

Solidarity and Welfare Spending in a Context of Crisis: A Research Note

Andrei Gheorghita^{*1}, Horațiu Rusu¹ and Cristina Stănuș¹

¹ Lucian Blaga University of Sibiu, Bd. Victoriei, No.10, 550024, Sibiu, Romania

KEYWORDS

Social solidarity
Local solidarity
Welfare spending
Romania
Economic crisis

ABSTRACT

This paper explores the extent to which variations in community-level welfare spending are reflected in individual-level attitudes of solidarity in a Romanian context defined by economic crisis. To this end, the study combines a static assessment of the relationship between local welfare expenditures and solidarity (employing 2012 WVS data) with a dynamic evaluation of how crisis-driven cuts in welfare spending have affected the sense of solidarity (drawing on 2009-2013 RES panel data). Multilevel regression analyses provide robust evidence that residing in communities with higher social expenditures tends to stimulate solidaristic attitudes towards vulnerable segments of the population. While variations in solidarity occurred in the context of crisis, they generally conformed to a growth pattern. Notably, this increase in solidarity is only marginally attributable to local welfare rollbacks; rather, it relates more closely to shifts in individual-level factors, such as generalised trust, religiosity, and economic optimism.

1. Introduction

Solidarity with different social groups is a pivotal issue for what is usually called the European welfare state. However, the meanings and uses of solidarity are quite diverse. Its conceptual origins are typically relational and collective: initially articulated in the Roman legal notion of *obligatio in solidum* (Bayertz 1999, 3; Brunkhorst 2005, 2), it was sociologically established in the Durkheimian tradition ([1893] 1965) of solidarity as a structural characteristic of societies. Contemporary approaches expand upon this tradition by placing greater emphasis on the individual dimension of solidarity (Bayertz 1999; de Beer and Koster 2009).

In this current perspective, solidarity may be conceived as a feeling of sympathy for and commitment to fellow citizens (Janmaat and Braun 2009), a

^{*} Corresponding author, contact address: andrei.gheorghita@ulbsibiu.ro (A. Gheorghita).

reaction to conditions of vulnerability or suffering affecting certain others independently of their personal or social characteristics (Arnsperger and Varoufakis 2003, 158), or preparedness to share resources with others through both personal contribution and state-organized taxation and redistribution (Stjernø 2005, 2). Therefore, solidarity is not reduced to generosity or goodwill, but presupposes a stable disposition oriented toward specific others, instantiated through concrete actions. Thus, at individual level, solidarity has both an *attitudinal dimension*, expressed through prosocial orientations, and an *action-oriented dimension*, manifested in practices of support, cooperation, and mutual commitment.

One core dimension of solidarity is likely to involve support for redistribution of resources towards materially needy individuals or groups (Bayertz 1999). In the European tradition, solidarity is essentially redistributive (Banting and Kymlicka 2017), thus the concepts of *solidarity* and *welfare state* (or *European welfare state*) are deeply intertwined in a bi-directional relationship. On the one side, solidarity usually serves to legitimate the welfare state. Widespread attitudes of solidarity should be regarded as a sort of precondition for welfare public spending: when people are prepared to share resources with those in need, a pressure from below for social programs is likely to emerge. A higher stock of solidarity should theoretically translate into more community-level welfare spending. On the other side, extensive social programs and expenditures in a community are likely to cultivate individual awareness and concern for the living conditions of materially needy individuals or groups. Following this pathway, welfare spending should contribute to higher levels of solidarity within the community.

Unfortunately, the relationship between welfare spending and solidarity was almost never subject to empirical testing, at least not as part of a design combining individual and community-level data. This is exactly the gap in the literature this paper addresses. It aims to combine survey data and financial data for a list of communities in Romania to investigate the link between welfare spending and solidarity attitudes. Further, it explores whether sudden rollbacks in social spending (such as those introduced by austerity measures in a context of economic crisis) do trigger changes in solidarity as an attitude.

Our laboratory for this is Romania in the context of the 2008-2009 (and after) global economic downturn. It is a context somewhat particular. Leading up to 2009, the inclusiveness of social welfare programs in Romania was on the rise. Moreover, as presidential elections were scheduled for late 2009, all possible crisis-adjustment political decisions were delayed, due to electoral reasons. The consequence was that severe adjustments had to be implemented starting in 2010: harsh cuts to social spending, the elimination of many social programmes (reducing them from 54 categories to only 9), public sector layoffs, and a universal 25% reduction in the salaries of public sector employees. Furthermore, a "fat public sector versus slim private sector" mentality proliferated throughout the political arena. It seems like an almost perfect laboratory for exploring the link between solidarity and social spending.

For this purpose, this article employs cross-sectional survey data from the 2012 *World Values Study* (WVS) and panel survey data from the 2009-2013 *Romanian Election Study* (RES), combined with data on community-level welfare spending provided by the Ministry of Development, Public Works, and Administration. The WVS data is used to investigate the relation between welfare spending and solidarity under extensive statistical control for alternative explanations. The RES panel data is employed to explore the dynamic relationship between crisis-driven rollbacks in welfare spending and changes in solidaristic attitudes. The article starts with a concise literature review regarding the meaning and dimensions of solidarity, as well as its sources at the individual or aggregate levels. This is followed by a section dedicated to methodology and another one presenting the main findings. Finally, the study's conclusions are summarised and discussed.

2. The sources of solidarity: a literature review

This paper approaches *solidarity as concern for others* - that is, as caring about or looking out for their living conditions and welfare. From this perspective, solidarity operates as a latent orientation toward different kinds of groups, ranging from close relatives (family) to more distant groups (humankind) (Rusu 2012; Rusu and Gheorghită 2014; Voicu et al. 2021; Gheorghită 2023;

Rusu 2020). Accordingly, based on the target of solidarity, this paper distinguishes between social and local solidarity.

Two main categories of determinants of solidarity are usually approached across empirical studies: individual-level and aggregate ones (societal or contextual). At the individual level, the literature focuses on a quite extensive list of factors influencing solidarity: *religiosity* (Abela 2004), *postmaterialism* (Abela 2004; Janmaat and Braun 2009), *individualization* (Abela 2004; de Beer and Koster 2009), *class belonging* (Arts and Gelissen 2001), *interpersonal trust* (Janmaat and Braun 2009; Banting et al. 2011), *national identification* (Banting et al. 2011), and *political participation* (Dickes, Valentova, and Borsenberger 2010), alongside standard socio-demographic variables such as *age*, *gender*, *education*, and *social class* (Arts and Gelissen 2001; Abela 2004; Janmaat and Braun 2009; de Beer and Koster 2009; Voicu, Rusu, and Comşa 2013). At the aggregate level, studies seldomly investigate *ethnic/cultural diversity* (de Beer and Koster 2009), *social spending* (Banting et al. 2011), and *locality size* (de Beer and Koster 2009) as factors linked to solidarity. This section continues with a brief overview of the main findings in the literature about the relationship between these individual and aggregate factors and solidarity.

At the individual level, existing studies do not find fully consistent relationships between solidarity and its predictors, a variation that reflects both contextual differences and how concepts are operationalized and measured. *Religiosity* is in a robust positive relation with solidarity (Abela 2004), while *postmaterialism* yields mixed results: negative for local solidarity, but positive for social and global forms (Abela 2004), with Janmaat and Braun (2009) reporting context-dependent patterns across Europe. *Individualization* is similarly inconsistent, with de Beer and Koster (2009) finding a negative link to unidirectional solidarity and Abela (2004) reporting mixed effects. *Class belonging* remains a relevant predictor (Arts and Gelissen 2001), as entrepreneurs tend to be less solidaristic, while unemployed individuals display higher levels of solidarity, though other groups show less clear patterns. *National identification* is positively associated with both civic and redistributive solidarity (Banting et al. 2011), while *institutional trust* appears more consequential than *interpersonal trust* for social solidarity, partly mediating the effects of diversity (see also Rothstein 2017 for the effects of the

quality of government). Dickes et al. (2010) further show that *trust*, *political participation*, and *social participation* are independently and positively associated with solidarity. Rusu (2015) identifies a positive relation with *sociotropic optimism*.

Beyond these factors, *class belonging* also helps distinguish contributors from beneficiaries within redistribution systems. Arts and Gelissen (2001) find lower solidarity among entrepreneurs and higher levels among unemployed individuals, with mixed evidence for other groups. De Beer and Koster (2009) further suggest that lower-class belonging does not foster informal solidarity, whereas upper-class belonging tends to reduce formal solidarity. More broadly, perceptions of deservingness also shape redistributive solidarity (van Oorschot 2000, 2006).

Socio-demographic patterns are also uneven: some forms of solidarity tend to increase with *age* (Abela 2004; de Beer and Koster 2009), although findings are not consistent across studies (Arts and Gelissen 2001; Janmaat and Braun 2009). *Education* has similarly mixed effects, ranging from negative associations with general solidarity (Arts and Gelissen 2001) to more positive links with compassion-based solidarity and formal solidarity (Janmaat and Braun 2009; de Beer and Koster 2009). Across studies, *women* consistently display higher levels of solidarity than men (Arts and Gelissen 2001; de Beer and Koster 2009; Janmaat and Braun 2009).

At the aggregate level, empirical evidence suggests that *larger localities* are positively associated with solidarity (de Beer and Koster 2009), while *diversity* tends to be negatively related (de Beer and Koster 2009), and *social spending* has mixed effects (Banting et al. 2011).

Overall, the results for Romania (Voicu, Rusu, and Comșa 2013; Rusu 2016; Rusu and Bejenaru 2022; Stănuș 2012) indicate a relatively stable core of determinants of solidarity, despite differences in measurement and variations across types of solidarity and model specifications. Consistently, solidarity is positively associated with dimensions of civic and social participation (e.g., membership in associations, volunteering), as well as with religiosity in its various forms of measurement, education, and, in several analyses, trust in others, to which are added factors such as life satisfaction or social identification.

At the same time, there is a set of relationships that are less stable or dependent on how the concept of solidarity is operationalised and on the type of beneficiary considered. Postmaterialism and materialism do not show systematic effects, while variables such as gender, age, autonomy, or locality size change their significance or lose consistency across models. Similarly, occupational status and social transfer status tend to have more contextual and variable effects. Overall, these results suggest that solidarity in Romania is mainly explained by a relatively robust core of socio-cultural and participation-related factors, while a substantial part of its determinants remains sensitive to measurement choices and analytical context.

3. Data and analytical strategy

In order to assess the relationship between community-level welfare spending and social solidarity, this paper employs survey data from two well established studies: cross-sectional survey data on Romania from the 2012 *World Values Survey* (WVS, $n=1.503$, 132 communities) and panel survey data 2009-2013 from the *Romanian Election Study* (RES, $n=1.055$, 158 communities).

WVS 2012 data (Inglehart et al. 2014) is used in order to provide a comprehensive *assessment of the effects of community-level factors on solidarity*, under extensive statistical control for individual-level variables. This ‘static perspective’ is based on a series of multi-level regression models (M1 and M2) providing insights on how individual and community-level variables contribute to the explanation of variations in social and local solidarity at a given point in time (late 2012, at the beginning of Romania’s recovery from the 2008-2011 economic crisis).

$$(M1) \quad \text{Social solidarity} = \text{community social welfare spending} + \\ \text{community diversity} + \text{individual-level controls}$$

$$(M2) \quad \text{Local solidarity} = \text{community social welfare spending} + \text{community} \\ \text{diversity} + \text{individual-level controls}$$

In other words, it provides an evidence-based answer to an essential research question: does community-level social security spending have an influence on the general level of solidarity (first social, then local) experienced

by the members of the community? A positive answer to this question is a necessary condition for going further with the second component of the analysis, namely the attempt to see whether crisis-induced cuts in social welfare spending do generate changes in the magnitude of solidarity.

3.1. *The static perspective*

Dependent variables

The dependent variable in Model M1 is *social solidarity*, calculated as a factor score of three solidaristic attitudes (concern for the living conditions) towards the *elderly*, *sick and disabled*, and *unemployed*, each measured on a 5-point scale. In Model M2, the dependent variable is *local solidarity*, similarly calculated as a factor score of solidaristic attitudes towards *neighbours*, *people in the region*, and *people in Romania*.

Level 2 independent variables

The core community-level (level 2) independent variable is the *social welfare spending per capita* of the locality for 2011, the year previous to WVS data collection, expressed in RON (Romanian New Leu), as reported by the Ministry of Development, Public Works, and Administration. The second variable employed at community level is a measure of *diversity*, calculated as language fractionalization index (see Alesina et al. 2003).

Level 1 independent variables

The first two control individual-level predictors employed across models M1 and M2 are dummy measures of *materialism* and *postmaterialism*, generated by transforming the 4-item Inglehart postmaterialism index (V63 in the WVS Wave 6 official questionnaire). As materialism and postmaterialism are entered simultaneously in the two models, *mixed* values respondents will be the category of reference when addressing the corresponding regression coefficients. The *importance of religion* in respondent's life (V9) is recoded ascendingly (1 means 'not at all important', 2 'not very important', 3 'rather important', and 4 'very important'). The next individual predictor is a dichotomic measure of *religious behaviour* (based on item V145), where 1 means 'attending religious services at least once a month' and 0 designates a less frequent self-declared church attendance ('only on special holy days', 'once a year', 'less often', or 'never'). The *strength of national identification* is measured as a summative index ranging from 2 to 8 that combines

information about ‘how proud the respondent is to be Romanian’ (where 1 means ‘not at all proud’, 2 ‘not very proud’, 3 ‘quite proud’, and 4 ‘very proud’, reversed from V211) and whether the respondent ‘sees himself/herself as part of the Romanian nation’ (where 1 means ‘strongly disagree’, 2 ‘disagree’, 3 ‘agree’, and 4 ‘strongly agree’, reversed from V214).

Generalised trust is measured as a factorial score calculated on indicators measuring the degree of trust invested by the respondent into five social groups (‘your neighbourhood’ – V103, ‘people you know personally’ – V104, ‘people you meet for the first time’ – V105, ‘people of another religion’ – V106, and ‘people of another nationality’ – V107). Higher values reflect more generalised trust. The next individual predictor is an index measuring the *preference for authority above autonomy* (Hagenaars, Halman, and Moors 2003, 53). It is calculated based on a list of parental values (V12 to V22) among which respondents are asked to indicate up to five that are especially important in the education of children: the number of qualities referring to autonomy mentioned (‘independence’, ‘feeling of responsibility’, ‘imagination’, and ‘determination, perseverance’) is subtracted from the number of qualities referring to authority (‘hard work’, ‘thrift, saving money and things’, ‘religious faith’, and ‘obedience’). The resulting index ranges from -4 to 4 and higher scores indicate a stronger preference of authority above autonomy. Having *run out of money in the last year* is a proxy measure for respondent’s income. It is a dichotomic predictor based on V237, where a value of 1 indicates that the respondent’s family has experienced financial troubles during the last year.

The list of individual-level controls is completed with several socio-demographic predictors: *age* (continuous), *highest educational level* achieved (ranging from 1 to 9, treated as continuous), being *retired* (dummy, 1/0), *benefitting from direct social transfers* (unemployed, maternity leave or sick leave – dummy, 1/0), *housekeeping* (administering the household without employment – dummy, 1/0), being *a student* (dummy, 1/0), and *gender* (dummy, 1 for male/0 for female).

3.2. *The dynamic perspective*

RES 2009-2013 panel data (Comșa et al. 2023) are employed in order to investigate *the impact of community-level cuts in social welfare spending on*

individual-level solidarity attitudes from a dynamic perspective. In other words, multi-level regression models of change between 2009 and 2013 were run, in order to explain changes in self-declared attitudes of solidarity towards *citizens of Romania* (model M3), *people in respondent's locality* (M4), and *retired people* (M5). RES 2009-2013 regression models are less extensive in terms of predictors than the WVS 2012 ones, given the limited availability of items in the RES panel questionnaire. For each of the variables included in the M3-M5 regression models, an indicator of change (after crisis vs. before crisis) is calculated and employed.

$$(M3) \quad \Delta I \text{ Solidarity with RO citizens} = \Delta C \text{ social welfare spending} + \Delta I \text{ generalised trust} + \Delta I \text{ religious behaviour} + \Delta I \text{ authoritarian propensity} + \Delta I \text{ sociotropic prospective evaluation of economy} + \Delta I \text{ egocentric prospective evaluation of economy} + \text{socio-demographic values}$$

$$(M4) \quad \Delta I \text{ Solidarity with people in the locality} = \Delta C \text{ social welfare spending} + \Delta I \text{ generalised trust} + \Delta I \text{ religious behaviour} + \Delta I \text{ authoritarian propensity} + \Delta I \text{ sociotropic prospective evaluation of economy} + \Delta I \text{ egocentric prospective evaluation of economy} + \text{socio-demographic values}$$

$$(M5) \quad \Delta I \text{ Solidarity with retired people} = \Delta C \text{ social welfare spending} + \Delta I \text{ generalised trust} + \Delta I \text{ religious behaviour} + \Delta I \text{ authoritarian propensity} + \Delta I \text{ sociotropic prospective evaluation of economy} + \Delta I \text{ egocentric prospective evaluation of economy} + \text{socio-demographic values}$$

Note: ΔI is an indicator of change at the individual's level, ΔC is an indicator of change at community level

Dependent variables

The dependent variable in model M3 is a measure of *change in individual solidarity with the citizens of Romania*. It is calculated as a difference between respondent's self-placement on a scale from 0 to 10 measuring 'concern for the living conditions of Romanian citizens' at two moments of time: early 2013 (after the economic crisis) and 2009 (at the beginning of the crisis). As 0 means 'not at all' and 10 means 'very much', a positive difference indicates an increase in solidaristic attitudes, while a negative one marks a decrease in

solidarity. Changes in *solidarity with people in the locality* (for M4) and *with retired people* (for M5) are calculated in a similar manner.

Level 2 independent variable

The core community-level independent variable is a measure of *change in social welfare spending per capita* at locality level between 2011 and 2008¹. It is expressed in RON (Romanian New Leu), as reported by the Ministry of Development, Public Works, and Administration.

Level 1 independent variables

The first individual-level predictor employed across the M3-M5 models measures *variations in generalised trust* during the economic crisis. It is calculated as a difference between respondent's 2013 and 2009 position on a 10-point scale, where 1 means 'you can't be too careful in dealing with people' and 10 means 'most people can be trusted'. Thus, positive values indicate an increase in trust between the two moments of time. Mean change imputation was employed in order to deal with missing values.

The second independent variable quantifies *change in religious behaviour* measured as the frequency of 'church going besides weddings, funerals, and baptisms' on an 8-point scale (1 means 'actually never', 2 'once a year or less often', 3 'for Christmas, Easter, and other holy days', 4 'once a month', 5 'two or three times a month', 6 'once a week', 7 'several times a week', and 8 'daily'). The difference between individual's position on the scale after and before the crisis is calculated, with mean imputation for missing values.

Variation in individual's *support for an authoritarian rule* over the normal mechanisms of liberal democracy is the third predictor employed across the M3-M5 regression models. It is measured as change in self-declared support for the idea that it would be good for the country 'to have a strong leader who doesn't bother with parliament and elections', where 1 means 'very bad', 2 'bad', 3 'good', and 4 'very good'. Thus, positive values indicate an increase in respondent's illiberal attitudes that occurred during the economic crisis. Missing values were replaced with the mean change score.

¹ 2008 values were updated using the Consumer Price Index (CPI), in order to be comparable with the 2011 values. As survey data were collected in very early 2013 (January), immediately after the end of 2012, our decision was to employ 2011 social welfare spending as likely driver of the attitudes and behaviours measured at individual level. Similarly social welfare spending for 2008 was employed in relation to the 2009 survey data.

Measures of *sociotropic* and *egocentric optimism* are also employed as predictors for change in solidarity attitudes across the three models. The first one quantifies change in prospective evaluations about ‘how well the Romanian economy will perform in the next four years’, calculated as a difference between the 2013 and 2009 individual expectations on a scale from 1 (‘much worse’) to 5 (‘much better’). The second one uses a similar approach for measuring change in prospective evaluations on the same scale about the respondent’s ‘economic situation in the next four years.’ For both predictors, positive values indicate a stance of optimism, while mean values are imputed for missing evaluations.

An indicator of *change in political orientation (Left-Right)* completes the list of predictors quantifying individual fluctuations in attitudes and behaviours in the context of crisis. It is calculated as a difference between the 0-10 (Left-Right) ideological self-placement between 2013 and 2009, with mean imputations for missing values. A positive value marks a shift towards ideological Right, while a negative one a shift towards Left.

Individual controls are added for *gender* (1 ‘male’, 0 ‘female’), *education* (ranging from 0 meaning the absence of any formal education to 15 meaning doctoral studies), and *area of residence* (1 is ‘urban’, 0 ‘rural’).

4. Analyses and results

4.1. The static picture

The idea put forward by this paper is that structural factors, particularly social welfare spendings, do have a significant effect on the attitudes of solidarity developed by the community members. Consequently, sudden changes in the amount of public money spent on social welfare programs are likely to interfere with the very mechanisms of social cohesion. The first component of the analysis is intended to provide an overall *assessment of the effects of structural (community-level) factors on solidarity* under conditions of strict control for alternative explanations, using WVS 2012 survey data for Romania. Multilevel mixed-effects linear regression models (*xtmixed* command in Stata 13) were run in order to explain individual variations in what we refer as *social solidarity* (measured as concern for the living conditions

of the elderly, sick and disabled, and unemployed) and *local solidarity* (measured as concern for the living conditions of neighbours, people in the region, and people of Romania). The results are presented in **Table 1**.

Data indicate a significant influence of both structural factors on social solidarity (M1). Thus, *living in communities with higher levels of social welfare spendings* tends to stimulate solidaristic attitudes towards vulnerable segments of the population (retired, sick and disabled, unemployed). Naturally, the direction of the relation is hard to assess: it is either that extended social spending in the community raises awareness, and hence concern, about the living conditions of people at risk; or that communities spend more on social welfare especially because their citizens are concerned about vulnerable categories and expect to see action on that from local governments. *Cultural homogeneity* also appears to favour social solidarity, which is rather intuitive: sharing the same cultural background and the absence of communication barriers, both tend to nurture social trust, which is essential for the toolkit of solidarity. Overall, the community level accounts for 14 percent of the variation in social solidarity. In the case of local solidarity (M2), which is a more identity-based measure, the effects of structural factors follow the same pattern, but the relationships lack statistical significance.

The contributions of individual predictors largely follow similar patterns across the two models, M1 and M2. *Holding materialist values* is in a negative relationship with solidarity, either social or local. Thus, materialists tend to be less altruistic, no matter if it is in relation to vulnerable groups or to people they share a common identity with. This is fairly consistent with previous findings in the literature, however with a twist of perspective: while Janmaat and Braun (2009) find a clear positive link between postmaterialism and solidarity in Western Europe (but not in Eastern Europe), our models provide statistical proof in favour of a negative relation materialism-solidarity in the case of Romania.

Religiosity has a consistent positive contribution to how big the individual solidarity stock is, a finding in line with the previous conclusions of Abela (2004) and de Beer and Koster (2009). However, there are variations that seem to originate in how this religiosity is measured. The self-declared *importance given to religion* in life is in a significant positive relation with solidaristic attitudes towards people in a geographic proximity (local

solidarity), while frequent *church attendance* consistently increases the feeling of concern for people in need (social solidarity).

Table 1: Explaining social and local solidarity from a static multilevel perspective (individual-level and community-level determinants). Data: WVS 2012 data for Romania. Note: *I* denotes individual-level predictors and *C* community-level ones. *** $p \leq .001$; ** $p \leq .01$; * $p \leq .05$; † $p \leq .10$

Model	M1	M2
Dependent variable	Social solidarity	Local solidarity
<i>Level 1 predictors (respondent)</i>		
I Materialism	-0.164** (0.056)	-0.093** (0.035)
I Postmaterialism	0.079 (0.092)	-0.033 (0.057)
I Religion importance	0.066 (0.035)	0.073*** (0.022)
I Religious behaviour (1=attending religious services at least once a month)	0.113* (0.055)	0.045 (0.034)
I Strength of national identification	0.115*** (0.021)	0.065*** (0.013)
I Generalised trust	0.106*** (0.026)	0.111*** (0.016)
I Preference of authority above autonomy index	0.051** (0.017)	0.025* (0.011)
I Ran out of money in the last year (1=yes)	0.151*** (0.025)	0.086*** (0.015)
I Retired (1=yes)	-0.008 (0.084)	-0.057 (0.052)
I Benefitting from direct social transfers (unemployed, maternity leave or sick leave) (1=yes)	-0.111 (0.126)	-0.115 (0.078)
I Housekeeping (1=yes)	-0.189* (0.075)	-0.083 (0.046)
I Student (1=yes)	0.067 (0.131)	0.081 (0.082)
I Age	0.006** (0.002)	0.003 (0.001)
I Education	0.017 (0.009)	0.018*** (0.005)
I Male (1=yes)	0.040 (0.053)	-0.033 (0.033)
<i>Level 2 predictors (community)</i>		
C Language fractionalization index	-0.500* (0.250)	-0.183 (0.133)
C Social welfare spending per capita	0.001* (0.001)	0.000 (0.000)
_cons	-1.844*** (0.243)	-1.085*** (0.148)
Ins1_1_1		
_cons	-1.081*** (0.114)	-1.893*** (0.154)
Insig_e		
_cons	-0.201*** (0.022)	-0.666*** (0.022)
N	1179.000	1179.000
Log-Lik	-1495.455	-924.497
Chi-sq	175.767	165.063
ICC	0.147	0.079

Strong national identifiers are more likely to share solidaristic attitudes, either social or local. Thus, a shared identity facilitates social cohesion and hence altruism within the borders of the ‘imagined community’. Such positive relation is consistent with the theoretical expectations stating national identity as a prerequisite for solidarity (Teney and Helbling 2017; van Oorschot 2000, 2008).

Another individual predictor in a positive relation with both social and local solidarity is the respondent’s score of *generalised trust*. Trust is largely regarded as a precondition for a group to act in solidarity (Chan, To, and Chan 2006), frequently in a mediated relation with a shared identity. Consequently, it is mentally comfortable to extend this perspective to solidarity as attitude: trust that various peers will not ‘free ride’ sets the focus of concern towards not only those sharing a common identity, but also to those in need.

Preference towards authority over autonomy also provides an anchor for a rise in both social and local solidarity. There may be different pathways to this state of things, but the result is beyond doubt: while the positive relation authority-social solidarity may originate in religious roots preaching help for disadvantaged community members, the authority-local solidarity link is likely to follow the traditional route of sameness (mechanical solidarity).

Finally, *low income* and *higher levels of education* contribute to experiencing higher senses of solidarity, both social and local. *Growing older* comes with significantly higher levels of concern for the living conditions of people at risk. Quite unexpectedly, the *housekeeping status* is in a negative relation with social solidarity.

4.2. The dynamic picture

The „static perspective” relying on WVS 2012 data (models M1 and M2) has made a strong case for structural factors having a large impact on the magnitude of solidaristic attitudes developed by the community members. The positive impact of both *social welfare spendings* and *cultural homogeneity* on social solidarity is large and consistent even under conditions of strict statistical control for an extensive list of individual-level explanations.

The next step of the analysis is meant to provide an assessment of *how community-level cuts in social welfare spending during the economic crisis have affected the sense of solidarity* across the Romanian society. For this purpose, we

employ survey data from a RES panel, where individual solidaristic attitudes (concern about living conditions of eight categories of people) are measured just before the first austerity measures were taken (December 2009) and again three years later, when all the crisis-adjustment political decisions were in place (January 2013). The first issue of concern in this „dynamic perspective” is whether there really is a change in these attitudes between the two moments of time. As solidarity items are measured on the same scale (0-10, where 0 is ‘not at all concerned’ and 10 ‘very much concerned’), a *t test* is calculated to assess the change. The results are presented in **Table 2**.

Apparently, experiencing the economic crisis has worked as a ferment for solidarity, stimulating an increase in self-reported concern for the living conditions of other social groups. However, the magnitude of change is not particularly remarkable and there are also some intriguing evolutions. There is a significant growth in altruism in relation to three categories, out of which two are aligned with a logic of local/identity solidarity (people in the locality, citizens of Romania) and one with a logic of social solidarity (retired people). A rise in average concern for other social groups (neighbours, unemployed people, Europeans, humans all over the world) is also visible in the RES sample, but change is quite small and does not pass the threshold of statistical significance.

Table 2: Changes in solidarity attitudes towards various social groups during the economic crisis. Data: 2009-2013 RES panel survey. Note: *** $p \leq .001$; ** $p \leq .01$; * $p \leq .05$; † $p \leq .10$

Concern about the living conditions of...	Mean value in December 2009	Mean value in January 2013	T test value	Significance	Direction of change
... people in your neighbourhood	6.22	6.27	-0.426	No	↑
... people in your locality	6.05	6.30	-2.038	*	↑
... citizens of Romania	6.07	6.39	-2.627	**	↑
... Roma people	4.68	4.38	2.014	*	↓
... unemployed people	6.39	6.50	-0.851	No	↑
... retired people	7.08	7.36	-2.347	*	↑
... Europeans	5.28	5.32	-0.272	No	↑
... humans all over the world	5.33	5.40	-0.452	No	↑

Table 2 also indicates a quite disturbing change that occurred throughout the period of economic instability: a significant decrease in solidarity with Roma people. Self-declared concern for members of Roma ethnic group was already at a much lower level when compared with any alternative group measured in the RES 2009-2013 questionnaire. This is definitely in line with the general discussion related to social exclusion of Roma ethnic minority (see Fleck and Rughiniș 2008; Preda 2002). However, under the pressure of severe economic hardships, solidarity with the Roma minority, perceived as an out-group in a resource scarcity context, has plummeted.

In this overall analytical context, our decision was to limit the assessment of social welfare budget cuts on solidarity to the three dimensions where crisis-related growth in altruism was a statistically reliable finding, namely *solidarity with the local residents, fellow Romanians, and retired people*. **Table 3** summarizes the findings from the three regression models (M3-M5) assessing change in individual attitudes of solidarity.

All three models indicate a negative relation between change in community social protection expenditures and variations in solidaristic attitudes. This generally means that *cuts in welfare spending do come with a rise in concern for other social groups*, that share a common identity or are perceived as being at risk. Unfortunately, the impact is not statistically significant in any of the three models, although it is very close to reaching a $p < 0.10$ threshold of empirical support in M3 and M4. Consequently, this trend towards austerity measures serving as a driver for in-group solidarity is hard to evaluate in terms of how generalised and reliable really is.

The impact of change in several individual-level predictors on solidaristic attitudes is more clear-cut, at least in models M3 and M4. Having reported *an increase in social confidence during the economic crisis* is consistently linked to a surge in concern for the living conditions of Romanian citizens and fellow community members. A similar evolution occurred in the case of religious behaviour: *an increase in the frequency of church going* is mirrored by significant advances in self-reported altruism. Last, a boost in solidarity tends to be positively related to *an increase in the sense of optimism towards the future state of the economy*. No other estimate of change in individual-level predictors turned to be in a significant relation with the crisis-related fluctuations in

social cohesion. A similar pattern emerges in the case of socio-demographic predictors (education, gender, settlement type), that do not appear to be linked to the direction of change in solidaristic attitudes.

Table 3: Explaining change in solidaristic attitudes in a context of economic crisis from a dynamic multilevel perspective (individual-level and community-level determinants). Data: RES 2009-2013 data for Romania. Note: Individual-level predictors are marked with I and community-level ones with C. ΔI is an indicator of change at the individual's level, ΔC is an indicator of change at community level. *** $p \leq .001$; ** $p \leq .01$; * $p \leq .05$; † $p \leq .10$

Model	M3	M4	M5
<i>Dependent variable</i>	<i>ΔI Solidarity with RO citizens</i>	<i>ΔI Solidarity with people in the locality</i>	<i>ΔI Solidarity with retired people</i>
<i>Level 1 predictors (respondent)</i>			
ΔI Generalised trust	0.116** (0.039)	0.123** (0.040)	0.053 (0.049)
ΔI Religious behaviour	0.152* (0.064)	0.131† (0.068)	0.113 (0.071)
ΔI Authoritarian propensity	-0.059 (0.102)	-0.101 (0.120)	0.093 (0.116)
ΔI Sociotropic prospective evaluation of economy	0.380* (0.155)	0.283† (0.149)	0.014 (0.175)
ΔI Egocentric prospective evaluation of economy	-0.140 (0.170)	-0.031 (0.160)	0.124 (0.180)
ΔI Left-right ideological orientation	-0.006 (0.041)	-0.008 (0.042)	0.030 (0.040)
I Education	-0.002 (0.031)	0.002 (0.036)	0.010 (0.032)
I Male	0.088 (0.212)	0.150 (0.215)	-0.040 (0.203)
I Urban	0.509 (0.490)	0.519 (0.479)	0.265 (0.487)
<i>Level 2 predictor (community)</i>			
ΔC Social welfare spending	-0.006 (0.004)	-0.006 (0.004)	-0.001 (0.003)
_cons	-0.319 (0.546)	-0.438 (0.544)	0.008 (0.508)
N	925	943	933
Log-Lik	-2436.513	-2515.788	-2485.483
Chi-sq	20.82	18.38	6.35
ICC	0.335	0.271	0.294

5. Conclusions

The aim of this study was to explore the extent to which variations in community-level welfare spending are reflected in individual-level attitudes of solidarity. For this purpose, two perspectives and two sources of data were

combined. The first approach was a one-time standard assessment of how local social expenditures contribute to the understanding of variations in solidarity, with extensive control for alternative explanations, employing the 2012 WVS Romanian data. The second approach was meant to provide a dynamic evaluation of how community-level cuts in social welfare spending during the economic crisis have affected the sense of solidarity, making use of 2009-2013 RES panel data. Its core findings can be clustered in two large categories.

First, this study provides empirical evidence that structural factors have a significant influence on social solidarity. Living in *communities with higher social expenditures* tends to stimulate solidaristic attitudes towards vulnerable segments of the population, in some sort of congruence of concern for people at risk between citizens and local authorities. Likewise, empathy for retired, sick, and unemployed people is also stirred inside communities with *higher levels of cultural homogeneity*, likely due to higher identification among their citizens (de Beer and Koster 2009, 164) and, consequently, higher social trust. The relations between structural factors and local solidarity follow a similar pattern, but fail to reach the significance threshold.

Second, the analyses show that variations in solidaristic attitudes in contexts of crisis are a concrete occurrence and generally exhibit a pattern of increase. Panel data for the Romanian population provide empirical evidence of a significant increase between 2009 and 2013 in self-reported concern for the living conditions of compatriots, local residents, and retired people, which is most likely a crisis-driven evolution. However, according to our regression models, this increase in altruism is only marginally explainable in terms of cuts in community welfare spending. The origins of this change in solidarity are more strongly linked to recent date developments in individual-level attitudes, such as *trust, religiousness, and optimism towards the future state of the economy*.

To sum up, our investigation provides empirical arguments in favour of a solid link between community-level welfare spending and individual attitudes of solidarity. In other words, the safety net provided through social spending (as a form of collective action) appears to deepen concern for the others (as an individual choice). However, our study provides a limited understanding of the dynamics of the relationship between the two. It appears

that sudden welfare rollbacks may trigger heightened concern for the in-group as a mechanism of social defence, but our findings are quite scant on that. Further research based on different tools or data may provide deeper insight on that.

6. Acknowledgements

Horațiu Rusu's work was supported by a grant of the Ministry of Education and Research, CCCDI – UEFISCDI, project number PN-IV-PCB-RO-MD-2024-0171, within PNCDI IV. The authors wish to thank Bogdan Voicu for his valuable suggestions and support.

7. References

- Abela, Anthony M. 2004. 'Solidarity and Religion in the European Union: A Comparative Sociological Perspective'. In *The Value(s) of a Constitution for Europe*, edited by Peter G. Xuereb, 71–101. Malta: European Documentation and Research Centre, University of Malta.
- Alesina, Alberto, Arnaud Devleeschauwer, William Easterly, Sergio Kurlat, and Romain Wacziarg. 2003. 'Fractionalization'. *Journal of Economic Growth* 8 (2): 155–94. doi:10.1023/A:1024471506938.
- Arnsperger, Christian, and Yanis Varoufakis. 2003. 'Toward a Theory of Solidarity'. *Erkenntnis* (1975-) 59 (2): 157–88.
- Arts, Wil, and John Gelissen. 2001. 'Welfare States, Solidarity and Justice Principles: Does the Type Really Matter?' *Acta Sociologica* 44 (4). SAGE Publications Ltd: 283–99. doi:10.1177/000169930104400401.
- Banting, Keith, Richard Johnston, Will Kymlicka, and Stuart Soroka. 2011. 'Are Diversity and Solidarity Incompatible? Canada in Comparative Context'. *Inroads: The Canadian Journal of Opinion*, no. 28: 36–48.
- Banting, Keith, and Will Kymlicka. 2017. 'Introduction: The Political Sources of Solidarity in Diverse Societies'. In *The Strains of Commitment: The Political Sources of Solidarity in Diverse Societies*, edited by Keith Banting and Will Kymlicka, 1–58. Oxford: Oxford University Press.
- Bayertz, Kurt. 1999. 'Four Uses of Solidarity'. In *Solidarity*, edited by Kurt Bayertz, 3–28. Dordrecht: Kluwer Academic Publishers.
- Beer, Paul de, and Ferry Koster. 2009. *Sticking Together or Falling Apart? Solidarity in an Era of Individualization and Globalization*. Amsterdam: Amsterdam University Press.
- Brunkhorst, Hauke. 2005. *Solidarity: From Civic Friendship to a Global Legal Community*. Cambridge, Massachusetts: The MIT Press.

- Chan, Joseph, Ho-Pong To, and Elaine Chan. 2006. 'Reconsidering Social Cohesion: Developing a Definition and Analytical Framework for Empirical Research'. *Social Indicators Research* 75 (2): 273–302. doi:10.1007/s11205-005-2118-1.
- Comșa, Mircea, Florin Feșnic, Andrei Gheorghită, Grigore Pop-Elecheș, Marina Popescu, Camil Postelnicu, Cristina Stănuș, Claudiu D. Tufiș, and Bogdan Voicu. 2023. '2009-2013 Romanian Election Studies (RES 2009-2013)'. Panel survey data. Harvard Dataverse. doi:10.7910/DVN/ZSIKWI.
- Dickes, Paul, Marie Valentova, and Monique Borsenberger. 2010. 'Construct Validation and Application of a Common Measure of Social Cohesion in 33 European Countries'. *Social Indicators Research* 98 (3): 451–73. doi:10.1007/s11205-009-9551-5.
- Durkheim, Émile. (1893) 1965. *The Division of Labor in Society*. New York: Free Press.
- Fleck, Gábor, and Cosima Rughiniș, eds. 2008. *Come Closer. Inclusion and Exclusion of Roma in Present Day Romanian Society*. Bucharest: Human Dynamics.
- Gheorghită, Andrei. 2023. 'Understanding Public Support for the Flat-Rate Personal Income Tax in a Post-Communist Context: The Case of Romania'. *Sustainability* 15 (9): 7576. doi:10.3390/su15097576.
- Hagenaars, Jacques, Loek Halman, and Guy Moors. 2003. 'Exploring Europe's Basic Values Map'. In *The Cultural Diversity of European Unity: Findings, Explanations and Reflections from the European Values Study*, edited by Wil Arts, Hagenaars, and Loek Halman, 23–58. Leiden: Brill.
- Inglehart, Ronald, Christian Haerpfer, Alejandro Moreno, Christian Welzel, Kseniya Kizilova, Juan Diez-Medrano, Marta Lagos, Pippa Norris, Eduard Ponarin, and Bi Puranen. 2014. 'World Values Survey: Round Six - Country-Pooled Datafile'. Comparative survey. Madrid: JD Systems Institute.
<https://www.worldvaluessurvey.org/WVSDocumentationWV6.jsp>.
- Janmaat, Jan Germen, and Robert Braun. 2009. 'Diversity and Postmaterialism as Rival Perspectives in Accounting for Social Solidarity Evidence from International Surveys'. *International Journal of Comparative Sociology* 50 (1): 39–68. doi:10.1177/0020715208100969.
- Oorschot, Wim van. 2000. 'Who Should Get What, and Why? On Deservingness Criteria and the Conditionality of Solidarity among the Public'. *Policy & Politics* 28 (1). Policy Press: 33–48. doi:10.1332/0305573002500811.
- — —. 2006. 'Making the Difference in Social Europe: Deservingness Perceptions among Citizens of European Welfare States'. *Journal of European Social Policy* 16 (1). SAGE Publications Ltd: 23–42. doi:10.1177/0958928706059829.
- — —. 2008. 'Popular Deservingness Perceptions and Conditionality of Solidarity in Europe'. In *Culture and Welfare State*, edited by Wim van Oorschot, Michael Opiekl, and Birgit Pfau-Effinger. Edward Elgar Publishing. doi:10.4337/9781848440234.00023.

- Preda, Marian. 2002. 'Caracteristici ale excluziunii sociale specifice pentru populația de romi din România'. In *Romii în România*, edited by Cătălin Zamfir and Marian Preda, 283–306. București: Editura Expert.
- Rothstein, Bo. 2017. 'Solidarity, Diversity, and the Quality of Government'. In *The Strains of Commitment: The Political Sources of Solidarity in Diverse Societies*, edited by Keith Banting and Will Kymlicka, 300–326. Oxford: Oxford University Press.
- Rusu, Horațiu. 2012. 'Measuring Social Solidarity. Some Research Notes'. *Social Change Review* 10 (1): 71–90. doi:10.2478/scr-2013-0012.
- — —. 2015. 'Soziale Solidarität in Rumänien—Über Solidaritätshandlungen'. In *Zivilgesellschaft Und Soziale Arbeit: Herausforderungen Und Perspektiven an Die Arbeit Im Gemeinwesen in Rumänien Und Deutschland*, edited by Juliane Sagebiel, Ana Muntean, and Bettina Sagebiel, 61–85. Neu Ulm: AG SPAK Bücher.
- — —. 2016. 'Solidarity with the Elderly in Romania'. *Revista de Cercetare și Intervenție Socială* 52: 130–44.
- — —. 2020. 'Solidaritatea socială în România contemporană: absență, declin sau nici una dintre ele?' In *Atlasul valorilor sociale. România la 100 de ani*, edited by Bogdan Voicu, Horațiu Rusu, and Claudiu Tufiș, 62–69. Cluj-Napoca: Presa Universitară Clujeană. <http://www.editura.ubbcluj.ro/www/ro/ebook2.php?id=2842>.
- Rusu, Horațiu, and Anca Bejenaru. 2022. 'Examining Traits of Engagement in Solidarity Actions in Romania: An Analysis of Findings from Social Values Studies with a Comparative Emphasis'. *Social Change Review* 20 (1): 162–80. doi:10.2478/scr-2022-0002.
- Rusu, Horațiu, and Andrei Gheorghită. 2014. 'Transnational Solidarity and Public Support for the EU Enlargement'. *Sociologia* 46 (3): 261–82.
- Stănuș, Cristina. 2012. 'Trade Unions, NGOs and Social Solidarity in Romania'. In *Reinventing Social Solidarity across Europe*, edited by Marion Ellison. Bristol: Policy Press.
- Stjernø, Steinar. 2005. *Solidarity in Europe: The History of an Idea*. Cambridge, UK; New York: Cambridge University Press.
- Teney, Céline, and Marc Helbling. 2017. 'Solidarity between the Elites and the Masses in Germany'. In *The Strains of Commitment: The Political Sources of Solidarity in Diverse Societies*, edited by Keith Banting and Will Kymlicka, 127–51. Oxford: Oxford University Press.
- Voicu, Bogdan, Edurne Bartolome Peral, Horațiu Rusu, Gergely Rosta, Mircea Comșa, Octavian-Marian Vasile, Lluís Coromina, and Claudiu Tufiș. 2021. 'COVID-19 and Orientations towards Solidarity: The Cases of Spain, Hungary, and Romania'. *European Societies* 23 (sup1). Routledge: S887–904. doi:10.1080/14616696.2020.1852439.
- Voicu, Bogdan, Horațiu Rusu, and Mircea Comșa. 2013. 'Atitudini față de solidaritate în România'. In *Ocupare și incluziune socială*, edited by Lucian Marina, 17–44. Cluj-Napoca: Presa Universitară Clujeană.