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Article

Public Perception of Climate Change in a Period of Economic Crisis

Dimitrios Papoulis, Dimitra Kaika, Christina Bampatsou and Efthimios Zervas *

Hellenic Open University, School of Science and Technology, Sahtouri 11, 262 22 Patra, Greece;
E-Mails: papoulisdimitris@yahoo.com (D.P.); dkaika@eap.gr (D.K); c.bampatsou@gmail.com (C.B)

***** Author to whom correspondence should be addressed; E-Mail: zervas@eap.gr;
Tel.: +30-2610-367-566.

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Abstract: The present study surveys the opinion of the residents of the Athens area in Greece on a wide range of issues related to climate change, such as their environmental consciousness and awareness and their willingness to take action against climate change. This study is performed at a time of a severe economic crisis in Greece. Based on a questionnaire, this study examines the general trends reported on various environmental issues, more particularly concerning climate change. The main results are that Greek citizens are aware of the problems of environmental and of climate change and also believe that the environmental quality of Greece is quite poor. They believe they are fairly well informed about climate change. However, the current economic crisis in Greece has reversed the progress made in the past concerning the awareness of climate change. Also, the citizens have very low confidence in the public authorities and the big enterprises to deal with climate change, while they have high level of trust in scientific and environmental organizations. They agree with public actions, but are against individual actions to protect the environment as they consider the main stakeholders (state, industry) to be mainly responsible for environmental degradation.

Keywords: climate change; public opinion; environmental awareness; environmental degradation; economic crisis; Greece

1. Introduction

One of the greatest challenges faced by humanity today is climate change. However, as the direct effects on human welfare are not always clear, it is hard for people to conceptualize the causes of climate change and, conversely, the possible effects of climate change on their lives. This, however, does not imply that citizens are not concerned about the consequences of climate change [1]. Several studies have attempted to survey public perceptions and attitudes concerning the issue of climate change on a national basis [2–5]. The majority of citizens in developed countries seem to be very aware of the consequences of climate change [6], even though they do not clearly understand the mechanism through which human activity has an effect on it [7].

The issue of climate change is hard to analyze in a simple and accurate manner, while there is a lot of uncertainty around the issue to date [8,9]. This fact is reflected in the willingness of agents to participate in any possible action against climate change [9]. Moreover, despite the fact that there is a steadily growing widespread concern and awareness about climate change, agents still do not place sufficient importance on this issue when they compare it to other issues of their everyday lives [2,3,10]. This low importance can be attributed to the fact that people do not always have personal experience of the impact of climate change [9,11], even though culturally constructed beliefs can strongly influence people's perceptions of their experience of global warming [12]. Moreover, people need to be better informed on the issue, in order to gain knowledge of every possible action they can undertake to mitigate the potential impact [13].

However, more recent studies indicate there has been a decline in the public's concern about climate change [4,14]. This pattern characterizes the European Union, where only one in two citizens consider climate change a serious problem facing the world in 2013, ranking it as the third most serious problem [15,16]. This trend is reversed compared to 2008, when 62% European citizens considered climate change as the second most serious problem facing the world [15,16]. Economic insecurity, caused by the current economic crisis, has a negative effect on the level of public concern about climate change [4,17]. Similar trends are reported in Eurobarometer surveys at the European Union level: In 2008, only one out of four (24%) European citizens considered a global economic downturn as the third most serious global threat [15], while in 2013 almost six in ten (58%) considered the economic situation as the second most serious problem, ranking climate change third in order of serious global problems [16].

Greece is a European country which has been facing a severe economic crisis over the last six years (after 2009) affecting the way in which Greek citizens perceive the seriousness of climate change. In 2008, nine in ten Greek citizens (90%) considered climate change as the ultimate global problem and ranked an economic downturn as the fourth most serious problem (38%) [15]. Trends were reversed in 2013: the economic situation is classified as the second most serious problem (87%) and climate change is classified as the third most serious problem (53%) [16].

In view of this, the present study surveys the opinion of the residents of the Athens area in Greece concerning their environmental consciousness and awareness on the issue of climate change at a time of a severe economic crisis. Moreover, the study attempts to evaluate various factors affecting the environmental behavior of the residents, such as their willingness to take action against climate change, the possible actions that can be undertaken to address climate change and the importance of the role of

the state. It must be noted that the aforementioned parameters have not been examined in the literature. Unfortunately, there is no similar work conducted in Greece before the economic crisis to compare the impact of economic growth/economic crisis on the public perception of climate change.

2. Data and Methodology

The collection of the data is based on a questionnaire conducted from February 2014 to April 2014, in 16 different places of the Athens urban area. This urban area is divided in four regional units: Central Athens, Piraeus, West Attica, and East Attica. The corresponding percentages of the population are 48.07%, 20.96%, 7.51%, and 23.45% [18], and the same proportions are found in our sample. It should be emphasized that the citizens living in East Attica are financially better-off and live in better urban conditions compared to those of the West Attica area. West Attica and Piraeus suffer from high unemployment rates compared to the other regional units. Moreover, West Attica reports the lowest educational level among all regional units [19].

A total of 513 citizens completed the questionnaire. The sample of the study is in line with the current population characteristics reported by the Greek Statistic Authority [19].

The questionnaire includes five parts (Table 1). The first part poses some general questions aiming to capture the way citizens rank the major environmental issues in Greece. In the second part respondents are asked to classify the severity of possible impacts of climate change on Greece. In addition, respondents are asked to answer whether they repose trust in the ability of various institutions to tackle the problem of climate change. The third part investigates the degree to which respondents consider the actions undertaken against climate change to be effective. In relation to this, citizens are asked to rate whether certain forms of individual actions against climate change can be conducive to mitigating the problem. The fourth part of the questionnaire focuses on the willingness of respondents to participate in actions against climate change on an individual basis. Finally, the fifth part records some socio-demographic data of the respondents. The evaluation of the responses is carried out using categorical variables taking values on a scale from 1 = "not at all" to 5 = "very much" or, alternatively, from 1 = "very bad" to 5 = "very good".

Table 1. The questionnaire used in this study.

Variables	Questions
	First Part: General questions about the environment
Q1.1 *	Is the degradation of water resources a major environmental problem in Greece?
Q1.2 *	Is air pollution a major environmental problem in Greece?
Q1.3 *	Is unhealthy nutrition a major environmental problem in Greece?
Q1.4 *	Are climate change and extreme weather events major environmental problems in Greece?
Q1.5 *	Is the destruction of ecosystems a major environmental problem in Greece?
Q1.6 *	Is solid waste a major environmental problem in Greece?
Q1.7 *	Is noise pollution a major environmental problem in Greece?
Q2 **	How would you rate the quality of the environment in Greece?
Q3.1 *	How informed do you feel about the greenhouse effect?
Q3.2 *	How informed do you feel about climate change?
	Second Part: Severity of possible impacts of climate change on Greece
Q4.1 *	Do you think that Greece will be affected by an increase in the average temperature?

Table 1. *Cont.*

Variables	Questions
Q4.2 *	Do you think that Greece will be affected by extreme weather events such as floods or droughts?
Q4.3 *	Do you think that Greece will be affected by a sea level rise?
Q4.4 *	Do you think that Greece will be affected by a reduction in arable land or desertification?
Q4.5 *	Do you think that Greece will be affected by a destruction of ecosystems?
Q5.1 *	Do you trust national government agencies to tackle climate change?
Q5.2 *	Do you trust the local authorities to tackle climate change?
Q5.3 *	Do you trust the scientific community to tackle climate change?
Q5.4 *	Do you trust environmental organizations to tackle climate change?
Q6.1 *	To what extent do you think the state is responsible to deal with climate change?
Q6.2 *	To what extent do you think citizens are responsible to deal with climate change?
	Third Part: Effectiveness of the actions undertaken against climate change
Q7.1 *	Are the introduction of stricter environmental legislation and heavier fines for offenders effective actions at state level against climate change?
Q7.2 *	Is the provision of more information to the public about climate change an effective action at state level against climate change?
Q7.3 *	Are energy conservation and the use of renewable energy resources effective actions at state level against climate change?
Q7.4 *	Is the integrated solid waste management an effective action at state level against climate change?
Q7.5 *	Are the creation of green belts and reforestation effective actions at state level against climate change?
Q7.6 *	Is the protection of drinking water an effective action at state level against climate change?
Q8.1 *	Is energy saving an effective individual action against climate change?
Q8.2 *	Is recycling (waste and appliances) an effective individual action against climate change?
Q8.3 *	Is the protection and conservation of water an effective individual action against climate change?
Q8.4 *	Is the use of public transport or bicycles an effective individual action against climate change?
	Fourth Part: Willingness to participate in actions against climate change
Q9 *	Do you participate or are you willing to participate in individual actions to address climate change?
Q10.1 *	How much do you agree with the following statement: "Individual actions against climate change are ineffective if those who are primarily responsible for the problem, such as the industry, the state *etc.*, do not participate or do not take a more active role".
Q10.2 *	How much do you agree with the following statement: "Participation in individual actions against climate change must be accompanied by financial or other benefits".
Q10.3 *	How much do you agree with the following statement: "I do not worry about climate change because I do not think it will affect me".
	Fifth Part: Socio-demographic data
	Age classification
	Gender classification
	The educational level of residents
	Location of residence
	Residents' occupation

* How the variable is coded: 1: Not at all, 2: Little, 3: Enough, 4: Much, 5: Very Much. ** How the variable is coded: 1: Very bad, 2: Bad, 3: Average, 4: Good, 5: Very Good.

3. Results and Discussion

Table 2 shows the responses recorded on each question and their mean value.

Table 2. General trends of responses on the questionnaire (%).

Question		Evaluation of Responses *					Mean Value
		1	2	3	4	5	
Description	**Code**	**Not at all**	**Little**	**Enough**	**Much**	**Very Much**	
Is the degradation of water resources a major environmental problem in Greece?	Q1.1	2.53	6.63	27.68	34.70	28.46	3.80
Is air pollution a major environmental problem in Greece?	Q1.2	0.19	4.29	15.98	36.84	42.69	4.18
Is unhealthy nutrition a major environmental problem in Greece?	Q1.3	1.17	8.38	29.43	33.92	27.10	3.77
Are climate change and extreme weather events major environmental problems in Greece?	Q1.4	1.75	18.13	31.19	29.43	19.49	3.47
Is the destruction of ecosystems a major environmental problem in Greece?	Q1.5	0.58	3.70	24.56	35.67	35.48	4.02
Is solid waste a major environmental problem in Greece?	Q1.6	0.39	4.68	18.32	35.48	41.13	4.12
Is noise pollution a major environmental problem in Greece?	Q1.7	2.73	15.98	35.67	29.63	15.98	3.40
How would you rate the quality of the environment in Greece?	Q2 **	22.42	30.21	38.79	5.85	2.73	2.36
How informed do you feel about the greenhouse effect?	Q3.1	7.21	20.86	37.43	21.05	13.45	3.13
How informed do you feel about climate change?	Q3.2	3.90	19.30	42.88	22.22	11.70	3.19
Do you think that Greece will be affected by an increase in the average temperature?	Q4.1	0.00	9.94	32.55	38.60	18.91	3.66
Do you think that Greece will be affected by extreme weather events such as floods or droughts?	Q4.2	0.19	8.58	34.70	39.57	16.96	3.65
Do you think that Greece will be affected by a sea level rise?	Q4.3	2.73	24.56	37.82	25.15	9.75	3.15
Do you think that Greece will be affected by a reduction in arable land or desertification?	Q4.4	4.09	15.59	30.41	29.63	20.27	3.46
Do you think that Greece will be affected by a destruction of ecosystems?	Q4.5	0.39	6.82	34.11	37.62	21.05	3.72
Do you trust national government agencies to tackle climate change?	Q5.1	55.75	35.28	7.21	0.97	0.78	1.56
Do you trust the local authorities to tackle climate change?	Q5.2	45.61	37.62	13.26	2.73	0.78	1.75
Do you trust the scientific community to tackle climate change?	Q5.3	7.41	25.34	37.04	22.42	7.80	2.98
Do you trust environmental organizations to tackle climate change?	Q5.4	7.99	19.30	33.14	28.46	11.11	3.15
To what extent do you think the state is responsible to deal with climate change?	Q6.1	2.34	4.29	9.55	28.46	55.36	4.30
To what extent do you think citizens are responsible to deal with climate change?	Q6.2	3.70	5.26	16.37	32.94	41.72	4.04
Are the introduction of stricter environmental legislation and heavier fines for offenders effective actions at state level against climate change?	Q7.1	5.85	14.81	16.18	29.24	33.92	3.71
Is the provision of more information to the public about climate change an effective action at state level against climate change?	Q7.2	1.56	7.80	18.52	30.41	41.72	4.03

Table 2. *Cont.*

Question		Evaluation of Responses *					Mean Value
		1	2	3	4	5	
Description	**Code**	**Not at all**	**Little**	**Enough**	**Much**	**Very Much**	
Are energy conservation and the use of renewable energy resources effective actions at state level against climate change?	Q7.3	0.78	2.73	9.36	29.24	57.89	4.41
Is the integrated solid waste management an effective action at state level against climate change?	Q7.4	0.39	3.90	12.28	31.58	51.85	4.31
Are the creation of green belts and reforestation effective actions at state level against climate change?	Q7.5	0.39	2.34	6.24	23.20	67.84	4.56
Is the protection of drinking water an effective action at state level against climate change?	Q7.6	1.17	2.92	6.43	20.08	69.40	4.54
Is energy saving an effective individual action against climate change?	Q8.1	0.97	4.48	20.27	36.65	37.62	4.05
Is recycling (waste and appliances) an effective individual action against climate change?	Q8.2	0.39	3.70	15.01	35.67	45.22	4.22
Is the protection and conservation of water an effective individual action against climate change?	Q8.3	1.36	4.68	11.89	35.67	46.39	4.21
Is the use of public transport or bicycle an effective individual action against climate change?	Q8.4	1.75	5.07	18.32	31.58	43.27	4.10
Do you participate or are you willing to participate in individual actions to address climate change?	Q9	7.60	15.79	38.99	22.81	14.81	3.21
How much do you agree with the following statement: "Individual actions against climate change are ineffective if those who are primarily responsible for the problem, such as the industry, the state etc, do not participate or do not take a more active role".	Q10.1	4.68	8.77	18.91	30.02	37.62	3.87
How much do you agree with the following statement: "Participation in individual actions against climate change must be accompanied by financial or other benefits".	Q10.2	72.71	13.26	9.16	4.48	0.39	1.47
How much do you agree with the following statement: "I do not worry about climate change because I do not think it will affect me".	Q10.3	80.70	7.21	4.87	4.09	3.12	1.42

Notes: * values in percent. ** For question Q2, numerical variables represent 1: Very bad, 2: Bad, 3: Average, 4: Good, 5: Very Good.

3.1. First Part of the Questionnaire: General Questions about the Environment

The majority of the citizens of Athens (79.5%, sum of the answers "much" and "very much") perceive air pollution as the most important environmental issue in Greece. Solid waste follows (76.6% of the respondents), then comes the destruction of ecosystems (71.2%), the degradation of water resources (63.2%) and unhealthy nutrition (61.0%). Almost half of the respondents (48.9%, mean value: 3.47) consider climate change and extreme weather events serious environmental problems affecting Greece (Table 2). An explanation for this classification could be that the former environmental problems are more easily understood as they have a direct local effect [2]. However, according to previous studies, climate change is cited as a critical environmental issue in Greece by 46% of respondents in 2004 [20]

and by 67% in 2007 [21]. This implies that the current economic crisis in Greece has reversed the progress made in the past concerning the awareness of Greek citizens about climate change.

The majority of the residents of Athens believe that the environmental quality in Greece is in quite bad condition (sum of answers "very bad" and "bad" = 52.6%). Only a minority of 8.5% responds "good" or "very good" (Table 2). These outcomes are consistent with the findings of a previous study, according to which a total of 74% of Greek respondents judged the environmental situation in their country in a negative way, against 53% of the corresponding EU average value [22].

Furthermore, respondents believe that they are well informed about both the greenhouse effect and the issue of climate change: 34.6% and 33.9% of the respondents respectively believe that their level of information is "good" to "very good" regarding these issues. Only 28.1% and 23.2% respectively respond that they are "not at all" to "little" informed about both issues (Table 2). According to previous Eurobarometer surveys in 2004 and 2007, the Greek citizens felt relatively poorly informed (42%–48%) compared to the average European value (EU: 55%–59%) [20,21]. Our results indicate that there has been progress since then, but further information on both topics is still advisable.

3.2. Second Part of the Questionnaire: Severity of Possible Impacts of Climate Change on Greece

Almost 6 out of 10 respondents (58.7%, sum of answers "much" and "very much") believe that the main impact of climate change on Greece will be the destruction of ecosystems. The increase in the average temperature ranks as the second major impact (57.5%), while extreme weather events, such as floods and droughts (56.6%), and the reduction of farmland (49.9%) follow. Only 34.8% of respondents consider the rise in sea level a major forthcoming effect of climate change in Greece (Table 2). This is quite expected. Contrary to ocean coastal countries, the rising sea level is not the major impact of climate change in Greece and other Mediterranean countries, especially compared to the increase of mean temperatures and the decrease of rainfalls.

The respondents do not have confidence in public authorities to deal with the problem of climate change. In particular, 55.8% and 45.6% of the respondents answer "Not at all" when they were asked about their trust in government and local authorities respectively (Table 2). While most citizens welcome any effective action undertaken at state level (national or local authorities), there is a lack of confidence in these institutions. An explanation for this could be that the citizens of Athens are concerned either about institutional failure or corruption in the same way recorded by citizens of Norwich and Rome [23]. A further explanation could be that at the time the survey was conducted, Greece was experiencing a severe economic crisis and political instability. The stringent austerity measures have resulted in adverse effects on economic, political, and social life in Greece. Austerity brought about a deeper economic crisis leading to a general lack of confidence of Greek people in the entire local political system. According to official data, the unemployment rate rose from 9.5% in 2009 to 17.7% in 2011 and to 27.3% in 2013 [24], the Gross Domestic Product in US $ (constant 2005 prices) shrank by 11.7% in 2011 and by 21% in 2013 compared to 2009 levels [25], while the annual real minimum wage shrank by 5.38% in 2011 and by 24.14% in 2013 compared to 2009 levels [25].

Conversely, the respondents have high confidence in the scientific community and environmental organizations to tackle the problem of climate change: 67.2% "enough" to "very much", against 32.7% "not at all" to "little" (Table 2). With respect to environmental organizations, more than 7 in

10 respondents (72.7%) show "enough" to "very much" confidence in these organizations to deal with the problem of climate change.

According to Eurobarometer, the public authorities, the environmental organizations and the scientific community enjoy relatively low levels of confidence in the EU as only 38%, 36%, and 26% of respondents respectively trust authorities [21]. Based on our results, the trends reported in Greece are quite different: the public authorities are deeply distrusted, while, conversely, the scientific community and environmental organizations enjoy relatively high levels of trust.

Literature shows that the vast majority of European citizens (86%), as well as Greek citizens (93%), stress the importance of responsibility at the individual level to protect the environment [26]. Also, Greek citizens feel that governments (90%) and the EU (74%) are not making progress in using energy resources in a more efficient way [26]. Furthermore, our results show that almost 92% of Greek citizens believe that those who are mainly responsible, such as industries, do nothing to protect the environment. The major part of our respondents believes that public authorities (83.9%), as well as citizens (74.6%), should take action and contribute to mitigating climate change. The same findings are reported in the case of USA and Canada [27].

3.3. Third Part of the Questionnaire: Effectiveness of the Actions Undertaken against Climate Change

In this part, the respondents rank the effectiveness of various possible actions that can be undertaken to address climate change. The vast majority of the people surveyed (91%, sum of the answers "much" and "very much") consider the creation of green areas and reforestation as the most effective actions against climate change at state level. The protection of drinking water (89.4%), energy saving and the use of renewable energy resources (87.1%), the integrated solid waste management (83.4%), the reinforcement of environmental awareness through improvements of the information level (72.1%) and the imposition of heavy fines on polluters (63.1%) follows. Greek citizens seem to place great significance on forests, water, and energy policies at state level to address climate change.

According to Eurobarometer [26], improvements in the level of knowledge of environmental issues are seen as the most effective way to tackle environmental problems (Greece: 40%, EU: 26%), followed by the imposition of heavier fines on polluters (Greece: 37%, EU: 36%), the introduction of stricter legislation to avert further environmental degradation (Greece: 32%, EU: 23%), the more effective use of natural resources (Greece: 23%, EU: 26%), higher economic incentives for organizations and citizens to protect the environment (Greece: 20%, EU:25%), the enforcement of environmental laws (Greece: 16%, EU: 25%), and higher taxes on environmentally damaging activities (Greece: 14%, EU: 15%).

Our results show (Table 2) that more than four in five Greek citizens consider the actions of recycling (waste and appliances) and water conservation as the most effective actions at the individual level against climate change (80.9% and 82.1% respectively, sum of the answers "much" and "very much". Almost three in four respondents (74.9%) cite the use of public transport and bicycles and the action of energy saving (74.2%) as an effective individual action.

According to Eurobarometer, the most popular individual action that respondents undertook in 2007 to tackle environmental problems was recycling (Greece: 32%, EU: 59%), reduction in energy consumption (Greece: 38%, EU: 47%) and water saving (Greece: 39%, EU: 37) [21]. Only 9% of Greek citizens reported having used their car less in 2007 [21], while in 2011, only one in five (21%) reported

having used environmentally friendly alternative ways of transportation instead of their cars [28]. Of course, the first of the two last results is completely different today, as the economic crisis has led to a significant decrease in the use of private cars in Greece, due to the decrease in income and the increase in fuel price [29].

3.4. Fourth part of the Questionnaire: Willingness to Participate in Actions against Climate Change

Greek citizens do not show a great willingness to participate in individual actions against climate change, since only 37.6% respond "much" to "very much" (Table 2). From a different perspective, four out of five (80%) Greek citizens believe that they are not doing enough to protect the environment [26] and only 14% believe that they are personally responsible for tackling climate change [28].

In accordance with this, our results show that a high percentage of citizens of Athens (67.6%) believe that individual actions have no effect, if stakeholders, who are mainly responsible for the climate change, such as the state or industry, are not involved (Table 2). Nine out of ten citizens in the EU and in Greece believe that the primary responsibility for protecting the environment should lie with the biggest polluters, such as corporations and industries [21,26].

Our respondents disagree with the statement that participation in individual actions must be accompanied by financial or other benefits: 72.7% completely disagree (Table 2). About one fourth (29% in 2007, 26% in 2011) of EU citizens believe that offering higher financial incentives (e.g.,: tax breaks, subsidies) to industry, commerce, and to citizens who protect the environment is an effective way of tackling environmental problems [21,26].

Furthermore, four out of five (80.7%) respondents in Athens agree with the statement that climate change concerns them or will affect them. From 2007 to 2011 there has been a significant decrease in the way European citizens rank the environmental problem of climate change in relation to other problems (from 57% in 2007 to 34% in 2011). At the state level in Greece, climate change ranks as the second most significant environmental issue to worry about in 2011 [28] but, as already discussed in the first part of the questionnaire, this trend has been reversed in recent times; obviously as a result of the severe economic crisis.

4. Conclusions

This study shows that climate change is considered to be one of the main environmental problems in the urban area of Athens, Greece. However, the current economic crisis in Greece has reversed the progress that was made in the past concerning the awareness of Greek citizens about climate change. Even so, Greek citizens seem to place great importance on the implementation of energy policy strategies at a national level to address climate change through environmental protection, use of renewable energy sources and energy saving schemes.

The citizens of Athens seem to believe that they are well informed on issue of climate change, perceiving air pollution, solid waste and the destruction of ecosystems (in order) as the ultimate impacts of climate change on Greece. The rise in sea levels is considered the least significant forthcoming effect of climate change on Greece. Most citizens welcome any effective action undertaken at state level (national or local authorities) against climate change, but do not have confidence in these institutions to address climate change. Conversely, the respondents have almost complete confidence in the scientific

community and environmental organizations to tackle the problem of climate change. A high percentage of citizens of Athens do not believe that participation in individual actions must be accompanied by financial or other benefits but stress that individual actions have no effect, if stakeholders, who are mainly responsible for the climate change, such as the state or industry, are not involved. Obviously, Greek people seem to question the ability of the political and institutional framework to undertake certain actions to protect the environment from the adverse effects of climate change. This highlights the fact that tackling the issue of climate change presupposes a channel of feedback between the individual and society as a whole as expressed through the political system.

A limitation of the current study is that there has been no similar work conducted in Greece before the economic crisis. This would allow a fruitful comparison of trends concerning the impact of economic growth and of an economic crisis on the public perception regarding climate change. However, results reported in the current study could constitute the basis for future research on the climate change-economic situation nexus. This work will continue to record the future trends.

One of the main problems of policy analysis in energy, environment, and natural resource problems is that the GDP fails to capture the environmental and social externalities of economic growth. It fails as well to capture the inherent unsustainability of economic activity financed by debt. Incorporating such externalities is instead a means for guiding policy and further research. Looking forward and identifying emerging issues of economic and environmental challenges will help to adopt a more proactive approach to both structural changes and strategic investments. The fact remains that today's massive socio-economic challenges demand immediate attention, to avert the long-term effects of climate change. A capacity to act decisively is also needed, despite considerable uncertainty about what the best plan of action might be. Hesitating to act now against climate change will only add to the burdens of the next generation.

Author Contributions

All authors contributed extensively to the work presented in this paper. Dimitrios Papoulis processed the data and performed the analysis. Dimitra Kaika and Christina Bampatsou were involved in the data analysis, the interpretation of results, and the preparation of the manuscript. Efthimios Zervas conceived the research, supervised the entire work, and commented on the manuscript at all stages. All authors discussed the results and implications.

Conflicts of Interest

The authors declare no conflict of interest.

References

1. Carolan, M. Sociological ambivalence and climate change. *Local Environ.* **2010**, *15*, 309–321.
2. Leiserowitz, A. Climate change risk perception and policy preferences: The role of affect, imagery, and values. *Clim. Change* **2006**, *77*, 45–72.
3. Pidgeon, N. *Report 5: Public Understanding of and Attitudes Towards Climate Change*; Government Office for Science: London, UK, 2010.

4. Scruggs, L.; Benegal, S. Declining public concern about climate change: Can we blame the great recession? *Glob. Environ. Change* **2012**, *22*, 505–515.
5. Whitmarsh, L. Scepticism and uncertainty about climate change: Dimensions, determinants and change over time. *Glob. Environ. Change* **2011**, *21*, 690–700.
6. Lorenzoni, I.; Pidgeon, N.F. Public views on climate change: European and USA perspectives. *Clim. Change* **2006**. *77*, 73–95.
7. Lorenzoni, I. Present Choices, Future Climates: A Cross-Cultural Study of Perceptions in Italy and in the UK. Ph.D. Thesis, University of East Anglia, Norwich, UK, 2003.
8. Ungar, S. Knowledge, ignorance and the popular culture: Climate change *versus* the ozone hole. *Public Underst. Sci.* **2000**, *9*, 297–312.
9. Weber, E.U. What shapes perceptions of climate change? *WIREs Clim. Change* **2010**, *1*, 332–342.
10. Ajibade, I.; Armah, F.; Kuuire, V.; Luginaah, I.; McBean, G. Self-reported experiences of climate change in nigeria: The role of personal and socio-environmental factors. *Climate* **2014**, *3*, 16–41.
11. Spence, A.; Poortinga, W.; Pidgeon, N.; Lorenzoni, I. Public perceptions of energy choices: The influence of beliefs about climate change and the environment. *Energy Environ.* **2010**, *21*, 385–407.
12. Akerlof, K.; Maibach, E.W.; Fitzgerald, D.; Cedeno, A.Y.; Neuman, A. Do people "personally experience" global warming, and if so how, and does it matter? *Glob. Environ. Change* **2013**, *23*, 81–91.
13. Moser, S. Costly Knowledge-unaffordable denial: The politics of public understanding and engagement on climate change. In *The Politics of Climate Change: A Survey*; Boykoff, M.T., Ed.; Routledge: London, UK; New York, NY, USA, 2010; pp. 155–181.
14. Stoknes, P.E. Rethinking climate communications and the "psychological climate paradox". *Energy Res. Soc. Sci.* **2014**, *1*, 161–170.
15. European Commission. *Europeans' Attitudes towards Climate Change, Special Eurobarometer 300/Wave 69.2*; European Commission: Brussels, Belgium, 2008.
16. European Commission. *Climate Change, Special Eurobarometer 409/Wave EB80.2*; European Commission: Brussels, Belgium, 2013.
17. Brulle, R.J.; Carmichael, J.; Jenkins, J.C. Shifting public opinion on climate change: An empirical assessment of factors influencing concern over climate change in the U.S., 2002–2010. *Clim. Change* **2012**, *114*, 169–188.
18. EL.STAT. *Announcement on the Publication of Revised 2011 Census Tables*; Hellenic Statistical Authority: Piraeus, Greece, 2011.
19. EL.STAT. *Population and House Census 2011, Economic Characteristics of Population*; Hellenic Statistical Authority: Piraeus, Greece, 2011.
20. European Commission. *The Attitudes of European Citizens towards the Environment, Special Eurobarometer 217/Wave 62.1*; European Commission: Brussels, Belgium, 2004.
21. European Commission. *Attitudes of European Citizens towards the Environment, Special Eurobarometer 295/Wave 68.2*; European Commission: Brussels, Belgium, 2007.
22. European Commission. *National Report-Executive Summary—Greece, Standard Eurobarometer 72*; European Commission: Brussels, Belgium, 2009.

23. Lorenzoni, I.; Langford, I. Dealing with climate change: Role of institutions in the eyes of the public. In Proceedings of the 2001 Berlin Conference on the Human Dimensions of Global Environmental Change, Berlin, Germany, 6–7 December 2001.
24. Eurostat. *Online Database (Various Series)*; European Commission: Luxembourg, 2013.
25. OECD StatExtracts. *OECD Statistics-Online Database*; Organisation for Economic Co-Operation and Development: Paris, France, 2014.
26. European Commission. *Attitudes of European Citizens towards the Environment, Special Eurobarometer 365/Wave 75.2*; European Commission: Brussels, Belgium, 2011.
27. Borick, C.; Lachapelle, E.; Rabe, B. Climate compared: Public opinion on climate change in the United States and Canada. *Issues Gov. Stud.* **2011**, *39*, 1–13.
28. European Commission. *Climate Change, Special Eurobarometer 372/Wave EB75.4*; European Commission: Brussels, Belgium, 2011.
29. Chita, E.; Zervas, E. The Greek market of passenger cars in a period of economic crisis. In Proceedings of the 3rd Conference of the Scientific Society of Political Economy: The Greek Economy and the Politics of Memorandums: Current Situation and Perspectives, Patra, Greece, 14–15 January 2014.