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Income mobility and support for the welfare state: Panel evidence from Germany

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Abstract

Previous studies on preferences for state intervention have primarily relied on cross-sectional designs, which are limited in their ability to account for time-invariant unobservables. Using panel data from the 1997–2002 German SOEP, we estimate first-difference models to assess whether medium-term income changes are associated with changes in support for public versus private provision across five domains of financial security. A one-log-point rise in real household income is associated with a decline in support for state involvement in family, unemployment, sickness, old-age, and long-term care provision by 7-11% of a scale point. Two patterns of heterogeneity emerge: (i) individuals in the bottom or top 1997 income quintile react almost twice as strongly as those in the middle ; (ii) the absolute response to income gains exceeds that to losses ($p < 0.01$). Gender, cohort, region, initial attitudes and baseline ideology do not significantly alter the slope. Results hold across alternative codings, placebo tests, and controls for employment transitions.

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1. Introduction

Among the many factors shaping preferences for state redistribution, the literature consistently highlights the central role of an individual's position on the income ladder. This relationship is driven by several mechanisms, such as the potential to gain or lose from redistribution (Meltzer and Richard, 1981; Cross et al., 2023), identification with social groups holding specific attitudes toward taxation (Klor and Shayo, 2010; Costa-Font and Cowell, 2015), and the self-insurance motive (Moene and Wallerstein, 2001). However, most of these empirical studies adopt a static perspective, examining the correlation between the *actual* income levels and *actual* support for redistribution in cross-sectional data (e.g., Alesina and La Ferrara, 2005; Rainer and Siedler, 2008; Slemrod, 2006). In contrast, this paper adopts a dynamic perspective, using panel data from the German Socio-Economic Panel (SOEP) to examine whether *changes* in household income are associated with *changes* in support for state provision of financial security.

We estimate first-difference models that eliminate time-constant individual unobservables and reduce biases due to unmeasured fixed traits such as early-life experiences (Wooldridge, 2016). This design exploits intra-individual variation and therefore goes beyond a standard cross-sectional association between income levels and redistributive preferences. It does not, however, identify the causal effect of an exogenous income shock: income changes may co-occur with employment transitions, household composition changes, or other life events that independently affect preferences. Our estimates should therefore be interpreted as conditional within-individual associations between observed income changes and changes in redistributive preferences.

Our findings indicate that medium-term income gains reduce support for state intervention across five domains of financial security. These effects are modest in size—around 7 to 11% of a scale point per log-point income increase—but statistically significant and consistent across outcomes. Two sources of heterogeneity matter: individuals in the bottom or top quintile of the income distribution in 1997 react almost twice as strongly as those in the middle quintile, and the absolute response to income gains is significantly larger than to losses. On the other hand, responses are strikingly homogeneous across gender, cohort, region, initial attitudes and political orientation. These patterns remain robust across alternative model specifications and income measures, and are further validated by placebo tests using unrelated attitudinal outcomes.

This paper contributes to the literature on redistributive preferences along two dimensions. Methodologically, we exploit panel data and a first-difference design to estimate the within-individual effect of income changes on attitudes toward state intervention, isolating short-term dynamics that cross-sectional designs cannot capture. Substantively, we identify key moderators of this relationship—initial income rank and the direction of income change—shedding light on mechanisms behind attitudinal shifts. By focusing on intra-individual variation, this paper complements existing work on redistributive preferences and offers additional evidence that material conditions remain a central driver of support for the welfare state.

2. Data and methodology

The SOEP (Socio-Economic Panel) is a longitudinal survey of private households in Germany, capturing detailed information on demographics, income, employment, education,

and health. Initiated in 1984, it follows individuals over time, including those joining households due to birth or mobility, ensuring representativeness despite boundary changes and migration. We exploit the 1997 and 2002 waves, a five-year window long enough to register meaningful income movements while short enough to limit confounding life-cycle changes.[1] Our working sample therefore consists of individuals observed in both years.

The dependent variables. The questions we are interested in concern attitudes towards the roles of the state and private forces in certain areas of financial security.[2] The question asked is: "At present, a multitude of social services are provided not only by the state but also by private free market enterprises, organizations, associations, or private citizens. What is your opinion on this? Who should be responsible for the following areas? 1. Only the state, 2. Mostly the state, 3. State and private forces, 4. Mostly private forces, 5. Only private forces". Following Alesina and Fuchs-Schündeln (2007) we retain five domains: *financial security of families, financial security in case of unemployment, financial security in case of illness, financial security for old age,* and *financial security when requiring care.* For each domain we compute the first difference between 1997 and 2002 responses.[3] Appendix Table A3 shows that while roughly 45% of respondents maintain the same position, the remainder shift in both directions, with 10–12% moving by two categories or more on the 5-point attitude scale.

The explanatory variable. In this study, we use the change in the log of post-government income ($\Delta \ln Y_i = \ln Y_{i,2002} - \ln Y_{i,1997}$) as the explanatory variable. Table A2 documents the underlying mobility across income deciles: only roughly 27–28% of individuals remain in the same decile, and moves of 2–3 deciles are common.

Interaction variables. To uncover potential moderators we interact $\Delta \ln Y_i$ with six baseline characteristics measured in 1997: income quintile (Q_1–Q_5), gain vs. loss (dummy $1\{\Delta \ln Y_i > 0\}$), gender, birth cohort: *Young* (< 35), *Active* (35–55), *Retired* (> 55), East vs. West Germany and political orientation (centre/none, left, right). This rich set of interactions—made possible by true panel data—allows us to test whether income variations matter more for some groups than for others. For a detailed description and summary statistics of the variables used, see Table A1.

Attrition analysis. We assess the extent of sample attrition by comparing the 1997 characteristics of individuals retained in the panel (observed in both 1997 and 2002) to those lost between the two waves. Of the 13,195 individuals observed in 1997, 72.8%

[1] The battery of questions on state versus private responsibility for financial security is available only in three SOEP waves: 1997, 2002, and 2017. The 1997–2002 pair is the only one offering a usable medium-term interval. The 2017 wave is separated from 2002 by fifteen years, a span that mixes income shocks with major macroeconomic and policy changes (the Hartz reforms, the 2008 financial crisis, the 2015 refugee inflow), making first-difference estimates hard to interpret as the response to income variation alone. By contrast, the 1997–2002 window covers a relatively calm institutional period in Germany, prior to the structural reforms of the mid-2000s. We nonetheless estimate the main specification over 2002–2017 as a robustness check and find qualitatively similar results (see Appendix C.4).

[2] Support for state intervention in financial security can be considered one of the important facets of the well-known research issue commonly called "preferences for redistribution".

[3] One of the advantages of this set of questions is that it measures the "static" attitudes towards state redistribution. In fact, the majority of questions studied in the literature ask people if they are favorable to "more" or "less" redistribution, not redistribution in general. The "static" or "original" attitudes are less impacted by the perception of the current situation of redistribution compared to the "relative" attitudes.

are retained in 2002. Online Appendix A.5 shows that, although attrition is statistically detectable on observables, its substantive magnitude is small: observable characteristics jointly explain less than 1% of the variation in retention, and the differences in means—in income, employment, education, and attitudes—are all on the order of 5 to 10% of a standard deviation. Combined with the first-difference design, which conditions on time-invariant individual characteristics, this pattern makes attrition unlikely to bias our estimates in a substantively meaningful way.

3. Results

We rely on the following first-difference model, which examines changes in people's support for expanding the welfare role rather than their absolute level of support:

$$\Delta Preference_{id} = \delta_0 + \beta_1 \Delta ln(Income)_i + \beta_2 Preference_{id}^{1997} + \beta_3 ln(Income)_i^{1997} + \beta_4 X_i + \Delta u_i \quad (1)$$

where ΔPreference$_{id}$ denotes the change in support for state provision in domain d between 1997 and 2002, measured on a scale from –4 to +4 (as detailed in the note of Table A3); $\Delta \ln(\text{Income})_i$ is the change in the log of post-government household income over the same period; Preference$_{id}^{1997}$ captures baseline attitudes; and ln(Income)$_i^{1997}$ is the 1997 log of post-government income. The term Δu_i reflects the change in the individual-specific error term. The coefficient β_1 represents the first-difference estimator associated with income change. Individual fixed effects a_i are eliminated by differencing. The model also includes a set of control variables (X), accounting for relevant individual-level characteristics such as gender, age, education, and East/West residence. Robust standard errors are clustered at the individual level to account for within-individual correlation over time.[4]

Table I presents the estimates from the first-difference specification described in Equation (1), across five domains of financial security. In all cases, income variations are significantly associated with changes in attitudes: individuals who experienced an increase in income between 1997 and 2002 became less supportive of state responsibility, with estimated effects ranging from –0.07 to –0.11 depending on the domain.[5] Since the outcome is measured on a bounded ordinal scale, these magnitudes are best read in relative terms: their relevance lies in their consistency across the five domains and across alternative codings of the outcome (Appendices C1 and C2). The strong negative coefficients on initial

[4]We adopt a first-difference rather than a within (fixed-effects) specification for the following reasons. With only two waves, the two are numerically equivalent for the coefficient of interest, so both purge time-invariant unobserved heterogeneity equally well. The FD formulation, however, allows us to keep the baseline attitude and the baseline log-income as explicit regressors—variables that would be absorbed in a fixed-effects framework. This matters in three respects. First, controlling for the initial attitude is essential because our outcome is a bounded change score on a 1–5 scale: respondents at the extremes face mechanical ceiling and floor constraints, and omitting this control generates substantial attenuation bias (see Online Appendix B.2). Second, the coefficients on these baseline regressors are themselves informative, documenting the persistence of preferences and the role of the initial income level. Third, retaining the baseline as an observable regressor is required for the heterogeneity analysis by initial income quintile (Table II, Panel B), which interacts $\Delta \ln(\text{Income})$ with the 1997 income position.

[5]For reference, Appendix Table B1 reports pooled cross-sectional estimates over 1997 and 2002. The coefficients on income display the same negative sign across all outcomes, but are somewhat larger in absolute value—consistent with upward bias due to time-invariant unobserved heterogeneity that is purged in the first-difference models.

attitudes (around –0.80) confirm the high persistence of preferences.[6] Notably, we also find that individuals in East Germany exhibit a significantly stronger increase in support for public provision than their West German counterparts, suggesting a divergence rather than a convergence in attitudes during this period. The effects of education are generally negative, particularly among respondents with higher qualifications, indicating that more educated individuals were more likely to shift toward market-oriented views. Other demographic controls, including age and gender, exhibit small or inconsistent effects.

Before turning to our heterogeneity analysis, we verify that the baseline estimates are robust to six sets of sensitivity checks (full results in Online Appendix C). The negative income effect survives (i) ordered–logit estimation (Table C1), (ii) a binary recoding of the outcome (Table C2), (iii) income–decile changes as dependent variable (Table C3), and (iv) a 2002–2017 window (Table C4); in every case the slope remains negative and significant. The first two checks, in particular, verify that our result still holds in specifications that do not impose cardinality—an assumption made by our baseline linear model. The results also remain stable when controlling for transitions in full-time employment status (Table C6). Finally, we estimate placebo regressions with SOEP "worry" items: income gains ease concern about one's own finances but leave worries over peace, crime, and the macro-economy unchanged (see Tables C7 and C8).

Table I: First-Differences Models with Baseline Attitude and Income Controls

	Dependent variable: Δ Responsibility for financial security...				
	...of the family	...when unemployed	...when sick	...when old	...when requiring care
Δ Ln(Income)	−0.0724***	−0.0830***	−0.101***	−0.113***	−0.0884***
	(0.0199)	(0.0186)	(0.0182)	(0.0177)	(0.0173)
Initial Att. (1997)	−0.784***	−0.796***	−0.768***	−0.771***	−0.799***
	(0.0109)	(0.0109)	(0.0108)	(0.0106)	(0.0106)
Initial Ln(Inc) (1997)	−0.140***	−0.107***	−0.126***	−0.137***	−0.114***
	(0.0191)	(0.0187)	(0.0177)	(0.0183)	(0.0173)
Age	0.00329	0.00545*	0.00596*	0.00574*	0.00127
	(0.00339)	(0.00330)	(0.00320)	(0.00333)	(0.00312)
Age²	−0.0000480	−0.0000538*	−0.0000655**	−0.0000594*	−0.0000239
	(0.0000331)	(0.0000318)	(0.0000308)	(0.0000321)	(0.0000300)
Female	0.0153	0.0228	0.0289*	−0.00387	−0.00314
	(0.0170)	(0.0164)	(0.0158)	(0.0164)	(0.0155)
Edu (Medium)	−0.0608**	−0.0150	−0.0681***	−0.0897***	−0.0490**
	(0.0263)	(0.0249)	(0.0243)	(0.0253)	(0.0250)
Edu (High)	−0.0735**	−0.104***	−0.168***	−0.186***	−0.0526*
	(0.0306)	(0.0295)	(0.0283)	(0.0291)	(0.0286)
East	0.208***	0.163***	0.131***	0.130***	0.0911***
	(0.0190)	(0.0186)	(0.0182)	(0.0188)	(0.0177)
Observations	9,385	9,376	9,377	9,405	9,404
R-squared	0.413	0.402	0.395	0.414	0.419

Note: The dependent variables represent changes in support for state versus private sector intervention in financial security in different situations: for the family, when unemployed, when sick, when old, and when requiring care. These values range from -4 to 4, with -4 indicating a change from the most favorable position for state responsibility (5) to the most favorable position for private sector responsibility (1) between 1997 and 2002. The explanatory variables include changes of ln(income), the corresponding attitude in 1997, the ln(income) in 1997, gender (male = ref.), age, age squared, education levels (as a reference the least advanced education level), and living in the East region. The coefficients are estimated using first-difference models, and standard errors are clustered at the individual (pid). Significance levels are indicated by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

[6]Controlling for initial preferences is essential: omitting them conflates income effects with mean reversion and ceiling/floor constraints inherent in bounded scales Online appendix B.2 shows that excluding baseline attitudes renders the income coefficient small and insignificant, due to mechanical bias arising from limited scope for change among respondents at scale extremes

Table II: Heterogeneous Effects of Income Change on Redistribution Attitudes

	Dependent variable: Δ Responsibility for financial security...				
	...of the family	...when unemployed	...when sick	...when old	...when requiring care
Panel A. Heterogeneity by Income Gain or Loss (Loss or no change = reference)					
Δ Ln(Income)	0.001	-0.016	-0.132***	-0.100***	-0.103***
	(0.035)	(0.033)	(0.031)	(0.031)	(0.030)
ΔLn(Income) × Gain	-0.187***	-0.173***	-0.045	-0.114**	-0.044
	(0.050)	(0.048)	(0.044)	(0.045)	(0.043)
Panel B. Heterogeneity by Initial Income (Q3 = reference)					
Δ Ln(Income)	-0.059	0.035	0.022	-0.041	-0.030
	(0.049)	(0.043)	(0.046)	(0.045)	(0.045)
ΔLn(Income) × Q1	-0.066	-0.159***	-0.134**	-0.077	-0.056
	(0.061)	(0.055)	(0.056)	(0.055)	(0.055)
ΔLn(Income) × Q2	0.057	-0.105	-0.168***	-0.045	0.001
	(0.070)	(0.065)	(0.063)	(0.063)	(0.062)
ΔLn(Income) × Q4	0.033	-0.121**	-0.118**	-0.055	-0.054
	(0.062)	(0.057)	(0.059)	(0.057)	(0.056)
ΔLn(Income) × Q5 (Top 20%)	-0.009	-0.130**	-0.120**	-0.081	-0.088
	(0.062)	(0.055)	(0.056)	(0.055)	(0.055)
Controls	Yes	Yes	Yes	Yes	Yes
Observations	9,385	9,376	9,377	9,405	9,404
R-squared	0.414	0.404	0.396	0.415	0.419

Note: The dependent variables represent changes in support for state versus private sector intervention in financial security in different situations: for the family, when unemployed, when sick, when old, and when requiring care. These values range from -4 to 4, with -4 indicating a change from the most favorable position for state responsibility (5) to the most favorable position for private sector responsibility (1) between 1997 and 2002. All regressions include the following control variables: the initial attitude (1997 attitude), the 1997 ln(income), gender, age, age squared, education levels, and region of residence (East/West). The coefficients are estimated using first-difference models, and standard errors are clustered at the individual (pid). In Panel A, the reference group consists of individuals whose income stayed the same or declined between 1997 and 2002. In Panel B, the omitted category is the third quintile of initial income (Q3). Coefficients for interactions represent differential effects relative to this group. Significance levels are indicated by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table III: Marginal Effect of Income Change on Attitude Change, by Initial Income Quintile

	Dependent variable: Δ Responsibility for financial security...				
	...of the family	...when unemployed	...when sick	...when old	...when requiring care
Q1 (Bottom 20%)	−0.125***	−0.123***	−0.113***	−0.118***	−0.086***
Q2	−0.002	−0.070	−0.147***	−0.086*	−0.029
Q3 (Reference)	−0.059	0.035	0.022	−0.041	−0.030
Q4	−0.027	−0.086**	−0.097**	−0.097**	−0.084**
Q5 (Top 20%)	−0.068*	−0.095***	−0.099***	−0.122***	−0.118***

Note: Entries are average marginal effects of changes in log household income (Δ ln(Income)) on changes in attitudes toward public responsibility (Δ Attitude), estimated via interaction models of the form $\Delta.\ln(\text{Income}) \times \text{Income Quintile}_{1997}$. Reference category is the third quintile (Q3). The dependent variables represent changes in support for state versus private sector intervention in financial security in different situations: for the family, when unemployed, when sick, when old, and when requiring care. These values range from -4 to 4, with -4 indicating a change from the most favorable position for state responsibility (5) to the most favorable position for private sector responsibility (1) between 1997 and 2002. All regressions include the following control variables: the initial attitude (1997 attitude), the 1997 ln(income), gender, age, age squared, education levels, and region of residence (East/West). Significance levels are indicated by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table II presents two of our heterogeneous effects of income variation. Panel A compares income gains and losses, revealing a clear asymmetry: income gains are associated with a stronger decline in support for state responsibility than the corresponding increase in support observed after income losses. In other words, upward income mobility appears to generate a stronger market-oriented shift than downward mobility generates a pro-state shift. Panel B investigates heterogeneity by initial income quintile. Across the five domains, we observe a consistent U-shaped pattern—confirmed by the marginal effect plots in Online Appendix Figure B.1—where individuals in both the bottom (Q1) and top (Q5) income quintiles display greater sensitivity to income changes than middle-income respondents. For unemployment and sickness, the interaction terms with Q1 and

Q5 are statistically significant and negative, suggesting a sharper attitudinal shift among these groups. For other domains—family, old age, and care—similar patterns emerge, though coefficients are not statistically significant. To provide a clearer picture, Table III reports the marginal effects by income quintile: effectively, it shows that coefficients for Q1 and Q5 are individually significant across all outcomes, whereas those for the middle quintiles are smaller and statistically insignificant. Taken together, these findings suggest that income changes are most consequential for respondents at the extremes of the income distribution. Additional interactions with gender, cohort, region, initial attitudes, and political orientation (reported in Table B3 of the online appendix) do not reveal any consistent or significant patterns.

4. Conclusion

Using first-difference models on panel data from Germany (1997–2002), this study shows that changes in household income predict changes in individual support for state-provided financial security across five welfare domains. Notably, these income effects remain significant despite strong attitudinal stability and the removal of time-invariant unobserved heterogeneity. Two robust heterogeneity patterns emerge: individuals at both extremes of the initial income distribution react more strongly, and support decreases more after income gains than it increases after income losses. Although the five-year horizon may be seen as relatively long for identifying short-term effects, the results suggest that moderate-term income mobility can meaningfully shift redistributive preferences.

Several caveats qualify our interpretation. First, the estimates do not isolate exogenous variation in income and should not be read as causal effects of income shocks. Yet, because the first-difference design relies on within-individual changes, the estimates are net of time-invariant individual heterogeneity and therefore go beyond standard cross-sectional correlations. The relevant interpretation is then a conditional within-individual association between observed income changes and changes in redistributive preferences. Second, the outcome is measured on a bounded ordinal scale. Although alternative codings, including ordered logit models and binary indicators, yield similar conclusions, magnitudes on such a scale should be read as relative rather than absolute. Third, the 1997–2002 window covers a relatively calm institutional period in Germany. This strengthens the interpretability of the empirical setting, but also limits external validity: the same relationship could unfold differently under larger macroeconomic or policy shocks. Estimates over the 2002–2017 window provide a useful benchmark, but do not fully resolve this concern.

These findings carry tentative implications for the political economy of redistribution. If experienced income gains durably shift individual support away from state provision, then sustained growth may slowly weaken the coalitions that politically sustain the welfare state. And because the response to losses is weaker than to gains, periods of income decline are unlikely to reverse this shift symmetrically—a dynamic consistent with reference-dependent models of tax preferences and evidence on opinion shifts (Kelly and Enns, 2010; Fisman et al., 2017; Kuziemko et al., 2015). However, these suggestions remain conjectures rather than direct evidence, and testing them properly would require designs that isolate exogenous variation in income.

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Appendix

Income Mobility and Support for the Welfare State: Panel Evidence from Germany

Bilal El Rafhi

A. Appendix A

A.1 Description of variables

- **Attitudes towards state responsibility for financial security:** Respondents were asked to evaluate who should be responsible for various aspects of financial security: "only the state", "mostly the state", "equally state and private", "mostly private", or "only private". We construct five dependent variables on a 1–5 scale (1 = only private, 2 = mostly private , 3 = private and public , 4 = mostly state , 5 = only state), corresponding to: `Att_secure_5` (financial security for the family), `Att_unemp_5` (in case of unemployment), `Att_sick_5` (in case of sickness), `Att_old_5` (for old age), and `Att_care_5` (when requiring care). This selection of variables follows Alesina and Fuchs-Schündeln (2007). For interaction analysis, we also construct a three-category version of each variable, grouping responses into "only or mostly private" (1–2), "equally state and private" (3), and "only or mostly state" (4–5).

- **Household income (log):** `Ln_Income_HH` is the natural logarithm of post-government household income, reported in real terms and equivalized using the OECD-modified scale. It captures the respondent's economic position in relative terms, allowing interpretation in percentage changes. The reference variable in the SOEP database is `i11102`.

- **Age:** `Age` is the respondent's age in completed years at the time of interview. It is used to capture lifecycle effects on redistributive preferences.

- **Gender:** `Woman` is a binary variable equal to 1 if the respondent is female, and 0 otherwise.

- **Education level:** `Education_Level` classifies respondents into three categories based on their highest educational attainment: low (no degree or basic education), medium (vocational or secondary diploma), and high (tertiary education).

- **Region (East/West):**`Region_East` is equal to 1 if the respondent resides in a federal state formerly part of East Germany, and 0 otherwise. This variable captures the long-term institutional legacy of the communist system.

- **Employment status:** Based on the harmonized SOEP variable `plb0022_h`, we construct a binary indicator `EmplStatus_binary` equal to 1 for full-time employed respondents, and 0 otherwise (including part-time, marginal, non-employed, and other categories).

A.2 Descriptive statistics for main variables

Table A1: Descriptive Statistics for Main Variables (1997 and 2002)

Variable	1997					2002				
	Mean	SD	Min	Max	N	Mean	SD	Min	Max	N
Att_secure_5	3.361	0.876	1	5	9521	3.348	0.844	1	5	9481
Att_unemp_5	3.927	0.820	1	5	9526	3.927	0.810	1	5	9465
Att_sick_5	3.454	0.803	1	5	9521	3.508	0.785	1	5	9474
Att_old_5	3.505	0.867	1	5	9533	3.474	0.820	1	5	9490
Att_care_5	3.554	0.797	1	5	9532	3.559	0.766	1	5	9489
Ln_Income_HH	10.179	0.528	4.625	12.166	9609	10.256	0.565	3.135	12.522	9607
Age	43.626	15.844	17	94	9609	48.626	15.844	22	99	9609
Woman	0.523	0.500	0	1	9609	0.523	0.500	0	1	9609
Education_Level	1.977	0.631	1	3	9185	2.078	0.601	1	3	9587
Region_East	0.286	0.452	0	1	9609	0.283	0.450	0	1	9609

Note: Descriptive statistics for main variables used in the empirical analysis. All variables are from the German Socio-Economic Panel (SOEP), waves 1997 and 2002. Statistics are weighted using cross-sectional weights. Sample restricted to adult respondents with valid information on income and attitudes toward welfare state responsibilities.

A.3 Income deciles transition table between 1997 and 2002

Table A2: Income Deciles Transition Table (1997 to 2002)

Decile 1997	Decile 2002										Total
	1	2	3	4	5	6	7	8	9	10	
1	**49.73%**	16.22%	6.76%	4.27%	3.11%	2.52%	1.70%	2.83%	1.04%	2.87%	100.00%
	(273)	(108)	(56)	(40)	(34)	(30)	(19)	(33)	(11)	(29)	(633)
2	18.76%	**34.23%**	15.80%	9.72%	5.95%	5.13%	3.58%	2.83%	2.75%	2.17%	100.00%
	(103)	(228)	(131)	(91)	(65)	(61)	(40)	(33)	(29)	(22)	(803)
3	8.93%	19.52%	**25.21%**	14.10%	8.88%	5.21%	4.30%	5.41%	4.64%	2.67%	100.00%
	(49)	(130)	(209)	(132)	(97)	(62)	(48)	(63)	(49)	(27)	(866)
4	6.92%	8.26%	17.85%	**22.01%**	13.55%	8.49%	7.35%	3.95%	3.60%	4.84%	100.00%
	(38)	(55)	(148)	(206)	(148)	(101)	(82)	(46)	(38)	(49)	(911)
5	5.83%	5.26%	8.81%	15.71%	**18.86%**	14.21%	8.96%	5.67%	5.59%	3.46%	100.00%
	(32)	(35)	(73)	(147)	(206)	(169)	(100)	(66)	(59)	(35)	(922)
6	3.10%	6.76%	9.17%	15.92%	18.59%	**17.83%**	11.83%	9.79%	7.96%	6.52%	100.00%
	(17)	(45)	(76)	(149)	(203)	(212)	(132)	(114)	(84)	(66)	(1098)
7	3.64%	2.10%	6.03%	7.26%	14.01%	19.01%	**17.29%**	12.19%	9.29%	4.35%	100.00%
	(20)	(14)	(50)	(68)	(153)	(226)	(193)	(142)	(98)	(44)	(1008)
8	1.82%	3.45%	4.34%	4.91%	7.88%	16.57%	22.76%	**19.14%**	12.42%	6.92%	100.00%
	(10)	(23)	(36)	(46)	(86)	(197)	(254)	(223)	(131)	(70)	(1076)
9	1.09%	2.10%	4.22%	3.95%	6.59%	7.91%	14.96%	24.98%	**30.81%**	14.53%	100.00%
	(6)	(14)	(35)	(37)	(72)	(94)	(167)	(291)	(325)	(147)	(1188)
10	0.18%	2.10%	1.81%	2.14%	2.56%	3.11%	7.26%	13.22%	21.90%	**51.68%**	100.00%
	(1)	(14)	(15)	(20)	(28)	(37)	(81)	(154)	(231)	(523)	(1104)
Total	5.71%	6.93%	8.63%	9.74%	11.36%	12.37%	11.61%	12.12%	10.98%	10.53%	100.00%
	(549)	(666)	(829)	(936)	(1092)	(1189)	(1116)	(1165)	(1055)	(1012)	(9609)

Note: Transition matrix of household income deciles between 1997 and 2002. Deciles are computed separately for each year using post-government household income, based on the German Socio-Economic Panel (SOEP). All statistics are weighted using the cross-sectional weights provided in the dataset. Cell entries report row percentages, with absolute frequencies in parentheses.

A.4 Transitions in Attitudes from 1997 to 2002

Table A3: Transitions in Attitudes Towards State's Role in Financial Security from 1997 to 2002

Attitudes	Changes									Total
	-4	-3	-2	-1	0	1	2	3	4	
Financial security of families	0.21% (20)	0.80% (75)	6.60% (621)	20.45% (1,923)	44.45% (4,180)	20.32% (1,911)	6.40% (602)	0.65% (61)	0.14% (13)	100.00% (9,406)
Financial security when unemployed	0.09% (8)	0.39% (36)	6.01% (565)	22.13% (2,080)	42.85% (4,028)	22.24% (2,091)	5.68% (534)	0.46% (43)	0.14% (13)	100.00% (9,398)
Financial security when sick	0.05% (5)	0.37% (34)	4.72% (444)	19.35% (1,819)	46.65% (4,384)	22.59% (2,123)	5.78% (543)	0.39% (37)	0.11% (10)	100.00% (9,399)
Financial security for old-age	0.08% (8)	0.50% (47)	6.61% (624)	21.21% (1,999)	45.91% (4,327)	19.11% (1,802)	5.78% (545)	0.59% (56)	0.20% (19)	100.00% (9,427)
Financial security when requiring care	0.08% (8)	0.32% (30)	5.55% (523)	20.49% (1,932)	46.76% (4,408)	20.71% (1,952)	5.62% (530)	0.36% (34)	0.10% (9)	100.00% (9,426)

Note: This table reports transitions in attitudes toward state responsibility between 1997 and 2002. The original variable is coded on a five-point scale, from 1 = only private forces should be responsible to 5 = only the state should be responsible. Changes are computed as the 2002 value minus the 1997 value. Negative values indicate movement toward greater support for private responsibility, while positive values indicate movement toward greater support for state responsibility. For example, a change of -4 corresponds to a shift from 5 to 1. All statistics are weighted using the cross-sectional weights provided in the dataset. The total number of observations ranges between 9,398 and 9,427 depending on the variable. Source: SOEP.

A.5 Attrition analysis

This appendix examines whether the individuals retained in the estimation sample (observed in both 1997 and 2002) differ systematically from those lost to attrition (observed in 1997 but not in 2002). Of the 13,195 individuals observed in 1997, 9,609 (72.8%) are retained and 3,586 (27.2%) are lost. This attrition rate is consistent with what is reported for other five-year panel windows in the SOEP (Spieß and Kroh, 2008).

Table A4 reports means of 1997 characteristics for each group and the difference between them. Lost individuals are on average slightly poorer (log household income 10.13 vs. 10.18, $p < 0.001$), less often in full-time employment (41.0% vs. 46.1%, $p < 0.001$), more often male (50.3% vs. 47.7%, $p = 0.01$), more often resident in the West (74.9% vs. 71.4%, $p < 0.001$), and less educated (χ^2 test, $p < 0.001$). They also hold slightly more pro-state attitudes on four of the five domains—family (+0.04, $p = 0.01$), sickness (+0.04, $p = 0.009$), old-age (+0.07, $p < 0.001$), and care (+0.03, $p = 0.03$)—with no significant difference on unemployment.

Table A5 reports a probit regression of retention on all 1997 characteristics jointly. The joint test rejects the null that attrition is unrelated to observables ($\chi^2(12) = 125.8$, $p < 0.001$), confirming that selection is statistically detectable. However, the pseudo-R^2 is 0.0089, indicating that observable 1997 characteristics jointly explain less than 1% of the variation in retention. The magnitudes of the differences in Table A4 are also small—the income gap corresponds to roughly one-tenth of a standard deviation, and attitude differences are on the order of 5% of a standard deviation.

Table A4: Means of 1997 characteristics: retained vs. lost individuals

Variable	Lost	Retained	Difference	p-value
Log household income (post-gov.)	10.128	10.179	−0.051	< 0.001
Age	43.31	43.63	−0.32	0.33
Att. family (1–5)	3.405	3.361	+0.044	0.010
Att. unemployment (1–5)	3.916	3.927	−0.011	0.49
Att. sickness (1–5)	3.496	3.454	+0.042	0.009
Att. old-age (1–5)	3.576	3.505	+0.071	< 0.001
Att. care (1–5)	3.589	3.554	+0.035	0.027
Female (%)	49.7	52.3	−2.5	0.010
East Germany (%)	25.1	28.6	−3.5	< 0.001
Full-time employed (%)	41.0	46.1	−5.1	< 0.001
Education: Low (%)	27.9	21.1		
Education: Medium (%)	56.9	60.2		$< 0.001^{\dagger}$
Education: High (%)	15.2	18.8		
N	3,586	9,609		

Notes: p-values from two-sample t-tests with equal variances, except for Education ($^{\dagger}\chi^2$ test). Sample restricted to individuals observed in 1997.

Table A5: Probit of retention on 1997 characteristics

	Coefficient	Std. error
Log household income	0.077**	0.025
Age	0.001	0.001
Female	0.119***	0.026
East Germany	0.081**	0.029
Att. family (1997)	−0.023	0.016
Att. unemployment (1997)	0.061***	0.018
Att. sickness (1997)	−0.014	0.020
Att. old-age (1997)	−0.056**	0.019
Att. care (1997)	−0.007	0.019
Education: Medium	0.160***	0.031
Education: High	0.203***	0.042
Full-time employed	0.084**	0.028
Constant	−0.345	0.270
N	12,280	
Pseudo R^2	0.0089	
Joint test $\chi^2(12)$	125.8	
p-value (joint)	< 0.001	

Notes: Dependent variable is 1 if the individual is observed in both 1997 and 2002, 0 if observed only in 1997. Education base category: Low. Significance: $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

B. Appendix B

B.1 Cross-section regressions on support for the welfare state

We estimate the following pooled cross-sectional model, which relates individual attitudes towards public provision to contemporaneous income and demographics:

$$Preference_{idt} = \alpha_0 + \gamma_1 \ln(Income)_{it} + \gamma_2 X_{it} + \gamma_3 Year_t + \varepsilon_{it} \tag{2}$$

In this specification, $Preference_{idt}$ is the reported level of support for state provision in domain d by individual i in year t (1997 or 2002), measured on a 5-point scale ranging from "Only the private sector" to "Only the state." The main explanatory variable is the log of post-government household income $\ln(Income)_{it}$. The vector X_{it} includes individual characteristics such as age, age squared, gender, education, and region of residence (East vs. West). A year dummy ($Year_t$) is included to account for aggregate temporal shifts in attitudes. Standard errors are clustered at the individual level to account for repeated observations. This model allows us to compare standard cross-sectional estimates with the panel results discussed in the main text.

Table B1: Cross-sectional Regressions on Attitudes (1997 and 2002)

	(1) Family	(2) Unemployment	(3) Sickness	(4) Old Age	(5) Care
Ln(Income)	-0.105***	-0.113***	-0.132***	-0.147***	-0.115***
	(0.0134)	(0.0124)	(0.0120)	(0.0129)	(0.0119)
Age	0.00702***	0.00526**	0.00922***	0.00703***	0.00340
	(0.00258)	(0.00242)	(0.00239)	(0.00250)	(0.00234)
Age^2	-0.0000691***	-0.0000481**	-0.0000871***	-0.0000565**	-0.0000338
	(0.0000263)	(0.0000244)	(0.0000243)	(0.0000251)	(0.0000235)
Female	0.0163	0.0318**	0.0452***	0.00987	-0.00559
	(0.0138)	(0.0130)	(0.0128)	(0.0137)	(0.0126)
Edu (Medium)	-0.140***	-0.0547***	-0.132***	-0.137***	-0.0874***
	(0.0188)	(0.0175)	(0.0174)	(0.0184)	(0.0177)
Edu (High)	-0.157***	-0.127***	-0.240***	-0.233***	-0.134***
	(0.0234)	(0.0220)	(0.0217)	(0.0225)	(0.0215)
East	0.267***	0.263***	0.215***	0.217***	0.162***
	(0.0156)	(0.0145)	(0.0144)	(0.0155)	(0.0142)
Year = 2002	0.00437	0.0132	0.0764***	-0.0112	0.0238**
	(0.0113)	(0.0108)	(0.0104)	(0.0110)	(0.0105)
Observations	18,566	18,553	18,560	18,587	18,584
R-squared	0.029	0.032	0.037	0.034	0.019

Note: The dependent variables represent the support for state versus private sector intervention in financial security in different situations: for the family, when unemployed, when sick, when old, and when requiring care. The explanatory variables include the ln(income), gender (men as reference), age, age squared, education levels (as a reference the least advanced education level), living in the East region, and the year fixed effects. The coefficients are estimated using linear regression models, and standard errors are clustered at the individual (pid). Significance levels are indicated by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table B1 presents the results. As expected, we find a significant negative correlation between income and support for public provision: higher-income individuals express weaker preferences for state involvement in financial security. The coefficients are slightly larger (in absolute value) than those from the first-difference models, highlighting upward bias due to time-invariant unobserved heterogeneity in cross-sectional estimates.

B.2 Basic regression without initial attitude

We estimate a simplified version of the first-difference model to assess the impact of excluding baseline preferences:

$$\Delta Preference_{id} = \delta_0 + \beta_1 \Delta \ln(Income)_i + \beta_2 \ln(Income)_i^{1997} + \beta_3 X_i + \Delta u_i \qquad (3)$$

The main difference with the baseline model is the omission of $Preference_{id}^{1997}$, which may capture persistence in attitudes. Omitting this variable may bias the coefficient on income change if changes in income are correlated with prior attitudes.

Table B2: First-Difference Models Without Baseline Attitude Controls

	Dependent variable: Δ Responsibility for financial security...				
	...of the family	...when unemployed	...when sick	...when old	...when requiring care
Δ Ln(Income)	-0.0156	-0.0256	-0.0276	-0.0121	-0.0223
	(0.0267)	(0.0244)	(0.0243)	(0.0232)	(0.0227)
Initial Ln(Income)	-0.0530**	0.00654	0.00169	0.00902	-0.00549
	(0.0252)	(0.0244)	(0.0232)	(0.0240)	(0.0224)
Age	-0.000922	0.00354	0.00119	0.00469	0.00139
	(0.00438)	(0.00428)	(0.00409)	(0.00435)	(0.00405)
Age^2	-0.0000164	-0.0000387	-0.0000259	-0.0000615	-0.0000283
	(0.0000423)	(0.0000413)	(0.0000391)	(0.0000420)	(0.0000390)
Female	0.00445	-0.00666	-0.0111	-0.0164	0.00416
	(0.0222)	(0.0213)	(0.0203)	(0.0214)	(0.0204)
Edu (Medium)	0.0651*	0.0226	0.0349	0.0217	0.0182
	(0.0340)	(0.0326)	(0.0313)	(0.0335)	(0.0324)
Edu (High)	0.0671*	-0.0424	-0.00413	-0.0395	0.0786**
	(0.0397)	(0.0382)	(0.0364)	(0.0383)	(0.0369)
East	0.0134	-0.0724***	-0.0411*	-0.0448*	-0.0576**
	(0.0244)	(0.0231)	(0.0229)	(0.0239)	(0.0228)
Observations	9,385	9,376	9,377	9,405	9,404
R-squared	0.002	0.002	0.002	0.002	0.002

Note: The dependent variables represent changes in support for state versus private sector intervention in financial security in different situations: for the family, when unemployed, when sick, when old, and when requiring care. These values range from -4 to 4, with -4 indicating a change from the most favorable position for state responsibility (5) to the most favorable position for private sector responsibility (1) between 1997 and 2002. The explanatory variables include changes of ln(income), the ln(income) in 1997, gender (men as reference), age, age squared, education levels (as a reference the least advanced education level), and living in the East region. The coefficients are estimated using first-difference models, and standard errors are clustered at the individual (pid). Significance levels are indicated by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

As shown in table B2, when omitting baseline attitudes from the first-difference model, the estimated effect of income change becomes small and statistically insignificant across all outcomes. This is consistent with expectations, given the structure of our dependent variable: ΔPreference is a bounded change score derived from a five-point ordinal scale, ranging from –4 to +4. In such settings, the absence of baseline controls generates mechanical constraints: respondents at the top of the scale in 1997 can only decrease in support, while those at the bottom can only increase. If initial attitudes are correlated with income levels—as is well documented in the literature—failing to control for baseline support induces attenuation bias in the coefficient of income change. More formally, the marginal effect of $\Delta \ln(\text{Income})$ on ΔPreference is heterogeneous and depends on the available room for movement, which itself is a function of Preference^{1997}. Conditioning on baseline attitudes absorbs this source of bias and allows us to recover the average marginal effect of income change across the full support of initial preferences. This reinforces the importance of including lagged dependent variables in difference models, particularly when dealing with bounded ordinal constructs.

B.3 Additional interaction analysis

Table B3: Heterogeneous Effects of Income Change on Redistribution Preferences

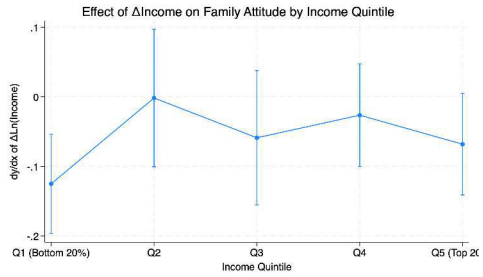
	Dependent variable: Δ Responsibility for financial security...				
	...of the family	...when unemployed	...when sick	...when old	...when requiring care
Panel A: Interaction with Birth Cohorts (Ref = Cohort 1)					
ΔLn(Income)	-0.0404	-0.0851***	-0.104***	-0.0936***	-0.0861***
	(0.0279)	(0.0268)	(0.0261)	(0.0244)	(0.0244)
ΔLn(Income) × Cohort 2	-0.0560	-0.00193	0.00368	-0.0436	0.00130
	(0.0402)	(0.0387)	(0.0372)	(0.0367)	(0.0367)
ΔLn(Income) × Cohort 3	-0.0601	0.00949	-0.00668	-0.0406	-0.0200
	(0.0485)	(0.0446)	(0.0411)	(0.0408)	(0.0406)
Observations	9,385	9,376	9,377	9,405	9,404
R-squared	0.413	0.402	0.395	0.415	0.419
Panel B: Interaction with Political Orientation (Ref = Left)					
ΔLn(Income) (Left)	-0.0534	-0.0482	-0.0838**	-0.0724**	-0.0575*
	(0.0403)	(0.0373)	(0.0350)	(0.0342)	(0.0327)
ΔLn(Income) × Centre	-0.00599	-0.0501	-0.0178	-0.0416	-0.0339
	(0.0445)	(0.0417)	(0.0390)	(0.0383)	(0.0372)
ΔLn(Income) × Right	-0.0528	-0.00265	0.00415	-0.0567	-0.0266
	(0.0583)	(0.0537)	(0.0530)	(0.0492)	(0.0497)
Observations	9,297	9,287	9,290	9,317	9,315
R-squared	0.414	0.403	0.397	0.419	0.420
Panel C: Interaction with Gender (Ref = Men)					
ΔLn(Income) (Men)	-0.0750**	-0.0843***	-0.0852***	-0.117***	-0.0424
	(0.0299)	(0.0280)	(0.0268)	(0.0269)	(0.0260)
ΔLn(Income) × Woman	0.00440	0.00226	-0.0275	0.00570	-0.0789**
	(0.0360)	(0.0338)	(0.0322)	(0.0319)	(0.0312)
Observations	9,385	9,376	9,377	9,405	9,404
R-squared	0.413	0.402	0.395	0.414	0.419
Panel D: Interaction with Region (Ref = West)					
ΔLn(Income) (West)	-0.0718***	-0.0687***	-0.106***	-0.109***	-0.0832***
	(0.0233)	(0.0218)	(0.0207)	(0.0203)	(0.0196)
ΔLn(Income) × East	-0.00234	-0.0557	0.0172	-0.0158	-0.0202
	(0.0379)	(0.0363)	(0.0368)	(0.0357)	(0.0361)
Observations	9,385	9,376	9,377	9,405	9,404
R-squared	0.413	0.402	0.395	0.414	0.419
Panel E: Interaction with Initial Attitude Groups (Ref = Low Support in 1997)					
ΔLn(Income) (Low support)	-0.116**	-0.203	-0.158**	-0.267***	-0.126
	(0.0570)	(0.125)	(0.0653)	(0.0736)	(0.0916)
ΔLn(Income) × Mid support	0.0714	0.0872	0.0404	0.189**	0.0507
	(0.0607)	(0.129)	(0.0677)	(0.0758)	(0.0937)
ΔLn(Income) × High support	0.0481	0.174	0.110	0.171**	0.0610
	(0.0654)	(0.127)	(0.0696)	(0.0775)	(0.0945)
Observations	9,385	9,376	9,377	9,405	9,404
R-squared	0.356	0.297	0.337	0.354	0.353

Note: The dependent variables represent changes in support for state versus private sector intervention in financial security in different situations: for the family, when unemployed, when sick, when old, and when requiring care. These values range from -4 to 4, with -4 indicating a change from the most favorable position for state responsibility (5) to the most favorable position for private sector responsibility (1) between 1997 and 2002. All regressions include the following control variables: the initial attitude (1997 attitude), the 1997 ln(income), gender, age, age squared, education levels, and region of residence (East/West). The coefficients are estimated using first-difference models, and standard errors are clustered at the individual (pid). Significance levels are indicated by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

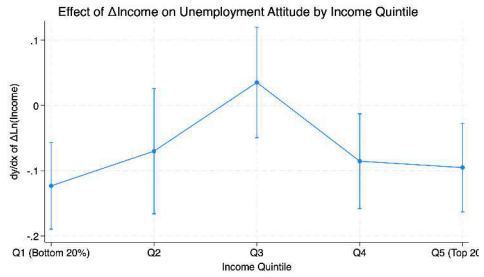
As seen in Table B3, none of the interaction terms are statistically significant in Panels A to D, suggesting that the effect of income variation on redistributive preferences does not significantly differ by birth cohort, political orientation, gender, or region. Panel E suggests that individuals with initially low support for redistribution are more responsive to income changes in terms of attitude shifts, compared to those with medium or high initial support. Yet, the interaction terms are statistically significant only for old-age protection, indicating that this heterogeneous effect is domain-specific rather than general.

B.4 Marginal Effect of Income Change on Attitude Change, by Initial Income Quintile

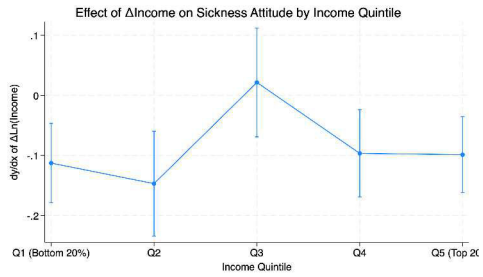
This subsection reports marginal effects derived from interaction models between income change and initial income quintiles. Figure B.1 plots the marginal effect of income change separately for each quintile, across the five dimensions of financial security. Table III reports the corresponding exact average marginal effects. In each subplot, the y-axis indicates the estimated impact of a one-log-point rise in household income on the change in support for state responsibility, with the third quintile (Q3) serving as the reference group. This approach allows us to visualize and quantify whether individuals at the extremes of the income distribution react more strongly to income variation.



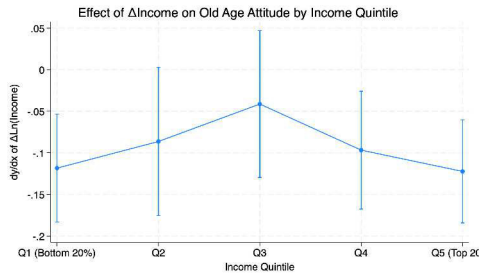
(a) Family



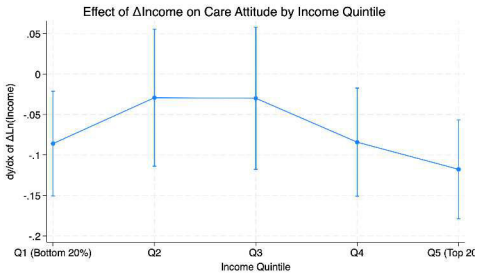
(b) Unemployment



(c) Sickness



(d) Old-age



(e) Care

Figure B.1: Interaction between Income Change and Initial Income Quintiles across Redistributive Items

C. Appendix C

C.1 Ordered logit

Table C1: Ordered Logit Models for Changes in Attitudes (1997–2002)

	Dependent variable: Δ Responsibility for financial security...				
	...of the family	...when unemployed	...when sick	...when old	...when requiring care
main					
Δ ln(Income)	-0.171***	-0.211***	-0.273***	-0.284***	-0.244***
	(0.0464)	(0.0477)	(0.0476)	(0.0448)	(0.0457)
Initial Att. (1997)	-1.896***	-1.883***	-2.004***	-1.916***	-2.127***
	(0.0327)	(0.0286)	(0.0345)	(0.0324)	(0.0357)
Initial Ln(Income)	-0.320***	-0.268***	-0.320***	-0.338***	-0.300***
	(0.0450)	(0.0484)	(0.0460)	(0.0454)	(0.0461)
Age	0.00730	0.0115	0.0130	0.0126	-0.000380
	(0.00795)	(0.00853)	(0.00839)	(0.00839)	(0.00823)
Age^2	-0.000109	-0.000117	-0.000150*	-0.000134*	-0.0000351
	(0.0000775)	(0.0000823)	(0.0000807)	(0.0000809)	(0.0000793)
Female	0.0302	0.0388	0.0660	-0.0144	-0.0194
	(0.0400)	(0.0421)	(0.0410)	(0.0409)	(0.0412)
Edu (Medium)	-0.133**	-0.0364	-0.162**	-0.210***	-0.139**
	(0.0622)	(0.0644)	(0.0641)	(0.0641)	(0.0663)
Edu (High)	-0.163**	-0.265***	-0.429***	-0.459***	-0.158**
	(0.0726)	(0.0764)	(0.0743)	(0.0732)	(0.0757)
East	0.472***	0.422***	0.338***	0.314***	0.243***
	(0.0454)	(0.0480)	(0.0479)	(0.0477)	(0.0476)
Observations	9,385	9,376	9,377	9,405	9,404
Log-likelihood	-11178	-11088	-10544	-10910	-10465

Note: The dependent variables represent changes in support for state versus private sector intervention in financial security in different situations: for the family, when unemployed, when sick, when old, and when requiring care. These values range from -4 to 4, with -4 indicating a change from the most favorable position for state responsibility (5) to the most favorable position for private sector responsibility (1) between 1997 and 2002. The explanatory variables include changes of ln(income), the corresponding attitude in 1997, the ln(income) in 1997, gender (men as reference), age, age squared, education levels (as a reference the least advanced education level), and living in the East region. The coefficients are estimated using first-difference ordered logit models, and standard errors are clustered at the individual (pid). Significance levels are indicated by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

C.2 Binary variable

Table C2: FD Models with binary version of attitudes (instead of 5 categories)

	Dependent variable: Δ Responsibility for financial security...				
	...of the family	...when unemployed	...when sick	...when old	...when requiring care
Δ Ln(Income)	-0.0369***	-0.0529***	-0.0672***	-0.0554***	-0.0547***
	(0.0109)	(0.0105)	(0.0110)	(0.0109)	(0.0110)
Initial Att. (1997)	-0.818***	-0.824***	-0.805***	-0.799***	-0.813***
	(0.0102)	(0.0106)	(0.0103)	(0.0101)	(0.0101)
Initial Ln(Income)	-0.0600***	-0.0470***	-0.0682***	-0.0706***	-0.0644***
	(0.0107)	(0.0108)	(0.0110)	(0.0109)	(0.0111)
Age	0.00108	0.00301	0.00253	0.00171	-0.00226
	(0.00189)	(0.00186)	(0.00197)	(0.00197)	(0.00199)
Age^2	-0.0000208	-0.0000362**	-0.0000335*	-0.0000228	0.00000848
	(0.0000182)	(0.0000180)	(0.0000190)	(0.0000191)	(0.0000192)
Female	0.00306	0.0161*	0.0125	-0.0124	-0.00574
	(0.00974)	(0.00945)	(0.01000)	(0.00990)	(0.0101)
Edu (Medium)	-0.0294**	0.00695	-0.0313**	-0.0448***	-0.0188
	(0.0149)	(0.0143)	(0.0152)	(0.0152)	(0.0152)
Edu (High)	-0.0423**	-0.0449***	-0.0987***	-0.104***	-0.0266
	(0.0175)	(0.0171)	(0.0178)	(0.0177)	(0.0180)
East	0.108***	0.0845***	0.0871***	0.0842***	0.0635***
	(0.0114)	(0.0104)	(0.0115)	(0.0114)	(0.0116)
Observations	9,585	9,585	9,585	9,585	9,585
R-squared	0.414	0.412	0.398	0.403	0.405

Note: The dependent variables represent the binary versions of changes in support for state versus private sector intervention in financial security in different situations: for the family, when unemployed, when sick, when old, and when requiring care. These values range from -1 to 1 (-1, 0 and 1), with -1 indicating a change from favorable position for state responsibility (1) to the a favorable position for private sector responsibility (0) between 1997 and 2002. The coefficients are estimated using first-difference models, and standard errors are clustered at the individual (pid). Significance levels are indicated by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

C.3 Income deciles

Table C3: First-Difference Models with Income Deciles

	Dependent variable: Δ Responsibility for financial security...				
	...of the family	...when unemployed	...when sick	...when old	...when requiring care
Δ Income Decile	-0.0111***	-0.0133***	-0.0137***	-0.0170***	-0.0146***
	(0.00404)	(0.00383)	(0.00375)	(0.00376)	(0.00367)
Initial Att. (1997)	-0.784***	-0.796***	-0.768***	-0.771***	-0.799***
	(0.0109)	(0.0109)	(0.0108)	(0.0106)	(0.0106)
Initial Decile (1997)	-0.0298***	-0.0234***	-0.0245***	-0.0263***	-0.0231***
	(0.00382)	(0.00374)	(0.00362)	(0.00374)	(0.00351)
Age	0.00367	0.00572*	0.00573*	0.00542	0.00132
	(0.00340)	(0.00331)	(0.00321)	(0.00333)	(0.00312)
Age²	-0.0000525	-0.0000573*	-0.0000630**	-0.0000564*	-0.0000248
	(0.0000332)	(0.0000319)	(0.0000309)	(0.0000322)	(0.0000302)
Female	0.0156	0.0224	0.0294*	-0.00319	-0.00262
	(0.0170)	(0.0164)	(0.0158)	(0.0164)	(0.0155)
Edu (Medium)	-0.0604**	-0.0149	-0.0705***	-0.0924***	-0.0501**
	(0.0262)	(0.0248)	(0.0243)	(0.0253)	(0.0249)
Edu (High)	-0.0703**	-0.100***	-0.171***	-0.189***	-0.0530*
	(0.0306)	(0.0295)	(0.0284)	(0.0292)	(0.0286)
East	0.203***	0.160***	0.130***	0.129***	0.0888***
	(0.0190)	(0.0186)	(0.0183)	(0.0189)	(0.0178)
Observations	9,387	9,378	9,379	9,407	9,406
R-squared	0.413	0.402	0.395	0.413	0.418

Note: The dependent variables represent changes in support for state versus private sector intervention in financial security in different situations: for the family, when unemployed, when sick, when old, and when requiring care. These values range from -4 to 4, with -4 indicating a change from the most favorable position for state responsibility (5) to the most favorable position for private sector responsibility (1) between 1997 and 2002. The explanatory variables include changes of incomes deciles, the corresponding attitude in 1997, the income deciles in 1997, gender (men as reference), age, age squared, education levels (as a reference the least advanced education level), and living in the East region. The coefficients are estimated using first-difference models, and standard errors are clustered at the individual (pid). Significance levels are indicated by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

C.4 Robustness to a different and a larger window (2002–2017)

Table C4 reproduces the first-difference specification on the 2002–2017 SOEP subsample. The estimates for $\Delta \ln(\text{Income})$ remain negative and highly significant across all five welfare domains (ranging from –0.076 to –0.122), thus confirming that increases in real disposable income are systematically associated with declining support for state responsibility.

While these results corroborate the direction and significance of the baseline findings (1997–2002), some caution is warranted when comparing magnitudes. The coefficients in Table C4 capture the cumulative effect of income changes over a fifteen-year span, whereas those in the main Table (Table I) reflect a five-year interval. Because first differences absorb the full temporal gap, raw estimates are not directly comparable: annualised effects from the earlier period are approximately three times larger.

This robustness check reinforces the conclusion that the sign of the income effect is stable across periods. However, we rely on the 1997–2002 window as our baseline, as it ensures temporal proximity and interpretability. That shorter window allows us to better isolate short-run adjustments in redistributive attitudes while minimizing confounding from broader macroeconomic or institutional transformations. In contrast, the 2002–2017 period includes major structural changes in Germany (e.g., Hartz reforms, global financial crisis, refugee inflows), which may independently shape welfare preferences over the

long run.

Table C4: First-Differences Models with Baseline Attitude and Income Controls [2002-2017]

	Dependent variable: Δ Responsibility for financial security...				
	...of the family	...when unemployed	...when sick	...when old	...when requiring care
Δ Ln(Income)	-0.0826***	-0.0967***	-0.0756***	-0.121***	-0.0798***
	(0.0207)	(0.0202)	(0.0199)	(0.0208)	(0.0193)
Initial Att. (2002)	-0.817***	-0.863***	-0.833***	-0.823***	-0.827***
	(0.0127)	(0.0123)	(0.0129)	(0.0129)	(0.0130)
Initial Ln(Income)	-0.123***	-0.117***	-0.146***	-0.174***	-0.0766***
	(0.0225)	(0.0219)	(0.0208)	(0.0214)	(0.0200)
Age	-0.00225	0.00549	-0.00306	0.000633	-0.00379
	(0.00599)	(0.00590)	(0.00569)	(0.00586)	(0.00553)
Age^2	-0.00000455	-0.0000634	-0.0000121	-0.0000447	0.00000100
	(0.0000496)	(0.0000488)	(0.0000466)	(0.0000481)	(0.0000453)
Female	-0.0188	-0.0202	-0.000636	-0.0405**	-0.0224
	(0.0200)	(0.0195)	(0.0189)	(0.0199)	(0.0183)
Edu (Medium)	-0.0137	0.0304	0.00980	0.000211	0.00217
	(0.0436)	(0.0417)	(0.0414)	(0.0430)	(0.0413)
Edu (High)	0.0252	0.0372	-0.0119	-0.0503	-0.0326
	(0.0468)	(0.0448)	(0.0445)	(0.0460)	(0.0438)
East	0.144***	0.0679***	0.147***	0.142***	0.114***
	(0.0238)	(0.0226)	(0.0224)	(0.0230)	(0.0216)
Observations	6,559	6,577	6,597	6,608	6,607
R-squared	0.425	0.459	0.429	0.418	0.419

Note: The dependent variables represent changes in support for state versus private sector intervention in financial security in different situations: for the family, when unemployed, when sick, when old, and when requiring care. These values range from -4 to 4, with -4 indicating a change from the most favorable position for state responsibility (5) to the most favorable position for private sector responsibility (1) between 2002 and 2017. The explanatory variables include changes of ln(income), the corresponding attitude in 2002, the ln(income) in 2002, gender (men as reference), age, age squared, education levels (as a reference the least advanced education level), and living in the East region. The coefficients are estimated using first-difference models, and standard errors are clustered at the individual (pid). Significance levels are indicated by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

C.5 Controlling for transitions in full-time employment status

Table C5: Distribution of Transitions in Full-Time Employment Status (1997–2002)

Transition status	Freq.	Percent	Cum.
Stayed non-full-time	4,759	49.52	49.52
Entered full-time	424	4.42	53.94
Exited full-time	518	5.39	59.33
Stayed full-time	3,908	40.67	100
Total	9,609	100	

Note: This variable captures individual transitions in full-time employment between 1997 and 2002. We construct a binary indicator of full-time employment in each year based on self-declared employment status (`plh0022_h`). We then define four categories: (0) Stayed non-full-time: not in full-time employment in either year; (1) Entered full-time: not full-time in 1997, but full-time in 2002; (2) Exited full-time: full-time in 1997, but not in 2002; (3) Stayed full-time: full-time in both years. These categories form the variable `EmplStatus_transition`, used as a control in robustness checks.

Table C6: First-Difference Models with Employment Transitions

	Dependent variable: Δ Responsibility for financial security...				
	...of the family	...when unemployed	...when sick	...when old	...when requiring care
Δ Log Income	-0.0653***	-0.0772***	-0.0987***	-0.112***	-0.0874***
	(0.0201)	(0.0189)	(0.0184)	(0.0179)	(0.0175)
Initial Att. (1997)	-0.784***	-0.796***	-0.768***	-0.772***	-0.799***
	(0.0109)	(0.0109)	(0.0108)	(0.0106)	(0.0130)
Initial Income (1997)	-0.135***	-0.105***	-0.126***	-0.133***	-0.115***
	(0.0193)	(0.0189)	(0.0179)	(0.0184)	(0.0174)
Entered Full-time	-0.0422	0.0120	-0.0351	0.0359	0.0284
	(0.0338)	(0.0337)	(0.0323)	(0.0338)	(0.0318)
Exited Full-time	0.0190	0.0657**	0.0207	-0.00248	0.0399
	(0.0286)	(0.0279)	(0.0276)	(0.0287)	(0.0268)
Stayed Full-time	-0.0406*	-0.00816	-0.00375	-0.0195	0.0136
	(0.0234)	(0.0227)	(0.0218)	(0.0228)	(0.0215)
Age	0.00374	0.00524	0.00511	0.00728**	0.000867
	(0.00359)	(0.00345)	(0.00334)	(0.00349)	(0.00325)
Age²	-0.0000568	-0.0000516	-0.0000591*	-0.0000738**	-0.0000178
	(0.0000353)	(0.0000335)	(0.0000324)	(0.0000339)	(0.0000315)
Female	0.00322	0.0210	0.0279	-0.00961	0.00138
	(0.0183)	(0.0179)	(0.0172)	(0.0179)	(0.0169)
Edu (Medium)	-0.0599**	-0.0165	-0.0681***	-0.0898***	-0.0506**
	(0.0263)	(0.0248)	(0.0243)	(0.0253)	(0.0250)
Edu (High)	-0.0695**	-0.106***	-0.167***	-0.186***	-0.0562**
	(0.0307)	(0.0296)	(0.0285)	(0.0292)	(0.0286)
East	0.209***	0.162***	0.130***	0.130***	0.0902***
	(0.0190)	(0.0186)	(0.0182)	(0.0188)	(0.0177)
Observations	9,385	9,376	9,377	9,405	9,404
R-squared	0.413	0.403	0.395	0.414	0.419

Note: The dependent variables represent changes in support for state versus private sector intervention in financial security in different situations: for the family, when unemployed, when sick, when old, and when requiring care. These values range from -4 to 4, with -4 indicating a change from the most favorable position for state responsibility (5) to the most favorable position for private sector responsibility (1) between 1997 and 2002. The explanatory variables include changes of ln(income), the corresponding attitude in 2002, the ln(income) in 2002, the full-time employment status (stayed non full-time as reference), gender (men as reference), age, age squared, education levels (as a reference the least advanced education level), and living in the East region. The coefficients are estimated using first-difference models, and standard errors are clustered at the individual (pid). Significance levels are indicated by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

C.6 Placebo tests

We use attitudinal items from the SOEP's *"Worries"* battery to perform placebo tests (see table C7). These questions are not directly related to welfare-state preferences and follow the same wording and response format. We focus on three items—concerns about economic development, peace, and crime—as placebo outcomes. A change in income should not systematically affect these attitudes if our main findings are not driven by general shifts in opinion. We also include concern about one's own financial situation, not as a placebo, but as a validation check: income growth should plausibly reduce financial worries. A significant effect in that case would confirm that the battery captures meaningful variation in subjective concern.

Table C7: SOEP worry items used in placebo and validation tests

Label in text	**Question (English translation)**	**SOEP code**
Finances (validation)	"How concerned are you about **your own financial situation**?"	`plh0033`
Economic development	"How concerned are you about **economic development in Germany**?"	`plh0032`
Peace	"How concerned are you about **maintaining peace**?"	`plh0038`
Crime	"How concerned are you about **crime in Germany**?"	`plh0040`

All items use the same three-point scale: 1 = *Great worry*, 2 = *Some worry*, 3 = *No worry at all*. Missing values (`-1`) are dropped. We compute:

$$\Delta\, Worry_{id} \;=\; Worry_{id,2002} \;-\; Worry_{id,1997},$$

ranging from -2 (increased concern) to $+2$ (decreased concern).[7] Each regression includes the initial level of concern to account for baseline differences. Positive values of $\Delta\, Worry$ indicate a decline in concern between 1997 and 2002; negative values indicate a rise in anxiety. We run the following regressions (see table C8) using an equivalent of equation (1).

As we can see in the Table C8, the placebo exercise reinforces the credibility of our identification strategy. Column (1) shows that a rise in household disposable income significantly *reduces* concern about one's *own* financial situation (-0.18 scale points per log–point gain, $p < 0.01$). The sign and significance are intuitive: higher resources ease subjective financial anxiety, so the model is able to pick up meaningful attitudinal shifts when they are closely linked to material conditions.

By contrast, Columns (2)–(4) reveal *no* detectable relationship between income changes and worries that are plausibly orthogonal to household budgets—the overall state of the economy, the maintenance of peace, or crime in Germany. In all three cases the point estimates are close to zero and far from statistical significance, whereas baseline worries remain highly persistent (coefficients around -0.60 to -0.71).

Taken together, these results confirm that our first–difference specification does not mechanically generate spurious correlations between $\Delta \ln Y$ and any attitudinal outcome: it registers a response only when there is a clear conceptual channel. This lends additional support to the main finding that income gains erode solidarity–related preferences, rather than reflecting some generic tendency for respondents to update *all* attitudes in tandem with income.

[7] While ordinal, the scale is evenly spaced, making first differences interpretable.

Table C8: Placebo Tests (1997–2002): ΔIncome → Δ Worries

	(1) Finances	(2) Econ-Dev	(3) Peace	(4) Crime
Δ Ln(Income)	0.177***	0.0111	0.00861	-0.0114
	(0.0151)	(0.0130)	(0.0145)	(0.0137)
Initial worry about Finances	-0.620***			
	(0.0102)			
Initial worry about Economics		-0.709***		
		(0.0106)		
Initial worry about Peace			-0.619***	
			(0.00928)	
Initial worry about Crime				-0.592***
				(0.0117)
Controls	Yes	Yes	Yes	Yes
Obs.	9,521	9,533	9,505	9,479
R^2	0.305	0.357	0.337	0.244

Note: The dependent variables represent changes in self-reported worries between 1997 and 2002, measured on a three-point scale (1 = Great worry, 2 = Some worry, 3 = No worry at all). The resulting first-difference variables range from –2 (increased concern) to +2 (declined concern). Explanatory variables include changes in ln(income), baseline concern in 1997, initial income level, gender (men as reference), age and age squared, education levels (reference: lowest level), and residence in East Germany. Coefficients are estimated using first-difference models; standard errors are clustered at the individual level (pid). Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.