Environmental Concern, Behavior, Skepticism, and Subjective Well-being: Evidence from Russia

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Abstract.
In recent years, sustainable development policies have increasingly focused not only on economic indicators and infrastructure quality, but also on subjective well-being, happiness, and population satisfaction. The aim of this study is to determine how environmental concern, observed behavior, and skepticism levels impact life satisfaction assessments. The data comes from a survey of over 1,400 employed respondents in Russia, conducted by the authors in the summer of 2024. The methods include correlation and regression analyses, and environmental indicators were measured using simple scales that reflect respondents' attitudes toward specific environmental issues. The results revealed that human and social capital indicators are important predictors of environmental concern, behavior, and skepticism. For instance, an active life stance increases environmental concern and pro-environmental actions, while a lack of trust in institutions raises the level of environmental skepticism. Overall, higher levels of environmental concern and increased pro-environmental actions enhance life satisfaction, whereas growing skepticism negatively affects subjective well-being. These findings could be used to inform environmental policy aimed at improving population well-being by engaging individuals in institutional efforts and building trust through the accumulation of social capital.

Keywords: environmental concern, pro-environmental behavior, environmental skepticism, subjective well-being, life satisfaction.

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Introduction

Over the past two decades, increasing attention has been given to subjective well-being indicators in environmental economics, coinciding with the establishment of long-term empirical programs measuring happiness and population satisfaction. The environment functions as a public good, making its value difficult to measure directly within economic growth models (Welsch & Ferreira, 2014). Measuring the correlation between subjective well-being and regional environmental resources is important for economic policy, particularly in conducting cost-benefit analyses and forming recommendations. People's willingness to pay for a certain good or invest in capital is related to expected and perceived utility, which refers to the ability to create pleasant emotional states (Kahneman et al., 1999). The condition of ecosystems and the impact of climate on daily life are becoming

increasingly important issues globally, especially since the recognition of climate change as a global problem and the introduction of the 17 Sustainable Development Goals in 2015 (Bidarbakhtnia, 2022). As a result, public concern over environmental issues is growing, influencing people's behavior, attitudes, lifestyles, and consumer preferences (Kaida & Kaida, 2016).

Previous studies employ various approaches to determine the impact of environmental indicators on both subjective and objective well-being. The use of objective environmental quality indicators in empirical research may introduce biases in models, as environmental conditions and their effects can be inconsistent. Therefore, researchers often focus on the psychological aspects of behavior. Universalism and intrinsic satisfaction may positively influence observed pro-environmental behavior, which, in turn, enhances current subjective well-being (Kaida & Kaida, 2016). Mavisakalyan et al. (2024), using extensive statistical data, confirm the positive relationship between pro-environmental behavior and subjective well-being, highlighting the significant role of individualistic values in promoting environmental engagement. Welsch (2024) points out that people often underestimate the satisfaction they will gain from pro-environmental actions, leading them to act less environmentally-friendly than they should. However, once they engage in such behaviors, they experience greater well-being than initially expected, especially when these actions require significant time, effort, or financial cost.

The psychological aspects are related to the growing awareness of global environmental problems, which depend not only on national policies but also on global cooperation, alongside the realization that current efforts to address these challenges are insufficient. Increasing skepticism toward environmental indicators reflects the ability to question the effectiveness and future potential of specific environmental programs, efforts, and green management practices within companies, governments, and even the academic community (King et al., 2023). Green skepticism also influences environmental behavior by reducing trust in certain products and affecting the accumulation of social capital, leading to a redistribution of company efforts in the production and distribution of goods and services in the marketplace (Uddin et al., 2023). The rise in skepticism can have varied effects on subjective well-being and consumer satisfaction, as skepticism generally has a negative moderating effect on the attitude-behavior relationship (Uddin et al., 2023).

Based on the literature review, we formulated the following hypothesis: a high level of environmental concern, pro-environmental actions, and environmental skepticism positively influence subjective well-being, as expressed through life satisfaction.

Methods and data

Subjective well-being indicators were measured using the traditional life satisfaction scale, expressed through the Cantril ladder (Helliwell et al., 2009). Thus, eudaimonic rather than hedonic measures were used to assess these indicators. Environmental concern, behavior, and skepticism were measured on a scale from 0 to 5, with respondents asked to rate their agreement with statements provided in the survey. Five explicit questions (items) were used to measure each of the three latent constructs (Fig. 1). All items carried equal weight in calculating the final indicator, and factor analysis procedures were not applied.

The data were collected by the authors through a digital survey based on a stratified sample of respondents during June and July 2024, across eight federal districts of Russia. Initially, 3 200 respondents were invited to participate in the study, resulting in 1 434 observations, with a response rate of approximately 45%.

Environmental concern (ECO_CONS)

- I am concerned about climate change and its impact on future generations
- Protecting the environment should be a priority, even if it slows down economic growth
- I believe that human activity is an important cause of climate change
- It is important to me that the products I buy are environmentally friendly
- The government should invest more in renewable energy

Environmental behaviour (pro-environmental actions) (ECO_ACT)

- I sort garbage and household waste, if possible, I avoid single-use plastic
- I try to buy products with eco-labels, green labels
- I use energy-saving devices (including lamps) and water-saving solutions
- I minimize the use of personal vehicles, use public transport and bicycles
- I regularly plant trees and plants

Environmental scepticism (ECO_SCEPT)

- I think that the seriousness of environmental problems is often exaggerated, and scientific data on climate is too uncertain
- Environmental policies often lead to unnecessary costs
- Claims of environmentally friendly products are often just a marketing ploy
- I believe that too much attention is paid to protecting the environment at the expense of creating jobs places
- The measures taken by governments to protect the environment have little real impact

Fig. 1. Explicit variables to measure environmental concern, behavior, and level of skepticism. Proposed by the authors

The regression models initially included environmental indicators as dependent variables. We also incorporated several independent control variables into the equations, allowing us to identify the determinants of environmental concern, behavior, and skepticism. Subsequently, the environmental indicators were used as independent variables in a model where the dependent variable was subjective well-being, measured by life satisfaction. The statistical significance of the coefficients was evaluated, and conclusions were drawn regarding the proposed hypothesis.

Results and discussion

The modeling results, where environmental indicators served as dependent variables, are presented in Table 1. The analysis of control variables revealed that men are generally less concerned about environmental conditions, engage in fewer pro-environmental actions (as listed earlier in Figure 1), and are also less prone to skepticism regarding environmental preservation efforts. Accumulated formal education had no significant effect on environmental behavior or concern; however, participation in lifelong learning programs positively influenced these indicators. The analysis further showed that museum and exhibition visitors, who actively engage in self-education, exhibit the highest levels of environmental concern and involvement in pro-environmental activities. Health capital also had a moderate impact on environmental indicators—physically active individuals more frequently reported engaging in environmentally beneficial actions, while alcohol consumers were more inclined toward environmental skepticism.

Table 1. Regression analysis results. B – unstandardized coefficients, t-stat. – t-statistics, * - significant at the 1% level, ** - significant at the 5% level. Authors' calculations using SPSS Statistics.

Variable type	Independent variables	ECO_CONS		ECO_ACT		ECO_SCEPT	
		B	t-stat.	B	t-stat.	B	t-stat.
Control	Constant	1,471*	3,14	-0,172	-0,45	1,083*	3,04
	Age, years	0,002	0,27	-0,002	-0,29	-0,002	-0,29
	Gender, male = 1	-0,344*	-4,17	-0,186*	-2,75	0,179*	2,86

Variable type	Independent variables	ECO_CONS		ECO_ACT		ECO_SCEPT	
		B	t-stat.	B	t-stat.	B	t-stat.
	Married = 1	-0,016	-0,45	-0,058	-1,95	-0,029	-1,05
Education	Educational attainment, years	-0,018	-0,8	0,017	0,94	0,023	1,39
	Life-long learning participation = 1	0,443*	5,4	0,441*	6,55	0,189*	3,03
	Experience, years	-0,001	-0,13	0,012	1,77	0,012	1,87
Health capital	Physical activity, 5-point scale	0,023	0,86	0,138*	6,31	0,019	0,95
	Light alcohol consumption = 1	0,053	0,73	0,037	0,61	0,229*	4,13
	Strong alcohol consumption = 1	0,049	0,63	0,017	0,27	0,130**	2,21
Social capital	National pride level, 5-point scale	-0,027	-0,67	-0,02	-0,61	-0,049	-1,6
	Trust in Russian politicians, 5-point scale	-0,12**	-2,46	-0,007	-0,17	-0,133*	-3,51
	Trust in foreign politicians, 5-point scale	0,004	0,07	-0,035	-0,88	-0,051	-1,36
	Trust to educational institutions, 5-point scale	0,137**	2,35	0,028	0,58	-0,121*	-2,74
	Trust to healthcare institutions, 5-point scale	0,065	1,12	0,140*	2,93	0,065	1,47
	Level of openness to globalization, 5-point scale	0,014	0,85	0,007	0,52	-0,049*	-4,00
Satisfac-tion	Healthcare system and insurance satisfaction, 5-point scale	-0,142*	-3,42	-0,043	-1,26	0,035	1,12
	Personal health state satisfaction, 5-point scale	-0,029	-0,8	-0,037	-1,25	-0,009	-0,31
	Life achievements satisfaction, 5-point scale	-0,079**	-1,97	0,014	0,43	-0,053	-1,74
	Usually feel that what I do in my life is valuable and useful = 1	0,222*	5,06	0,129*	3,59	0,004	0,11
R^2		0,181		0,212		0,210	
R^2 adj.		0,167		0,198		0,197	
Durbin-Watson		2,003		2,052		1,977	
F-statistics		5,92*		8,44*		8,35*	
No of observations		1434		1434		1434	

Social capital indicators have a significant impact on the psychological aspects of environmental attitudes, such as concern and green skepticism. Trust in politicians is negatively associated with increasing environmental concern and skepticism; in other words, distrust and social isolation fuel greater concern. Additionally, a globalization perception index was tested, which was based on several statements regarding the necessity of integrating Russia's economy into the international environment. More open individuals who support globalization exhibit lower levels of skepticism. Satisfaction with various aspects of life also has a mixed effect on environmental concern—higher satisfaction with institutions correlates with lower environmental concern.

Overall, the most consistent factors influencing environmental indicators are gender, participation in lifelong education, and trust in institutions. Table 2 presents the regression analysis results for testing the hypothesis. The analysis concludes that the three considered indicators have different effects on subjective well-being. First, environmental concern is not statistically significantly associated with life satisfaction, while education levels and relationship status have a positive influence. Active environmental behavior shows a noticeable positive impact on life satisfaction. However, an increase in environmental skepticism leads to a decrease in subjective well-being, which is expected given the disappointment with the efforts and investments made in environmental preservation.

Table 2. Regression analysis results. Dependent variable – subjective well-being, * - significant at the 1% level, ** - significant at the 5% level. Authors' calculations using SPSS Statistics

Group of variables	Independent variables	B	t-stat.
Control	Constant	4,232*	7,27
	Age, years	-0,008	-0,73
	Gender, male = 1	-0,207	-1,89
	Married = 1	0,276*	5,59
Education	Educational attainment, years	0,090*	2,96
	Life-long learning participation = 1	0,032	0,28
	Experience, years	0,008	0,67
Environmental indicators	ECO_CONS, 5-point scale	-0,031	-0,81
	ECO_ACT, 5-point scale	0,186*	4,08
	ECO_SCEPT, 5-point scale	-0,142*	-3,03
R^2		0,153	
R^2 adj.		0,146	
Durbin-Watson		2,002	
F-statistics		7,27*	
No of observations		1434	

Conclusions

In recent years, there has been growing interest in studies exploring the relationship between environmental behavior and life satisfaction. This study adopts an approach where environmental behavior is viewed in three sequential components: environmental concern, when an individual begins to recognize the issue; environmental behavior, when the individual takes concrete actions to protect the environment; and environmental skepticism, when a critical attitude toward the effectiveness of environmental efforts develops. The regression analysis results rejected the initial hypothesis, showing that environmental behavior has varying effects on life satisfaction. Active pro-environmental actions enhance life satisfaction, while increased environmental skepticism decreases it. This highlights the complex nature of the relationship between environmental engagement and subjective well-being.

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