

Income Inequality, Individual Income, Trust in Government and Long-term Individual Concerns

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Humans frequently worry about their future, yet most research focuses on only one area of concern, limiting our understanding of general long-term worry. This manuscript addresses this gap through a cross-national analysis of 27 high-income societies. Using representative surveys conducted in 2022 and 2024 and multilevel models, we examine seven domains of worry spanning financial security, housing, and health. We identify two underlying forms of concern - financial and health-related - and argue that their prevalence is linked to country conditions. In countries with higher inequality and lower trust in government, citizens report higher levels of long-term concern overall. We attribute the role of income inequality in relation to worry to the influence of perceived instability and status-maintenance anxiety, and the role of trust in government to the presence of credible institutions. Policies that reduce inequality and enhance trust in government may mitigate material insecurity and psychological burden about the future.

Replications files are available at <https://figshare.com/s/db1dcea8c1635e545d3e>

Modern societies have reduced many sources of uncertainty. Most citizens are relatively sure about their daily access to clothing, food and shelter and take physical security for granted. However economic, health-related and social risks persist in these societies: biennial surveys conducted by the Organization for Economic Cooperation and Development (OECD) as part of the Risks that Matter (RtM) project show that long-term individual concerns related to finances, health and access to long-term care are widespread. In 2022, 75% of all respondents across 27 OECD countries worry about not being financially secure in old age, 71% about not having access to good-quality healthcare and 68% about becoming ill or disabled in the next 10 years (OECD 2023).

Social scientists are only beginning to explore the social foundations of long-term concerns. Existing research is fragmented: it typically examines single issues such as climate concerns (Peisker 2023) or economic and job insecurity (Anderson and Pontusson 2007; Lee 2024), with little comparative work that analyses long-term concerns and their macro-level foundations. As a result, we have a limited understanding of how individual and country-level factors contribute to negative emotions regarding the distant future.

In particular, it is unclear whether long-term concerns reflect topic-specific risks or a more general disposition, and whether structural conditions shape concerns differently across socio-economic groups. This manuscript seeks to address this gap by analysing two important and understudied questions. First, how are long-term worries structured across different domains? Do they reflect multiple topic-specific concerns, or underlying dispositions toward long-term uncertainty? Second, to what extent do country-level factors account for the substantial cross-national variation in long-term concerns?

Explaining the socio-economic and political foundations of long-term worries is important for several reasons. Having recurring concerns and worries can motivate action to prevent undesirable situations (Sweeny and Dooley 2017) but has also been associated with

extensive negative experiences. It constitutes a major source of personal distress and has been proven to increase the likelihood of anxiety, depression, uncontrolled eating and insomnia (Borkovec, Ray and Stober 1998; McLaughlin and Nolen-Hoeksema 2011; Moulds and McEvoy 2025). Moreover, understanding which country-conditions are associated with long-term concerns can help identify effective public policy tools to reduce these levels. If levels of long-term concerns are higher where inequality is greater and trust in government lower, then redistributive and capacity-building policies that reduce economic precariousness and bolster credible commitments may do more than shift in incomes; they may also reduce the psychological burden of the future.

While existing research suggests that income inequality and institutional trust shape perceptions of risk and insecurity (e.g., Helliwell and Huang 2008; Nannestad 2008; Wilkinson and Pickett 2010), theoretical expectations about their relationship with long-term worries remain ambiguous. On the one hand, inequality may increase concern for all income groups by fostering economic insecurity, status competition, perceived instability and fears of downward mobility. On the other hand, its effects may be muted or offset if individuals adapt to unequal conditions, interpret inequality as a signal of opportunity rather than risk, or are protected by institutional buffers. Moreover, even if inequality matters, it remains unclear whether its effects are concentrated among low-income individuals, who have fewer resources to cope with uncertainty, or extend to middle- and higher-income groups through status-maintenance anxiety. Institutional trust may likewise shape not only overall levels of concern but also their distribution across income groups: confidence in the state's capacity to manage future risks may reassure individuals across society, but its benefits may differ depending on individuals' resources and dependence on public protection. It is indeed still unclear how material vulnerability, status competition, and institutional confidence jointly shape both the level and socio-economic distribution of long-term worries.

To answer the two abovementioned questions, we conduct a quantitative analysis of the two most recent waves (2022 and 2024) of the RtM project, which cover 27 mostly high-income countries.¹ Since predictors may vary by type of worry, we consider personal long-term concerns about the respondents' future regarding seven key areas: (i) not being as well-off in the future; (ii) becoming ill or disabled; (iii) not having the right skills for a well-paid job; (iv) being financially insecure in old age; (v) being unable to find/maintain adequate housing; (vi) being unable to access good-quality long-term; and (vii) accessing good-quality healthcare. We specifically pool the 2022 and 2024 waves of the RtM datasets and use multilevel models with random intercepts and random slopes to investigate which country-level conditions are related to average levels of long-term concern and whether or not they enhance the association between individual income and these concerns.

We find that long-term worries are systematically related and can be synthesized by two dimensions, which are economic and health-related concerns. These two underlying dimensions prove consistently associated with both personal and country-level factors. Women, middle-aged individuals, those with lower education, members of minority groups and, especially, those with low income are significantly more likely to experience these two long-term worries. While research has identified these characteristics in relation to specific risks (for example, on retirement risks see Hershey et al., 2010), this paper is the first to demonstrate that these characteristics shape long-term concerns across domains.

Our analysis shows that individuals living in more unequal societies and those with lower levels of trust in government are significantly more likely to express long-term financial and health-related concerns. These findings are consistent with our theoretical model which stresses the role of income inequality and trust in government. Income inequality widens

¹ Austria, Belgium, Canada, Chile, Denmark, Estonia, Finland, France, Germany, Greece, Israel, Ireland, Italy, South Korea, Lithuania, Latvia, Mexico, Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Switzerland, Turkey, United Kingdom and the United States

distances between social positions (Wilkinson and Pickett 2010), increasing overall anxiety and status-maintenance anxiety, thereby raising concerns even among those not at the bottom of the income distribution (Hernando and Mitchell 2024). However, we also highlight that income inequality not only increases levels of concern overall but changes their distribution across income groups. Specifically, medium- and high-income groups in more unequal societies increase their worry levels disproportionately, thereby narrowing the income gap in long-term concerns. Institutional trust in government likewise shapes both average concern and its socio-economic distribution. Higher trust is associated with lower long-term concerns overall, consistent with the idea that a context of high trust reassures individuals about the capacity of political institutions to manage future risks and sustain social protection. At the same time, this association is stronger among high-income individuals, so that high trust contexts widen the income gradient in long-term concerns.

The manuscript makes three contributions. Conceptually, it shifts attention from issue-specific anxieties to more generalized long-term concerns as a comparative political economy outcome. In support of this perspective, we show that different types of worries are associated with consistent individual and country-level factors. Theoretically, we integrate arguments about inequality-induced uncertainty and status competition with the political role of trust in government, thereby clarifying why similarly wealthy societies can feel so different to their citizens. Empirically, we provide new cross-national evidence using two recent large-N surveys, deploying latent measures of long-term concerns across multiple life domains, and show that inequality and trust are consistent correlates of long-term financial and health concerns net of individual composition.

Previous Research

Long-term concerns or worries, terms used interchangeably, describe a complex set of emotions related to uncertainties about the distant future (Ojala et al. 2021). It stands apart from anxiety, which is a defensive behavioural response to uncertainty in the immediate or short-term. While worrying is often considered as something out of an individual's control, there may be a positive aspect to worry, either as a pre-condition for action or as an emotional buffer by assuming the worst outcome (Sweeny and Dooley 2017).

In academic research, longer-term concerns have been frequently linked to personal level-factors. In this body of work, worry is framed as an emotional-cognitive phenomenon related to specific sources of concern, such as COVID-19 and climate change, studied predominantly through quantitative and survey methodologies (Ojala et al. 2021). The literature highlights that levels of worry or concern vary by individual-level characteristics (Dwyer et al. 2016; Hershey et al. 2010; Stephens and Al-Bahrani 2023). Some of this evidence suggests that more marginalised groups have greater levels of worry. For example, descriptive statistics from OECD's (2023) report on the 2022 RtM wave shows that low-income individuals are more concerned about their household's ability to cover essential food, housing and energy needs than high-income individuals (see also Sachweh 2012). However, some data confounds this assumption. Using data for the US, Stephens and Al-Bahrani (2023) find that white non-Hispanics worry about finances more than all other racial/ethnic groups, who are generally less privileged (Stephens and Al-Bahrani 2023).

Literature has also examined the role of country-level factors, on specific long-term concerns (Lee 2024; Ojala et al. 2021). Christensen and Aars (2017) find that fear of terrorism is higher in countries categorised as non-democratic compared to those which are democratic, while Lee (2024) suggests that people are more likely to fear technology change in countries where there are less robust labour protections. Trust in political institutions, as an individual

characteristic, has been found to be both a driver and a mediating factor of worry, albeit with a lack of consistency in approaches across different types of risk (Hershey et al. 2010; Helweg-Larsen, Peterson and DiMuccio 2023; Kessler 2021).

As these studies have tended to focus on specific kinds of concern which are temporally and geographically situated, there is limited empirical evidence around patterns of long-term worry across countries. We know little about how socio-economic context shape long-term concerns. Sociological theorists point to changes in how people apprehend and respond to risk, associated with concepts of postmodernism, such as Beck's (1992) 'risk society' and Giddens' (1992) 'reflexive modernity', suggesting increasing levels of long-term concern, although these concepts have not been operationalised across socio-economic contexts. One area where empirical research on the relationship between socio-economic context and long-term concerns has been conducted concerns inequality. Amid rising inequality in many countries, recent research suggests that the incidence of long-term concern may be patterned by socio-economic status (Axelsen and Nielsen 2023). For example, those with greater access to financial resources, such as income and wealth, may feel better able to handle the multiple risks faced in modern society, with others feeling less confident (Axelsen and Nielsen 2023; Hernando and Mitchell 2024; Wilkinson and Pickett 2010).

There is also evidence that a country's level of inequality increases economic worries across the socio-economic spectrum, as found by Roth et al. (2017) for Germany based on panel data (see also Wilkinson and Pickett 2010). Yet, the exploration of country-level factors in shaping long-term concerns is very limited: most research that has done so has focussed on a single type of risk, such as retirement income or climate change (Hershey et al. 2010; Kessler 2021) and has not considered the role of country-level factors (with the exception of Hershey et al. 2010).

To our knowledge, no study simultaneously analyses individual and country-level determinants across different forms of worry (Schmitz, Flemmen and Rosenlund 2018). We therefore contribute to these gaps in literature by exploring the role of individual and, especially, country-level factors in shaping long-term concerns, across the different types covered by the OECD's Risks that Matter dataset.

Hypotheses

Income inequalities and long-term worries

Income inequality has been widely studied as a determinant of subjective well-being and economic insecurity. This research suggests that societies with greater income inequality tend to experience higher levels of social anxiety and economic concern among individuals, irrespective of the individual personal financial situation (Wilkinson and Pickett 2010). From this literature, income inequality appears to have three consequences which reverberate in concerns about the short and long term. First, income volatility arises from job polarization and the expansion of low-income and insecure jobs characteristic of income inequality (Hacker et al. 2013, Kalleberg 2018; Dynan et al. 2012). Second, income inequality comes hand-in-hand with weaker job protections and social benefits, constraining the ability of the lower classes to meet their objective (or socially constructed) needs (Brady et al. 2016). Third, since individuals have a need for status and tend to emulate the upper classes (Stephens et al. 2014), inequality intensifies status competition: lower- and middle-class individuals find it more difficult to replicate the consumption patterns of the upper classes, resulting in stronger upward social comparisons and heightened status anxiety (Layte and Whelan 2014; Wilkinson and Pickett 2010). Moreover, perceived inequality is also related to lower subjective social status (Hajdu 2025).

In more unequal countries, individuals perceive that they have lower socio-economic status, identify more competitiveness, have lower interpersonal trust and give more importance to their relative status (Buttrick and Oishi 2017; Schneider 2019; Sommet et al. 2018), with repercussions for personal worries. For example, when individuals perceive that economic opportunities and social protections are distributed unevenly and unfairly, they are less likely to trust their compatriots, and they may thus develop greater concerns about their ability to access welfare services and security to support their long-term well-being (Rothstein and Uslaner 2005). While workers in these situations may benefit from working harder and longer hours, these actions can conversely affect anxiety and stress levels (Buttrick and Oishi 2017). We therefore hypothesise that individuals living in countries with higher income inequality show greater concern about their long-term future generally, across domains.

H1: Income inequality is positively associated with individuals' long-term worries across domains of concern

Income inequality, individual income and long-term worries

A context of high inequality can also affect the income-divide in long-term worries. While higher-income individuals are often held to experience lower levels of worry compared to those with lower incomes (Diener et al. 1993; OECD 2023), and vice versa, the moderating role of income inequality is theoretically ambiguous. On the one hand, individuals with higher incomes may be more exposed to the broader macroeconomic and institutional environment, for instance through asset ownership or labour market positioning, making them more responsive to contextual conditions such as inequality. On the other hand, individuals with lower incomes have fewer resources to buffer risks and may therefore be more vulnerable to adverse structural conditions, implying stronger responsiveness to inequality. We hence

formulate two predictions regarding the moderating role of inequality in the income gradient in long-term concerns.

We first consider the moderating role of inequality. Inequality may reduce the income divide in perception of long-term concerns because it increases the concerns of the middle- and upper-classes disproportionately. While lower-income individuals consistently exhibit the highest levels of long-term worries – independent of the level of inequality in their country – the degree to which middle- and high-income individuals experience concerns may vary based on inequality levels. In highly unequal societies, all income groups easily perceive a large economic distance between social classes and hence the risks associated with downward mobility, contributing to higher worries. Partially supporting this argument, research suggests that in contexts of high inequality, individuals across all income groups are more likely to experience social comparison stress, fear of economic instability, and concerns about access to high-quality social services (Paskov, Gërzhani, and van de Werfhorst 2017).

However, fears of downward mobility may not be distributed uniformly across all classes. In more equal societies, income differences play a smaller role in shaping individuals' long-term worries, as social safety nets and economic stability reduce financial uncertainty and the risk of downward mobility across income groups. In high-inequality countries, individuals with medium income levels – that is the middle class – are also likely to experience an increase in concerns, as they perceive a higher risk of downward mobility, lack of economic protection, and increasing costs of maintaining their status.

Although high-income individuals possess sufficient financial reserves to buffer against economic downturns and future uncertainty to a certain extent, in contexts of high inequality they may also be concerned about their status maintenance. Following this reasoning, we hypothesise that in unequal societies middle- and upper-income groups increase their long-

term concerns disproportionately, thus reshaping the income divide in the distribution of long-term concern.

H2a: Income inequality reduces the income gap in long-term concerns

An opposite expectation could also be formulated that a context of high income inequality increases the long-term worries of low-income groups disproportionately, ultimately strengthening the income gap in these concerns. Rather than responsiveness, in this case the core mechanism is vulnerability: individuals with fewer economic resources have a more limited capacity to buffer unexpected expenses, cope with uncertainty, or compensate for institutional and market failures. In unequal contexts, this should make them especially sensitive to risks related to income volatility, insufficient protection, and constrained opportunities for upward mobility.

This argument is consistent with the ‘scarcity’ perspective, which emphasizes that the psychological and material consequences of inequality are concentrated among those facing objective financial insecurity (Kusano et al. 2026). Recent large-scale evidence shows that inequality widens well-being gaps, because it deteriorates life satisfaction more among low-SES individuals than among high-SES individuals (Kusano et al. 2026; Bartram 2025; also Sommet et al. 2018). Similarly, in high-inequality contexts, low-income individuals exhibit greater vigilance toward risks and uncertainty than their counterparts in more equal societies (Melita et al. 2025). At the same time, research on status anxiety suggests that perceived economic inequality increases status anxiety by reducing expectations of upward mobility (Layte and Whelan 2014). This mechanism reinforces the idea that inequality intensifies perceived risks about future prospects, especially among those with limited resources. In a case study of Germany, Roth et al. (2017) show that inequality increases economic worries most clearly among the poor and middle-income groups rather than the affluent. Taken together, these findings suggest that low-income individuals react more strongly to inequality than high-

income individuals because the former are less insulated from its material and psychological consequences than the latter.

H2b: Income inequality heightens the income gap in long-term concerns

Trust in government and long-term worries

We theorise that trust in government is a key determinant of individuals' long-term worries. In societies where trust in government is high, individuals tend to exhibit greater confidence in public institutions to provide long-term economic stability and social protection (Rothstein 2011). Similarly, the quality of governments affects life satisfaction (Helliwell and Huang 2008). Conversely, in countries with low levels of trust in government, individuals are more likely to experience higher levels of long-term worries, as they may perceive institutions as ineffective, corrupt, or incapable of addressing societal risks (Nannestad 2008). Unlike individual-level trust in government, which has been studied in relation to some long-term concerns, the country-level measure of trust in government captures the general climate of institutional confidence within a society. This aggregated measure reflects broader political and economic conditions, influencing collective perceptions of economic security, governance, and future stability. As we note below, trust in government may influence individual long-term worries through perceptions of (i) politicians' responsiveness to crises, (ii) perceptions of welfare state effectiveness, and (iii) overall stability of the political environment.

One mechanism linking trust in government with long-term worries is perceived economic and social stability. When trust in government is high, individuals are more likely to believe that institutions can mitigate economic crises, maintain employment stability, and ensure access to social services (Helliwell and Huang 2008). In contrast, in countries with low trust in government, individuals may worry that policy failures, corruption, or ineffective governance could lead to economic downturns, social unrest, or inadequate social services.

This uncertainty fosters greater long-term concerns among the population about their own financial security, employment prospects and access to high-quality social services.

Moreover, trust in government is closely linked to perceptions of welfare state effectiveness (Rothstein and Stolle 2008). In high-trust societies, individuals may feel more assured that the government is especially responsive to public demands and will remain committed to maintain the current levels of protection in pensions, healthcare, and unemployment programmes, reducing long-term worries. Conversely, in low-trust countries, individuals – regardless of their personal economic situation – may fear that social protection might be retrenched, leading to greater concerns of individuals about their long-term well-being.

Furthermore, trust in government reflects confidence in political stability and effective policy-making (Newton 2007). In countries with low trust, concerns about government dysfunction, political corruption, or policy unpredictability may increase long-term worries, as individuals lack confidence in the predictability of the regulatory environment. For these reasons, we hypothesise that individuals in countries with low levels of trust in government display higher levels of long-term worries.

H3: Individuals in countries with lower levels of trust in government display higher levels of long-term worries

Trust in government, individual income and long-term worries

Trust in government may not only shape average levels of long-term concern but also the income gradient in these concerns. Individuals with lower incomes generally report greater worry than those with higher incomes (Diener et al. 1993; OECD 2023), but the magnitude of this gap may depend on the broader institutional context. In particular, trust in government may

either compensate for limited individual private resources or complement them, leading to opposite expectations about its moderating role.

First, high institutional trust may reduce the income gap in long-term concerns. As noted above, where trust in government is widespread, citizens are more likely to expect public institutions to respond effectively to crises, maintain social protection, and provide reliable public services (Helliwell and Huang 2008; Rothstein 2011). But such institutional reassurance may not affect all income groups uniformly. It may be particularly important for low-income individuals because they are less able to buffer financial, health, and unemployment problems based on their market income, and so are more dependent on welfare protection (Anderson and Pontusson 2007; Hacker et al. 2013). Consistent with this argument, trustworthy social and institutional environments have been shown to increase resilience to adverse circumstances, with particularly important benefits among more vulnerable groups (Helliwell, Huang, and Wang 2017). In this sense, institutional trust can compensate for limited private resources: when institutional trust is high, low-income individuals may feel disproportionately more protected against future risks, thereby narrowing the income gradient in long-term concerns.

H3a: High average trust in government reduces the income gap in long-term concerns.

An alternative expectation is that high institutional trust increases the income gap in long-term concerns. Rather than compensating for limited private resources, a reliable institutional environment may complement higher resources. High-income individuals possess greater financial assets and opportunities to buffer future risks, yet these advantages depend on institutional protections: they can only translate their employment, income and wealth into a durable sense of security if state institutions sustain a predictable economic and legal environment including the protection of private property (Helliwell and Huang 2008; Rothstein and Stolle 2008). Low-income individuals, by contrast, remain more uniformly exposed to material risks even where institutional trust is high, because they have more limited economic

resources regardless of the institutional-trust context. Moreover, since high-income individuals attain more external political efficacy (Lindqvist et al. 2026), they may be particularly able to translate a trustworthy institutional environment into confidence about their capacity to influence policy-making and attain good personal prospects. Under this complementary resource mechanism, high trust would reduce concerns more strongly among high-income individuals and therefore widen the income gradient in long-term concerns.

H3b: High average trust in government heightens the income gap in long-term concerns.

Data and Methods

Data

In order to examine the socio-economic context of long-term concern, the main data source of the analysis should be a cross-national survey. While standard databases of cross-national attitudes like the World Values Survey, the European Values Survey, European Social Survey, Eurobarometers and the International Social Survey Programme do not include questions regarding respondents' long-term concerns, the OECD's cross-national and bi-annual Risks that Matter (RtM) project includes questions that capture multiple forms of individual concerns about their future situation. To attain representativeness of the national working-age population (18-64 years old), the RtM survey employs samples of 1,000 cases per country that are stratified by gender (two categories), age (five categories), income (ten groups), education (three groups) and employment status (three groups). The data are collected through online self-completion software. The RtM surveys furthermore include a sufficient number of countries for a systematic analysis of cross-national and individual variation.²

² Alternatively, the last round of the European Quality of Life Survey does also include a question regarding long-term individual concerns. But the question only asks about concerns with the respondents' finances during old-age. Moreover, these data are from 2016 and it is slightly dated.

This article utilizes the two last publicly available waves of the RtM, with fieldwork conducted in 2024 and 2022, respectively. Both waves include data for 27 OECD member states, most of which are high-income societies: Austria, Belgium, Canada, Chile, Denmark, Estonia, Finland, France, Germany, Greece, Israel, Ireland, Italy, South Korea, Lithuania, Latvia, Mexico, Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Switzerland, Turkey, United Kingdom and the United States. In the multivariate analysis we include all countries except Israel due to lack of data for a country-level variable calculated based on the Integrated Values Survey.

The wording of the key question regarding long-term concerns was “Looking beyond the next ten years, how concerned are you about the following?” in both waves, which allows us to pool the data and conduct a cross-national time-series dataset. Respondents were provided with 10 aspects in 2022 and 13 in 2024, respectively. Since this is the first comparative study regarding these concerns, we focus on items regarding respondents’ future situation and disregard their concerns regarding their relatives or children’s future situation or general situations that feature in both waves (e.g. climate change or population aging, asked only in 2024). We utilize these seven questionnaire items: (i) “not being as well-off and financially secure as your parents and/or that you had hoped to be” [we label it *general financial security*]; (ii) “becoming ill or disabled” [*illness/disability*]; (iii) “not having the right skills and knowledge to work in a secure and well-paid job” [*job prospects*]; (iv) “not being financially secure in old age” [*finances in old age*]; (v) “not being able to find/maintain adequate housing” [*housing*]; (vi) “not being able to access good-quality long-term care for her/himself” [*long-term care*]; and (vii) “accessing good-quality healthcare” [*quality of healthcare*]. For each of these aspects, respondents have to declare whether they feel “not at all concerned” (1), “not so concerned” (2), “somewhat concerned” (3) and “very concerned” (4). The subheading titled

“Analytical approach” elaborates on the approach we follow to combine information for these items.

The analysis considers eleven individual-level variables and five country-level ones. The purpose of including individual-level variables is to account for compositional differences across respondents or identify consistent associations rather than to estimate causal effects of these characteristics. Since gender, age and education have been documented to be related to individual concerns (Hershey et al. 2010; OECD 2021, 2023), we consider the influence of gender, *age groups* (five categories: 18-24, 25-34, 35-44, 45-54 and 55-64) and a categorical variable for the respondent’s level of *education* (three categories: lower secondary or less, high school or post-secondary and tertiary education). Respondents’ relation to employment affects their material economic situation and may also shape her/his concerns. We therefore control for their *employment status* (three categories: in paid work, unemployed and inactive). Respondents’ social ties may also affect their worries: having a partner in the household and children may buffer or enhance long-term concerns. The models therefore control for their *partnership status* (four categories: single, married or in partnership, separated or divorced and widowed) and a continuous variable for the *number of children under 18*.

Given the special interest of this study on the role of income, all models also include a linear variable for the respondent’s *equivalized income* decile.³ Having a minority status affects socio-economic position and therefore also individual long-term concerns. Hence the models include control dichotomous variables for self-describing as an *ethnic minority*, *sexual minority* and a *migrant*. The final individual level control is the *size of the respondents’ town* (five

³ The following analysis does not include indicators of wealth, because neither the 2024 nor the 2022 RtM databases include indicators of that dimension. We acknowledge that income may be endogenous to long-term concerns. Income captures current socio-economic position, but concerns may also influence labour market behaviour, employment, and income trajectories. We therefore interpret the income coefficients as conditional associations rather than causal effects.

categories: the countryside, a country village, a town or small city, the suburbs of a big city and a big city).

Regarding country-level factors, all models include five variables. To test H1 and H2, for the main analyses we use the Gini index of disposable income which remains the predominant indicator of income inequality in the literature (Solt 2020). To address limitations of the Gini coefficient in capturing top-end income concentration (Barradas 2025; Furceri and Loungani 2015), we also replicate the analyses using the income share of the top 10% (World Inequality Dataset 2025) as an alternative measure of inequality.

To mitigate potential endogeneity between trust in government and long-term concerns, we use a measure country-level average trust in government, which captures a broader institutional context rather than individual attitudes. As country-level trust reflects a rather stable institutional climate shaped by long-standing perceptions of state capacity and reliability, it tends to be ‘sticky’ and change slowly over time, making it more likely to shape citizens’ expectations about future risks related to different life domains than the reverse pathway.⁴ Therefore, we test H3 using a variable constructed from microdata from the Integrated Values Survey (IVS), which includes both the World Values Survey and the European Values Survey.⁵ The IVS asks respondents about their trust in “the government (in your nation’s capital),” with four response options ranging from “not at all” (1) to “a great deal” (4). For each country, *average confidence in government* is calculated as the weighted country-year mean of this item. For 25 of the 27 considered countries - all but the Netherlands and United Kingdom -, the last

⁴ Recent research supports this statement. Devine and Valgarðsson (2024: 478) use six panel surveys to examine within-individual longitudinal changes in institutional trust and reach the conclusion of “trust being stable in the long term, with potential for short-term volatility in response to changing political contexts”. Valgarðsson et al. (2025) assemble a dataset of average levels in institutional trust and report that, on average, every additional year is associated with only a 0.3% change in trust in government. Using the IVS data and the countries examined in this study, the median absolute annualized change is equivalent to a 5.1% of a standard deviation in trust in government.

⁵ To our knowledge this is the only freely-available cross-national survey micro-level database with a question regarding confidence in government for all the 27 considered countries.

IVS wave was conducted prior to 2022. Hence for those cases, we use the most recent wave available and assign it to the individual-level data corresponding to the 2022 and 2024 RtM waves. For the Netherlands and United Kingdom, we use the data point closest but prior to the two RtM waves.

Because income inequality and trust in government covary with a range of other country-level characteristics (Dawson and Krakoff 2024; Krazinger 2020) all models include three macro-level variables. *GDP per capita* log captures the role of country affluence (Teorell et al. 2024), because richer countries may generate less insecurity regardless of inequality. Following Gerring et al. (2021), we measure democratization through the *multiplicative polyarchy index* (Coppedge et al. 2024) as long-term concerns might be lower where voice and accountability are stronger. This index multiplies the values on sub-indices for (i) freedom of association, (ii) clean elections, (iii) freedom of expression, (iv) elected executive, and (v) universal suffrage. Finally, because state dysfunction is related (Table A3) to inequality, we utilize an indicator of *public sector corruption* (Coppedge et al. 2024).

All country-level independent variables have been lagged one year to reduce the risk of reverse causality and reduce the number of missing values.⁶ Since all questionnaire items in the 2022 and 2024 RtM surveys use the same wording, and the country-level variables rely on the same operationalization in both waves, we combine the data in a single dataset and estimate pooled models. The Appendix provides detailed definitions and sources of each variable. It also includes a Table A1 with descriptive statistics of all variables. Tables A2 and A3 include correlation matrices for the seven indicators of long-term concern and the macro-level variables, respectively.

⁶ However, this strategy does not fully eliminate concerns about reverse causality or omitted variable bias. The estimated relationships should therefore be interpreted as conditional associations rather than causal effects.

Analytical approach

In the following analysis we combine tools of structural equation modelling (SEM) and linear multilevel models. SEM comprises a set of statistical techniques designed to test hypothesized statistical associations derived from theoretical models that posit directional relationships. These models may involve variables that are directly observed or latent constructs - the latter also known as factors - inferred from shared information in observed variables, also called indicators. It encompasses techniques like confirmatory factor analysis (CFA), and path analysis, and it is widely utilized in research in psychology (Kline 2023; Whittaker and Schumaker 2022).

As noted above, our database includes seven observed variables of long-term concerns that may capture one or more latent constructs of concerns. Hence, in the first step of the analysis we utilize CFA to test theoretically informed hypotheses regarding the dimensionality and structure of these concerns. CFA is a deductive framework in which researchers specify a measurement model a priori by assigning indicators to latent factors according to theoretical predictions and evaluating the covariance matrix in the measurement model against the observed sample covariance matrix. By imposing a theoretically grounded allocation of indicators to factors, CFA cannot generate a factor solution without conceptual or theoretical justification, which can arise in the framework of exploratory factor analysis (EFA). Moreover, unlike EFA, CFA generates global fit statistics that allows researchers to assess how well the measurement model reflects the sample covariance structure (Whittaker and Schumaker 2022). Based on the CFA, we identify the appropriate number and composition of latent factors.

Having established the underlying factors, we extract factor scores for each respondent and in a second step we assess its correlates using OLS multilevel analyses.⁷ Our interest lies

⁷ We could have instead estimated a two-level, multiple-indicators and multiple-causes (MIMIC) recursive model, which would have provided a parsimonious single estimation solution (Kline 2023).

in exploring the determinants of, first, average country-level long-term concern and, second, cross-national variation in the income gap in long-term concerns. Since we have information on long-term concerns in two waves of the OECD RTMS (2022 and 2024), we pool both waves. Hence, we estimate two-level random intercepts models and random slope models with individuals nested into country-years. Two-level models account for variance in the outcome across the different levels of analysis - individual and country - and enable us to estimate country-level effects without underestimating standard errors (Snijders and Bosker 2011). In random intercept models each country has its own intercept and the effect of individual-level predictor variables is fixed to be homogenous across countries. They are thus appropriate to assess country conditions related to averages in the outcomes, specifically H1 and H3. Random slopes models, by contrast, allow both the intercepts and slopes to vary across higher-level groups (i.e. countries). To test H2a and H2b as well as H3a and H3b we allow the effect of *equivalized income* to vary across country-years by specifying it as a random slope. This enables us to assess whether country-level income inequality and trust in government moderate or accentuate the income divide in long-term concerns (Heisig and Schaeffer 2019).

Since the database used in this study includes individual-level data corresponding to two points in time (the 2022 and 2024 RtM surveys), it could be analytically possible to include country fixed effects. However, for most countries there is only one observation of *average trust in government*. Hence, this key country-level predictor shows little or no longitudinal variation within countries.

Additionally, the dataset includes only two closely spaced time points (2022 and 2024). Over such a brief interval, little within-country variation can be expected. In fact, random-effects decomposition of the latent concern measures indicates that between-country variation

However, multilevel MIMIC include a large number of parameter estimates and are known for the convergence problems (Kim et al. 2013), which also occurs in this case.

in these outcomes is far larger than the variation between years in a given country.⁸ Under those conditions, FE models would yield estimates with a very low signal-to-noise ratio. Finally, our research question focuses on cross-national differences in long-term concerns and their association with structural and institutional contexts. For this purpose, between-country variation is substantively meaningful rather than a source of bias.

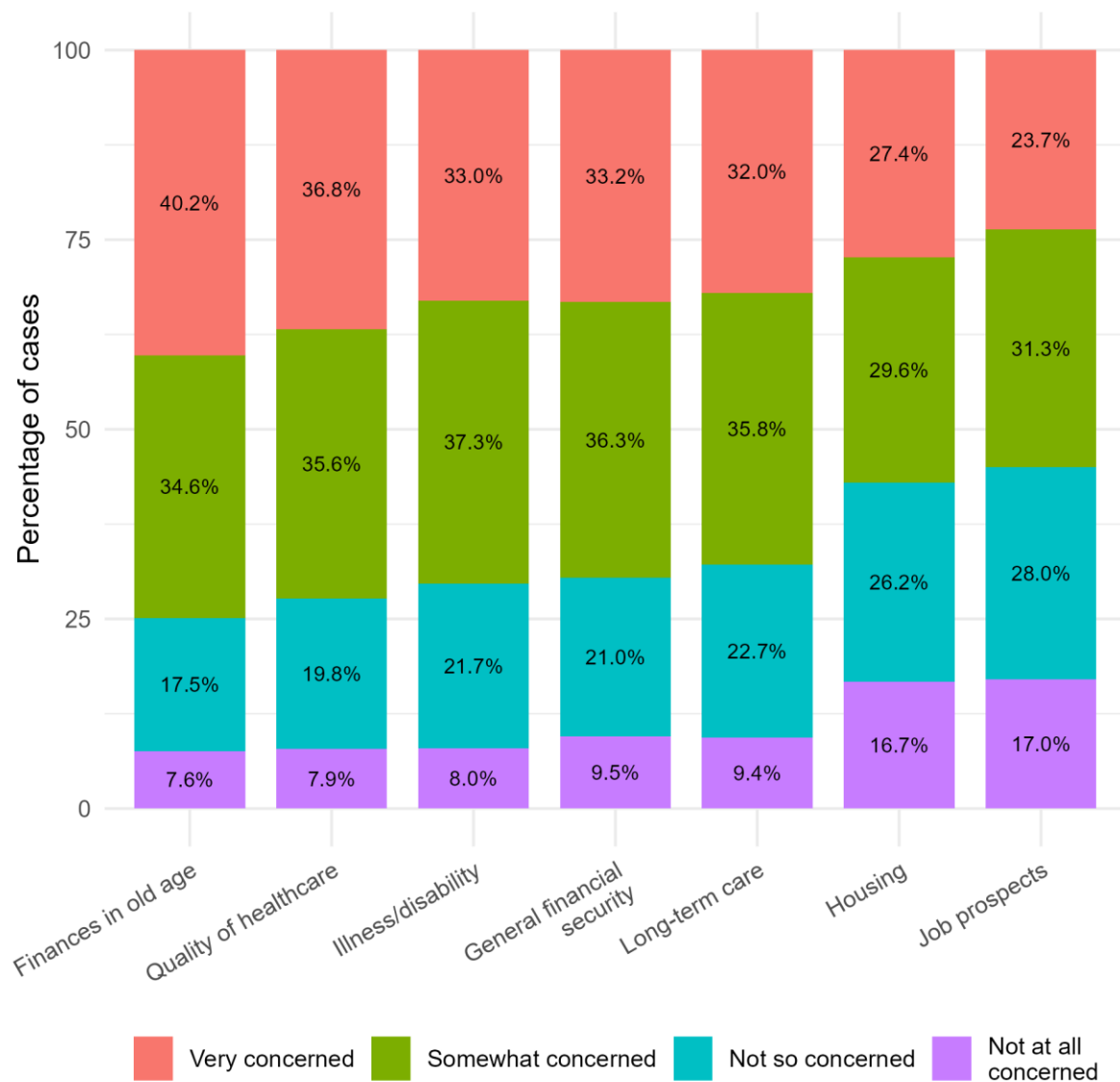
Results

Descriptive Results

Across the 27 countries, the average degree of long-term personal concern is generally high across the seven dimensions of concern. The majority of respondents are very or somewhat concerned about their finances in old age (74.8%), quality of healthcare (72.4%), long-term likelihood of falling ill (70.3%), financial security (69.5%), long-term care (67.8%), housing situation (57.0%) and job prospects (55.0%) (Figure 1).

⁸ Between country variations accounts for 8.9% and 9.8% of total variance in financial and health concerns, respectively, while the between-year variation within countries accounts for only 0.6% of the total variance in both cases. The vast majority of variances (90.5% and 90%, respectively) reflect individual-level heterogeneity within country-years.

Figure 1. Distribution of responses to the seven questions regarding long-term concerns



Following standard practice in SEM (Kline 2023; Whittaker and Schumacker 2022), we begin this analysis through a CFA to determine whether the covariance structure of the seven attitudinal items is better captured by one, two or three latent variables, and in which combination.⁹ We estimate a set of measurement models with different allocations of the seven items, compare their fit to the covariance matrix, and select a final specification based on the overall fit and overall interpretability.

⁹ Given the presence of missing values among the seven indicators, the CFA models were estimated using full information maximum likelihood (FIML). Moreover, factor identification is achieved by fixing the loading of one marker indicator per latent variable to 1.

We first assess the fit of a model with a single latent variable including all seven items, which assumes that there is just one underlying dimension distinguishing people who are from those who are not concerned. Standard fit statistics are included in Table 1. While the CFI, TLI and SRMR suggest acceptable fit, the RMSEA indicates a poor fit (RMSEA=.115, $p_{close} < .001$). We therefore estimate a second model with two factors. Because three of the seven indicators specifically focus on health issues, in this model we distinguish two factors: one capturing health matters - reflected in the items *long-term care*, *quality healthcare* and *illness/disability* - and another one capturing financial and economic matters - reflected in the items *general financial security*, *finances in old age*, *job protection* and *housing*. All fit statistics of this second model meet the thresholds established in the literature (Kline 2023; Whittaker and Schumacker 2022).

A third model separates financial matters (*general financial security* and *finances in old age*) from socioeconomic ones (*housing* and *job protection*). Although this model provides a marginally better fit, the additional factor would be identified by only two indicators, which is not valued very positively in the SEM literature (e.g. Brown 2015). Hence, model 2 provides the most parsimonious solution, with an excellent fit and has theoretical interpretability corresponding to two distinct life spheres: finances and health. We therefore retain model 2 as the final measurement model, which includes two factors: *financial concerns* and *health concerns*.¹⁰

The standardized loadings of the two-factor solution are high to very high. The smallest loading is observed for *job prospect* (0.72) on the factor *financial concerns*, whereas the largest loading is for *long-term care* (0.86) on the factor *health concerns* (Kline 2023). This means

¹⁰ The resulting variable *financial concerns* is highly correlated with an alternative variable simply averaging the values of *general financial security*, *old-age finances*, *housing* and *job protection* ($r=0.956$, $p<.01$). The resulting variable *health concerns* is also highly correlated with an alternative variable simply averaging the values of *quality healthcare*, *illness* and *own care* ($r=0.952$, $p<.01$).

that the indicators strongly reflect their underlying latent constructs. For instance, a standard deviation increase in the latent *health concerns* factor is expected to increase the value of *long-term care* by 0.86 standard deviations (Figure A1). The latent factors explain between 51.8% and 74.0% of the variance in their respective indicators (the squared standardized loadings), also suggesting strong measurement capacity. In the remainder of the analysis we therefore use factor scores for the constructs *financial concerns* and *health concerns*.

Table 1. Model fit summary of the measurement model

Model	X ²	Df	CFI	TLI	RMSEA	SRMR
Model 1: One factor	10,098.096	14	0.948	0.923	0.115 [0.113-0.117], pclose<.001	0.036
Model 2: Two factors	1,274.200	13	0.994	0.990	0.042 [0.040-0.044], pclose=1.00	0.015
Model 3: Three factors	231.995	11	0.999	0.998	0.019 [0.017-0.021], pclose=1.00	0.011

Note: Configuration of the three models.

Model 1: Single latent variable: *general financial security, finances in old-age, long-term care, quality healthcare, illness, housing, job protection*

Model 2: Financial: *general financial security, finances in old-age, housing and job protection*; Health: *quality healthcare, illness and long-term care*

Model 3: Financial: *general financial security and finances in old-age*; Health: *quality healthcare, illness and long-term care*, Miscellanea: *housing and job protection*

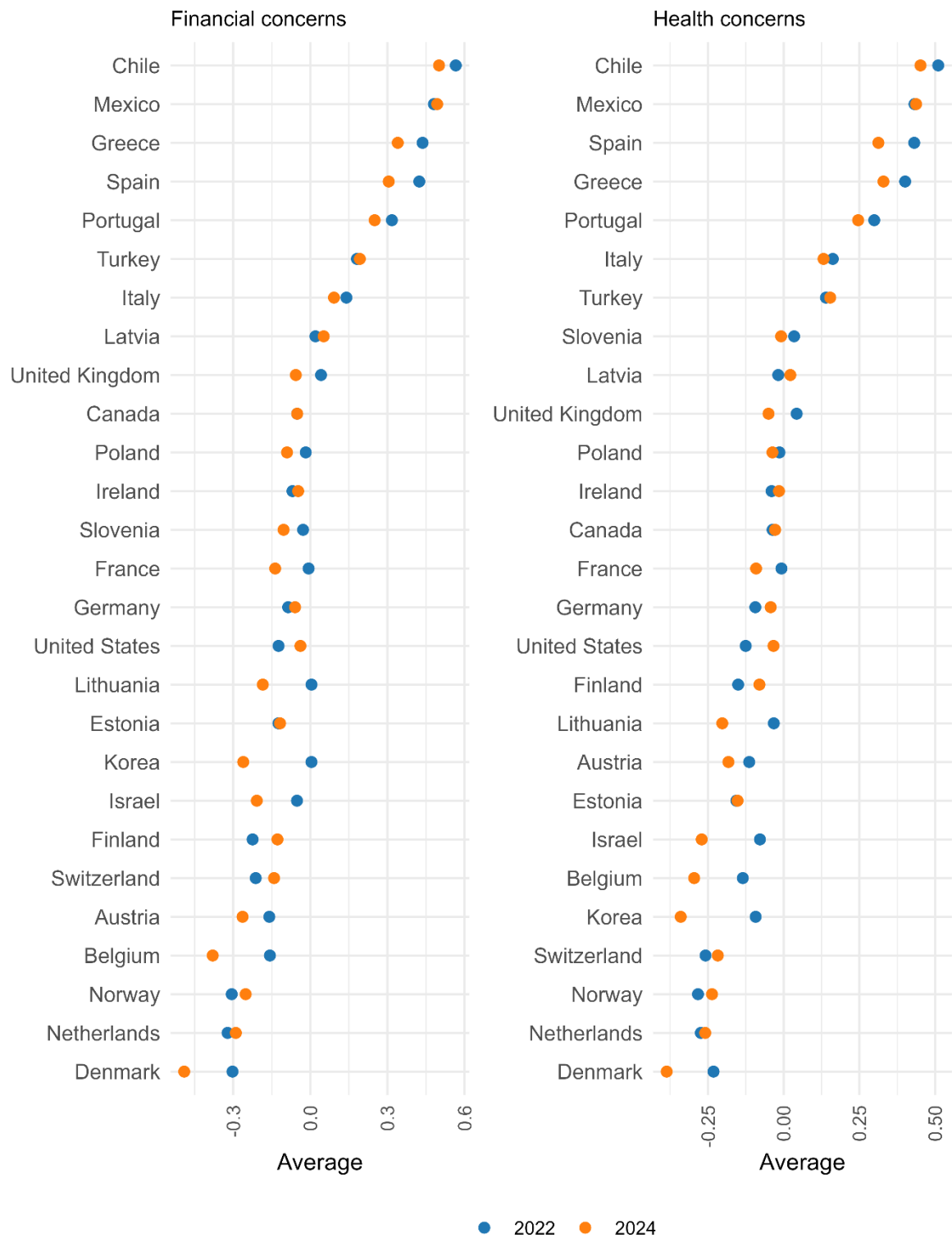
Are there substantial cross-national differences in the average values of the factor scores of *financial concerns* and *health concerns*? To answer, Figure 2 depicts the average values of these two variables for each country in 2022 and 2024 and shows that country ranking positions are very stable over time, as documented by the high correlations between country averages corresponding to the 2022 and 2024 waves (*Finances* $r=0.92$, $p<.001$; *Health* $r=0.93$, $p<.001$). Figure 2 also reveals substantial cross-national variation in levels of concern and relatively similar rankings for the two considered dimensions. Latin American (Chile and

Mexico) and Southern European countries (Greece, Spain, Portugal, Turkey, Italy) show the highest levels of long-term financial and health concern, while Scandinavian countries (Norway and Denmark), along with Belgium the Netherlands, display the lowest levels of concern over their long-term financial and health concerns (Figure 2).¹¹

However, a comparison of the rankings of *financial concerns* and *health concerns* also reveals heterogeneity in intermediate positions. For example, based on the average 2022 and 2024 Slovenia is ranked in position 13 regarding long-term financial concerns and in position 9 regarding long-term health concerns. Overall, national levels of individual long-term concern tend to be stable over time, cross-national variations are substantial, and country rankings across the two dimensions are not identical but broadly similar.

¹¹ The averages were estimated based on conditional prediction based on the number of indicators with non-missing data.

Figure 2. Average values in the latent factors Finances and Health



Multivariate Results

Having documented the existence of two main types of long-term concern and substantial cross-national variation among them, we can examine the individual- and country-level conditions associated with *financial concerns* and *health concerns*. To this effect, Table 2 presents four random intercept models, two for each of the outcomes. Given the hypotheses presented above, models 1 and 2 include individual-level predictors and only two country-level factors: *Gini index* and *average confidence in government*. Models 3 and 4 are the full specifications and include three additional country-level control variables: *GDP per capita*, *corruption index* and *multiplicative polyarchy index*.

Models 1-4 show robust and significant associations between, on the one hand, income inequality and confidence in government, and, on the other hand, long-term financial and health concerns. Respondents living in more unequal countries and those living in countries where population mistrusts governments are significantly more likely to have financial and health concerns. The associations are depicted in Figure 3. A standard deviation increase in income inequality is associated with a 12.9% and a 11.8% of a standard deviation increase in *financial concerns* and *health concerns*, respectively. Similarly, a standard deviation reduction in average confidence in government is associated with a 10.9% and 14.4% of a standard deviation increase in the level of financial and health concerns, respectively.

A key concern is that income inequality and trust may proxy for other country differences. We therefore estimate models 3 and 4 that include a set of theoretically relevant macro-level controls. Across these specifications, the association between inequality and collective trust with both financial and health concerns remain positive and statistically significant, whereas the additional macro controls are not related to the outcomes. This pattern suggests that the relationship between income inequality and trust with the outcomes cannot be reduced to affluence, corruption, or democratic quality alone. Moreover, our measure of

collective trust still proves significant when adding the institutional measure of corruption that is not based on subjective perceptions, suggesting that the relationship is not solely due to individual-level perceptions.

Regarding individual level factors, respondents' gender, age, income, employment status, minority status and size of town of respondents are related to their long-term financial and health concerns. Keeping all things equal, women, and individuals who are older, have lower income, are unemployed, part of an ethnic minority, sexual minority or are migrants display higher levels of long-term financial or health concerns. The roles of gender, employment and income are particularly relevant in this regard. The gender gap is associated with a 25.8% and a 25.4% of a standard deviation increase in *financial concerns* and *health concerns* respectively.¹² Moreover, the unemployment-employment gap is associated with a 25.4% and 19.1% of a standard deviation increase in both outcomes, respectively.

A strong link also occurs in regard to respondents' income. Income is inversely related to individual long-term financial and health concerns and a 1.5 standard deviation increase in *equivalized income* is associated with 22.9% and a 19.1% of a standard deviation reduction in both outcomes, respectively.¹³ Interestingly, controlling for individual income and employment status, education does not prove consistently related to financial and health concerns. Moreover, on average respondents in a stable relationship are not more worried about their long-term finances or health than single individuals. The Appendix discusses and presents the evidence regarding five robustness checks: using an alternative measure of inequality, excluding one country at a time, using alternative measures of the outcome variables, applying listwise deletion, and using cluster-robust standard errors.

¹² All predicted values are empirical averages computed over the observed sample, not reference-based predictions evaluated at mean or baseline covariate values.

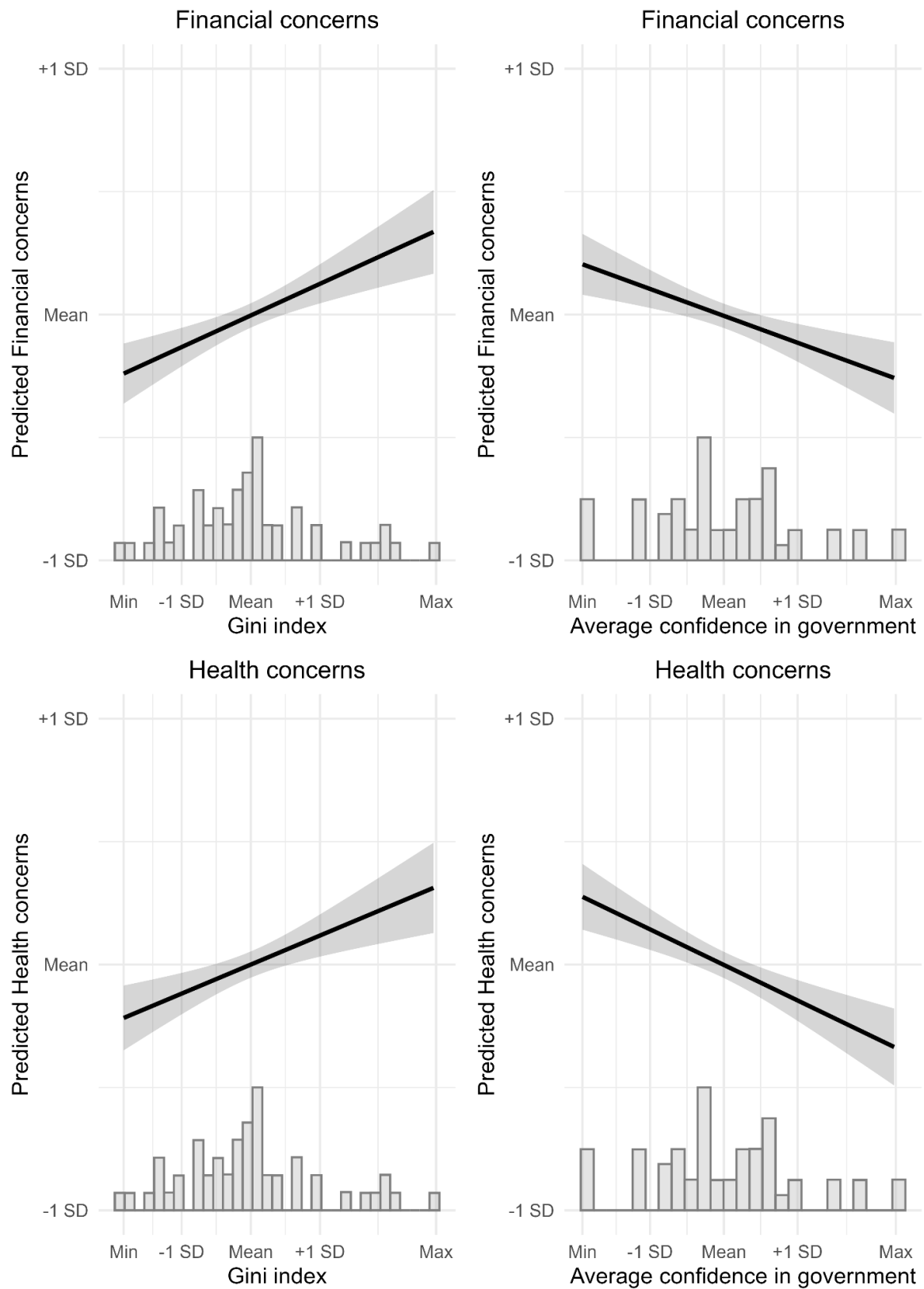
¹³ Additional results using a quadratic transformation of *equivalized income* available upon request show that the relationship between income and *financial concerns* and *health concerns* are quasi-linear.

Table 2. Two-level random intercept models predicting long-term financial and health concerns

	Model 1	Model 2	Model 3	Model 4
	Financial concerns	Health concerns	Financial concerns	Health concerns
Country-level factors				
Gini index	0.853*** (0.132)	0.715*** (0.125)	0.653*** (0.159)	0.532*** (0.152)
Average confidence in government	-0.355*** (0.065)	-0.380*** (0.061)	-0.275*** (0.076)	-0.323*** (0.073)
GDP per capita			-0.045 (0.056)	-0.035 (0.054)
Corruption index			0.034 (0.025)	0.022 (0.024)
Multiplicative polyarchy index			0.088 (0.160)	-0.003 (0.153)
Individual-level factors				
Equivalized income	-0.038*** (0.001)	-0.028*** (0.001)	-0.038*** (0.001)	-0.028*** (0.001)
Female	0.184*** (0.006)	0.161*** (0.005)	0.184*** (0.006)	0.161*** (0.005)
Age 25-34 (ref. 18-24)	0.075*** (0.011)	0.091*** (0.009)	0.075*** (0.011)	0.091*** (0.009)
Age 35-44	0.093*** (0.011)	0.137*** (0.010)	0.093*** (0.011)	0.137*** (0.010)
Age 45-54	0.089*** (0.011)	0.163*** (0.010)	0.089*** (0.011)	0.163*** (0.010)
Age 55-64	0.023* (0.011)	0.173*** (0.010)	0.023* (0.011)	0.173*** (0.010)
Medium education (ref. Low educ.)	0.009 (0.011)	0.007 (0.010)	0.009 (0.011)	0.007 (0.010)
High education	-0.038*** (0.011)	-0.019 (0.010)	-0.037** (0.011)	-0.019 (0.010)
Unemployed (ref. In paid work)	0.182*** (0.011)	0.121*** (0.010)	0.182*** (0.011)	0.121*** (0.010)
Inactive	-0.024** (0.008)	-0.002 (0.007)	-0.024** (0.008)	-0.002 (0.007)
Married/in partnership (ref. Single)	-0.037*** (0.007)	-0.003 (0.007)	-0.037*** (0.007)	-0.003 (0.007)
Separated/divorced	-0.002 (0.013)	0.007 (0.011)	-0.003 (0.013)	0.007 (0.011)
Widowed	-0.006 (0.027)	0.021 (0.024)	-0.006 (0.027)	0.020 (0.024)
Number of children under 18	-0.000 (0.004)	-0.002 (0.003)	-0.000 (0.004)	-0.002 (0.003)
Ethnic minority	0.080*** (0.013)	0.071*** (0.012)	0.080*** (0.013)	0.071*** (0.012)
Sexual minority	0.088***	0.072***	0.088***	0.072***

	(0.013)	(0.011)	(0.013)	(0.011)
Migrant	0.080***	0.074***	0.079***	0.074***
	(0.017)	(0.015)	(0.017)	(0.015)
Town size	0.018***	0.011***	0.018***	0.011***
	(0.003)	(0.002)	(0.003)	(0.002)
Wave	-0.050	-0.035	-0.047	-0.035
	(0.037)	(0.035)	(0.037)	(0.035)
Constant	-2.095***	-1.684***	-1.085	-0.747
	(0.480)	(0.454)	(0.845)	(0.809)
Variance intercept	0.017	0.015c	0.016	0.015
BIC	102,506.6	90,670.2	102,545.5	90,710.6
Country-years	51	51	51	51
N	50,934	50,934	50,934	50,934
Note: Standard errors in parentheses; *** p<0.001, ** p<0.01, * p<0.05, + p<0.1.				

Figure 3. Predicted values in *financial concerns* and *health concerns* at different levels in *Gini index* and *average confidence in government*



Having assessed unconditional associations between structural factors and the outcome, we can now explore conditional associations. For this purpose, we re-estimate the models in Table 2 but including the interactions *equivalized income*Gini index* and *equivalized income*average confidence in government* using multilevel random slopes models and setting the income variable as random. A full version of these models is available in Table A4 and a trimmed version in Table 3. In models 5-8, the interaction term *equivalized income*Gini index* is positive and significant, whereas *equivalized income*average confidence in government* is negative and significant. The former indicates that higher income inequality attenuates the negative association between individual income and long-term concerns: income differences in financial and health concerns are smaller in more unequal societies. This pattern is consistent with H2a and inconsistent with H2b. By contrast, higher average confidence in government strengthens the negative association between income and long-term concerns, producing a larger income gradient in high-trust societies. This pattern is consistent with H3b and inconsistent with H3a.

Table 3 Two-level random intercept models predicting long-term financial and health concerns				
	Model 5	Model 6	Model 7	Model 8
	Financial concerns	Health concerns	Financial concerns	Health concerns
Country-level factors				
Gini index	0.851*** (0.132)	0.717*** (0.125)	0.803*** (0.157)	0.636*** (0.148)
Average confidence in government	-0.357*** (0.065)	-0.383*** (0.062)	-0.298*** (0.075)	-0.324*** (0.071)
(...)	(...)	(...)	(...)	(...)
Individual-level factors				
Equivalized income	-0.039*** (0.002)	-0.029*** (0.002)	-0.039*** (0.002)	-0.029*** (0.002)
Equivalized income * Gini index	0.059*** (0.016)	0.033* (0.014)	0.059*** (0.016)	0.033* (0.014)
Equivalized income * Average confidence in government	-0.025** (0.008)	-0.023*** (0.007)	-0.025** (0.008)	-0.023*** (0.007)
(...)	(...)	(...)	(...)	(...)
Constant	-0.155** (0.056)	-0.234*** (0.051)	-0.206 (0.474)	-0.182 (0.439)
Variance intercept	0.017	0.016	0.017	0.016
Variance income	0.0002	0.0001	0.0002	0.0002
BIC	102336.4	90552.6	102376.6	90593.5
Country-years	51	51	51	51
N	50,934	50,934	50,934	50,934

Note: Models 5-8 replicate models 1-4. Individual and country-level control variables not included for space reasons. The full version of the models is available on Table A4. *Gini index*, *average confidence in government* and *equivalized income* have been grand-centered. Standard errors in parentheses; *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$.

To facilitate the interpretation of this conditional association, Figures 4 and 5 depict the average marginal effect (AME) of *equivalized income* for *financial concerns* and *health concerns* at different levels of *Gini index* and *average confidence in government*, as well as predicted values of both outcomes at different income levels for individuals living in countries with above- and below-average values in the contextual variables, respectively. Regarding Figure 4, the first and third subplots including the AME indicate that income inequality strongly moderates the associations between, on the one hand, individual income and, on the other hand, financial and health concerns. Moving from the minimum to the maximum level of income inequality reduces the AME of *equivalized income* for *financial concerns* and *health concerns*

by as much as 70.4% and 56.8%, respectively. Yet it is important to note that, although income inequality moderates the predictive capacity of individual income, in both egalitarian and non-egalitarian societies low-income individuals are significantly more likely to worry about their long-term finances and health than high-income individuals, suggesting that income has a universal or quasi-universal link to long-term concerns. The second and fourth subplots in Figure 4 depict the predicted levels of the two outcomes for respondents at different income levels and living in comparatively egalitarian and inegalitarian countries. The evidence indicates that income inequality moderates the role of income primarily by reducing the worrying-buffering advantage of high-income individuals. In fact, an individual living in an inegalitarian society and belonging to the highest income decile has a predicted level of *financial concern* equivalent to that of an individual living in an egalitarian society and belonging to the third-lowest decile.

Figure 5 indicates that confidence in government enhances the association between equivalized income and both types of concerns. Moving from the minimum to the maximum level of average confidence in government increases the AME of *equivalized income* for *financial concerns* and *health concerns* by as much as 120% and 175%, respectively. The second and fourth subplots in Figure 5 show that confidence in government enhances the role of income primarily by reducing the concerns of high-income individuals.

Figure 4. AME of equivalized income and predicted levels in financial concerns and health concerns at different levels in equivalized income and Gini index

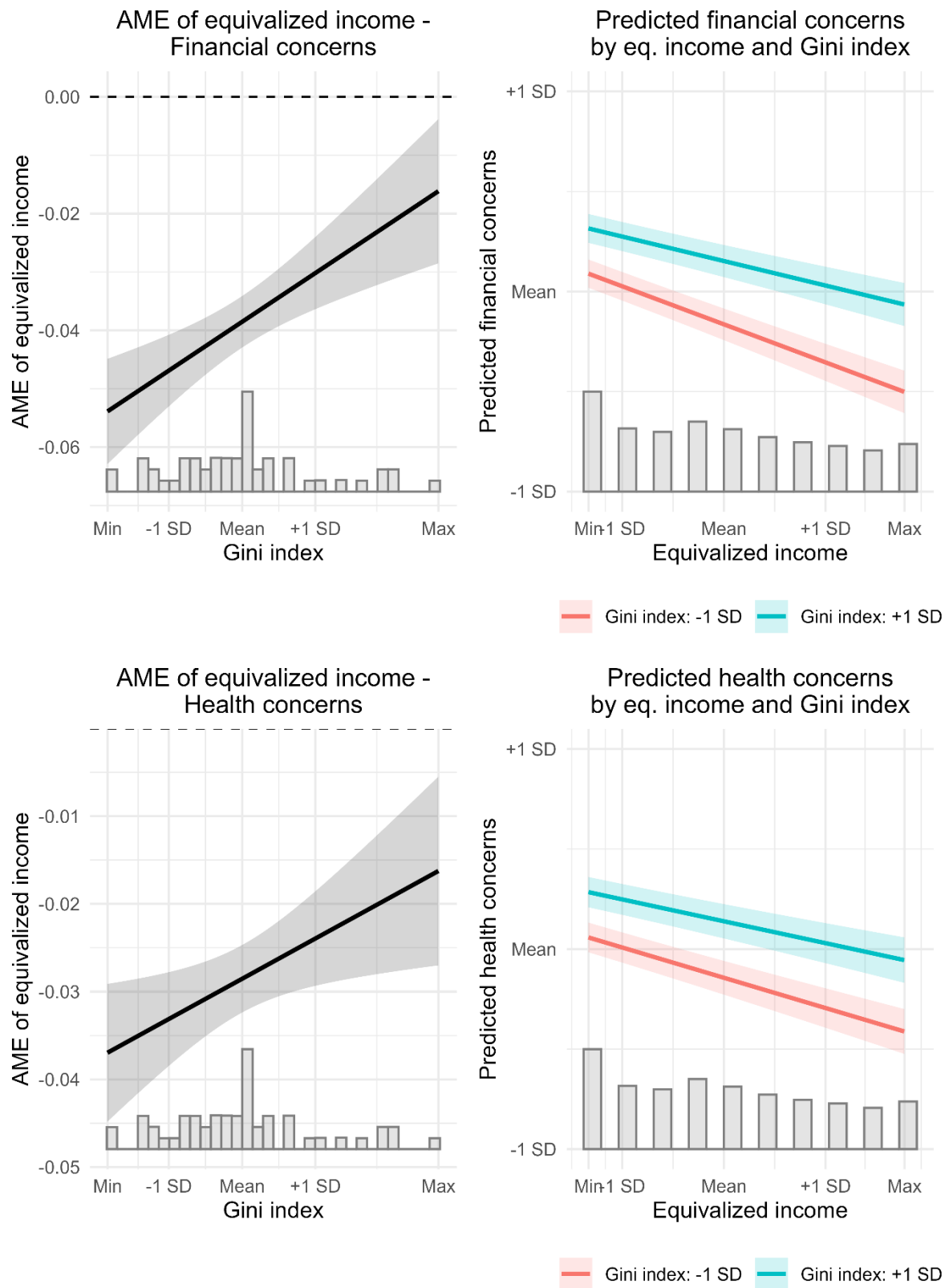
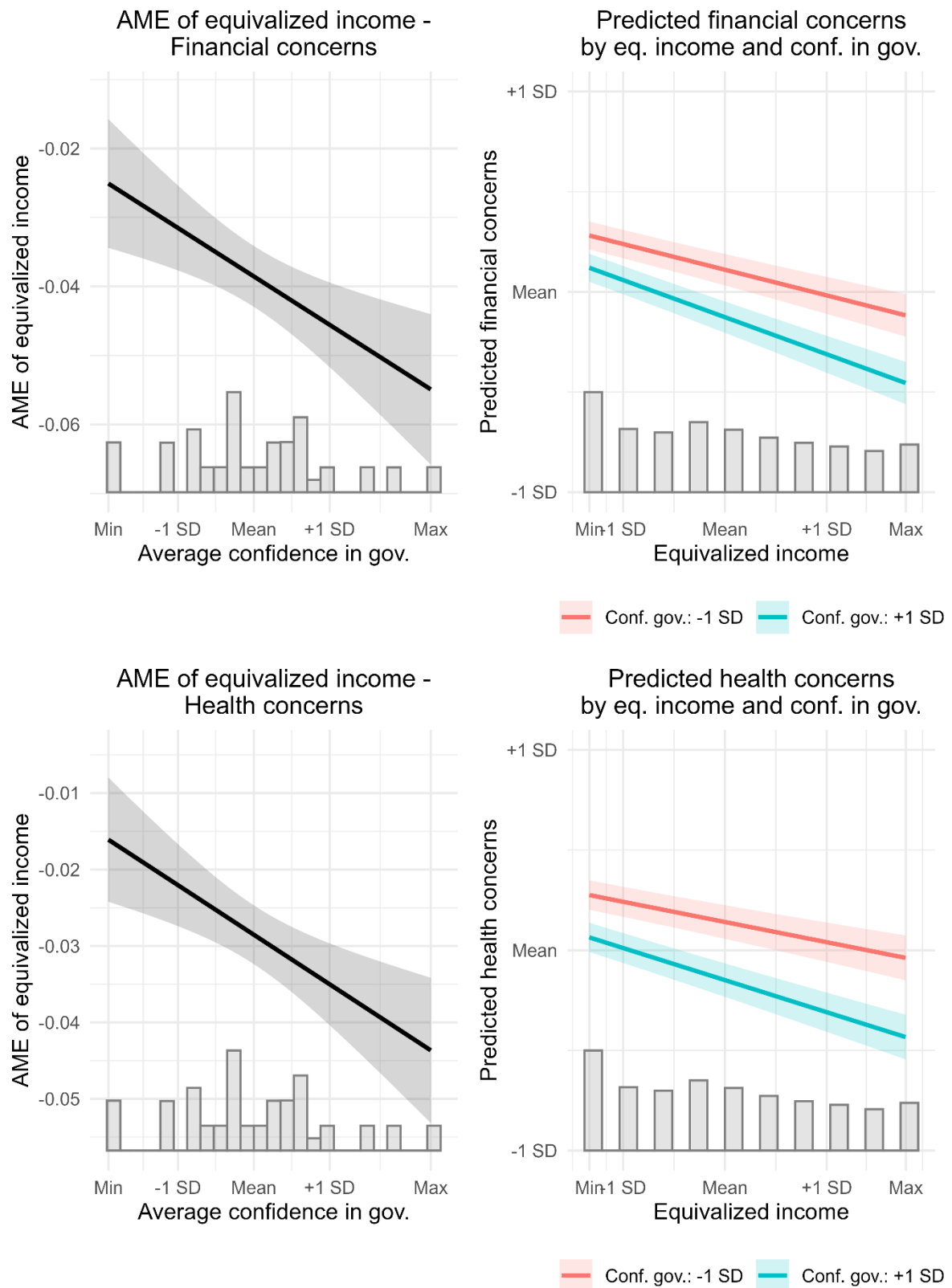


Figure 5. AME of equivalized income and predicted levels in financial concerns and health concerns at different levels in equivalized income and average confidence in government



Discussion

Three main findings emerge. First, long-term concerns are not topic-specific but reflect a generalized disposition: individuals worry mostly about their long-term financial and health wellbeing. Second, these concerns are socially structured, with strong gradients by income, employment status, and gender. Third, beyond individual characteristics, country-level factors – especially income inequality and trust in government – are consistently associated with levels of long-term concern.

The finding that worries cluster across domains supports theoretical accounts of generalized uncertainty in advanced societies. Rather than responding to isolated risks, individuals appear to experience a broader sense of future insecurity. This is consistent with Beck's (1992) concept of the "risk society" and Giddens's (1992) notion of reflexive modernity, both of which emphasize the growing pervasiveness and interdependence of risks. Our results suggest that individual long-term worries tend to be related and are best classified as related to health and financial issues.

The positive association between income inequality and long-term concerns aligns with research linking inequality to insecurity and status competition. As argued by Wilkinson and Pickett (2010), more unequal societies intensify social comparison and status anxiety, which can increase perceived instability. Moreover, the association is not limited to low-income individuals, suggesting that inequality generates broader concerns about future prospects and downward mobility across the income distribution (Layte and Whelan 2014; Schneider 2019).

The results further indicate that inequality reshapes the income gradient in long-term worries. While low-income individuals report higher long-term concerns across all contexts, high-income individuals in more unequal countries worry at levels closer to those of low-income individuals than their counterparts in more equal societies. Thus, inequality appears to narrow the income gap in concerns primarily by eroding the worry buffering advantage of

higher income. This pattern is more consistent with status-maintenance anxiety than with a vulnerability-at-the-bottom mechanism.

Trust in government also shapes both average levels of concern and their distribution across income groups. The negative association between institutional trust and long-term concerns is consistent with an institutional reassurance mechanism: higher trust signals confidence that institutions can manage risks and provide stable social protection, thereby reducing uncertainty about the future (Rothstein 2011; Helliwell and Huang 2008). At the same time, this association is stronger among high-income individuals. Therefore, high-trust contexts widen the income gradient in long-term concerns, mainly because high-income respondents report especially low levels of worry where institutional trust is high. This pattern is consistent with the complementary resource mechanism proposed in H3b rather than the substitution mechanism in H3a. However, given the cross-sectional nature of the data, the possibility of reverse causality cannot be fully ruled out.

Overall, the findings highlight the importance of integrating micro- and macro-level perspectives on long-term concerns. The results suggest that structural conditions such as inequality and institutional trust shape not only objective risks (Hacker 2006; Hacker et al. 2013) but also individuals' subjective expectations about the future. While concern about the long-term is a standard feature of human experience, it is not evenly or randomly distributed. It is likely grounded in individuals' structural circumstances and the broader political economy of the country

Conclusion

This study set out to examine how long-term worries are structured and how they are shaped by individual and country-level conditions. The results show that long-term concerns are best understood as generalised dispositions around economic and health-related aspects.

Individuals who are concerned about one aspect of their future tend to be concerned about others, pointing to a broader sense of uncertainty about long-term life prospects. At the same time, these concerns are socially structured: socio-economic disadvantage is strongly associated with higher levels of worry. Beyond individual characteristics, macro-level conditions also prove related to this emotional state. In particular, higher income inequality is consistently associated with greater long-term concern, while higher levels of trust in government are associated with lower concern.

These findings contribute to the literature in three ways. Conceptually, they highlight the importance of treating long-term worries as a socially constructed phenomenon and avoiding over-isolating specific forms of long-term concern. Theoretically, they integrate insights from research on inequality, institutional trust, and insecurity by showing that both material conditions and institutional confidence are linked to how individuals perceive their future. Empirically, the study provides comparative evidence across a large number of countries, demonstrating that these patterns are not limited to specific national contexts.

The results also carry implications for public policy. They suggest that policies aimed at reducing economic inequality and strengthening institutional trust may go beyond material outcomes, as they may reduce perceived long-term insecurity among citizens. In this sense, long-term concerns can be understood as an additional dimension through which social and economic policies shape individual well-being. In particular, our results raise an inherent tension in the experiences of higher income groups in unequal countries. Despite having access to greater-than-average levels of resources in the present, these groups appear to experience more concerns about the future than higher income groups in egalitarian countries. Moreover, in high-trust societies, the income gradient becomes more pronounced, because high-income individuals report particularly low levels of long-term concern. These findings could contribute

to understanding when high income citizens support non-redistributive policies and governments.

At the same time, several limitations should be noted. The cross-sectional design does not allow for strong causal claims, and the relationships identified should be interpreted as strictly correlational. In particular, the possibility of endogeneity between trust in government and long-term concerns cannot be fully ruled out and unobserved country-level characteristics may jointly affect inequality, institutional trust, and long-term concerns. Future research could address this limitation by using longitudinal data and experimental designs. Additional research could also explore more complex (non-linear) forms of the association between income and long-term concerns and whether this association is shaped by other individual-level factors.

More broadly, the findings point to the value of studying how individuals perceive their long-term future in an increasingly uncertain world. As economic, demographic, and environmental challenges intensify, understanding the sources and consequences of long-term concerns will remain an important task for socio-economic research. This project contributes to that agenda by showing that long-term concerns are substantially larger among low-income individuals and in societies characterized by high inequality and low confidence in government. Furthermore, while the income gradient in concerns is present across all contexts, it is weaker in unequal societies.

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Appendix

Definitions of all variables

Long-term concerns: The question in the 2022 and 2024 questionnaires reads: “Looking beyond the next ten years, how concerned are you about the following?” The topics considered in this study are (a) “Not being as well-off and financially secure as your parents and/or that you had hoped to be”, (b) “Becoming ill or disabled”, (c) “Not having the right skills and knowledge to work in a secure and well-paid job”, (d) “Not being financially secure in old age”, (e) “not being able to find/maintain adequate housing”, (f) “Not being able to access good-quality long-term care for yourself”, (g) “Accessing good-quality healthcare”.

In this study we do not consider the items (b) “Your children (or young members of your family) not being as well-off and financially secure as you are”, (h) “Not being able to access good-quality long-term care for elderly family members”, (i) “Not being able to access good-quality long-term care for young or working-age family members with an illness or disability”.

Possible responses for the 2022 and 2024 waves are “not at all concerned” (1), “not so concerned” (2), “somewhat concerned” (3), and “very concerned” (4).

Female: The original question reads: “How would you describe yourself?” Response options were “Male”, “Female” and “Other”. in *female* female are recoded as (1) and male as (0). There are insufficient cases for considering a third category.

Age group: The original question reads: “What year were you born?”. Response were recoded in 5 groups: 18-24 years old (1), 25-34 years old (2), 35-44 years old (3), 45-54 years old (4) and 55-64 years old (5). The databases do not include individuals older than 64.

Education level: The question reads “What is the highest educational level that you have attained?”. Response options are “no formal education” (1), “primary (e.g. elementary education)” (1), “lower secondary (e.g. middle/junior high school)” (1), “upper secondary (e.g. high school diploma)” (2), “post-secondary, non-tertiary (e.g. vocational training)” (2), “basic tertiary (e.g. undergraduate degree)” (3), “advanced tertiary (e.g. Master’s degree, Doctorate)” (3). We keep the three categories.

Equivalized income decile: Decile in equivalized disposable household income. Equivalized disposable income means total net income divided by the square root of household size.

Employment status: The original question reads: “Did you do any paid work in the last week?”. Response options are “Yes, I was in paid work” (1), “No, I was in paid work but actively seeking a job” (2), “No, I was not in paid work and not seeking a job” (3), “No, I was temporarily away from my paid job because of health reasons or sick day” (4). The *employment status* includes three groups: “in paid work” (group 1), “unemployed” (group 2) and “inactive” (groups 3 and 4).

Partnership status: The question reads: “What is your current marital status?”. Response categories are “single” (1), “married or in registered partnership” (2), “in a non-registered partnership” (3), “separated” (4), “divorced or previously in a dissolved registered partnership” (5) and “widowed” (6). The variable *partnership status* has the categories “single” (1), “married or in partnership” (2 or 3), “separated/divorced” (4 or 5) and “widowed” (6).

Number of children under 18: The original question reads “How many children (under the age of 18) do you have?”. The resulting continuous variable includes the number of children.

Ethnic minority: The original question reads “Would you consider yourself as being part of a minority group based on your...”. In this case we use the item “ethnicity or skin color”. Responses were dichotomous “yes” (1) or “no” (0).

Sexual minority: The original question reads “Would you consider yourself as being part of a minority group based on your...”. In this case we use the item “sexual orientation or gender identity”. Responses were dichotomous “yes” (1) or “no” (0).

Migrant: The original question reads “Would you consider yourself as being part of a minority group based on your...”. In this case we use the item “migrant status”. Responses were dichotomous “yes” (1) or “no” (0).

Size of town: The original question reads: “What is the size of the town or place you are currently living in?”. Response options are “a big city” (1), “the suburbs or outskirts of a big city” (2), “a town or small city” (3), “a country village” (4), and “the countryside or rural area” (5). The variable *size of town* keeps this typology.

GDP per capita logged: GDP per capita (constant 2015 US\$). The variable was logged due to a right-hand skew. Source: Teorell et al. (2024).

Gini index: Gini index (disposable income). If there is not a value for 2021 and 2023, we use the most recent value. The variable was logged due to a right-hand skew. Source: Solt (2020).

Top 10% income share: Percentage of total income held by top 10% of the population. The variable was logged due to a right-hand skew. Source: World Inequality Database (2025).

Average trust in government: Average value in a question included in the Integrated Values Survey dataset. The question reads “I am going to name a number of organizations. For each one, could you tell me how much confidence you have in them: is it a great deal of confidence, quite a lot of confidence, not very much confidence or none at all? The government (in your nation’s capital)”. Response options are “A great deal”, “Quite a lot”, “Not very much” and “Not at all”. The variable was reversed-coded. A higher value indicates more trust in government. For each country we use only the value for the most recent IVS survey prior to the RtM survey.

Public sector corruption: Public sector corrupt exchanges (v2x_pubcorr). The variable was logged due to a right-hand skew. Source: Coppedge et al. (2024).

Multiplicative polyarchy index: Multiplicative polyarchy index (v2x_mpi). Source: Coppedge et al. (2024).

Robustness Checks

We estimate five sets of robustness checks. First, although the Gini index is the most common indicator of income inequality, it has the limitation of being relatively insensitive to non-salary forms of income, which are best captured through the share of income held by the top 10% earners (Barradas 2025; Furceri and Loungani 2015). We therefore replicate the main models in Table 2 using *top 10% income share* as the indicator of income inequality (Table A5). Second, due to the limited number of country-level observations for the two years, the results may be sensitive to a single country. We therefore replicate the main evidence in Table 2 but using LOCO models, that is, leaving one country out of the model at a time (Table A6).

Third, the main multivariate analysis utilizes factor scores for two latent constructs estimated from a CFA. An important advantage of this approach is that the underlying indicators are allowed to contribute unequally to the latent constructs, rather than being assigned equal weight. However, factor-score measures are not readily interpretable. We therefore construct alternative specifications of the outcomes by calculating individual-level averages of the indicators that make up the variables *financial concerns* and *health concerns*, and then replicate the main results (Table A7). Fourth, in the factor scores used so far, missing values were estimated using full information maximum likelihood (FIML), which could affect the results. We hence replicate the models using an alternative method: listwise deletion (Table A8). Fifth, given the relatively small number of countries in the multivariate analysis (26) and the fact that individuals in a given country may still share unobserved features across years, all models were re-estimated with CR2 cluster-robust standard errors clustered at the country level and the statistical significance was assessed using Satterthwaite degrees of freedom (Huang and Li 2022).

The main results reported above remain rather robust across these robustness checks. Using another indicator (*top 10% income share*), LOCO models, simple averages of indicators

of long-term concern and an alternative method to handle missing values, income inequality remains significantly and positively related to long-term financial and health concerns at the 5% level. The only exceptions are the models with country-clustered SE (Table A9), in which *Gini index* is significant at the 10% level. However, this is a rather strict test and those standard errors would likely be lower if the database included more than only 26 countries. Moreover, in all those additional models, societal confidence in government and equivalized income are significantly and negatively related to those forms of concerns at the 5% level. Overall, these checks suggest that the main findings are largely consistent across alternative specifications, though the evidence is somewhat weaker when country-clustered standard errors are applied.

Tables and Figures

Variable	Obs	Mean	Std. dev.	Min	Max
General financial security	53,553	2.955	0.947	1.000	4.000
Illness/disability	53,213	2.966	0.924	1.000	4.000
Job prospects	52,147	2.629	1.017	1.000	4.000
Finances in old age	53,779	3.100	0.923	1.000	4.000
Housing	53,058	2.697	1.042	1.000	4.000
Long-term care	53,295	2.920	0.949	1.000	4.000
Quality of health care	53,773	3.028	0.931	1.000	4.000
Financial concerns	54,470	0.009	0.714	-4.658	3.147
Health concerns	54,470	0.007	0.634	-3.959	2.701
GDP per capita	54,698	10.406	0.587	9.186	11.427
Gini index	52,691	3.437	0.141	3.178	3.813
Share top 10%	54,698	-0.994	0.200	-1.236	-0.505
Average trust in government	52,670	2.201	0.284	1.657	2.864
Corruption index	54,698	-3.037	1.312	-6.908	-0.273
Multiplicative polyarchy index	54,698	0.700	0.181	0.036	0.871
Female	54,566	0.504	0.500	0.000	1.000
Education level	54,698	2.348	0.644	1.000	3.000
Equivalized income decile	54,698	4.855	2.896	1.000	10.000
Employment status	54,698	1.444	0.775	1.000	3.000
Age group	54,698	3.142	1.336	1.000	5.000
Marital status	54,355	1.812	0.613	1.000	4.000
Size of town	54,522	3.732	1.245	1.000	5.000
Number of children under 18	54,698	0.600	0.946	0.000	10.000
Migrant	54,698	0.032	0.177	0.000	1.000
Sexual minority	54,698	0.061	0.238	0.000	1.000
Ethnic minority	54,698	0.056	0.229	0.000	1.000
Wave	54,698	1.498	0.500	0.000	1.000

Note: The number of observations for the factor-score variables *financial concerns* and *health concerns* exceeds that of some individual indicators because factor scores were estimated using available information across multiple items, allowing scores to be computed even when some component items were missing.

Table A2. Correlation matrix of all items regarding long-term concerns

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Gen. fin. security (1)	1	0.5***	0.56***	0.68***	0.58***	0.57***	0.52***
Illness and dis. (2)	0.50***	1	0.49***	0.55***	0.47***	0.62***	0.57***
Skills/Job prospects (3)	0.56***	0.49***	1	0.57***	0.59***	0.52***	0.47***
Finances in old age (4)	0.68***	0.55***	0.57***	1	0.59***	0.62***	0.56***
Housing (5)	0.58***	0.47***	0.59***	0.59***	1	0.56***	0.49***
Long-term care (6)	0.57***	0.62***	0.52***	0.62***	0.56***	1	0.69***
Quality healthcare (7)	0.52***	0.57***	0.47***	0.56***	0.49***	0.69***	1

Note: *** p<0.001, ** p<0.01, * p<0.05, + p<0.1

Table A3. Correlation matrix of country-level factors

	(1)	(2)	(3)	(4)	(5)
Gini index (1)	1	-0.525***	0.483***	0.014**	-0.479***
GDP per capita (2)	-0.525***	1	-0.755***	0.376***	0.608***
Corruption index (3)	0.483***	-0.755***	1	-0.275***	-0.734***
Trust in government (4)	0.014**	0.376***	-0.275***	1	-0.001
Multiplicative polyarchy index (5)	-0.479***	0.608***	-0.734***	-0.001	1

Note: *** p<0.001, ** p<0.01, * p<0.05, + p<0.1

Figure A1. Standardized factors in the CFA of model 2 (Table 1)

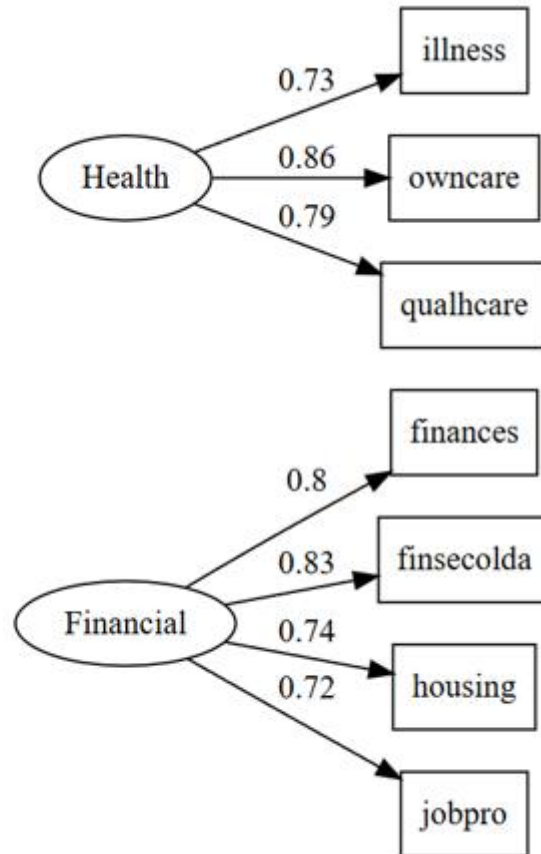


Table A4. Two-level random slopes models predicting long-term financial and health concerns

	Financial concerns	Health concerns	Financial concerns	Health concerns
Country-level factors				
Gini index	0.851*** (0.132)	0.717*** (0.125)	0.803*** (0.157)	0.636*** (0.148)
Average confidence in government	-0.357*** (0.065)	-0.383*** (0.062)	-0.298*** (0.075)	-0.324*** (0.071)
GDP per capita			-0.001 (0.050)	-0.007 (0.047)
Corruption index			0.046* (0.022)	0.041* (0.021)
Multiplicative polyarchy index			0.261 (0.144)	0.195 (0.133)
Individual-level factors				
Equivalized income	-0.039*** (0.002)	-0.029*** (0.002)	-0.039*** (0.002)	-0.029*** (0.002)
Equivalized income * Gini index	0.059*** (0.016)	0.033* (0.014)	0.059*** (0.016)	0.033* (0.014)
Equivalized income * Average confidence in government	-0.025** (0.008)	-0.023*** (0.007)	-0.025** (0.008)	-0.023*** (0.007)
Female	0.186*** (0.006)	0.163*** (0.005)	0.186*** (0.006)	0.163*** (0.005)
Age 25-34 (ref. 18-24)	0.075*** (0.011)	0.091*** (0.009)	0.074*** (0.011)	0.091*** (0.009)
Age 35-44	0.091*** (0.011)	0.135*** (0.010)	0.091*** (0.011)	0.135*** (0.010)
Age 45-54	0.087*** (0.011)	0.161*** (0.010)	0.086*** (0.011)	0.161*** (0.010)
Age 55-64	0.020 (0.011)	0.171*** (0.010)	0.020 (0.011)	0.171*** (0.010)
Medium education (ref. Low educ.)	-0.036** (0.011)	-0.017 (0.010)	-0.036** (0.011)	-0.017 (0.010)
High education	0.186*** (0.006)	0.163*** (0.005)	0.186*** (0.006)	0.163*** (0.005)
Unemployed (ref. In paid work)	0.187*** (0.011)	0.125*** (0.010)	0.187*** (0.011)	0.125*** (0.010)
Inactive	-0.027*** (0.008)	-0.004 (0.007)	-0.027*** (0.008)	-0.004 (0.007)
Married/in partnership (ref. Single)	-0.035*** (0.007)	-0.001 (0.007)	-0.035*** (0.007)	-0.001 (0.007)
Separated/divorced	-0.002 (0.013)	0.007 (0.011)	-0.002 (0.013)	0.007 (0.011)
Widowed	-0.001 (0.027)	0.022 (0.024)	-0.001 (0.027)	0.022 (0.024)
Number of children under 18	-0.002	-0.003	-0.002	-0.003

	(0.004)	(0.003)	(0.004)	(0.003)
Ethnic minority	0.082***	0.071***	0.082***	0.072***
	(0.013)	(0.012)	(0.013)	(0.012)
Sexual minority	0.087***	0.071***	0.087***	0.071***
	(0.012)	(0.011)	(0.012)	(0.011)
Migrant	0.080***	0.074***	0.080***	0.074***
	(0.017)	(0.015)	(0.017)	(0.015)
Town size	0.017***	0.011***	0.017***	0.011***
	(0.003)	(0.002)	(0.003)	(0.002)
Wave	-0.031	-0.012	-0.022	-0.005
	(0.033)	(0.031)	(0.033)	(0.031)
Constant	-0.155**	-0.234***	-0.206	-0.182
	(0.056)	(0.051)	(0.474)	(0.439)
Variance intercept	0.017	0.016	0.017	0.016
Variance equivalized income	0.0002	0.0001	0.0002	0.0002
BIC	102336.4	90552.6	102376.6	90593.5
Country-years	51	51	51	51
N	50,934	50,934	50,934	50,934

Table A5. Two-level random intercept models predicting long-term financial and health concerns with an alternative inequality indicator

	Financial concerns	Health concerns	Financial concerns	Health concerns
Country-level factors				
Top 10% income share	0.574*** (0.106)	0.496*** (0.097)	0.398** (0.133)	0.336** (0.125)
Average confidence in government	-0.343*** (0.073)	-0.370*** (0.067)	-0.229** (0.082)	-0.283*** (0.077)
GDP per capita			-0.076 (0.061)	-0.065 (0.058)
Corruption index			0.043 (0.027)	0.030 (0.026)
Multiplicative polyarchy index			0.204 (0.175)	0.106 (0.165)
Individual-level factors				
Equivalized income	-0.037*** (0.001)	-0.027*** (0.001)	-0.037*** (0.001)	-0.027*** (0.001)
Female	0.182*** (0.006)	0.159*** (0.005)	0.182*** (0.006)	0.159*** (0.005)
Age 25-34 (ref. 18-24)	0.073*** (0.010)	0.089*** (0.009)	0.073*** (0.010)	0.089*** (0.009)
Age 35-44	0.092*** (0.011)	0.135*** (0.010)	0.092*** (0.011)	0.135*** (0.010)
Age 45-54	0.089*** (0.011)	0.163*** (0.009)	0.089*** (0.011)	0.163*** (0.009)
Age 55-64	0.021 (0.011)	0.170*** (0.010)	0.021 (0.011)	0.170*** (0.010)
Medium education (ref. Low educ.)	0.009 (0.011)	0.007 (0.010)	0.010 (0.011)	0.008 (0.010)
High education	-0.041*** (0.011)	-0.022* (0.010)	-0.040*** (0.011)	-0.021* (0.010)
Unemployed (ref. In paid work)	0.185*** (0.011)	0.125*** (0.009)	0.185*** (0.011)	0.125*** (0.009)
Inactive	-0.022** (0.008)	-0.001 (0.007)	-0.022** (0.008)	-0.001 (0.007)
Married/in partnership (ref. Single)	-0.037*** (0.007)	-0.003 (0.007)	-0.037*** (0.007)	-0.003 (0.007)
Separated/divorced	-0.002 (0.012)	0.008 (0.011)	-0.002 (0.012)	0.008 (0.011)
Widowed	-0.005 (0.027)	0.023 (0.024)	-0.006 (0.027)	0.022 (0.024)
Number of children under 18	0.000 (0.004)	-0.002 (0.003)	0.000 (0.004)	-0.002 (0.003)
Ethnic minority	0.080*** (0.013)	0.071*** (0.012)	0.081*** (0.013)	0.071*** (0.012)
Sexual minority	0.084***	0.069***	0.084***	0.069***

	(0.012)	(0.011)	(0.012)	(0.011)
Migrant	0.082***	0.075***	0.082***	0.075***
	(0.017)	(0.015)	(0.017)	(0.015)
Town size	0.019***	0.012***	0.018***	0.012***
	(0.003)	(0.002)	(0.003)	(0.002)
Wave	-0.047	-0.031	-0.039	-0.026
	(0.042)	(0.038)	(0.040)	(0.037)
Constant	1.386***	1.248***	1.729***	1.577***
	(0.204)	(0.188)	(0.503)	(0.473)
Variance intercept	0.022	0.019	0.020	0.018
BIC	104,349.0	92,248.9	104,385.1	92,287.5
Country-years	52	52	52	52
N	51,909	51,909	51,909	51,909

Note: Standard errors in parentheses; *** p<0.001, ** p<0.01, * p<0.05, + p<0.1.

Table A6. Coefficients of Gini index and average trust in government in LOCO models

	Financial concerns			Health concerns		
	Gini index	Av. confidence in government	Equivalized income	Gini index	Av. confidence in government	Equivalized income
Excluding...						
Austria	0.630*** (0.162)	-0.267** (0.077)	-0.037*** (0.001)	0.520** (0.156)	-0.318*** (0.074)	-0.028*** (0.001)
Belgium	0.636*** (0.167)	-0.274*** (0.077)	-0.037*** (0.001)	0.510** (0.160)	-0.321*** (0.074)	-0.027*** (0.001)
Canada	0.654*** (0.160)	-0.279*** (0.077)	-0.037*** (0.001)	0.531** (0.153)	-0.327*** (0.073)	-0.028*** (0.001)
Chile	0.556** (0.168)	-0.281*** (0.075)	-0.038*** (0.001)	0.417* (0.158)	-0.330*** (0.071)	-0.028*** (0.001)
Denmark	0.671*** (0.153)	-0.290*** (0.073)	-0.037*** (0.001)	0.545*** (0.150)	-0.334*** (0.072)	-0.028*** (0.001)
Estonia	0.630*** (0.160)	-0.237** (0.081)	-0.037*** (0.001)	0.508** (0.152)	-0.283*** (0.077)	-0.027*** (0.001)
Finland	0.671*** (0.165)	-0.280*** (0.077)	-0.038*** (0.001)	0.563*** (0.158)	-0.330*** (0.074)	-0.028*** (0.001)
France	0.658*** (0.162)	-0.283*** (0.078)	-0.038*** (0.001)	0.535** (0.155)	-0.330*** (0.075)	-0.028*** (0.001)
Germany	0.650*** (0.161)	-0.280*** (0.077)	-0.037*** (0.001)	0.529** (0.155)	-0.327*** (0.074)	-0.028*** (0.001)
Greece	0.664*** (0.157)	-0.227** (0.080)	-0.038*** (0.001)	0.541*** (0.152)	-0.286*** (0.077)	-0.029*** (0.001)
Ireland	0.639*** (0.160)	-0.259** (0.077)	-0.037*** (0.001)	0.516** (0.152)	-0.305*** (0.074)	-0.028*** (0.001)
Israel	0.653*** (0.159)	-0.275*** (0.076)	-0.038*** (0.001)	0.532** (0.152)	-0.323*** (0.073)	-0.028*** (0.001)

Italy	0.653*** (0.163)	-0.275** (0.078)	-0.038*** (0.001)	0.526** (0.156)	-0.320*** (0.075)	-0.028*** (0.001)
Korea	0.648*** (0.162)	-0.273** (0.080)	-0.036*** (0.001)	0.526** (0.154)	-0.306*** (0.076)	-0.026*** (0.001)
Latvia	0.667*** (0.158)	-0.266** (0.076)	-0.038*** (0.001)	0.545*** (0.150)	-0.313*** (0.072)	-0.028*** (0.001)
Lithuania	0.679*** (0.155)	-0.236** (0.076)	-0.037*** (0.001)	0.555*** (0.148)	-0.286*** (0.073)	-0.027*** (0.001)
Mexico	0.660*** (0.170)	-0.280** (0.085)	-0.039*** (0.001)	0.546** (0.163)	-0.332*** (0.081)	-0.029*** (0.001)
Netherlands	0.625*** (0.163)	-0.272** (0.077)	-0.037*** (0.001)	0.509** (0.156)	-0.321*** (0.074)	-0.027*** (0.001)
Norway	0.676*** (0.162)	-0.288*** (0.079)	-0.037*** (0.001)	0.554*** (0.155)	-0.335*** (0.075)	-0.027*** (0.001)
Poland	0.566** (0.164)	-0.300*** (0.076)	-0.038*** (0.001)	0.440** (0.155)	-0.349*** (0.072)	-0.028*** (0.001)
Portugal	0.670*** (0.153)	-0.299*** (0.074)	-0.038*** (0.001)	0.549*** (0.145)	-0.348*** (0.070)	-0.028*** (0.001)
Slovenia	0.666*** (0.187)	-0.273** (0.078)	-0.038*** (0.001)	0.553** (0.179)	-0.319*** (0.075)	-0.028*** (0.001)
Spain	0.618*** (0.148)	-0.228** (0.072)	-0.038*** (0.001)	0.499** (0.142)	-0.278*** (0.069)	-0.029*** (0.001)
Switzerland	0.622*** (0.160)	-0.296*** (0.077)	-0.037*** (0.001)	0.518** (0.156)	-0.332*** (0.076)	-0.027*** (0.001)
Turkey	0.620*** (0.158)	-0.374*** (0.094)	-0.039*** (0.001)	0.489** (0.147)	-0.449*** (0.088)	-0.029*** (0.001)
UK	0.662*** (0.164)	-0.278** (0.079)	-0.038*** (0.001)	0.544** (0.157)	-0.329*** (0.076)	-0.028*** (0.001)
United States	0.962*** (0.179)	-0.360*** (0.075)	-0.037*** (0.001)	0.818*** (0.173)	-0.401*** (0.073)	-0.028*** (0.001)

Note: The models replicate models 3 and 4 in Table 2 Standard errors in parentheses; *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$

Table A7. Two-level random intercept models using alternative measures of long-term financial and health concerns

	Financial concerns	Health concerns	Financial concerns	Health concerns
Country-level factors				
Gini index	0.997*** (0.147)	0.884*** (0.164)	0.766*** (0.174)	0.658** (0.201)
Average confidence in government	-0.354*** (0.072)	-0.524*** (0.081)	-0.247** (0.083)	-0.456*** (0.096)
GDP per capita			-0.062 (0.061)	-0.037 (0.071)
Corruption index			0.043 (0.027)	0.029 (0.031)
Multiplicative polyarchy index			0.175 (0.176)	-0.018 (0.203)
Individual-level factors				
Equivalized income	-0.044*** (0.001)	-0.029*** (0.001)	-0.044*** (0.001)	-0.029*** (0.001)
Female	0.198*** (0.007)	0.204*** (0.007)	0.198*** (0.007)	0.204*** (0.007)
Age 25-34 (ref. 18-24)	0.049*** (0.012)	0.118*** (0.012)	0.049*** (0.012)	0.118*** (0.012)
Age 35-44	0.051*** (0.013)	0.202*** (0.012)	0.051*** (0.013)	0.202*** (0.012)
Age 45-54	0.023 (0.012)	0.258*** (0.012)	0.023 (0.012)	0.258*** (0.012)
Age 55-64	-0.093*** (0.013)	0.319*** (0.013)	-0.093*** (0.013)	0.319*** (0.013)
Medium education (ref. Low educ.)	0.004 (0.013)	0.005 (0.013)	0.004 (0.013)	0.006 (0.013)
High education	-0.054*** (0.013)	-0.012 (0.013)	-0.054*** (0.013)	-0.012 (0.013)
Unemployed (ref. In paid work)	0.185*** (0.012)	0.088*** (0.012)	0.185*** (0.012)	0.088*** (0.012)
Inactive	-0.016 (0.009)	0.011 (0.009)	-0.016 (0.009)	0.011 (0.009)
Married/in partnership (ref. Single)	-0.070*** (0.009)	0.011 (0.009)	-0.070*** (0.009)	0.011 (0.009)
Separated/divorced	-0.013 (0.014)	0.017 (0.014)	-0.013 (0.014)	0.017 (0.014)
Widowed	-0.032 (0.031)	0.033 (0.031)	-0.033 (0.031)	0.033 (0.031)
Number of children under 18	0.002 (0.004)	-0.003 (0.004)	0.002 (0.004)	-0.003 (0.004)
Ethnic minority	0.098*** (0.015)	0.095*** (0.015)	0.099*** (0.015)	0.095*** (0.015)

Sexual minority	0.102*** (0.014)	0.088*** (0.014)	0.102*** (0.014)	0.088*** (0.014)
Migrant	0.106*** (0.019)	0.093*** (0.019)	0.106*** (0.019)	0.093*** (0.019)
Town size	0.026*** (0.003)	0.011*** (0.003)	0.026*** (0.003)	0.011*** (0.003)
Wave	-0.049 (0.042)	-0.026 (0.046)	-0.043 (0.040)	-0.026 (0.046)
Constant	0.321 (0.535)	0.900 (0.598)	1.531 (0.928)	2.013 (1.071)
Variance intercept	0.021	0.027	0.019	0.026
BIC	116,234.1	115,570.7	116,271.2	115,609.8
Country-years	51	51	51	51
N	50,810	50,810	50,810	50,810

Note: Standard errors in parentheses; *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$. *Financial concerns* averages the values in *general financial security*, *finances in old age*, *housing* and *job prospects*. *Health concerns* averages the values of *long-term care*, *quality healthcare* and *illness/disability*.

Table A8 Two-level random intercept models using listwise deletion in CFA

	Financial concerns	Health concerns	Financial concerns	Health concerns
Country-level factors				
Gini index	0.871*** (0.138)	0.730*** (0.130)	0.662*** (0.166)	0.543*** (0.159)
Average confidence in government	-0.369*** (0.068)	-0.392*** (0.064)	-0.284*** (0.079)	-0.333*** (0.076)
GDP per capita			-0.044 (0.058)	-0.033 (0.056)
Corruption index			0.037 (0.026)	0.025 (0.025)
Multiplicative polyarchy index			0.100 (0.167)	0.005 (0.160)
Individual-level factors				
Equivalized income	-0.038*** (0.001)	-0.029*** (0.001)	-0.038*** (0.001)	-0.029*** (0.001)
Female	0.185*** (0.006)	0.164*** (0.006)	0.185*** (0.006)	0.164*** (0.006)
Age 25-34 (ref. 18-24)	0.074*** (0.011)	0.095*** (0.010)	0.074*** (0.011)	0.095*** (0.010)
Age 35-44	0.091*** (0.012)	0.140*** (0.010)	0.091*** (0.012)	0.140*** (0.010)
Age 45-54	0.086*** (0.012)	0.166*** (0.010)	0.086*** (0.012)	0.166*** (0.010)
Age 55-64	0.021 (0.012)	0.177*** (0.011)	0.021 (0.012)	0.177*** (0.011)
Medium education (ref. Low educ.)	0.013 (0.012)	0.011 (0.011)	0.013 (0.012)	0.011 (0.011)
High education	-0.032** (0.012)	-0.014 (0.011)	-0.032** (0.012)	-0.014 (0.011)
Unemployed (ref. In paid work)	0.193*** (0.012)	0.128*** (0.010)	0.193*** (0.012)	0.127*** (0.010)
Inactive	-0.037*** (0.009)	-0.013 (0.008)	-0.037*** (0.009)	-0.013 (0.008)
Married/in partnership (ref. Single)	-0.036*** (0.008)	-0.002 (0.007)	-0.036*** (0.008)	-0.002 (0.007)
Separated/divorced	-0.004 (0.014)	0.007 (0.012)	-0.004 (0.014)	0.007 (0.012)
Widowed	-0.018 (0.030)	0.014 (0.027)	-0.019 (0.030)	0.014 (0.027)
Number of children under 18	-0.001 (0.004)	-0.003 (0.003)	-0.001 (0.004)	-0.003 (0.003)
Ethnic minority	0.088*** (0.014)	0.073*** (0.013)	0.088*** (0.014)	0.074*** (0.013)
Sexual minority	0.091*** (0.013)	0.075*** (0.012)	0.091*** (0.013)	0.076*** (0.012)

Migrant	0.081*** (0.018)	0.076*** (0.016)	0.081*** (0.018)	0.076*** (0.016)
Town size	0.019*** (0.003)	0.012*** (0.002)	0.018*** (0.003)	0.012*** (0.002)
Wave	-0.048 (0.039)	-0.034 (0.037)	-0.045 (0.038)	-0.033 (0.037)
Constant	-2.134*** (0.503)	-1.719*** (0.474)	-1.099 (0.884)	-0.787 (0.844)
Variance intercept	0.019	0.017	0.018	0.016
BIC	92,801.9	82,584.2	92,840.1	82,624.1
Country-years	51	51	51	51
N	45,596	45,596	45,596	45,596

Note: Standard errors in parentheses; *** p<0.001, ** p<0.01, * p<0.05, + p<0.1.

Table A9. Two-level random intercept models predicting long-term financial and health concerns with robust standard errors at the country level

	Financial concerns	Health concerns
Country-level factors		
Gini index	0.653+ (0.267)	0.532+ (0.258)
Average confidence in government	-0.275* (0.120)	-0.323* (0.120)
GDP per capita	-0.045 (0.104)	-0.035 (0.100)
Corruption index	0.034 (0.033)	0.022 (0.029)
Multiplicative polyarchy index	0.088 (0.248)	-0.003 (0.269)
Individual-level factors		
Equivalized income	-0.038*** (0.004)	-0.028*** (0.003)
Female	0.184*** (0.012)	0.161*** (0.010)
Age 25-34 (ref. 18-24)	0.075*** (0.014)	0.091*** (0.013)
Age 35-44	0.093*** (0.019)	0.137*** (0.014)
Age 45-54	0.089** (0.027)	0.163*** (0.020)
Age 55-64	0.023 (0.031)	0.173*** (0.021)
Medium education (ref. Low educ.)	0.009 (0.015)	0.007 (0.011)
High education	-0.037+ (0.019)	-0.019 (0.015)
Unemployed (ref. In paid work)	0.182*** (0.016)	0.121*** (0.014)
Inactive	-0.024+ (0.014)	-0.002 (0.011)
Married/in partnership (ref. Single)	-0.037*** (0.010)	-0.003 (0.009)
Separated/divorced	-0.003 (0.014)	0.007 (0.011)
Widowed	-0.006 (0.032)	0.020 (0.028)
Number of children under 18	-0.000 (0.005)	-0.002 (0.004)
Ethnic minority	0.080*** (0.014)	0.071*** (0.012)
Sexual minority	0.088*** (0.013)	0.072*** (0.013)

Migrant	0.079*** (0.019)	0.074** (0.020)
Town size	0.018** (0.005)	0.011* (0.005)
Wave	-0.023* (0.010)	-0.017+ (0.009)
Constant	46.139* (19.248)	34.575+ (17.600)
Variance intercept	0.016	0.015
BIC	102,546.9	90,712.0
Country-years	51	51
N	50,934	50,934

Note: Standard errors in parentheses; *** p<0.001, ** p<0.01, * p<0.05, + p<0.1.