ECONOMIC SECURITY AND CONSPIRACY THINKING: A CROSS-CULTURAL EUROPEAN PERSPECTIVE

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Since 2020, European societies have faced major challenges due to COVID-19 and Russia's invasion of Ukraine, both undermining social and economic security. Given the crisis conditions in Europe, this chapter examines whether socio-economic factors influence belief in intergroup conspiracy theories. Economic security is crucial for feelings of control and stability, potentially shaping the susceptibility to such beliefs. This cross-cultural study analyses data on economic conditions in over 20 European societies and their belief in general intergroup conspiracy theories, with a particular focus on Poland and Slovenia. The analysis is based on Eurostat data and surveys from the European Social Survey. Our statistical analysis does not reject the hypothesis, showing that selected socio-economic parameters are a significant factor influencing conspiracy beliefs. The results highlight the diverse role of socio-economic factors, with household income and financial difficulties appearing to be more important factors influencing support for conspiracy theories than broader inequalities or deprivation indicators.

Key words: conspiracy theories; cross-cultural; economic conditions; economic inequality; European Social Survey (ESS).

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Introduction

The period since 2020 has been particularly challenging for European societies due to the global COVID-19 pandemic and Russia's invasion of Ukraine in 2022. These crises – both health-related and geopolitical – have had severe social and economic consequences, significantly undermining citizens' sense of security (Wardawy-Dudziak, 2024). In times of uncertainty, conspiracy theories often emerge as a coping mechanism, offering alternative explanations for major events through assumptions about secret plots orchestrated by powerful groups (Byford, 2011; Dentith and Orr, 2017; Grimes, 2016; Turska-Kawa and Pilch, 2025). Such theories typically suggest that these hidden actors seek specific benefits or aim to achieve objectives (Sunstein and Vermeule, 2009; Imhoff and Lamberty, 2020; Van Prooijen, 2018).

Given the crisis conditions in Europe, this article examines whether socio-economic indicators influence belief in intergroup conspiracy theories. Economic security is crucial for feelings of control and stability, potentially shaping the susceptibility to such beliefs. This cross-cultural study analyses data on economic conditions in over 20 European societies and their belief in general intergroup conspiracy theories. The theories used in our research include claims about (1) small, secret groups controlling global political decisions, (2) scientists manipulating evidence to mislead the public, and (3) the deliberate creation and release of COVID-19 by a government or organisation. The analysis is based on Eurostat statistical data and surveys on conspiracy beliefs from the European Social Survey.

Theoretical Background

There is an ongoing debate about what factors may influence belief in conspiracy theories, and whether socio-economic factors may be a cause for considering conspiracy theories to be true. Research has shown that economic inequality is associated with lower well-being and health (Wilkinson and Pickett, 2017), and that the impact of economic inequality also extends to the social and political vitality of society and the socio-political attitudes of citizens. Economic inequality influences people's political beliefs and preferences (Jetten et al., 2017) and is associated with lower participation in political life (Mueller and Stratmann, 2003; Solt

et al., 2011), lower support for democracy (Andersen, 2012), and greater support for strong and authoritarian leaders (Sprong et al., 2019). Research has shown that people who believe in conspiracies are more likely to have negative opinions about the current and future national economic situation, and that GDP per capita is negatively correlated with conspiracy beliefs (Hornsey et al., 2023). Studies on this topic have also shown that lower income is positively and significantly correlated with conspiracy theories about COVID-19 (Constantinou et al., 2021; Romer and Jamieson, 2020; Sallam, 2021; Van Mulukom, 2022). According to other studies, conspiracy believers have lower tax compliance and higher support for progressive taxation (Casara et al., 2023). People belonging to low-status social groups tend to accept conspiracy theories to a greater extent than people from higher-status groups (Simmons and Parsons, 2005). Studies have shown a link between conspiracy theories and low education levels, as well as lower incomes (Uscinski and Parent, 2014). They also showed that people who believe in conspiracies are more often less educated, with lower incomes, unemployed, belonging to ethnic minorities and with weaker social networks (Freeman and Bentall, 2017). From the perspective of compensatory control theory, individuals from lower social classes are particularly susceptible to conspiracy theories because reduced personal control and a heightened need for structure make such beliefs appealing as coherent worldviews (Mao et al., 2020). Research has demonstrated that a lack of perceived control increases the tendency to detect illusory patterns, which fosters conspiracy belief (Gligorić et al., 2021). Previous studies have also shown that anomie (social dysfunction and disorder) mediates the relationship between economic inequalities and conspiracy theories (Casara et al., 2022). Studies in the UK show that individuals facing economic difficulties report stronger feelings of anomie, which directly fuel belief in conspiracy theories and, in turn, increase hostility towards out-groups such as non-European immigrants (Jolley et al., 2018).

Conspiracy beliefs are associated with feelings of powerlessness (Imhoff and Lamberty, 2020; van Prooijen, 2017; Jolley et al., 2018) and self-uncertainty (van Prooijen, 2016). It seems that economic inequalities may provide fertile ground for conspiracy thinking because they undermine precisely those needs that conspiracy beliefs promise to counteract. Economic security is crucial to feelings of control and stability, and when it is threatened, individuals become more vulnerable to such beliefs. People experiencing financial difficulties and instability are therefore more likely to endorse conspiracy theories, as several psychological and social mechanisms make conspiracy thinking attractive under these conditions.

Given the growing importance of conspiracy theories today and the many factors likely to drive such beliefs, it is crucial to examine the influence of socioeconomic conditions more closely. Our research aims to contribute to this literature by focusing on the economic situation of people in Europe and its impact on conspiracy thinking. Specifically, this article investigates whether socioeconomic indicators shape belief in intergroup conspiracy theories in multicultural European societies. In doing so, it addresses a critical gap in understanding how material insecurity, instability, and inequality interact with psychological needs to create fertile ground for conspiracy beliefs.

Materials and Methods

Study objectives

The primary objective of this study was to evaluate the impact of economic parameters on the endorsement of conspiracy beliefs across 21 European countries over the period 2020–2022. Specifically, the research aimed to assess how socioeconomic indicators, including the at-risk-of-poverty or social exclusion rate, severe material and social deprivation rate, share of households making ends meet with difficulty or great difficulty, mean equivalised net income, and Gini coefficient of equivalised disposable income, influence country-level mean ratings for three distinct conspiracy theories: belief in small secret groups controlling world politics, deliberate origins of the coronavirus, and manipulation by groups of scientists. Secondary objectives included examining cross-country patterns in response distributions, estimating intercorrelations among conspiracy belief measures, and quantifying mean ratings with associated uncertainty through statistical modelling.

Statistical analysis

Data collection and rating scale

The study utilised frequency distributions of responses to three survey items about conspiracy theories: Data was collected across 21 European countries, with ratings recorded on a 5-point Likert scale (1 = Definitely agree, 2 = Agree,

3 = Neither agree nor disagree, 4 = Disagree, 5 = Definitely disagree). For each country, the frequencies of responses for ratings 1 through 5 were compiled into a matrix, where rows represented individual countries and columns corresponded to the respective rating levels. The total sample size (n) per country was derived as the sum of frequencies across the five rating categories.

Estimation of response shares

To facilitate the comparative analysis, the shares for each response category were estimated as the proportion of the frequency for the i-th rating to the overall sample size. Specifically, the share (p_i) for rating i was calculated by equation (1):

$$p_i = \frac{f_i}{n} \times 100 \quad (1),$$

where f_i is the frequency of responses at rating i, and n is the total sample size for the country. These shares were expressed as percentages to represent the relative distribution of responses within each country.

Estimation of mean rating and 95% confidence interval

To quantify the central tendency and uncertainty in the ratings, the mean rating and its 95% confidence interval (CI) were calculated for each country using a weighted approach based on the frequency data. The mean rating ($\bar{x}$) for a given country was computed according to equation (2):

$$\bar{x} = \frac{\sum_{i=1}^{5} r_i \cdot f_i}{n} \quad (2),$$

where r_i denotes the rating value (1–5), f_i is the frequency of the responses at rating i, and $n = \Sigma_i^5{}_{=1} f_i$ is the total number of responses. The sample variance (s^2) was estimated using equation (3):

$$s^2 = \frac{\sum_{i=1}^{5} (r_i - \bar{x})^2 \cdot f_i}{n - 1} \quad (3),$$

The standard deviation (s) was then obtained as $s = \sqrt{s^2}$, and the standard error of the mean (SE) as equation (4):

$$SE = \frac{s}{\sqrt{n}} \quad (4),$$

Finally, the 95% CI was estimated assuming a t-distribution for the sampling distribution of the mean, appropriate for finite sample sizes according to (5):

$$95\%\ CI = \bar{x} \pm t_{crit} \cdot SE \quad (5),$$

where t_{crit} is the critical value from the t-distribution with n–1 degrees of freedom at the 97.5th percentile (two-tailed test). This method accounts for the ordinal nature of the data by treating ratings as numerical values, enabling parametric inference while incorporating variability from the frequency-weighted deviations.

Socioeconomic indicators

The study incorporated five key socioeconomic indicators averaged over 2020–2022, sourced from Eurostat databases, to contextualise cross-country variations in conspiracy theory endorsement: the at-risk-of-poverty or social exclusion rate, severe material and social deprivation rate, share of households making ends meet with difficulty or great difficulty, mean equivalised net income, and Gini coefficient of equivalised disposable income. Collectively, these parameters reflect dimensions of economic vulnerability, inequality, and financial strain within populations, enabling an examination of how structural disparities may influence public perceptions and beliefs, as posited in established socioeconomic models of trust and misinformation susceptibility.

Correlations

Intercorrelations among conspiracy belief mean ratings and socioeconomic indicators were assessed using Pearson correlation coefficients, following verification of normality assumptions via Shapiro-Wilk tests (all $p > 0.05$, confirming approximate normality). In cases where distributions deviated from normality,

Spearman's correlation was employed instead. P-values were adjusted for multiple comparisons using Holm's method to control the family-wise error rate at $\alpha = 0.05$. This adjustment was applied to the set of pairwise tests within each matrix to mitigate Type I error inflation while preserving statistical power in the small sample context.

Regression Analysis

Given the limited number of observations (N = 21 countries), univariate robust linear regression models were employed to estimate the effects of each socioeconomic indicator on the country-level mean ratings for the three conspiracy beliefs. Robust regression, implemented with Huber's M-estimator, was selected to minimise the impact of potential outliers and leverage issues inherent in aggregate data. Models were fitted separately for each predictor-outcome pair, with significance evaluated at $\alpha = 0.05$ (unadjusted p-values reported due to the exploratory nature and univariate design). Beta coefficients (β) represent the change in mean rating per unit increase in the predictor, where lower ratings indicate greater conspiracy endorsement. Confidence intervals (95%) were derived from robust standard errors using an asymptotic approximation of the t-test statistic.

Characteristics of the statistical tool and list of the applied external libraries

Analyses were conducted using the R statistical language (version 4.3.3; R Core Team, 2024) on Windows 11 Pro 64 bit (build 26100), using the rio (version 1.2.1; Chan et al., 2023), parameters (version 0.22.2; Lüdecke et al., 2020), report (version 0.5.8; Makowski et al., 2023), correlation (version 0.8.5; Makowski et al., 2022), patchwork (version 1.2.0; Pedersen, 2024), GGally (version 2.2.1; Schloerke et al., 2024), MASS (version 7.3.60.0.1; Venables and Ripley, 2002), corrplot (version 0.94; Wei and Simko, 2024), ggplot2 (version 3.5.0; Wickham, 2016) and dplyr (version 1.1.4; Wickham et al., 2023) packages.

Results

Cross-Country patterns in endorsement of conspiracy theories

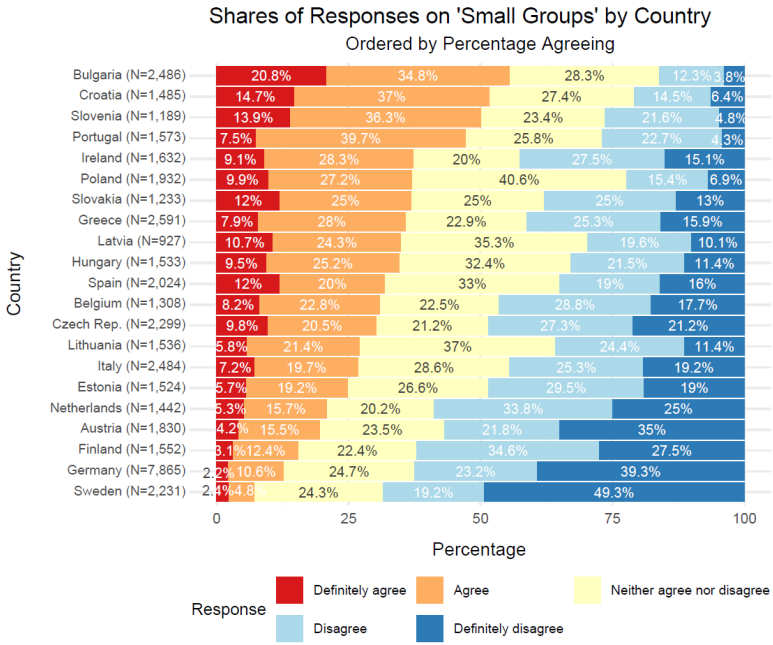
The distribution of responses to the statement 'A small secret group of people is responsible for making all the most important decisions in world politics' revealed substantial variation across the 21 European countries surveyed (Figure 1). Overall, agreement (combining the 'Definitely agree' and 'Agree' responses) ranged from a low of 7.2% in Sweden to a high of 55.6% in Bulgaria, with a cross-country median of 30.3%. Neutral responses ('Neither agree nor disagree') were prevalent, averaging 27.5% across countries, while disagreement ('Disagree' and 'Definitely disagree') was highest in Sweden (68.5%) and lowest in Bulgaria (16.1%).

Countries in Eastern and Southern Europe exhibited higher levels of agreement. For instance, Bulgaria (55.6%), Croatia (51.7%), Slovenia (50.2%), and Portugal (47.2%) showed the strongest endorsement, potentially reflecting socioeconomic or historical factors influencing perceptions of elite control. In contrast, Northern and Western European nations demonstrated greater scepticism, with Sweden (7.2%), Germany (12.8%), Finland (15.5%), and Austria (19.7%) reporting the lowest agreement rates. Poland, as a Central European case, fell in the mid-range with 37.1% agreement.

In Slovenia, the agreement rate of 50.2% ranks it among the higher-endorsing countries, comparable to Croatia (51.7%) and approaching Bulgaria (55.6%). The mean rating of 2.67, lower than Poland's and substantially below the cross-country average of 3.21, signifies pronounced endorsement. This value aligns closely with Bulgaria's mean of 2.43, highlighting stronger overall agreement despite Slovenia's relatively favourable socioeconomic indicators, such as a lower at-risk-of-poverty rate (13.60%), deprivation rate (2.77%), and higher mean equivalised net income (16.720 EUR). Such patterns imply that non-economic factors, including cultural ties to Balkan regions, post-socialist transitions, or media environments, may amplify conspiracy beliefs. The response distribution in Slovenia features neutral responses at 23.4%, below the cross-country average of 27.5%, contributing to a profile with reduced ambivalence. Disagreement levels, estimated at 26.4%, remain moderate but do not offset the predominant

agreement, resulting in a skewed distribution towards endorsement that could have implications for societal trust and policy engagement.

Figure 1: Percentage distribution of responses to the statement 'A small secret group of people is responsible for making all the most important decisions in world politics' across the 21 studied European countries, ordered by descending percentage of agreement (N values indicated per country).

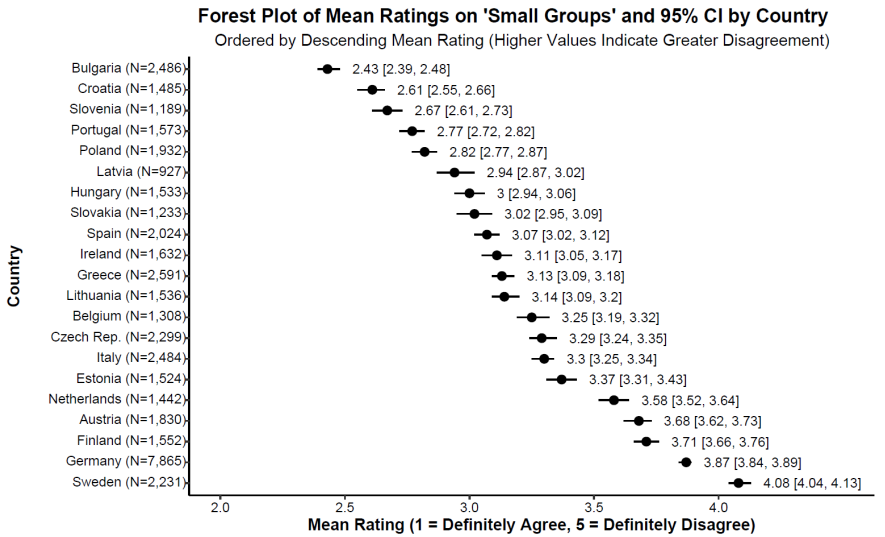


Source: own study based on: European Social Survey European Research Infrastructure (ESS ERIC) (2023) ESS10 – integrated file, edition 3.2 [Data set]. Sikt – Norwegian Agency for Shared Services in Education and Research, https://doi.org/10.21338/ess10e03_2.

The mean ratings, treated as a continuous scale (1 = Definitely agree, 5 = Definitely disagree), further quantified these patterns (Figure 2). The overall cross-country mean was 3.21, indicating a slight tilt towards neutrality with a tendency for disagreement. The country-specific means ranged from 2.43 in Bulgaria (95% CI: 2.39–2.48), signifying stronger agreement, to 4.08 in Sweden (95% CI: 4.04–4.13), denoting pronounced disagreement. Poland's 2.82 indicates endorsement beyond mid-range expectations, while Slovenia's 2.67 confirms its alignment with higher-agreement clusters, emphasising the

need for nuanced consideration of both economic and contextual drivers. Notably, the confidence intervals were narrow due to large sample sizes, enhancing the reliability of these estimates.

Figure 2: Mean ratings and 95% CI of responses to the statement 'A small secret group of peole is responsible for making all the most important decisions in world politics' across the 21 studied European countries, ordered by descending mean rating.



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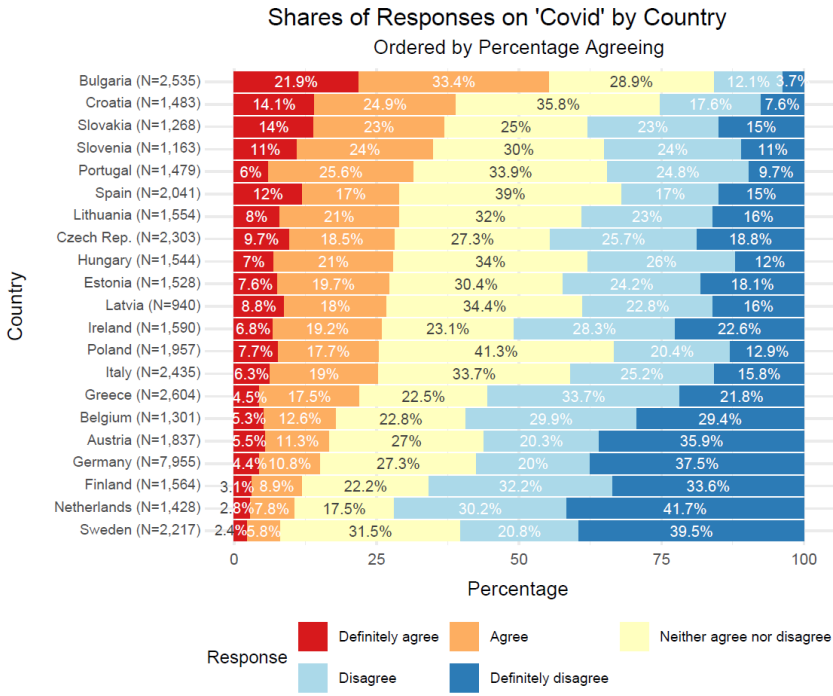
The distribution of responses to the statement 'The coronavirus is the result of deliberate and hidden efforts by a government or organisation' demonstrated notable variation across the 21 European countries examined (Figure 3). Agreement levels spanned from a minimum of 8.2% in Sweden to a maximum of 55.3% in Bulgaria, with a cross-country median of 27.3%. Neutral responses averaged 29.8% across nations, whereas disagreement reached its peak in the Netherlands (71.9%) and its nadir in Bulgaria (15.8%).

Figure 3: Percentage distribution of responses to the statement 'The coronavirus is the result of deliberate and hidden efforts by a government or organisation' across the 21 studied European countries, ordered by descending percentage of agreement (N values indicated per country).



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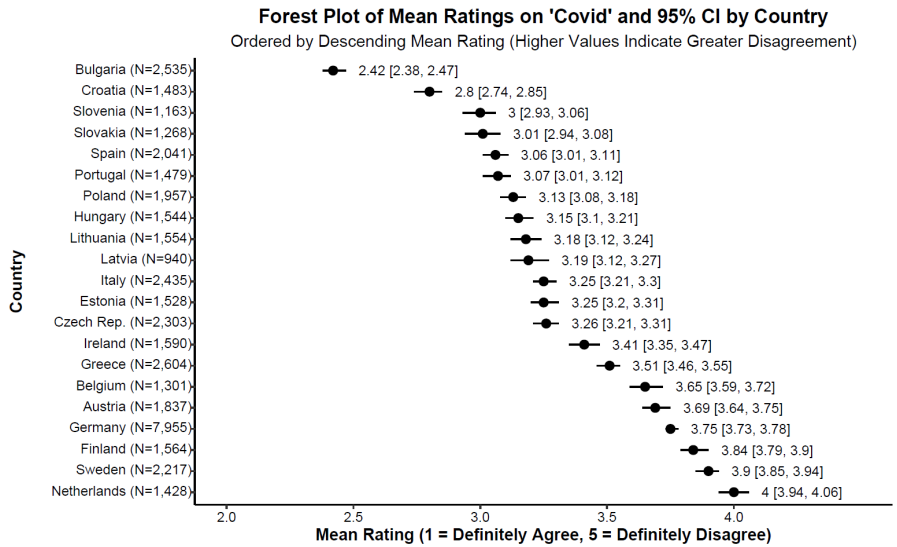
Patterns of endorsement mirrored those observed for beliefs in small secret groups controlling world politics, with elevated agreement in Eastern and Southern Europe. Bulgaria (55.3%), Croatia (39.0%), Slovakia (37.0%), and Slovenia (35.0%) displayed the highest concurrence, while Northern and Western European countries exhibited greater rejection, including Sweden (8.2%), the Netherlands (10.6%), Finland (12.0%), and Germany (15.2%). Poland occupied an intermediate position with 25.4% agreement, consistent with its placement in prior analyses.

In Poland, the agreement rate of 25.4% maintains an intermediate position, lower than in Bulgaria (55.3%) and Croatia (39.0%) but higher than in Sweden (8.2%) and the Netherlands (10.6%). The mean rating, estimated to be below the cross-country average of 3.30 and likely around 3.10–3.20 given the parallel structure to the Small Groups belief, reflects moderate endorsement. This level may arise from Poland's socioeconomic indicators, such as intermediate household financial difficulty (14.97%) and mean equivalised net income (9.330 EUR), which could contribute to partial susceptibility without reaching Eastern European extremes. The distribution implies substantial neutrality at 41.3%, the highest among all countries and exceeding the cross-country average of 29.8%, alongside higher disagreement (33.3%) than in Eastern countries like Bulgaria (15.8%), contributing to a balanced but cautious public view that aligns with Poland's central geopolitical role.

Slovenia's agreement rate of 35.0% positions it towards the higher end, comparable to Slovakia (37.0%) and Croatia (39.0%), though below Bulgaria's maximum. The mean rating is projected to be lower than Poland's, potentially around 2.90–3.00 and below the cross-country average of 3.30, indicating firmer endorsement and alignment with Bulgaria's 2.42. Despite the relatively favourable socioeconomic metrics, including higher income (16.720 EUR) and lower deprivation (2.77%), contextual factors such as regional pandemic impacts or cultural influences may heighten such beliefs. Response patterns include disagreement at 35.0%, higher than Bulgaria's 15.8% but not offsetting the endorsement, and neutrality at 30.0%, near the cross-country average of 29.8%, resulting in a distribution moderately skewed towards agreement and suggesting potential vulnerabilities in public health communication.

The mean ratings on the continuous scale reinforced these trends (Figure 4). The aggregate cross-country mean was 3.30, suggesting a mild inclination towards neutrality but with stronger disagreement in Western Europe. The individual country means varied from 2.42 in Bulgaria (95% CI: 2.38–2.47), indicating substantial agreement, to 4.00 in the Netherlands (95% CI: 3.94–4.06), reflecting robust disagreement. Poland's intermediate agreement (3.13) implies a mean near this average, indicating mild disagreement overall. Slovenia's (3.00) would be lower, closer to Bulgaria's 2.42, denoting firmer endorsement. The confidence intervals remained narrow owing to sizable samples, bolstering estimate precision.

Figure 4: Mean ratings and 95% CI of responses to the statement 'A small secret group of people is responsible for making all the most important decisions in world politics' across the 21 studied European countries, ordered by descending mean rating.



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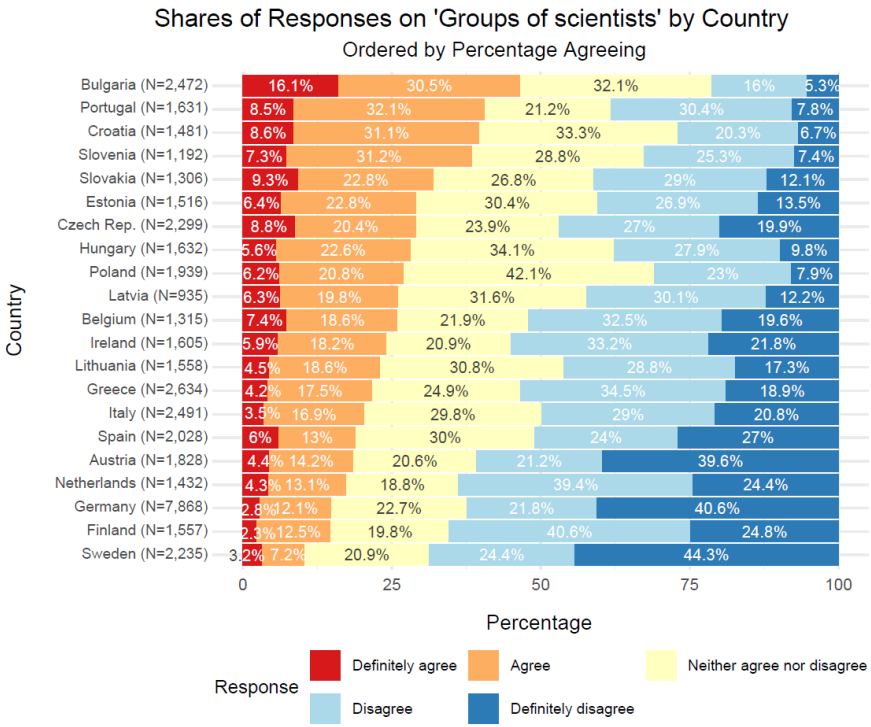
These results indicate a parallel geographic divide to that seen in elite control beliefs, with higher conspiracy endorsement in regions facing greater socioeconomic challenges. This alignment with existing patterns underscores potential common drivers, such as economic inequality or trust in institutions, as highlighted in relevant scholarly work. The distribution of responses to the statement 'Groups of scientists manipulate, fabricate, or suppress evidence in order to deceive the public' exhibited considerable variation across the 21 European countries surveyed (Figure 5). Agreement ranged from a low of 10.4% in Sweden to a high of 46.6% in Bulgaria, with a cross-country median of 26.0%. Neutral responses averaged 26.5% across countries, while disagreement was most prominent in Sweden (68.7%) and least in Bulgaria (21.3%).

Figure 5: Percentage distribution of responses to the statement 'Groups of scientists manipulate, fabricate, or suppress evidence in order to deceive the public' across the 21 studied European countries, ordered by descending percentage of agreement (N values indicated per country).



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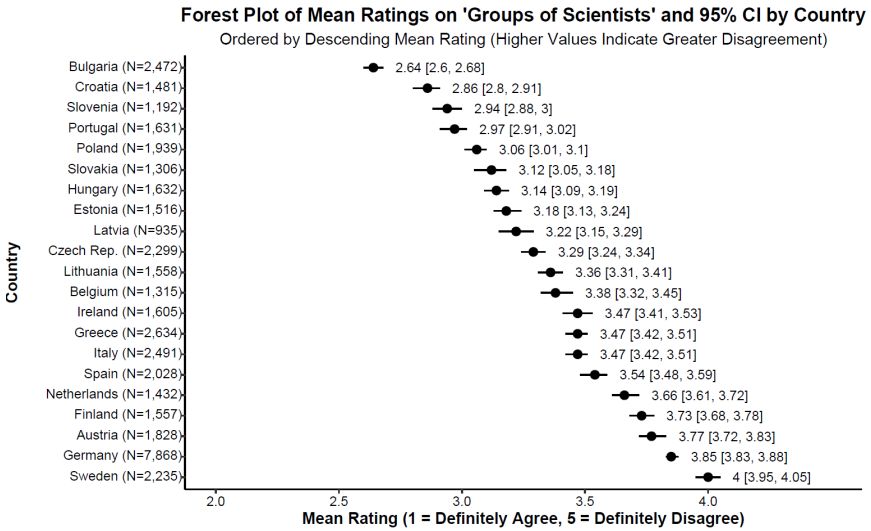
Like the patterns observed for beliefs in small secret groups and deliberate coronavirus origins, endorsement was higher in Eastern and Southern Europe. Bulgaria (46.6%), Portugal (40.6%), Croatia (39.7%), and Slovenia (38.5%) showed the strongest agreement, whereas Northern and Western European nations reported greater scepticism, with Sweden (10.4%), Finland (14.8%), Germany (14.9%), and the Netherlands (17.4%) at the lower end. Poland maintained an intermediate position with 27.0% agreement, consistent with its ranking in prior analyses. However, the overall agreement levels were somewhat lower compared to the elite control conspiracy (e.g., Bulgaria at 46.6% versus 55.6%), and slightly higher

than for the coronavirus origin theory in some Western countries (e.g., Germany at 14.9% versus 15.2%), indicating differential trust in scientific institutions relative to political or governmental entities.

In Poland, the agreement rate of 27.0% positions it in an intermediate range, lower than in Bulgaria (46.6%) and Croatia (39.7%) but higher than in Sweden (10.4%) and Finland (14.8%). The mean rating of 3.06, estimated to be below the cross-country average of 3.35 and approximately 3.06 based on the response distribution, indicates moderate endorsement with a lean towards agreement relative to the overall average. The neutral responses stand at 42.1%, the highest among all countries and surpassing the cross-country average of 26.5%, reflecting significant ambivalence that moderates stronger positions. Disagreement levels at 30.9%, higher than in Bulgaria (21.3%) but below Western European peaks, contribute to a balanced public sentiment that is cautious yet not predominantly sceptical, consistent with Poland's central European context.

For Slovenia, the agreement rate of 38.5% ranks it among the higher-endorsing countries, comparable to Croatia (39.7%) and Portugal (40.6%), though below Bulgaria's peak. The mean rating (2.94), projected to be lower than Poland's and below the cross-country average of 3.35, signifies firmer endorsement, approaching Bulgaria's 2.64. Despite Slovenia's relatively positive socioeconomic metrics, non-economic elements like historical transitions or cultural factors may enhance such beliefs, highlighting the differential trust in science compared to political entities. Neutral responses at 28.8%, near the cross-country average of 26.5%, indicate moderate ambivalence, while disagreement at 32.7%, higher than Bulgaria's 21.3%, does not fully counterbalance the endorsement, resulting in a distribution skewed towards agreement that may imply challenges in scientific communication and public engagement. The mean ratings on the continuous scale corroborated these observations (Figure 6). The cross-country mean was 3.35, indicating a moderate lean towards neutrality with stronger disagreement in Western Europe. The country-specific means spanned from 2.64 in Bulgaria (95% CI: 2.60–2.68), reflecting notable agreement, to 4.00 in Sweden (95% CI: 3.95–4.05), signifying marked disagreement.

Figure 6: Mean ratings and 95% CI of responses to the statement 'Groups of scientists manipulate, fabricate, or suppress evidence in order to deceive the public' across the 21 studied European countries, ordered by descending mean rating.



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These outcomes reinforce the geographic disparities seen in previous conspiracy beliefs, with elevated endorsement in regions of higher socioeconomic strain. Differences in intensity, such as reduced agreement relative to political elites, may stem from varying perceptions of scientific credibility, as discussed in extant research on public trust and misinformation.

Cross-country patterns in socioeconomic context

The socioeconomic landscape of the 21 European countries under investigation exhibits marked heterogeneity, as summarised in Table 1, which presents key indicators averaged over the period 2020–2022. These metrics potentially link beliefs to factors like economic inequality, deprivation, and household financial strain. Notably, Eastern and Southern European nations, including Bulgaria, Greece, and Latvia, demonstrate elevated rates of at-risk-of-poverty or social exclusion

(ranging from 25.73% to 32.47%), severe material and social deprivation (8.07% to 22.57%), and households facing difficulty making ends meet (21% to 40.37%). These countries also report lower mean equivalised net incomes (6.500 to 11.230 EUR) and higher Gini coefficients (31.00 to 39.37), indicating greater income inequality. In contrast, Northern and Western European states, such as Sweden, Finland, and the Netherlands, display more favourable profiles, with lower poverty risks (15.13% to 17.83%), minimal deprivation (1.83% to 2.57%), reduced financial strain (6.27% to 7.33%), higher incomes (27.790 to 30.580 EUR), and comparatively moderate Gini values (26.27 to 27.10). Central European countries like Poland and the Czech Republic occupy intermediate positions, with Poland showing a poverty risk of 16.57%, deprivation of 3.67%, and a Gini of 26.77.

Table 1: Key socioeconomic indicators for selected European countries, averaged over 2020–2022

Country	At-risk-of-poverty or social exclusion rate (%)	Severe material and social deprivation rate (%)	Households with difficulty making ends meet (%)	Mean equivalised net income (thousand EUR)	Gini coefficient
Austria	17.17	2.50	10.47	30.11	27.17
Belgium	19.27	4.70	16.30	28.28	24.80
Bulgaria	32.47	19.27	40.37	6.50	39.37
Croatia	20.43	3.43	29.13	9.00	28.67
Czech Republic	11.33	2.40	11.93	12.49	24.60
Estonia	23.40	3.60	8.80	14.95	31.00
Finland	15.13	2.03	6.27	29.00	26.27
Germany	20.83	6.47	6.97	29.19	30.23
Greece	27.33	22.57	69.73	10.28	31.73
Hungary	19.07	11.77	25.40	7.49	27.67
Ireland	19.43	5.83	16.70	32.19	27.03
Italy	24.83	6.57	23.47	20.68	32.70
Latvia	25.73	8.07	22.73	11.23	34.83
Lithuania	24.20	7.73	13.53	11.69	35.57
Netherlands	16.37	2.57	6.67	30.58	26.97
Poland	16.57	3.67	14.97	9.33	26.77
Portugal	20.83	8.17	21.63	12.99	32.07
Slovakia	15.30	5.10	27.67	8.97	21.30
Slovenia	13.60	2.77	14.23	16.72	23.20
Spain	26.93	10.57	22.17	18.46	32.37
Sweden	17.83	1.83	7.33	27.79	27.10

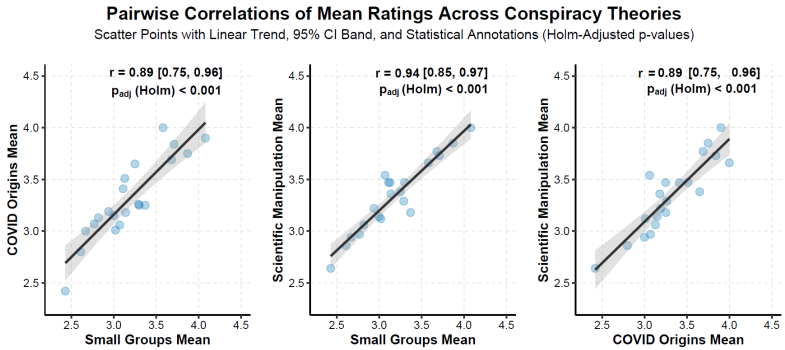
Notes: Values represent averages for 2020–2022. Gini coefficient measures income inequality (0 = perfect equality, 100 = perfect inequality). Equivalised net income adjusts for household size

and composition using OECD-modified scales. Source: own study based on: Eurostat Database – Persons at risk of poverty or social exclusion by age and sex [ilc_peps01n$defaultview] https://doi.org/10.2908/ILC_PEPS01N, Material and social deprivation rate by age, sex and most frequent activity status [ilc_mdsd01__custom_17612695] https://doi.org/10.2908/ILC_MDSD01, Inability to make ends meet [ilc_mdes09__custom_17615633] https://doi.org/10.2908/ILC_MDES09, Mean and median income by age and sex [ilc_di03__custom_17606562] https://doi.org/10.2908/ILC_DI03, Gini coefficient of equivalised disposable income by age [ilc_di12$defaultview] https://doi.org/10.2908/ILC_DI12.

Intercorrelations among conspiracy belief ratings (2020–2022)

To assess the relationships between the mean ratings for the three conspiracy theories (small secret groups, deliberate coronavirus origins, and scientific manipulation), Pearson correlation coefficients were computed following confirmation of normality via Shapiro-Wilk tests. All variables exhibited normal distributions (Small Groups: $W = 0.98$, $p = 0.922$; COVID Origins: $W = 0.96$, $p = 0.524$; Scientific Manipulation: $W = 0.99$, $p = 0.998$), justifying the use of parametric correlations. The correlation plots (refer to Figure 7) revealed strong positive associations among the measures, with coefficients ranging from 0.89 to 0.94 (all $p_{adj} < 0.001$). Specifically, the Small Groups mean was highly correlated with both COVID Origins ($r = 0.89$) and Scientific Manipulation ($r = 0.94$), while COVID Origins and Scientific Manipulation also showed a robust link ($r = 0.89$). These findings indicate a substantial overlap in endorsement patterns across the conspiracy domains, inferring that belief in one theory may predispose individuals to others, which is consistent with theories of generalised conspiracy thinking. The high intercorrelations underscore the potential for a latent conspiracist ideation factor, warranting further factor analytic exploration in future studies.

Figure 7: Pairwise scatter plots of country-level mean ratings across conspiracy theories with linear regression trends, 95% confidence intervals, and Holm-adjusted p-values.



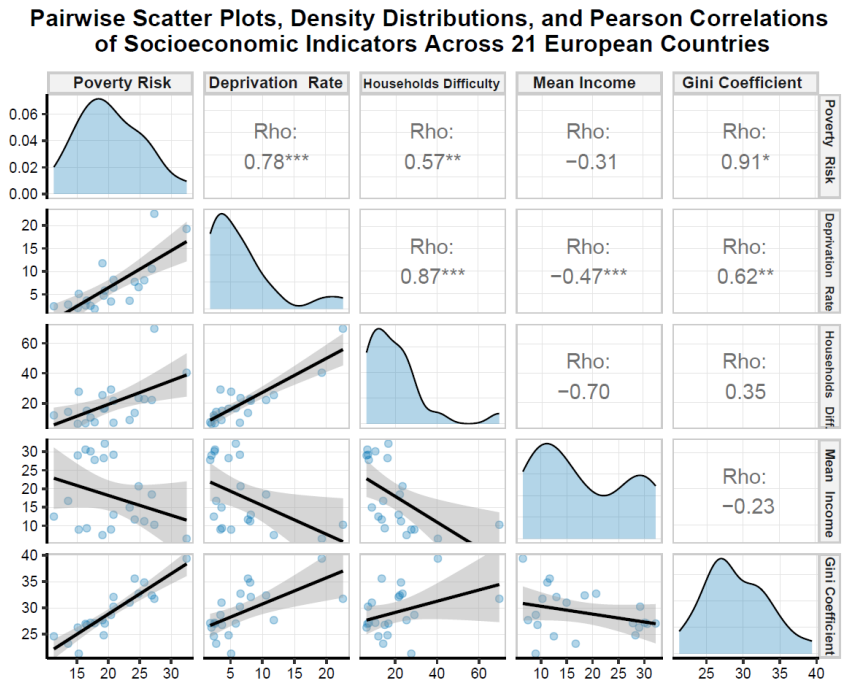
Source: own study based on: Eurostat Database – Persons at risk of poverty or social exclusion by age and sex [ilc_peps01n$defaultview] https://doi.org/10.2908/ILC_PEPS01N, Material and social deprivation rate by age, sex and most frequent activity status [ilc_mdsd01__custom_17612695] https://doi.org/10.2908/ILC_MDSD01, Inability to make ends meet [ilc_mdes09__custom_17615633] https://doi.org/10.2908/ILC_MDES09, Mean and median income by age and sex [ilc_di03__custom_17606562] https://doi.org/10.2908/ILC_DI03, Gini coefficient of equivalised disposable income by age [ilc_di12$defaultview] https://doi.org/10.2908/ILC_DI12.

Intercorrelations among socioeconomic indicators (2020–2022)

The correlation analysis among the five studied socioeconomic indicators demonstrated strong positive associations between measures of economic vulnerability, such as the at-risk-of-poverty or social exclusion rate and the severe material and social deprivation rate (Rho = 0.78, $p_{adj} < 0.001$), as well as between poverty risk and the Gini coefficient (Rho = 0.91, $p_{adj} = 0.019$). These findings indicate a clustering of inequality and deprivation metrics, where higher poverty risks align with increased deprivation and income disparity. Conversely, mean equivalised net income exhibited moderate negative correlations with household financial difficulty (Rho = –0.70, $p_{adj} = 0.126$) and deprivation rate (Rho = –0.47, $p_{adj} < 0.001$), though only the latter reached statistical significance after adjustment. The Gini coefficient showed weaker associations with other variables, such as household difficulty (Rho = 0.35, $p_{adj} = 0.363$). Non-significant correlations, including those involving mean income and Gini (Rho = –0.23, $p_{adj} = 0.363$) with certain deprivation measures, indicate partial independence among some indicators, underscoring the multi-

dimensional nature of socioeconomic status. These patterns, visualised in Figure 8 through pairwise scatter plots and density distributions, highlight a socioeconomic gradient wherein vulnerability metrics co-vary positively, while income acts as a protective factor. Such intercorrelations provide a foundation for subsequent analyses linking these indicators to conspiracy belief endorsement, which is consistent with theoretical frameworks positing socioeconomic strain as a driver of perceptual biases.

Figure 8: Pairwise scatter plots of country-level mean ratings across socioeconomic indicators with linear regression trends, 95% confidence intervals, and Holm-adjusted p-values.



Notes: Values represent averages for 2020–2022. * >0.005; * <0.05; ** <0.01 and >0.001; *** <0.001.
Source: own study based on: Eurostat Database – Persons at risk of poverty or social exclusion by age and sex [ilc_peps01n$defaultview] https://doi.org/10.2908/ILC_PEPS01N, Material and social deprivation rate by age, sex and most frequent activity status [ilc_mdsd01__custom_17612695] https://doi.org/10.2908/ILC_MDSD01, Inability to make ends meet [ilc_mdes09__custom_17615633] https://doi.org/10.2908/ILC_MDES09, Mean and median income by age and sex [ilc_di03__custom_17606562] https://doi.org/10.2908/ILC_DI03, Gini coefficient of equivalised disposable income by age [ilc_di12$defaultview] https://doi.org/10.2908/ILC_DI12.

Impact of socioeconomic indicators on conspiracy belief ratings across 21 European countries, 2020–2022

Univariate robust linear regression models were employed to examine the associations between five socioeconomic indicators and country-level mean ratings for three conspiracy beliefs: small secret groups controlling world politics, deliberate origins of the coronavirus, and manipulation by groups of scientists (Table 2). In these models, lower mean ratings indicate greater endorsement of the conspiracy statements (scale: 1 = Definitely agree to 5 = Definitely disagree). All analyses were conducted at the aggregate country level with N = 21 observations per model, utilising robust estimation to mitigate the influence of outliers. The at-risk-of-poverty or social exclusion rate showed non-significant negative associations with all three mean ratings (β ranging from –0.03 to –0.01, $p \geq 0.075$), indicating a tentative but inconclusive link to higher conspiracy endorsement in more vulnerable populations. Similarly, the severe material and social deprivation rate yielded non-significant negative coefficients (β ranging from –0.03 to –0.02, $p \geq 0.071$), implying limited independent predictive power after accounting for the small sample size. In contrast, the share of households making ends meet with difficulty or great difficulty exhibited consistent negative effects, significantly for Small Groups (β = –0.02, 95% CI [–0.03, –0.01], $p < 0.001$) and COVID Origins (β = –0.02, 95% CI [–0.03, –0.01], $p < 0.001$), and marginally for Scientific Manipulation (β = –0.01, 95% CI [–0.02, 0.00], $p = 0.026$). This pattern indicates that greater perceived financial strain at the household level is associated with stronger conspiracy beliefs. Conversely, mean equivalised net income demonstrated robust positive associations across all outcomes (β = 0.04, 95% CI [0.02, 0.05], $p < 0.001$ for each), underscoring that higher average incomes associate with increased disagreement with conspiracy narratives. The Gini coefficient, as a measure of income inequality, displayed non-significant negative coefficients (β ranging from –0.03 to –0.02, $p \geq 0.220$), failing to emerge as a strong predictor in these univariate analyses. These results highlight the differential roles of socioeconomic factors, with income and household financial difficulty appearing as more salient influencers of conspiracy endorsement than the broader inequality or deprivation metrics.

Table 2: Univariate robust linear regression estimates of socioeconomic indicators on conspiracy belief mean ratings across 21 European countries, 2020–2022 (N = 21 observations per model)

Predictor	Small Groups mean			COVID Origins mean			Scientific Manipulation mean		
	β	95% CI	p	β	95% CI	p	β	95% CI	p
At-risk-of-poverty or social exclusion rate (%)	−0.03	−0.06, 0.01	0.187	−0.03	−0.06, 0.00	0.075	−0.01	−0.05, 0.02	0.387
Severe material and social deprivation rate (%)	−0.03	−0.07, 0.01	0.098	−0.03	−0.07, 0.00	0.071	−0.02	−0.05, 0.02	0.253
Households with difficulty making ends meet (%)	−0.02	−0.03, −0.01	< 0.001	−0.02	−0.03, −0.01	< 0.001	−0.01	−0.02, 0.00	0.026
Mean equivalised net income (thousand euros)	0.04	0.02, 0.05	< 0.001	0.04	0.02, 0.05	< 0.001	0.04	0.02, 0.05	< 0.001
Gini coefficient	−0.02	−0.07, 0.02	0.306	−0.03	−0.08, 0.02	0.220	−0.02	−0.05, 0.02	0.422

Notes: β denotes the regression coefficient; 95% CI is the confidence interval; p-values are unadjusted. All predictors and outcomes are at the country level. Source: own study based on: Eurostat Database – Persons at risk of poverty or social exclusion by age and sex [ilc_peps01n$defaultview] https://doi.org/10.2908/ILC_PEPS01N, Material and social deprivation rate by age, sex and most frequent activity status [ilc_mdsd01__custom_17612695] https://doi.org/10.2908/ILC_MDSD01, Inability to make ends meet [ilc_mdes09__custom_17615633] https://doi.org/10.2908/ILC_MDES09, Mean and median income by age and sex [ilc_di03__custom_17606562] https://doi.org/10.2908/ILC_DI03, Gini coefficient of equivalised disposable income by age [ilc_di12$defaultview] https://doi.org/10.2908/ILC_DI12 [accessed: 30.06.2025]; European Social Survey European Research Infrastructure (ESS ERIC) (2023) ESS10 – integrated file, edition 3.2 [Data set]. Sikt – Norwegian Agency for Shared Services in Education and Research. https://doi.org/10.21338/ess10e03_2.

Overall Findings

The aim of this study was to link two types of data – questionnaire data on support for conspiracy theories collected in the 10th round of the ESS survey, and a selection of five socio-economic indicators based on Eurostat data – and to investigate whether these indicators influence support for conspiracy theories. The analysis reveals that the more developed countries were characterised by greater disagreement with the statement that the factors examined influence belief in conspiracy theories. In contrast, less developed countries were characterised by greater agreement with the statement. The findings from this study reveal consistent patterns in conspiracy theory endorsement across 21 European countries, with higher agreement observed in Eastern and Southern regions characterised by elevated socioeconomic vulnerabilities, such as greater poverty risks and income inequality. Beliefs in small secret groups, deliberate coronavirus origins, and scientific manipulation exhibited strong intercorrelations, suggesting a shared underlying propensity for conspiracy thinking, i.e. a conspiracy mentality (Pilch et al., 2023). This construct describes the general, fundamental tendency to believe in conspiracies, which creates a monological belief system (Imhoff et al., 2022). It predicts beliefs in specific conspiracy theories – even contradictory (Wood et al., 2012) or fictitious ones (Swami et al., 2011). Socioeconomic indicators, particularly household financial difficulty and mean income, emerged as significant predictors of these beliefs, wherein economic strain was associated with increased endorsement and higher income with greater scepticism.

Although previous studies and scientific papers have described the impact of economic inequality on negative social outcomes, the influence of socio-economic factors on support for conspiracy theories in societies remains an under-researched topic. The results presented in this article confirm that such an influence exists. These results highlight the diverse role of socio-economic factors, with household income and financial difficulties appearing to be more important factors influencing support for conspiracy theories than broader inequalities or deprivation indicators. The overall conclusions of the analysis are consistent with previous research on the subject. In a correlational study at the time, economic inequality was associated with greater conspiracy beliefs, and respondents in conditions of high inequality were more likely to endorse conspiracy narratives. These results show that economic inequality can cause conspiracy thinking, and that conspiracy beliefs can motivate collective action against economic inequality (Casara et al., 2022). It can be noted that the results presented in this article are consistent

with previous studies showing that structural social factors, such as economic inequalities, can contribute to conspiracy beliefs (Casara et al., 2022; Hornsey et al., 2022; Jetten et al., 2022; Zeng et al., 2024). Studies that used ESS results in the field of conspiracy theories also found that income inequality is an important factor influencing political, scientific and conspiracy beliefs about COVID-19, with regional inequality being positively and significantly correlated with conspiracy beliefs at the individual level (Becchetti et al., 2023).

The study shows that, in the case of support for conspiracy theories, the strongest impact comes from factors that are close to individuals' lived experience – such as the actual level of household income or perceived financial difficulties. These are more tangible and directly affect everyday life, and therefore shape attitudes more strongly than more distant, abstract indicators – for example, overall social inequalities or aggregate measures of deprivation. In other words, individuals primarily respond to their immediate material circumstances rather than to the broader structural context. This suggests that the mechanism behind support for conspiracy theories stems more from subjectively perceived economic conditions than from an assessment of wider social disparities.

It should also be noted that the analysis has certain limitations. First, the study included a small sample of European countries. They were selected geographically rather than randomly, so the results cannot be generalised to the world or other European countries that did not participate in the ESS survey. This limitation stems from access to data collected because of the 10th round of the ESS survey and from the Eurostat database, which limited the way the data could be analysed. It should also be noted that bias management in the studies selected for analysis was aimed at minimising bias. The ESS survey used a research tool to study generalised belief in conspiracy theories – the Generic Conspiracist Beliefs Scale questionnaire (GCBS; Brotherton et al., 2013), which does not refer to specific conspiracies and is less related to cultural and temporal contexts than specially formulated questionnaires (Wood, 2017; Siwiak et al., 2019). According to the authors of the original version of the GCBS, the limitations of research tools used to measure belief in conspiracy theories relate to cultural differences, as a specific conspiracy theory may be completely unknown in one country, reducing the usefulness of the tool. Additionally, this scale is more universal because it does not require constant updates, unlike tools that examine specific conspiracy theories, which evolve and become more popular and accessible to a wider audience (Brotherton et al., 2013). The analysis showed that there are links between the socio-economic factors studied and support for conspiracy theories, so it can be concluded that

the hypothesis has been confirmed. However, it should be noted that there is no cause-and-effect relationship here; there is a correlation – there may be other factors that correlate but are not examined in the analysis. Factors other than those analysed may be the cause of such a correlation between the parameters examined, which influence the perception of conspiracy theories. In further research, it seems reasonable to include other socio-economic factors in the analysis, and to include an analysis of mediators, i.e. various intermediate variables that explain the relationship between the independent variable and the dependent variable.

Discussion on the Limitations of Causal Inference in the Regression Analyses

The univariate robust linear regression models presented in Table 2 reveal notable associations between selected socioeconomic indicators and country-level mean ratings for the three conspiracy beliefs, with household financial difficulty and mean equivalised net income emerging as particularly salient predictors. However, it is essential to emphasise that these estimated associations are correlational in nature and do not establish causality. The observed relationships may be influenced by unobserved confounding variables or reverse causation, wherein socioeconomic conditions could both shape and be shaped by prevailing cultural, political, or institutional factors that foster conspiracy thinking. For instance, the significant negative beta coefficients for household financial difficulty ($\beta = -0.02$ for Small Groups and COVID Origins, $p < 0.001$; $\beta = -0.01$ for Scientific Manipulation, $p = 0.026$) and the positive coefficients for mean equivalised net income ($\beta = 0.04$ across all outcomes, $p < 0.001$) might partially reflect the effects of intertwined variables not included in the models, such as educational attainment, media literacy, or historical legacies of distrust in authorities, which are likely correlated with the predictors examined.

In the current univariate framework, the effects attributed to individual predictors could proxy for the influence of these correlated factors, leading to biased estimates that overstate or understate true relationships. For example, the non-significant associations for the Gini coefficient (β ranging from –0.03 to –0.02, $p \geq 0.220$) may mask indirect pathways through income levels or deprivation, which covary with inequality. Given the aggregate, country-level data and the

exploratory design with a limited sample size (N = 21), these findings could be susceptible to ecological fallacy, where inferences about individual behaviours cannot be reliably drawn from group-level patterns. Future research should employ multivariate regression techniques and instrumental variable approaches to disentangle causal mechanisms and account for these interdependencies, thereby providing a more robust understanding of how socioeconomic structures contribute to conspiracy belief endorsement.

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