COGITATIO

Social Inclusion (ISSN: 2183–2803)
2022, Volume 10, Issue 3, Pages 206–216
https://doi.org/10.17645/si.v10i3.5228

Article

Climate Change Concerns and the Ideal Number of Children: A Comparative Analysis of the V4 Countries

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Submitted: 31 December 2021 | Accepted: 13 April 2022 | Published: 30 August 2022

Abstract
The Visegrád countries (Hungary, Czech Republic, Poland, and Slovakia) faced a sharp decline in fertility rates after the regime change in 1989. Since then, total fertility rates have largely remained below the EU average, although they have increased during the past decade. Family policies (support for the parental caregiving model) and the conditions of women's employment might be shaping these trends. Besides the pronatalist rhetoric, there is another reason why people might alter their fertility plans: climate change-related worries. Our analysis in this article examines whether such concerns exist in these four countries, pointing out that the efficacy of pronatalist measures depends on the widespread adoption of such attitudes among young people of childbearing age. Pronatalist pressure is strong in the V4 countries but may be diluted by strengthening environmentalist norms. Scholarship about the relationship between climate change-related concerns and fertility in these pronatalist countries is scarce. I examine this potential relationship by analysing respondents' ideas about the generally and personally ideal number of children using Eurobarometer data from 2011 through logistic regression analysis. The results are contradictory: Climate change concerns seem to be positively associated with a smaller ideal family size in Hungary, but only from a general perspective (i.e., not for respondents personally). A positive relationship can be found in the Czech Republic regarding climate concerns and personal ideal family size. In Slovakia, a strong negative association was observed between climate change-related concerns and smaller general and personal ideal family sizes.

Keywords
climate change; childbearing intentions; family policy; environmental policy; ideal number of children; Visegrád countries

Issue
This article is part of the issue "Fragile Pronatalism? Barriers to Parenthood, One-Child Families, and Childlessness in European Post-Socialist Countries" edited by Ivett Szalma (Centre for Social Sciences, Hungarian Academy of Sciences Centre of Excellence / Corvinus University of Budapest), Hana Hašková (Institute of Sociology, Czech Academy of Sciences), Livia Oláh (Stockholm University), and Judit Takács (Centre for Social Sciences, Hungarian Academy of Sciences Centre of Excellence).

1. Introduction

The hazards of climate change are being felt around the world, albeit with a high level of heterogeneity across different countries and regions. Environmental sensitivity and risk perception are higher where the effects of climate change are more visible due to individuals' personal, direct experience (Diakakis et al., 2021). Environmental catastrophes are increasingly depicted in mainstream media, and many people are developing anxiety about the climate (Clayton, 2020), even without being directly exposed to negative environmental effects. The phrases "climate anxiety" and "eco-anxiety" have been integrated into the general vocabulary. People may also react to climate change by changing their attitudes and adopting responsible behaviours if environmental sensitivity is widespread (De Rose & Testa, 2015b).

This article focuses on the Visegrád countries (Czech Republic, Hungary, Poland, and Slovakia). It deals with the following question: Do those who consider climate change to be the most serious threat the world is facing regard having fewer children to be theoretically ideal

for families and themselves personally? While the literature is rich in studies about childbearing intentions and voluntary childlessness in general, as well as macro-level factors behind fertility choices such as the effects of economic conditions and changes (e.g., Goldstein et al., 2013; Sobotka et al., 2011), scholarship is lacking about the relationship between concerns about climate change and fertility intentions (Schneider-Mayerson & Leong, 2020), especially in a European context. One way of demonstrating concern about the process of climate change is remaining childless or having fewer children: Studies have sparked debate about the idea that one can do most for the planet in terms of environmental considerations by foregoing having a child (Murtaugh & Schlax, 2009; Wynes & Nicholas, 2017). Such attitudes already exist in some parts of the world—for instance, polls recently implemented in North America have identified individuals who are factoring climate change concerns into their fertility plans (e.g., Miller, 2018; Morning Consult, 2020). Besides choosing non-parenthood to limit environmental impact, a more common consideration is that the well-being of potential children will be threatened by poor environmental quality (Arnocky et al., 2012; Helm et al., 2021; Schneider-Mayerson & Leong, 2020).

Central and Eastern European countries, including the V4, faced a sharp decline in fertility rates during and after the 1990s. Consequently, governments started to formulate and expand family policies to reduce the unfavourable effects of the decline. Demographic concerns were related to a potential lack of human and financial resources, including the cost of an ageing population (Frejka & Gietel-Basten, 2016). The fertility decline was partly due to the uncertainty caused by the economic and social transformation which followed the collapse of state socialism (Sobotka et al., 2011), but other forces such as changing conditions in a competitive labour market, wider access to modern contraceptives (Frejka & Gietel-Basten, 2016), and the general European trend to the postponement of family formation (Billari et al., 2006), contributed to the process.

My analysis examines the connection between climate change concerns and the limitation of the ideal number of children to a maximum of one, since studies have pointed out that this behaviour can also be a response to concerns about the carbon footprint of procreation, or about the well-being of the next generation (Schneider-Mayerson & Leong, 2020). Since pronatalist pressure is strong in the V4 countries, and the hazards of climate change are not directly tangible for most people living there, we presume that only a very narrow stratum of society actively factor climate change considerations into their childbearing attitudes. Although the phenomenon is not common yet, in the long term the efficacy of pronatalist measures might depend on the spread of environmentalist norms among young people of childbearing age.

An analysis of 2011 Eurobarometer data (which I also use) was carried out by De Rose and Testa (2015a, 2015b), who examined the effects of climate change-related worries on fertility intentions in the 27 EU member states. It differs from my research in several ways—most importantly, in its dependent variable. Fertility intentions (the intended number of children additional to present ones) were measured by the question "How many more children do you intend to have?" My analysis, however, uses questions preceding those used by De Rose and Testa (2015a, 2015b) and assesses fertility intentions from a more distant viewpoint that involves identifying respondents' ideal number of children. Empirical research often mixes the concepts of childbearing *ideals* and *intentions*. Philipov and Bernardi (2011) draw attention to the Miller-Pasta theory, according to which childbearing desires that do not necessarily relate to action form expectations that lead to intentions, and thus involve what may be called commitments. The concept of ideals is closer to that of desires when defined in relation to one's ideal circumstances in life (i.e., it assumes that any obstacles to childbearing are neglected). Furthermore, I differentiate between individuals' personal ideals concerning family size and their positions about ideal family size for individuals generally. I create a dichotomous variable that collapses the categories of the ideal number of children to measure attitudes toward a smaller family size (zero or one child) in contrast to a larger one (at least two children). In similar surveys, variance in personal ideals has been found to be larger than in general ideals (i.e., a family's ideal number of children, generally speaking), and the latter seems to be stable across time, although slightly declining (Philipov & Bernardi, 2011).

The reason for using a dataset from 2011 is mainly practical. To my knowledge, no other more recent cross-country surveys cover both topics of interest, i.e., climate change-related issues and family planning at the same time. Using combined data from separate surveys (data on fertility intentions/attitudes and attitudes toward climate change) would have been an alternative but then I would not have been able to analyse my research question at the individual level. Hoping that suitable databases will be available in the future, I carried out my analysis on the latest data that was available, thereby providing insight into a phenomenon that has received even more attention since the release of the data under analysis here. Since the data I use are from 2011, I present the specific social context and trends from that time in the following section.

2. Background

2.1. Fertility Trends

After the regime change, there was a decline in both first and higher-order births in most post-socialist countries. However, the data highlight the prominence of a two-child family norm, as at least half (but usually 60–85%) of the mothers of one child had a second

child in nineteen post-socialist countries (Billingsley & Duntava, 2017). The difference between the pre-transition and post-transition periods is greatest in terms of third births. However, the smallest decline in births occurred, among other areas, in Poland and Hungary, while even more women had a third birth in the Czech Republic after the transition than before it. But the main drivers of post-transition fertility decline are the falling second-birth rates in Central and Eastern Europe (Zeman et al., 2018). Besides the fertility decline, demographic trends show the postponement of family formation in Europe (Billari et al., 2006). Nevertheless, in non-Soviet countries, age at first birth began to increase earlier than in post-Soviet countries. The process of decline in second and higher-order births is distinct from the process of postponement in post-socialist countries: A shift in the timing of parenthood did not always lead to a reduction in family size (Billingsley & Duntava, 2017). One explanation for these trends is that the economies and societies of these countries went through a great transformation after 1990. Economic uncertainty escalated, youth were faced with entering a new, global labour market associated with increased risk, and the number of those returning to higher education increased, raising the opportunity cost of childbearing (Brainerd, 2014; Róbert & Bukodi, 2005).

2.2. Family Policies, Childcare Services, and Maternal Employment Rates

The V4 countries are often labelled "familialistic" for their family policies, which refers to the preference for providing childcare at home, usually by the mother. Since women are supported to leave the labour market and care for children at home, they are often perceived through their role as carers (Michoń, 2015).

Policies about leave vary in flexibility and length, in their relation to earnings, and whether well-paid. In comparison to other OECD countries, in terms of total weeks of paid leave granted to mothers, including maternity leave (which is available only to mothers before and after giving birth) and parental leave, the V4 countries led the way with between 110–164 weeks (Thévenon & Solaz, 2013). These extended terms of leave have contributed to making mothers the primary caregivers for children below the age of three in all four countries (Szikra & Győry, 2014). Statutory paternity leave, which allows fathers to spend time at home after the birth of a child, was extremely short at the time of the survey: one week in Hungary and Poland (Moss, 2011), and not a statutory entitlement in Slovakia and the Czech Republic. Poland stands out due to the generosity of its leave policy, and this country undertook the most impressive reforms in terms of length and flexibility of leaves, starting in 2007 (Michoń, 2015).

Childcare services are underdeveloped in the V4 countries—the state does not support "defamilialisation"; it rather discourages it, supporting the traditional family model instead (Michoń, 2015). Attendance levels associated with formal childcare arrangements were generally low in these countries in 2011 compared to other EU member states, especially among children under three years old. Attendance was between 3–5% in the Czech Republic, Poland, and Slovakia, and 8% in Hungary in contrast to the 29% EU average attendance rate in this age group. No V4 country reached the EU average (83%) for use of childcare services for children between the age of three and compulsory school age, with 74–75% in the Czech Republic, Hungary, and Slovakia, and an extremely low rate of 43% in Poland.

Female labour force participation also conformed to the traditional picture suggested by leave and childcare policies. While the employment rate of mothers with a child between 3–5 years old (62–80%, lowest in Hungary) was around the OECD average (66%) in 2011, the proportion of employed mothers with a child under three years (6–21%, also lowest in Hungary) was well below average (52%), except in Poland (54%). Polish women are encouraged to become mothers only after they find a job, as well as to return to work after giving birth before having another child due to the incompatibility between family and work, unstable contracts, and the fear of unemployment (Matysiak, 2009).

In these countries, where social attitudes toward gender roles are often conservative and quality part-time employment opportunities are scarce, but also for economic reasons, women often have to choose between employment (having a full-time job) or family (withdrawing from the labour market; Michoń, 2015). This is a good example of how family policies that were introduced or expanded to mitigate the fertility decline are not always effective in shaping fertility behaviour, and their impact is mediated through socioeconomic and other structural conditions of countries and features of the policies (Neyer & Andersson, 2008).

2.3. Climate Change, Environmental Attitudes, and Related Policies

Nowadays, we see two contrasting processes related to the world population. Globally, our planet is overpopulated, whereas in many parts of the world nations are facing the challenge of an ageing society. For the former, childlessness or lower fertility rates could be an answer; however, this approach may contribute to increasing the problem of the latter because the shrinking working-age group would not reproduce itself. Of the 30 countries with the highest old-age dependency ratio, which is calculated by dividing the 65+-aged population by the working-age (15–64) population, 26 countries are from Europe. The Czech Republic ranked nineteenth on the list with a ratio of 31%, Hungary ranked twenty-first, Poland twenty-ninth, and Slovakia forty-first (with 25%; see The World Bank, 2020). Countries where population growth is low or negative often have high income and consumption levels, while poorer

high-fertility nations often have low or even negligible consumption. The greenhouse gas emissions that contribute to the change in the climate are associated with these high levels of consumption. However, it is not simply the population size that drives the process of climate change—it is interconnected with consumer behaviour and the emission levels linked to that. The impacts of climate change, however, are and will be greatest on people from developing countries and poorer regions (Stephenson et al., 2010).

Perceptions of climate change have been changing constantly over the past decades. In the early 2000s, although it was acknowledged as a danger, it was only a secondary consideration compared to other environmental risks in the EU and the USA (Lorenzoni & Pidgeon, 2006). In 2011, climate change was seen as the second most serious problem in the EU (indicated as most serious by 20% of citizens), following poverty, hunger, and a lack of drinking water. The proportions of citizens of V4 countries who felt this way remained at or below this average, with Hungary having the smallest share of citizens who felt that climate change was the most important environmental risk (14%). Being a woman, younger, and better educated increased climate change concerns. Tackling climate change was mostly perceived to be the responsibility of either national governments, the EU, or business and industry. Twenty-one percent of EU citizens regarded themselves as having personal responsibility, with Slovakia (25%) and the Czech Republic (19%) leading the way in this respect among the V4, and Poland and Hungary falling behind (11% and 7%, respectively). While 53% of EU citizens and Hungarians reported that they had taken some action to fight climate change recently, this share was 45–47% in the Czech Republic and Slovakia, and 30% in Poland (Eurobarometer, 2011).

Climate change has implications for social policies. Meadowcroft (Gough et al., 2008) argues that closer connections need to be established between social and climate policy to prevent further changes in the climate. Today's welfare state is unsustainable in the sense that it is built on continuous economic development. Literature stresses that population-size-related issues should be linked to environmental considerations and the well-being of humans and nature in the future (Gough et al., 2008). Nevertheless, although reducing population growth could considerably contribute to bringing down CO2 emissions globally, it is questionable that policies that reduce fertility would be appropriate in countries with already low rates, taking the dilemmas about the ageing population into account (O'Neill et al., 2010).

A study that used data for 2016–2017 (Otto & Gugushvili, 2020) measured support for climate change policies and public welfare provision, identifying four distinct attitude groups. The Czech Republic was one of the most divided European countries in terms of eco-social priorities, meaning that an almost equal share of people belonged to each attitudinal group. In Hungary and Poland, a fairly large share of people (above 30%) were "eco-social sceptics," disliking both public welfare and environmental policies, but the second major group had different opinions: While 31% of Hungarians were suspicious of the welfare state but in favour of policies for mitigating climate change, 32% of Poles supported public welfare programmes but rejected climate change policies.

It is a question of whether members of society will accept the trade-off of environmental protection over economic growth. It was true of most EU member states according to 2006 Eurobarometer data, but not in three countries of my analysis (Hungary, Poland, and Slovakia). The Czech Republic, conversely, had the fourth highest approval rating for environmental protection among the EU member states (with around two-thirds of citizens agreeing that economic growth should be restricted in favour of environmental protection; see Gough et al., 2008).

3. Method

3.1. Sample

Datasets that include recent information about both climate change issues and family planning are scarce: the empirical basis of my analysis is wave 75.4 of the Eurobarometer from 2011 as it covers both topics ("social climate and family planning" and "climate change"). The European Commission's Eurobarometer surveys are carried out in EU member states twice a year, are always based on new samples, and involve interviewing approximately 1,000 respondents per country face-to-face at their homes. Participants are selected through a multi-stage, random (probability) sampling design that represents the population aged 15 or older (Eurobarometer Data Service, n.d.).

The present study is based on data from the V4 countries. The database is weighted using the post-stratification weight (given by the data publisher). The full Eurobarometer sample for the four countries included 4,023 observations, of which 2,037 were associated with individuals of the age group of my interest (people of reproductive age, aged 18–45; see Table 1 for a detailed description of variables).

3.2. Measures

The dependent variable, ideal family size, was measured by dichotomous variables regarding the ideal number of children generally and personally. The original variable was dichotomized to capture both stronger and weaker attitudes towards a smaller family size. The related questions were "Generally speaking, what do you think is the ideal number of children for a family?" and "For you personally, what would be the ideal number of children you would like to have or would have liked to have had?" Those who thought zero or one child would be ideal for a family/themselves were coded 1. A minority

of respondents would prefer families to remain childfree. Note that some parents may have shared this opinion and belonged to this group since this question was asked from the whole sample. Besides the very low number of answers indicating zero children as ideal, there is another reason for collapsing the categories and including those who think one child would be ideal for a family/themselves: This lets me test the assumption that climate change-related concerns may contribute to the belief that fewer children are ideal for a family. I believe that downward deviation from the ideal family size of two children, which is generally considered ideal for the majority of the sample, may signal a way of thinking that is typical of those who would entirely give up parenting due to worries about climate change, only a little less radically.

Table 1. Description of dependent and independent variables by country.

	Czech Republic		Hungary		Poland		Slovakia	
Variable	%	N	%	N	%	N	%	N
Gender								
male	50.9	259	49.5	244	49.8	240	52.0	287
female	49.1	250	50.5	249	50.2	242	48.0	265
Age group [1]								
18–24	22.4	114	20.9	103	26.1	126	28.6	158
25–29	16.5	84	12.8	63	19.9	96	16.3	90
30–34	19.8	101	18.0	89	18.5	89	17.0	94
35–39	19.8	101	24.5	121	19.3	93	18.5	102
40–45	21.4	109	23.9	118	16.2	78	19.6	108
Highest level of education								
low	9.2	47	52.3	258	11.4	55	4.4	24
medium	77.4	394	33.7	166	66.9	323	76.4	421
high	13.4	68	14.0	69	21.7	105	19.2	106
Type of settlement								
rural area or village	35.2	179	35.0	173	38.9	188	44.6	246
small/middle town	40.5	206	30.0	148	34.2	165	40.6	224
large town	24.4	124	35.0	173	26.9	130	14.9	82
Difficulty paying bills								
most of the time	11.9	59	16.0	78	6.9	32	4.5	24
from time to time	39.9	198	46.7	227	26.7	124	33.1	175
almost never/never	48.2	239	37.2	181	66.5	309	62.3	329
Has at least one child								
yes	56.9	289	63.1	310	52.7	251	54.8	298
no	43.1	219	36.9	181	47.3	225	45.2	246
Considers climate change to be the single most serious problem the world is facing								
yes	16.4	82	15.2	75	21.3	100	20.7	114
no	83.6	418	84.8	417	78.7	369	79.3	436
Mentioned themselves as responsible for tackling climate change								
yes	21.8	107	8.2	39	12.0	53	25.9	140
no	78.2	383	91.8	435	88.0	387	74.1	401
Has taken action to fight climate change over the past six months								
yes	52.0	251	59.0	269	34.4	158	50.8	265
no	48.0	232	41.0	187	65.6	301	49.2	257
Ideal number of children in general								
maximum 1	21.1	95	16.6	79	13.1	54	18.5	93
2 or more	78.9	356	83.4	398	86.9	357	81.5	411
Ideal number of children personally								
maximum 1	21.1	99	17.6	82	16.9	69	21.8	110
2 or more	78.9	371	82.4	384	83.1	340	78.2	395

Notes: Data are weighted by post-stratification weight; [1] age is included as a continuous variable in the regression models.

As for climate change-related concerns, I used the question: "Which of the following do you consider to be the single most serious problem facing the world as a whole?" The main explanatory variable distinguishes those who consider climate change to be the single most serious global problem (coded 1) from those who marked something else (e.g., the economic situation, the spread of infectious diseases, etc.) as the most serious problem (0). For the main explanatory variable I intended to use a comprehensive indicator that could be broadly interpreted since studies point out that reasons for the mental-health impacts of climate change vary on a wide scale, including anxiety related to an uncertain future or concern about potential harm to one's future offspring (Clayton, 2020). The analysis of De Rose and Testa (2015a, 2015b) on the relationship between climate change concerns and fertility intentions applied the same explanatory variable.

For control variables I included *gender*, *age*, *squared age* (respondent's age squared was included to check whether the relationship between age and the odds of regarding having fewer children as ideal is linear or U-shaped), *highest level of education* (includes three categories: "low" education means primary education, first- or second-stage basic education, or lower secondary education; "medium" means upper secondary and post-secondary, non-tertiary education; "high" means tertiary education), *type of settlement* (rural area or village, small/middle town, and large town), *subjective financial situation of respondents* (since income data was not available, I used a variable that contains information about whether the respondent had difficulty paying bills the year before, to which replies were: most of the time, from time to time, and almost never/never), and *whether the respondent has a child* (no distinction was made between biological and adopted children in the questionnaire). Additionally, two climate change-related variables were included in the models: whether respondents indicated that they were *personally responsible* in response to the multiple-choice question "In your opinion, who within the EU is responsible for tackling climate change?"; and whether the respondent said yes to the question "Have you personally taken any action to fight climate change over the past six months?" The reason for controlling for these climate change-related variables is that I assumed they might be correlated with the main explanatory variable, and might have a separate, perhaps contrasting effect on ideal family size (if someone is actively taking action against climate change, it is possible that this will make them feel that they are working for a better future and thus creating the conditions to have children without concerns). By involving individuals' own responsibility for tackling climate change, it becomes easier to distinguish between the mechanisms presumed to connect climate change concerns and reduced ideal family size: If a person believes that having fewer or no children is an ideal means of reducing environmental problems, this variable is believed to capture this effect and distinguish it from another potential driver (smaller ideal family size because of concerns about the well-being of one's own child).

3.3. Analytical Strategy

Following the descriptive analysis, bivariate relationships between the dependent and independent variables were examined through cross-tabulation analysis separately by country.

Logistic regression analysis was then conducted separately by country on the subset of valid responses to the respective dependent variable, thus the analytical sample might be selective. Non-response rates to the questions about the ideal number of children in general and personally for the respondents were the following, respectively: Hungary—3.3%, 5.3%; Slovakia—8.6%, 8.6%; Czech Republic—11.4%, 7.8%; Poland—14.8%, 15.2%.

For each country the two dependent variables (ideal number of children in general and personally) were analysed in separate, nested regression models: Model 1 included only the main explanatory variable, while Model 2 also included all control variables. The advantage of using logistic regression analysis to examine the relationship between the explanatory variables and the two-category dependent variables is that the results are easily interpretable: If the coefficient is negative, this means the odds of regarding a maximum of one child as ideal are lower, while a positive coefficient means higher odds of preferring a smaller ideal family size.

4. Results

The ideal number of children is two or more for the majority of respondents in all V4 countries, both generally speaking and for them personally. However, according to the descriptive results presented in Table 1, the four countries differ considerably regarding the exact share of respondents who think a maximum of one child is the ideal number. Among those who provided a valid answer to the question (excluding those who answered "there is no ideal number" or "it depends," etc.), this proportion varied from 13.1% of Poles to 21.1% of Czechs in terms of the ideal number of children for a family, speaking generally. On a personal basis, those who think zero or one would be the ideal number of children they would like to have (or would have liked to have had) represented 16.9% of respondents in Poland, 17.6% in Hungary, and more than one-fifth of respondents in the Czech Republic (21.1%) and Slovakia (21.8%).

Continuing with the bivariate relationships, regarding general views about the ideal number of children, Slovakia is the only country where there is a significant difference ($p = 0.005$) according to the main explanatory variable: Among those who consider climate change to be the single most serious problem, we find a smaller proportion of those who regard a maximum of one child

to be ideal (8.7%) compared to those who consider something else to be the most serious problem (20.6%). A similar but smaller difference (p = 0.045) exists regarding personal ideals about the number of children for Slovaks whose main concern is climate change (14.5%) or something else (23.4%), while there is an even smaller but considerable (p = 0.071) difference among Poles (10.3% vs. 18.5%) in the proportion of those who believe that a maximum of one child is personally ideal.

Overall, there were some differences in general views about ideal family size according to the demographic and climate change-related control variables, mostly in Czech Republic and Slovakia: A smaller proportion regarded a maximum of one child to be ideal in general among those who had taken action to fight climate change lately, among women, and among parents (in Slovakia), while a larger proportion of those living in a large town and those having difficulties paying the bills most of the time (in Slovakia and the Czech Republic) regarded a smaller family size to be ideal. In terms of personal ideals, the odds of regarding a smaller family as ideal were higher among men and those living in a large town (Czech Republic, Slovakia), those having difficulties paying bills most of the time, and those who were moderately well educated compared to the higher educated (Slovakia), as well as among childless persons (all countries). The odds were lower among those who indicated themselves as responsible for tackling climate change (in Hungary and Slovakia) and who had taken action to fight climate change recently (Slovakia). In Hungary, both in terms of general and personal views, individuals aged 25–29 and 40–45 had a greater likelihood of regarding a maximum of one child as ideal than those in other age groups.

Table 2 shows the coefficients of the logistic regression analysis only for the main explanatory variable, climate change-related concern. The full set of coefficients is presented in the Supplementary Material (*Tables S1-S8*). Contradictory results are obtained in the four countries: there is a positive association between climate change concerns and regarding a maximum of one child as ideal both generally speaking and personally in the Czech Republic and Hungary (except for the uncontrolled estimate in Model 1a for the Czech Republic), while a negative association is found in all models for Poland and Slovakia. In terms of general views, the coefficients are significant only for Hungary and for Slovakia, at different levels (p < 0.1–0.01). For personal ideals, results are significant for Slovakia in both models (p < 0.05), for Poland in Model 1b (p < 0.1), and for Czech Republic in Model 2b (p < 0.1).

Regarding the climate change-related control variables, attitudes towards one's own responsibility for tackling climate change seemed to matter only in relation to personal views in Hungary (p = 0.029) and Slovakia (p = 0.008): Those who considered it their own responsibility were less likely to regard zero or one child as ideal. Results from the analysis of bivariate relationships regarding basic demographic variables were roughly reproduced in the multivariate analysis, with a few exceptions, as detailed below. In terms of general attitudes towards the ideal number of children, in Hungary, the positive coefficient of living in a large town became significant (p = 0.019), while a negative relationship was discovered between having children and regarding a maximum of one child as ideal (p = 0.086). Regarding personal views, gender was no longer a predictor of ideal family size for the Czech Republic (p = 0.207); nevertheless,

Table 2. Connection between climate change-related concerns and the ideal number of children in general and personally in the V4 countries.

	Czech Republic		Hungary		Poland		Slovakia	
Dependent: ideal no. of children in general								
Considers climate change to be the single most serious problem the world is facing								
(Model 1a)	−0.069	(0.313)	0.598#	(0.308)	−0.205	(0.369)	−0.970**	(0.365)
(Model 2a)	0.148	(0.331)	0.886**	(0.335)	−0.180	(0.418)	−1.124**	(0.419)
Dependent: ideal no. of children personally								
Considers climate change to be the single most serious problem the world is facing								
(Model 1b)	0.390	(0.291)	0.323	(0.316)	−0.627#	(0.374)	−0.579*	(0.294)
(Model 2b)	0.520#	(0.314)	0.447	(0.350)	−0.703	(0.436)	−0.748*	(0.345)

Notes: Model 1 includes only the main explanatory variable; model 2 includes all control variables; for the full set of constant values and coefficients see Supplementary Material (Tables S1–S8); estimates obtained from separate logistic regression models (unstandardized coefficients and standard errors in parentheses); #p < 0.1; *p < 0.05; **p < 0.01; ***p < 0.001.

in Hungary, men were less likely to regard a maximum of one child as ideal than women (p = 0.085). Age had a positive effect in Poland (p = 0.091), and the negative coefficient of people living well financially on smaller ideal family size (p = 0.05) became significant in Hungary. Otherwise, the associations seen in the bivariate analysis were sustained in the multivariate one.

5. Conclusion

Sociological research often neglects environmental considerations as potential predictors of childbearing attitudes. In this study, I examined whether concerns about climate change are in relation to ideal family size. In the Czech Republic and Slovakia, more than 21% of the respondents regard a small family size, i.e., of zero or one child as ideal in terms of personal attitudes, and this rate is slightly lower in Hungary (17.6%) and in Poland (16.9%). Among individuals who belong to the cohorts born prior to my sample (between 1940–1970), in Central and Eastern Europe, there was a decline in total fertility driven by falling second-order births. On the contrary, first-birth rates were relatively high and negative attitudes towards childlessness were dominant in comparison with other low-fertility countries. According to Zeman et al. (2018), factors such as the uncertainties related to the economic transition after 1990, relatively low wages and living standards, and the traditional gender roles in the family collectively contributed to the rise of one-child families. The individuals of my analysis (belonging to cohorts born between 1966–1993) entered the conventional age of first childbirth around or after the regime change, thus only part of these factors should play a role in forming their ideals and attitudes regarding childbearing. I assumed that other reasons, such as climate change worries as new forms of uncertainties might contribute to the high share of those with a smaller ideal family size in my analytical sample.

This analysis points out that there may be a relationship between climate change-related concerns and ideal family size, although it is not uniform. Within countries, no inconsistencies were found in terms of the direction of effect between general and personal views about the ideal number of children when the difference was significant, although the magnitude of the discrepancy varied. Climate change-related concerns appeared to be positively associated with a smaller ideal family size in Hungary, but only when generally speaking. Regarding personal ideals about family size, a positive relationship was identified for the Czech Republic. Contrary to expectations, in Slovakia, a strong negative association was observed between climate change concerns and smaller ideal family size (in general as well as personally), which means that those who regard climate change as the most serious threat were more likely to consider a larger family size with at least two children to be ideal.

These contradictory findings have several potential explanations. Given that climate change was considered a serious threat by relatively few people in the Visegrád countries, the weak effects are not surprising. Although the data are not suitable for revealing causal relationships, the assumed direction of the association runs from concerns about climate change to childbearing attitudes. However, following De Rose and Testa (2015a, 2015b), the negative coefficients in the case of Slovakia and Poland could be interpreted in the opposite way: Climate change-related concerns may play a role for people thinking of having a bigger family because they are more concerned with the future of the next generation. Nevertheless, research has revealed that larger family size is one of the determinants of weaker climate change-related concerns, probably due to an (unmeasured) traditional family orientation (Price & Bohon, 2019). Although my study is concerned with ideal family size, research that investigates actual family size might be illuminating, even despite that the ideal number of children is reported to be higher in Europe than actual fertility (Liefbroer et al., 2015). In the case of the present research, this would suggest that the explanation must be sought in traditional family orientations and conservativism. In Hungary, when individuals are asked about societal ideals, environmental concerns seem to matter, but at the level of personal desires for children, a stronger traditional orientation might suppress the relationship between environmentalism and childbearing attitudes.

This, however, does not explain the between-country variance. The four countries are often treated as one unit in international comparative research, but these controversial results suggest that a more detailed, in-depth examination of country-level discrepancies is necessary, since besides plenty of similarities there were non-negligible differences in family and childcare policies (Czech Republic and Slovakia had similarities in their leave policies, while Poland stood out in terms of the availability and attendance of formal childcare services and maternal employment rates; see Michoń, 2015) and in climate change-related attitudes (again, the Czech Republic and Slovakia shared most similarities regarding the indicators). Neyer and Andersson (2008) also argue that the context (not only the local but also temporal) cannot be neglected when the effects of family policies are evaluated, since the policies do not have a universal impact. Even where pronatalist expectations in fertility trends might seem to be met, other contextual factors play important roles regarding individual fertility behaviour. Individual-level factors and features of the sample of this analysis might also be behind the dissimilar results: Slovak data is unique in that men and younger people dropped out from the analytical sample in larger proportions due to their non-responses. If this factor plays a role, the results would indicate that gender and age may mediate the relationship between climate change-related concerns and ideal family size.

This study has drawn a picture of the situation ten years ago, when climate change was less of an everyday topic than it is today. The article has its limitations:

Perhaps the major shortcoming is that, due to the low case numbers in some categories, a dichotomous variable was used to measure the ideal number of children instead of taking all the different values into account. Moreover, the database did not allow me to control for religiousness or political ideology, although these factors have been shown to affect environmental considerations (Otto & Gugushvili, 2020; Price & Bohon, 2019), and might also affect childbearing ideals. Finally, a more recent database which covers the analysed topics would be greatly needed to address this question in a more up-to-date manner. Nevertheless, I believe that the research draws attention to the fact that, in addition to the well-researched determinants, other considerations such as environmental attitudes might influence childbearing attitudes or desires. Additionally, my study demonstrated the problems of treating the V4 countries as belonging to one unit despite the apparent differences in attitudes toward environmental issues as well as toward ideal family size. These findings have potentially important policy implications. To increase support for policies aimed at tackling climate change in pronatalist countries, a shift in the narrative would be necessary so that environmental protection appears as a traditional norm in discourse (Price & Bohon, 2019). The question of whether pronatalist family policy and green policy are at all compatible may sound harsh, but it is definitely an issue for further discussion.

Acknowledgments

This publication has been prepared with the co-financing of the European Union, Hungary, and the European Social Fund within the framework of the EFOP-3.6.3-VEKOP-16–2017-00007 project From a Talent to a Young Researcher—Activities Supporting the Career of Researchers in Higher Education. The research conducted by the MTA TK Lendület "Momentum" Reproductive Sociology Research Group, leading to these results, has received funding from the Hungarian Academy of Sciences.

Conflict of Interests

The author declares no conflicts of interests.

Supplementary Material

Supplementary material for this article is available online in the format provided by the author (unedited).

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