

# Journal of Regional & Socio-Economic Issues

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# **JOURNAL OF REGIONAL SOCIO- ECONOMIC ISSUES (JRSEI)**

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# JOURNAL OF REGIONAL SOCIO-ECONOMIC ISSUES (JRSEI)

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**Aims of the Journal:** Journal of Regional Socio-Economic Issues (JRSEI) is an international multidisciplinary refereed journal the purpose of which is to present papers manuscripts linked to all aspects of regional socio-economic and business and related issues. The views expressed in this journal are the personal views of the authors and do not necessarily reflect the views of JRSEI journal. The journal invites contributions from both academic and industry scholars. Electronic submissions are highly encouraged (mail to: [gkorres@geo.aegean.gr](mailto:gkorres@geo.aegean.gr)).

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## Editorial Note

According to European Commission (2016), EU development policy seeks to increase efficiency and effectiveness in a context of sustainable development. It is a cornerstone of EU policies – alongside financial, economic and trade policy (and international aspects of other policies like environment, education, agriculture and urban policies). The EU focuses on certain sectors of intervention, depending on the needs of partner countries, making an enormous contribution in raising public awareness, increasing political will and mobilizing resources together with the economic, social and environmental dimensions of sustainable development. Based on European values, the EU promotes, in its relations with partners countries, democratic values and practices such as human rights, fundamental freedoms, good governance and the rule of law.

EU needs to pay more attention to the policies toward growth, development, competitiveness and regional cohesion. A new generation of policies have to overcome the limitations and failures of past experiences, such as collusive practices between political and economic power, heavy bureaucracy, lack of accountability and obstacles of entrepreneurship. They have to be creative and selective, with decision-making mechanisms that are more democratic and inclusive of different social interests, pulling out of the current crisis. The politics behind such a new departure has to be based on a wide social consensus over the distribution of the productivity and efficiency gains deriving from new technologies and socio-economic activities.

This special issue, Volume 7, January 2017, based on selected papers regarding economic crisis and the socio-economic consequences. More specifically, this special issue includes the following reviewed papers:

- Profession Preferences of Primary School Students (last two classes) in Syros in Greece during the Financial Crisis (by Sophia Antonopoulou)
- The influence of the economic crisis on health care and health systems in Greece (by Themelidou Maria)
- Culture, Tourism and Community Based University- the role of non-formal education in promoting Lifelong Learning, Training, Local Growth and Prosperity (by Eirini Androulaki, Ioanna Kalliopi Georgoudi, Maria Margariti, Mitropoulou Xristoula, Mpakalou Paraskeui and Eumorfia Papageorgiou)

- Agricultural Development and Processing: The case of Naxos, Greece (Kyriakoulea Sofia, Liani Kalliopi and Chouzouri Vasiliki)
- “Spatial and Urban Policy”: The Case of Naxos Island, Greece (by Tzimos Alexandros – Theodoros, Stasinou Nikolaos and Mayrogeorgoy Stella)

Furthermore, this special issue explores and studies various dimensions of the socio-economic issues. This special issue considers both an economic and social perspective to increase the information base and derive broader conclusions about the social consequences of the economic crisis, with this issue being of particular research relevance because evidence shows that even though economic crisis has been widely analyzed with respect to economic consequences, yet little attention has been paid to the evaluation of social consequences.

The authors of this special issue hereby declare that all papers included in this special issue are the result of their own actual work and originally authored by them, except explicitly stated otherwise in the text. Authors declare to be aware of and understand the journal’s policy on plagiarism and except where states otherwise by reference or acknowledgment, the papers presented are entirely their own and any due references used are being clearly indicated and have been provided on all supporting literatures and resources.

The views expressed in this journal are the personal views of the authors, remain under their sole responsibility, and do not necessarily reflect the views of JRSEI journal.

The Editor,

Professor Dr. George M. Korres

## Profession Preferences of Primary School Students (last two classes) in Syros in Greece during the Financial Crisis (2016)

### **Abstract:**

This article summarises the research conducted among students of a Primary School in Syros (Cyclades) aiming to explore their profession preferences in Greece during the financial crisis (2016). A careful study of the findings of this research suggests that girls and boys alike are minimally influenced by the crisis and the ongoing recession the country is experiencing when stating their professional aspirations, and focus on job satisfaction (on personal level) and supporting man and animals through their future profession.

**Keywords:** Choice of profession, primary school students, Syros, Cyclades, financial crisis, Greece (2016)

**Classification:** Labor and Demographic Economics

**Sophia Antonopoulou<sup>1</sup>**

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<sup>1</sup> Sophia Antonopoulou, French teacher at the primary school of Poseidonia (Syros-Cyclades-Greece). Address: Primary school Poseidonias, Syros, Cyclades, 84100, Greece Email: [kos201277@gmail.com](mailto:kos201277@gmail.com)

## **1. Introduction- Literature Review**

The selection of a profession is a process that has been the object of multiple theories, such as socio-economic ones- represented by Wills, which posit that the socio-economic context of an individual influences their subsequent choice of profession. At the same time, psychological theories attribute a greater significance on the individual and general theories such as Blau et al's (1956) argue that social, economic, biological and psychological factors are involved in an individual's choice of profession. Aligned with this theory is that of Holland (1985), according to which an individual's behaviour and choices are a function of the interaction between the environment and their personality.

According to Ginzberg et al. (1951), central to choosing a profession is the imaginative level and the simulation of professions during play-time. Influence from the family -vividly supported by Small and McClean (2002)-, identifying with the same-sex parent and establishment of male or female stereotypes are eminent, while later children's preferences might be affected by group dynamics. Additionally, Vamvoukas (1982) argues that during primary school studies, the motives behind the choice of a profession are characterised as very early/ and gradually concretise by adulthood. As far as both sexes are concerned, Creed and Patton (2003) believe that girls mature earlier with regard to their professional inclinations, which is further underpinned by the faster psycho-somatic development they exhibit compared to boys. In this theoretical framework, the study was conducted among primary school students of Syros, the capital of the island complex of Cyclades, at a time period when Greece is experiencing a most challenging financial crisis and most families on the island are involved in Maritime professions (seamen, boat mechanics), tourist professions (restaurants, cafeterias, small hotel units) and agricultural activities.

### **Objective**

The objective of the present study is to explore the choice of profession of 11 and 12-year-old students in Syros who were in the last two classes of primary school during 2015-2016. Additionally, through this study we examine the extent to which each gender is influenced by the crisis in Greece in 2016 and the employment status of both parents when expressing their professional aspirations.

### **Methodology & Sample**

The sample consists of 139 students of the last two classes of primary school, from 4 (out of a total of 9) primary schools in Syros (Cyclades) who were invited to participate in the research in the first two weeks of June 2016.

## 2. Data Collection Tool

The data collection tool used in the study was the questionnaire designed by the French teacher of the students which comprised of 7 questions, the first two of which concern the gender and class of the students, the 2<sup>nd</sup> pair concerns the employment status of their mother and father, the fifth question their professional aspirations (they were given the opportunity to mention more than 1), if they had already been shaped. The next question explored the motives which led to this particular choice of profession and finally, students were asked whether the crisis which Greece is experiencing at the moment is influencing their choice of their future profession. For the full questionnaire, please see Appendix 1.

## 3. Data collection process

The questionnaire presented was handed out to students during class and was answered within approximately 5 minutes. It goes without saying that all school principals had been informed and briefed-in in advance so as for permission to be granted for the purposes of the present research. It was clearly stated right from the start that their answers were anonymous and all queries that emerged were answered.

## 4. Findings

There were 139 participants in the study, of which 80 were girls (57.5%) and 59 were boys (42.5%) (Appendix 2).

Turning first to the girls' mothers, according to their 79 questionnaires, 60 out of 79 of them are employed while the remaining 19 either do not wish to work/cannot work, or they cannot find a job. With respect to their fathers, 75 out of 79 (95%) work and 4/79 (5%) do not (Appendix 4) either because they do not wish to/they cannot work or because they cannot find a job (3/4 [75%]). As regards their professional aspirations, students were allowed to express more than one, with 69/80 (86,25%) giving a plethora of answers which are listed in Appendix 5, whereas a mere 13.75% (11/80 students) answered that they are yet to decide their future profession. In the following question which concerns the motives behind their profession of choice (they could choose one or more) (Appendix 6), based on the 88 answers of the girls, 16 of them (18.81%) stated that money earned was a significant factor in their decision, 4/88 (4,5%) mentioned that prestige and fame of the profession contributed to their choice, 3/88 (3.4%) mentioned that they chose their profession following the advice of their parents, one student (1,1%) wants to follow the same profession as her parents while 64/88 (72.7%) state Other reasons. More specifically, 51/64 (79,68%) stated that they like the

profession they have chosen, 4/64 (6.25%) that they want to help people and animals through their profession, 1/64 (1.56%) that she wants to follow the same profession as a family member and an equal percentage that she wants to live with her family. Finally, in the question regarding the impact of crisis in Greece (2016) on choosing their future profession, 21/80 (26%) girls said that it did influence their choice, 55/80 (69%) stated that their choice was not affected by the circumstances, and 4/80 (5%) undecided because even though they were partly influenced by the crisis, they wanted to choose the profession they like (Appendix 7).

Turning next to the boys' mothers, according to their 59 questionnaires, 46 (78%) of them are employed while the remaining 13 either do not wish to work/cannot work, or they cannot find a job (3/13 [23%]). With respect to their fathers, 57 out of 59 (97%) work and 2/59 (3%) do not (Appendix 9) because they cannot find a job (2/2 [100%]). As regards their professional aspirations, students were allowed to express more than one, with 40/59 (67.80%) giving a plethora of answers which are listed in Appendix 10, whereas a mere 32.2% (19/59 students) answered that they are yet to decide their future profession. In the following question concerning the motives behind their profession of choice (they could choose one or more) (Appendix 11), based on the 62 answers of the boys, 22 of them (35.48%) stated that money earned was a significant factor in their decision, 9/62 (14.51%) mentioned that prestige and fame of the profession contributed to their choice, 2/62 (3.22%) mentioned that they chose their profession following the advice of their parents, while 21/62 (33.87%) stated Other reasons. More specifically, 15/21 (71.4%) stated that they like the profession they have chosen, 1/21 (4.76%) that they want to follow the same profession as a family member, 3/21 (14.28%) that they wish help people and animals through their profession, and another 4.76% provided their good performance at this job as support to their choice, and an equal percentage wanted to explore the world through their chosen profession. Finally, in the question regarding the impact of crisis in Greece (2016) on choosing their future profession, 21/59 (35.6%) boys said that it did influence their choice, 37/59 (62.7%) stated that their choice was not affected by the circumstances because they trust their determination and skills, and 1/59 (1.7%) remained undecided because even though he was partly influenced by the crisis, he wanted to choose the profession he likes (Appendix 12).

## **5. Conclusions**

Delving deeper into the findings for the girls, the majority of their mothers work and those who do not, few are those who cannot find a job. Respectively, the vast majority of fathers

work while of those who are unemployed; most cannot find a job due to the recession. As far as girls' professional aspirations are concerned, most of them expressed a wide range of professions, among which teacher, beautician, hair stylist and kindergarten teacher ranking first. Less popular were those of policewoman, journalist, decorator, painter, theologian, historian, accountant, musician, carpenter, oenologist, teacher of informatics, author, bank clerk, physiotherapist and photographer. With regard to the motives-criteria they used to choose their profession, a small percentage of the girls supported their choice with the money they will earn, while it can be suggested that glory, urge from the parents and their own profession only has a minimal effect on their decision. On the contrary, the majority mentioned their passion for the profession as central to their choice and a small percentage expressed their desire to love and support people and animals. As for the impact of the ongoing financial crisis in Greece (2016) on their professional aspirations, the study showed that just above a quarter of the girls are affected, while most of them remain uninfluenced and too few of them were partly influenced by the crisis without, nevertheless, being willing to change their aspirations.

As for the boys, little do their opinions differ from girls', based on their answers. In particular, the majority of their mothers work while few are those who cannot find a job. Similarly, the vast majority of their fathers are employed, with the exception of those who cannot find a job due to the recession. With regard to the professional aspirations expressed by two thirds of the students questioned, the range of answers was restricted to male-dominated professions, and mainly those of football players, while mechanics, coaches, bus drivers, gymnast and agronomist garnered less attention. Nevertheless, a third of the boys mentioned they still have not decided on their future profession. For those who have, money to be earned is the most important motive-criterion, followed by the love for their profession choice, the possibility to give back to the community and animals through their profession. Lastly, crisis in Greece 2016 influences just above a third of the participants, with the rest of the boys stating that, regardless of the situation in the country, they will succeed if they try because they really want to practice the profession they have chosen.

## **6. Suggestions- Implications**

Taking into consideration that there is at least one employed parent in each family of the students who participated in this research and that the majority of girls and two thirds of the boys have already expressed one or more profession preferences uninfluenced by the 2016 crisis in Greece, it is safe to argue that optimism is present in the 11-12-year-olds generation.

This is a generation that maintains its dreams and desires, sets goals and strives gradually to achieve them. Certainly, this generation might not be able to fully perceive the challenges and hardships to be faced by adults on average. It would, thus, be meaningful for the same students to fill out a similar questionnaire six years later, in order to examine whether their answers are differentiated from the profession choices expressed.

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**Appendix 1**  
**STUDENTS' QUESTIONNAIRE**

**Profession preferences of primary school students (last two classes) in Syros in Greece under crisis (2016)**

**Sex:** Boy/ Girl

**Class:** 5<sup>th</sup>/ 6<sup>th</sup> grade

**My mother works:** Yes/ No

If Yes, what does she do?

If not, is it because she does not want to work- she cannot work / because she cannot find a job (circle what applies)

**My father works:** Yes/ No

If Yes, what does he do?

If not, is it because he does not want to work- he cannot work / because he cannot find a job (circle what applies)

**Which profession would you like to practise in the future? (Complete the first answer or underline the second one)**

.....

- I have yet to decide my future profession

**Why did you choose this profession?** (Circle one or more answers)

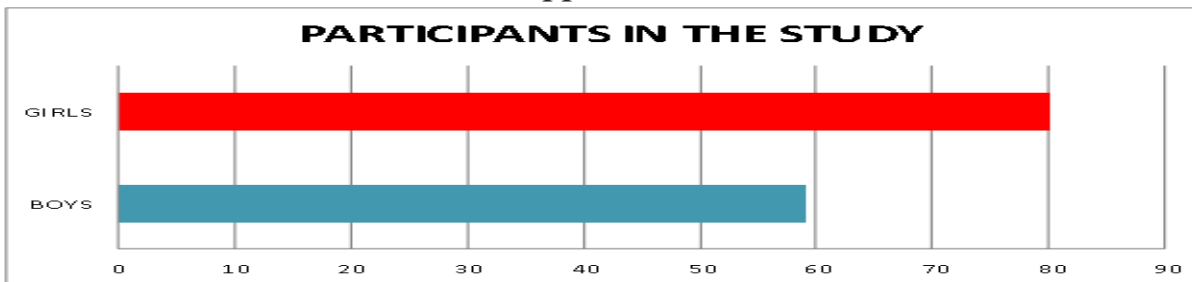
- a. money to be earned
- b. for the prestige/fame
- c. because my parents want me to
- d. because I want to follow my mother's/father's profession
- e. Other reason:

**Does the crisis our country has been experiencing over the past years influence your profession choice?**

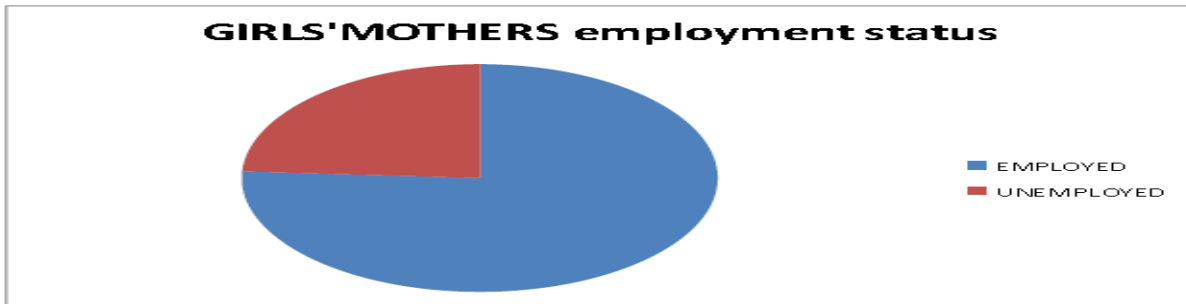
Yes No (Circle)

Briefly explain the answer you circled.

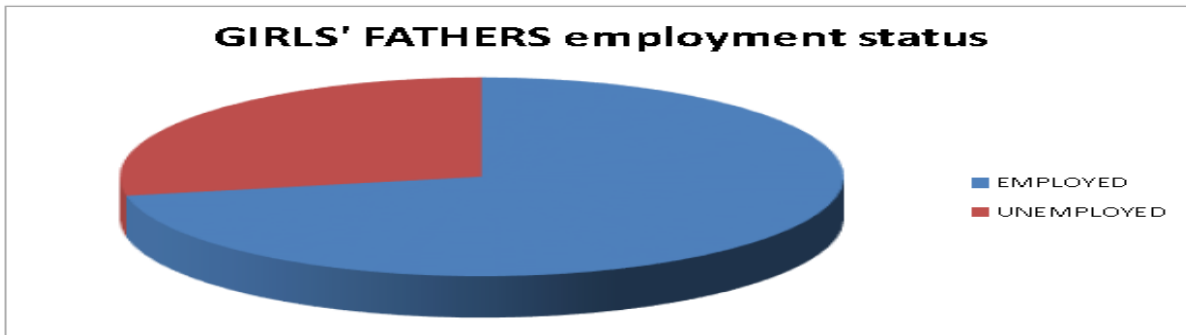
Appendix 2



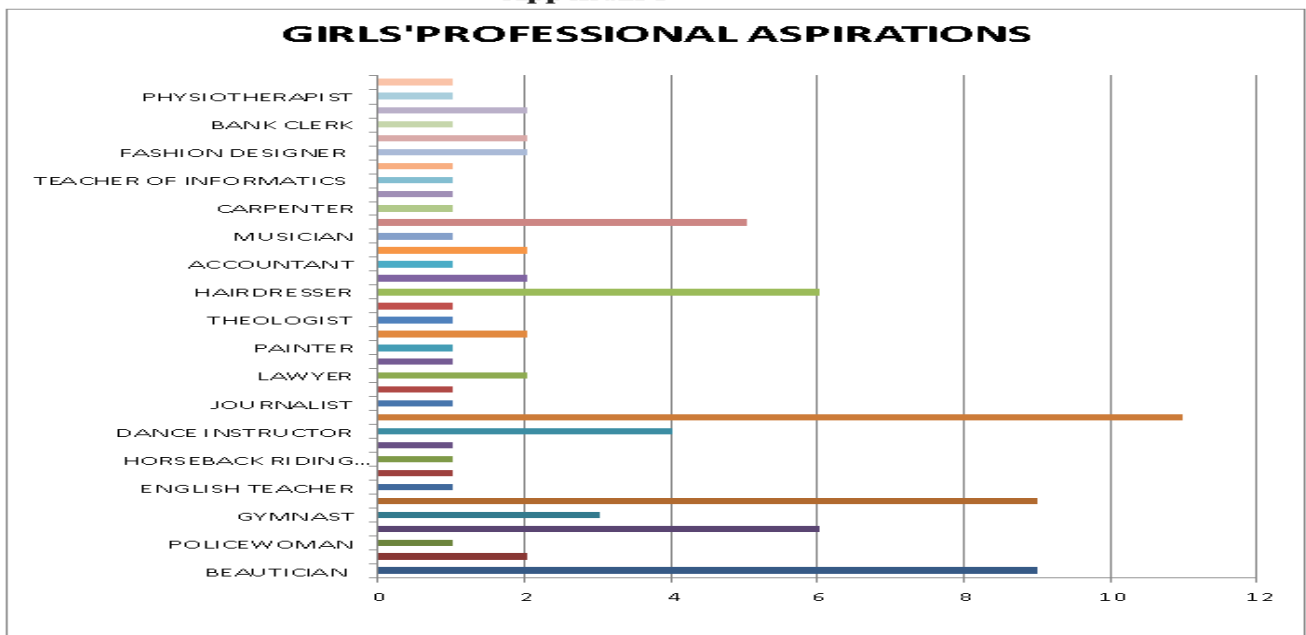
Appendix 3



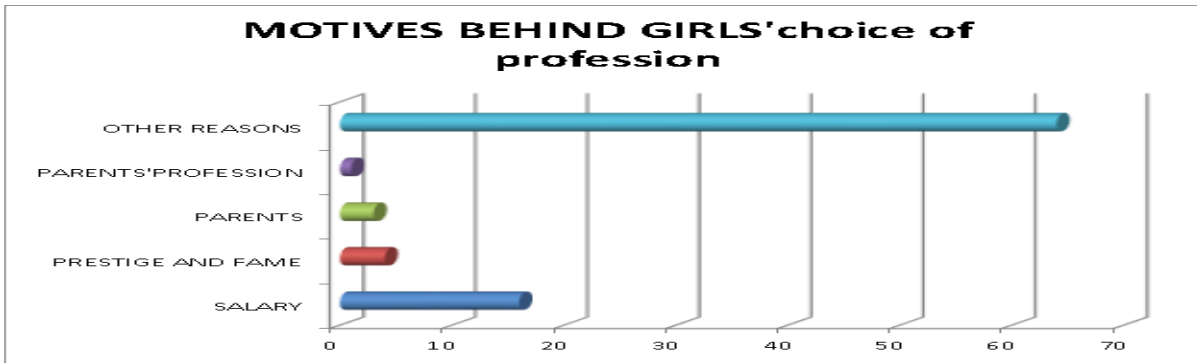
Appendix 4



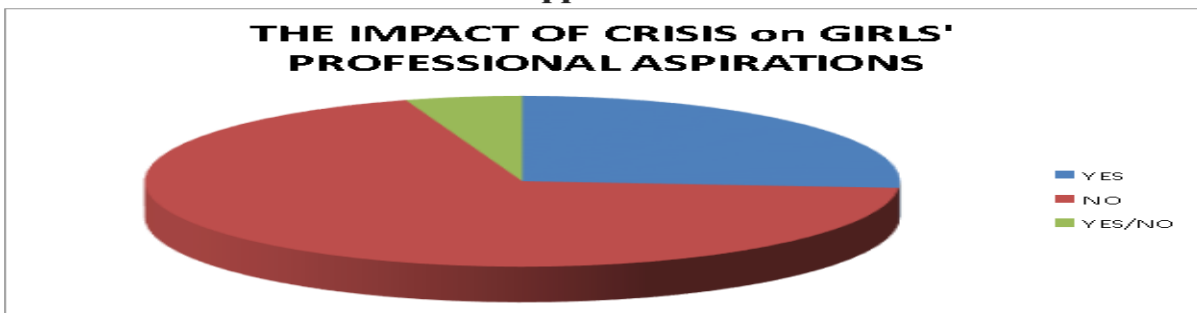
Appendix 5



Appendix 6



Appendix 7



Appendix 8



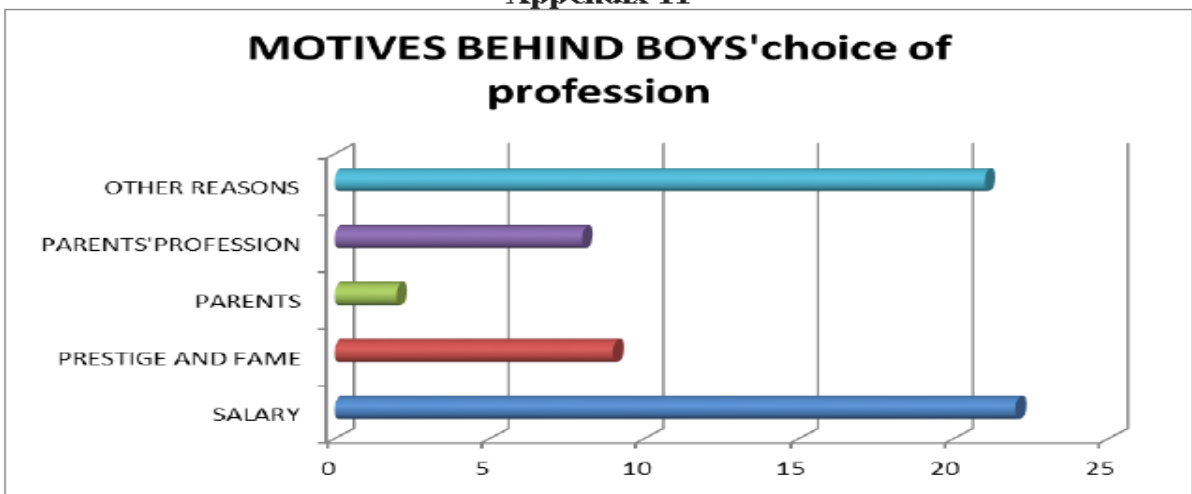
Appendix 9



Appendix 10



Appendix 11



Appendix 12



## **The influence of the economic crisis on health care and health systems in Greece**

### **Abstract**

The good socio-economic level were those who played an important role in the development of health systems and the improvement of health indicators. The existing data the base of OECD, show that while the United States have the largest per capita GDP, have the worst health indicators, while countries such as China, Cuba have achieved a high level of health compared with their per capita income. On the other hand the average life expectancy in Third World countries is 20-30 years less than that of Western Countries.

Taking into account only the GDP to assess the population health level is not a good practice. Indicators such as Gini, indicator SES (Socio-economic status) which evaluates income, profession, education indicate in variable ways the relationship of the individual to the economy.

### **Purpose**

The aim of this article is to study the impact of economic crisis on the performance of health systems.

### **Methods**

Data was collected through bibliography and internet search (Pub med, Medline, Google Scholar) 1990-2015. Greek and English articles were chosen which show the multilayer dimension of economic crisis in health systems. Bibliography review in diagram 1.

### **Discussion/conclusion**

General traits of the economic crisis is that it leads to uninsured labor, unemployment, reduction in income, job insecurity and ultimately poverty. As the level of health are linked to income, therefore the economic crisis has an effect on the health of citizens and the health systems.

**Key-words:** Economic crisis, economic crisis on health, health systems, Greece

**Themelidou Maria<sup>1</sup>**

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<sup>1</sup>Themelidou Maria, Health Visitor, Anticancer Oncological Hospital. St. Savas, E-mail: [mariathemel@gmail.com](mailto:mariathemel@gmail.com)

### **1. The influence of economic crisis on health care**

One of the areas which is most affected during an economic crisis, is employment. The unemployment rate shows greatly the course of the economy. In addition, the unemployment, job insecurity and the loss of income have significant health effects.

Job loss as a consequence brings mental disorders (restlessness, anxiety, depression) addiction and dependency problems in substances and non-adoption of healthy lifestyles by growing consumption of foods of low nutritional value, tobacco and alcohol and inability to deal with by the overburdened health services. (Stuckler et al, 2009)

The economic crisis and long-term unemployment leads many people to social exclusion and poverty, resulting in the risk of premature mortality and morbidity can be increased. This seemed to occur to persons belonging to minorities, immigrants and chronically mentally or physically diseases. (Van Doorslaer et.al.1997)

On the other hand there are various broad presenting the picture that in industrialized countries the economic crisis short-term has the effect of changing consumption patterns towards the adoption of a more healthy way of life and consequently the reduction of mortality. It seems that in times of economic growth are increasing the dangers to healthy habits, such as smoking and consumption of alcohol, while reducing the exercise and a healthy diet, resulting in an increase of obesity. Research results show that in times of economic crisis, the mortality is reduced, with the exception of suicides which appear to grow. The effects vary by gender age and cause and have a different sensitivity to the indicators used. (GDP, employment level) (Gertham&Ruhm 2006)

The economic crisis and bad consequences in the health, otherwise distributed in society, the people and families who are in a bad position at two times more risk of premature death and increased morbidity. This is because of the problems created in income, education, the medical care, housing and nutrition, which are acting together.(Bartley&Blane&Montgomery 1997)

### **2. The influence of economic crisis on health system**

Main pillars support sustainable health systems, is the reliable access to human capital and consumable resources. Securing these inputs requires financial resources for investment in buildings and equipment, for compensation of health personnel, for medicines and consumables. Most countries feel constant pressure because of rising costs and limited resources. (Mossialos&Dixon et al 2002)

In the midst of economic crisis, the health system is facing problems because of reduction in government spending on health due to the financial crunch and due to the interruption of the external financial assistance of the richest countries, which cover a large part of the funding for the health and which will cut back on their expenditure.

Deficits in the public sector and the unemployment engaged relentless pressure both to the budgets of insurance and in private health companies, which are experiencing liquidity problems. (Appleby 2008)

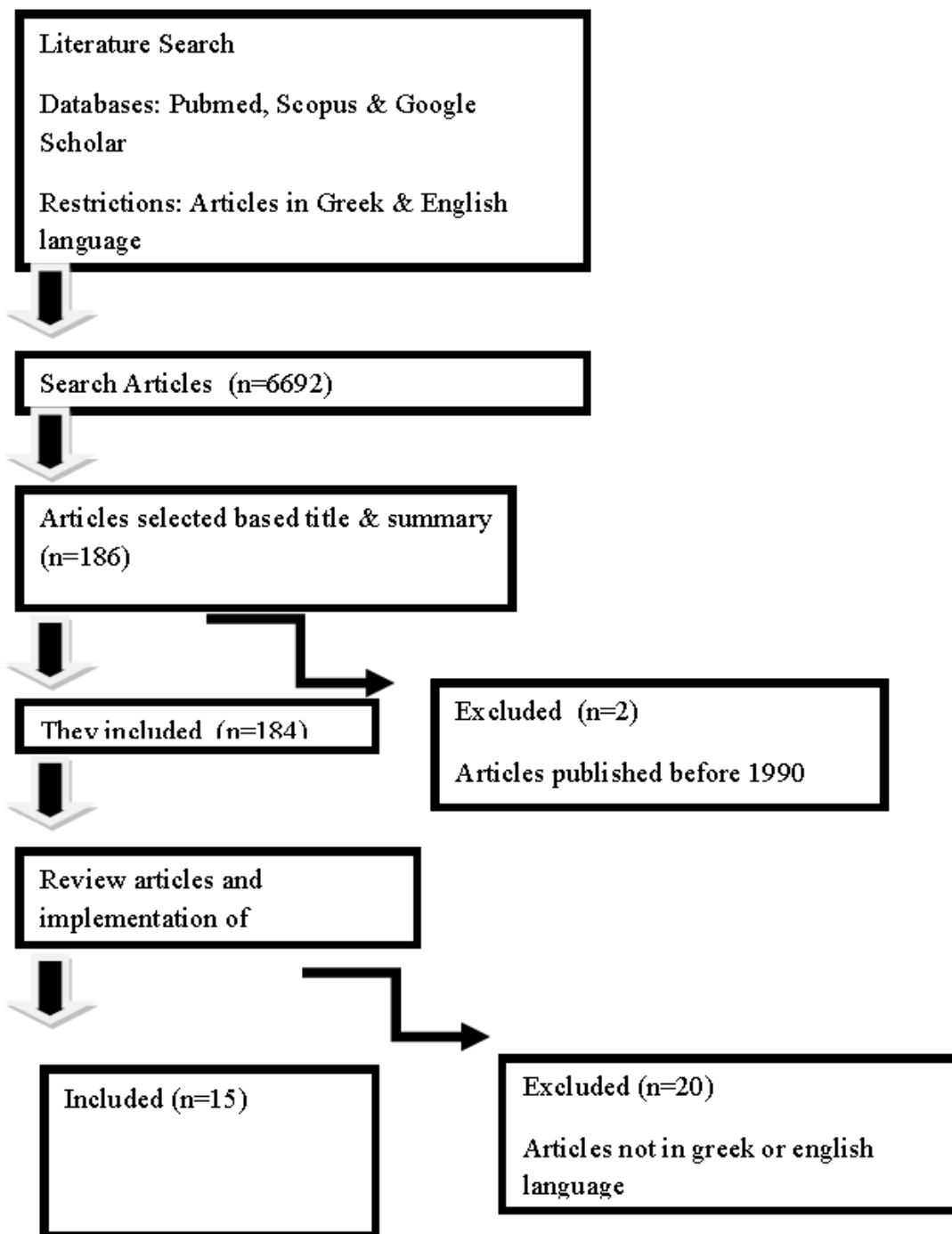
The report of the WHO « The Financial Crisis and Global Health» January 2009 confirms that if public budgets and household income are under pressure, the demand for public services is increased. The experience gained over the years, show that spending in the private sector tend to be reduced in an economic downturn since patients either defer care completely or switch from the private to the public sector if the treatment is available at a lower cost. If not ensure adequate financial support for public health care, the quality of services are likely to worsen. The budget reduction for health could prove problematic if the requirements for health care such as mental health increased during the economic downturn. The same report confirms that the health system is suffering due to increased demand for services mainly public character as patients go where their insurance cover is provided. (WHO 2009)

The issue of the economic crisis and the impact that has resulted in health systems a point of discussion in the OECD Health Committee in 2009 July. The report concentrated on the effects of the crisis in the financing of the health sector and one of the findings that came out was « Continued funding can help to the crisis » Proposes not affected public funds to finance the health negatively. (Liaropoulos, 2010) The health system will be developed without additional taxes to eliminate wasteful and in the context of a restructuring based on the organization and development of Primary Health Care improving the method of financing and compensation of health services, accounting and financial management of hospitals the development of structures and quality systems of service, the merger of several support services and better utilization and development of staff.([www.inhealthcare.gr](http://www.inhealthcare.gr))

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**Flow chart 1:** Articles sample selection for the systematic reviews



Source: Own elaboration

## **Culture, Tourism and Community Based University- the role of non-formal education in promoting Lifelong Learning, Training, Local Growth and Prosperity**

### **Abstract:**

The following paper addresses the founding of a life-long, non-typical university structure as a means of culture and tourism education, promotion and protections, in terms with sustainability. The methods that were used before suggesting the aforementioned proposal are data and case study review, SWOT analysis and qualitative data provided from Naxos. Taking all data into consideration, Naxos appears to be not only an island filled with abundant historical and cultural resources, but a cohesive community with strong motivation to learn as well. Therefore, founding a non-typical, university-based learning structure was deemed the most suitable proposal for local growth. A PESTEL Analysis indicated that this suggestion provides the Naxian community with advantages and obstacles yet the latter ones can be solved effectively with the appropriate intervention.

**Keywords:** Lifelong learning, non-formal education, non-typical education, community-based university, local growth

**Eirini Androulaki<sup>1\*</sup>, Ioanna Kalliopi Georgoudi<sup>2\*\*</sup>, Maria Margariti<sup>3</sup>, Mitropoulou Xristoula<sup>4</sup>, Mpakalou Paraskeui<sup>5</sup> and Eumorfia Papageorgiou<sup>6</sup>**

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<sup>1</sup> Corresponding Author: Eirini Androulaki, University of Athens, Department of Fine Arts, Athens Greece. E-mail address: [irini\\_androulaki@yahoo.com](mailto:irini_androulaki@yahoo.com)

<sup>2</sup> Corresponding Author: Ioanna Kalliopi Georgoudi, University of Crete, Department of Psychology, Rethymnon, Greece. E-mail address: [ioannageorgoudi@gmail.com](mailto:ioannageorgoudi@gmail.com)

<sup>3</sup> Maria Margariti, Aegean Univeristy, Department of Geography, Lesvos, Greece.

<sup>4</sup> Mitropoulou Xristoula, National Kapodistrian University of Athens, Department of Philosophy, Psychology and Education, Athens Greece

<sup>5</sup> Mpakalou Paraskeui, Technical University of Missolonghi, Department of Computing in Management and Finance, Missolonghi, Greece

<sup>6</sup> Eumorfia Papageorgiou, Open Univeristy of Cyprus, Department of Public Health Management, Nicosia, Cyprus

## **1. Introduction**

### **1.1 Culture-Definition and Dynamics**

Culture can be defined as “the sum of material, spiritual, technical accomplishments coming from the creative forces and human skills and are expressed historically in forms of organized social actions, as well as in the creation of values”. The relationship between culture and tourism is dynamic, being both beneficial and harmful (Gate to Greek Language, [www.greek-language.gr](http://www.greek-language.gr)).

The advantages tourism has to offer in cultural and social growth are the immediate increase of income – mainly during the summer time- , the development of activities related to cultural heritage, new job opportunities and professions, as well as structural and policy changes. The need to serve tourists and withstand larger population movements every summer has led local residents to enhance their products and service quality, strengthen their cultural identity and promote it as social and cultural capital.

On the other hand, the interaction with foreign culture schemas may hinder the protection of one’s personal, social and cultural identity. The main issue emerging from this fact is the dissolution of social bonds, in addition to commercialization of monuments and history. These facts can easily lead local residents and authorities to sacrifice historical, social and environmental resources in order to satisfy the overwhelming population movements and needs.

Culture and tourism can have an essential impact on education and via versa, thereby creating a society and economy of knowledge that will create innovative products, services and activities that will promote learning processes related to historical heritage and the embrace of the individual and cultural capital as an entity.

This realization makes education in all forms and levels not only important, but necessary for the survival of the environmental, social and cultural orientation that one place or certain group of people share with each other.

### **1.2 Community-based learning- History and Methodology**

The first life-long learning, community universities were established three hundred years ago, making their first appearances in Scandinavia during the 1850s and in England with the University Extension movement. The purpose of these universities was to educate the masses, despite the socio-economical status. These two movements influenced the German People’s University that made its appearance during the 19<sup>th</sup> century. As the aforementioned two establishments before, this university aim to a massive, economically and socially unbiased education that targeted the lower classes and labourers. It became a very popular means of

education from 1900 until 1933, when the Nazi party took over and disbanded the university. It regained its status and reopened in 1945. German People's University became the role model for contemporary life-long learning, non-typical procedures. The need for adult learning and education, as well as the necessity of enhancing apprenticeship were grasped by the institutions of European Union and incorporated them to the union's policies. It is stated in the White Bible– the very first formal manuscript about education in the EU- that “the future of the European Union, its prosperity, will be an outcome of the union's ability to move forward into the society of knowledge. We ought to possess the means that will harvest and grow lifelong learning and training , in order to build a generalized and permanent access to all kinds of knowledge” ( White Bible,1995,p16-17).

The methodology being followed in institutions like community universities is based on lifelong learning and adult education principles. This form of education is not solely based on provided seminars or lectures, but it offers a structure academic course corpus that targets to provide holistic knowledge and information on a variety of subjects. It usually combines simplified learning procedures- so a great mass of people can attend and comprehend the subject in presentation- and advanced lectures that aim to display recent findings and research on a cognitive field. (<http://www.lpp.gr/history/>)

### **1.3 Lifelong and community-based learning in Greece**

The Greek educational system, as far as non-typical learning methods are concerned, is evolving with a slow pace. Consecutively, a large majority of the population is left with no further education and academic based learning opportunities. This gap is mainly covered by private, NGO and nongovernmental organizations that provide citizens with non-typical, experiential learning. In Greece, people's universities are marked with proliferation on their numbers in many places. Athens, as being the capital, has a big variety of mostly private structures that require a certain amount of subscription. Booze cooperative, Free University and Civil Academy are three of the many examples that the capital has to offer to the public. The first one, Booze cooperative is a community of artists that give out seminars about theatre, art, and cinema and produce the so-called Art factories that connects more than two hundred artistic communities around the world (<http://www.boozecooperativa.com/>). The second one, Free University, is an initiative of the Education Association in cooperation with Georgios Mpampiniotis, a Glossology professor in the University of Athens. It focuses on humanities, such as Glossology, philosophy, dramatology and archaeology (<http://www.stoabibliou.gr/>). Finally, another facility is Civil Academy, or else Community University, has spread to other cities such as Thessaloniki and Trikala. It is an innovative

learning experience that focuses on Humanities, Psychology and Counseling, structured with seminars, personal development groups and cultural events

(<http://www.trikalavoice.gr/news/2011/12/10/anoixto-laiko-panepistimio-idryetai-sta-trikala>).

## 2. Statistics

### 2.1 Statistics about Learning

According to Eurostat (2014), the educational participation ratio in the EU has risen from 9, 1% in 2009 to 11,6% in 2014. On the contrary, the ratio has dropped from 3, 3 in 2009 to 2, and 8% in 2014 in Greece. ( figure 1). The main factors that affect attendance are family responsibilities (39, 3%) and the high educational cost 28%, Eurostat, 2014, figure 2). Non-typical education accounts for the 15, 9% of learning in Greece. (Eurostat, 2014, figure 3).

The population group that participates in educational activities are employees between 25-39 years old with 15,5%. However, this ratio is deemed low as the 84,5% in this group does not participate in any learning procedures. The same results can be found for the next age's group (Hellenic Statistical Authority, 2012, Table 1 and Table 2).

**Figure 1:** Population (Male & Female) (Source: Eurostat)

	Total		Male		Female	
	2009	2014	2009	2014	2009	2014
EU-28 (*)	9.1	10.7	8.2	9.8	10.0	11.6
Belgium	6.8	7.1	6.4	6.7	7.2	7.6
Bulgaria (*)	1.4	1.8	1.3	1.6	1.5	2.0
Czech Republic (*)	6.8	9.3	6.5	9.1	7.0	9.6
Denmark	31.2	31.7	25.3	26.0	37.2	37.5
Germany (*)	7.8	7.9	7.8	8.0	7.7	7.8
Estonia	10.5	11.5	7.5	9.2	13.2	13.7
Ireland	6.3	6.7	5.6	6.0	7.0	7.3
Greece	3.3	3.0	3.3	3.1	3.3	2.8
Spain (*)	10.6	9.8	9.6	9.2	11.6	10.5
France (*)	5.7	18.6	5.3	16.1	6.1	21.0
Croatia	2.6	2.5	2.8	2.4	2.5	2.6
Italy	6.0	8.0	5.6	7.7	6.3	8.3
Cyprus	7.8	6.9	7.7	6.3	7.8	7.3
Latvia	5.4	5.5	3.5	4.8	7.0	6.2
Lithuania	4.4	5.0	3.4	4.5	5.2	5.4
Luxembourg	13.4	14.0	13.4	13.4	13.5	14.5
Hungary	2.7	3.2	2.4	2.9	3.0	3.5
Malta	6.1	7.1	6.0	6.8	6.2	7.5
Netherlands (*)	17.0	17.8	16.5	17.4	17.5	18.2
Austria	13.8	14.2	12.8	13.2	14.8	15.3
Poland (*)	4.7	4.0	4.3	3.6	5.1	4.3
Portugal (*)	6.0	9.3	5.6	8.9	6.4	9.6
Romania (*)	1.5	1.5	1.3	1.6	1.6	1.3
Slovenia	14.6	11.9	12.9	10.4	16.4	13.6
Slovakia (*)	2.8	3.0	2.2	2.8	3.3	3.1
Finland	22.1	25.1	18.5	21.6	25.9	28.8
Sweden	22.2	28.9	16.1	22.1	28.5	36.0
United Kingdom	20.1	15.8	16.7	14.2	23.3	17.4
Iceland	25.1	25.9	20.4	21.7	30.0	30.2
Norway	18.1	19.7	16.8	18.1	19.5	21.4
Switzerland	23.9	31.7	22.8	32.2	25.0	31.2
FYR of Macedonia	3.3	3.1	3.2	3.0	3.4	3.2
Turkey (*)	2.3	5.0	2.4	5.1	2.1	4.9

(\*) Refer to the internet metadata file ([http://ec.europa.eu/eurostat/cache/metadata/en/rmg\\_esms.htm](http://ec.europa.eu/eurostat/cache/metadata/en/rmg_esms.htm)).

(\*) Break in series.

Source: Eurostat (online data code: rmg\_ifs\_01)

**Figure 2: Lifelong learning participation ratio in EU and per country, (Source: Eurostat)**

	Health or age	None within reachable distance (*)	No time due to family	Did not have the pre-requisites (*)	Too expensive, could not afford	Lack of employer /public service support	Conflict with work schedule	Did not need it for work	Did not need it for personal reasons	Could not find what was wanted (*)	No access to a computer or internet (for distance learning) (*)
<b>EU-27</b>	<b>8.5</b>	<b>6.1</b>	<b>20.9</b>	<b>4.2</b>	<b>13.2</b>	<b>8.0</b>	<b>18.0</b>	<b>50.0</b>	<b>14.6</b>	<b>8.6</b>	<b>1.6</b>
Belgium	6.4	3.6	10.3	2.6	4.7	4.0	13.0	43.7	3.9	2.9	0.5
Bulgaria	3.1	3.8	6.2	2.4	8.9	1.9	7.2	88.8	2.8	2.2	1.4
Czech Republic	7.1	3.7	22.1	2.1	7.6	4.9	11.1	41.6	16.3	7.9	1.2
Denmark	7.0	2.2	12.0	2.0	14.4	10.7	16.8	..	5.5	13.0	..
Germany	12.1	5.6	23.0	7.0	13.3	10.6	21.2	76.4	19.0	10.0	1.8
Estonia	16.3	14.0	14.6	1.4	22.0	4.8	24.0	..	15.9	15.4	2.8
Ireland	3.1	2.4	28.4	3.1	8.8	2.0	6.7	6.0	4.8	2.7	0.8
Greece	18.3	10.4	39.3	10.4	28.4	5.7	23.2	42.2	21.7	21.3	2.5
Spain	5.6	2.3	30.7	3.2	6.6	7.5	20.5	11.5	21.6	4.7	0.6
France	5.1	6.3	6.5	4.5	11.6	14.1	15.7	78.6	5.8	9.8	1.9
Croatia	..	..	..	..	..	..	..	..	..	..	..
Italy	8.7	10.3	31.8	5.1	22.2	4.8	25.0	14.8	17.0	13.9	3.0
Cyprus	5.7	5.0	36.3	2.4	15.7	3.9	19.3	69.1	10.2	6.2	..
Latvia	3.8	6.8	9.9	4.9	19.3	7.3	15.3	87.7	4.6	9.4	2.3
Lithuania	14.3	3.9	9.4	4.3	19.0	2.0	20.0	68.4	16.4	2.8	1.3
Luxembourg	6.3	7.3	21.4	2.8	12.8	8.9	24.1	81.7	10.0	11.6	..
Hungary	4.6	5.1	6.7	2.3	11.4	4.1	8.2	87.3	1.6	2.0	1.3
Malta	4.4	1.4	17.7	1.6	6.9	2.3	19.1	..	7.9	1.9	..
Netherlands	16.2	11.7	37.3	4.3	19.5	12.0	28.4	51.9	19.9	15.7	2.6
Austria	5.2	8.0	13.2	3.0	7.4	5.1	12.2	..	4.9	5.3	1.6
Poland	11.6	2.9	21.6	1.8	15.5	5.2	11.8	60.1	13.6	5.7	0.6
Portugal	3.8	6.2	5.0	0.9	5.5	1.3	1.6	2.9	24.4	..	..
Romania	7.5	28.1	30.9	12.9	52.5	30.0	34.7	91.3	19.2	6.0	10.4
Slovenia	6.9	4.2	16.1	1.4	12.6	3.0	13.0	61.8	27.4	6.8	..
Slovakia	6.2	1.4	6.0	0.7	4.7	1.8	4.9	30.0	4.6	2.0	0.5
Finland	12.8	15.9	21.7	4.7	11.1	10.6	31.1	39.8	12.1	13.5	1.8
Sweden	8.1	7.9	18.4	4.2	10.2	8.6	16.6	63.3	26.0	9.2	..
United Kingdom	..	..	..	..	..	..	..	..	..	..	..
Norway	6.7	9.0	14.2	6.8	9.4	9.6	17.1	34.5	6.1	8.1	2.2
Switzerland	18.5	15.8	34.6	8.0	31.8	19.3	39.2	70.4	71.5	22.5	4.8
Serbia	5.4	3.2	12.3	0.6	18.5	1.7	6.3	77.9	3.8	2.9	..

(\*) Multiple answers allowed. Refer to the internet metadata file ([http://ec.europa.eu/eurostat/cache/metadata/en/trng\\_aes\\_esms.htm](http://ec.europa.eu/eurostat/cache/metadata/en/trng_aes_esms.htm)).

(\*) Malta: unreliable.

(\*) Estonia, Malta, Slovenia, Slovakia and Serbia: unreliable.

(\*) Romania: unreliable.

(\*) Belgium and Slovakia: unreliable.

Source: Eurostat (online data code: trng\_aes\_176)

**Figure 3: Lifelong learning hindering factors, (Source: Eurostat)**

	Employer	Non-formal education & training institution	Formal education institution (*)	Commercial institution where education & training is not main activity (*)	Employers' organisation, chamber of commerce (*)	Non-commercial institution (e.g. library) (*)	Non-profit association (*)	Individual (*)	Trade union (*)	Other (*)
<b>EU-27</b>	<b>32.0</b>	<b>17.7</b>	<b>9.8</b>	<b>10.9</b>	<b>3.2</b>	<b>5.7</b>	<b>5.9</b>	<b>5.1</b>	<b>1.0</b>	<b>4.9</b>
Belgium	38.5	7.7	13.6	10.3	2.3	6.7	9.7	3.5	0.7	..
Bulgaria	71.8	11.3	2.5	3.9	2.3	5.3	..	1.3	..	..
Czech Republic	40.7	32.6	9.1	3.4	1.3	2.0	1.5	7.1	..	1.6
Denmark	33.3	7.5	13.6	12.2	1.8	3.0	2.1	1.7	7.2	12.3
Germany	28.2	14.3	16.8	17.0	..	5.2	3.0	7.7	0.9	4.2
Estonia	7.4	9.9	27.6	25.2	1.3	5.4	2.9	2.3	6.1	6.0
Ireland	16.6	11.1	12.4	4.2	2.0	1.6	2.4	1.5	..	2.0
Greece	19.2	15.9	8.4	6.3	..	..	6.3	13.1	..	19.0
Spain	14.4	13.5	9.5	16.1	6.9	22.4	5.9	3.4	3.8	..
France	33.4	23.4	2.7	6.8	1.6	3.7	14.3	7.5	0.8	4.1
Croatia	..	..	..	..	..	..	..	..	..	..
Italy	31.7	11.1	11.0	8.0	8.0	7.7	4.9	3.6	..	13.3
Cyprus	23.6	22.2	7.7	14.7	4.8	15.5	3.9	6.1	..	..
Latvia	41.5	22.7	10.9	9.0	2.9	1.2	1.9	4.8	..	4.5
Lithuania	10.4	25.3	29.9	7.1	9.4	2.1	..	8.9	..	2.4
Luxembourg	23.0	15.6	9.0	10.5	6.1	4.1	6.7	3.3	1.2	17.0
Hungary	60.3	12.9	3.7	4.5	7.7	2.7	3.0	4.4	..	0.6
Malta	36.7	17.7	18.7	8.1	2.6	6.2	5.7	3.9	..	..
Netherlands	35.1	17.5	9.6	12.6	2.1	3.5	5.4	4.4	0.8	6.0
Austria	26.9	25.3	12.2	7.2	3.7	2.5	3.1	3.7	1.4	12.2
Poland	16.8	53.6	11.9	7.9	1.2	1.5	2.4	1.7	..	2.4
Portugal	46.6	18.6	7.1	7.0	2.2	2.8	5.2	1.9	1.0	7.4
Romania	39.9	35.4	13.6	2.4	..	..	..	..	..	..
Slovenia	19.5	45.7	11.3	3.4	5.9	4.3	5.6	1.7	..	2.6
Slovakia	47.5	25.2	11.0	7.8	1.7	1.3	1.2	2.9	..	1.4
Finland	44.1	8.9	20.4	5.2	1.0	2.8	10.1	1.3	1.8	4.0
Sweden	30.1	10.5	7.5	25.1	3.9	9.0	3.9	3.1	1.3	4.8
United Kingdom	44.3	10.7	..	..	7.3	1.6	2.1	3.4	..	..
Norway	36.7	11.1	8.4	17.3	6.4	..	4.9	3.0	2.7	7.4
Switzerland	27.8	17.8	11.0	11.2	5.9	3.8	6.6	7.9	0.9	5.9
Serbia	23.0	26.3	16.7	..	3.0	..	2.3	..	..	10.5

(\*) Refer to the internet metadata file ([http://ec.europa.eu/eurostat/cache/metadata/en/trng\\_aes\\_esms.htm](http://ec.europa.eu/eurostat/cache/metadata/en/trng_aes_esms.htm)).

(\*) Bulgaria and Greece: low reliability.

(\*) Greece and Romania: low reliability.

(\*) Bulgaria, Estonia, Ireland, Malta, Slovakia, Finland and Serbia: low reliability.

(\*) Ireland, Latvia, Lithuania, Slovakia and the United Kingdom: low reliability.

(\*) Greece, Latvia, Slovakia, the United Kingdom and Serbia: low reliability.

(\*) Bulgaria, Ireland, Latvia, Slovenia, Finland and the United Kingdom: low reliability.

(\*) Belgium, Germany, Luxembourg and the Netherlands: low reliability.

(\*) Lithuania, Hungary and Slovakia: low reliability.

Source: Eurostat (online data code: trng\_aes\_170)

As far as district is concerned, Attica has the highest ratio (13,7%), followed by the South Aegean (7,2 %). This is an achievement provided the isolation Islandic complexes face due to lack of regular ship schedules (Grullaki, 2003. Hellenic Statistical Authority, 2012 Table 3).

## 2.2 Statistics about culture

According to Eurostat in 2014, in the culture section work about 6.000.00 people, making up for the 3% of all EU employees. This sum consists mostly of graduate human resource (6 to 10) and the majority can be found in Luxemburg (5, 2%). In Greece, the employment ratio in the cultural sector is 2, 3 % (Eurostat, 2016). Older data have shown that the GDP amount that account for cultural activities reached 645 billion euro ( about 2,3% of the EU GDP) with the growth paces rising to 12,3% (Eurostat,2003).

According to Fischer (2013), the amount that was spent in Greece for the conservation, growth and improvement of the national cultural industry applied for the 2, 4% of the whole EU support funds in Greece from 2007 to 2013. Consecutively, the cultural sector in Greece have seen growth of 33, 1%. The monuments that absorb most of the funds are the museums, with the majority of money being spent on equipment (Hellenic Statistical Authority, 2012 Tables 4-7).

**Table 4:** Participation in Learning Activities per Age and Occupation Status, (Source: Eurostat)

		Did not participate in formal educational system		Participated in formal educational system activities	
		Population	Ratio%	Population	Ratio %
25 - 34 years old	Employed	831.144	94,9%	40.093	5,7%
	Unemployed	375.651	94,5%	21.815	5,8%
	Non-active	129.977	72,4%	49.500	27,6%
	Did not respond	9.926	94,3%	1.645	15,7%
35 - 49 years old	Employed	1.639.130	99,6%	23.979	1,4%
	Unemployed	461.652	99,5%	2.551	0,6%
	Non-active	204.675	99,0%	3.020	1,0%
	Did not respond	25.489	95,1%	1.313	4,9%
50 - 64 years old	Employed	937.758	99,3%	7.046	0,7%
	Unemployed	185.494	99,8%	310	0,2%
	Non-active	984.138	99,7%	2.528	0,3%
	Did not respond	16.174	100,0%	0	0,0%
All ages	Employed	3.409.033	97,9%	76.017	2,2%
	Unemployed	1.022.997	97,6%	24.691	2,4%
	Non-active	1.409.700	96,2%	55.100	3,9%
	Did not respond	50.469	94,5%	2.959	5,9%
<b>Summary</b>		<b>6.890.289</b>	<b>97,4%</b>	<b>158.766</b>	<b>2,6%</b>

**Table 5:** Non-Formal Educational System Activities which participants prefer for Professional reasons, (Source: Eurostat)

Men	80,3%
Women	64,5%
25 - 34 years old	66,8%
35 - 49 years old	76,2%
50 - 64 years old	64,5%
Employed	79,5%
Unemployed	51,3%
Non-active	14,5%
Primary	59,6%
Secondary	65,7%
Higher	76,0%
Summary	71,2%

**Table 6:** Participation in Educational Activities per District and Gender, (Source: Eurostat)

		Did not participate in formal educational system activities		Participated in formal educational system activities		Did not participate in non-formal educational system activities		Participated in non-formal educational system activities	
		Population	Ratio%	Population	Ratio%	Population	Ratio%	Population	Ratio%
Ionian Islands	Men	61.503	100,0%	0	0,0%	60.791	98,8%	712	1,2%
	Women	57.716	94,9%	3.083	5,1%	59.783	98,3%	1.016	1,7%
	Summary	119.219	97,5%	3.083	2,5%	120.574	98,6%	1.728	1,4%
Attica	Men	1.076.880	96,4%	40.728	3,6%	990.831	88,7%	126.777	11,3%
	Women	1.116.053	97,0%	33.998	3,0%	986.630	84,1%	183.422	15,9%
	Summary	2.192.933	96,7%	74.726	3,3%	1.957.461	86,3%	310.199	13,7%
Northern Aegean	Men	56.640	100,0%	0	0,0%	56.640	100,0%	0	0,0%
	Women	46.597	99,1%	417	0,9%	46.784	97,4%	1.229	2,6%
	Summary	103.237	99,6%	417	0,4%	102.425	98,9%	1.229	1,2%
Southern Aegean	Men	83.956	98,3%	1.476	1,7%	81.003	94,8%	4.429	5,2%
	Women	73.308	95,1%	3.782	4,9%	69.802	90,5%	7.286	9,5%
	Summary	157.263	96,8%	5.258	3,2%	150.805	92,8%	11.716	7,2%
Crete	Men	160.423	98,1%	3.058	1,9%	148.463	90,8%	15.028	9,2%
	Women	149.165	97,5%	3.796	2,5%	140.787	92,0%	12.174	8,0%
	Summary	309.589	97,8%	6.854	2,2%	289.241	91,4%	27.202	8,8%

**Table 7:** Antiquities Research on Preservation Costs in 2012, (Source: Eurostat)

Monument Category	Cost summary (columns 3+8)	Completed projects ( 1)				
		Summary (columns 4+5+6+7)	Construction	Expansion	Repair, & improvement	Function, equipment (3)
1	2	3	4	5	6	7
<b>Museums</b>	<b>21.957.601</b>	<b>7.131.125</b>	<b>0</b>	<b>44.448</b>	<b>1.731.298</b>	<b>5.355.379</b>
<b>Archaeological Collections</b>	<b>201.995</b>	<b>168.290</b>	<b>0</b>	<b>0</b>	<b>98.000</b>	<b>70.290</b>
<b>Guard room</b>	<b>117.579</b>	<b>87.833</b>	<b>0</b>	<b>0</b>	<b>32.965</b>	<b>54.868</b>
<b>Buildings</b>	<b>279.535</b>	<b>126.535</b>	<b>0</b>	<b>0</b>	<b>61.638</b>	<b>64.897</b>
<b>Cultural Facilities (2)</b>	<b>398.558</b>	<b>180.998</b>	<b>0</b>	<b>36.448</b>	<b>56.654</b>	<b>87.896</b>
<b>Summary</b>	<b>22.693.030</b>	<b>7.619.313</b>	<b>0</b>	<b>44.448</b>	<b>1.944.503</b>	<b>5.630.362</b>

(1). Salaries , wages and material cost are included

(2).Cultural centres, theatres etc.

(3).Stairs. seats. furniture and tools are included

### 3. Case study- History, Resources and the Current situation in Naxos

#### 3.1 History- Findings

Naxian history begins in the Neolithic Period, when the Protocycladic civilization appeared around 500 B.C and its high peak around 300 B.C. Many of the findings of this era are preserved in the area of Grotta, in the Filoti village and elsewhere. Many important findings of the Copper Age are exhibited in the Archaeological Museum of Naxos and in the Archeological Museum of Apeiranthos. The Archaeological Museum of Naxos owns the second biggest collection of Cycladian artifacts after the Archaeological Museum of Cycladian Art in Athens. Remnants of the Mycenaean Era in Naxos can be found in the Epitopian Museum in the Grotta area that is located in Hora. Visitors can walk through the excavated ruins of walls, houses of this period.

During 7<sup>th</sup> -6<sup>th</sup> century B.C., the island was habituated by Ions that constructed some of the most important monuments. In Hora, the monument of Portara, the big marble gate located in the small rocky island Palatia, is what remains of the Delian Apollo's temple, that was being built this era, yet it was never completed. Another monument is the reconstructed temple of Demeter close to Sangri village. The Naxian Sphinx is characterized as one of the most imposing monuments of Naxos and it's preserved and protected in the Delphi Archeological Museum. A replica of the statue resides outside of the Municipality. Last but

not least, the giant Kouros of the 10, 45 meters in Apollonas. During the byzantine era, many churches were built across the island, with some dating from the 7<sup>th</sup> to the 15<sup>th</sup> century A.D. The Tragaia valley holds the largest number of byzantine churches.

(<https://el.wikipedia.org/wiki/%CE%9D%CE%AC%CE%BE%CE%BF%CF%82>).

In 1207, Naxos was passed on the hands of the Sanudian Dynasty. Specifically, the authority and political power was given to Marko Sanudo, hence the beginning of the Naxian Duchy. The Venetian control over the island will last for 3 and half centuries, until the beginning of the 19<sup>th</sup> century. The system established by the Sanudian Dynasty was a feudal one. Monuments of this era are the Naxian Castle in Hora and the remaining towers around the island. After the dissolution of Santzaki, the Ottoman ruling district in the Aegean, Naxos was organized and divided into three communities. The first one was the Castle community, where descendants of Venetian royal families reside. The second one was the Bourgos Community, where the uprising urban class lived and the third one, the Rural Community, based in the many villages across the island.

During the 17<sup>th</sup> century, Naxians turned their trade to Asia Minor and Istanbul. Cargo ships transported products from Naxos such as emery, food supplies, and returned with carpets, fabrics, cotton, roof tiles and wood. In the concept of these merchandised exchanges with Asia Minor, a good number of Naxians was concentrated in Istanbul and Smyrna. To be more specific, the Naxians residing in Smyrna worked as barrel makers, wine makers and created many labour associations there. Via these associations, they realized many donations to Naxos. After the destruction of Asia Minor in 1922 and the population exchange in 1923-1924, many Asia Minor Greeks came to Naxos as refugees and stayed in Hora, Koronos and in many other locations. (<https://www.wikipedia.org> ).

### **3.2 Naxian Heritage- Monuments and Museums**

Naxos has around 21 towers and castles. Some of the most characteristic are : Prantounas Tower in Eggares, Dellarokas Tower in Potamia, Mpelonias Tower, Sanudo Tower in Melanes, Mparozzi Tower in Sangri, Mpardanis Tower in Apeiranthos. Naxos has more than 9 museums with the most prominent being the Archaeological Museum in Ano Poli, the Domus Della Rocca-Barozzi inside the Castle in Hora, the Archaeological Museum of Apeiranthos.

The most important and highly- visited sights are: Portara , the marble gate to the ruins of the Delian Apollo temple in Palatia, the Mycenaean ruins in Grotta, „the Venetian Castle , in which the Ursulines School was founded, the Sanudo Tower, the Crispi Tower, the

temple dedicated to Demeter in Sangri, the Panormo Castle and the Jesuits Palace outside of Melanes, in Kalamitsia (<http://www.mynaxos.gr/naxos/monuments-and-museums/>, [http://www.naxos-tours.gr/what-to-see/historical\\_moments/](http://www.naxos-tours.gr/what-to-see/historical_moments/)).

### **3.3 Natural Resources**

The metals that one can find in Naxos are marble, granite and emery the last one is found in Koronos and Apeiranthos. It is extremely rare as Naxos is the only place in the world that has emery deposits. Naxians try to mine this metal and in 1930s they created an overhead system of mining.

### **3.4 Traditional Arts**

#### **Weaving**

Weaving shows great development in the villages, though still in an amateur level. There are two weaving workshops registered in the Trade Center of Cyclades, one in central Naxos and one in Apeiranthos.

#### **Pottery**

With the touristic growth, pottery shows great potential of interest and employment during the last years. In the municipality of Naxos there are three workshops and three in Koronos, Xalki and Damarionas Community respectively.

#### **Wood crafting**

Wood crafting can also be further developed. However, there is only one workshop active in Xalki Community.

As it can be derived from the aforementioned, due to the touristic growth, many traditional art workshops have flourished that relate to arts such as weaving, woodcraft, wood/fabric/pebble painting, pottery and jewel making ( Koutelieri, 2011).

Many other forms of traditional arts exist in the island, such as basket knitting, though they are on the verge of extinction as the majority of people involved or specialized in these arts are elders. In general, the biggest problem those forms of art must face is the renewal of knowledge and its passing on to the younger population (Plaka, 2006).

## **4. Qualitative data analysis**

Members of our authors' team had an appointment with the mayor of Naxos and Little Cyclades, Mr. Manolis Maragiritis on 18<sup>th</sup> of July. The purpose of this meeting was to conduct a qualitative data analysis through a recorded interview related to the cultural,

touristic and educational actions in Naxos. The interview lasted about 30 minutes and the mayor answered every question with detailed information. According to Mr. Margaritis, the following data can be derived:

The public sector provided Naxos with 2.800.000 euro in order to cover basic needs, projects and activities. However, after the financial crisis of 2009, this amount is reduced to 500.000 euro. Despite this decrease, supplementary funds are given via European programs and can rise up to 27.000.000 euro. Even with the supplementary funds, the municipality has 20% sedimentation in their financial deposit in comparison with the period before the crisis. Another essential matter that is a crisis by-product and the policies radical changes is the understaffing of museums and the inability to provide security in archeological sites. Last year, 3 clerks were appointed to keep museums open. However, due to the fact that the museum management is appointed to the Ministry of Culture, many of the municipality's requests for improved services were not accepted.

As far as educational activities are concerned, the municipality aims to improve the existent buildings conditions, as well as the founding of a new post-secondary educational structure for youngsters of 18-25 years old. The KDVM of Naxos is located in the Ursulines School, where many summer schools take place. Education is the primary goal and the mayor envisions the creation of a university, typical education structure in the island. When it comes to the population interest and appeal, the mayor was positive that Naxians will participate, as they are fond of education and learning.

When he was asked about tourism in Naxos, he referred to the abatement of 6, 5% in June this year in comparison with last year. However, he predicted that there will be a rebound and increase the next three months. The annual number of tourists' arrival has risen up to 5 -10%. The improvement of promotion media and structures, as well as the Naxian hospitality and natural resources attract more and more visitors every year. In the end of the interview, the mayor was asked about the proposed establishment of a community-based university. He found that project a positive chance for social and educational growth in the island.

## **5. SWOT Analysis**

According to the aforementioned data, Naxos has both strengths and weaknesses.

### **5.1 Strengths**

Naxos has a huge repertoire of monuments and festivals. With more than 300 churches, 25 towers, 3 ancient temples, and many cultural festival that attract people from all ages, can

certainly offer a great variety of activities. Furthermore, it has rich natural resources and various landscapes, from mountains to sandy beaches. The agricultural products of the island are famous for their high quality, as the touristic services are constantly growing- many alternatives options, such as camping facilities show rapid growth. Therefore, touristic activities are endorsed and leave visitors quite satisfied. The organized touristic activities have an impact on beach management. Many organized beaches offer water sports, restaurants and cafeterias. When it comes to accessibility, Naxos has many ship scheduled trips that connect it with Paros, Amorgos, Koufonisia, as well as with Dodecanese, North Aegean and Athens. Apart from these trips, many local agencies provide excursions to the surrounding islands. Finally, Naxos has an airport that connects various places through internal flights. Last but not least, the island has regular bus schedules that connect the villages with the mainland island.

## **5.2 Weaknesses**

Naxos faces many institutional obstacles that downgrade conservation, promotion and management of cultural monuments. As it was noted above, the Ministry of Culture has cut many expenses that cause hindrance to the efficient opening of many museums in the island. The ongoing need to serve and grow tourism has a negative impact in the preservation of natural treasures and resources, as well as the one-sided development of financial sector- tourism- is noted. Mainstream touristic activities lead to the exclusion of other forms of travelling (i.e. religious tourism, diving tourism etc) and the local identity may face erosion due to the fact that different populations carry their own identity and press habitats to assimilate some of their culture elements in order to serve them more effectively. Another essential matter is accessibility during the winter. In the summer, trip schedules are quite often yet in the winter, bad weather conditions, strikes and low population movement can affect daily schedules and self-sufficiency of the islands. These weaknesses can be a keystone of further growth and improvement opportunities. Pressure to authorities and ministries can be made in order to give local communities more power to act and protect their history and monuments. New forms of tourism could appear with the proper promotion and planning. The most important measure communities should take is to protect the environmental and cultural identity of their hometown.

Unfortunately, there are many threats that can stampede growth. The most important factor is superior forms of authorities and their policy changes. According to Mr. Margaritis, there is a lot of pressure from institutional policies to cut even more funds in order to save up money. Another matter at hand is the imminent destruction of biodiversity, if touristic season keeps growing. Accessibility and underhanded competition will always be the most apparent

problems, as they are conduced to touristic activities. Many businesses focus solely on destroying competition by either eliminating growth possibilities or by disparaging similar ones.

## **6. Conclusion**

Taking into account the selected quantitative and qualitative data, it can easily be deduced that Naxos is characterized by an abundance of resources- mainly focused on tourism, history and culture- , competent quality in its local products and services, as well by a strong link to all forms of education- typical, non-typical and apprenticeship. Despite being efficient in the aforementioned fields, there is still space for improvement of all existent facilities, as it seems that they are not given the right promotion due to economical and policy issues. This fact leads to practical problems, for instance in opening, preserving museums and monuments, as well as organizing cultural events. The authors concluded that the establishment of a non-typical educational structure, such as a community university, is a necessity, in order to overcome and solve the above obstacles to local growth and to promote learning, culture and tourism in terms with sustainability.

## **7. Proposal- The Naxian Community University**

The Naxian Community University will aim in the education, certification, training of young adults above 18 years old. It will be formed as a constitution that will be able to get funded by many sources- donations, European Commission funds, district programs and municipal sources. It will possibly be semi-autonomous, as it may choose its funding procedures, not entirely seeking permission from the local authorities or geographical district.

The founders and managers of the institution can seek existent facilities to house the university's provisions. For instance, the Castle in Naxos' Hora- formerly known as the Ursulines' Academy- or schools can be used, so a fair amount of money can be saved up instead of being used to build new facilities. The personnel that will run this institution can be divided into technicians, application and informational system programmers, registry, accountants, professors, tutors, academics and artists that can contribute to community education- a certain priority can be given to Naxian educators and artists. The purpose of the Naxian Community University will be to encourage education, awareness, protection, promotion and endorsement of cultural events and monuments, as well as the promotion of youth business opportunities, promotion and improvement of skills that are useful in touristic employment and growth.

### 7.1 Academic Course Schedule- Educational System

The course modules will be divided into generic and specific. Generic modules can be seminars or open lectures that refer to a subject generalized and simplified for every kind of audience, whereas the specific will focus on an expert unit addressed to certain professions. One can combine both generic and specific in order to enhance his skills. For example, a tour guide cannot only learn new languages, but should be informed about the history of Naxos as well. In the specific section art workshops, PC labs and non-typical education can be applied as well. In the end of the academic year, a 2-month practicum will be given as an employment and experience endorsement, related to cultural and/or touristic activities.

The university will use a mixed educational system both physical and digital, via using a platform to upload educational material and permit its students to communicate with each other. According to Ophus and Abbitt (2009) digital classrooms and social media provide student with new learning opportunities magnified by the socialization these websites offer, the instant information sharing, cloud services and collaboration through many institutions around the world (Johnson, Levine, Smith & Stone, 2010). In the Naxian community-based university, this can be implemented by the student's participation in searching, enriching and uploading extra material next to the ones provided by their professors (Zhang, 2010). Taking the comments relativity into consideration, a supervisory team will look at the comments thoroughly and decide to whether keep or delete inappropriate messages.

### 7.2 Yearly Academic Corpus

Culture	Tourism	Non-typical education	Practicum
History of the Cycladian civilization	Youth Business Opportunities	Art workshop	Management of cultural activities and monuments
History of Naxos	Communication Skills	Traditional Arts workshops	Organization of cultural activities and monuments
Islandic Traditions	Languages	Music	Alternative forms of touristic services and products
History of Art	Public Relationships	PC lab	
Introduction to Monument Conservation	Marketing Skills	Product design	
Social Media & Culture Promotion	Social Media & Tourism Promotion	Branding	
Culture &Environment	Tourism & Environment	Culture &Tourism	

### 7.3 Educational Material

The lectures can be realized with the additional connection to other formal education universities, providing either professors for annual lectures or their open source modules (MOOCS). The material will be both paperwork and digital, such as handbooks, articles and presentations. Vpn connections to formal learning institutions will great increase access to academic information. In the end of the year, symposiums with professors from the community-based university and other academies may be invited to take part. As a result, the knowledge burdens will become more and more loose, more and more collective.

### 8. PESTEL Analysis

The authors' proposal has both opportunities and obstacles in political, economical, social, technological, environmental and legislative perspectives.

Firstly, as far as the political factor is concerned, instability, frequent legislation plans towards tourism and culture, interest conflicts can greatly stampede the creation of non formal education structures. Mr. Margaritis mentioned the ongoing collaboration of the municipality and the authorities, yet the funds were cut below 50%.

In the economical section, the financial crisis is directly and deeply connected with the political system and policies, where reality is more fluid. Greece is not given the opportunity to access funds with lower interest rates, in order to go back in the market, thereby the funds cut and lack of effective management. However, this can be proven to be a great chance of searching new funding programs and sources, making the structure independent. Additionally, an educational institution like a community-based university can create new jobs and increase the local employment ratio. Οι νέες προοπτικές δημιουργούν νέες ανάγκες, επομένως νέες θέσεις εργασίας. For example, should a student attend seminars about alternative tourism and build accommodations for winter sports or touristic activities, (hiking, mountain climbing, agricultural tourism), then he or she should automatically need to find human resources that will realize this goal.

Thirdly, the cohesion and social structure can heavily affect the support of policies and community decisions. A social entity with solid cultural identity, common goals, co-operation and a strong yearning for learning will support and embrace a project of a non-formal learning program. The Naxian society is one of these social structures with a strong affiliation to arts, literature and learning, as Mr. Margaritis claimed. It is no surprise that Naxian women have a quite high university diploma possession ratio.

In the technological section, the problems the Naxian Community-Based University may have to face are the lack or misuse of new technologies and digital innovations, leading to a generation gap. Innovations must be incorporated as the primary tool of local growth, as through the new state-of-the-art start ups or applications; solutions to existent problems and advertisement issues can be solved. The university can cover the generation gap by promoting certificated seminars for seniors about technology and media.

In the environmental section, the protection of the island's natural beauty and rare resources must be the most important duty both the university and the students ought to serve. The basic goal of all the courses must be the growth and management of environmental and cultural resources, as to not destroy them in the name of financial development and income increase.

Finally, the legislation can become a prohibiting or facilitating factor when it comes to the university's function and policies. Gaps in lawmaking, such as the recognition of diplomas or the structure itself, as well as the lack of endorsement can discourage the audience to attend the free university course program, putting the university uninterrupted and sustainable function in danger.

## **9. Conclusions**

Taking all the above into consideration, the following can be deduced:

The founding of a community institution of non-formal education can be characterized as a need for the society of Naxos, with the hopes of possible financial growth and increased employment. As a result, the provided services may improve due to further education and information, thus the visitors' ratio may increase. Another benefit will be the strengthening, protection and promotion of the local identity. The Naxian community-based university may become a motive to create a formal academic department in the island.

The most important problems that may arise are the funding of these program- low funds, incessant cuts in educational funding programs, EU programs prerequisites- and policies, especially political- instability, lack of will- and legal- constant law changes, legislative gaps.

### Acknowledgements

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## **Agricultural Development and Processing: The case of Naxos, Greece**

### **Abstract:**

In the region of the Aegean Sea, specifically on the island of Naxos, besides touristic development there is also agricultural and secondary processing growth. Naxian products have a wide variety that ranges among organic herbs to the finest quality of cheese. Considering that the cultivation and processing procedures are traditional it is an obligation to maintain them throughout the years. To achieve that, an Open University for Life-long Studies: Agricultural Development and Processing should be established. To preserve them it is necessary to include them in a course of seminars. Local businessmen seem to be willing to participate in such courses in a bidirectional way both as participants and as lecturers with the assistance of distinguished professors. It is recommended for the participants to pay a fee in order to feel obliged to attend and on the other hand to conserve the institution.

**Key Words:** Agricultural regional development, secondary processing, Life-long Studies, Open University.

**Kyriakoulea Sofia, Liani Kalliopi and Chouzouri Vasiliki**

## 1. Introduction

Naxos is a Greek island located in the cycladean archipelago in the Aegean Sea and it is rich among others in agricultural production.

Potatoes, cheese, honey, olive oil and meat production are some of the traditional products of the fertile Naxian soil. In recent years, the private sector is engaging in the production of new cultivations such as Aloe vera and aromatic plants and herbs.

Within the framework of our study, we came in contact with people at the Agricultural Development Department of Naxos, of the province of the South Aegean, with the owners of Aloe Vera Naxos and of Organic Islands, and also with a traditional cheese-maker from the village of Apeiranthos.

From those interviews we obtained important information that made up the goals of our study:

- What is the course of agricultural education in Naxos
- What are the possibilities for new cultivations
- Problems faced
- The establishment of an Open University for Life-long Studies: Would it further assist the agricultural development on the island

Greece, from the 19<sup>th</sup> century and until the 1950's, was mainly an agricultural country and farming was the base of the nation's economy.

Quite early, the need for agricultural education became apparent. The first school that taught relevant subjects was founded in 1829 by Ioannis Kapodistrias. It was the Agricultural School of Tyrinthas in Nafplion, the Capital of Greece at the time. Other schools followed and in 1920 the highest level school was founded in Athens, the Supreme Agricultural School of Athens. Today, the continuation of this is the Agricultural University of Athens (1995) that plays a decisive role in Greece's agricultural policies. (www.aua.gr, 2015)

### Farmer

This term refers to one and the oldest of the social classes. The farmer can be considered the world's first professional. When man stopped hunting, settled in one area, and started cultivating the soil. From that point on, life and civilization took on a complex course that lead to a higher form of culture. (Livepedia, 2006)

### Education

The process of sharing knowledge and experience, and also the cultivation and development of skills and abilities in each individual, so that they can respond to their obligations. (Wikipedia, 2015)

## **Development**

Progress, growth, creation. (Dictionary, 2014)

## **Agricultural Development**

The achievement of growth, the progress of the farming sector with the proper infrastructure, equipment, agricultural methods and proportionate education

## **2. History of the term: Open University for life-long Studies**

About two centuries ago, the first steps for adult education were made. At first it was about demotic education, since it was basically directed to the lower social classes. In the present day it has been replaced to basic adult education to all social classes. According to the beliefs of the Danish folk instructor N.F.S. Grundtvig in Scandinavia in 1850, “Home Universities” were founded. Their goal was folk education. On the other hand, the British movement of University Extension sought to educate all social classes in scientific and other academic studies. Both of these movements, in the early 19<sup>th</sup> century, were the standard for the newly founded Open Universities in Germany which were split into night and home universities. Their goal was to provide general education for work as well as the everyday life. Before 1918, they were founded without any government support and only by the initiatives of social groups or individuals. After WWI, the German Open Universities became popular. Between 1900 and 1933 Open Universities were the most widespread form of adult education. During the Nazi Era, they were prohibited and banned only to make a comeback in 1945. The goal of the Open University is to offer everyone, education and activities, so that every citizen can fulfill their right to education. (Kontaxopoulos, 2012)

## **3. SWOT Analysis of the Open University for Long-life Studies**

### **Strengths**

- Improvement of skills and updated knowledge
- Production of traditional products, local culture
- Tourism
- Tight social relationships – social media
- Small distances (time)
- Quality of life

### **Weaknesses**

- Reduced technological growth
- Problems with healthcare, education, administration

- Reduced social contacts
- Reduced forms of recreation
- Internal immigration
- Unemployment
- Reduced number of job openings
- Closed society, close-minded people, old fashioned mentality
- Transportation, means of transport
- Weather, isolated areas in the winter, country
- Geographical exclusion

### **Opportunities**

- Exploitation of new technologies on every level
- Promotion of the region: History-Traditions-Products-Tourism
- Attraction of highly skilled manpower
- Enhancement of present manpower, motivation to remain in their birthplace and improvement of living conditions

### **Threats**

- Smuggling, illegal immigration
- Social exclusion
- Danger of desolation (especially the villages)
- Neglect of the government concerning infrastructure and services (mainly health, education, administration, technical infrastructure) (Papanis, 2013)

## **4. Agricultural Education**

The KE.G.E.<sup>1</sup> started in 1967 and continued until the early 2000's. They organized central education programs with combined funding from the European Union and Greek funds. Education of new and young farmers is also offered from the Technical Professional Institute of Filoti, at a college level. The KE.G.E center has been reformed as OGEKA DIMITRA for the education of young farmers. NSRF (European Union) funding provides programs for new farmers to purchase tools and machinery.

The K.E.K<sup>2</sup> (former KE.G.E.) is taking advantage of the co-funding of European programs and regional funds to organize seminars for farmers.

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<sup>1</sup> KE.G.E. = Greek Acronym (Agricultural Education Centers)

<sup>2</sup> K.E.K. = Greek Acronym Centers of professional training

It's worth noting that little interest was shown for the seminars with the participants not really being interested in farming and a few who did not gain much from them. In the end, only 20% proceeded with careers in farming. Attendance was voluntary, but the studies were mandatory. The professors also were not aligned with the needs of the farmers and the cognitive gap between theory and practice was difficult to overcome. As a center of Agricultural Studies, it is deemed that the attendance of farmers at the Open University should have a small fee as to keep the students in class and not abandoning their studies.

## **5. Institutions of the Open University of Life-long studies. Definitions, features, funding administration.**

### **Institution**

The Open University of Life-long studies that addresses to adults who want to achieve life-long learning and self-improvement. It is a fact that adults enter this procedure voluntarily only to improve themselves through knowledge. They learn easier and better when they are interested in the subject due to the non-conventional way of teaching. (Universities)

### **Institutional Framework**

Distinguished academic professors and experts, present their knowledge simplified in a course of lectures of relevant subjects, starting a conversation of substantial importance.

This institution already exists in Europe and other places since the 19th century developing and adopting new forms of education such as experimental and distance learning (e-learning).

In Greece, this institution became popular only during the recent years and specifically since 2005 that the Open University of Crete was founded. Its success was the beginning of its wide expansion. Greece should follow European and international development of life-long learning, because knowledge has a valuable importance. In the future Bachelor and Master

Degrees may not be sufficient if someone does not want to enrich further their knowledge.

It is of great importance that nowadays the Open University of Agricultural Development and Process, is developed quickly in many communities, villages and cities. There are many similar educational activities with resembling denominations based on the original idea.

When an Open University of Agricultural Development and Process is established, in every place that a new department is created, a local committee of alternating members is recommended, so it can be developed according to the local society's demands.

Open University of Agricultural Development and Process, does not only offer a round of lectures, but also, in collaboration with other institutions, organizes various events, such as day conferences of important subjects or educational and other kinds of trips. Besides, parties for graduates are organized in order to enrich their social relations and develop a team spirit.

Believing that beyond the acquisition of knowledge and self-improvement, informed citizens, are also active and useful, not only for themselves but also for their country. (Universities)

## **6. The Case Study of Naxos**

In this paper are mentioned the local companies that we visited, a brief description of them whereas the main focus is on the problems that these companies are facing as well as their thoughts about the Open University for long-life Studies: Agricultural Development and Processing.

### **Aloe Vera Naxos**

The main merchandise of this company is the 100% pure and organic gel of the Aloe's leaf (*Aloe vera*, var. *Barbadensis*, Miller). The packing process takes place in Athens while the majority of the pulp is used to make cosmetics. The company is fixed on producing and selling only the pulp of the leaf, not by extracting it chemically but mechanically. This company, is a Private Company, consists of six partners, whereas there were seven in the beginning and employs on person at the position of the secretary. The income of the partners is made by other occupations. The cultivation began on 2012 on Naxos Island while the establishment happened only two years after on 2014. Between those two years the necessary documents were gathered in order for the company to be certified as pure organic and also to take part in the NSRF program to raise more funds. The company addresses to wholesale customers who trade bio – cosmetics. The initial NSRF planning prohibits them from selling directly retail. The production of Aloe's pure gel in Naxos is limited. (Material, 2007)

### **Problems Facing**

Aloe Vera Naxos couldn't find a way to sell the produced leaves of the plant, so they decided to mechanically extract the gel from the leaf. The geopolitical position influenced the operation of the company as far as the chemical analyses were concerned. In addition to that, the lack of specialized chemists to this field made the trading even harder. It would have been a mistake not to mention the difficulties which the Greek bureaucratic system has caused in every step along the way. The NSRF has specific and strict rules and on the same time the competition is extremely elevated not only among producers of the same product, but also between companies with irrelevant activities. The local Union of Agricultural Cooperatives

was unable to provide with substantial support and as a result the know-how had to be bought along with the expensive and of course imported equipment. Due to certification legalities the marketing was only able to begin in 2016, two years after the company stated the official production.

Needs covered by the Open University for long-life Studies: Agricultural Development and Processing.

Aloe Vera Naxos believes that each and every producer has to receive from an Open University different education, training and guidance to meet the needs of their cultivation or activity. Their specific needs at the moment are focus around the topics of marketing and international trading. They strongly support organic cultivation and products as they are of the highest quality despite the reduced quantity. The partners could not agree that it would be productive to take place in an Open University as lecturers, due to the defrayed cost of the know-how. (Naxos, 2016)

### **Organic Islands**

This name refers to a small business which produces and sells organic herbs such as oregano, thyme, lavender, chamomile etc. These herbs are meant to become mainly beverages rather than food seasoning. The headquarters are in the island of Naxos with a complete vertical production line due to the fact that every step from the cultivation to the packaging is made on the island. Only the raw material of the packaging comes from Athens. The company consist of three partners and seasonal staff depending on the needs. The products are certified with the latest European Union and United States of America F.D.A regulations. They are being sold in local stores on the island and on selected spots in European countries and overseas in New York. The target group of the products is the tourist market of the Cyclades. The company focuses on exports and is distinguished by the excellent quality of the product, resulting to an inevitably high price tag. The competition is light due to the lack of many similar businesses. Although there are only two in the whole archipelago of Cyclades, the competitive advantage of Organic Islands is the locality of the product.

### **Problems Facing**

The owner points out the crucial importance of the geographical position of the island, which is one of the main factors that demands elevated prices. The archipelago is only reached through ferry boats. The ports are far too small to support cargo boats and as a result, the high costs are inevitable. In the C.E.O.'s own words "exporting from Greece to Greece!". The starting fund came purely form the partners' equity while the company could not receive any additional funding due to the paralytic bureaucracy. A folder with the necessary documents was submitted for evaluation, however it was reviewed two years after. A rather common

phenomenon in Greece. Those two years would have been a major delay in the launch of the activities if the partners could not invest their own money. The investment included the establishment of the raw materials, the plants, and the processing unit that began to work from day one. One of the partners emphasized that if someone, with an economical background, breaks down the terms of the subsidies people would be surprised to find out that the system is not built in favor of the production. In addition, the lack of specialized Agronomists is apparent and the initial false design of the crop layout leads now to difficulties with mechanical harvesting. Last but not least come the certifications of the plant material's health which are of great importance if a company wants to export overseas. Customs at the Greek port have not yet been informed of the quality control checklist due to the particularity of the product (packed organic herb). That results to the delay of the custom clearance or the complete lack of it. Here it should be mentioned that shipments travelling anywhere, containing plant material without the necessary "Certification of Plant Health" are destroyed regardless the country of origin.

### **7. Needs covered by the Open University for long-life Studies: Agricultural Development and Processing.**

One of the partners in this business has already taken place as a lecturer in relevant seminars in the past. The topic was on Aromatic and Pharmaceutical Plants and their cultivation in the Cyclades. The participants numbered around 300 people and just a few of those were actually interested in the topic, while the others were completely irrelevant. However, because he is for long-life learning, he would happily take again part in a lecture series either as a lecturer or as part of the audience. He strongly supports that the presumable success of these kind of lecture series leans on a firm motivation, which can only be money. Only if the future participants are convinced that they are going to gain from the lectures they will come. If not the seminar will fail and that has happened in the past. To support this argument, he adds that there should be a participation fee and obligatory attendance. In conclusion these kind of actions ought to be targeted in an audience that could value and reclaim the given knowledge and on the same time those who carry the knowledge have to be versatile in order to adapt to the needs of the audience. (Chatziandreou, 2016)

### **Naxian Dairy Products**

Naxian cheese, is one of the island's popular products. There are two dairy factories in Naxos and many small, traditional dairy farms at the villages. Dairy production on the island started the 16th century. Cheese was made of cow's milk, based on recipes found in ancient scripts (Homer) (Giakra - Imelou, 2014) or the tradition passed from generation to generation.

(Tyrokomia) The variety of cheese is wide, including the popular graviera, kefalograviera, mizithra, xinomizithra, manouri, arseniko, anthotiro, xinotiro and kopanisti. The Naxian graviera is produced since 1988 and has PDO (protected designation of origin) since 1996. It consists 80% cow's and 20% goat's milk. Also, there are two types of graviera: the simple one and the 5 years old grown. Kopanisti which consists pasteurized goat's and cow's milk, has also PDO. Naxos's dairy products are available to the Greek market and abroad. The last 15 years, dairy production in Naxos, has decreased. (Athinorama)

Naxian cheese – making. Emmanouel V. Koufopoulos

During the 1990 decade, Emmanouel V. Koufopoulos, created his dairy factory at Agios Isidoros in Galanado. Combining the island's tradition and new technologies, he produces a wide variety of cheese and dairy products from cow's, goat's and sheep's milk. His products have a HACCP and ISO certification (ISO 9001:2008, ISO 22000:2005). The turnover reaches the amount of 27.000.000€. (Manolis Koufopoulos Cheese - Making)

He learnt the art of dairy production from his father and his grandfather who were breeders and had a small, traditional farm. As the herds were few, there was need of returning to the tourist industry. He took charge of the company, without asking for or taking any financial support. His first goal, was to upgrade and modernize the dairy farm. He increased his production, having a variety of 23 different types of cheese. He supported the island's production, as he collaborated with many breeders from the island. He tried to establish the PDO for Naxos's arseniko cheese, but he faced the reaction that the opponent breeders had.

The "Agios Isidoros" cheese, made of cow's and sheep's milk, was rated at the first place by the chefs of "Gastronomos" magazine during a testing the did. Theofylaktos Masouras, Assistant Professor in Dairy Science within the Department of Food Science and Human Nutrition at the Agricultural University of Athens, delivered the award. (Patera, 2012)

### **Traditional dairy farming on the mountainous area of Naxos**

Producer: Michalis S. Giakoumis (Nickname: Chrousomihalis)

The producer that was interviewed has 200 animals: 100 goats and 100 sheep. The milk production starts during spring, when animals are exclusively fed with corn silage. They are of free-range and food is important to attract them for milking. Milk and cheese produced during spring, have a sufficient taste. During winter that is not a period of milk production, animals are fed with cottonseed meal in order to be kept warm and the milk that they produce has a loathsome taste. The producer uses all the milk for cheese production.

### Traditional dairy farming process

Arseniko cheese or manoura (taking place in “mazomos”<sup>3</sup>)

- Milking. The milk is not pasteurized.
- Preparation of the tank (actually it is a cauldron called “harani” that comes from the Greek word “kazani”).
- He lets the milk cool because it comes warm from the animal.
- He adds a product that permits the cheese to curdle. (Previously he used a traditional product called “mouli”<sup>4</sup> and now he uses a modern product branded “Parnassos”).
- Using the touch, he checks the congelation.
- When there is an appropriate degree of congelation, he starts mixing (this is called “taragma”).
- Then we have “manoura” or arseniko cheese (male cheese).
- It is placed in special baskets called “tsimiskia” or “trevolia”<sup>5</sup>.
- He starts mixing again with his hands.
- When the cheese curdles, he turns it around to get the stamp from the opposite side.
- Finally, he adds salt to the cheese at will.

Anthotiro cheese or mizithra

- Also taking place in “mazomos”.
- What rests in the cauldron, is boiled at 60°C.
- The producer starts slowly mixing it.
- He lets the mixture to boil until it reaches 600-700°C.
- The cheese comes up to the cauldron’s surface and it is sterile.
- “Tsiros” is what rests in the cauldron and is animal food.

The producer works alone. The only scientific equipment that he uses, is a thermometer. The rest of his tools are traditional. Dairy farming production is a family tradition for him. He was taught the cheese production from his father with little changes as the technology imposes.

Needs that an Open University of Agricultural Development and Process can cover.

The producer that we interviewed admitted that he could take part in a round of lectures related to the dairy production at the Open University of Agricultural Development

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<sup>3</sup> Mazomos: Otherwise called “mandra” or “mandrokathisi” is the traditional establishment where all the dairy farming process is realised. It comes from the Greek word “mazevo” which means “collect”. (Probonas, 2012)

<sup>4</sup> Mouli: It is the traditional way of congelation. The producer takes one of the baby lamb’s stomach that has not eaten grass and uses it as a filter of the milk. Curdled milk comes out of the “mouli”.

<sup>5</sup> Trevoli: It is the old knitted basket made of rushes used in the past for the cheese. Nowadays, plastic or stainless steel baskets are used.

and Process. He thinks that the transmission of the traditional knowledge is absolutely necessary for the next generations in order not to lose or deform its value. Finally, he is positive to get new knowledge by attending lectures familiar to his subject.

### **7. Conclusions and Suggestions**

According to all of the above it is necessary to assure respectable life-long studies for every citizen. Through an Open University for long-life studies knowledge and training are mainly promoted especially in the 21<sup>st</sup> century where they change rapidly. To be more specific Agriculture and Animal Culture are different than other subjects, because the way they ought to be taught is practical rather than theoretical, through workshops as well as field work. As a result, besides the demanding organization skills needed to set up such a lectures' circle, an enormous number of funds need to be given for that purpose. It is obvious that the state or the local authorities cannot afford to pay for those expenses especially in the Greek scenery of 2016 and it is inevitable to conclude that that kind of educational structures cannot be built upon a regime of free tuition.

In former decades, Greece has gained bitter experience from the organization of countless seminars and training courses that had no real impact on the Greek society. Human resources, time and money had been wasted with almost zero result.

It is demanding to align the knowledge/training fields of the O.U. with the production process. The trainees would gain knowledge only for what they need to know to establish their own business or to be a part of a "Producers Team". Thus production credits are not to be wasted and this will be the true contribution of the O.U. in sustainable development.

In the apposed interviews from the local Office of Agricultural Development and the businessmen from Aloe Vera and Organic Islands it is clear that they are for the creation of an O.U. for long-life studies and they are at disposal to transmit their knowledge. However, they believe that the way of thinking of the young farmers of Naxos is so old fashioned that they are not willing to attend such seminars, let alone pay for them. It would have a great impact on the society if the new age of farmers would have broaden horizons and if they would pursue new knowledge on their field without thinking only their profit. In conclusion the competition among the farmers can cause problems to the local businesses, as it is possible for a few trainees to start their own companies rather than working on the already existing ones after training.

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## “Spatial and Urban Policy”: The Case of Naxos Island, Greece

### **Abstract:**

This article based upon summer school project, “Education, Training, and Local Development” in Naxos, in 2016.

Taking into consideration the need for the harmonious coexistence of man and nature, this article researches the implementation of spatial and urban policy for the municipality of Naxos, as it is applied in four areas: the capital improvements (land uses), the environment (degradation and contamination of the natural environment), the cultural heritage and transport and infrastructure. Also presented in this article are the features and the characteristics of the island and in particular the former administrative division, (from “Kapodistrias” program, municipality of Naxos). Furthermore, the main problems detected are analyzed in the case study. One of the problems is the outside of the planning zone settlements. These larger settlements lead to the degradation of the landscape and the destruction of biodiversity. Problems like this are in stark contrast to the principles of sustainable development. The aim is to make proposals for solving them under the local and sustainable development (OGG, 1999) of the island.

**Key-Words:** Naxos, spatial, urban, policy, build-up, development, NATURA, environment, transport, infrastructure, cultural heritage.

**Tzimos Alexandros – Theodoros<sup>1</sup>, Stasinou Nikolaos<sup>2</sup>, Mayrogeorgoy Stella<sup>3</sup>**

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<sup>1</sup>Corresponding Author: Tzimos Alexandros – Theodoros, Email: [alexis.tzimos@gmail.com](mailto:alexis.tzimos@gmail.com)

<sup>2</sup> Corresponding Author: Stasinou Nikolaos, Email: [n.l.stasinou@gmail.com](mailto:n.l.stasinou@gmail.com) ; Email: [geo12154@geo.aegean.gr](mailto:geo12154@geo.aegean.gr)

<sup>3</sup>Corresponding Author: Mayrogeorgoy Stella, Email: [stellamavr@outlook.com](mailto:stellamavr@outlook.com)

## 1. Introduction

Naxos is the largest island of Cyclades. It belongs to the South Aegean region and has an area of 428 km<sup>2</sup> and an altitude of 1004 m. The physical geography of Naxos is significant and includes intense biodiversity. The law N. 3937/11 (G.O.J.60), states that "the effective management of biodiversity, as a precious, irreplaceable and important national resource" is imperative, in order to lead to sustainability. The unique environment of Naxos has been recognized internationally and a result of that, part of the island has included with the European network of protected areas NATURA 2000. These areas are set to be in the southwest of the municipality of Naxos and includes lagoons, salt marshes, and wetlands ecosystems.

This article includes, specific administrative reform issues of Naxos, with the aim of evaluating the current situation in the study area ("Kapodistrias" program Municipality of Naxos). There are problems that must be addressed, both in the terrestrial and the marine environment of the municipality of Naxos. Because many of these problems are related to the island's environment (e.g. urban sprawl has resulted in the deterioration of the urban and natural environment, even in protected areas Natura 2000) proposals have been made in three areas: a) protection and enhancement of the environment, b) enhancement of the cultural heritage, and c) ensuring adequate infrastructure and communications system. Finally, general conclusions are formulated.

## 2. The Case Study

According to the administrative division introduced by the program of "Kapodistrias"<sup>4</sup> with the law n.2539 / 97, Naxos is divided into two municipalities: a) the Municipality of Naxos, which includes the western and a part of the central and northern part of the island with an area of 127 sq. km and b) in Drymalia Municipality with capital Halki, including mountainous Naxos with an area of 320 sq. km.

The present administrative division of Greece came from the "Kallikratis" program. The law n.3852 / 2010 passed by the Parliament in May 2010 was replaced the "Kapodistrias" program. The administrative division that introduced the newest Kallikratis program led to the integration of the Municipality of Drymalia and the Municipality of Naxos to form the new municipality "small Cyclades" (Naxos kai mikres Cyclades). The new municipality includes the island of Naxos and the islands of the Small Cyclades -

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<sup>4</sup> Both No. 379/95 / 16.1.1986 decision of the Minister of Environment, Planning and Public Works approving the "General Urban Plan (G.U.P.) (O.G.J, D 207 / 18.03.1986) and the Plan Open City Housing Development (Master Plan), refer to the municipality Naxos from "Kapodistrias" program.

Iraklia, Koufonisia and Donousa. However, in this article, Naxos municipality considered as delimited by “Kapodistrias” program (OGG, 1999).

The Municipality of Naxos is composed eleven (11) districts, occupying 29.6% of the total area of the island. The Kapodistrian Districts are: Naxos, Agios Arsenios, Vivlou, Galinis, Galanadou, Glinadou, Eggares, Kinidaros, Melani, Potamia, Sagkriou. Based on the census of ELSTAT 2001, the Municipality of Naxos was the third most populated municipality in the Cyclades, after Syros and Paros, with a population of 11.772 inhabitants.

The culture is characterized by the variety and uniqueness of the archaeological sites, some of which are symbols of the island, as Portara, the imposing gate of the archaic temple of Apollon, the Venetian Castle of Chora, the Temple Demeter in Gyroula (Sangri) and Kouroi in Melani.

The town of Naxos is an important command center, with commercial transactions. The tertiary sector in the other residential centers of the Municipality is directly interwoven with recreational activities and especially with tourism.

Regarding the Regional Framework (OGG, 1999), Naxos belongs to the South Aegean and along with Kos island, constitutes major gateways into the region. Both Naxos and Kos are strengthened regarding the administrative and productive role, by improving their accessibility. They both emphasize to the central role of the ports and airports with international standards.

According to the Regional Framework, the primary sector is a source of income for the island of Naxos, since the island has large rural areas, farms and fish farming along the coast. Moreover, the mining activity developed mainly in the mountainous part of the island and manufacturing activity which involves small craft units.

### **3. The Problems**

As mentioned above, this work was structured to record the problems and come up with solution proposals to manage them. This section includes four subsections: 1.capital improvements and land uses, 2.Environment: degradation and pollution of the environment, 3.Cultural heritage 4.Transport and Infrastructure. All four concern the municipality Naxos of “Kapodistrias” program.

#### **3.1 Capital improvements and land uses**

Habitation was necessary. On the island, and specifically in Naxos based on historical trends. Over time, the problem of urbanization was compounded. Although the agglomerations were defined by spatial and urban policy, cases of encroachments of land (often outside the

planning zones), resulted the large settlement of the municipality and, the violation of archaeological sites, woodland and many protected areas (Natura). The problem of illegal construction is observed in Naxos, as across Greece (Karanikas, 2010).

### **3.2 Environment: Degradation and Pollution of the environment**

In the case of Naxos, some NATURA 2000 areas, bounded southwest of the city center and include lagoons, salt marshes, and wetlands ecosystems, from Agios Georgios to Aliko. On the other hand, there is a marine ecosystem and cedar forest in the area of Agia Anna to Aliko, where wildlife birds are housing and need protection. Generally, the network NATURA 2000 includes terrestrial and marine parts. Physical geography is important, because as already mentioned includes bio-diversity, namely variety of living organisms (terrestrial, aquatic complexes, water, etc.). Also, Geotopes forming geological and geomorphological structures, natural formations and are important evidences of the geological history of the earth (Mikri Vigla, Agia Anna).

The problems recorded concern, the degradation and deterioration of marine and terrestrial areas of the NATURA 2000 network caused by modern structures, especially hotels. One good example is the current tourist areas of Agia Anna and Agios Prokopios. The last years found that the destruction of biodiversity as a result of the construction of new modern hotel units.

Also, significant problems are created by arbitrary siting of landfills and mining of raw materials from quarries in Kinidaros. Instead of landfill there is a site with uncontrolled waste dumping in the mountainsides. This is making contaminated soils and consequently the aquifer and the sea, through the rain “wash” and transfers the waste. The arbitrary siting landfill creates risks not only for humans but also for the environment. And that’s because the landfill contaminate the aquifer [E.Y.E.P. of Y.PE.KA]. Problems are created because of leachate leakage, exposure of garbage, the exposure of workers to the landfill to disease etc. (Andreopoylos, 2010).

Regarding the extraction of quarries in Kinidaros, it has also created problems because of the degradation of the landscape and biodiversity destruction. Overall, in the quarries areas, the air pollution, the mining waste and the noise make these areas unviable for many residents and many birds.

### **3.3 Cultural heritage and Lack of spatial planning**

Naxos cultural heritage is very rich. As E. Gratsia reports "This included all individual buildings with their immediate environment, cities, villages, landscapes, archaeological sites

that testify to a particular culture, a tentative development or a historic event, great creations and humbly projects over time acquired cultural significance " (Gratsia, 2005).

Therefore, the problems related to cultural heritage are complex and varied as involving both individual buildings (ancient, Byzantine or later) and extensive historical ensembles (traditional villages - archaeological sites) that require special attention. The latter, quite often suffered considerable damage by natural causes (earthquakes, floods<sup>5</sup> etc.) or by human intervention (urban sprawl, encroachments of land, etc.).

In this subsection we will refer particularly to the problems of historical ensembles (traditional villages and archaeological sites), mainly because they are linked to spatial and urban policy issues. The main problems identified are:

**a. Encroaching the archeological sites**

In the area of the archaeological "Gyroula", Sagkri, where a quarry aggregates in a short distance, found serious violations of this site (agrocsmos, 2014). Note that the archaeological site in the area "Gyroulas" Sagkriou is one of the most important archeological sites of Naxos municipality (MD, 1995). It includes the ruins of an ancient temple dedicated to the goddess Demeter or Apollon and nineteen (19) Byzantine monuments, three of them are located in Zone type A. For the remaining sixteen (16) sites, defined Zones type A, with center each monument and within radius of 50 meters.

**b. The encroachment phenomena in urban sprawl**

According to interviews<sup>6</sup> of residents of the area of Stelida, the bounds of Agia Anna and Agios Prokopios villages have significantly expanded outside the planning zone because of the growing tourism development. The risk of encroachment of the site is real! The area of Stelida is located southwest of Naxos Town and contains important excavated antiquities (flint processing residues in prehistoric times -pyrines- flakes etc. - foundations circular tower of the 4th century BC, granite quarries, etc.).

**c. Degradation and Deterioration physiognomy of villages in Municipality of Naxos**

In the headland area of Agios Nikolaos, is observed discontinuous built-up area around the site. Although is prohibited to build-up in the zone with a radius of 200 meters. So the architectural style Agios Nikolaos and the cedar forest that is in the same site are threatened by deterioration and degradation. Another example of this phenomenon gives us the urban expansion of the village Filoti, "an expansion without design, heights, volumes and buildings that does not reminds us the historical village" (Gratsia, 2005).

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<sup>5</sup> The terraces destroyed from floods in Naxos, a few years ago.

<sup>6</sup> Interviews with residents took place in July 2016.

All the above indicate the lack of spatial planning. It also means lack of protection of archaeological sites and the island's traditional villages. Although the cultural heritage on the island is important, spatial planning and cultural policies are lacking. Finally, the relevant provisions (OGG, 2002) do not apply and do not contribute to the protection of archaeological bays and the island's traditional villages.

### **3.4 Transport and Infrastructure**

Considering the insularity, the geographical location of centre of Municipality of Naxos and the needs for intra- and inter-regional connections, the role of transport and infrastructure (port infrastructure and infrastructure of other transport modes such as airports) are fundamental (Lagos Kontogeorgos, 2003). The problems reported in port infrastructure are largely frequency problems, such as traveling time and seasonal products portability. Also, the proximity of the port from the suburban roads, combined with daily arrivals and departures of tourists, -especially during periods of increased traffic- has the effect of creating traffic congestion and difficulty of accessibility to and from the port.

The island's airport, as it stands, shows significant problems due to the limited size of the terminal. Also, the airport of Naxos is spaced in a short distance from the protected area of Aliko (Natura 2000 area). The pollution caused by airplanes in exhaust gases emitted into the atmosphere and the high temperatures which occur during the combustion of kerosene (which makes the oxygen and nitrogen in the air to join in nitrogen oxides which increase the temperature) intensify in 60% of the effect of carbon dioxide into the atmosphere aggravating the largest coastal wetland in the Cyclades, namely the area of Aliko (Papandrikos, 2003).

## **4. Discussion**

### **4.1 Protection and enhancement of the natural environment from urban sprawl**

The land use conflicts, the urban sprawl (despite prohibitions) and tourist facilities developed on protected by the NATURA 2000 network areas, are issues which should be confronted immediately, as part of planning and urban policy.

According to the provisions of the Law n.1650/86 must take measures to protect the natural environment. Particularly in those areas identified as Natura 2000 or as wildlife sanctuaries, such as the Stellida areas, Mikri Vigla, Kastraki and Kantili, the construction will be severely restricted.

Moreover, in regions such as Agia Anna, Mikri Vigla, where recorded landforms, proposed the formation of a Geopark<sup>7</sup>, which can line (if managed properly) a firewall in front of arbitrary interference caused primarily by human factor.

Finally, the problems created by the quarry's extraction in Kinidaros area will be addressed, as defined by the legislation (Gov. 2076B / 25.9.2009) and Directive 2006/21 / EU for the mining industry's waste.

#### **4.2 Protection and enhancement of the cultural heritage**

This subsection emphasizes the protection and promotion of archaeological sites in the region Naxos and makes proposals aimed at cultural and economic upgrading of the island.

It was found that in many recorded cases encroachments of land or land use conflicts, even in areas around archaeological sites, namely radius zone of 200 meters around them, which according to the law n.3028/2002, any construction is forbidden. For this reason, drawn up environmental studies on creating protection zones at archaeological sites are necessary.

The boundaries of archaeological sites mentioned above, may constitute abuses and control tools, throughout the island and the preservation of their boundaries should be done continuously. The same is proposed for the boundaries of the villages adjacent to the archaeological sites, which is necessary to set strict criteria of urban planning and environmental studies. Any construction without a building permit isn't authorized and should be dismantled.

#### **4.3 Ensuring adequate infrastructure and communications system**

Ensuring adequate infrastructure and communication system is needed. This means that the basic transport infrastructure (ports, airports and roads) should be updated and improved for the benefit of local-sustainable development.

Naxos port receives daily, several cargo vessels and passenger ships, mainly in the summer months, causing congestion in the limited port area. Moreover, because of the transfer of goods and people is done mainly by sea, the port should be improved. At the same time other ports should be used, where are available in coastline of Naxos. An example is the port of Apollon, which is used by fishing or tourist boats. The construction of a new autonomous trading harbor is considered appropriate (Plaka, 2006) and will help to

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<sup>7</sup> Geopark is an area with clearly defined boundaries, which has a remarkable geological heritage combined with a strategy for sustainable development (i.e. economic development designed and implemented taking into account environmental protection and sustainability).

decongest the main port of Naxos. Also, improving the current deficit connection with the surrounding islands is deliberated, in order to improve the isolation during the winter months.

Regarding the air transport, -besides the requiring improvement - siting the airport to a new location is essential. Because its present location is in a protected area (next to salt marshes). Also, the existing road network throughout the island has no traffic lights, except one in the airport area. The communication within the island is limited, due to the limited number of bus routes and difficulty linking the coastline with a mountainous hinterland, especially in the southern part of the island which is completely cut off from the town of Naxos.

## 5. Conclusion

The real problems of Naxos seem to ignored by the Spatial and Urban Policy in recent years. Unfortunately the problems recorded reveal the errors and omissions of Development Plans in the four key areas: a) building, b) the environment, c) the cultural heritage and d) the transport and infrastructure, which were briefly studied.

In the case of Naxos, where the presence of designated areas NATURA 2000 (which defined the southwest of the country and include lagoons, salt marshes, ecosystems and wetlands), and the presence of archaeological areas are importance. That's why required special use of Spatial and Urban Policy, in order of handling the specific problems were recorded in these areas.

More generally, the introduction of new urban studies combined with the improvement of legislation (particularly in the construction and protection of the natural and cultural environment) is necessary. The individual proposals that made for each of the key areas, aim to manage the problems that were recorded.

All these require informing people through various activities (i.e. education programs using new technologies, etc.) in order to learn to protect the environment and the culture of the island. The goal is to reduce or to definitively eliminate the problems caused primarily by the human factor.

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**Socio-Economic Sustainability,  
Regional Development and Spatial Planning:  
European and International Dimensions &  
Perspectives**

Edited by:

Prof. Dr. George M. Korres  
Department of Geography  
University of the Aegean

Prof. Dr. Elias Kourliouros  
Department of Geography  
University of the Aegean

Assoc. Prof. Dr. George O. Tsobanoglou  
Department of Sociology  
University of the Aegean

Dr. Dr. Aikaterini Kokkinou  
Department of Geography  
University of the Aegean

Mytilene 2014

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