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Research Article

Revisiting the Role of Post-Materialist Values on Environmental Concern: An Analysis of Turkish Public Perception Over Climate Change Between the Years 2018-2020

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Abstract

Previous studies on public environmental concerns indicate that economic factors have an impact on individuals' environmental concerns and attitudes toward environmental problems. Yet, few studies have examined the possible impact of changing economic conditions due to economic and/or financial crises on public environmental concern and especially concern towards climate change. The economic crisis starting in late 2018 in Turkey provides an interesting case to understand the impact of economic factors on environmental concerns and especially attitudes towards climate change. The study asks how changing economic conditions due to the economic crisis of 2018 affected Turkish individuals' concerns about the climate change problem. Multilevel analysis was applied to data collected from special Eurobarometer surveys between the years 2018 and 2020. The main finding in this study is that changes in the economic situation across Turkey during the crisis period do have an impact in decreasing public concern towards climate change in Turkey overall. In 2020 when the negative effects of economic recession were felt strongly, the results indicate that environmental concern is negatively correlated with the public perceptions of the national economy, household financial situation, and life satisfaction. In other words, while the prioritization of economic factors by most of the society in the period when the economic crisis was most felt, confirms the post-materialist thesis; on the other hand, the increasing awareness of the climate change crisis has started to bring the idea that the exit plans from the economic crisis should be more environmentally friendly and more sustainable.

Keywords: Post-materialism, Public Environmental Concern, Economic Factors, Turkey, Climate Change.

JEL Codes: Q54, C12, C8, G5

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Araştırma Makalesi

Post-Materyalist Değerlerin Çevresel Kaygı Üzerindeki Rolüne Yeniden Bakış: 2018-2020 Yılları Arasında Türkiye Kamuoyunun İklim Değişikliği Algısı Üzerine Bir Analiz

Tuğçe Yıldız[1]

Öz

Kamusal çevre kaygıları ile ilgili yapılan önceki çalışmalar, ekonomik faktörlerin bireylerin çevresel kaygıları ve çevre sorunlarına yönelik tutumları üzerinde etkisi olduğunu göstermektedir. Ancak, ekonomik ve/veya finansal krizler nedeniyle değişen koşulların, kamunun çevresel kaygıları ve özellikle iklim değişikliğine yönelik kaygıları üzerindeki olası etkisini inceleyen az sayıda çalışma bulunmaktadır. Türkiye'de 2018'in sonlarında başlayan ekonomik kriz, ekonomik faktörlerin çevresel kaygılar ve özellikle iklim değişikliğine yönelik tutumlar üzerindeki etkisini anlamak için ilginç bir örnek sunmaktadır. Bu çalışma, 2018 ekonomik krizi nedeniyle değişen ekonomik koşulların Türk kamuoyunun iklim değişikliği sorununa ilişkin endişelerini nasıl etkilediğini sormaktadır. Bu çalışmada, 2018 ve 2020 yılları arasında özel Eurobarometer anketlerinden toplanan verilere çok düzeyli analiz uygulanmıştır. Bu çalışmadaki temel bulgu, kriz döneminde Türkiye genelinde ekonomik durumdaki değişikliklerin Türkiye'de iklim değişikliğine yönelik kamuoyunun endişesini azaltmada etkili olduğudur. Ekonomik durgunluğun olumsuz etkilerinin güçlü bir şekilde hissedildiği 2020 yılında sonuçlar, çevresel kaygının halkın ülke ekonomisine, hanehalkının mali durumuna ve yaşam memnuniyetine yönelik algıları ile negatif ilişkili olduğunu göstermektedir. Diğer bir deyişle, bir yandan ekonomik krizin en çok hissedildiği dönemde, toplumun büyük kesiminin ekonomik faktörleri önceliklendirmesi post-materialist tezi doğrularken; diğer yandan, git gide artan iklim krizi farkındalığıyla birlikte, ekonomik krizden çıkış planlarının daha çevreci ve daha sürdürülebilir olması gerektiği düşüncesini de getirmeye başlamıştır.

Anahtar Kelimeler: Post-materyalizm, Kamusal Çevre Kaygısı, Ekonomik Faktörler, Türkiye, İklim Değişikliği

JEL Kodlar: Q54, C12, C8, G5

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1. Introduction

Climate change is one of the most challenging problems confronting the world. It is evident that global climate change not only results in serious alterations in the environment but also causes several serious problems such as deaths, displacements, diseases, and droughts and also floods, landslides, hurricanes, high temperetures, forest fires. According to United Nations Safe Climate Report (2019), between 2005 and 2015, over 700.000 people died due to the negative effects of climate change, over 1.4 million were injured and over a billion were affected harshly by natural disasters exacerbated by climate change. This number is expected to reduplicate by 2030 even if the countries start to take some serious plans and policies for reducing emissions today (Gould, 2019). Although many large bodies of scientific agencies and the vast majority of climatologists agree on the climate change reality, this scientific consensus on climate change has not been translated into a social consensus as it is a very difficult problem and a complex issue with political, economic, socio-cultural, psychological and ethical implications to address.

Held and Hervey (2011) emphasize that the climate change challenge is multifaceted and multilayered, which requires long-term policy commitments and solutions within the global governance framework including many actors and agencies. In order to find concrete solutions to such a complex problem, decision-making needs to take into account the multiple diverse preferences over short and longer timescales (Lorenzoni & Pidgeon, 2006). Public opinion in a such complex socio-political context is critically important to address the challenges of the climate change problem. As of interest to many social scientists and policymakers, public perceptions toward climate change give very crucial insights on effective solutions to tackle the challenges and strategies sought by policymakers dealing with designing concrete policies (Bord et. al., 1998).

In the mid-1980s, the question of global warming had begun to be included in some public opinion polls. Since then, there have been numerous public opinion polls all over the world in order to assess environmental awareness and concerns about global climate change. While assessing the results of these polls, various approaches developed within the field of communications and social psychology, have been used in order to explore key factors influencing individuals' beliefs, awareness, and action towards climate change (Marquart-Pyatt et. al., 2011). Previous research has shown that public concern for environmental problems specifically climate change is different across countries and fluctuates from time to time. This cross-national variation in environmental concern has led to the search for explaining underlying factors by using cross-national data (see Sandvik, 2008; Franzen & Meyer, 2010). Yet, while scholars have mainly focused on the local context in examining the determinants for the climate change perception (See for ex. Maibach et. al., 2009; Metag et. al, 2017) comprehensive studies in this field is very recent. Indeed, the first meta-analysis of the demographic and psychological correlates of belief in climate change has been done in 2016 (Hornsey et. al., 2016).

One of the most frequent explanations for cross-national variation in environmental concern is the "Theory of Post-Materialist Value Change" formulated by Ronald Inglehart (1990, 1995). Based on Maslow's "theory of a hierarchy of human needs", Inglehart suggests that economic development after the post-war period led to the shift from materialist values such as economic and security to "post-materialist" values such as self-actualization, creativity, and care for the environment which in turn prompted the emergence of social movements such as peace, feminism, and environmental movements. Thus, Inglehart's theory argues that people in affluent societies with more prevalent post-materialist values express higher levels of concern

for environmental issues (Brechin 1999; Brechin & Kempton, 1994; Dunlap & Mertig, 1997). However, this explanation has been criticized for its inability to explain growing environmental awareness and activism within poor nations. On the contrary, Dunlap and Mertig (1995) showed in their studies that environmental concern has a worldwide phenomenon, not one limited to wealthy nations by using the results of the Health of Planet (HOP) survey conducted by Gallup International Institute. Results showed that citizens within poor nations were more likely to show environmental concern than their counterparts in affluent nations and questioned the assumptions of Inglehart's post-materialist explanation. As a response to the critics, Inglehart revised the post-materialist explanation of environmental concern and reformulated his 'objective problems-subjective values' hypothesis to research the cross-country variation in environmental concern. Inglehart (1995) has argued that individuals in poor countries are also concerned with environmental issues because they face with local environmental problems such as polluted air, water, and soil degradation. Therefore, public support for environmental protection tends to be strong in countries with relatively severe objective (environmental) problems and explained the high level of environmental concern in poor nations. Thus, environmental concern is a result of not only post-materialist values but also objective problems. By combining both assumptions, Inglehart reformulated the framework by stating that there are two independent factors shaping environmental concern: i) post-materialist values and ii) degree of environmental quality.

Similar to Inglehart's assumptions, Weber (2010) argues that individuals experiencing the bad effects of extreme weather events are more likely to show a higher level of concern for climate change. A bulk of studies in the literature show that with an increasing number of extreme weather events such as high temperatures, floods, hurricanes and droughts, individuals recognize more visibly the existence of climate change.

Regarding this debate over the determinants of environmental concern, it is interesting to see how and why there is fluctuation in public environmental concern in Turkey over years. This study aims to investigate key underlying factors of fluctuation in public environmental concern specifically focusing one towards climate change in Turkey. In that respect, changing economic conditions at times of economic crisis as well as gradually increased numbers of environmental disasters happened in various regions in Turkey will provide a good test to examine the impact of economic conditions on public concern towards climate change issue when other possible determinants come into play.

The rest of the study consists of four parts: The second part includes literature review, theoretical framework key concepts derived from previous studies on public opinion toward climate change, research problem, aims, and hypotheses; third part includes data, methods, and empirical results; the last part gives the conclusion of the study.

1.1 Literature Review

There is a strong consensus among scientists concerning the reality of climate change and its potential consequences in the future. Given the fact that climate change is largely driven by greenhouse gas (GHG)s, there is no doubt that human behavior is the main contributor to this problem as several key GHGs such as carbon dioxide, methane, and nitrous oxide are stemmed by human activities. Although human behavior is one of the main causes of the problem and any changes to it are important to mitigate negative effects, some argue that it has been the least understood aspect of the climate change system (Gifford, Kormos, & McIntyre, 2011). In other words, the reasons for specific attitudes regarding environmental problems especially climate change have not been well-understood aspect compared to others by both scholars and politicians.

Nevertheless, over the past two decades, significant efforts have been made to integrate social and behavioral sciences into the complex climate change system and the literature. As Stern (1992) emphasized, social and behavioral sciences have a key role in the understanding of how human systems produce the proximate causes and how any change in human perception and behavior regarding environmental issues might affect the risks of global environmental crisis and climate change. Thus, understanding the role of humans in responding to the alterations in the global environment as mitigation or adaptation is crucially important for both policymakers and scientists to address this problem.

This section tries to overview previous studies on the determinants of public opinion on climate change by emphasizing the channels and sources where people get information about climate change. The fact that individuals cannot directly perceive climate change makes it difficult to accept this reality. Perception of the climate change is affected by forecasts and beliefs that obstruct certain behaviors to respond to challenges. Personal experience of extreme weather events might shape the likelihood of increased concern about climate change. According to Weber (2010), climate change is a statistical phenomenon, and it is hard to detect it by personal experience although some weather changes might be falsely attributed to climate change. In addition, Weber argues that learning from personal experience and learning from the statistical description might lead to different perceptions and actions followed even though the same information about events and their likelihood is given. Learning from personal experience is mostly fast and automatic whereas learning from statistical descriptions requires analytic processing and cognitive effort. Therefore, compared to the analytical processing of climate-related information on which scientists base their decisions and perceptions, affective and associative processing is far more likely to capture non-scientists attention. (Weber, 2010; Weber & Stern, 2011) Several studies show that extreme weather events such as floods (Spence et al. 2011), hurricanes, and droughts (Borick & Rabe, 2010), as well as increasing temperatures (Krosnick et al., 2006), increase the salience of the environmental problems which in turn leads to increase recognition of and concern over climate change. However, the probability of those extreme weather or climate events (frosts, flooding, or droughts) that people can diagnose in their daily life is small.

Lack of information also affects public concern about climate change. Information-Deficit Model introduced by Sturgis and Allum (2004) suggests that knowledge is the main determinant of attitudes toward science. Thus, lack of knowledge about climate change reality is the main impediment to the understanding of this problem as well as the increasing public concern over it. Two divergent camps of scholars suggest different assumptions about the importance of scientific information in creating awareness of climate change. On the one side, some scholars such as Reynolds et al. (2010) and Zhao et al (2011) indicate in their studies that an increase in available information to the public about climate change has a positive effect on individual concern about it. On the other side, some suggest that a better understanding of causes and practical solutions to climate change does not necessarily result in efficacious behavior. Instead, other factors such as deeply held pro-environmental values and beliefs, incentives, perceived benefits, skill and a sense of efficacy, social support, peer pressure, and practical assistance are effective in shifting behavior toward pro-environmental behavior (Moser & Dilling, 2010; Downing & Ballantyne 2007; Gardner & Stern 2002; Semenza et al. 2008; Takahashi 2009).

Media coverage is another factor that suggested that media plays a key role in informing the mass population about climate change by using language and graphics that are easier to comprehend. According to the Agenda-Setting Hypothesis (McCombs, 2004; Dumitrescu & Mughan, 2010), public opinion reflects the extent and prominence of media coverage.

Moreover, the Quantity of Coverage Theory states that public concern about environmental risks rises with increasing news coverage and decreases with diminishing coverage (Mazur 1990, 1998). The main effect of media coverage is to increase issue salience. The frequency and prominence of the specific issue in media are much more important than its detailed content. Therefore, headlines and repeated stories about that specific issue in media give the impression of that issue is particularly important to the public. Thus, media coverage might lead to a rise and fall in public concern about climate change over time. For example, according to the Eurobarometer Survey 58.0 of 2002, respondents said that nuclear power and radioactive waste, industrial activities, pollution, natural disasters, and ozone are the most worrying environmental risks rather than the climate change, because according to the survey analysts, over the last 30 years, media frequently mentioned these subjects as critical environmental problems (Lorenzoni & Pidgeon, 2006). On the other hand, results of the Special Eurobarometer Report (501) indicate that majority of survey respondents (53%) think that climate change is the most important environmental issue, followed by air pollution (46%) and the growing amount of waste (46%) (Eurobarometer, 2020) as climate change issue has gained prominence in media over the last decades.

These factors mentioned here play into two competing theoretical approaches namely Inglehart's Post-materialist Value Change explanation and Dunlap and Mertig's globalization approach, which will be discussed further in the following subsection.

1.2 Theoretical Framework

This study takes the three most debated theoretical approaches to environmental concern into consideration. The first one is Inglehart's Post-materialist Value Change approach, which was first introduced in the early 1970s suggesting that as industrialization brings material affluence, societies tend to give priority over the "quality of life" issues over material ones such as economic and physical security. Using psychological needs theory (Maslow, 1970), Inglehart (1995, 1997) argues that citizens within affluent societies are less interested in the economic struggle for their survival because they can easily satisfy their basic needs in those societies. This freedom leads to pursuing other post-materialistic goals such as political freedom, individual self-fulfillment, and environmental protection. Thus, higher environmental concern emerges because of a widespread shift from materialist values to post-materialist values as societies develop.

The hypothesis stating that there is a positive correlation between prosperity and environmental concern was assessed by Dunlap and Mertig (1995, 1997) via data of the Gallup International Institute survey conducted in 1992. Unlike the previous cross-national surveys, this survey included a more diverse set of nations that can be classified as low, medium, and high income based on GDP per capita. They found that environmental concern is not limited to the citizens of wealthy nations, but instead it exists in many third-world countries. Indeed, contrary to the conventional assumption, data only partially supported the hypothesis suggesting the correlation between environmental attitude and national affluence as prominent levels of environmental concern were also seen in some developing countries. Even more, results showed that citizens within poor nations were more likely to show environmental concern than their counterparts in affluent nations and questioned the assumptions of Inglehart's post-materialist explanation. In addition, the growing environmental awareness within poor nations has become visible in many incidents such as the participation of the vast number of grassroots organizations from those nations in the Global Forum in Rio in 1992 (Dunlap and York, 2012).

With the globalization of environmental concern, it is no longer possible to make universalistic explanations to can be proved worldwide. There are many varied factors involved in shaping public haopinion regarding environmental issues within and particularly across different nations. Several studies show that environmental concerns are complex, multifaceted, and varied. Context, in this regard, is critically important to shaping environmental concerns in at least two ways: through an individual's socio-economic context and country-level contextual forces (Marquart-Pyatt, 2012). Based on previous research on individual-level determinants of public environmental concern, age, gender, education level, income and political ideology have an impact on environmental beliefs, values, and attitudes. Accordingly, some researchers found that younger people (Dunlap et al., 2000; Jones & Dunlap, 1992; Klineberg et al., 1998) with a high level of education (Van Liere & Dunlap (1980), individuals with leftist ideology (Dunlap & McCright 2008; Hamilton 2008, 2011; Hamilton & Keim 2009; Krosnick et al. 2000; McCright 2009, 2010; McCright & Dunlap 2011), and women (Bord and O'Connor 1992) have more concern on climate/environmental changes. On the other hand, previous studies on the relationship between income and environmental concern have conflicting results. While some scholars (Jones & Dunlap, 1992; Klineberg et al., 1998; Zimmer et al., 1994) argue that there is a positive relationship between income and environmental attitudes, in other words, people having higher levels of income express more likely higher levels of environmental concern, other scholars (Fairbrother, 2013) find a significant negative or no relationship between income and environmental concern over time. One prominent study of Franzen and Meyer (2010) test the hypotheses of Inglehart's theory of post-materialism, Dunlap and Mertig's globalization explanation and the prosperity approach by applying multilevel analysis to ISSP data from the years 1993 and 2000. They have found that prosperity hypothesis is correct by stating that individuals with higher relative income express higher levels of environmental concern than their compatriots. For the scope of this study, it focuses on the possible link between economic drivers and environmental concern.

1.3 Research Problem, Aims, and Hypotheses

This study examines the intensity of public concern about environmental problems and climate change in Turkey between 2018-2020 when the negative effects of economic recession are assumed to be felt by the public. Considering the mainstream theoretical approaches to the determinants of environmental concern discussed so far, this study asks how changing economic conditions due to the financial/economic crisis starting in late 2018 affected individuals' environmental concerns specifically a concern for the climate change issue in Turkey when other individual factors are not considered. Based on Inglehart's Post-Materialist Value Change, this study argues that any change in the economic conditions of one country might lead its citizens to give attention to materialistic or post-materialistic values depending on the economic situation. Starting from this point of view, economic deterioration since the beginning of 2019 might decrease public concern towards post-materialist values including environmental values. Therefore, the main aim of this study is to analyze the impact of post-materialist values on Turkish public concern regarding environmental problems and climate change by specifically focusing on the possible effects of the economic/monetary crisis on public environmental concern in Turkey.

The first and main hypothesis is constructed upon the claim that economic conditions and income levels have an impact on individuals' environmental concerns because it is expected that individuals with a high level of income can satisfy their basic materialistic needs and can turn their focus toward other post-materialistic values. Since it is not possible to gather income levels from each survey respondent and to understand whether they satisfy with that income or

not, this study takes the responses to the question asking the individuals' perceptions towards household financial situation, national economy, and world economy.

Hypothesis 1*:* Perceptions towards their household financial situation, national economy, and world economy affect individuals' environmental concerns related to the clash between materialist and post-materialist values. Therefore, people who have a bad financial situation in their household or think that the national economy and/or world economy is bad, are less concerned with the environmental problems and the seriousness of the climate change issue.

Closely related to the first hypothesis, the second hypothesis is based on the possible link between post-materialist values and environmental concern. Besides economic security, physical and psychological security may also affect public environmental concerns.

Hypothesis 2: Greater levels of life satisfaction bring higher levels of environmental concern as these people satisfy their basic and material needs and turn their focus on post-materialist goals.

These interrelated hypotheses are evaluated within the appropriate design of study and methods, which are introduced and discussed in the next section.

2. Data and Methods

2.1 Research Design

The main purpose of this study is to examine the relationship between economic factors and public environmental concerns, especially regarding climate change in Turkey. To reveal a possible link between these variables, this study chooses the period (2018-2020) in which sharp changes in economic conditions, as well as public perceptions regarding the household financial situation and national economy, can be visible. In addition, the year 2020 is a significant time when the COVID-19 pandemic erupted in Turkey and made millions physically and psychologically insecure. Therefore, this study applies quantitative methods as the most appropriate one for the research aims. By benefiting from the SPSS (quantitative research software programme), this study makes a correlation analysis between variables.

2.2 Data Collection

To test the hypotheses above, this research deals with an analysis of three Eurobarometer surveys (i.e. Eurobarometer 89.1 (2018), 92.1 (2019) and 93.1 (2020). Eurobarometer data series is gathered regularly (two to five times a year) by the European Commission. The surveys consist of approximately 1,000 respondents per EU member state and the candidate countries like Turkey. The reason to choose Eurobarometer surveys as the main database is that there are no other public opinion surveys in Turkey on some specific issues including public environmental concerns conducted consistently. Despite the increasing academic interest in the perception of climate change in Turkey, the only research conducted on this issue is the "Climate Crisis Perception" surveys conducted in cooperation with Konda and Climate News since 2019. As this study aims to focus on the possible impact of economic factors on environmental concerns, the survey questions included in the aforementioned study do not meet the requirements of this research. Thus, this study uses Eurobarometer surveys, which enables the comparison of the findings over time with the same questions asked to respondents.

- Dependent Variable

The dependent variable in this study is public concern regarding climate change. In that respect, this study gets the responses to the question: "QA3a: What do you think are the two most important issues facing (OUR COUNTRY) at the moment?" In a list of multiple issues including crime, economic situation, rising prices/inflation/cost of living, taxation, unemployment, Cyprus issue, immigration, health, energy supply, etc., the responses selecting "the environment and the climate change" are taken into consideration. In the same manner, the survey asks: "QA4a:
And personally, what are the two most important issues you are facing at the moment?" with the same options. Responses including "the environment and the climate change" are considered the determinant of environmental concern, which is gathered under the dependent variable.

- Independent Variables

For the aims of this study, data of independent variables are chosen from the questions reflecting the respondents' views on their household financial situation, national economy, expectations for the future, and how they are satisfied with their lives. Regardless of the real economic situation in Turkey over years covered by this study, this study is concerned with the respondents' perspectives' on the economy. Even though it is hard to define the exact period that we can see the bad consequences of the economic crisis as it could be scattered over a wide time span, sharp changes in economic conditions -household and national economy- are expected to shape public opinion on the economy. Therefore, the following questions are used in the analysis:

"QA1a How would you judge the current situation in each of the following? (national economy and household financial situation included in the analysis) (Very good 1, Rather good 2, Rather bad 3, Very bad 4, DK 5)" (Eurobarometer 89.1, 92.1, 93.1)

"D.70 On the whole, are you very satisfied, fairly satisfied, not very satisfied or not at all satisfied with the life you lead? (Very satisfied 1, Fairly satisfied 2, Not very satisfied 3, Not at all satisfied 4, DK 5)" (Eurobarometer 89.1, 92.1, 93.1)

3. Empirical Findings

To understand the level of environmental concern among respondents between 2018 and 2020, this study uses the responses to two questions asked in the surveys (Eurobarometer 89.1, 92.1, 93.

"QA3a: What do you think are the two most important issues facing (OUR COUNTRY) at the moment?" and

"QA4a:
And personally, what are the two most important issues you are facing at the moment?"

Table 1 shows the changes in the percentage of responses including the environment as one of the most important issues for the country and personally.

Table 1

Descriptive statistics for the dependent variable indicating percentage values between 2018-2020

	2018	2019	2020
Percentage of responses on important issues for **the country** (the environment mentioned)	2.1%	3.7%	1.2%
Percentage of responses on important issues **personally** (the environment mentioned)	2.6%	3.9%	1.6%

Note. **Author compilation derived from** Eurobarometer 89(1), 92(1), 93(1).

It is clear that while environmental concern among Turkish public opinion from 2018 to 2019 has been increasing, it dropped significantly between 2019-2020. To examine the possible link between environmental concern and economic factors, perceptions on the national economy and household financial situation are also added into the analysis.

Table 2

Descriptive statistics for the independent variables between 2018-2019

	National Economy Situation			**Household Financial Situation**		
	2018	**2019**	**2020**	**2018**	**2019**	**2020**
Very good	9,3	13,6	4	8,3	11,8	3,2
Rather good	39,7	22,9	23,8	53	35,2	34
Rather bad	38,4	37,3	39,7	28,2	39,3	42
Very bad	11,8	25,1	31.2	9,3	11,9	20,5
DK	0,9	1,1	1,2	1,2	1,8	1,2

Note. Author compilation derived from Eurobarometer 89(1), 92(1), 93(1).

Table 2 indicates the percentage of responses to the questions regarding the national economy and household financial situation. Interestingly, perceptions of the national/household economy at each extreme side (very good/very bad) have increased between 2018 and 2019. However, the number of respondents who think that the national economy/household financial situation is good has decreased from 2019 to 2020 as an expected consequence of the economic recession. This sharp drop in perceptions of the economic situation enables this study to examine the correlation between economic factors and environmental concerns. In addition to perceptions regarding the national economy and household financial situation, the level of life satisfaction is also added to the analysis. As shown in Table 3 below, the number of respondents who think that they are satisfied with their life has decreased considerably between 2018-2020.

Table 3

Percentage of responses on the level of life satisfaction between 2018-2020

	Life Satisfaction		
	2018	**2019**	**2020**
Very satisfied (1)	27,8	24,3	16,1
Fairly satisfied (2)	47,6	42,1	49,7
Not very satisfied (3)	16,7	19,9	21,5
Not at all satisfied (4)	7,8	13,7	12,8
DK (5)	0,2	0	0

Note. Calculated using Eurobarometer 89(1), 92(1), 93(1).

As it is seen, perceptions of life satisfaction vary from year to year within the period of 2018-2020. The percentage of respondents who say that they are very satisfied with their life decreased considerably since 2018. In 2019 when the economic recession hit hard, Turkish public opinion on life satisfaction was affected negatively. To reveal the possible link between environmental concerns and economic factors, this study examines the correlations between those variables, whose results are given in Table 4 below.

Table 4

Correlation Matrix

Note. Author compilation.

	2018					2019					2020				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
(1) imp. issues (the environment - national)	1					1					1				
(2) imp. issues (the environment -personally)	0.195**	1				-0.012	1				0.059	1			
(3) situation (national economy)	-0.62*	-0.025	1			-0.102*	-0.179**	1			-0.075*	-0.084**	1		
(4) situation (hh financial)	-0.050	-0.015	0.560**	1		-0.064*	-0.102**	0.627**	1		-0.065*	-0.009	0.474**	1	
(5) life satisfaction	-0.008	-0.038	0.328**	0.373**	1	-0.036	-0.117**	0.505**	0.472**	1	-0.048	0.000	0.397**	0.438**	1
*. Correlation is significant at the 0.05 level (2- tailed). **. Correlation is significant at the 0.01 level (2- tailed).															

The correlation matrix illustrated in Table 4 indicates the correlations between variables in a three-year period (2018-2020). Accordingly, the study has found some significant correlations within each year as assumed in the hypotheses. First of all, in 2018, the study reveals that most of the respondents to the survey who says the environment/climate change is one of the most important issues for their nations, also regard this as the most important issue personally. In addition, one critical conclusion drawn from the study is that environmental concern is negatively correlated with perceptions regarding the national economy. In other words, most of the respondents who think the national economy is good, say the environment

and climate change as the most important issue at the national level. Life satisfaction, on the other hand, is positively correlated with positive perceptions regarding the national economy and the household financial situation. Secondly, in the year 2019 when the negative effects of the economic recession had been felt more strongly by the public, the results show that environmental concern is negatively correlated with the public perceptions of the national economy, household financial situation, and life satisfaction. Lastly, in 2020 when other issues (such as COVID 19) gained more prominence than the environment and climate change, the level of correlation between economic factors and environmental concern decreased and even persisted to some degree.

This study reaches two general conclusions. First, it confirms hypothesis 1 suggesting that perceptions towards their household financial situation, national economy, and world economy affect individuals' environmental concerns related to the clash between materialist and post-materialist values. As evidenced by the results of the analysis, people who think that the national economy and/or world economy is bad or have a bad financial situation in their household, are less concerned with the environmental problems and the seriousness of the climate change issue. This impact is much more visible during the economic crisis, yet before/after the first eruption of the crisis, the correlation is not significant. Second, the results partly confirm hypothesis 2 suggesting greater levels of life satisfaction bring higher levels of environmental concern as these people satisfy their basic and material needs and turn their focus on post-materialist goals. Only in 2019, this study indicates a weak correlation between life satisfaction and environmental/climate change concerns.

4. Conclusion

In Turkey located in one of the geographies that have been/will be most affected by climate change, despite the rare studies on the effects of climate change at the local and national levels, it is quite remarkable that more than half of the society have been aware of the climate change and feel its effects in their life. As scientists say that there is an important relationship between climate change and the frequency and severity of disasters caused by climate change such as droughts, floods, and forest fires, most people in Turkey think that climate change has a role in those disasters they felt in their daily life. Unlike the fragmentation of Turkish society on political, economic and social cleavages, the vast majority of Turkish people are concerned about the climate change issue. In fact, the extreme weather events in 2021 such as fires that have affected southwest Turkey and burned thousand-hectares forestland, floods, and landslides due to excessive precipitation in the Western Black Sea region, have affected the level of awareness about the climate change crisis.

Despite the increasing awareness and concern about climate change, the expectations of Turkish society for the future are based on economic needs and demands. Eurobarometer (92.1) survey in 2019 indicates that while 38.9% of people regard the economic situation and 35.9% of respondents see the rising prices/inflation as the most important issues for the country, only 3.7% of people say the environment/climate change is the most important one among other issues. These results support the post-materialist thesis partly as citizens prioritize economic factors over other issues while accepting the importance of climate change reality. This study also reveals that there is a link between perceptions regarding the national economy/household financial situation and environmental concerns. According to results, people who think that the national economy and/or world economy is bad or have a bad financial situation in their household, especially during economic crisis times, are less concerned with the environmental problems and the seriousness of climate change.

On the other hand, although small in number, studies carried out in this field in Turkey show that individuals accept the reality of climate change and feel its grave consequences in their daily lives. Even though this study has indicated that citizens has prioritized their household financial situation/national economy over the environment/climate change, the level of correlation between economic factors and environmental concern decreased when other problems such as pandemic crisis occurred and affected their life. Moreover, it has been shown in the surveys conducted that while the coronavirus epidemic dragging the world economies, which could not recover after the 2008-2009 global crisis, into a deep recession, requires governments to direct their priorities to economic recovery plans, citizens have been much more aware that these steps should be taken within the framework of more sustainable and more "green" policies.

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