differences among the three segments were illustrated using demographics, socio-economic variables, trip-related characteristics, and spending patterns. Roca et al. (2009) performed a cluster analysis to access public perceptions concerning a beach destination in Costa Brava, in Spain. Their purpose was to find out what sociodemographic and behavioural determining factors influence beach users. Two segments were identified: demanding and satisfied beach users. The analysis showed that significant differences were observed for the beach users' origin, age, accommodation, motivations, suggestions and beach frequented.

In Greece, little empirical research has focused on market segmentation in light of exploring the driving forces that shape visitors' destination choice and travellers' behaviour. It appears, therefore, crucial for researchers and managers to bring vistors' judgments into the decision model. To the best of our knowledge, there are only two published segmentation studies reflecting market segments in coastal settings. Andriotis et al. (2008) identified three segments of tourists with different satisfaction levels in the famous island destination of Crete in Greece: higher-satisfied, in-betweeners and lower-satisfied visitors. In their research, they also used sociodemograpic and travel arrangement characteristics such as season and length of stay. This research suggests that a more diversified tourism market could possibly attract visitors with more varied interests as well as improve tourist experience and satisfaction. They concluded that no matter how good a hotel is, if there is a breakdown at other features of the tourist product such as health, tours, airport services and host attitudes, overall tourists' satisfaction may be under dispute. The primary appeal of market segmentation studies is that they provide important insights and incorporate a wide range of issues and segmentation

bases for targeting tourists offering unique tourism products. Supportively, customers form their outcome satisfaction when making comparisons of product attributes and performance to their own expectations (Huang & Sarigollu, 2008) which in turn determine the perception of experience. More interestingly, in view of adequately providing tourism experience for visitors, it is essential to identify their motivations for selecting a destination (Beh & Bruyere, 2007). According to Australia's National Landscapes Programme, an experience is formed by the combination of activity setting, social interaction and the personal connection that arises. It engages the senses; it is physical, emotional or spiritual (or all three). Moreover, an inspiring experience offers discovery, learning, and creates strong memories. In this context, Triantafillidou & Siomkos (2013) applied a two step clustering procedure to segment extraordinary experience of summer campers in Greece. Four clusters were identified: indifferent campers, pure naturalists, adventurous-experiential and social naturalists. They, also, used post visit experience variables such as satisfaction, intention to revisit, nostalgia, word of mouth activity and praise as well as demographic variables. Based on their findings, they concluded that the most satisfied customers were members of the adventurous–experiential and social–naturalist segments. Additionally, members of these clusters felt the highest levels of nostalgia intensity compared to the other two segments. Moreover, they found that these segments had a higher likelihood to make positive recommendations and visit the campsites again resulting in the profitability of the campsites, since their members could be deemed loyal customers with a high referral value.

In light of innovation in natural tourism products the commodification and marketing of natural resources transform the resource into a product (Hjalager, 1997). However, if the specific characteristics of each beach are not taken into account - not only in terms of natural diversity but also on the grounds of social uses and users - there is a risk that the models applied may become homogeneous (Roca et al., 2009). In effect, by enabling the sharing, searching and exploration of data, questions and results from many users, the knowledge and expertise throughout the tourism system will be made available resulting in developing offers better adapted to the needs of target markets and predicting future travel patterns.

Study Area

The coastal zone between Molos and Arkitsa in the prefecture of Fthiotida, in Sterea Ellada Region, in Greece (figure 1) was chosen as a subject to our research since it covers a wide area and is a well known tourist location. To the best of our knowledge, there are no published studies concerning market segmentation research.
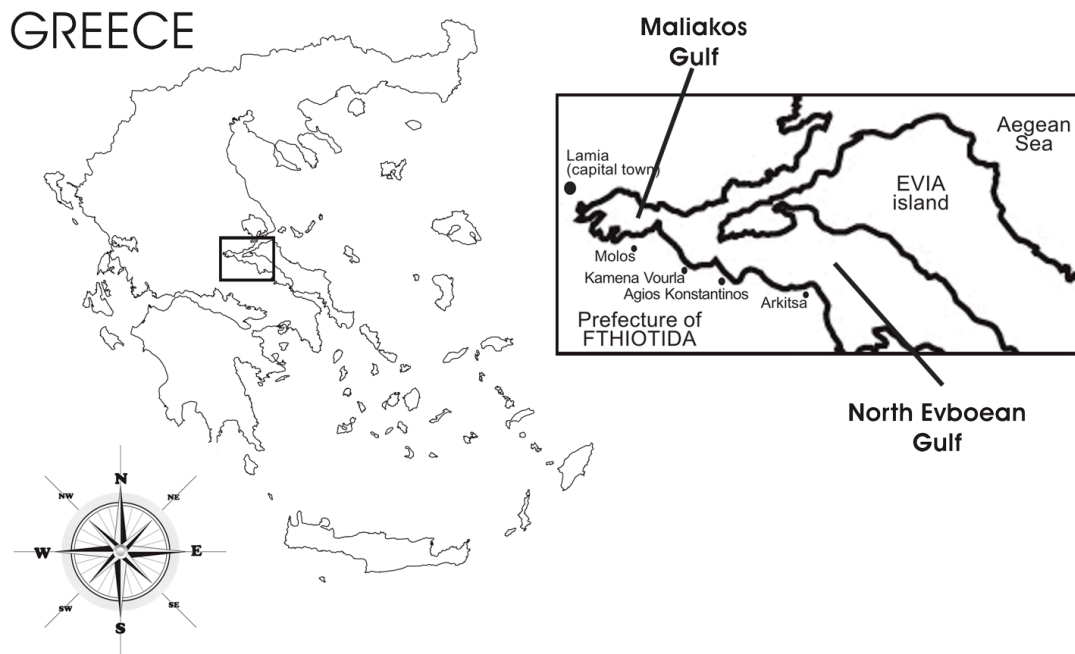
The Study Area

Figure 1. *The study area.*

Despite the potential of the tourism growth in the area, little information has been documented concerning specific destination attributes that attract visitors. Conventional tourism programmes and the 3Ss approach (sea, sun, sand) have been followed so far. The location of the study area (central part of Greece), the good climate conditions, its regional characteristics and natural beauty, its ecological value and the interaction between the marine environment and the host community stimulated our interest and provided motives for a thorough research. The beaches are pristine, having been designated as blue flag beaches many times in the past while 200 km of lacy coastline dotted with sandy and pebble beaches offer an opportunity for establishing preferred tourism products. In this perspective, a joint effort of coastal resource development makes a good sense in adopting gainful and coherent tourism policies and establishing a starting point for further implementation in relevant natural settings.

Methodology

Data Collection

The research was designed to further understand the coastal tourism market in the study area. The cluster sampling technique was used since no sampling frames were available for beach users. The population was divided into non overlapping populations called clusters (Zelin & Stubbs, 2005). Cluster sampling is a random sampling technique in which a cluster represents the sampling unit (Ahmed, 2009). In this method, the total population is divided into clusters. Then a sample of the clusters is selected. As a result, the analysis was conducted on a population of clusters, n=33 days, since each day of the research was deemed as a cluster. The population within a cluster should be as heterogeneous as possible. In cluster sampling only the selected clusters are studied. Data were collected during the peak visitation time of summer months. Respondents were asked to indicate the extent to which they assessed the importance of a wide range of variables reflecting destination based attributes. For this purpose, 25 items were included in the questionnaire. Additionally, respondents were asked to answer questions concerning travel behavior aspects related to time of visit the area (high or low season) and activities preferred when visiting the area (fishery or dive tourism, water sports and cruises). The questionnaire was developed from a comprehensive literature review with a focus on recreation, marine ecotourism, costs and expenditures, quality of nature attractions, experience, active participation and environmental awareness (Lew 1987; Moutinho 2000; Klenosky 2002; Garrod & Wilson 2003; Alegre & Cladera 2006; Jang & Wu 2006). To ensure content validity, numerous interviews with tourists and providers of tourist lodging in the study area were undertaken to identify the major dimensions of importance to tourists in the coastal site. These items were then subjected to review by experts in the field for completeness and clarity (Kastenholz, 2002). The questionnaire was composed of three parts. The introductory part introduced the respondents to the purpose of the study presenting all the necessary background information about the aim of the survey. The second part aimed at ascertaining socio-demographic characteristics and defining travel behaviour aspects. In the third part, respondents were asked to rate the initial items related to destination attributes. The 25 items used were operationalized on a five-point Likert scale, ranging from one (1: not at all important) to five (5: very important). Despite the fact that face-to-face research is usually more costly and time consuming process, it was selected because of its strengths in achieving high response rates. Of the 1709 questionnaires that were distributed 1433 were found to be suitable for statistical analysis giving a return rate of 84.04%.

Data Analysis

Data were analyzed in three stages. First, descriptive analysis was applied to the collected data to explore the overall sample profile. In the second stage, factor analysis was implemented to uncover the latent characteristics among a set of variables in view of explaining the observed variances in the data (Kuppusamy & Giridhar, 2006; Zhao, 2009). Principal component analysis (PCA) with Varimax rotation was then used to identify the underlying motive dimensions. Kozak (2001) plainly states that a large sample is critical for generating good factor analysis. Cronbach's alphas were computed to prove the internal consistency of variables in each factor. Afterwards, the factor scores for each respondent were saved and consequently used for implementing cluster analysis (Madrigal, 1995).

Cluster analysis procedures are suitable for identifying similarities among objects based on any number of variables, and allows for researchers interpretation of what latent constructs classifications mean (Romesburg, 1979). Since the *a priori number* of segments was not known beforehand, hierarchical cluster analysis was undertaken. The squared Euclidean distance was used in the hierarchical clustering process to measure distance, or the proximity of respondents to one another across the variables in the cluster variate whereas Ward's method was used as the clustering algorithm (Hair et al., 2006; Kim, 2007). Thereafter, in view of identifying different visitors' segments, a K-means cluster analysis (non hierarchical approach) was employed. The K-means clustering method produces results that are less susceptible to outliers in the data, the distance measure used, and the inclusion of irrelevant or inappropriate variables (Hair, et al., 2006). Obtaining a preliminary cluster solution is the core reason for conducting the hierarchical analysis so that the final cluster solution can then be obtained using a non-hierarchical analysis (Kim, 2007). Individuals were clustered in such a way that those within each cluster were more similar to each other than those in other clusters, thereby creating a situation of homogeneity within clusters and heterogeneity between clusters. ANOVA was used to identify possible statistical differences between the clusters in terms of the factors derived from the PCA. Moreover, F-statistics were used to provide information about which of the factors were most influential differentiators between the segments identified. This type of factor-clustering method with PCA and K-means cluster analysis has been used in the recent tourism literature for segmentation purposes (Molera & Albaladejo, 2007; Petrick, 2005).

In the third stage, discriminant analysis was used to assess the accuracy level of classification of segment membership (Park & Yoon, 2009; Beh & Bruyere, 2009). To further validate the clusters, cross-tabulation and chi-square tests were performed to ascertain if and how the segments differed in categorical background variables, such as demographics and

travel behavior. These statistical procedures typically entail cluster analysis for the purposes of validation and segment profiling (Formica & Uysal, 1998; Madrigal & Kahle, 1994).

Sample Profile

The socio-demographic characteristics of the coastal visitors in the sample are presented in Table1. Descriptive analysis showed that there were more male respondents (56.2%) than female visitors. A total of 851 respondents (59.4%) were in the age group of 31-40. The mean age of the respondents was 38.71 years. Many of the participants in the survey (36.64%) had an annually income of 1501-2000€ while the 30.77% were self employed. Concerning their level of education, a large proportion of the respondents (44%) was well educated since they possess a post graduate degree.

Table 1. *Sample Profile*

Socio-demographics	Frequency (%)
Gender	
Male	805 (56.18%)
Female	628 (43.82%)
Age	
18-30	106 (7.4%)
31-40	851 (59.39%)
41-50	349 (24.35%)
>51	127 (8.86%)
Annual Income (€)	
<500	18 (1.25%)
500-1000	47 (3.28%)
1001-1500	408 (28.47%)
1501-2000	525 (36.64%)
2001-2500	251 (17.52%)
>2501	184 (12.84%)
Profession	
Public sector	425 (29.66%)
Private sector	355 (24.77%)
Freelance (self-employed)	441 (30.77%)

Businessman	139 (9.70%)
Farmer	55 (3.84%)
Unemployed	18 (1.26%)
Educational level	
High school graduate	256 (17.86%)
Technological educational institutes	172 (12.01%)
University	374 (26.1%)
Post graduate studies	631 (44.03%)

Results

Principal Component Analysis

Principal component analysis (PCA) with Varimax rotation method was performed on the importance ratings of the 25 motivation factors identified in the instrument development process. Table 2 displays the results of factor analysis. The most common and reliable criterion is the use of eigenvalues in extracting factors. All factors with eigenvalues greater than 1 were retained as being significant; all factors with less than 1 were discarded (Swanson & Horridge, 2004; Hair et al., 2005). All items with a factor loading above 0.4 were included, whereas all items with factor loading lower than 0.4 were removed. All factors with a reliability above 0.6 were deemed acceptable for the purposes of this study since it is an approved value and is the "the criterion-in-use" (Peterson, 1994; Lee et al., 2006). For each extracted factor a "name" or a "label" should be assigned which depicts the common sense or characteristics among the included factors (Kim et al., 2006).

The analysis of the motivation items generated eight factors explaining 60.395 % of the total variance. A KMO test yielded a measure of 0.774, demonstrating that the distribution of values in the initial measure of motivation dimensions was adequate for conducting factor analysis. Bartlett's test of sphericity produced a x^2 of 8523.362, a degree of freedom 300 at a significance level of 0.000. Factor loadings of all relevant variables in the rotated factor matrix were clearly related to only one factor each. The internal consistency of the factors, measured with Cronbach's a indicator, showed good reliability with the scores ranging from 0.627 to 0.749. The resultant eight factors were named as follows: *organized*

beach sites, *sustainability, costs for participating, accommodation facilities*, *accessibility, hospitality, learning,* and *health services*,

Many of the extracted factors are in compliance with the findings of similar researches Alegre et al. (2011) point out that among the basic attributes of a holiday product are climate, beaches, cleanliness and hygiene, safety and security, quality of accommodation, information and easy access when examining the high leverage motivation factors for visiting a sun and sand destination. In their research, Van der Merwe et al. (2011) found that destination attractiveness composed of accommodation and facilities, safety and affordability are among the crucial factors that interpret travel motivations concerning marine destinations. Loker & Perdue (1992) found four motivation factors concerning a summer travel market: escape/relaxation, natural surroundings, excitement variety, family and friends.

Table 2. *Results of factor analysis.*

Factor Domain	Overall mean	Factor loading	Eigenvalue	Variance explained (%)
Organized beach sites	3.39		4.74	18.96
The zoning regulation – schemes (e.g. dive sites)		0.667		
The human intervention in the coastal zone (aesthetic stimulation, attractiveness of natural environment)		0.652		
The availability of space on beaches for site		0.622		

visitors (sightseeing)			
The feeling of safety and security (safe bathing)		0.601	
The availability of beach items and accessories (e.g. beach umbrellas)		0.595	
The existence of adequate and safe parking places		0.540	
Sustainability	3.95		2.25	9.00
The measures taken for biodiversity conservation		0.753	
The existence of environmentally friendly tourism facilities – constructions		0.679	
The protection of the marine resource (e.g. absence of pollution in		0.538	

many guises)			
The contribution – participation of host community		0.487	
The opportunity for volunteer tourism		0.485	
Costs for participating	3.47		1.65	6.60
The costs to participating in recreational and sport activities		0.794	
The costs for attending events and festivals (e.g. wine and food festivals)		0.718	
The food and beverage purchase, costs for entertainment, nightlife and local craft		0.665	
Accommodation facilities	3.54		1.56	6.30
The cost per person per night of being accommodated		0.791	

The diversification - quality (luxury)		0.730	
The level of hygiene		0.619	
Accessibility	2.59		1.38	5.52
Ease of access to the beach (e.g. distance to beach)		0,808	
Other barriers to access (e.g. traffic issues, quality of roads, local transportation)		0,709	
Hospitality	3.84		1.25	4.99
The social behavior – manners of local residents (friendliness)		0.888	
The quality of the tourism services provided (e.g. responsiveness of customers' desires-complaints)		0.802	

Learning	3.78		1.19	4.78
The knowledge seeking for the marine environment		0.880		
The experience based tourism (e.g. fishery and dive tourism, marine eco-tourism)		0.725		
Health services	2.08		1.06	4.24
The beach sanitation (cleanliness of the beach)		0.825		
The medical aid (e.g. emergency aid, availability of medical facilities)		0.798		
Total variance extracted (%)				

Cluster Analysis

The eight factors identified above were used as composite variables for conducting cluster analysis (Table 3). Three distinct clusters representing three different types of involvement were identified. The procedure was supported by the criterion of the relative increase of the agglomeration coefficient. The results of ANOVA tests also revealed that all eight factors contributed to differentiating the three clusters ($p < 0.001$).

Two canonical discriminant functions were calculated by using discriminant analysis on all eight motivation factors (Tables 4 and 5). A Wilks's lambda test and a univariate F test

were conducted to determine the significance of each of the eight motivation factors. The results showed that all of the eight motivational factors made a statistically significant contribution to the discriminant function. The first function accounted for the 56.7% of the variance explained with an eigenvalue of 1.735, whereas the second function explained the 43.3% of the variance with an eigenvalue of 1.323. Eigenvalues were produced to give indications of the 'goodness' of discriminant functions in which larger values are associated with better functions (Kim, 2007). The significance was associated with a measure of canonical correlation which indicated a relatively high degree of association (both values 0.796 and 0.755 closed to 1.0) between the discriminant scores and the clusters. The Wilks' lambda, which is transformed to a chi-square distribution, was used for testing the overall significance between clusters (Hair et al, 2006). In order to determine how well the discriminant function classified the respondents, the classification matrices were examined and the hit ratio, or the percentage correctly classified was identified. The classification matrix of respondents was used to determine how successfully the discriminant function could work. Almost all (97.0%) of the 1433grouped cases were correctly classified, representing a very high accuracy rate. Specifically, *cost sensitive* visitors (97.7%), *demanding beach users* (97.5%) and *accommodation oriented visitors* (95.8%) were correctly classified into their respective clusters. In order to further identify the profile of the three clusters, each cluster was cross-tabulated with external variables such as the tourists' socio-economic characteristics and travel behavior aspects (Table 6).

Table 3. *Results of cluster analysis based on factor scores*

Factor	Cluster 1 cost sensitive (n=436/30.43%)	Cluster 2 demanding beach users (n=523/36.5%)	Cluster 3 accommodation oriented vistors n=474/33.07%)
Organized beach sites	0.1790418	**0.7007614**	-0.9378912
Sustainability	0.0167444	0.2414259	-0.2817855
Cost for socializing	**1.1428383**	-0.5301093	-0.4663088
Accommodation	0.0758899	-0.1900477	**0.1398881**

Accessibility	-0.0912547	0.1187508	-0.0470879
Hospitality	-0.0103236	0.1215792	-0.1246515
Learning	0.1961064	0.0834342	0.0834342
Health services	0.2045705	0.0365133	0.0365133

Table 4. *Results of discriminant analysis*

Function	Eigenvalues	Percent of variance explained by function	Canonical Correlation	Wilk's lambda	Chi-square	df	Sig
1	1.735	56.7	0.796	0.157	2637.379	16	0.000
2	1.323	43.3	0.755	0.430	1202.302	7	0.000

Discriminant Loading	Function 1	Function 2
Organized beach sites	0.509	0.879
Sustainability	0.169	0.398
Costs for socializing	0.955	-0.367
Accommodation	0.003	-0.292
Accessibility	-0.070	0.172
Hospitality	0.058	0.199
Learning	0.158	-0.337
Health services	0.192	-0.278

Note: 97.0% of original grouped cases correctly classified

Table 5. *Evaluation of cluster formation by classification results*

Cluster number of Case	Predicted Group Membership			Total
	cost sensitive	demanding beach users	accommodation oriented visitors	
cost sensitive	426 (97.7%)	7 (1.6%)	3 (0.7%)	436 (100%)
demanding beach users	8 (1.5%)	510 (97.5%)	5 (1.0%)	523 (100%)
accommodation oriented vistors	4 (0.8%)	16 (3.4%)	454 (95.8%)	474 (100%)

Table 6. *Sociodemograpic characteristics and travel behavior*

	cost sensitive	demanding beach users	accommodation oriented visitors	Total (1433/100%)	Chi square (p<0.05)
Gender					16.353
Male	256 (58.72%)	318 (60.80%)	231 (48.73%)	805 (56.18%)	
Female	180 (41.28%)	205 (39.2%)	243 (51.27%)	628 (43.82%)	
Age					17.335
18-30	30 (6.88%)	38 (7.27%)	38 (8.02%)	106 (7.4%)	
31-40	285 (65.37%)	279 (53.35%)	287 (60.55%)	851 (59.39%)	
41-50	89 (20.41%)	154 (29.44%)	106 (22.36%)	349 (24.35%)	
>51	32 (7.34%)	52 (9.94%)	43 (9.07%)	127 (8.86%)	
Annual Income (€)					21.098
<500	5 (1.15%)	10 (1.91%)	3 (0.63%)	18 (1.25%)	

500-1000	4 (0.92%)	34 (6.5%)	9 (1.90%)	47 (3.28%)	
1001-1500	187 (42.89%)	100 (19.12%)	121 (25.53%)	408 (28.47%)	
1501-2000	135 (30.96%)	119 (22.76%)	271 (57.17%)	525 (36.64%)	
2001-2500	68 (15.59%)	152 (29.06%)	31 (6.54%)	251 (17.52%)	
>2501	37 (8.49%)	108 (20.65%)	39 (8.23%)	184 (12.84%)	
Profession					18.852
Private sector	76 (17.43%)	140 (26.77%)	209 (44.1%)	425 (29.66%)	
Public sector	180 (41.28%)	81 (15.49%)	94 (19.83%)	355 (24.77%)	
Freelance (self-employed)	114 (26.15%)	203 (38.81%)	124 (26.16%)	441 (30.77%)	
Businessman	44 (10.09%)	63 (12.05%)	32 (6.75%)	139 (9.70%)	
Farmer	17 (3.90%)	26 (4.97%)	12 (2.53%)	55 (3.84%)	
Unemployed	5 (1.15%)	10 (1.91%)	3 (0.63%)	18 (1.26%)	
Educational level					14.433
High school graduate	83 (19.04%)	89 (17.02%)	84 (17.72%)	256 (17.86%)	
Technological educational institutes	47 (10.78%)	67 (12.81%)	58 (12.24%)	172 (12.01%)	

University degree	108 (24.77%)	144 (27.53%)	122 (25.74%)	374 (26.1%)	
Post graduate studies	198 (45.41%)	223 (42.64%)	210 (44.30%)	631 (44.03%)	
Time of visit					29.326
Low season	260 (59.63%)	238 (45.51%)	292 (61.60%)	790 (55.13%)	
High season	176 (40.37%)	285 (54.49%	182 (38.40%)	643 (44.87%)	
Preferred Activities					33.584
Special interest tourism (fishery- dive tourism)	118 (27.06%)	81 (15.49%)	197 (41.56%)	396 (27.63%)	
Traditional water sports	221 (50.69%)	140 (26.77%)	130 (27.43%)	491 (34.26%)	
Cruises, guided excursions, site observation	97 (22.25%)	302 (57.74%)	147 (31.01%)	546 (38.10%)	

Profiling the clusters

The *cost sensitive* visitors represented the 36.5% of the sample (n=436). As shown in Table 3, among the three clusters, this cluster appeared to have the highest score on *costs for socializing* factor (4.07). The members of this group appeared to place the greatest importance on costs and expenditures for socializing, taking part in traditional marine sports, attending events and nightlife. They had an annual income of 1001-1500€. In terms of travel behaviour, this cluster preferred the low season tourism period and chose traditional water sports (50.69%).

The second identified cluster, the *demanding beach users*, (32. 5% of the sample) was found to have the largest score on *organized beach site* dimension and comprised the largest segment (n=523). This segment was mostly discriminated by the importance ratings of the zoning regulation –schemes and the human intervention concerning the aesthetic stimulation and the attractiveness of the natural environment when visiting beach sites. These two items depicted the highest factor loadings (0.667 and 0.652 respectively) within the specific factor. They, also, had an annual income between 2001-2500€. Individuals of this cluster preferred the high season and showed a clear disposition for cruises, site observation and guided excursions (57.74%).

The third segment, the *accommodation oriented* visitors, comprised of 33.07% of the sample (n=474). This cluster appeared to have the highest factor score in *accommodation* factor. In this case, the results of this study showed that accommodation has a big influence to the certain tourism destination. It is very important to provide accommodation to the people from diverse economic backgrounds according to their affording ability, the desired level of luxury and the quality of the services provided. They, mostly, had an annual income of 1501-2000€. Respondents of this cluster preferred the low season whereas the 41.56% showed a disposition for fishery and dive tourism.

Practical Implications

The factor-cluster analysis followed in this study proved to be a valuable means of providing management with evidence concerning the possible structure of the coastal tourism market avoiding traditional undifferentiated marketing. Each empirically identified cluster offers a solid customer base with measurable and distinguishable patterns on the grounds of destination attributes that attract visitors, travel behaviour aspects and socio-economic characteristics. This study contributes to the segmentation discussion by showing that destination attributes recommend an effective way to segment coastal visitors by exploring the tourist typology formation and the evaluation of responses towards a destination concerning visitors underlying interests in view of targeting and positioning strategies. The differentiating attributes among the clusters were *costs for participating*, *organized beach sites* and *accommodation*. These findings indicate the perceived differences among visitors, determine the core pull factors that are highly related to the destination selection process, once the decision to travel has been made based on push factors, and provide valuable implications for effective destination management.

Promoters of the *cost sensitive* cluster should elaborate on how changes in the cost of visiting beach sites affect the amount of revenue generated by travelling. If decision makers

aim to develop cost effective tourism products, they ought to start predicting the tastes, affordability and spending habits of potential vistors to meet their demands. Janson (2008) argues that in an uncompetitive market, increasing the price of products and services does not proportionately depress the sales volume and, as such, results in increasing the sales value. However, this is not true of markets that are highly competitive and highly price sensitive. The reason that visitors are so sensitive to changes in the price is that there is a large degree of substitutability in the tourism market. That is, if the cost of spending in a beach area rises to a point beyond that which potential visitors are unwilling to pay, they can loosely visit a less expensive destination. Moreover, the global financial crisis has facilitated a change in consumer behavior. Visitors are more price sensitive, compare, reduce mercurial consumption and do more pre-research and wise budgeting compared to the pre-global financial crisis. According to the Association of Greek Tourism Enterprises (SETE) the tourism sector in Greece offers a large portion in the Gross Domestic Product (GDP) with a rate greater than 15% while one out of five people works in the tourism sector. Furthermore, each Euro spent in the tourism sector generates more than double in secondary consumption in the economy. In this regard, Dwyer & Forsyth (2011) claim that price competitiveness is an important element of overall destination competitiveness that highly affects tourist flows.

To continue with the second segment, *demanding beach users* feel that the competitive advantage of the destination is deeply supported by tourism development focused on organized beach sites. In this case, organized beach sites aim to promote healthy marine ecosystems by implementing zoning regulations while working to protect the environment by eco-friendly human interventions. Zoning regulations concern the permitted and prohibited uses of the coastal zone in light of preserving the natural resource and dealing with potential increase of the demand in the shoreline. Flick (1992) claims that human interventions include massive amounts of sand placement and constructions of groins, jetties and break waters. These structures compartmentalize and stabilize artificial beaches. Developers ought to ensure that visitors have the opportunity to enjoy a safe, healthy and sustainable beach site where the natural setting provides an aesthetical and recreational asset for all tastes of visitors.

In the third cluster the most distinguishing attribute is *accommodation*. The key role of accommodation in the tourism product is depicted by the revenue that generates in the destination places and the employment opportunities that offers. All the items that form the accommodation factor should be taken into serious consideration. A large percentage of the travel expenditures are directly associated with accommodation costs. Cooper et al (1998, p.

313) clearly state that accommodation not only is "the largest and most ubiquitous sub-sector within the tourism economy", but it is also an essential ingredient of the tourism experience (Goss-Turner, 1996). This would suggest that the physical location, the density of accommodation, and the extent to which it is balanced with the broader development of infrastructure and tourism-related facilities are parameters that highly affect the overall tone of the destination (Sharpley, 2000). The investment policy ought to integrate commitment to quality services and flexibility to their offers. What is more interesting is the environmental impact from accommodation facilities. The coastal resource exploitation stresses the importance of ensuring that it not only blends in with the natural surroundings but that it has minimum impact on the environment. Issues such as environmental conservation and biodiversity protection, use of eco friendly construction materials, emission reduction, and recycling of waste should be incorporated in the tourism planning processes. Bearing in mind the volatile market conditions, the competitive character of the tourism industry and the changes in consumers' needs and expectations, accommodation sector plays a considerable role to destination's ability to develop and expand. Such endeavour is, by origin, engaged in a widespread initiative which incorporates the potential environmental advantages and performance of the area as well as the certified green developments and spatial patterns.

In 2009, the country welcomed over 19.3 million tourists, a major increase from the 17.7 million tourists the country welcomed in 2008 whereas in 2011 the arrivals in the country reached the number of 16 million (ESYE, 2013; Eurostat, 2011). Furthermore, according to data processed by SETE, June arrivals at the country's main airports grew 14.6% compared with the same month last year, amounting to 1.96 million, from 1.71 million in June 2012. These statistics highlight the need to "move away from a- static and externally imposed norms towards an intrinsically driven individualized ruled consumption" (Reino & Schroeder, 2009, p.7).

Perceiving what customers value most and the extent to which these valued attributes can be interpreted into applicable coastal tourism plans are important determining factors for achieving coherent strategic policies which offer a great challenge of placing tourism planners in the role of social change agents (Lew, 2007). However, to reflect these roles, it is important to understand the value that members of each segment assign to specific destination attributes upon their decision to travel. Recognizing the importance of visitors' responses and judgments the enhancement of modern trends based on well defined market segments seems a promising way for increased visitation rates as well as supply improvement (destination attributes) and sustainable growth. As a direct consequence, positioning

marketing targets the relative visitors by offering tourism products that attract their interest and satisfy their motives to travel to the specific destination. Consequently, by keeping the visitors satisfied and delighted the travel experience gained will create strong memories and a disposition to visit the area again. Moreover, word of mouth promotion will be achieved resulting in strengthening the reputation of the site. An attempt to increase the potential of each segment through targeting marketing is in direct connection with empirical analysis and practical processes that address problems and questions in response to sudden or gradual changes in customers' interests and patterns of diversity once they have decided to travel. Then, the answer on the crucial question of "where to travel" should be thoroughly offered. Data analysis is not only about testing of statistical hypothesis but also about thinking to update, deciding to upgrade, changing to recover and improving to proceed.

As with all empirical research, any limited generalizability, differentiations or variances are likely to be explained due to the specificities and the unique characteristics that each natural setting may have, the peculiarities of the study area as a whole, the particular respondents, the socio-economic circumstances at the time of the research, the absence of previous experience and research with a destination, the number of the extracted factors and the inconsistency of the items included in this analysis compared to other studies (Klenosky, 2002; Kozak, 2002).

Conclusions

The aim of this research was to define market segments derived from respondents' judgments so as to advance thorough coastal tourism marketing. In particular, emphasis has been put on examining separately the clusters obtained through the analysis so as to analyze the influence of market heterogeneity and bring out themes and trends among beach users.To this effort, we focused on destination attributes for establishing viable coastal tourism products in terms of effective regional coastal planning on a logical basis in a systemic mode at a manageable level. The results showed that there are statistically significant elements among the defined clusters concerning destination attributes, travel behavior issues, and sociodemographic characteristics. Coastal tourism in Greece will take a successful position in the tourism market depending on which and how tourism attractions develop value for tourists and the extent to which destination resources are managed in a sustainable manner.

The study area constitutes a good representation of similar coastal settings where the interface of the marine environment and land is the dominating factor. The proposed analysis avoided high risk assumptions or generalizations since it was based on reality and unbiased

customer responses. The range and the credibility of the analysis allowed for translating the findings into useful and realistic evidence for further application in coastal sites that can be characterized as destinations. Although the variables chosen for this research were derived from features found in the study area, a new set could be selected using field-checks and background information from various reports.

Bearing in mind that today problems come from yesterday's "solutions" and that the harder you push, the harder the system pushes back (Senge, 1994), the present research tried to establish a coastal setting as a preferred destination. Such an attempt may find helpful the proposed methodology which is based on market segments derived from individuals' interests.

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