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Financial Well-Being, Interpersonal Trust, and Regional Context in Europe: Evidence from Multilevel Models

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ABSTRACT

Financial well-being combines the experience of managing immediate financial obligations with confidence about longer-term economic security. This study examines how these related but distinct perceptions vary with individual resources, psychological characteristics, and social capital across European regions. It reinterprets evidence from 4,598 participants located in 89 regions across twelve European countries, drawing on the European Social Survey and CRONOS-2. Two indicators distinguish current money-management stress, reverse-coded so that larger scores indicate less stress, from expected future financial security. Multilevel linear models separate individual departures from regional social-capital averages and between-region associations, with additional specifications controlling for regional economic and demographic conditions. Income and perceived control are strongly associated with both financial outcomes. Self-assessed financial knowledge is related primarily to expectations of future security, while informal social networks are associated chiefly with reduced present stress. Individual social and institutional trust correlate positively with both dimensions. At the regional level, average interpersonal trust remains positively associated with future security after adjustment for regional gross domestic product, unemployment, and age dependency. Cross-level interaction evidence is more limited and specification-sensitive. These results suggest that the social environment matters alongside personal financial resources, although observational associations do not establish causal pathways. The distinction between immediate strain and future confidence has implications for the design and evaluation of regional financial-well-being initiatives.

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1. INTRODUCTION

Financial well-being is increasingly understood as an assessment of financial circumstances rather than a simple reflection of income or accumulated wealth. Two people with similar earnings may differ markedly in the degree to which their finances constrain everyday life, or in how securely they expect to live in later years. Such differences are not merely semantic: present difficulties and future expectations may respond to different forms of

material support, knowledge, and social protection. The conceptual distinction therefore matters for empirical research that aims to explain variation in perceived financial conditions [1], [2].

Existing work has established substantial connections between financial well-being and broader life evaluations. Economic resources can widen choices and reduce exposure to hardship, yet they cannot fully account for confidence, uncertainty, or the emotional demands of managing money. Financial judgments are also situated within institutions and social relationships. The same household balance sheet may be interpreted differently depending on the reliability of employment, availability of assistance, and confidence that other people and public institutions will respond predictably. A complete explanation must therefore consider more than household characteristics.

European regions provide an informative setting for examining these issues. They differ in economic performance, demographic composition, and social norms, while residents within the same territory share some institutional and social conditions. Regional analysis also reveals patterns obscured by country-level averages. Nevertheless, a regional association can arise because particular individuals live in a region rather than because the regional environment itself shapes their experiences. Distinguishing these explanations is a central methodological concern, particularly when the focal explanatory variables are attitudes and networks that can be measured at both levels.

This study revisits a two-dimensional approach to financial well-being using data from the tenth round of the European Social Survey and the second wave of CRONOS-2 [3]. Current money-management stress and expected future financial security are analysed separately. Their different temporal orientations allow a test of whether resources associated with coping today are equally relevant to confidence in the future. Social capital is represented by interpersonal trust, confidence in institutions, informal relationships, formal networks, and political or associational engagement.

The analytical contribution is to distinguish individual and regional associations with these five social-capital components, while accounting for demographic and financial characteristics. A within–between specification compares individuals with others in the same region and separately considers how regional averages relate to outcomes. Regional economic conditions are then introduced to assess the stability of contextual coefficients. Finally, cross-level interaction models investigate whether the association between personal social capital and financial well-being varies according to the surrounding regional environment.

The results indicate a patterned rather than uniform relationship. Income and perceived control matter for both dimensions; subjective financial knowledge is more clearly associated with future expectations; and informal networks appear more relevant to current financial pressure. Individual trust is positively associated with both outcomes. By contrast, the regional findings are narrower: average social trust is the clearest contextual correlate of future financial security after economic adjustment. The interpretation developed below treats these estimates as associations, recognizes the limits of self-reported indicators, and avoids assuming that the geographic distribution of trust can be manipulated independently of broader institutions.

2. LITERATURE REVIEW

The definition of financial well-being has evolved from an emphasis on objective adequacy toward a broader conception incorporating the individual's evaluation of present circumstances and anticipated financial future. Brüggen and colleagues situate financial well-being within a network of individual characteristics, financial behaviours, and contextual conditions [1]. Netemeyer and colleagues develop measures that distinguish stress in managing money from expectations of future security [2]. This separation is analytically useful because confidence about retirement or long-term stability need not track the experience of meeting current obligations.

Current money-management stress concerns the immediate burden of financial affairs. It captures whether money problems restrict ordinary activities, dominate attention, or create a sense of being unable to keep up. Expected future financial security instead addresses the perceived likelihood of meeting goals and sustaining financial stability. These constructs can be correlated without being interchangeable. A household may be coping adequately with present bills while remaining concerned about retirement; conversely, temporary difficulties may coexist with confidence about long-run earning capacity.

Sociodemographic resources shape both dimensions, but their effects need not be identical. Income provides financial flexibility and the capacity to absorb shocks. Educational attainment may facilitate access to employment and financial information, although education does not guarantee favourable outcomes. Age reflects changing earnings, commitments, and time horizons. Gender differences may reflect unequal career trajectories and caregiving burdens rather than an inherent difference in financial competence. Accordingly, observed demographic coefficients should be interpreted in light of structural opportunities and the covariates included in each model.

Psychological resources add another explanatory layer. A sense of control captures the perceived ability to influence life circumstances. It may ease the emotional consequences of financial uncertainty even where objective constraints remain. Subjective financial knowledge, by comparison, represents confidence in one's

understanding of financial matters. It differs from tested literacy and can be influenced by self-assessment biases. Knowledge confidence may be particularly relevant to future security, where individuals must imagine their capacity to plan and adapt over a longer horizon.

Social capital offers a framework for examining relationships that extend beyond the individual balance sheet. Bourdieu emphasizes resources accessible through durable relationships [4]; Coleman focuses on features of social organization that facilitate action [5]; and Putnam draws attention to trust, norms, and networks that support coordination [6]. These traditions differ in emphasis, but each suggests that the resources embedded in relationships may affect how individuals respond to uncertainty and manage risks. Treating social capital as a single index, however, can obscure distinctions between trust, sociability, and civic activity.

Interpersonal trust may reduce perceived uncertainty by making cooperation and informal assistance seem more reliable. Institutional trust may similarly support expectations about the fairness and predictability of formal arrangements. Yet the two forms are not equivalent. A person may trust neighbours while distrusting political institutions, and regional averages of institutional confidence may reflect different historical and governance experiences. This distinction is important when estimating both individual and regional relationships with financial well-being.

Informal networks and formal participation represent further mechanisms. Regular social contact and close relationships can provide advice, emotional support, or practical assistance during a period of financial strain. Formal networks, including volunteering or organized participation, may create access to information and opportunities but can also demand time and resources. Political and associational engagement is even more ambiguous: participation may signify civic efficacy, but it may also arise from dissatisfaction, economic vulnerability, or mobilization around perceived injustices. A negative association between participation and financial confidence therefore should not automatically be interpreted as evidence that civic engagement is harmful.

Contextual approaches ask whether the characteristics of a region matter beyond the characteristics of its residents. Higher average trust might signal dependable informal institutions or a broadly cooperative environment. Yet prosperous regions may simultaneously exhibit greater trust and stronger financial expectations. A model that excludes economic conditions risks attributing to social capital what partly reflects employment prospects, demographic structure, or regional income. The empirical challenge is therefore to separate within-region variation from between-region differences and to assess sensitivity to regional controls.

The distinction between compositional and contextual associations is particularly consequential. If people with high trust report greater security wherever they live, the individual coefficient is informative but does not demonstrate a regional effect. If residents of high-trust regions report greater security after accounting for their own trust, a contextual interpretation becomes more plausible. Even then, unmeasured regional characteristics and selective residence remain possible explanations. The within–between approach associated with Mundlak and subsequent multilevel developments offers a disciplined way to organize these comparisons [7], [8].

Four broad expectations follow from this literature. Economic and demographic circumstances should be associated with present and future financial evaluations. Perceived control should be relevant to both, whereas financial knowledge confidence may be more consequential for the future. Trust should relate to both dimensions, informal relationships may be more relevant to current pressures, and civic participation may show a less straightforward pattern. Finally, average regional trust may matter independently of individual attitudes, although the magnitude and stability of any regional coefficient are empirical questions rather than assumptions.

3. METHODS

The empirical material combines the tenth round of the European Social Survey with CRONOS-2, a follow-up online panel in which the second wave includes the financial-well-being questions [3]. The analytic sample comprises 4,598 respondents living in 89 regions across Austria, Belgium, Czechia, Finland, France, Hungary, Iceland, Italy, Portugal, Slovenia, Sweden, and the United Kingdom. The panel was conducted during 2021–2023. The regional grouping is central to the design because respondents from the same territory may share social and economic conditions that are not captured by individual variables.

Two dependent variables are constructed from abbreviated survey items based on the framework developed by Netemeyer and colleagues [2]. Current money-management stress uses four items concerning the experience of financial restriction and pressure. Its direction is reversed for interpretation: higher scores indicate less stress and therefore more favourable present financial circumstances. Expected future financial security uses three items concerning progress toward security and confidence in achieving financial goals. The indicators are formed by summing their respective responses. The future-security index ranges from three to fifteen; the current-stress index comprises four five-point items and therefore ranges from four to twenty.

Individual controls include age and its square, gender, educational attainment, income category, and political self-placement. Age squared permits curvature rather than assuming a constant effect across the life

course. Subjective financial knowledge is a five-category self-assessment relative to other adults. Sense of control is derived from a broader self-rating of influence over life outcomes and is grouped into low, medium, and high categories. These psychological measures are retained as distinct constructs rather than combined into a general confidence score.

The social-capital indicators originate from twenty survey questions. Trust items are summarized using component analysis into interpersonal and institutional trust. Informal social networks and formal network participation are extracted from measures of social contact, confidants, volunteering, and organized involvement. Political and associational engagement is summarized from activities such as contacting public officials, signing petitions, or participating in demonstrations. Because the input variables differ in measurement scale, the source analysis uses principal components, categorical principal components, and multiple correspondence analysis as appropriate. Resulting scores are standardized before regression.

For each social-capital dimension, the model distinguishes the deviation of a respondent's score from the regional mean and the corresponding regional mean. The within-region coefficient therefore describes differences among residents of the same region, conditional on other variables. The between-region coefficient captures differences associated with the average level of the social-capital measure in a region. Random intercepts allow average outcomes to vary between regions. The model is estimated separately for current stress and expected future security using linear mixed effects in R with the lme4 package [9].

The source also reports augmented models including regional gross domestic product per capita, unemployment, and the old-age dependency ratio for 2022. These indicators come from the European Commission's ARDECO database, supplemented with OECD regional statistics for the United Kingdom. Their inclusion provides a sensitivity check against the possibility that trust simply proxies for regional prosperity or demographic composition. An additional set of models interacts individual social-capital scores with regional means; those interaction models use uncentred individual predictors rather than the within–between-centred specification, a difference that matters for interpreting the coefficients.

Although the outcome indices derive from ordinal survey responses, the original analysis treats the summed measures as approximately cardinal. This facilitates coefficient interpretation but does not eliminate concerns about category spacing or measurement equivalence. The intraclass correlation coefficient quantifies the share of residual variance associated with regional clustering. Model comparisons using a likelihood-ratio test support the inclusion of regional intercepts. The analysis is observational, so neither within-region nor between-region estimates should be read as causal effects without additional identifying assumptions.

4. RESULTS

The sample combines demographic diversity with an educational profile weighted toward respondents who have completed secondary or higher education. Table 1 reports selected descriptive characteristics and regional conditions from the source appendix. These quantities establish the composition of the analytic sample rather than representing model-adjusted relationships.

Table 1. Selected characteristics of the analytic sample and regional context

Indicator	Reported value
Respondents	4,598
Regions	89
Countries	12
Age, mean (SD)	50.174 (16.203)
Women	51.6%
Tertiary education	41.3%
High income category	38.4%
About-average financial knowledge	54.4%
High sense of control	58.4%
Regional GDP per capita, mean	€35.027 thousand
Regional unemployment, mean	5.512%
Regional old-age dependency, mean	37.028%

A slight female majority and a mean age close to fifty characterize the respondents. Most report at least moderate confidence in their financial knowledge, while high perceived control is relatively common. The regional averages conceal considerable heterogeneity, making adjustment for economic and demographic conditions especially relevant to comparisons across territories.

The social-capital indicators separate different kinds of relationships and participation. Table 2 summarizes the five extracted dimensions and the variance explained within their respective reduction procedures. These percentages should not be compared as if all dimensions were derived from one common analysis.

Table 2. Social-capital measurement dimensions

Dimension	Illustrative indicators	Variance explained
Institutional trust	Parliament, courts, police, political and supranational bodies	45.66%

Social trust	Trustworthiness, fairness, helpfulness of others	20.93%
Informal social networks	Social meetings, confidants, social activity	34.44%
Formal networks	Volunteering and organized political involvement	21.26%
Political/associational norms	Petitions, demonstrations, political contacts and online activity	33.87%

Trust divides into institutional and interpersonal components, whereas network indicators distinguish ordinary relationships from organized participation. The measurement approach therefore avoids treating every social connection as interchangeable. It also introduces a caution: political engagement may reflect dissatisfaction as much as access to support, and the extracted scores are summaries of observed survey items rather than direct measures of every form of social capital.

Individual characteristics show different relationships with the two outcomes. Table 3 selects reported estimates from the macro-adjusted specification, including psychological and demographic controls. The table presents coefficients rather than standardized effect sizes for the categorical predictors.

Table 3. Individual resources and financial well-being, macro-adjusted models

Predictor	CMMS coefficient	EFFS coefficient
Medium income vs low	0.9287***	0.3392***
High income vs low	1.4974***	0.8992***
Tertiary education vs primary/lower secondary	0.8963***	0.3723**
Female vs male	0.0180	−0.1681*
Financial knowledge: somewhat high vs very low	0.1678	1.1263***
Financial knowledge: very high vs very low	0.1729	1.6425***
Sense of control: medium vs low	1.2640***	0.7170***
Sense of control: high vs low	2.6624***	1.8003***

Income and sense of control show substantial positive associations with both outcomes. Financial knowledge confidence, by contrast, is not significantly associated with current stress in these comparisons, but the upper categories correspond to markedly higher expected security. The adjusted gender difference is concentrated in the future-oriented outcome, while tertiary education is positively associated with both measures. These results support treating present financial pressure and future confidence as distinct dimensions.

Table 4 turns to the individual and regional social-capital coefficients in the within–between model. The estimates reported here are from the macro-adjusted columns, allowing the regional coefficients to be considered conditional on economic prosperity, unemployment, and population ageing.

Table 4. Social capital within and between regions, macro-adjusted models

Predictor	CMMS	EFFS
Individual social trust	0.3096***	0.1302**
Individual institutional trust	0.3098***	0.2104***
Individual informal networks	0.1727***	0.0310
Individual formal networks	−0.0736	0.0350
Individual political/associational norms	−0.1715**	−0.1757***
Regional mean social trust	0.5074	0.7431*
Regional mean institutional trust	−0.2172	−0.0435
Regional mean informal networks	0.2425	0.4738
Regional mean formal networks	−0.8037	0.6620
Regional mean norms	0.6881	−0.9784*

Both forms of individual trust are positively associated with current and future financial evaluations. Informal networks are associated with lower current stress but not significantly with expected security. Political or associational engagement has negative individual coefficients for both outcomes. At the regional level, average social trust is positively associated with future security after macroeconomic adjustment. Regional average norms also show a negative future-security association, so the claim that only regional trust is significant requires qualification when discussing all coefficients rather than only positive protective associations.

The interaction specification examines whether individual associations depend on regional social-capital averages. Table 5 isolates the interaction terms from the macro-adjusted model. These estimates are not identical in interpretation to the centred within–between coefficients, and the contextual findings should be compared cautiously across specifications.

Table 5. Cross-level interaction coefficients, macro-adjusted models

Individual × regional dimension	CMMS	EFFS
Social trust	0.0326	0.0680
Institutional trust	0.2693†	0.2841*
Political/associational norms	−0.3176†	−0.0059
Informal social networks	0.2317	−0.0535

Formal networks	0.3532	0.1387
Regional GDP per capita	0.0194	0.3288*
Regional unemployment rate	−0.1534***	0.0514

Most interaction coefficients are not statistically distinguishable from zero. Institutional trust is the clearest exception for expected future security, with a positive interaction that is statistically significant in the reported specification. The regional unemployment rate is negatively associated with the reverse-coded current-stress outcome, while GDP per capita is positively associated with expected future security. The source reports intraclass correlations of 0.0333 for current stress and 0.0706 for future security in the macro-adjusted within–between models, consistent with modest but meaningful regional clustering.

5. DISCUSSION

The results reinforce the value of distinguishing present financial pressure from expectations about future stability. Income and perceived control are associated with both outcomes, suggesting that material capacity and a sense of agency have broad relevance. Their interpretation is not identical, however. Income can directly expand the resources available to meet obligations, while control may influence how circumstances are evaluated and whether uncertainty is experienced as manageable. Since both are measured in an observational design, the estimates do not establish whether control improves financial well-being, whether favourable circumstances strengthen control, or whether both processes operate simultaneously.

The asymmetry of subjective financial knowledge is particularly informative. Confidence in financial understanding is strongly associated with anticipated security at the upper end of the self-rating scale, but not with lower current stress. A plausible interpretation is that knowledge confidence informs planning and future expectations more than it changes immediate obligations. Equally, respondents who already feel optimistic about their future may rate their financial knowledge more highly. Because the survey measures perceived rather than objectively tested knowledge, the association cannot be attributed exclusively to financial competence.

Informal relationships display a complementary asymmetry. Their positive coefficient for the current-stress indicator is consistent with the possibility that social contacts offer emotional reassurance, practical advice, or short-term assistance. Yet the absence of a significant coefficient for expected security suggests that immediate support and long-term financial confidence are not interchangeable. Long-term expectations may depend more strongly on savings, employment prospects, retirement arrangements, and institutional stability than on the frequency of social interaction alone.

Individual trust is one of the most consistent social-capital correlates. Trust in other people and confidence in institutions are associated with more favourable present and future evaluations even after including financial and psychological controls. Trust may help individuals interpret uncertainty, but alternative explanations remain plausible. Individuals experiencing greater economic stability may become more trusting, while unobserved optimism could influence both financial expectations and trust responses. The cross-sectional evidence therefore supports an association, not a verified psychological or institutional mechanism.

The contextual results narrow the argument about social capital. Average interpersonal trust retains a positive association with future financial security after adjustment for regional economic conditions. This is compatible with a regional environment in which expectations of cooperation and reliability influence perceived long-term prospects. Nonetheless, regional averages are constructed from the same broad survey environment as individual attitudes. Residential selection, unmeasured institutional differences, and culturally patterned response styles may contribute to the observed between-region coefficient. A region-level association should not be interpreted as an experiment in raising trust.

The negative coefficients for political and associational participation deserve particular care. Civic engagement may arise because people face economic grievances or because they are especially attentive to political risks. The participation indicators combine activities with different motivations, including petition signing and political communication. Consequently, the estimated negative associations do not show that participation diminishes financial well-being. They may instead reflect selection into engagement, heightened awareness of inequality, or unmeasured dissatisfaction. The negative regional association with future security also cautions against presenting every dimension of social capital as uniformly beneficial.

The relatively small regional intraclass correlations are compatible with a predominance of individual-level heterogeneity, but they do not make regional conditions irrelevant. Even modest clustering can matter for estimation and policy comparisons when the regional differences are systematic. The distinction between present and future outcomes is especially pertinent: future security displays a larger regional variance share than current stress. That pattern suggests that the broader environment may be more salient to expectations than to the immediate experience of managing money.

Several limitations constrain inference. The panel follow-up may not represent all socioeconomic groups equally, and the relatively high educational profile raises questions about participation selection. Self-reported measures can be affected by reference-group comparisons and differences in response styles across countries. The

indicators capture subjective assessments rather than verified financial balances. The analysis also relies on a linear treatment of summed ordinal items, while cross-sectional data cannot establish the direction of influence. Finally, the number of regions and the measurement of regional social capital limit the precision of contextual claims.

Policy implications should follow the differentiated evidence. Financial education may be useful for planning and confidence, but knowledge initiatives alone should not be expected to resolve immediate financial pressure. Policies addressing income insecurity and access to resources remain relevant to both dimensions. Community networks may complement material assistance for people facing short-term strain. At the regional level, building reliable institutions and cooperative social environments is a plausible longer-run objective, yet the study does not estimate the effect of any specific intervention. Evaluation designs capable of testing change over time would be needed before assigning causal benefits to trust-building programmes.

6. CONCLUSION

This analysis shows that financial well-being in European regions is multidimensional and socially situated. Current money-management stress and expected future financial security share important individual predictors, especially income and perceived control, but they differ in their relationships with self-assessed financial knowledge and informal social networks. The evidence is therefore inconsistent with treating financial well-being as a single, undifferentiated outcome.

Social capital also exhibits a differentiated pattern. Individual interpersonal and institutional trust are positively associated with both financial outcomes, while informal networks are more closely related to present financial pressure. Political and associational participation is negatively associated with the outcomes in the reported models, a finding that warrants contextual rather than normative interpretation. Across regions, average interpersonal trust retains a positive association with future financial security after accounting for economic and demographic characteristics, although most other regional and cross-level relationships are weaker or less robust.

These findings support an integrated approach that recognizes material resources, psychological evaluations, interpersonal relationships, and regional conditions. They do not demonstrate that changing trust or participation would cause financial well-being to improve. Longitudinal evidence, stronger attention to measurement equivalence, and evaluation of concrete policy interventions would help clarify the pathways connecting social capital and financial security. Distinguishing present strain from future confidence remains a necessary foundation for such research.

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