RESEARCH ARTICLE

The Experience of an Alternative Form of Tourism in Veria, Greece, and Its Statistical Analysis

Dr. Agesilaos Economou[1], George Karagiannis[2], Roido Mitoulas[3]

[1]*Doctor NTUA, Environmentalist*
[2]*Department of Insurance Statistics University of Piraeus*
[3]*Professor at Harokopio University*

Abstract

The purpose of this paper is to explore the "traveler" experience as an alternative form of tourism in this country. The questions posed concern the attitudes and views of traveler-tourists to three emblematic sites which embody history, culture, and religious tourism. Our sample was found in Veria (Northern Greece) –specifically, the archaeological site of Vergina, the Apostle Paul's Tribune, and the Sumela Monastery, dedicated to the Theotokos (*Panagia Sumela*) and home to an icon of the latter that originated in currently Turkish land. Both the theoretical part and the statistical analysis of the primary study outline the prospects of touristic development in the area.

Keywords: Traveler-Tourists, Veria, Vergina, Apostle Paul's Tribune, Sumela Monastery.

1. Introduction

1.1 Emblematic Sites

We began our study by recording the traveler-tourists' motivations – culture, religion, rest, or a combination thereof – for visiting the three emblematic sites of the area. It is a fact that these sites are characterized by significant cultural wealth which grows under the influence of science and technology (Sergopoulos & Karagianni, 2018). We believe that tourism is an important factor for these three sites that attract tourists. Indeed, culture is not just the various achievements of the human mind and artistic creativity, nor just technological accomplishments, but also includes monuments and works that remain throughout the centuries. Veria, covering an area of 791.43 m^2 and with a population of 62,064, in accordance with the latest census of 2021 (Hellenic Statistical Authority, 2022), constitutes a center of interest.

We then examined the three emblematic sites of the area themselves, starting with the Apostle Paul's Tribune – a site in the city of Veria, where the Apostle Paul was welcomed some time between 44-60 A.D., most likely in 54 A.D. The podium on which the Apostle Paul addressed the people is saved to this day– in fact, it has been declared a Religious Heritage Site. It should be noted that Veria is home to 74 religious sites besides the Apostle Paul's Tribune (Kalligas, 2022), so it can be understood that the Apostle Paul's Tribune gave prominence to Veria as a center for religious sites, monuments, museums, etc., which is why a deep dive into all the parameters of religious wealth, past and present, is sought (Venetsanopoulou, 2006).

Another emblematic site of the area of study is the Sumela Monastery, located at 20,53 km from Veria, at the side of mount Vermio, and 23 minutes away from the city. The Monastery Church "revives" the ruins of the original church at mount Melas in Trebizond, by the Black Sea (*Pontos*), currently Turkish territory. The Monastery has worldwide reach, and throngs of believers make a pilgrimage to the miraculous icon of the Theotokos (Atmatzidis, 2023).

We conclude our study with the emblematic site of Vergina, which used to be the capital of the Macedonian Empire. Excavations for the royal palace began in 1938 and were completed in 1974. An inscription found in the royal tombs is testament to the fact that the people of the Macedonian Empire used to live in its original capital and had Hellenic names. The royal palace and royal toms are a point of reference for Vergina, as well as an opportunity for cultural tourism, which shows the potential for the development of the area. Vergina is located at 12,6 km from Veria, 14 minutes away. The village of Vergina has a population of approximately 1,000 and lies at an altitude of 120 m (Tourtas, 2011).

2. Analysis of the Variables

2.1 Traveler-Tourists

Multiple cultural units can be found on Greek territory – smaller or larger, of great or minor importance, at densy or sparsely populated areas, with obsolete or relevant cultural elements, etc. (Delitheu & Karagianni, 2020). These cultural units have stockpiles of historical, cultural, and religious data – in fact, they constitute amalgamations of cultural functions and actions, not limited in the space they occupy but affecting the wider residential area, hence the interest for traveler-tourists (Karachalis, 2007).

Traveler-tourists for cultural purposes comprise a range of organized groups whose members share a common characteristic: their love for culture and nature (Papastavrou & Karameris, 2006). Thus, the concept of traveler-tourist for cultural purposes is complex and current, focused on the historical, artistic, and intellectual heritage of an area, as well as its cultural production. This is why places history and culture that goes back centuries, with religious relics and a rich historical past attract multiple traveler-tourists. An additional aspect of this phenomenon is that of education – the wider satisfaction from the exhibits with which one comes in contact. A sense of identity and continuity is thus provided, contributing to the promotion of respect for culture, cultural diversity, and human creativity (Kovos, 2021; Karvounis & Georgakellos, 2003).

An interest in this form of tourism has been noted lately: traveling to sites of historical, cultural, educational, religious, agritourist interest, showing respect for the environment and wishing to safeguard the cultural heritage of the area visited (Kokkosis, Chartas & Gryba, 2011). It was this spirit that allowed the gates of peoples, churches, monasteries, and digging sites to open, that brought down the walls of social division and set aside the curtains of cultural isolation.

3. Setting the Goals of the Study

3.1 The Geographical Characteristics of Veria

The Prefecture of Imathia appertains to the Region of Central Macedonia in Greece, and Veria is its capital (official website of the Prefecture: https://web-greece. gr/destinations/imathia-macedonia). The city of Veria has an interesting history, rich cultural tradition, and notable archaeological and natural sites. Its location allows for shorter or longer travels, making for an excellent use of one's free time. It also has an excellent climate, which has in fact been deemed as a basic point of attraction by travel agencies and individual travelers (Zaharatos, 2000); winters are partly cold and humid/sub-humid, with northern winds often noted, and the lowest temperatures ranging from 0°C to 3°C, while summers are warm at the lowlands and cool at high altitudes. The area has one mountain – Vermio, with a height of 2,052 m – and is crossed by three rivers – Aliakmonas, 297 km long, Loudias, 60 km long, and Tripotamos, 20 km long. In general, it has a continental climate. Wind temperature is affected by the sun, and it constitutes one of the most significant factors affecting the horizontal and vertical spread of plant species and vegetation. The following table showcases the average, highest, and lowest temperature of the area by month (Data from the meteorological station of Kozani):

Month	Average Temperature (°C)	Highest Temperature (°C)	Lowest Temperature (°C)
January	2.3	6.1	-1.2
February	3.7	8.0	-0.5
March	6.9	11.4	1.8
April	11.6	16.3	5.2
May	16.8	21.7	9.5
June	21.5	26.5	13.2
July	24.1	29.3	15.7

August	23.6	29.2	15.7
September	19.3	25.0	12.5
October	13.5	18.8	8.1
November	8.0	12.7	3.9
December	3.9	8.0	0.4

As the table demonstrates, January is the coldest month for the region while July and August are the hottest months, which explains the increased tourist flow during that time of the year (Gerakaki, Bousbouras & Bardakas, 2010). As regards to humidity, its levels tend to rise abruptly in the early evening, remain high during the night, and start falling from dawn until the afternoon. The following table shows the average percentage of humidity per month:

Month	Average humidity (%)
January	74.2%
February	70.1%
March	67.5%
April	63.0%
May	62.0%
June	54.8%
July	49.8%
August	50.4%
September	57.0%
October	66.7%
November	74.5%
December	75.7%

In terms of social infrastructure, there is one hospital in the area. There is also a long-distance bus station and a train station, as well as various hotels and car/motorcycle hire agencies, food & drink establishments, conference rooms, and shops which serve both the locals' and tourists' needs (Data from the Municipality of Veria, 2022).

4. Methodology

The historical and cultural resources of Veria – the area studied – as well as its natural beauty are behind cultural events held there on an annual basis: the National Meeting of Municipal-Regional Theaters, the National Meeting of Amateur Theaters, a national Guitar Contest, plays, dance performances, exhibitions, concerts, and conferences, all adding to the rich cultural life of the city (Peloponnese Energy SA Environmental Impact Study, 2011). We visited the city of Veria ourselves and then met with travelers at the three aforementioned sites, whom we informed about our field study.

4.1 Identity of the Study

Our study at the three emblematic sites of the area was conducted from June to August 2022, with our sample consisting of 243 individuals. The participants were informed that they would answer a total of 12 via computer or lab. Therefore, the questionnaires were filled in using a "Google Forms" program and were processed with the IBM SPSS Statistics 29 program. Participation to the study was voluntary, and the participants were informed about our adherence to the Code of Ethics and that any findings would be published solely for scientific/research purposes.

4.2 Presenting the Answers to the Study

Gender
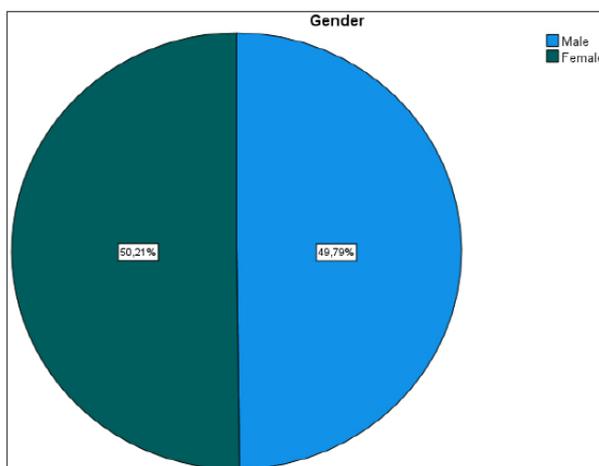
Age
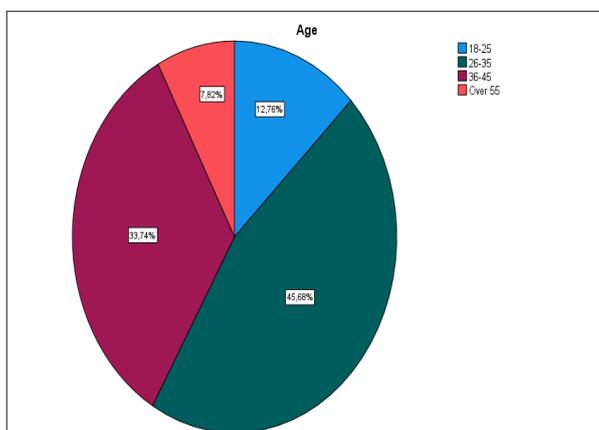
Question: What was your source of information on the three emblematic sites of the Prefecture of Imathia?

	Source	Percentage (%)
Valid	Promotional Brochure	20.2
	Acquaintance	4.5
	Tourist Agency	59.7
	Travel Brochure	15.6
	Total	100.0
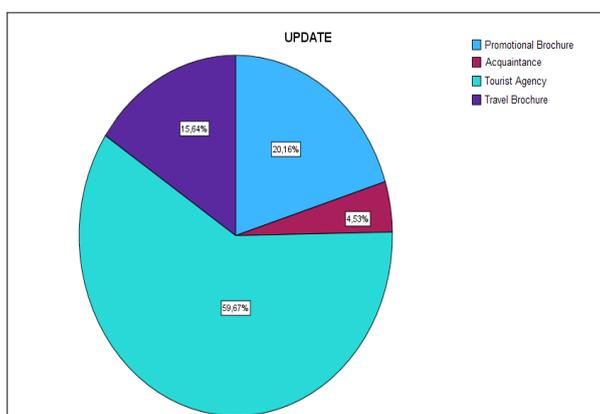
As the above pie chart shows, 20.2% of the participants (49 individuals) were informed by promotional brochures, 4.5% (11 individuals) were informed by an acquaintance, 59.7% (145 individuals) by a tourist agency, and 15.6% (38 individuals) by a travel brochure. We can thus reach the conclusion that travel agencies are the main source of information on the three sites.

Question: Have you visited these emblematic sites before?

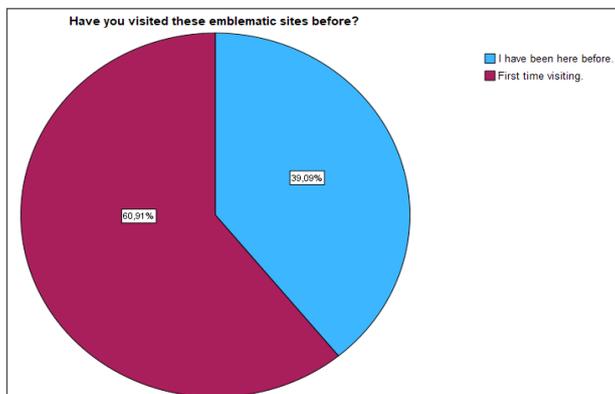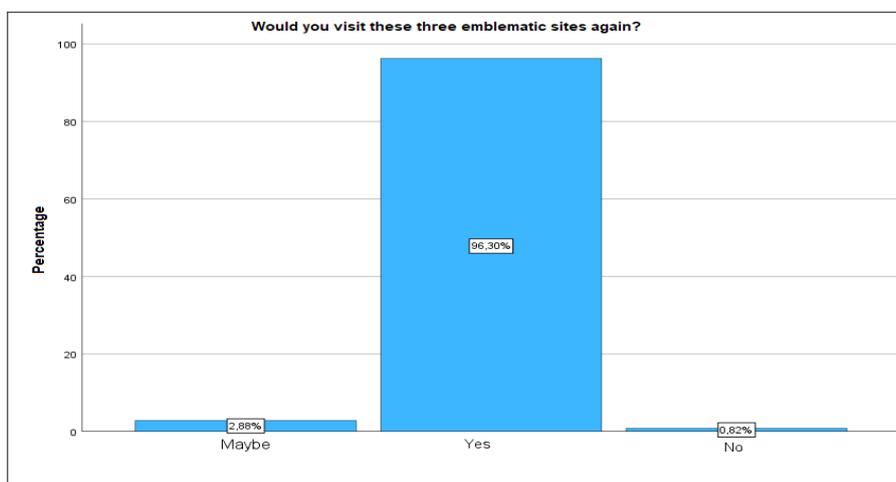|		Percentage (%)
Valid	I have been here before.	39.1
	First time visiting.	60.9
	Total	100.0

The majority of our sample of 243 – that is, 60.9% (148 individuals) – were visiting the sites for the first time, while 95 of them (39.1%) had visited them again in the past.

Question: Would you visit these three emblematic sites again?

		Percentage (%)
Valid	Maybe	2.9
	Yes	96.3
	No	0.8
	Total	100.0

The vast majority of the participants expressed an intention to revisit the sites in the future, with 234 of them (96.3%) answering "Yes", 7 of them (2.9%) answering "Maybe", and only 2 of them (0.8%) answering "No".

4.3 Statistical Analysis of the Data

Incasesoflargesamples – asisours– we have to compare the histogram in accordance with the normal curve, by using SPSS. For even more accuracy, we have to check the QQ-plot.

One can see in the histogram that the curve follows the form of normal variance, while the NormalQ-QPlot shows the points being on or very close to the line, therefore we can claim that normal variance is followed.

The statistical analysis of the data is further presented in the Annex of the paper, including the calculation of the $x2$ test, with a significant relation found.

The questionnaires were processed by analyzing specific questions and answers.
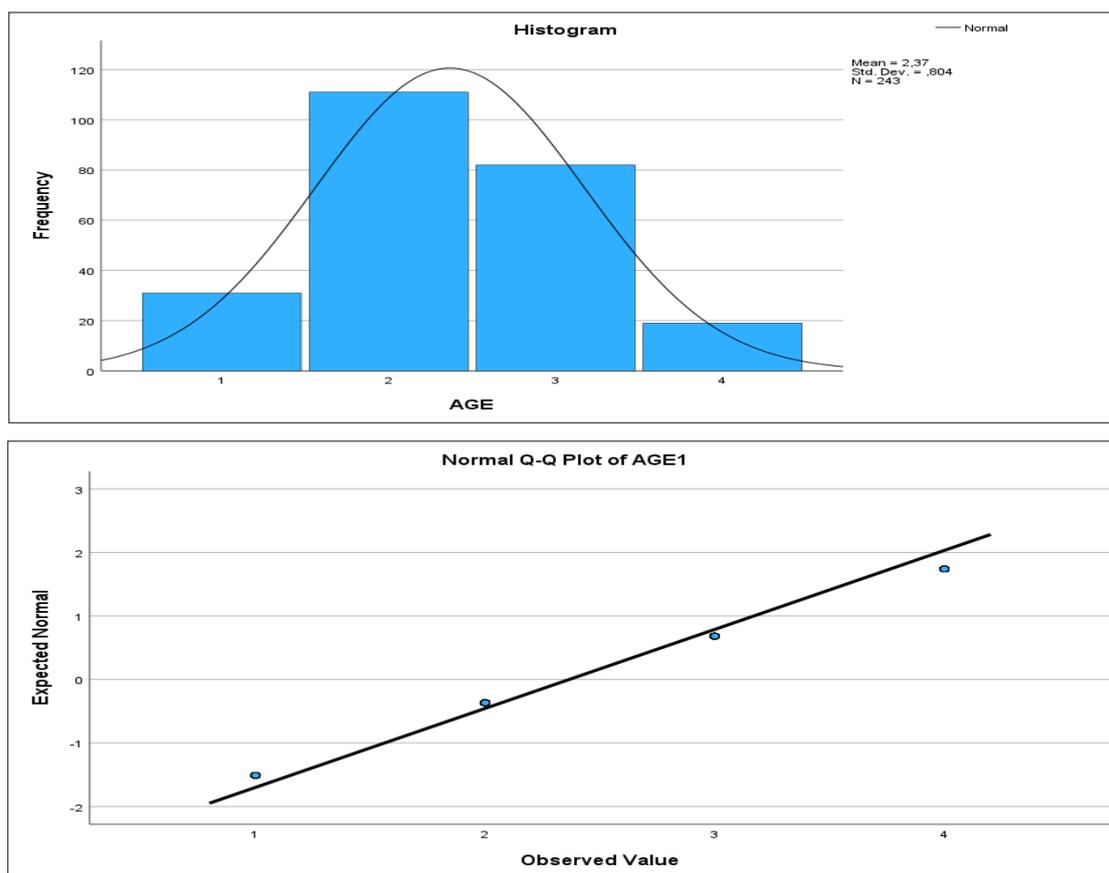
4.3 Demographics

It was difficult to approach the sample at first, as we were met with certain distrust, but the visitors became friendlier over time. When we posed our main questions regarding the visitors' criteria for visiting the sites, their degree of interest in them, and the importance of these sites for each of them, we received answers of a more theoretical nature, particularly on the sites being deemed a draw by the city of Veria and by them as well. Some stated that they had only come for the sites, while others combined sightseeing with purchases of local products and participation in local events – these were the main reasons the participants gave for visiting.

We consider the fact that the participants' main source of information on the three emblematic sites were travel agencies to be significant, as we do the fact that about a third of them were repeat visitors, which is something that city officials should take into consideration. Another significant fact that should be kept in mind is that the vast majority of the respondents claimed that they would visit the sites again.

No less noteworthy were the answers given by the visitors regarding their emotions when seeing the sites, with the first three age groups experiencing awe and those over 55 surprise, which shows a general respect towards religious and historical treasures.

Last but not least is how visitors spent their time in the area: some of them stayed in Veria for just a few hours, while those who had developed relationships with local families spent more time in the city due to the free accommodations. Some spent a few days there in order to visit other historical, cultural, and religious sites in the wider area besides the three emblematic ones, staying in city hotels. In general, Veria appears to endear people, as there are many repeat visitors to the three emblematic sites and the city itself.

5. Conclusion – Suggestions

All the aforementioned led us to the conclusion that the city officials ought to find ways to attract more people and from diverse social groups, since the royal Macedonian tombs of Vergina, the Apostle Paul's Tribune, and the Sumela Monastery can constitute significant draws. The flow of culture-loving visitors would be greater if the officials of Veria promoted the city, its wider area, and its hospitality businesses more vigorously in electronic media.

In any case, the royal Macedonian tombs of Vergina, the Apostle Paul's Tribune, and the Sumela Monastery are contributing factors to the development of historical, cultural, and religious tourism, as well as to the general development of the area through the generation of various business opportunities. It falls to the representatives of the city of Veria to take

advantage of the emblematic sites of the region, with their primary duty nevertheless being to care for and maintain the surrounding area and environmental balance.

City officials should also show due diligence in managing the natural and cultural resources of the area, studying the wealth of material that rests in Veria, and even promoting the works of skilled and accomplished artists, authors, historians, poets, etc., who have made and are making history, spreading the wings of culture beyond the city of Veria.

A new vision and a new hope for the local community will thus be formed through the development of tourism, since events of a historical, cultural, and/or religious character can be organized annually in addition to the existing annual food & drink-centric events focusing on peaches, apples, cherries, and *tsipouro* (a distilled spirit made from grapes).

Another suggestion is for the Municipality of Veria to implement and operate a "Participatory Culture Workshop", with the assistance of an information environment at a city level, publicizing at any moment the newest folk culture events (Bausinger, 2009). This would strengthen the structural participation of all cultural entities and societies for the purpose of showcasing every historical, cultural, religious, and natural site in the area.

The creation of modern means of information on and promotion of important issues of cultural heritage can thus be achieved. At this point in particular, a connection between the Greek Orthodox tradition and the cycle of festivities could be formed. We would also suggest organized visits by foreign students, combining sightseeing with lessons in – for instance – history, culture, and Christian Orthodoxy. A direct contact with history, culture, and pilgrimage would indeed make the area more attractive to traveler-tourists (Venetsanopoulou, 2006).

Annex

Question: Is there a statistically significant relation between age group and emotion at the sight of the three emblematic sites?

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	19.713[a]	6	0.003
Likelihood Ratio	23.809	6	<0.001
N of Valid Cases	243		
a. 2 cells (16.7%) have an expected count of under 5. The minimum expected count is 1.72.			

The above table demonstrates that there is a statistically significant relation between age and the emotions experienced when seeing the emblematic sites $[x^2(6)=19.713, p<0.001]$. Specifically, the dominant emotion for the first three age group was awe, while those over the age of 55 experienced mostly surprise.

Question: Is there a statistically significant relation between gender and source of information on the three emblematic sites?

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	11.256[a]	3	0.010
Likelihood Ratio	12.461	3	0.006
N of Valid Cases	243		
a. 0 cells (0.0%) have an expected count of under 5. The minimum expected count is 5.48.			

No statistically significant relation between gender and source of information on the sites was found $[x^2(3)=11.256, p>0.05]$. The effect of gender and age group on visiting volume was also studied using the two-way ANOVA method.

Findings from the Single-Variable Analysis of Variance

Single-Variable Analysis of Variance

Using the two-way ANOVA method with null hypotheses, we found the following:

H0.1: Gender has no effect on the volume of visitors to the sites.

H0.2: Age has no effect on the volume of visitors to the sites.

H0.1: The interaction of gender and age has no effect on the volume of visitors to the sites.

Using the two-way ANOVA method with alternative hypotheses, we found the following:

HA.1: Gender has a significant effect on the volume of visitors to the sites.

HA.2: Age has a significant effect on the volume of visitors to the sites.

HA.3: The interaction of gender and age has a significant effect on the volume of visitors to the sites.

Tests of Between-Subjects Effects					
Dependent Variable: Would you visit these three sites again?					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	0.559[a]	7	0.080	2.253	0.031
Intercept	458.646	1	458.646	12927.089	<0.001
Gender	0.008	1	0.008	0.212	0.646
Age	0.232	3	0.077	2.182	0.091
Gender * Age	0.383	3	0.128	3.594	0.014
Error	8.338	235	0.035		
Total	961.000	243			
Corrected Total	8.897	242			
a. R Squared = 0.063 (Adjusted R Squared = 0.035)					

Through the two-way ANOVA, we discovered a statistically significant effect of gender and age on the likelihood of repeat visits to the three sites in the future [F (7.235) = 2.253, p = 0.031].

Gender [F(1.235) = 0.212 , p = 0.646] and age [F(3.235) = 2.182, p = 0.091] on their own appear to have no significant effect on the likelihood of visiting the three emblematic sites again in the future, yet the interaction of gender and age [F(3.235) = 3.594, p = 0.014] does appear to be statistically significant.

A graph on testing the interaction between the two factors (gender and age) on the visiting volume to the sites follows.

Estimated Marginal Means

The general rule for a marginal means graph such as the one above is to observe whether the lines intersect or tend to intersect, which would indicate a statistically significant relation. This graph does indicate that.

Continuing with the Correlation Between Age and Intention to Visit Again

Correlations		Would you visit these three sites again?	Age
Would you visit these three sites again?	Pearson Correlation	1	0.076
	Sig. (2-tailed)		0.238
	N	243	243
Age	Pearson Correlation	0.076	1
	Sig. (2-tailed)	0.238	
	N	243	243

One notes that there is no significant/strong correlation between age and the decision to revisit the three emblematic sites in the future (r = 0.076, p = 0.238 > 0.05), which means that age has no bearing on such a decision.

In order to answer the question on whether being a permanent resident of Thessaloniki or not influences the likelihood of repeat visits to the sites in question, we turned to the T-Test, as presented below.

T-Test

Based on the IndependentSamplesTest table, we performed a T-Test, noting Levene'sTest at first with a focus on the equality of variance, in order to determine whether to test the first or the second line.

Since Sig.< 0.05, it is the second line we should look to, where it is noted that p = 0.024 < 0.05, therefore our initial hypothesis is rejected and permanent residence is correlated with having previously visited the three emblematic sites of Imathia.

Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | | |
		F	Sig.	t	df	Significance One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower	Upper
In the past have you visited again this iconic monuments?	Equal variances assumed	10,660	,001	-2,304	241	,011	,022	-,148	,064	-,275	-,021
	Equal variances not assumed			-2,270	180,758	,012	,024	-,148	,065	-,277	-,019

6. References

1. Atmantzidis, S. (2023). *Panagia Sumela history and tradition.* Ed. Quintessential p.14. *(Quote about the Sumela Monastery taken from the undated texts of the late president of the "Panagia Sumela" Foundation, Panagiotis Tanimanidis.)*

2. Bausinger, H. (2009). *Folk culture in the world of technology.* Patakis Publishing, Athens, pp.105-106.

3. Delitheu, V. & Karagianni, M., (2020). *Local Humanities.* Ed. Erodios, Thessaloniki, p. 178.

4. Gerakaki, A., Bousbouras, S. & Bardakas, E. (2010). *Environmental Impact Study.* 36 MW Wind Power Park & Interconnection Projects, Municipality of Veria, Prefecture of Imathia, p. 16.

5. Kalligas, N. (2022). *Veria during the occupation and the civil war 1940-1940.* Ed. Lexis, Veria, p.284.

6. Karachalis, N. G. (2007). *Culture and Local Development: The role of cultural and tourist areas in the modern city.* Panteion University, pp. 126-127.

7. Karvounis, S. & Georgakellos, D. (2003). *Environmental Management.* Ed. Stamoulis, Athens, p. 792.

8. Kokkosis, X., Chartas, P. & Gryba, E. (2011). *Special and Alternative Forms of Tourism.* Ed. review, Athens, p. 202.

9. Kovos, D. (2021). Florinio Publications, p.19.

10. Papastavrou, A. & Karameris, A. (2006). *Mountain tourism issues.* Forest policy workshop, Thessaloniki, p.21.

11. Peloponnese Energy SA Environmental Impact Study (EIA) (2011). Class 27 (Environmental Studies), p. 51.

12. Sergopoulos, C. & Karagianni, M. (2018). *Paleos Panteleimonas.* Monograph, Athens, p. 26.

13. Tourtas, A. (2011). Aristotle University of Thessaloniki, p.34.

14. Venetsanopoulou, G. M. (2006). *State Contribution to Tourism: Alternative Forms of Tourism.* Interbooks, Athens, pp. 136-138.

15. Zaharatos, G. (2000). *Package Tour.* Propompos Publishing, Athens, p. 77.

16. Andronikos, M., Cawkwell, G. & Dell, J. H. (1980). *Philip, King of Macedonia.* Athens Publishing House, Athens.

17. Bogas, C. (2009). *Philip of Macedonia – The exciting life of the great king.* Enalios Publications, Athens.

18. Bonarou, C. (2012). *Visual Culture and Tourism: Representations of Greece in Tourist Postcards.* Papazisi Publications, Athens.

19. Brilakis, K. G. (1986). *History of the Prefectures of Imathia.* Published by "The geographical divisions of our country", Thessaloniki.

20. Encyclopedia "Nea Domi", Issue 35 (1996). Ed. Tegopoulos, Athens.

21. Friedel, E. (2013). *Cultural History of Ancient Greece, Myths and Reality of the Pre-Christian Soul.* Topos publications, Athens.

22. Jarennis, E. (2012). *Greeks and the war. From the Homeric universe to the classical Greek world.* Enalios Publications, Athens.

23. Karagianni, M. (2017). *Culture Sustainability Policy, Aspects of the Greek Society.* Dionikos Publications, Athens.

24. Karagiannis, G. (2023). *Principles of Business Economics, Help for students.* Florinio Publications.

25. Sakellariou, M. V. (1992). F*oundation and Consolidation of the Macedonian Kingdom* in Macedonia: 4000 years of History and Culture. Athens Publishing House, Athens.

26. Statistical Service, Veria branch, https://www.xo.gr/profile/profile-907477877/el/.

Online Links

https://web-greece.gr/destinations/imathia-macedonia

https://www.google.com/search?q=%CE%9Dational+Geographic%3A+vergina+-+pella&rlz=1C1KNTJ_elGR979GR979&oq=%CE%9Dational+Geographic%3A+vergina+-+pella+&aqs=chro

https://el.wikipedia.org/wiki/%CE%92%CE%B5%CF%81%CE%B3%CE%AF%CE%BD%CE%B1

https://www.kathimerini.gr/culture/561584824/i-anakalypsi-ton-tafon-sti-vergina/

https://core.ac.uk/download/pdf/132803543.pdf

https://www.maxmag.gr/agnosti-ellada/vergina-i-istoria-tis-protis-proteyoysas-toy-makedonikoy-vasileioy/

http://ikee.lib.auth.gr/record/125557/files/GRI-2011-6126.pdf

https://kozani.pdm.gov.gr/live/velvento-meteo-2/

https://eservices.veria.gr/

https://www.veria.gr/new/index.php/news/deltia-tupou/2846-oles-oi-ilektronikes-ypiresies-tou-dimou-veroias-me-ena-klik-sto-eservices-veria-gr

https://www.voria.gr/article/oles-i-ilektronikes-ipiresies-tou-dimou-verias-sto-eservicesveriagr

https://web-greece.gr/destinations/imathia-macedonia

https://www.statistics.gr/en/home/