

Economic crisis threatens vernacular architecture: an evidence using cultural economics

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Abstract

It is of general belief that cultural heritage is of indisputable and rather undiminished value. Building environment inherited from the past, bears a variety of values that hold strong argumentation in favor of its protection. Yet, the deterioration of building heritage raises questions on its core socioeconomic dimensions. In view of examining these, we applied CV surveys using two Greek mountainous settlements as case studies. We analyzed social attitude towards protecting vernacular heritage, we elaborated on the way financial crisis affects vernacular heritage and we came with several conclusions on a future evolution pattern regarding heritage's survival. Traditional building environments proved rather vulnerable in a prolonged period of economic decline. It was made clear that people generally show higher level of concern for well-preserved building environments, while they are more indifferent to deteriorated ones. We prove that economic crisis leads to a peculiar cultural Darwinism which enables the survival of few and of exceptional architecture quality settlements to exist. Vernacular architecture is unique and can't be replaced if destroyed; therefore, certain policy decisions should be taken in view of the study's findings.

Keywords: architectural heritage, vernacular buildings, economic crisis, mountainous Greece, CVM.

1. Introduction

Cultural heritage's protection issue gained global attention, mainly, after the end of World War II. It was then that the global community realized the emerging threats on heritage and it was then, also, that tourism industry *discovered* cultural destinations (Frey and Pamini, 2010; Steiner and Frey, 2011; Riganti and Nijkamp, 2004). Implicit human and physical dangers for heritage's survival and a rapidly growing industry seeking the next popular cultural attraction set the frame for a variety of international charters and legislation to be adopted¹. The need to protect heritage, tangible and intangible, was under growing interest. The ability of culture to generate monetary resources, through tourism, was, of course, decisive to the direction of outstanding global monuments and sites to receive special care attention. Among different forms of culture, architectural heritage holds important position; a fact underlining the significance of building environment in human societies.

However, in spite of global recognition of multidimensional importance that heritage bears many monuments, archaeological sites or historical settlements are left in decay, worldwide. Lack of funding seems to appear as prevailing cause; yet, even when funding exist issues on what to protect, at which level and under what criteria always arise (Throsby, 2000, 2007). Cultural heritage goods are mostly non-market goods; there is no actual market in which they can be bought and sold as other typical market goods. As a result, many non-market benefits remain latent and underestimated lacking proper estimation of their true value (Provins et al., 2008; Throsby, 2007; Noonan, 2002). Local vernacular architecture, unique in every country, created in the pre-industrial era is characteristic of the building environment of many rural, mainly, regions today. It is among the most threatened heritage goods and special Charters for its protection have been adopted².

¹ i.e. UNESCO Convention on the Protection of the World Cultural and Natural Heritage.

² ICOMOS: Charter on the Built Vernacular Heritage, 1999.

2. The issue of value and protection of heritage

Built heritage is attributed with several types of value; historical, aesthetic, scientific, sentimental, cultural etc. This is well explained though considering that built environment holds important role as vehicle of symbols and meanings; as the tangible proof of the past, the visible proof of our ancestors' existence. Buildings are much more than materials and forms; they are shelters of human lives, of people's dreams and fears. They are carriers of human stories, individual and collective memory. Built environment can evoke human feelings; it attracts people and it turns them away. The sense of belonging to a place is so forceful that its loss can evoke feelings of grief and deprivation (Butterworth, 2000; Jacobs, 1995). Klammer (2001) notes that the destruction of Mostar ancient bridge in Bosnia during war in 1993 seemed to evoke more grief than the loss of human lives that same day.

Buildings are political symbols and settlements may unite and divide people at the same time. The 09/11 attack to the New York's twin towers was an attack to capitalism, at the heart of the free market economy. Modern city ghettos consist of symbolic divisions; they provide shelter, familiarity and safety between their members keeping the *others* away. They are small homelands of refugees; the homelands they left behind. As carriers of meanings, building environments are not always attributed with positive values. When connected with religion or ethnic groups, intense detestation is often evoked. Repeatedly, through time, religious buildings of past civilizations were wildly destroyed in the name of a new religion. Those past temples were not just rocks and mud; they were evidence of symbols that had to be vanished.

In relative literature, built heritage is generally considered of holding positive meanings. Its protection and preservation is bound up with positive consequences on people's lives. Heritage goods are usually attributed with important social values and their protection is expected to generate social benefit. Built heritage is mostly a public good; therefore its

protection is subjected to public expenses. At a certain level, the positive benefit deriving from heritage's preservation socially justifies public money spent on it (Montenegro et al., 2012; Rizzo et al., 2012). The variety of values inherited from the past hold strong argumentation in favor of heritage preservation. At the bottom line, heritage conservation is, mainly, an economic issue. Heritage management requires monetary allocation decisions and certain criteria should be taken under consideration especially when other vital common goods (i.e. health, education, etc) demand public resources (Rizzo and Throsby, 2006).

3. Building heritage in Greece; the case of traditional settlements

The building environment, in Greece, created during 15th – 19th ct. and in some regions until mid 20th ct. is referred as vernacular architecture. In 1975 and in 1978 almost 400 settlements all over Greece were designated as “traditional settlements” by the then Hellenic Ministry of Environment, Physical Planning and Public Works and special building regulations were assigned to them. Due to the historical and political era into which this kind of architecture was created (Ottoman Empire conquest) during the first decades of Greek independence important amount of vernacular buildings were demolished. The memoirs of slavery and hardships should be erased; destruction of old buildings and construction of new ones, following the principles of the arising neoclassicism, was a step forward welcoming a new historical era. Therefore, urban centers especially in south Greece lack of vernacular building complexes (Papaioannou et al., 2008; Mpouras, 1989). The general policy implemented in the country, since the decade of 1950s left mountain regions in the margins of the developmental race. In spite of certain drawbacks, this played important role to the protection of local architectural tradition. Therefore, significant vernacular heritage still exists in Greek mountain settlements.

Recognition of traditional architectural heritage's value came rather late. Several studies on it began to take place and a wider awakening on the importance of its protection was gradually made common. When mountains received attention as tourist destinations (sea regions prevail in the tourist map of Greece), small villages with old, stoned buildings and cobbled paths appeared really attractive. Yet, tourism proved rather threatening in many cases; soon new-traditional buildings were constructed, asphalt replaced stone for cars to enter, fancy shops, loud bars and restaurants replaced quietness and former economic activities were abandoned for the sake of *rooms to let*. In addition, non effective protective legislation, indifference, lack of political will, ignorance and lack of funding in many cases have all resulted in serious alteration and decay of this unique architectural heritage. Despite all the relative literature on the historical, scientific and aesthetic value of traditional architectural heritage along with several relevant laws and regulations, at national and international level, deterioration does threaten these building environments.

4. The object of this study

Vernacular heritage is a part of cultural heritage least studied in cultural economics³; as far as Greek mountainous vernacular architecture is concerned none such studies have taken place⁴. In view of estimating the economic value of vernacular heritage we used two Greek mountainous settlements as case studies. In 2008, we implemented the first CV survey for the evaluation of vernacular architecture in a Greek mountainous town. Four similar CV surveys followed in the same town and in a different village as well, until 2011. We came up to several conclusions concerning both the economic nature of vernacular architecture and the general value that local society attaches to it. During the implementation of the five surveys, Greece entered a phase of economic crisis in 2009, which enabled fruitful comparative

³ Provins *et al* (2005) give a summary of relative studies.

⁴ *As far as we are aware of from relative bibliographical research.*

analysis on the research findings in surveys that took place before and in the crisis (Giannakopoulou, 2012).

In this paper, we present part of these results regarding the value that society attributes to vernacular architecture and, mainly, how is this affected by the economic crisis. Further, we elaborate on people's views on the need to preserve vernacular and the social attitude change in view of a shrinking economy. We discuss the issue of correspondence between a highly valued cultural good in terms of aesthetic, historic, cultural etc dimensions and its economic value footprint; is society willing to protect it (for its value) even in presence of a financial crisis? We, finally, compare several demographic characteristics of respondents (i.e. age, income, occupational status) to their willingness to pay for the protection of this heritage and we elaborate on resultant conclusions that build up the main socioeconomic dimensions of vernacular heritage.

The rest of this paper is organized as follows: in section 5 the case study area is presented followed by the presentation of the survey design and methodology addressed in section 5.1. Section 6 discusses the results of the surveys and main concluding remarks are summed up in section 7.

5. Case study: the traditional settlements of Metsovo and Sirako

Two mountainous settlements were chosen as case study areas; the village of Sirako and the small town of Metsovo. The two settlements share some similar characteristics and differ significantly at their building environment. They are both located in the mountain range of Pindos, in Epirus, at a distance of 50km from the urban center of Ioannina (in different directions) (Fig. 1,2). Both settlements have a long historical tradition; their foundation dates back to the 14th and 15th ct. under the Ottoman conquest, meeting their development peak

around late 17th and 18th ct. Their inhabitants were (and still are) Vlachs, thus sharing a similar cultural tradition.

The village of Sirako was completely abandoned in the late 1970s. A massive population loss had preceded during the decades of '40-'50 and '60-'70. Yet, its habitants never really abandoned it; they always returned from time to time staying at the village for short periods. In mid 1990s its habitants massively returned and reconstructed their old buildings. Making use of public funding for traditional roof reconstruction at the village along with the relatively lower working cost that local Albanian migrants offered and with the devotion of their own expenses, effort and hard work, residents rebuilt the whole village. It is since used as a second-house settlement and is occupied for some time at an annual base by 300 families. Unlike many other cases in Greece, special attention was given at Sirako's building environment. Houses, churches, fountains and the old mill were rebuilt at their exact initial forms, cobbled paths and roads were similarly restored and the traditional structure of the village remained. Thus, cars are not allowed to enter the village; three parking spaces at the periphery indicate on-foot entrance to the village from narrow cobbled paths.

The town of Metsovo followed a completely different development pattern during the 20th ct. It was continuously inhabited and still is a vivid town of almost 3,500 permanent residents. Several socioeconomic parameters played decisive role and the town not only wasn't abandoned but it managed to maintain a variety of sustainable economic activities that kept its population and mainly the young people. The construction of a main national road (Egnatia Odos), nearby, lessened the distance between Metsovo and the close urban center of Ioannina, as well as the big urban centers of north Greece, Thessaloniki⁵ among them. This enabled an important increase to local habitants' choices (i.e. job opportunities, entertainment

⁵ Thessaloniki is the second largest city in Greece.

choices etc) as well as to a tourism flow from the north part of the country, which was a positive injection to local economy.

Due to the different development patterns, that took place during the last decades, the two settlements hold completely different building environments. Sirako is one of the most well preserved traditional villages in Greece, while Metsovo holds fragments of its traditional architectural elements; the majority of its buildings are constructions dating back to the 1950s and more recent ones. The continuous habitation is documented on the variety of building forms in the town and a severe decay of its traditional characteristics is already evident.

5.1 Survey design and Methodology

This study used CVM in order to assess WTP for heritage protection. More specifically, respondents were asked to state their max WTP (willingness to pay) in order for restoration works to be undertaken for the preservation and enhancement of local vernacular in the two settlements. Max WTP of respondents reflects that change in their income (removal of this amount of money of their total income) for which respondents equally accept: either the designed improvement in the condition of the good or the non-change in the condition of the good and the retention of their total income (Noonan, 2003; Throsby, 2003). This is described in equation (1):

$$V(p, q^1, y - \text{WTP}) = V(p, q^0, y) \quad (1)$$

where,

q^1 : improved condition of the good

q^0 : original condition of the good

$y - \text{wtp}$: amount removal of total income

y : retention of total income

The WTP is described by the equation (2):

$$\text{WTP} = e(p, q^1, U^*) - e(p, q^0, U^*) \quad (2)$$

where,

p = linear table of independent variables

q^0 and q^1 = original and final condition of the good (after the implementation of suggested proposal)

U^* = welfare level deriving from utility function $V(p, q^0, y)$

y = respondents' income

The social population group of the research was the habitants and the visitors of both settlements. These social groups are the first to be benefited by an implicit protection of local vernacular. Habitants make use of the good in their everyday life; the building environment actually comprises part of their habitation patterns. Visitors, on the other hand, spend time and money to visit the places in order to gain satisfaction from being at them for a period of time. Five CV surveys took place from 2008 to 2011; two in the village of Sirako (one addressed to habitants and one to visitors) and three in the town of Metsovo (one addressed to habitants and two to visitors) (Table 1). The valuation technique used was Contingent Valuation; a technique widely applied for the valuation of non-market cultural goods (Noonan, 2003; Carson et. al., 2001). Respondents were asked to state their individual max WTP to the following (identical in all surveys) given hypothetical scenario: *“As you are aware of protection and enhancement of local vernacular architecture requires certain construction work and funding, at an annual base. Suppose an independent institution was founded shouldered this task, would you be willing to voluntarily contribute with an amount of money?”*. The respondents were asked to state a *yes* or *no* and then, if *yes*, they were asked to state the max amount of money they would donate. Several questions following examined

the reasons either for *yes* or for *no* response. In four of the studies the Open Ended elicitation format was used, while in the fifth the Payment Card was applied (Table 1).

The five surveys were applied through on-site research; respondents were addressed with questionnaires through face-to-face interviews. Visitors were randomly chosen while being at the place (i.e. squares, streets, local cafes etc) and residents were door-to-door interviewed. Five questionnaires were used (one in each survey) sharing several similarities and differences. They all followed the suggested in CV surveys structure: a. a first introductory section with relevant context for the good; b. description of the good; c. the institutional setting in which the good was going to be provided; d. the manner for the good's payment; e. the elicitation method used; f. questions regarding the reasons for respondents' statements; g. socioeconomic and demographic data of respondents (Carson et al., 2001).

Table 1. CV surveys' design data

<i>Place</i>	Metsovo	Metsovo	Sirako	Metsovo	Sirako
<i>Population group</i>	visitors	residents	residents	visitors	visitors
<i>Year of survey</i>	2008	2009	2009-2010	2010	2010-2011
<i>Population sample</i>	Individuals 305	Households 260	Households 175	Individuals 366	Individuals 240
<i>Confidence level</i>	95% and 5,5%	95% and 5,5%	95% and 4,5%	95% and 5,5%	95% and 6,5%
<i>Elicitation format</i>	OE	OE	OE	PC	OE

6. The results of the survey

In this section the results of the survey are presented, subdivided in five thematic topics, namely: respondents' attitude towards the importance of local vernacular's protection, the willingness to pay for vernacular's protection, the demographic data parameters affecting wtp,

the vulnerability of local vernacular in economic crisis and the implicit future projection of local vernacular preservation pattern.

6.1 Social views on the importance of local vernacular architecture

Residents and visitors were addressed with questions regarding the importance of vernacular architecture. From the descriptive statistics analysis it came out that the vast majority in all studies stated that it is important for this kind of heritage to be protected (Table 2). This importance was analyzed in two main reasons; a. as the special local characteristic of the settlement, which if lost the settlement would no longer be attractive to visitors and b. as significant national cultural heritage. Between the two, cultural value prevailed in all of the studies with significantly higher proportional percentages to appear in the case of Sirako (Table 2). Respondents were further asked to elaborate on their personal view on the meaning of this heritage's importance. Cultural tradition, history, place unique identity, continuation of ancestors' tradition, highly aesthetic building environment, embodiment to local natural environment, sentimentality and cultural obligation to the following generations (bequest value) were the reasons stated by the majority of the respondents in explaining why being in favor of vernacular's preservation. *"This is what we should bequeath to our children"*, *"It is this place's history, it is our grandfathers' heritage"* were common phrases among residents, while *"Important national heritage"*, *"Beauty and uniqueness of the place"* were common statements among visitors, at both settlements.

Furthermore, visitors were asked to state whether they would recommend someone to visit the place and why. Local traditional character, surrounding natural environment and the combination of the two were the prevailing answers. Local traditional identity was addressed with percentages varying from 22% to 50%. Residents, on the other side, were asked to state why they would make use of traditional building materials (if so) on their houses. Among the

two prevailing answers “*I would make use of such materials because I personally like them better than the contemporary ones*” and “*I would make use of such materials because local architectural tradition shall be preserved for future generations*”, the second one was presented at percentages varying from 34% to 65% (Table 2).

Table 2. Descriptive statistics of respondents’ views on local vernacular’s protection

<i>Settlement</i>	Metsovo	Metsovo	Sirako	Metsovo	Sirako
<i>Population group</i>	visitors	residents	residents	visitors	visitors
	<i>yes</i>				
<i>Should vernacular architecture be protected?</i>	97,3%	94%	98%	90%	99,2%
	<i>justification</i>				
<i>“It is a unique local element. It is the identity characteristic of the place. If destroyed, the place will no longer be an attractive destination for tourists”</i>	40,7%	28%	26,5%	42,7%	38,3%
<i>“It is cultural heritage. It holds historical and aesthetical value and it should be preserved for the next generations”</i>	56,7%	72,5%	67%	47,4%	60,8%
<i>Would you still make use of traditional building materials even if it wasn’t obligatory by legislation?</i>					
<i>Yes, personal aesthetics choice</i>		34%	18,9%		
<i>Yes, cultural heritage protection</i>		34,5%	65,1%		
<i>No, due to higher cost</i>		31,5%	16%		

6.2 Willingness to pay for vernacular’s preservation

Local vernacular’s economic value was captured through the respondents’ individual stated WTP. Positive WTP percentages and individual mean WTP values, in each study, are shown in Table 3. Estimation of mean WTP was achieved through the non-parametric Kaplan-Meier estimator which is an empirical approach to estimating the survivor function of WTP responses. We applied the Kaplan-Meier estimator at: the total sum of the bids and to the subtotal sum of the positive bids. Non parametric statistical method examines the WTP

bids in the sample irrespectively of the possible parameters that affect them (Bateman et al, 2002).

Analyzing the findings we came up with a first observation; local vernacular holds an important economic value. Thus, the social benefit deriving from the multidimensional cultural value from the preservation of vernacular heritage is reflected in significant amount of monetary units. Estimating the Total Economic Value of the good (multiplying individual WTP to population reference number), in each study, it came out that this does not only justifies required public expenses, at an annual base, but in the case of Metsovo it is actually comparable to the annual budget of local Municipality. The TEV for the case Metsovo, in 2008, was estimated to almost 3.100.000€ when the annual Municipality's budget at the time was almost 1.500.000€

Table 3. Stated positive wtp percentages, mean wtp values, average income.

<i>Place</i>	Metsovo	Metsovo	Sirako	Metsovo	Sirako
<i>Population group</i>	visitors	residents	residents	visitors	visitors
<i>Year of survey</i>	2008	2009	2009-2010	2010	2010-2011
<i>Positive wtp</i>	41%	46,5%	72,6%	38,5%	43,8%
<i>Mean wtp (Kaplan-Meier without zero bids)</i>	47,30€	287,90€	196,85€	17,90€	54,10€
<i>Average income</i>	28.820€	23.580€	24.720€	24.650€	27.340€
<i>Mean wtp as income percentage</i>	0,16%	1,22%	0,79%	0,07%	0,19%

Analyzing the results of the studies we found out that positive WTP remained stable ($z=0,67 < 1,96$, $\alpha=0,05$) in the two similar studies that took place before and in the financial crisis (2008 and 2010 – Metsovo's visitors). Yet, an important individual mean WTP reduction occurred (47,30€ and 17,90€). We therefore come to the conclusion that even when positive attitude towards the protection of vernacular heritage remains the general economic

frame poses such restrictions that result to notable reduction of the amount of money people are willing to pay for this protection.

Respondents were additionally asked to state the reasons for their WTP. The importance of the cultural value of local vernacular and the need to protect it and bequeath it to the next generations prevailed among answers. It is worth noting that so called protest denials prevailed among zero WTP statements. The majority of these respondents said that it is the duty of local Municipalities and of central government to fund vernacular's preservation, while many respondents stated disbelief to the allocation of their money – *“I am not actually convinced that my money will be used for this purpose”*.

6.3 Examining WTP in relation to demographic data

In view of examining possible correlation between WTP and respondents' demographic data we used Reiser and Shechter (1999) approach for the examination of the parameters that affect WTP. We used Logistic Regression Models in order to examine parameters regarding WTP and Linear Regression Models in order to examine parameters affecting the mean WTP bid. The Logistic Regression model we used for the examination of the behavior of the depended variable WTP is described by the equation (4) and the Linear Regression Model is described by the equation (5) :

$$\ln(\text{odds}) = A + B_1X_1 + B_2X_2 + \dots + B_nX_n \quad (4)$$

where B_1, B_2, \dots, B_n the independent variables.

$$Y = b_0 + b_1X_1 + b_2X_2 + \dots + b_nX_n + e \quad (5)$$

where Y is the value of the dependent variable, X_1, X_2, \dots, X_n the independent variables, b_1, b_2, \dots, b_n the coefficients of multiple regression and e is the residual in the regression model.

As far as income parameter is concerned we found out that it does not affect either respondents' wtp (yes/no) nor their mean wtp value in the survey that took place before the crisis (Metsovo 2008). Indeed, income appears as decisive parameter affecting both WTP ($b = -0,288$ and $\text{Exp}(b) = 0,749$) and mean wtp value ($b = 0,3599^*$, *statistically significant at 1%) in the survey that took place in crisis (Metsovo 2010). More specifically, respondents are less willing to pay as their average income decreases and the higher their income the higher the amount of money they are willing to pay. Thus, it comes out that in a general social frame of prosperity, such as that before crisis occurred, people are willing to donate money for protection of heritage, yet, when economic decline takes place income constraints are taken under consideration before their choices. In the Sirako survey (2009-2010) income was the only parameter affecting mean wtp value ($b = 0,255^*$, *statistically significant at 1%). The finding becomes even more interesting given that in this survey the willing for local vernacular to be preserved was widely stated from almost all of the residents (98%) and wtp (yes/no) raised unusually high positive percentage (72,6%) and was not affected by almost any other parameter.

We further elaborated on implicit correlation between age, occupational status and wtp. In the case of Metsovo survey (2009) younger residents stated positive wtp in higher percentages than older ones (chi-square= 16,866, $df=3$, $p\text{-value}=0,001$). In addition, residents with some kind of steady occupation stated positive wtp in higher percentages than those without a steady income (chi-square=12,226, $df=4$, $p\text{-value}=0,016$). An implicit higher purchasing power among younger people and a more restricted one among older (elders depend usually on a small pension or on their children) explains the first finding. In addition, elders grown up in local vernacular buildings hold memories of hardships; preservation of these is a symbolic continuation of a hard life. On the other hand, young generations, probably fed up with urban type environments, seek the old and unusual. Such feelings justify

the finding. As it was rather anticipated, people with a steady job and income are more willing to donate money than the jobless. Similarly, in the case of Sirako study (2010-2011), almost 85% of respondents who stated zero wtp also stated very low income (chi-square= 20,069, df=8, p-value=0,010).

6.4 Vernacular heritage; vulnerable to economic crisis

Findings of the studies reveal that the economic value of mountainous traditional building environment (of Greece) appears greatly vulnerable in a prolonged period of financial crisis. As it is shown this economic value derives from vernacular architecture's embedded cultural value. In a general prosperous socioeconomic environment this cultural value generates social benefit reflected in respectable amount of monetary units. Yet, society appears less willing to justify public expenses on vernacular protection, in presence of economic recession.

Individual mean wtp value in the pro-crisis study (Metsovo 2008) was found almost three times higher than the corresponding one in the in-crisis study (Metsovo 2010) (47,30€ and 17,90€). At the same time, stated average income was decreased at a percentage of 14,5% (lower income in 2010, in comparison to 2008) (Table 3). What comes to light here is the disproportional decrease between stated mean wtp and stated income; a 14,5% income decrease caused a 62% mean wtp decrease. It is worth noting here that in the 2010 study the PC elicitation technique was applied, while in the 2008 study the OE format was used. As documented in relative literature (Venkatachalam, 2004) PC format leads, usually, to higher mean wtp values. Vernacular architecture's *consumption* was chosen to be reduced in a disproportionately higher rate than the actual income restriction would be expected to lead to.

According to local Municipality and travel agents' data the total annual number of visitors in Metsovo was decreased in half from 2008 to 2010 (150.000 to 300.000). This

reduction unavoidably leads to a proportional reduction in the total economic value of local vernacular, since TEV results from individual mean wtp multiplied to total population reference. Hence, due to the double reduction of both individual mean wtp and the total number of visitors TEV of local vernacular resulted in a 80% percentage reduction.

Findings show that vernacular architecture's economic value is subjected to the prevailing socioeconomic frame. It is significantly dependable to income variations and to social welfare preferences. Income elasticity and social subjection makes vernacular heritage's economic value highly unsteady in a general frame of financial decline. Therefore, a prolonged economic crisis, such as Greece has been subjected to during the last five years, could be proved fateful for building heritage. Financial deficiencies impose an additional threat to vernacular heritage even worse than inadequate regulation and neglect. Social justification for protection expenses proves instable contrary to the firm social belief of cultural excellence of this heritage asset. Hence, political decisions appear of vital importance as to protection policy design given that vernacular heritage is unique and irreplaceable; it has been developed over hundreds of years and once it is destroyed it's impossible to restore it in its authentic form.

6.5 Vernacular architecture survives under a peculiar *cultural Darwinism*

Findings' analysis made clear that different quality level of building environments generate correspondingly different social attitudes to them. People signify a notably higher level of affection for a very well preserved traditional settlement, while they would rather more easily turn away from a less preserved or from a significantly deteriorated one. As is shown in Table 3, architectural heritage preservation in the village of Sirako attracts higher percentages of positive wtp and very high mean wtp values. Visitors of Sirako stated a triple mean wtp value than the corresponding one of Metsovo's visitors (54,10€ against 17,90€).

The comparison is made between the two studies taking place in financial crisis period time. Indeed, in Sirako the study was completed in 2011, far deeper in crisis period than in Metsovo. Two more findings come in support of the argument: a. the stated individual mean wtp value in Sirako is 2,5 times higher than in Metsovo when examined as a percentage of stated average income (0,19% against 0,07%). b. the individual mean wtp value in Sirako is so high that overrides that of Metsovo even in the pro-crisis study (2008). It is higher both as an absolute value (54,10€ and 47,30€) and as an income percentage (0,19% and 0,16%) (Table 3). When similar cultural goods are examined under the same socioeconomic conditions, such variation (three times higher) in mean wtp values is not usual to occur. Hence, it is the architectural quality difference of the building environment, in each settlement, that leads to such mean wtp variations. A better well-preserved architectural complex holds such quality value that motivates people's willingness to further protect it, while a less preserved one holds higher probability to generate social indifference and, therefore, neglect. The finding draws a further observation; significant difference in individual mean wtp value would result in correspondingly significant total economic value given that the reference population was of the same size.

High architectural quality of building environments attracts social respect even in financial crisis time period; respect that is translated in non-ignorable amount of monetary units. It is true, that well-preserved architectural complexes demand far less public funding for further enhancement than deteriorated ones. Costly rehabilitation works are need for a decayed settlement to recapture and retain its architectural identity. This fact combined with the previous finding results in an interesting, yet inconvenient, conclusion. In a social environment of financial shrinkage the fewer and fewer public resources will be adequate to cover fewer and fewer needs; hence, they will be heading to the well-preserved settlements. Therefore, few traditional settlements with restricted needs will attract the shrinking public

funding at the expense of many poor-preserved and deteriorated traditional built environments. At the same time, absence of funding will lead to even faster decay rates for this majority. In a prolonged financial decline, evidence shows survival of very few and of exceptional architectural quality traditional settlements. In the meantime, settlements of lower building environment quality will be destined to a non-returnable situation of continual corruption. We refer to this procedure as a peculiar type of architectural heritage Darwinism arising. In a future projection this Darwinism survival type will enable the existence of only few, *Sirako type*, traditional settlements and the full deterioration extinction of all other of in-between quality traditional building environments. Given that permanently inhabited settlements are more prone to architectural decay than periodically inhabited ones (i.e. second-house settlements), due to evolving contemporary needs, it is concluded that financial crisis may also lead to the survival of architectural memorials of the past resembling more to frozen in time museum like settlements than vivid and socially robust settlements.

7. Conclusions

Built vernacular heritage represents an important part of cultural heritage at national and international level. Though its importance and cultural value is widely recognized and officially protected, deterioration and decay prevail in many areas resulting to loss of a unique and irreplaceable cultural good. In view of examining social attitudes towards Greek vernacular architecture as well as implicit parameters effecting wtp values and, mainly, the way economic crisis affects this specific good we applied five CV surveys in two mountainous, traditional settlements of Greece. Results show that local vernacular is highly subjected to socioeconomic changes. It was proved elastic to income, thus income restrictions and a prolonged period of crisis raise serious questions on social justification for heritage protection funding. Yet, local vernacular appears to hold important latent economic value,

which in case of a building environment of high architectural quality manages to remain relatively stable. People's attitude shows to a future cultural Darwinism which will enable only some few and very well-preserved traditional settlements to escape deterioration and loss. Economic crisis proves to be an additional implicit threat to vernacular architecture. Given its uniqueness and irreplaceable characteristics, certain policy decisions should be taken in view of its sustainable protection and enhancement.



Fig.1. The area of Metsovo and Sirako on the map of Greece

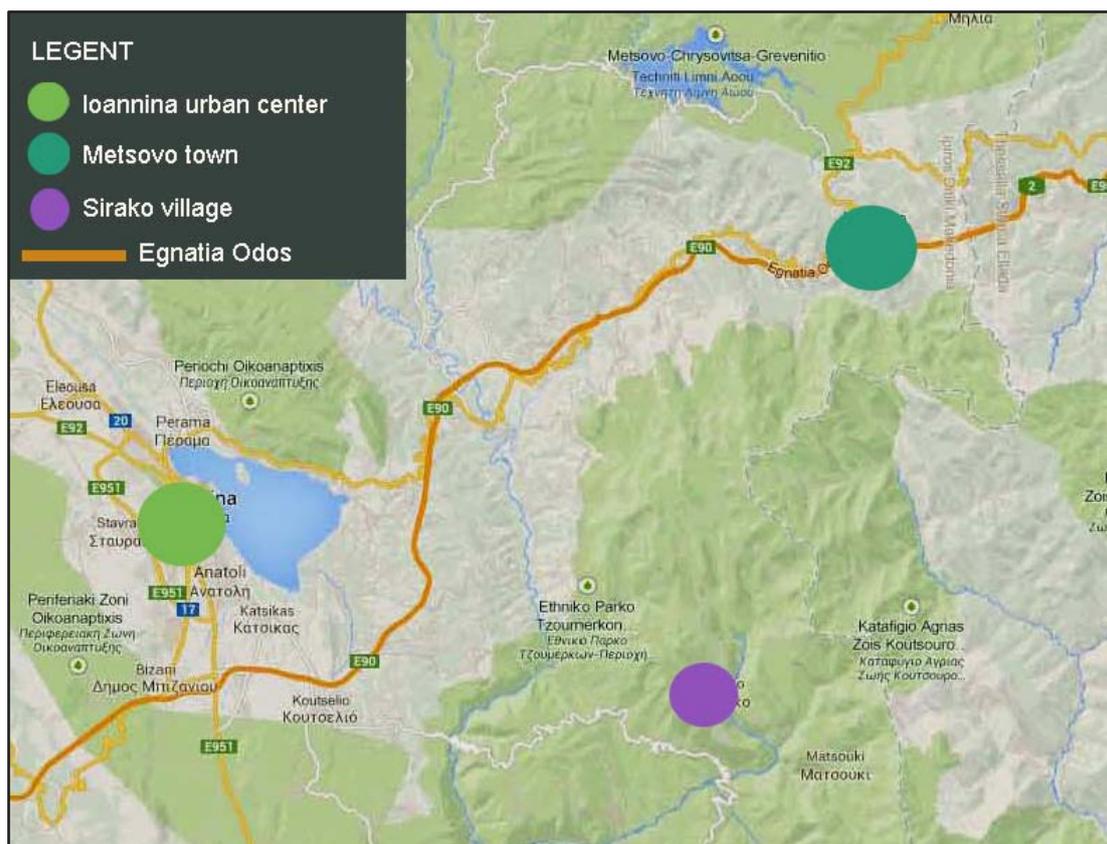


Fig.2. Metsovo and Sirako, in Epirus

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