Reviving Ancient Life: Segmentation Analysis of the Ancient Life Story Tourism Prospects

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This paper introduces a novel intangible heritage tourism product intended to enhance the heritage tourism sector. The Ancient Life Story Tourism concept is a new multidimensional cultural heritage tourism product that features fictional representations of ancient life as its core and includes many associated physical and digital products. Based on Kotler's STP theory, a market segmentation model has been applied to identify potential segments for novel heritage tourism products. An online quantitative survey was applied with the aim of identifying the demographic, behavioural and psychographic characteristics of a potential audience worldwide. In this study, cluster analysis was employed to analyse 766 foreign tourists, to identify potential ancient life story tourism market segments. Three potential market segments were identified: (1) Gen-Z, Adventure-Seeking Digital Natives, (2) Early Millennials, Explorers of Local Traditions, and (3) Late Millennials, Family Explorers of History and Culture. The segments were evaluated based on the alignment of their profile with the different levels of the proposed heritage tourism product. Overall, Segments 2 and 3 were more attractive targeting prospects due to higher alignment with the core, generic and expected product of Ancient Life Story Tourism. Due to this research, in the near future Ancient Life Story Tourism will be able to establish a strong positioning and branding strategy in the heritage tourism sector.

Keywords: cultural tourism, ancient life stories, tourism market segmentation, targeting, tourism product marketing

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Introduction

In the global tourism industry, authentic intangible cultural heritage (ICH) gives a community an edge. But the commercialization of ICH has made it less real, so alternative methods are needed to share and promote ICH as a tourism resource (Kim et al., 2019).

Tourism has helped protect and develop ICH, and some governments are using it as a revenue source. Many heritage sites have created tourism products to restore ICH, which may compromise authenticity and overcommercialize heritage. Academics prioritize ICH craftsmanship and aesthetic preservation (Qiu et al., 2019). On the other hand, it is necessary to strike a balance between ICH and non-heritage tourism development, whereby tourism-related products reflect value and satisfy the emotional needs of tourists. Thus, the ICH value can become the focal point of product development (Keeney, 1994). Therefore, destinations should aim to create tourist products that integrate ICH and non-heritage aspects so that both visitors and locals can benefit.

ICH is being leveraged by destination managers for the creation of novel tourist experiences. These products are not limited to historically supported cultural heritage but also include fictional cultural heritage creations, such as movies and TV series (Riley et al., 1998; Tkalec et al., 2017). Therefore, both historical narrative and fictional stories can spike tourists' interest in ICH. This paper introduces a novel ICH tourism concept: the Ancient Life Story Tourism. In a nutshell, 'ancient life story tourism' is a multidimensional tourist product that has ancient life stories as its core and combines a variety of associated physical and digital products and experiences.

The ancient life stories are based on osteobiographies, which are defined as 'fictional yet evidencebased, narrative interpretations of archaeological human remains' (Boutin, 2019, pp. 284-285). By themselves, the ancient life stories are insufficient to generate significant tourist interest. The introduction of ancient life stories as a tourist product necessitates the creation of relevant tourist packages to guide tourists through the experiences related to the core product. Traditional products and experiences that are associated with the ancient life stories can provide additional tangible and intangible evidences that stimulate tourists' emotions. Ancient life stories can be enhanced further with exhibitions and print media, while related digital technology experiences can serve as a medium for giving a tangible dimension to the ICH through digital storytelling (Tzima et al., 2020).

The rationale of this research will provide the basis for a market segmentation model that can be used by destination managers and tour operators to better understand and identify the relevant audiences and design more appropriate marketing strategies for novel tourist products. The research is based on the classic segmentation, marketing, and positioning (STP) marketing theory proposed by Kotler (2001), while the product of Ancient Life Story Tourism is analysed based on Kotler's five product levels model.

A quantitative questionnaire was developed based on the segmentation, targeting, and positioning (STP) framework proposed by Philip Kotler (2001) and was translated into seven languages. The questionnaire was structured around geodemographics, psychographics, and behavioural characteristics that are needed for creating comparable profiles for each segment. The survey was self-administered, anonymous, and distributed online.

A two-step cluster analysis was conducted to identify tourism market segments, which included 766 foreign tourists visiting Cyprus. Cluster analysis is a multivariate method used to group things that have similar traits, and this technique is ideal because it allows for the use of large datasets, automatically determines the number of derived clusters, and can analyse both categorical and continuous variables.

As part of this research study, we propose a unique form of ICH tourism named Ancient Life Story Tourism. Considering this is a novel concept, it is necessary to identify the potential market for this ICH product. For this reason, the main goal of this research is to approach in a unified way the characteristics of tourists who visit a tourist destination and at the same time are interested in ancient life and its revival through physical and digital products and experiences.

Since there is no typology of this tourist group, the originality of the study lies in the introduction of a new tourist product (Ancient Life Story Tourism product) and in the search for the tourism market segments that make up the profiles of those interested through demographic, geographic, psychographic and behavioural variables (Kotler et al., 2014). The objective of this paper is to provide a clear understanding of the specific tourist group by creating the framework

on which a successful branding strategy may be developed in the future. Finally, the attractiveness of each segment is evaluated based on its alignment with the proposed product of Ancient Life Story Tourism. By doing so, this research will provide a solid foundation for the positioning and branding strategy of Ancient Life Story Tourism in Cyprus.

Literature Review

Cultural heritage is perceived as a major asset for tourist destinations. Both tangible and ICH can increase the attractiveness of a tourist destination significantly (McKercher & Du Cros, 2002). Like in any other market, the theories, strategies, and techniques from the discipline of marketing are being directly applied in the context of tourism with the end goal of attracting more visitors to destination countries (Oh et al., 2004). However, attracting more customers is not always the best and most profitable strategy for destinations. Therefore, the modern application of effective marketing practises in tourism considers attracting the right visitors at the right place in order to maximize satisfaction and increase customer loyalty (Chen & Gursoy, 2001). Buyers in any market have different demands, resources, locations, attitudes, and behaviours. Each market is different because customers have different demands, wants and needs (Kotler et al., 2014).

In the field of marketing, the most commonly accepted and widely used theoretical framework among marketing professionals and academic researchers for the formulation of marketing strategies is the Segmentation, Targeting, Positioning (STP) framework proposed by Philip Kotler (2001). This framework has been implemented in numerous studies for the research and formulation of marketing strategies for destinations (Tsiotsou & Goldsmith, 2012; Pyo, 2015; Cuculeski et al., 2017; Mihailović & Popović, 2017; Rudiana & Komarlina, 2018; Binbasioglu, 2020; Prayag et al., 2021; Rianty et al., 2022; Badilla, 2022).

Segmentation

According to Kotler, a market cannot be segmented in a single manner. Researchers must experiment with various segmentation variables and characteristics, either using single factors or a combination of factors, in order to determine the best method for perceiving and segmenting the market (Kotler, 2001). Segmentation is the process of putting together groups of possible target customers and trying to separate potential markets for different buyer groups and different types of goods, as well as putting together the right parts of the marketing mix. Marketing strategy is achieved by product segmentation based on differences in customer attributes, their motives for purchasing or consuming several items, and their brand preferences. Market segments can be divided by geographic, demographic, behavioural and psychographic factors (Kotler et al., 2014).

Geographic segmentation divides the market into geographical units such as continents, countries, states, regions, counties, cities, or neighbourhoods. Buyers in any tourist market have different demands, resources, attitudes towards purchasing, and buying patterns based on their geographic location (Kotler et al., 2014). Because customers have different requirements and desires, each may be considered a separate market. In an ideal world, a marketer would create a unique marketing strategy for each customer. A caterer, for example, can tailor the meal, entertainment, and environment to match the demands of a given customer (Tsiotsou & Goldsmith, 2012). The personalization of products and services based on location is considered a best practise in today's interactive marketing channels, such as social media, streaming platforms, email, and others, because of the channels' automatic capabilities to ask and identify the user's geolocation via GPS (Matloka & Buhalis, 2010; Buhalis & Amaranggana, 2015).

Demographic segmentation separates the market into groups based on factors such as age, life stage, gender, income, profession, education, religion, ethnicity, and generation. The most commonly used foundations for segmenting client groups are demographic factors (Kotler et al., 2014). One reason for this is because customer demands, desires, and consumption rates often shift in tandem with demographic characteristics. Another advantage is that demographic characteristics are simple to quantify (Kotler, 2001). Even

if market groups are initially formed using other criteria, such as personality or behaviour, demographic parameters must be recognized in order to determine the size of the market and effectively reach it (Pyo, 2015).

Psychographic segmentation separates consumers into groups based on their socioeconomic status, lifestyle, or personality traits (Kotler, 2001). People in the same demographic category might have a wide range of psychographic features. As a consequence, marketers often segment their markets based on customer lifestyles, and their marketing methods are based on lifestyle attractions (Kotler et al., 2014).

In behavioural segmentation, customers are separated into groups based on their product knowledge, attitudes, use, and responses (Kotler, 2001). Numerous marketers feel that behavioural characteristics are the best place to begin when constructing market groups. Buyers can be classified based on their behavioural characteristics and behavioural patterns towards the product or service itself, as well as their relative patterns and characteristics regarding similar experiences (Kotler et al., 2014).

There are four prerequisites for efficient segmentation: measurability, accessibility, sustainability, and actionability. Measurability refers to the extent to which the segment's size and buying power may be quantified. Accessibility is the extent to which segments are capable of being evaluated and serviced. Substantiality is the extent to which parts are sufficiently substantial or lucrative to function as marketplaces. To support a customized marketing campaign, a segment should be the most economically viable homogeneous group. Finally, actionability refers to how well plans for attracting new customers and maintaining existing ones can be implemented (Kotler et al., 2014; Cuculeski et al., 2016).

Targeting

Choosing the target market presents a challenge. A target market is a group of purchasers with similar requirements or characteristics that a destination intends to serve. The selection of the best and most lucrative segments in the STP framework is called targeting (Kotler, 2001). Marketing segmentation exposes market-segment prospects for a destination. As a result, the destination must assess the different market segments and choose which to target (Rudiana & Komarlina, 2018). When analysing market segments, a destination must consider three factors: segment size and growth, segment attractiveness, and destination goals and resources. Instead of destination goals and resources, there are destination goals and resources in the case of tourist destination targeting (Kotler et al., 2014; Cuculeski et al., 2016).

A destination must first gather and evaluate data on current segment sales growth rates and anticipated segment profitability, if possible. Destinations should be interested in segments with the appropriate size and growth. However, 'appropriate size and growth' is a relative term, and in many cases, quality over quantity is a more profitable and sustainable approach (Tsiotsou & Goldsmith, 2012). Some destinations want to target markets with substantial present sales, a rapid growth rate, and a high profit margin. However, the biggest and fastest-growing areas are not always the most desirable for all tourist destinations, as factors such as carrying capacity are highly important. Smaller destinations often discover that they lack the carrying capacity and resources required to serve the bigger segments or that these segments are too competitive. These destinations may choose smaller but potentially more profitable market sectors and focus their offering portfolio on niche target segments (Delgado, 2017).

Even if a section has ideal size and growth, it may not yield desirable earnings. The destination must evaluate several significant structural elements that influence the attractiveness of its long-term segments. For instance, a market sector is less desirable if it already has several aggressive and powerful competitors. The existence of several real or hypothetical substitutes may constrain pricing and profits (Kotler, 2001). The relative purchasing power of buyers also influences the appeal of a segment. If buyers in a sector have great negotiating power compared to suppliers, they will drive down prices, demand higher quality services, and pit rivals against one another. When it comes to destination marketing, differentiation strategies are more challenging to implement, but their implementation can lead to great economic success if the right segments are targeted (Kotler et al., 2014).

Every destination must evaluate its own aims and resources with respect to accessible market segments. Because they do not align with the destination's longterm goals, certain appealing categories might be rapidly disregarded. Although such divisions may be enticing in and of themselves, they may distract a destination's focus and resources from its primary objective. Also, they might not be a good choice from an environmental, political, or social responsibility point of view (Binbasioglu, 2020).

Positioning

Once a destination has determined the segments to be targeted, it must determine its value proposition, or how it will provide distinct value for those markets, as well as what positions it will hold in those areas. Positioning is the process of giving a product a clear, unique, and desirable place in the minds of target segments compared to other products in the same market (Kotler et al., 2014). The position of a product in the eyes of customers in comparison to rival goods is determined by how the product is described by consumers in terms of significant features. Consumers are inundated with product and service information. They are unable to evaluate items with each purchase decision. To simplify purchasing choices, customers categorize things; they 'place' destinations in their brains (Kotler, 2001).

There are various positioning tactics available to destination marketers. Destination offerings may be placed according to certain characteristics. The attribution of physical, psychological, and emotional characteristics to the offering must provide valuable associations in the minds of potential visitors in each targeted segment (Kotler et al., 2014). The aforementioned value associations must be aligned with the value proposition of the destination's offering. Positioning plays a key role in the implementation of the differentiation strategy of a destination for either each tourist product or the destination as a whole (Binbasioglu, 2020).

In order to position its offering, the destination needs to find potential customer value differences that can provide distinct competitive advantages around

which to create the positioning. The destination may increase consumer value by charging lower rates than competitors or by providing more features to justify higher costs (Rudiana & Komarlina, 2018). However, if the destination claims a higher value, it must deliver on that promise. Otherwise, visitors might respond with negative online reviews regarding their experience and, as a consequence, damage the brand of the destination and its global appeal to potential tourists (Delgado, 2017). Thus, effective positioning of destination offerings starts with differentiation really distinguishing the destination's market offering so that it delivers greater value to visitors (Neirotti et al., 2016). Once the destination has determined its desired stance, it must take aggressive actions to deliver and convey that position to its target segments. The destination's overall marketing campaign should complement the chosen positioning approach.

The 'Ancient Life Story' Tourism Product

Ancient Life Story-Based Tourism is a novel, ICH product. It is characterized by complexity and consists of many different levels and aspects. In the case of Cyprus, the life stories developed by the ff-MAC project were based on archaeological findings and the production of osteobiographies. The general theme behind each life story is to present interesting aspects of the lives of ancient Cypriots while introducing details about how they lived. The ancient life stories are fictional; however, they are based on archaeological evidence and therefore provide a more vivid representation of life in ancient Cyprus.

As an intangible cultural heritage product, ancient life stories rely heavily on other products and services in order to be converted into a tourist product. Left alone as is, their potential as a tourist attraction is very limited. Ancient life stories must essentially be combined with tangible elements that can be used to construct a tourist experience. Moreover, the techniques of digitization and digital storytelling can provide a tangible character to the intangible stories. As a result, the final proposed product consists of the following elements that are illustrated in Figure 1 and described in depth below.

Tourist Packages. Complete tourist packages that

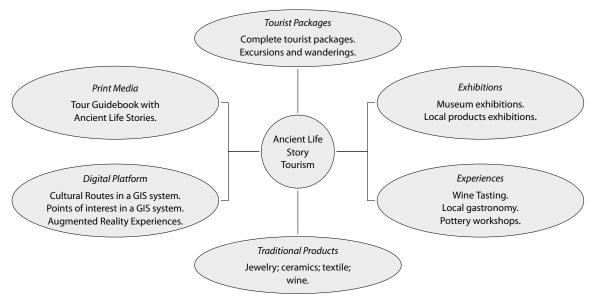


Figure 1 The Ancient Life Story Tourism Product

include points of interest and cultural heritage routes based on ancient life stories. The theme of the complete tourist packages is to provide the tourist with the experience of learning about and experiencing the life of ancient Cypriots, along with their life stories. Excursions and wanderings will have a similar but less integrated effect than complete tourist packages. Their purpose is to allow foreign and domestic tourists to learn about and experience the lives of ancient Cypriots.

Print Media. A tour guidebook with ancient life stories has as its goal to imprint the stories of ancient Cypriots into a tangible tourist guidebook that provides information regarding the various places tourists can visit and the experiences they can take part in. The goal with the guidebook is to connect the life stories with the associated experiences and products. The guidebook must be written in a way to stimulate the minds of tourists and foster a sense of connection with the past.

Exhibitions. Museum exhibitions are a valuable aspect of the product as they can connect the raw material that stories are inspired by, namely the osteobiographies. Exhibition visitors will be able to see exhibits from the archaeological excavations that inspired the ancient life stories and make connections in

their minds. Local product exhibitions are completely different than museum exhibitions, and their purpose is to showcase products that are inspired by the lives of ancient Cypriots and how these products connect to the ancient life stories.

Traditional Products. While travel packages, books, and exhibitions can provide great intangible value, the traditional product creation is an essential element of connecting the life of ancient Cypriots with something tangible. Jewellery creation is the first traditional product category to be created based on the lives of ancient Cypriots. The goal of jewellery creation is to provide jewels that are branded and associated with the lives of ancient Cypriots and their life stories. Through these product exhibitions, visitors will be able to connect the traditional products with the stories from ancient times and gain a deeper understanding of life in ancient Cyprus. Ceramic utensils made of clay, such as pots and plates, are great for representing the traditional culture of the island, as well as its ancient history. The goal of ceramics creation is to recreate the atmosphere of ancient Cyprus and to provide visitors with a glimpse into the ancient ancestors' lifestyle. Alongside ceramics, textiles can play a huge role in the perception of tourists regarding the lives of ancient Cypriots. Textiles are a representation of the artisanal skills, culture, and social life of ancient Cypriots. Last but not least, the creation of wine based on an ancient grape variety is a key product for understanding and appreciating the culture of Cyprus and the ancient life stories. The wine of ancient Cypriots is a product that can bring the past to life and stimulate visitors' feelings because it is consumable. The overall goal of developing traditional products is to provide tangible evidence and make visitors connect with the lives of ancient Cypriots.

Experiences. While traditional products serve as great tangible evidence, experiences are essential for making visitors experience the lives of ancient Cypriots. The first experience that is based on the creation of the wine of ancient Cypriots is wine tasting. As a popular cultural experience, wine tasting will make tourists experience the lives of ancient Cypriots and help them connect with the past. The second, but not less important, experience is local gastronomy. Similar to wine tasting, through local gastronomy, the visitor should be able to associate the experience of tasting certain specially created dishes with the life of ancient Cypriots. Gastronomy and wine can be combined to create a more compelling experience that engages visitors' senses of taste and smell while also assisting them in developing psychological associations between wine, food and ancient life. Last but not least, pottery workshops can be a great experience that will show off the artisanship and creativity of ancient Cypriots. Pottery workshops offer visitors a hands-on experience that allows them to directly explore the artistry of ancient Cypriots. By visiting local oenogastronomy spots and participating in pottery workshops, visitors can gain an understanding of the tastes, smells and creative pursuits of ancient Cypriots.

Digital Platform. All of the above-mentioned products and services focus on the tangible and experiential aspects of ancient life story-based tourism. As ICH, ancient life stories can be presented in a tangible way through digital technology. The digitization should not be limited to the life stories but include all elements related to the concept of ancient life story tourism. As a result, the digital platform should be designed and developed with two goals: (1) serving as a tour guide for ancient life story tourists, and (2) providing interesting interactive information and experiences to enrich the experience of the life stories.

Cultural routes based on ancient life stories are the first feature of the digital platform. The routes include points of interest related to the geolocation of the life stories and the locations of the various experiences. The routes within the platform follow a linear narrative. The storytelling and the logic behind the presentation of the geoinformation, descriptions, and media on the platform is that of storymaps. User interface is divided between an interactive map and a container that contains the information and multimedia related to the stories. Routes are connected point-to-point, and by following them, tourists can experience the concept of 'ancient life story tourism' as a whole. The goal of the cultural routes is to guide users through experiencing the lives of ancient Cypriots.

A linear narrative is not the best choice for all tourists. Some of them might want to take a different path or select different experiences and points of interest to visit. As a result, many tourists might want to skip certain points of interest or experiences and customize their trips. In that case, an interactive map with all the available points of interest and experiences is necessary. The map will give users the ability to select and visit only the points of interest and experiences they want. The map will allow users to fully customize their visit experience by allowing them to selectively explore only those points of interest and experiences that appeal to them.

Finally, augmented reality modules will enable users to gain more information by adding digital elements to the ancient life stories. The augmentations consist of 3D models such as monuments and objects that are related to each story. Augmented reality enables users to see the 3D models in their own space through their mobile devices and enhance each story's narrative. By providing an immersive and engaging experience through the use of augmented reality, users can gain a more meaningful appreciation for the stories they explore. Moreover, the addition of digital elements can provide the users with deeper insights into each life story and connect them to ancient history in a more tangible way.

As mentioned previously, ancient life story tourism

Table 1 Product Levels of Ancient Life Story Tourism

Potential Product	Future Expansion and Combination Combination of experiences such as wine tasting & gastronomy. Adding new technological storytelling tools and techniques to the platform.
Augmented Product	Exhibitions, Print Media & Digital Platform Museum Exhibitions, local products exhibitions. Tour Guidebook with Ancient Life Stories. Cultural Routes in a GIS system, Points of interest in a GIS system, Augmented Reality Experiences.
Expected Product	Traditional Products & Experiences Jewelry, ceramics, textile, wine. Wine tasting, local gastronomy, pottery workshops.
Generic Product	Tourist Packages Complete tourist packages. Excursions and wanderings.
Core Product	Ancient Life Stories The life stories of Ancient Cypriot produced based on osteobiographies.

is proposed as a complex product that consists of many elements. As a result, a further, more structured analysis of the product is necessary. Theoretically, the analysis of each product element is based on Kotler's five product levels model (Kotler, 2001).

The core of the ancient life story tourism is based on ancient life stories. In and of themselves, fictional life stories based on osteobiographies are inadequate to spike significant tourist interest (Table 1). To introduce the ancient life stories as a tourist product, it is essential to develop relative tourist packages that will serve as the generic tourist product. The development of traditional products and experiences can create expectations among potential visitors due to their tangible and experiential nature. Traditional products and experiences can serve as the part of the product that tourists expect from ancient life story tourism. The introduction of exhibitions, print media, and the digital platform can go beyond the expected product by adding additional factors for visitors to engage in this type of tourism.

As a result, these product aspects can be classified as the augmented product. Finally, there is the possibility of future growth and the combination of experiences, which can provide additional tangible and intangible benefits. The potential developments and combinations can be classified as the potential product. The potential product is key for future expansion

of ancient life story tourism growth, as it combines various elements from both the expected and augmented products.

Our purpose in conducting this study is to explore the characteristics of tourists interested in cultural heritage (tangible and intangible), with a particular focus on those who can potentially benefit from cultural heritage experiences through the Ancient Life Story product. As a means of achieving the above-mentioned purpose, four (4) research questions (RQ) have been proposed in this study:

- RQ1 What are the potential segments that are interested in Ancient Life Story Tourism?
- RQ2 How are psychographic, behavioural and geodemographic characteristics defining the segments?
- RQ3 What are the most prominent segments for Ancient Life Story Tourism?
- RQ4 Why are certain segments of Ancient Life Story
 Tourism more attractive than others?

Methodology

In order to identify tourism market segments, a twostep cluster analysis was conducted, which included 766 foreign tourists visiting Cyprus. Cluster analysis is a multivariate method that is used to group things that have similar traits (Hair et al., 2010). To classify and build a segmentation profile of the potential visitors

Table 2 Research Questions

What?	RQ1: What are the potential segments that are interested in Ancient Life Story Tourism?
	RQ3: What are the most prominent segments for Ancient Life Story Tourism?
How?	RQ2: How are psychographic, behavioural and geodemographic characteristics are defining the segments?
Why?	RQ4: Why certain segments of Ancient Life Story Tourism are more attractive than others?

for ancient life story tourism, a two-step cluster analysis was used. According to Sarstedt and Mooi (2014), this technique is ideal because it allows for the use of large datasets, automatically determines the number of derived clusters, and can analyse both categorical and continuous variables; attributes that other hierarchical and partitioning clustering methods cannot consider holistically.

It is also worth noting that we followed Dolnicar's suggestions for the methodological design of our segmentation investigation (Zopiatis & Pericleous, 2021), particularly in terms of sample size adequacy and the avoidance of both factor-cluster analysis and the use of ordinal data.

Two Step Cluster Analysis is a sort of analysis that groups items into two phases (Harantová et al., 2023). There are two stages to the two-step cluster analysis: (1) Pre-clustering is the first stage of the two-step clustering process. Sequential clustering is the method used to create subclusters from each variable object. Score (threshold) and maximum sub-cluster are two factors that influence the outcome of basic sequential clustering. (2) Hierarchical Cluster to Subcluster is the next stage to classify sub-clusters inside the larger clusters. Two-step cluster analysis uses a different type of ratio than previous cluster studies, the Log-Likelihood ratio (Harantová et al., 2023).

When data consists of both continuous and categorical factors, the log-likelihood ratio is used. The formula for the log-likelihood ratio between the ith and *i*th clusters is:

$$\begin{split} d(i,j) &= \xi_i + \xi_j - \xi_{i,j}, \\ \xi_S &= N_S \Biggl(\sum_{k=1}^{K^A} \frac{1}{2} \log(\hat{\sigma}_k^2 + \hat{\sigma}_{sk}^2) + \sum_{g=1}^{K^B} \hat{E}_{sk} \Biggr), \\ \hat{E}_{sk} &= -\sum_{l=1}^{L_k} \frac{N_{skl}}{N_S} \log \frac{N_{skl}}{N_S}, \end{split}$$

where d(i, j) is the ratio between the *i*th and *j*th cluster; ξ_i is the *i*th cluster variance; S is *i*th, *j*th or combination between *i*th and *j*th cluster symbol; ξ_i is the *j*th cluster variance; $\xi_{i,j}$ is the *i*th and *j*th cluster variance; K^A is the number of continuous variable; K^B is the number of categorical variable; L_k is the number of category in the kth (categorical variable); N_S is the number of object in the ith, jth or combination between ith and *j*th cluster; ξ_S is variance in *i*th, *j*th or combination between *i*th and *j*th cluster; σ_k^2 is the indicator for the *k*th continuous variable; \dot{E}_{sk} is the estimated score of *i*th, jth or combination between ith and jth cluster in the kth continuous variable; $N_s kl$ is the number of object of ith, jth or combination between ith and jth cluster in the kth categorical variable taken from the lth category; $\dot{\sigma}_{sk}^2$ is the indicator of variance in the *i*th, *j*th or combination between ith and jth of the kth continuous

The optimal cluster is calculated based on the cluster with the lowest BIC score or the greatest distance measurement ratio. Following is the formula for calculating BIC:

$$\mathrm{BIC}(J) = -2 \sum_{I=2}^{J} \xi_{j} + m_{j} \log(N),$$

where BIC(J) is BIC for total cluster count (E); J is $1, 2, \ldots, J$; m_i is cluster-j ratio determined during the hierarchical clustering step.

$$m_J = J(2K^A + \sum_{k=1}^{k^B} L_k - 1).$$

With the formula above we calculate the optimal cluster based on the lowest BIC score or the highest distance measure ratio, where m_I is the ratio in cluster j developed during the hierarchical clustering stage, J = 1, 2, ..., J; K^A is the number of continuous vari-

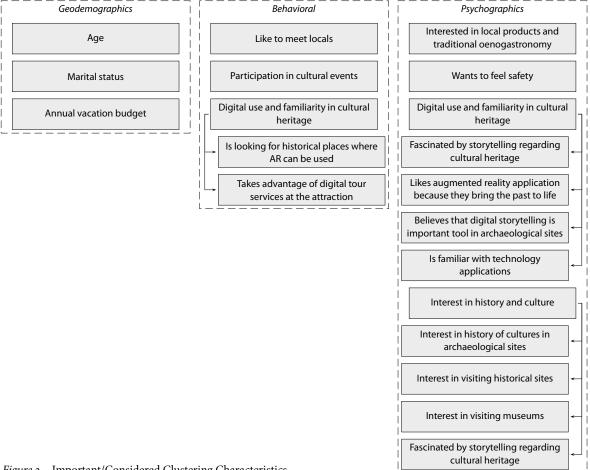


Figure 2 Important/Considered Clustering Characteristics

able; K^B is the number of categorical variable; L_k is the number of category in the *k*th (categorical variable).

Additionally, the corresponding tests (Chi-square and ANOVA) were performed for each variable within each cluster. These tests were conducted to determine whether the differences between the clusters are significant.

The Survey Research Tool

A structured questionnaire was utilized for the purposes of data collection. The questionnaire was fully self-administered, anonymous and was distributed online. It was developed based on the STP framework proposed by Philip Kotler (2001) and was translated into seven (7) languages followed by a pilot testing procedure. Thus, the questionnaire was structured around the following axes: a. geodemographics variables; b. geographic variables; c. psychographic variables; and d. behavioural variables.

In more detail, the questionnaire included four (4) sections. Section A includes questions concerning demographic variables (gender, age, education, marital status, occupation, annual income, annual vacation budget, country of residence). Section B includes questions related to the Cyprus Tourism Experience. These questions were focused on tourists who have visited or are planning to visit the island, in order to investigate their trip characteristics. A recent Cyprus tourism Strategy (THR, 2017), prepared by the Cyprus Deputy Ministry of Tourism, was utilized to select the relevant questions. For those participants who had never visited Cyprus and/or do not intend to, the survey ended at this point. Section C includes questions concerning tourists' motivations based on the typology proposed by McIntosh et al. (1995) and Cruz et al. (2006): physical; cultural; interpersonal; and status and prestige motivators. The motivation questions concern psychographic variables. They were based on Maslow's Need Theory and were structured on a 5-point Likert scale. Finally, Section D includes questions concerning behavioural variables (technology use, main activities, types of travel and travel means). The questions' formulation related to the use of technology by tourists was based on a relevant literature review (Eriksson et al., 2014; Neuhofer, 2015; Okazaki et al., 2015; Vallespín et al., 2017) and the questions were structured on a 5-point scale Likert. Multiple-item scales were used for the question categories 'type of travel' and 'main activities' preferences.

The Sample

The questionnaire was fully self-administered, anonymous and was distributed mainly online due to restrictions imposed by the COVID-19 pandemic. The data collection process was conducted between July and December of 2021. In particular, 676 questionnaires were collected online from various social media platforms, 48 from the Larnaca International Airport and 42 from the Paphos Airport. The quantitative research was based on a non-probability sampling methodology. The data was gathered using Qualtrics software and processed with the Statistical Package for the Social Sciences (SPSS V.20).

Among the 766 participants in the study, 60.7% were women and 39.3% were men (Table 3). The participants in the sample were relatively young, with 65.1% of them being between the ages of 18 and 44. A further 34.9% of those surveyed were over the age of 45. In terms of marital status, 50.8% of respondents were married and 40.7% were single. Moreover, according to the survey, 26.2% of visitors to Cyprus were from the United Kingdom. The next largest source of visitors was Greece, with 14.6%, followed by Russia with 9.5%. Most participants had a high level of education (71%) with 45.8% having a bachelor's de-

Table 3 Geodemographic Profile of the Respondents

	0 1		
Variables	Category	(1)	(2)
Gender	Male	301	39.3
	Female	465	60.7
Age	18-24	143	18.7
	25-34	211	27.5
	35-44	145	18.9
	45-54	123	16.1
	55-64	87	11.4
	65+	57	7.4
Country of	United Kingdom	201	26.2
Residence	Russia	73	9.5
	Israel	37	4.8
	Germany	23	3.0
	France	27	3.5
	Greece	112	14.6
	Nordic countries	30	3.9
	Other (please specify)	263	34.3
Marital	Single	312	40.7
Status	Married/Civil Partnership	389	50.8
	Divorced/Separated	48	6.3
	Widowed	16	2.1
Educational	Up to secondary education	195	25.5
Back-	Bachelor's degree	351	45.8
ground	Master's degree	193	25.2
	PhD	27	3.5
Occupation	Student	139	18.1
	Stay-at-home Spouse/Partner	20	2.6
	Employed	420	54.8
	Self-employed	96	12.5
	Retired	72	9.4

Continued on the next page

gree and 25.2% a postgraduate degree. Approximately 54.8% were employed in either the public or private sector. In the survey, 60.9% of respondents stated that their annual family income exceeded 20,000.00€. The remaining 39.1% reported earning up to €19,999.00 per year. Most respondents (37.9%) reported annual

Table 3 Continued from the previous page

Variable	Item	(1)	(2)
Frequency	Once a year	310	40.5
of vacation	2-3 times a year	386	50.4
taking	4-5 times a year	48	6.3
	More than 5 times a year	20	2.6
Annual	Less than €10,000	139	17.6
household	€10,000-€19,999	161	21.5
income	€20,000-€29,999	113	15.1
	€30,000-€49,999	139	18.6
	€50,000-€79,999	126	16.8
	More than €80,000	88	10.4
Annual	Up to €999	289	37.9
travel ex-	€1,000-1,999	255	33.5
penditures	€2,000-2,999	123	16.1
	€3,000-4,999	53	6.6
	More than €5,000	47	5.9

Notes (1) frequency, (2) valid percentage. n = 766.

travel expenditures of up to €999.00 and 33.5% between €1,000.00 and €1,999.00. Additionally, 50.4% of respondents indicated that they take vacations two to three times per year, and 40.5% once per year (Table 3).

Presented in Table 4 are descriptive statistics for 28 behavioural and psychological items used in our study. Based on the table, it is apparent that all items used have low standard deviations and high mean scores.

Empirical Results

Analysis of the Segments

Based on the findings of the cluster analysis technique, we identified three main segments of potential tourists for ancient life story-based tourism in Cyprus (Table 5). Each of these segments has been named based on its generational membership and most prominent characteristics. As a result of the corresponding tests (Chi-square and Anova) performed for each variable within each cluster, significant differences were observed between the three clusters.

This section describes each segment in the following manner:

Segment 1: Gen-Z, Adventure-Seeking Digital Natives. They range in age from 18 to 24. Most of them are single, with an annual vacation budget of up to €999.00. They show above-average interest in local products and traditional oenogastronomy. They are adventure seekers and not so concerned with travel safety, while being less extroverted when it comes to meeting locals. They are Tech-savvy, emphasizing the use of technology as a storytelling tool to enhance their visits to cultural heritage sites and museums. Also, they were less enthusiastic about participating in cultural events and less interested in history and culture than the other segments.

Segment 2: Early Millennials, Explorers of Local Traditions. They range in age from 25 to 34. Most of them are single, with an annual vacation budget of up to €999.00. They show a very high interest in local products and traditional oenogastronomy. They are very concerned with travel safety while being very extroverted when it comes to meeting locals. Moreover, they are tech savvy and emphasize the use of technology as a storytelling tool to enhance their visits to cultural heritage sites and museums. Also, they were more enthusiastic about participating in cultural events and quite interested in history and culture.

Segment 3: Late Millennials, Family Explorers of History and Culture. They range in age from 35 to 44. Most of them are married or in a civil partnership, with an annual vacation budget of up to €1999.00. They show the highest interest in local products and traditional oenogastronomy. They are the most concerned with travel safety while also being the most extroverted when it comes to meeting locals. Moreover, they are less tech-savvy and place less emphasis on the use of technology as a storytelling tool for cultural heritage than the other segments. Also, they were the most enthusiastic about participating in cultural events and the most interested in history and culture.

Distinct similarities and differences are identified between the segments (Table 6). While there are differences between the segments in terms of travel safety, meeting locals, technology use, and enthusiasm for cultural events, they all demonstrate an interest in history and culture. All three segments expressed an interest in learning about history and culture, though

Table 4 Descriptive Statistics for 28 Behavioural and Psychographical Items

Construct	Question Item	Mean	SD
Behavioural	I am looking for historical places where I can use augmented reality applications to learn about culture in a more experiential way.	3.68	0.964
	I like to rest and relax.	4.43	0.773
	I like to visit theme parks.	3.52	1.255
	I follow fashion trends.	3.25	1.110
	I like to be physically active during vacation.	3.96	0.961
	Sharing the experiences on social media is important part of holidays.	3.43	1.249
	I participate in cultural events.	3.82	0.940
	I try to go places visited by wealthy and influential people.	2.75	1.194
	I take advantage of digital tour services if available at an attraction.	3.83	0.989
Psychographics	I'm interested in learning about different cultures.	4.37	0.785
	I participate in cultural events.	3.82	0.940
	I like to learn about local products and try the local wine and food.	4.44	0.808
	I enjoy the folk architecture.	4.08	0.881
	I enjoy the contact with nature.	4.35	0.784
	I am looking for intense emotions.	3.74	0.971
	I'm interested in having fun.	4.30	0.816
	I like to meet locals.	4.29	0.845
	I want to feel safe.	4.58	0.728
	I like to try something new.	4.28	0.786
	I like to listen and learn about the history of cultures when I visit archaeological sites.	4.27	0.838
	I like to visit museums.	4.25	0.858
	I like augmented reality applications because they bring the past back to life.	3.88	0.926
	I am familiar with technology applications.	4.14	0.942
	I am fascinated by storytelling and it helps me better understand the culture of a place.	4.25	0.874
	I like to visit historical sites.	4.25	0.858
	I like to visit museums.	4.08	0.924
	Digital storytelling is a very important tool in archaeological sites.	3.99	0.921
	When travelling I am interested in having fun.	4.30	0.816

Notes 1 - strongly disagree, 2 - disagree, 3 - neither agree nor disagree/neutral, 4 - agree, 5 - strongly agree. n = 766.

the early and late millennials were the most enthusiastic about it. Early and late millennials had the most in common when it came to interests and enthusiasm. They were both interested in meeting locals and engaging in cultural activities such as trying the local cuisine. On the other hand, Gen Z had a more independent attitude, emphasizing their need to un-

derstand the world and explore it with less interest in engaging with locals or trying the local cuisine. Furthermore, Gen Z are digital natives who use and appreciate the added value of technology use related to cultural heritage. Overall, both early and late millennials shared similar interests when travelling, but there was a significant difference between the use and

Table 5 Clusters

Variable	Cluster			
	(1)	(2)	(3)	
Size	18% (131)	32.8% (239)	49.2% (358)	
Marital status	Single	Single	Married	
	45.8%	100%	86.66%	
Age	18-24	25-34	35-44	
	(28.2%)	(43.1%)	(24%)	
Annual vacation budget (EUR)	<999	<999	1000-1999	
	(53.4%)	(47.7%)	(31.8%)	

Table 6 Behavioural and Psychographic Profiles of the Segments

Variable	Cluster		
-	(1)	(2)	(3)
Interested in local products and traditional oenogastronomy	3.17	4.69	4.78
Safety when travelling	3.48	4.79	4.84
Like to meet locals	3.12	4.51	4.61
Digital use and familiarity in cultural heritage	4.46	4.36	3.22
Participation in cultural events	2.94	3.99	4.06
Interest in history and culture	3.13	4.10	4.18

appreciation of technology for cultural heritage by the early millennials. On the other hand, Gen Z focused more on understanding the world through research and technology, as well as exploring the world independently.

Targeting

At first glance, it seems like Segments 2 and 3 are more attractive targeting prospects. The reason is that their behavioural and psychographic profiles align better with the core product, the generic product, and the expected product of ancient life story tourism. However, Segment 1 aligns better with the augmented product of ancient life story tourism and the potential product. Because ancient life story tourism is a novel tourist product, there is no prior research to indicate if it is better to limit the targeting to Segments 2 and 3 or to include segment 1 in the targeting procedure.

The segment that has the best alignment with all

Table 7 Geodemographic Profiles of the Three Segments

Variable	Category			
		1	2	3
Marital status	Single	45,8% (60)	100% (239)	0.6%
	Married	43,5% (57)	o% (o)	86.6% (310)
	Divorced	9.2% (12)	o% (o)	9.2% (33)
	Widowed	1.5% (2)	o% (o)	3.6% (13)
Annual vacation	<999	53·4% (70)	47.7% (114)	27.7% (99)
budget (EUR)	1.000-1.999	35.1% (46)	33.1% (79)	31.8% (114)
	2.000-2.999	7.6% (10)	10% (24)	22.6% (81)
	3.000-4,999	o% (o)	6.3% (15)	8.9% (32)
	>5,000	3.8% (5)	2.9% (7)	8.9% (32)
Age	18-24	28.2% (37)	41.8% (100)	2.5%
	25-34	20.6% (27)	43.1% (103)	17.6% (63)
	35-44	22.9% (30)	8.8% (21)	24% (86)
	45-54	18.3%	4.6%	22.9% (82)
	55-64	7.6% (10)	1.7%	19% (68)
	>65	2.3%	0% (o)	14% (50)

five levels of the product is the Early Millennials, Explorers of Local Traditions because their behavioural and psychographic profile is aligned almost perfectly with the product of ancient life story tourism. On the other hand, Segment 1: Gen-Z, Adventure-Seeking Digital Natives is less aligned with the core and generic product of ancient life story tourism. However, the current data cannot indicate if Segment 1 should not be targeted as their alignment with the product is less

when compared to the other segments, but in and of itself the alignment is high.

Conclusions

This research represents the first attempt to explore a new, innovative heritage tourism product based on archaeological evidence. As an ICH tourism product, Ancient Life Stories Tourism depends on and connects to other products and services in order to be a complete cultural heritage tourism offering.

The empirical research revealed three main segments of potential tourists for ancient life tourism in Cyprus: (1) Gen-Z, Adventure-Seeking Digital Natives, (2) Early Millennials, Explorers of Local Traditions, and (3) Late Millennials, Family Explorers of History and Culture. Similarities and differences were identified between the three segments. While there are differences between the segments in terms of travel safety, meeting locals, technology use, and enthusiasm for cultural events, all segments demonstrate an interest in history and culture. All three segments expressed an interest in learning about history and culture, though the early and late millennials were the most enthusiastic about it. On the other hand, Gen Z had a more independent attitude, emphasizing their need to understand the world and explore it with less interest in engaging with locals or trying the local cuisine. Utilizing digital technologies in order to highlight cultural heritage has proven to be extremely valuable to the young generation (Gen Z) segment.

Overall, segments 2 and 3 are more attractive targeting prospects due to higher alignment of their behavioural and psychographic profiles with the core product, generic product, and expected product of ancient life story tourism, while segment 1 aligns better with the augmented product and potential product. The segment that has the best alignment with all five levels of the product is the Early Millennials, Explorers of Local Traditions, as they are aligned almost perfectly with the product.

Due to the COVID-19 pandemic restrictions, the study has a limitation due to the large number of questionnaires collected online. During the study period, only a very small sample was collected from airports. A corresponding data collection should cover all tourist gathering points in order to ensure a more representative sample and more accurate results.

As a final remark, this paper presents a framework for market research for a novel heritage tourism product. The results of this research can be used as the groundwork for developing and implementing an integrated marketing and branding strategy for Ancient Life Story Tourism in Cyprus. Future research should evaluate the effectiveness and appeal of ancient life story tourism as a product, as well as how this novel ICH product can be further developed. Moreover, future research could explore what positioning and branding strategies can be applied to such tourist products based on this research framework.

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