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Left behind but doing good? Civic engagement in two post-socialist countries

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ABSTRACT

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The fall of socialism in Central and Eastern Europe restored ordinary citizens' rights and freedoms and ended their political and social isolation. While the freedom of movement was quickly embraced, civil society revival lagged due to the eroded civic norms, declining social capital, and worsening economic conditions. In this paper, we examine the link between the out-migration of relatives and friends and the pro-social behavior of the left behinds in two post-socialist countries—Bulgaria and Romania—the EU's poorest, and among the least happy and most corrupt member states. We show that having close contacts abroad is consistently positively associated with civic engagement and that the cultural transmission of norms from abroad could be driving the results. Specifically, the strength of the civic engagement culture of the family or friend's destination matters for the pro-social behavior of respondents in the home countries. Our results imply that the emigration of family and friends may have positive but previously undocumented consequences for the individuals and communities left behind in Bulgaria and Romania. Given civil society's role for development in post-socialist Europe and the socio-economic and institutional challenges that Bulgaria and Romania face compared with the rest of the EU, understanding the channels fostering civil society and well-being are important for national and EU policymakers. *Journal of Comparative Economics* **45** (2017) 658–684. Institute for the Study of Labor (IZA), Schaumburg-Lippe-Str. 5-9, 53113, Bonn, Germany; The Brookings Institution, Washington, DC 20036, USA; The Bucharest University of Economic Studies, Romania; Harvard University, USA; POP at UNU-MERIT, Netherlands; University of Bonn, Germany.

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1. Introduction

The fall of the socialist regimes in Central and Eastern Europe and the former Soviet Union not only restored the political and civil liberties of ordinary citizens but also ended their political and social isolation. Strictly controlled before 1989, the freedom of movement was among the liberties that transition citizens promptly embraced and quickly exercised. With the liberalization of passport regulations, emigration from the post-communist countries sharply increased in the early 1990s due to opening borders, as well as political and economic instability in the home countries (Nikolova and Graham, 2015; UN, 2002).[1]

Unlike the freedom of movement, exercising the right to association lagged behind in transition economies. First, the suppression of civil society during socialism led to a deficit of civic engagement norms. By overtly curtailing freedom of association and suppressing democratic values related to participation in public matters, socialist regimes de facto eroded the fundaments underpinning civil societies (Petrova, 2007). This is why many foreign NGOs and governments contributed monetary and non-monetary aid to support civil society formations and revival in Eastern Europe after the collapse of the socialist regimes (Petrova, 2007). Moreover, the declining social trust (Fidrmuc and Gërxhani, 2008; Raiser et al., 2002) and the worsening macroeconomic conditions, which accompanied the transition process, further curtailed civil society revival.

Pro-social behaviors and civic engagement are linked to positive social outcomes such as economic development (Knack and Keefer, 1997), health, subjective well-being and social capital (Borgonovi, 2008; d'Hombres et al., 2010; Helliwell et al., 2015; Knack and Keefer, 1997; Meier and Stutzer, 2008), which can in turn enhance the quality of the social fabric, formal institutions, and democratic values (Norris, 2001). Understanding what factors promote civil society in transition economies is therefore important to policymakers and scholars alike.

This paper studies the nexus between emigration and civic engagement in two post-socialist countries: Bulgaria and Romania. Specifically, we investigate the association between having family or friends abroad and engaging in pro-social behavior, defined here as donating money, volunteering, or helping a stranger in the previous month.[2] We argue that these two countries are opportune case studies to examine the relationship between pro-social behaviors at home and having networks of family and friends abroad for several reasons. First, while countries' experiences greatly varied during and after socialism, Bulgaria and Romania's transition processes had similar trajectories. The two countries are often cited as the European Union's poorest members and are also often found at the bottom of international happiness rankings (Nikolova and Nikolaev, 2016). Bulgaria and Romania are also among the world's most corrupt nations (Transparency International, 2014).[3] Moreover, they are the only two countries in the European Union which are subject to post-accession monitoring of the judicial reform, organized crime, and the control of corruption via the EU's Mechanism for Cooperation and Verification. Given civil society's instrumental role for social and political outcomes, understanding the factors fostering it can help Bulgaria and Romania diminish the quality of life gap with the rest of the EU.

Bulgaria and Romania also share common features related to civil society histories, norms, and social trust as well as similar legal frameworks underpinning civil society. First, the two countries have low levels of generalized social trust (Fig. 1) (Bieri and Valev, 2015) and are among the countries with the lowest civic engagement in the world (Table A1). Both countries formally (Bulgaria) or de facto (Romania) lacked the right to form non-profit organizations until 1989, and with foreign help, witnessed the revival of the nonprofit sector in the 1990s (Bieri and Valev, 2015; Johnson and Young, 1997). Importantly, in both societies, the legal framework allowing for volunteering and donating money did not appear until the early 2000s.[4] Finally, the two countries have similar out-migration patterns with the top three destinations in 2005–2009 being Italy, Spain, and the UK (Table A2 based on data from Sander et al. (2015)).

We contribute to the nascent literature on the broad social consequences of international migration on the individuals and communities in the home countries. We find that having a family member abroad is a robust determinant of engaging in pro-social behavior among respondents in Bulgaria and Romania. We explain this result in light of the cultural transmission of civic engagement values from those abroad to contacts in the home country. Specifically, we find that Bulgarians and Romanians with connections in destination countries with a well-defined philanthropic culture have higher civic engagement than those with family and friends in countries with less civically engaged societies. While they deserve further

[1] The immigrant stock from transition countries increased in the main receiving countries from 1.9 million in 1990 to 3.3 million in 1995 (UN, 2002). The destinations considered in the UN report include Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

[2] In this paper, we adopt the Gallup organization's definition of civic engagement as donating, volunteering, and helping others. The terms pro-social behavior and civic engagement are used synonymously throughout this paper. The literature offers no strict definition of either term. Civic engagement could mean community service, political involvement, or collective actions to improve society (Adler and Goggin, 2005). Putnam (1995) discusses civic engagement as related to patterns of political and social participation and membership in (and volunteering for) civic and fraternal organizations. Measuring civic engagement in practice can relate to a number of activities ranging from volunteering to contacting public officials (Adler and Goggin, 2005). Pro-social behavior relates to helping, giving, volunteering, comforting, and sharing (Batson and Powell, 2003; Brief and Motowidlo, 1986).

[3] Transparency International's corruption perception index ranks Romania as the most corrupt country in the EU and Bulgaria as the fourth most corrupt one, surpassed only by Greece and Italy (Transparency International, 2014).

[4] Bulgaria's Law on Nonprofit Legal Entities, which relates to foundations and associations, was adopted in 2000 and enacted on January 1, 2001 (Gorchilova, 2010). Adopted in 2000 and substantially revised between 2001 and 2014, Romania's Nonprofit Law also covers associations and foundations. Regarding volunteering, the Romanian Volunteering Law was introduced in 2001, while in Bulgaria, a number of laws partially define or regulate volunteering but there is no legal definition of volunteering (GHK, 2010a,2010b). In 2006, the Bulgarian Center for Not-for-Profit Law proposed legislation, which to date has not been voted on by Parliament.

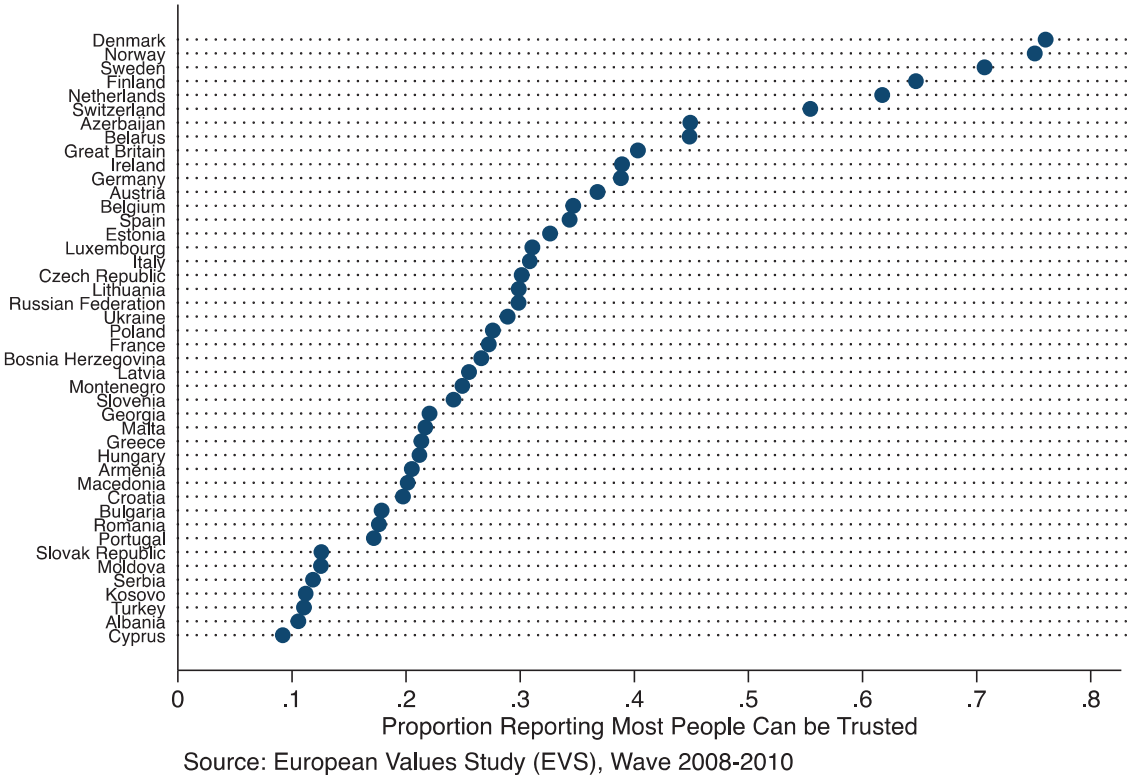

Fig. 1. Average Social Trust, by country. Notes: Excludes countries with fewer than 1000 observations (Northern Ireland, Northern Cyprus, and Iceland). The responses are based on the question "Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?" (EVS, 2011).

exploration in future research, our results suggest that the out-migration of family and friends may have important but previously undocumented positive consequences related to pro-social behavior in the home country.

2. Migration, the left behind, and civic engagement

When migrants leave their homes to live and work abroad, they typically do so to improve their own well-being and that of their children and families.[5] The extant literature has examined the well-being consequences of migration on the well-being of those who move (Abramitzky et al., 2012; Clemens et al., 2008; IOM, 2013; Nikolova and Graham, 2015; Simpson, 2013; Stillman et al., 2015) and on the families and communities left behind (see Démurger (2015) for a review).[6] In this paper we argue that looking at migration's effects only in terms of objective or subjective well-being is important, yet furnishes an incomplete perspective about the broader social consequences of emigration. Much less is known about how emigration affects social capital and networks, pro-social behavior, and informal exchanges in the home country. This paper seeks to provide some of the first insights on the consequences of the out-migration of family members and friends on the civic engagement of the left behind.

[5] The evidence shows that emigration increases the incomes and, in some instances, the life satisfaction and perceived quality of life aspects of those who move (Abramitzky et al., 2012; Clemens et al., 2008; IOM, 2013; Nikolova and Graham, 2015; Simpson, 2013; Stillman et al., 2015).

[6] The effects of migration on the left behind could be positive or negative depending on individual circumstances, who is left behind at the origin (e.g., spouses vs. elderly parents or children), and the well-being outcome. In addition, the well-being of the families left behind is difficult to evaluate, as it requires balancing the monetary gains from remittances with the psychological costs of being separated from children, parents, or spouses. On the one hand, the economic well-being of the family left in the home country could improve if remittances ease liquidity constraints and help finance education or healthcare investments (Démurger, 2015). On the other hand, the absence of a family member could be disruptive to the household unit and may result in depression, worsened health, decreased labor supply, among other effects (Démurger, 2015; Lu, 2012). The literature on the well-being consequences of migration for the families left behind is still in its infancy and primarily focuses on income, consumption, school outcomes, and subjective well-being of the left behind (for overviews, see Antman (2013) and Démurger (2015)). The findings vary depending on individual circumstances and the outcome metric studied.

Whether remittances and the out-migration of family and friends increase or decrease the civic engagement of those left behind is a priori unclear. From a microeconomics perspective, pro-social behavior depends on individual income and the price of engaging in such activities, as well as the benefit derived from them. Individuals get involved in pro-social behavior for a number of reasons. People may give or volunteer to increase the supply of the public good or because they are altruistic and derive utility from the act of pro-social behavior (Roy and Ziemek, 2000; Vesterlund, 2006). Andreoni (1989, 1990) famously suggested the impure altruistic model, according to which people experience a "warm glow" feeling from giving as their gift not only contributes to the public good but also makes them feel good about themselves. Individuals may also volunteer to acquire labor market experience and accumulate human capital (Roy and Ziemek, 2000). Emigration can affect the civic engagement of the left behind in a number of ways described below. For example, on the one hand, remittances could raise income and therefore increase pro-social behavior such as giving or volunteering. On the other hand, the absence of a family member increases time constraints, which could lower pro-social behavior among the left behind. Testing the net effect of these influences is the empirical exercise that this paper undertakes.[7]

2.1. Mechanisms which could lower the civic participation of the left behinds

The emigration of family and friends could lower civic participation of the left behinds through several channels. First, the initial out-migration of community members may disrupt or ruin the extant community networks and structures. Pro-social behaviors among the left behind at origin could decrease if out-migration is also linked to the loss of community social capital, which is a pre-condition for community engagement. For example, if a community's most socially pro-active members emigrate, those left behind may be unmotivated or unequipped to maintain the extant civil society structures or philanthropic culture. Recent papers highlight the importance of conditional cooperation, i.e., the fact that individuals are more likely to engage in pro-social behaviors when others engage in it (Frey and Meier, 2004). If the emigration of community members leads to a decrease in the overall civic engagement levels in the community, then conditional cooperation theory predicts that the left behind may decrease their engagement.

Second, if the out-migration of a *family* member is aimed at increasing within-household well-being, then its benefits may not necessarily be shared with the *community* (e.g., through donations) (Gallego and Mendola, 2013). Therefore, the left behind, and especially those receiving remittances, may be unwilling to give back to the community. Third, the out-migration of a family member may increase the household responsibilities of those left behind such as child- or eldercare, thus leaving little time for philanthropic behavior. Like other labor market and non-labor market activities, pro-social behaviors such as volunteering, charitable giving, and helping others require time, which could become scarcer when family members are absent due to migration.

2.2. Channels which could increase the civic participation of the left behinds

The out-migration of family and friends could also increase the pro-social behavior among the left behinds through (i) the transmission of civic engagement values and (ii) the income effect through remittances.

On the one hand, when immigrants go abroad, they bring their home country's culture with them, i.e., "culture travels with people" (Alesina and Giuliano, 2011; Algan and Cahuc, 2010; Blau et al., 2013; Fernandez and Fogli, 2009; Ljunge, 2012). Specifically, the culture and norms immigrants bring from home in part affects many of their behaviors and attitudes related to female labor force participation, trust, and preferences for redistribution. Yet, immigrants assimilate into the social environment in the destination country by learning the country's language, participating in formal education, familiarizing themselves with new social and cultural norms, and through interacting with the immigrant network and natives abroad (Fidrmuc and Doyle, 2004). Through local news, formal education, and contacts with co-workers, neighbors, and friends, migrants are exposed to new values and behaviors, which may differ or even clash with the ones they brought from home. Migrants continuously interact with and influence their friends, families, and the communities back home by staying connected via remittances, communication (e.g., phone calls, letters, and emails), returns and visits to the country of origin, among others (Levitt and Lamba-Nieves, 2011; Markley, 2011; Peréz-Armendáriz and Crow, 2009; Waldinger, 2013). This is especially relevant in the case of Bulgaria and Romania, which share a relatively recent emigration experience, where circular migration[8] is the norm, leading to strong ties between migrants and the left behinds (Mara and Landesmann, 2013; Stanek, 2009).

Specifically, emigrants could contribute to the social transmission of values, norms, news, and ideas from abroad (Levitt, 1999; Levitt and Lamba-Nieves, 2011; Mahmoud et al., 2014; Markley, 2011). "Social remittances," or the transfer of norms, practices, identities, and social capital that migrants relay to their home communities, breed new ideas and influence behaviors or social commitments among migrant sending-communities and could transform social and political life.[9] Compared with values and norms, which are intangible and often abstract, concrete practices and behaviors are easier to transfer

[7] While our data do not allow us to disentangle the relative strength of each channel for the net result, we seek to document some of the first results on the topic and leave it to future research to uncover the impact of each mechanism.

[8] See Constant et al. (2013) for an outline of the concept of circular migration.

[9] While the transmission of values could occur from the left behinds to the emigrants and vice versa, in this paper, we focus on the consequences of having a family member or a friend abroad for those in the home countries.

across borders (Levitt, 1999; Markley, 2011). By being concrete actions, rather than abstract values, behaviors such as donating, volunteering, and helping a stranger, are more likely to be systematically transferred from emigrants to their home communities and are therefore more likely to be adopted by those left behind. While the *identity* of the messenger of social remittances certainly matters, the extent of impact also hinges on the social remittance recipients' socio-demographic characteristics, such as age and gender, with females being more receptive to new ideas and values (Levitt, 2005). Our data allow us to test whether the civic engagement culture of the destination of the family or friends abroad matters for the pro-social behavior of the left behinds.

Second, the literature identifies the availability of resources, including monetary resources and health capabilities, as major determinants of volunteer activities (Lancee and Radl, 2014).[10] Remittances could improve the monetary well-being and health of the left behind (Böhme et al., 2015), which could in turn increase their pro-social behavior. While no studies explore the link between increased income and health capabilities through remittances and pro-social behavior, we merely suggest that one of the mechanisms could be behind the relationship.[11]

3. Related literature

To our knowledge, no extant papers specifically examine the relationship between the out-migration of family and friends and pro-social behavior among those left behind at the origin. As such, our research is most closely related to the literature on (i) emigration and the political engagement in the home country and (ii) emigration and group participation.

First, several recent studies examine the effects of international migration on the quality of political institutions and political engagement in the origin (see Chauvet and Mercier (2014) for a review). The diaspora abroad can affect the source country's political institutions by demanding political change from the authorities and exposing the local population to knowledge about functioning institutions. Domestic politics can also improve if those from abroad return home to promote change and raise awareness (Batista and Vicente, 2011). For example, individuals educated in countries with strong democratic traditions influence the spread of democracy at home (Spilimbergo, 2009). Fidrmuc and Doyle (2004) provide another line of evidence by studying the voting behavior of Czech and Polish immigrants, which appears to be affected by the host country's institutional environment such as democratic traditions and economic freedom. The authors conclude that migrants adapt to the values and norms of their new environments, which shapes and changes their behavior and has the potential to spill over to the home country.

Several studies find that the transfer of political norms from abroad does indeed spill over to the home countries. Batista and Vicente (2011) conduct a non-randomized referendum experiment in Cape Verde whereby respondents to an opinion survey on corruption are offered the opportunity to send a postcard wishing the study results to be made publicly available. The authors find a positive effect of emigration intensity on the demand for political accountability and better governance, mainly driven by migrants going to destinations with better governance and by return migrants. The finding that return migrants transfer political norms to the home country is also corroborated using data from Mali (Chauvet and Mercier, 2014). The authors not only show that return migrants influence electoral participation and electoral competitiveness but also that the returnees' impact is strongest in poorly educated regions, suggesting the role of returnees for diffusing electoral norms. Mahmoud et al. (2014) find that migration affects the share of votes for the opposition parties in parliamentary elections in Moldova. Pfutze (2012) demonstrates similar findings for municipal elections in Mexico. Yet, Mahmoud et al. (2014) suggest that their results are not due to the spillovers from migration on those who stay behind but rather from the votes cast by return migrants.

Relatedly, several papers examine the relationship between the out-migration of a household member and participation in community-based social groups at the origin, especially in developing regions where credit markets are dysfunctional and poverty and vulnerability are rampant (Cattaneo, 2015; Gallego and Mendola, 2013). For example, using data from Mozambique, Gallego and Mendola (2013) find that migration and remittances increase the participation in community-based social structures. The argument is that if at the household level the decisions to emigrate and to participate in social groups are motivated by an overarching strategy for improving economic welfare, then emigration and group participation are substitutes. If social networks provide information about migration, then group participation and emigration could be complements, at least among households preparing for migration (Cattaneo, 2015). In the developing country context, group participation is a means of coping with uncertainty and liquidity constraints, and is based on a principle of reciprocity and favor-sharing. Building on the extant literature on emigration's effects on a range of behaviors and norms such as voting, political outcomes, and group participation, our paper specifically looks at the link between out-migration and *altruistic* behavior related to donating money, volunteering, and helping a stranger.

[10] Europeans tend to substitute time donations with money donations when their time spent on market activities increases (Bauer et al., 2013).

[11] Gallego and Mendola (2013) find that remittances decrease the participation costs in groups such as rotating savings and credit associations and farmers' cooperatives. Admittedly, their sample includes civic communities and other groups which may include voluntary labor exchanges to improve the community or agricultural voluntary labor. Yet their paper focuses on groups that provide economic benefits to their members and are not philanthropic, as is the case in our paper.

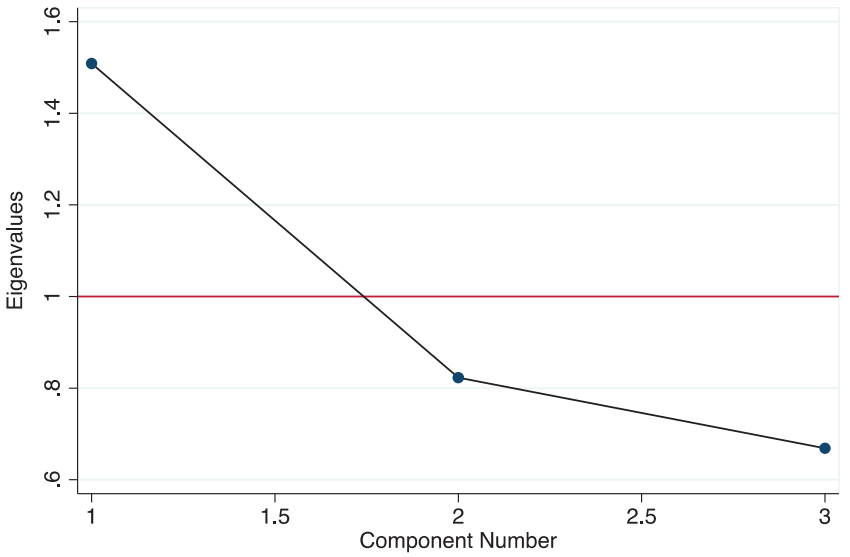

Fig. 2. Scree plot of eigenvalues after PCA.

4. Data, analysis sample construction, and variables

The data in this paper are based on the Bulgaria and Romania subsamples of the Gallup World Poll (GWP) (Gallup Inc., 2015a). Since 2005–2006, the Poll is conducted annually in about 150 countries around the globe and is representative of 98% of the world's population aged 15 and older. In Bulgaria and Romania, the data were collected via face-to-face interviews lasting about an hour. Since 2006, about 1000 respondents were polled in each survey wave except in 2008. Since different individuals are interviewed each year, the dataset is a collection of cross-sections rather than a panel.[12] The final analysis sample consists of 12,697 observations when *relatives or friends abroad* is the focal independent variable and is 10,895 when *remittances* is the focal independent variable.[13] Note that the number of observations decreases slightly when we include a labor force participation control as the employment status variables are available only starting in 2009.[14]

4.1. Dependent variables

Gallup furnishes a civic engagement index constructed as the simple average of three binary variables: donated money in the past month, volunteered in the past month, and helped a stranger in the past month.[15] Instead of combining the three variables in an index using simple averages, we conducted formal Principal Component Analysis (PCA) and created our own index ranging from 0 to 100. PCA is a standard data reduction procedure which provides a defensible way of combining variables into an index without ignoring the underlying data structure and the correlations among the variables. The extracted components are linear combinations of the three original variables and the factor loadings are used as weights. The scree plot in Fig. 2 demonstrates that one component has an eigenvalue greater than one, and per the commonly used Kaiser rule, we keep one component. Our index is closely related to the Gallup-provided one ($\rho = 0.99$). In separate regressions, we also use each of the three subcomponents of the index, namely donating, volunteering, or helping a stranger in the past month.[16]

[12] This is an unfortunate limitation as it prevents us from using individual fixed effects and thus controlling for unobserved individual heterogeneity that could influence both the probability of having friends and relatives who go abroad and pro-social behavior.

[13] When both variables are simultaneously included in the regressions, the number of observations is 10, 649.

[14] After dropping 109 foreign-born individuals, the GWP data contained 14,982 observations and spanned 2006–2014, with no observations for 2008. We further drop 1,236 observations with no civic engagement data (as it is not possible to create the civic engagement index for them) and an additional 313 observations for which the relatives or friends abroad question was not asked. For the rest of the analysis variables, to avoid systematic bias from non-response items, if "don't know" and "refused" observations were more than 5 percent of responses, we created an additional indicator for "no answer" and dropped missing observations if they were less than 5% of the missing sample. Note that the coefficient estimates for the "no answer" categories are not directly interpretable. Rather, they allow us to avoid systematic bias from omitted observations with missing data and let us understand if there are any systematic differences in civic engagement for respondents with missing information on the particular question.

[15] Note that the indicator for helping a stranger is broad and does not specify the concrete type of help (e.g., financial, physical, emotional) that the respondent provided. See Table 1 for question wording.

[16] The index has non-missing values for 13,692 respondents, or 91 percent of the original sample.

Table 1
Variables included in the analyses.

Variable	Explanation
Dependent variables	
Civic engagement index (0–100)	An index of pro-social behavior including donating money, volunteering, or helping a stranger in the past month based on principal component analysis results. Ranges from 0 (no civic engagement) to 100 (complete civic engagement).
Donate (1 = Yes)	Have you done any of the following in the past month? How about: Donated money to a charity?
Volunteer (1 = Yes)	Have you done any of the following in the past month? How about: Volunteered your time to an organization?
Helped a stranger (1 = Yes)	Have you done any of the following in the past month? How about: Helped a stranger or someone you didn't know who needed help?
Focal independent variables	Have you done any of the following in the past month? How about: Volunteered your time to an organization?
Relatives and friends abroad (1 = Yes)	Do you have relatives or friends who are living in another country whom you can count on to help you when you need them, or not?
Remittances (1 = Yes)	In the past 12 months, did this household receive help in the form of money or goods from another individual?
Other controls	
Household income dummies	This variable is based on the Gallup-provided household income in international dollars. Because about 14% of respondents did not provide a response on the household income question, we use household income quantile dummies based on within-country income, where 1 corresponds to the poorest 20%; 5 corresponds to the richest 20%, and 6 is an indicator for missing information.
Internet access (1 = Yes)	Does your home have Access to the Internet?
Social support (1 = Yes)	If you were in trouble, do you have relatives or friends you can count on to help you whenever you need them, or not?
Household and demographic variables	Age, age squared, gender, education, child in the household indicator, number of adults in the household dummies, religiosity dummy, marital status dummy, and urban/rural location dummy; and a personal unemployment dummy. Note that religiosity is a binary indicator for whether religion is important in the respondent's life. Note that about 13% of respondents did not provide an answer about the number of adults in their household. To prevent non-random attrition bias, we included adult household size dummies and an indicator for not reported household size. Employment status is available only starting in 2009 and is included in a subset of regressions

Source: Authors based on Gallup World Poll Documentation

4.2. Focal independent variables

Our analysis includes two separate proxies of being left behind. Our first focal independent variable is based on responses to the survey question *Do you have relatives or friends who are living in another country whom you can count on to help you when you need them, or not?* (Table 1).[17] We construct a binary indicator for whether the respondent has relatives and friends abroad on whom to depend. This variable captures the "left behind" status in a broad sense as it relates to a network of family and friends abroad without further specifying the emigrant's exact relationship to the interviewee. Yet, this variable is available for all survey waves, thus making it appealing from coverage and comparability perspectives.[18] In 2007, 2009, and 2010 respondents with family or friends abroad were also asked to list up to three countries in which their contacts are located. This information allows us to explore the transmission of civic engagement values from destinations with rather well-developed civic engagement cultures (Section 6.4).

Our second focal independent variable measures remittance receipt. Respondents were asked whether they had received money or goods from another individual in the past year, with the possible answers being from another individual living (i) outside this country; (ii) inside this country; (iii) both; or (iv) neither. We constructed a binary indicator variable taking the value of one for respondents receiving money or goods from an individual (i) abroad and (iii) both abroad and from this country, and zero otherwise. While providing a more precise definition of being left behind, which includes the aspect of receiving remittances, the question was only asked in 2009–2014, thus limiting the number of observations.

[17] In addition to the two proxies for left behind status that we use (Table 1), in Bulgaria and Romania, Gallup asked *Have any members of your household gone to live in a foreign country permanently or temporarily in the past five years?* The possible answers distinguish between family members who are still there, those who returned from abroad, and no family members abroad in the past 5 years. While providing the narrowest definition of left behind status among the three available questions, this item has two drawbacks: (i) it is only available for a few years thus limiting the number of observations; and (ii) it only includes information about recent migrants who left the household in the past five years. This question was only asked in Romania in survey waves 2007 and 2009 and in Bulgaria in survey wave 2009, thus severely limiting the scope for analysis. Given that employment data are only available starting in 2009, only two cross-sections are available for that part of the analysis. While only 475 respondents had household members who had left in the past five years who had not yet returned at the time of the interview, very few of the variables included in the regressions using this proxy variable were statistically significant due to the lack of statistical power, which is why we opted for using the other two proxies of being left behind. It is also possible that the social transmission of civic engagement and pro-social behavior works in the long run while the variable captures the recent (i.e., at most 5 years) emigration of a family member.

[18] Only Bulgarians were asked this question in the 2006 wave and only Romanians were asked in 2007 but the question was asked in both countries in the rest of the survey waves.

4.3. Additional control variables

We include standard socio-economic and demographic controls such as age (and its squared term), gender, marital status, education, whether the household has children under age 15, indicators for the number of adults in the household (aged 15 and over), and urban or rural location (Table 1). In addition, we use a set of controls for household income. The income variable in Gallup is in PPP-adjusted terms, which makes it comparable between the two countries and over time. Because about 14% of interviewees in the original sample did not provide a response on the household income question, to prevent a loss of observations due to non-reporting bias, we use household income quantile dummies based on within-country income, where 1 corresponds to the poorest 20%, 5 corresponds to the richest 20%, and 6 is an indicator for non-reported income.[19]

Next, we also include a religiosity variable which is a binary indicator for whether the respondent believes that religion is important in his or her life. The literature identifies religiosity as a component of social capital, which could be formed by attending religious services, for example (Lim and Putnam, 2010). Specifically for transition economies, religion serves as a "social insurance" alleviating the painful reforms and volatility in transition (Popova, 2014). The religiosity variable is therefore directly related to pro-social behavior, giving, and volunteering, as part of these activities could occur through places of worship. We also include an indicator variable for internet access. Household internet access is correlated with having friends and family abroad as it is an important communication channel. It is also related to civic engagement as it lowers the information and coordination costs of those wishing to engage in volunteering or giving.

Finally, we include an indicator for whether the respondent has access to a social network of family and friends on whom to rely in times of need in order to control for any effects of social support above and beyond the influences from remittances and family members abroad.[20] All regressions include indicators for the within-country regional divisions in Bulgaria and Romania and survey wave controls.[21] The employment status variable was asked only starting in 2009 and its inclusion in the regressions limits the number of observations. Nevertheless, for completeness and robustness, we have included this variable in separate regressions.

5. Method

5.1. Regression analysis

We first estimate the association between the civic engagement index (and its sub-components) and the two proxies for having family and friends abroad (i.e., being left behind) using a standard regression in which the civic engagement C of individual i in time period t living in region r is:

$$C_{itr} = \alpha + \gamma L_{itr} + X'_{itr}\beta + \pi_r + \tau_t + u_{itr},$$

where L is a binary indicator for being left behind (proxied in separate regressions by (i) having friends or family abroad and (ii) receiving remittances), X is a vector of individual- and household-level characteristics (age, age squared, gender, education level, marital status, presence of children in the household, urban or rural location, household size, employment status, religiosity (i.e., whether religion is important for the respondent's life), internet access, and social support), π_r are within-country region dummies, τ_t are year dummies, and u_{itr} is the stochastic error term. Because the two focal independent variables are conceptually related but practically different, in Table 3, we explore specifications where each variable enters separately as well as estimations where both variables are included in the regressions. The specifications including both variables at the same time can shed light on the relative strength of each migration proxy on civic engagement (i.e., the network of relatives and friends abroad vs. the financial transfer through remittances). Specifications in which both proxies enter at the same time are potentially more robust to endogeneity issues related to omitted variables bias. Yet, including both variables reduces the number of observations. For completeness, and where appropriate, we offer both types of specifications.

When the dependent variable is the civic engagement index (ranging from 0 to 100), the model is estimated using Ordinary Least Squares (OLS) regressions. When the dependent variables are the index sub-components, namely the binary indicators for donating, volunteering, and helping a stranger, the models are estimated using logits, with regression coefficients presented as average marginal effects.

[19] Note that when answering the household income questions, respondents are instructed to include all income, including remittances. Our results are robust to including and excluding the income variable from the regressions and to using the log-transformed continuous household income variable.

[20] Note that the Gallup World Poll question on social support is used for the "community" component of the OECD's Better Life Index.

[21] Specifically, the regions in Romania include: North-East, South-East, South, South-West, West, North-West, Central, and Bucharest. The regions in Bulgaria include: North West, North Central, North East, South West, South Central, and South East. Because about 13 percent of respondents in Romania and about 8 percent of their Bulgarian counterparts lack information on their region of residence, to prevent non-random attrition bias resulting from dropping missing observations, we included dummy variable indicators for "non-reported" regions.

5.2. Methodological challenges and propensity score matching

This paper's results are correlational as opposed to causal. We point out that endogeneity stemming from reverse causality is unlikely to be driving the results in this case, as it is hard to imagine that volunteering, helping a stranger, or donating money in the last month caused a family or a friend to depart abroad in the past. Reverse causality is theoretically possible, yet not very likely, in the relationship between remittances and civic engagement, if engaging in pro-social behavior such as donating money in the past month required household members from abroad to send remittances.

Yet, endogeneity related to selection bias is likely. The main problem relates to the fact that family members and friends do not migrate at random. In our context, it is likely that certain unobservable traits such as motivation, risk tolerance, openness, and others are correlated with having friends and family abroad and with engaging in pro-social activities, which may bias the estimation. Given this selection, the OLS results are likely positively biased. Aside from relying on exogenous variation in the emigration of family and friends, one way of dealing with this selection issue could have been by using a difference-in-difference estimator. A lack of longitudinal data with information prior to the migrant's friend or family member's departure, combined with the difficulty of knowing what the civic engagement of the left behind would have been in the absence of migration, make it very difficult to provide a causal estimate using difference-in-differences.

Another possibility of identifying a causal effect would be to use instrumental variables techniques. A valid instrument should be correlated with the emigration probability of family and friends but not with the civic engagement of the left behind. In the migration literature, local historical emigration rates (e.g., by municipality, state, village, and others) have been extensively used, often interacted with destination country's economic indicators (see, for example, Batista and Vicente, 2011; Munshi, 2003; McKenzie and Rapoport, 2007; Stöhr, 2015). Usually these papers focus on bilateral flows from a particular source to a particular destination. If the outcome of interest is labor supply or time use of the left behinds, then the migration networks variable is a good instrument as it does not affect the labor market outcomes or working hours if the family member or friend does not migrate. In our case, the historical emigration rates to the particular countries where friends, family members, or migration networks are located could affect the civic engagement of the left behind individual if family and friends do not migrate. For example, migrant networks could provide information about pro-social behaviors abroad. One solution could be to interact the migrant network variable with different exogenous destination-country variables such as economic growth (Stöhr, 2015). Practically, however, we are unable to construct such an instrument for several reasons. First, we do not know when the friend and relative departed. Second, while the Gallup surveys poll in 28 municipalities in Bulgaria and 41 in Romania, many observations (mainly in Romania) have missing information about the region of interview. Third, historical emigration rates at the local level are unavailable for Bulgaria.[22,23]

Given the limitations of observational data, we attempt to mitigate the consequences of these endogeneity problems as much as possible. Our focal independent variables are broader in the sense that they also include having friends abroad as opposed to just family members, which mitigates some selection issues. We also include a large set of individual- and household-level covariates that allow us to control for the influences of factors such as socio-demographic status, household size and children, urban or rural location, religiosity (i.e., the importance of religion in the respondent's life), the availability of support from family and friends in times of need, and other factors.

In addition, as a robustness check and as a means to correct for the selection issues, we also furnish propensity score matching (PSM) estimates. The PSM estimator is flexible as it is semi-parametric and can mitigate biases related to self-selection under conditions of strong ignorability, i.e., that all variables affecting migration of family and friends and pro-social behavior are known and measured without error (Steiner et al., 2011). Total bias reduction with PSM is possible only if a large number of covariates are used or if the exact mechanism of selection into migration by family and friends is known (Steiner et al., 2010).

Propensity score matching refers to a method of balancing the distribution of covariates for the treated and control groups (Stuart, 2010). In this setup, the treatment is emigration. Treated individuals are those with family and friends abroad (or those receiving remittances), while the control comprises observably similar individuals without family and friends abroad (or those not receiving remittances). If M is a binary treatment indicator for whether the individual's friend or family has migrated, Z is a vector of individual characteristics, $Y_i(Z_i)$ is the engagement in pro-social activities of each individual $i=1, \ldots, N$, where N is the total population. The propensity score is $P(Z)=Pr(P=1|Z)$ (i.e., the conditional probability of having a family or a friend abroad) and the PSM estimator for the average treatment effect (ATT) (Caliendo and Kopeinig, 2008) is:

$$\tau_{ATT} = E_{P(Z)|M=1}\{E[Y(1)|M=1,\ P(Z)] - E[Y(0)|M=0,\ P(Z)]\}$$

[22] Ideally, we would need to know historical emigration to and from each municipality to each destination where the respondent has family or friends, which is also unavailable.

[23] While data on historical emigration from Romanian municipalities are available, we would lose more than half of the available observations since they lack region of residence information. Furthermore, we do not have information about the emigration rates to particular destinations. The available emigration rates data underestimate the true emigration flows as they are based on changes in permanent residence, meaning that the instrument has measurement error. Nevertheless we tried using the 1995 emigration rates and the 2000 emigration rates at the municipal level as instruments in the Romanian case. Yet, the results are far from defensible: we have very weak first stages, with very low F-statistics and implausible second stage results, suggesting that the instruments do not perform well and the instrumental variable results are not defensible.

Table 2
Summary statistics of analysis variables, by whether respondent has relatives or friends abroad.

Variable	Overall			No relatives and friends abroad			Relatives and friends abroad		
	N	Mean	Std. Dev.	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
Relatives or friends abroad	12,697	0.366	0.482	8056	0.000	0.000	4641	1.000	0.000
Civic engagement index (0–100)	12,697	17.107	24.155	8056	14.332	22.469	4641	21.924	26.143
Donated (1 = Yes)	12,697	0.190	0.392	8056	0.158	0.365	4641	0.246	0.431
Volunteered (1 = Yes)	12,697	0.054	0.225	8056	0.043	0.202	4641	0.073	0.260
Helped a stranger (1 = Yes)	12,697	0.358	0.480	8056	0.306	0.461	4641	0.448	0.497
Age	12,697	51.910	18.674	8056	54.264	18.148	4641	47.825	18.870
Education (omitted category: elementary education)	12,697	0.298	0.457	8056	0.327	0.469	4641	0.247	0.432
Secondary	12,697	0.539	0.498	8056	0.536	0.5	4641	0.544	0.498
Some college or college diploma	12,697	0.163	0.369	8056	0.137	0.344	4641	0.208	0.406
Married or living with partner (1 = yes)	12,697	0.597	0.491	8056	0.601	0.490	4641	0.591	0.492
Female (1 = Yes)	12,697	0.588	0.492	8056	0.593	0.491	4641	0.581	0.493
Hhld. income (omitted cat.: poorest 20%)	12,697	0.160	0.366	8056	0.174	0.379	4641	0.134	0.341
2nd quintile	12,697	0.192	0.394	8056	0.202	0.401	4641	0.176	0.381
3rd quintile	12,697	0.195	0.396	8056	0.201	0.401	4641	0.183	0.386
4th quintile	12,697	0.192	0.394	8056	0.193	0.395	4641	0.191	0.393
Richest 20%	12,697	0.203	0.402	8056	0.171	0.377	4641	0.257	0.437
Household income not reported	12,697	0.058	0.234	8056	0.058	0.233	4641	0.059	0.236
No of adults in hh age 15+ (omitted category: 1 member)	12,697	0.207	0.405	8056	0.210	0.407	4641	0.201	0.401
2	12,697	0.385	0.487	8056	0.381	0.486	4641	0.391	0.488
3	12,697	0.181	0.385	8056	0.175	0.380	4641	0.190	0.393
4	12,697	0.110	0.313	8056	0.109	0.312	4641	0.112	0.316
5 or more	12,697	0.046	0.210	8056	0.045	0.208	4641	0.048	0.213
Number of adults not reported	12,697	0.071	0.257	8056	0.079	0.270	4641	0.057	0.232
Child(ren) in household (1 = Yes)	12,697	0.251	0.434	8056	0.231	0.421	4641	0.286	0.452
Large city (1 = Yes)	12,697	0.428	0.495	8056	0.413	0.492	4641	0.455	0.498
Religiosity (omitted category: religion important)	12,697	0.620	0.485	8056	0.605	0.489	4641	0.646	0.478
Religion not important	12,697	0.348	0.476	8056	0.362	0.481	4641	0.325	0.468
Religiosity not reported	12,697	0.032	0.175	8056	0.033	0.179	4641	0.029	0.168
Internet access (1 = Yes)	12,697	0.422	0.494	8056	0.356	0.479	4641	0.537	0.499
Social support (1 = Yes)	12,697	0.797	0.402	8056	0.750	0.433	4641	0.880	0.325

Source: Authors' estimation based on Gallup World Poll data for Bulgaria and Romania, 2006-2014
Notes: The statistics are based on the estimation sample in Model (1) of Table 3, i.e., the sample where the focal independent variable is having family and friend abroad. For variable definitions, see Table 1. The differences in means between those with no relatives and friends abroad and those with relatives and friends abroad are not statistically significant for: secondary education, marital status, gender, 3rd income quantile, 4th income quantile and the non-reported household income dummy; for the number of adults in household except not reported and 5 or more and for the no information on the religiosity. They are statistically significantly different at the 0.05 level for households with 2 adults and are statistically significant for all other variables

The estimator is based on the assumptions of unconfoundedness and common support. The first assumption implies that our matching covariates capture all relevant differences between the left behind and the non-left behind, while the second one indicates that individuals sharing the same observable characteristics can be part of both the treatment and the control groups. The included covariates in the PSM procedures are the same as those in the main regressions, and we again run specifications with and without the employment status indicator. We force exact matches within the survey year, within-country region,[24] and county of residence. Specifically, we use Stata's **teffects** command to perform nearest neighbor matching and a very conservative caliper (i.e., maximum allowable distance between the propensity scores) of 0.00001 and obtain the average treatment effect on the treated (ATT). We also use the bias adjustment option to account for the fact that two of our matching covariates, age and age^2, are continuous and not binary.

5.3. Summary statistics

Summary statistics for the main estimation sample, i.e. when the focal independent variable is whether the interviewee has relatives or friends abroad, are available in Table 2. Over a third (about 37%) of the sample reports having a relative or a friend abroad on whom they can depend in times of need, with the share among Romanians (40%) being higher than that among Bulgarians (33%) (not shown). The civic engagement index (on a scale of 0 to 100) is almost eight points higher among interviewees with close friends or relatives who have emigrated than for their counterparts. In the next section, we see whether or not this unconditional difference holds once we account for the socio-demographic characteristics of respondents and the regions in which they live.

[24] When the treatment variable is remittance receipt, we use exact matching only for the interview year and country of residence (because several observations do not have exact matches), while we include the region of residence in the matching covariates.

While many of the differences in means between the observable characteristics of respondents listed in Table 2 are statistically significant, half of them are not, such as those in secondary educational attainment, marital status, gender, some of the income quantiles, and the household size variables. This suggests that those with family and friends abroad (i.e. the left behinds) may are observably similar to those without family and friends abroad, at least with respect to some characteristics. Yet, the worry is that those with relatives and friends abroad are unobservably different from those without and have traits that make them both more likely to engage in pro-social behavior and at the same time more likely to have émigrés in their social networks. Yet, there are observable differences between the two groups in terms of internet access, the presence of children in the household, age, religiosity, and social support. The left behinds are on average slightly younger, more likely to have a tertiary education, more likely to have kids, more likely to have internet access, and report having more social support than the non-left behinds. In all analyses, we control for the socio-demographic covariates listed in Table 2 as they are practically and theoretically important.

6. Results

6.1. Main results

Table 3 features the main results, whereby the dependent variable is the civic engagement index defined above. In Models (1)–(2), the focal independent variable is having relatives and friends abroad, and in Models (3)–(4), it is whether the respondent's household received remittances in the past year. Finally, in Models (5)-(6), both focal independent variables simultaneously enter the estimation. Because the employment status variable is available starting in 2009, which limits the number of observations, we present estimations both with and without this control. Specifically, Models (2), (4), and (6) include the personal unemployment dummy, which does not change the main results much but is reported for completeness and robustness.

Models (1)–(6) show a positive and statistically significant association between being left behind and the civic engagement index. If the results in Models (1) and (2) were causal, they would suggest that having a relative or a friend abroad is associated with a 4.5 point increase in the civic engagement index (measured on a scale of 0 to 100). This suggests that there is a large gap in pro-social engagement between the left behind and the non-left behind. While the conditional difference in the civic engagement index of about 4.5 is lower compared with the unconditional difference of 8 reported in Table 2, it is still statistically and economically significant. Given that the average score of the civic engagement index for the sample as a whole is 17.1 points, a 4.5 point increase on average for those with relatives and friends abroad is economically meaningful.

Receiving remittances (Models (3) and (4)) is associated with a 3.3 point increase in the civic engagement index (the average index score for the estimation sample in Model (3) is 17.7). In Models (5)-(6), we include both focal independent variables at the same time. These results obviate the fact that while the magnitude and significance of the family and friends abroad variable does not change, the association between the civic engagement index and remittances becomes statistically insignificant.[25] Therefore, the financial transfer of funds from abroad increases civic engagement only through the migrant network abroad channel. In other words, additional financial resources acquired through remittances have no influence on civic engagement *above and beyond* the influence of having close contacts abroad. While the literature highlights the importance of financial and other resources for engaging in pro-social activities (see Section 2), our results highlight that this channel only works through the migration network effect. This is likely because in the contexts of Bulgaria and Romania, which are upper middle income countires where the civic engagement culture is relatively unestablished, it is the social transmission of civic engagement values rather than the financial resources from abroad that spur pro-social behavior.

Overall, the coefficient estimates of the control variables have the expected signs. For example, pro-social behavior is an increasing function of age, though at a very modest rate.[26] Respondents also with higher levels of education, richer respondents, religious respondents, those with internet access, and those with networks of family and friends on whom to depend are more likely to engage in pro-social behavior than their counterparts. However, there are no differences by gender, marital status, and urban location. Respondents with larger numbers of adults in the household are more likely than those with only one or two adults to engage in pro-social behavior. In Models (2), (4), and (6), the unemployment dummy is negatively associated with civic engagement. Yet, the inclusion of the unemployment control in Models (2), (4), and (6) does not change the coefficient estimates of the main explanatory variables.

6.2. Heterogeneity analyses

In separate regressions, we split the sample by country, gender, age groups, income groups, education, presence of children in the household, urban/rural location, and household size. This allows us to study whether particular socio-demographic groups drive the results and to examine the robustness of our main finding that being left behind is asso-

[25] These results are not due to collinearity between these two variables as the Variance Inflation Factors (VIFs) for each variable do not exceed 1.5. The simple correlation coefficient between the two variables is 0.3, moreover.

[26] The derivative with respect to age would suggest that the turning point occurs at around age 54 in Model (1), for example, but a more nuanced marginal effects picture at different ages shows some volatility throughout the age groups.

Table 3
Determinants of civic engagement.

	(1)	(2)	(3)	(4)	(5)	(6)
Relatives or friends abroad (1 = Yes)	4.524***	4.506***			4.466***	4.455***
	(0.461)	(0.517)			(0.526)	(0.551)
Remittances (1 = Yes)			3.284***	3.277***	1.139	1.177
			(0.902)	(0.946)	(0.959)	(1.006)
Age	0.321***	0.313***	0.280***	0.302***	0.284***	0.303***
	(0.067)	(0.076)	(0.073)	(0.076)	(0.074)	(0.077)
Age^2	−0.003***	−0.003***	−0.003***	−0.003***	−0.003***	−0.003***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Education (omitted category: elementary education)						
Secondary	3.827***	3.986***	3.831***	4.033***	3.739***	3.967***
	(0.488)	(0.563)	(0.538)	(0.566)	(0.541)	(0.570)
Some college or college diploma	10.291***	10.942***	10.577***	11.151***	10.283***	10.859***
	(0.808)	(0.903)	(0.863)	(0.901)	(0.874)	(0.913)
Married or living with partner (1 = yes)	−0.381	−0.376	−0.330	−0.375	−0.266	−0.325
	(0.572)	(0.661)	(0.638)	(0.668)	(0.640)	(0.670)
Female (1 = Yes)	0.059	0.011	−0.131	−0.114	−0.134	−0.131
	(0.432)	(0.493)	(0.471)	(0.495)	(0.475)	(0.499)
Household income quintile (omitted category: poorest 20%)						
2nd quintile	0.457	0.138	0.162	0.047	0.164	0.063
	(0.646)	(0.755)	(0.712)	(0.757)	(0.719)	(0.766)
3rd quintile	1.185*	1.245	1.246*	1.292	1.232	1.290
	(0.670)	(0.782)	(0.744)	(0.789)	(0.750)	(0.796)
4th quintile	3.078***	3.126***	2.845***	2.962***	3.016***	3.130***
	(0.724)	(0.829)	(0.786)	(0.832)	(0.794)	(0.842)
Richest 20%	5.246***	5.632***	5.644***	5.745***	5.415***	5.531***
	(0.783)	(0.892)	(0.848)	(0.898)	(0.855)	(0.906)
Household Income Not Reported	0.734	0.806	0.333	1.686	−0.121	1.195
	(1.021)	(1.474)	(1.345)	(1.533)	(1.348)	(1.516)
Number of household members aged 15+ (omitted category: 1 member)						
2	0.651	0.767	0.686	0.854	0.612	0.771
	(0.696)	(0.769)	(0.743)	(0.771)	(0.751)	(0.778)
3	1.405*	1.991**	1.461*	2.029**	1.427*	1.996**
	(0.803)	(0.893)	(0.855)	(0.893)	(0.864)	(0.901)
4	0.610	1.198	0.643	1.324	0.490	1.138
	(0.884)	(0.992)	(0.949)	(0.998)	(0.951)	(1.001)
5 or more	1.944*	3.042**	2.190*	3.171**	2.220*	3.139**
	(1.164)	(1.320)	(1.252)	(1.333)	(1.259)	(1.337)
Not reported	−1.997*					
	(1.201)					
Child(ren) in household (1 = Yes)	0.805	1.225*	0.924	1.293*	0.910	1.290*
	(0.560)	(0.657)	(0.627)	(0.665)	(0.629)	(0.667)
Large City (1 = Yes)	−0.391	−0.400	−0.530	−0.430	−0.486	−0.386
	(0.475)	(0.538)	(0.520)	(0.540)	(0.525)	(0.545)
Religiosity (omitted category: religion important)						
Religion not important	−5.191***	−5.138***	−5.338***	−5.353***	−5.179***	−5.215***
	(0.499)	(0.564)	(0.543)	(0.561)	(0.549)	(0.568)
No information on religiosity	−4.562***	−4.448***	−4.554***	−4.413***	−4.617***	−4.441***
	(1.145)	(1.322)	(1.272)	(1.353)	(1.263)	(1.346)
Internet access (1 = Yes)	3.799***	3.274***	3.974***	3.545***	3.626***	3.192***
	(0.554)	(0.622)	(0.591)	(0.621)	(0.596)	(0.627)
Social support (1 = Yes)	2.573***	2.648***	3.271***	3.321***	2.662***	2.716***
	(0.506)	(0.586)	(0.550)	(0.581)	(0.558)	(0.590)
Unemployed (1 = Yes)		−2.234**		−1.916**		−2.075**
		(0.914)		(0.931)		(0.931)
Region dummies	Y	Y	Y	Y	Y	Y
Survey waves	Y	Y	Y	Y	Y	Y
N	12,697	9997	10,895	10,012	10,649	9778
Adj. R^2	0.099	0.104	0.095	0.099	0.101	0.105

Source: Authors' estimation based on Gallup World Poll data for Bulgaria and Romania
Notes: Robust standard errors in parentheses. The dependent variable in all models is the civic engagement index (0-100). Models (2), (4), and (6) include an unemployment status dummy. See Table 1 for variable definitions.
*** $p<0.01$,
** $p<0.05$,
* $p<0.1$

Table 4
Heterogeneity analyses by country, gender, and urban/rural location.

Panel A: by country								
	Bulgaria				Romania			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Relatives or friends abroad (1=Yes)	4.638***	4.145***	4.217***	4.221***	4.476***	4.727***	4.784***	4.603***
	(0.667)	(0.701)	(0.754)	(0.754)	(0.639)	(0.769)	(0.735)	(0.815)
Remittances (1=Yes)			0.219	0.258			1.545	1.708
			(1.431)	(1.430)			(1.279)	(1.402)
Unemployed control		Y		Y		Y		Y
Region dummies	Y	Y	Y	Y	Y	Y	Y	Y
Survey waves	Y	Y	Y	Y	Y	Y	Y	Y
N	6295	5414	5316	5316	6402	4583	5333	4462
Adj. R^2	0.114	0.118	0.118	0.118	0.091	0.088	0.091	0.089
Panel B: by gender								
	Females				Males			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Relatives or friends abroad (1=Yes)	5.391***	5.141***	5.124***	4.979***	3.267***	3.544***	3.540***	3.635***
	(0.598)	(0.669)	(0.683)	(0.713)	(0.722)	(0.814)	(0.819)	(0.865)
Remittances (1=Yes)			1.769	1.832			−0.065	−0.066
			(1.198)	(1.257)			(1.601)	(1.687)
Unemployed control		Y		Y		Y		Y
Region dummies	Y	Y	Y	Y	Y	Y	Y	Y
Survey waves	Y	Y	Y	Y	Y	Y	Y	Y
N	7472	5862	6199	5726	5225	4135	4450	4052
Adj. R^2	0.104	0.110	0.108	0.111	0.096	0.105	0.098	0.105
Panel C: By urban/rural location								
	Urban				Rural			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Relatives or friends abroad (1=Yes)	5.344***	5.443***	5.690***	5.797***	3.718***	3.511***	3.260***	3.126***
	(0.707)	(0.781)	(0.798)	(0.835)	(0.605)	(0.687)	(0.694)	(0.730)
Remittances (1=Yes)			−0.083	−0.478			1.962	2.227*
			(1.487)	(1.535)			(1.245)	(1.320)
Unemployed control		Y		Y		Y		Y
Region dummies	Y	Y	Y	Y	Y	Y	Y	Y
Survey Waves	Y	Y	Y	Y	Y	Y	Y	Y
N	5439	4470	4638	4353	7258	5527	6011	5425
Adj. R^2	0.096	0.104	0.102	0.104	0.103	0.111	0.104	0.112

Source: Authors' estimation based on Gallup World Poll data for Bulgaria and Romania
Notes: Robust standard errors in parentheses. The dependent variable in all models is the civic engagement index (0-100). Models (2), (4), (6), and (8) include controls for personal unemployment. See Table 1 for variable definitions.
*** p<0.01, ** p<0.05, * p<0.1

ciated with pro-social behavior in the studied transition economies.[27] Given that the results in Table 3 indicated that the association between receiving remittances and civic engagement is driven by having family and friends abroad, the specifications in Tables 4–6 include regressions where relatives and friends abroad enters separately and specifications where both remittances and relatives and friends abroad are included in the analysis. Results which include the remittances variable separately in the analyses can be found in a working version of this paper and are available upon request.

Table 4 shows the results by country (Panel A), gender (Panel B), and urban/rural location (Panel C). Panel A in Table 4 demonstrates that the results for the Bulgarian and Romanian subsamples follow similar patterns as those in the combined full sample in Table 3. In both countries, having a relative or friend abroad is associated with about a 4.5 point increase in the civic engagement index.[28] When we include remittances receipt in Models (3)-(4) and (7)-(8), the coefficient estimate for relatives and friends abroad is 4.2 for Bulgaria and is about 4.7 for Romania.

Panel B in Table 4 suggests that the link between being left behind and pro-social behavior is stronger among females. Panel C in Table 4 reveals that the relationship between civic engagement and relatives or friends abroad is stronger in cities than in the rural areas (the coefficient estimate is 5.3–5.8 compared with 3.5–3.7 in the rural sample). The coefficient estimate for the remittances control is statistically insignificant in the urban group, but is positive and marginally statistically

[27] The results by survey wave are available in Table A3 in the Appendix.

[28] When we control for personal unemployment, the estimate falls slightly from 4.6 in Model (1) to 4.1 in Model (2) in Bulgaria, while it has the opposite result in Romania, where the magnitude of the coefficient estimate increases slightly from 4.5 in Model (5) to 4.7 in Model (6).

significant after controlling for employment status in the rural sample, suggesting that the financial transfer buttresses the main association between having relatives and friends abroad and pro-social behavior for this particular subgroup.

Table 5 continues the analyses by age and education. The relationship between the out-migration of family and friends and civic engagement is more pronounced among the younger left behind cohorts (ages 15–35). This finding is in line with the cultural transmission hypothesis, as the youngest respondents should be the most receptive of new values and ideas from abroad. The coefficient estimate for remittances is statistically insignificant. Panel B in Table 5 further reveals that pro-social behavior is strongly associated with having relatives and friends abroad across all educational groups. It is, however, strongest for respondents with secondary education and weakest for those with only elementary education. The coefficient estimate for the remittances variable is further insignificant.

Table 6 shows the results by income quintile. The relationship between having relatives and friends abroad and civic engagement is relatively strong, statistically significant, and robust across income groups. The coefficient estimates are the largest in magnitude for the top two quintiles of the income distribution and also for the poorest 20% but are slightly smaller for the 2nd and 3rd quintiles. Remittances are further marginally significantly positively associated with civic engagement among the poorest and the richest respondents, but negatively associated with pro-social behavior in the 3rd income quintile. Remittances likely increase the pro-social activities of the poorest respondents by making available additional financial resources. For the richest group, where financial resources are less likely to be a problem, the additional income from remittances is more likely to be shared with the community. Finally, the opposite argument likely holds true for the 3rd income quintile where receiving remittances is negatively associated with civic engagement. As noted in Section 2.1, the out-migration of a family or friend is likely undertaken to increase within-household well-being and as such it is unlikely to be shared with the community. This effect appears among the middle-income quintile likely because this is the income group above poverty and upwardly mobile, but still not financially secure yet where income plays a particular role for household well-being.

The final heterogeneity results in Table 7 shows that having friends and family abroad is robustly associated with pro-social behavior among respondents with and without children and for those living with or without other adults. The coefficient estimates for having friends and family abroad are higher among respondents with children in the household (Panel A, Models (1)–(4)) than for respondents without children (Panel A, Models (5)–(8)). Remittance receipt is not statistically significantly associated with civic engagement in any specification.

6.3. Decomposing the civic engagement index

The civic engagement index comprises three distinct components: (i) donating money, (ii) volunteering, and (iii) helping a stranger. In Table 8, Panel A, we look at the associations between each of the index sub-components and having family and friends abroad (Models (1)–(3)) and receiving remittances (Models (4)–(6)). As the dependent variables in all models are binary, for ease of interpretation, we present the coefficient estimates as average marginal effects. If they were causal, the interpretation of the results would imply that having relatives or friends abroad increases the predicted probability of donating by 5.3 percentage points, of volunteering by 1.5 percentage points, and of helping a stranger by 8.7 percentage points, which are economically significant magnitudes. Furthermore, there is no statistically significant association between remittance receipt and volunteering, but receiving remittances is linked with a 3.9 percentage point higher likelihood of reporting having donated in the past month and a 5.7 percentage points higher likelihood of helping a stranger in the past month. These results suggest that the main results are driven by helping a stranger and donating money but the out-migration of family and friends seems to have little, if any, influence on the volunteering activities of the left behinds. Table 8, Panel B, extends the analysis presented in Panel A by simultaneously including both focal independent variables in the same regression.[29] As in Tables 3–7, this allows us to discern the contribution of the financial boost (if any) from remittances for pro-social behavior *conditional on* having family or friends abroad. While the coefficient magnitudes for the relatives and friends abroad variable do not change much from Table 8, Panel A, remittances have no additional contribution for donations, volunteering, or helping others above and beyond the contribution of having the social network abroad. As in the preceding analysis, this result is not driven by collinearity.

The results so far indicate that the positive channels of having family and friends abroad seem to dominate the negative ones discussed in Section 3 above. Moreover, the channel related to having a network of family and friends in other countries appears to be stronger than that of receiving financial contributions from abroad. In other words, contrary to expectations, the income received from the remittances does not translate into higher civic engagement.

6.4. Channels

The following section offers insights regarding the social transmission of civic engagement values from family and friends to Bulgarians and Romanians in the home countries. In Table 9, we show results related to the social remittances channel. Specifically, in waves 2007, 2009, and 2010, Gallup asked respondents with family and friends abroad to list *up to three*

[29] We have also replicated the analyses reported in Table 8, Panel B, using the interaction between the two focal independent variables, but the remittance coefficient estimate and that on the interaction term are non-statistically significant.

Table 5
Heterogeneity analyses by age group and education level.

Panel A: by age group												
	Ages 15–35				Ages 36–60				Ages 60+			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Relatives or friends abroad (1 = Yes)	6.455***	7.008***	6.549***	6.840***	4.467***	4.147***	4.049***	4.035***	2.870***	3.056***	3.412***	3.269***
	(0.895)	(1.032)	(1.037)	(1.097)	(0.775)	(0.872)	(0.880)	(0.926)	(0.732)	(0.811)	(0.831)	(0.867)
Remittances (1 = Yes)			2.445	2.810			1.307	1.025			−0.488	−0.311
			(1.931)	(2.023)			(1.491)	(1.570)			(1.602)	(1.691)
Unemployed control		Y		Y		Y		Y		Y		Y
Region dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Survey waves	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
N	2964	2265	2410	2203	4999	3841	4136	3755	4734	3891	4103	3820
Adj. R^2	0.086	0.091	0.090	0.095	0.088	0.096	0.088	0.096	0.105	0.102	0.106	0.103
Panel B: by education level												
	Elementary				Secondary				Post-secondary (Some college or college diploma)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Relatives or friends abroad (1 = Yes)	3.170***	3.137***	3.007***	2.752***	5.057***	5.262***	5.145***	5.265***	4.572***	3.794***	3.980***	3.904***
	(0.756)	(0.870)	(0.890)	(0.935)	(0.628)	(0.699)	(0.714)	(0.749)	(1.275)	(1.399)	(1.392)	(1.444)
Remittances (1 = Yes)			1.343	1.696			1.106	0.796			1.343	1.999
			(1.634)	(1.740)			(1.289)	(1.339)			(2.773)	(2.916)
Unemployed control		Y		Y		Y		Y		Y		Y
Region dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Survey waves	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
N	3782	2860	3124	2795	6845	5416	5730	5298	2070	1721	1795	1685
Adj. R^2	0.071	0.079	0.075	0.080	0.062	0.070	0.066	0.072	0.055	0.054	0.056	0.054

Source: Authors' estimation based on Gallup World Poll data for Bulgaria and Romania
Notes: Robust standard errors in parentheses. The dependent variable in all models is the civic engagement index (0-100). Models (2), (4), (6), (8), (10), and (12) include controls for personal unemployment. See Table 1 for variable definitions.
***p<0.01, ** p<0.05, * p<0.1

Table 6
Heterogeneity analyses by income quintile.

	Poorest 20%				2nd quintile				3rd quintile			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Relatives or friends abroad (1 = Yes)	4.347***	4.219***	3.566***	3.407**	3.833***	3.839***	3.663***	3.668***	3.936***	4.279***	4.945***	4.912***
	(1.154)	(1.303)	(1.345)	(1.426)	(0.980)	(1.101)	(1.119)	(1.190)	(0.975)	(1.097)	(1.132)	(1.183)
Remittances (1 = Yes)			4.046*	4.196*			2.098	1.230			−4.083**	−3.950*
			(2.329)	(2.457)			(1.948)	(1.981)			(1.928)	(2.045)
Unemployed control		Y		Y		Y		Y		Y		Y
Region dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Survey waves	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
N	2028	1506	1643	1469	2443	1889	2060	1860	2470	2004	2110	1970
Adj. R^2	0.065	0.070	0.065	0.073	0.095	0.109	0.102	0.110	0.072	0.071	0.070	0.072
	4th quintile				Richest 20%				No income information			
	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
Relatives or friends abroad (1 = Yes)	5.238***	5.208***	5.399***	5.412***	5.149***	4.542***	4.532***	4.092***	3.827**	3.372	2.032	3.139
	(1.137)	(1.235)	(1.248)	(1.297)	(1.091)	(1.174)	(1.197)	(1.237)	(1.847)	(3.011)	(2.581)	(3.264)
Remittances (1 = Yes)			0.058	0.458			4.347*	4.823**			1.967	−0.862
			(2.401)	(2.520)			(2.242)	(2.335)			(5.351)	(5.261)
Unemployed control		Y		Y		Y		Y		Y		Y
Region dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Survey waves	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
N	2443	2088	2169	2043	2573	2221	2286	2158	740	289	381	278
Adj. R^2	0.079	0.083	0.085	0.086	0.065	0.066	0.067	0.067	0.111	0.213	0.165	0.204

Source: Authors' estimation based on Gallup World Poll data for Bulgaria and Romania
Notes: Robust standard errors in parentheses. The dependent variable in all models is the civic engagement index (0-100). Models (2), (4), (6), (8), (10), (12), (14), (16), (18), (20), (22), (24), (26), and (28) include controls for personal unemployment. See Table 1 for variable definitions.

*** $p<0.01$,
** $p<0.05$,
* $p<0.1$.

Table 7
Heterogeneity analyses by presence of children in the household and household size.

Panel A: By child(ren) in the household								
	Children				No children			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Relatives or friends abroad (1 = Yes)	6.147***	7.325***	6.832***	7.159***	3.862***	3.533***	3.626***	3.542***
	(0.922)	(1.077)	(1.091)	(1.164)	(0.532)	(0.588)	(0.598)	(0.624)
Remittances (1 = Yes)			0.077	1.014			1.486	1.083
			(1.795)	(1.920)			(1.134)	(1.182)
Unemployed control		Y		Y		Y		Y
Region dummies	Y	Y	Y	Y	Y	Y	Y	Y
Survey waves	Y	Y	Y	Y	Y	Y	Y	Y
N	3189	2350	2529	2295	9508	7647	8120	7483
Adj. R^2	0.117	0.134	0.125	0.131	0.093	0.096	0.093	0.097
Panel B: By Household size								
	No other adults in household				Other adults and missing information			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Relatives or friends abroad (1 = Yes)	3.550***	3.260***	3.288***	3.311***	4.663***	4.737***	4.685***	4.654***
	(0.979)	(1.036)	(1.059)	(1.104)	(0.522)	(0.596)	(0.605)	(0.636)
Remittances (1 = Yes)			1.313	0.365			1.062	1.435
			(1.879)	(1.897)			(1.117)	(1.190)
Unemployed control		Y		Y		Y		Y
Region dummies	Y	Y	Y	Y	Y	Y	Y	Y
Survey waves	Y	Y	Y	Y	Y	Y	Y	Y
N	2625	2330	2428	2274	10,072	7667	8221	7504
Adj. R^2	0.103	0.110	0.101	0.111	0.099	0.104	0.101	0.104

Source: Authors' estimation based on Gallup World Poll data for Bulgaria and Romania
Notes: Robust standard errors in parentheses. The dependent variable in all models is the civic engagement index (0-100). Models (2), (4), (6), and (8) include controls for personal unemployment. See Table 1 for variable definitions.
***p<0.01, ** p<0.05, * p<0.1

countries in which their connections reside. Based on the civic engagement data Gallup Analytics (Gallup Inc., 2015b), we ranked the destination countries of friends and family in terms of their civic engagement index score and then categorized destination countries into three groups, from the least civically engaged to the most civically engaged (Table A1 in the Appendix). We then created indicator variables for whether the respondent has a relative or a friend in the least civically engaged countries, moderately civically engaged countries, and highly civically engaged countries. The three variables are not mutually exclusive as respondents could have family and friends in multiple countries.[30] In addition, to further explore whether physical and cultural distance mediate the social transmission of civic engagement norms, in separate regressions we also control for the geographic and linguistic distance between Bulgaria and Romania and the destination countries of the family and friends. Models (5) and (6) include a proxy for linguistic distance from Melitz and Toubal (2014), while in (7)–(8), we control for the geographic distance between the capitals of the origin and destination countries using data from Mayer and Zignago (2011).[31] Models (1)–(2) in Table 9 include respondents with and without friends and family abroad. Models (3)–(8) are estimated only for those with family and friends abroad. The regressions in Models (1), (3), (5), and (7) are for 2007 and 2009–2010. When the employment control is included in Models (2), (4), (6), and (8), the regressions are for 2009–2010.

Specifically, Table 9 shows results consistent with the social remittances hypothesis. Having a family member or a friend in the most civically engaged countries is associated with a 4.5 to 5 point increase in the civic engagement index, regardless of whether only those with relatives and friends abroad are considered (Models (3)–(8)) or whether all respondents in 2007 and 2009–2010 are in the analysis sample (Models (1)–(2)). In addition, geographic and physical distance do not mediate the transmission of civic engagement norms (Models (5)-(8)). In other words, the social transmission of civic engagement values from relatively civically engaged countries to Bulgaria and Romania does not depend on cultural or linguistic similarity or physical distance with the family and friends' destinations.

While the channels mentioned here merit further exploration in future research, there seem to be tangible social benefits for those in the home countries from having family and friends in destinations with strong and vibrant civil societies. Having relatives and friends in countries which are not very civically engaged is not associated with pro-social behavior among the left behind. Having close contacts in countries with moderate levels of civic engagement contributes to the pro-social behavior of the left behinds but only when we include those with no friends and family abroad in the analysis. These

[30] The coding takes into account those with relatives in multiple locations. The analyses exclude 78 observations for which no information on the location of the friends and family was available.

[31] Because respondents could mention more than one destination, the distance variables are calculated as averages.

Table 8
Civic engagement sub-components results, average marginal effects.

Panel A						
	(1) Donate	(2) Volunteer	(3) Help	(4) Donate	(5) Volunteer	(6) Help
Relatives or friends abroad (1 = Yes)	0.053***	0.015***	0.087***			
	(0.008)	(0.004)	(0.010)			
Remittances (1 = Yes)				0.039***	0.013	0.057***
				(0.015)	(0.009)	(0.017)
Unemployment control	N	N	N	N	N	N
Region dummies	Y	Y	Y	Y	Y	Y
Survey waves	Y	Y	Y	Y	Y	Y
N	11,012	11,012	10,948	10,987	10,988	10,929
Pseudo R^2	0.064	0.083	0.070	0.062	0.078	0.065
Panel B						
	(1) Donate	(2) Volunteer	(3) Help	(4) Donate	(5) Volunteer	(6) Help
Relatives or friends abroad (1 = Yes)	0.050***	0.016***	0.084***	0.052***	0.016***	0.080***
	(0.008)	(0.005)	(0.010)	(0.009)	(0.005)	(0.011)
Remittances (1 = Yes)	0.016	0.006	0.016	0.018	0.004	0.018
	(0.014)	(0.008)	(0.017)	(0.015)	(0.009)	(0.018)
Unemployed control				Y	Y	Y
Region dummies	Y	Y	Y	Y	Y	Y
Survey waves	Y	Y	Y	Y	Y	Y
N	10,739	10,740	10,681	9859	9860	9810
Pseudo R^2	0.064	0.083	0.069	0.073	0.088	0.070

Source: Authors' estimation based on Gallup World Poll data for Bulgaria and Romania
Notes: Robust standard errors in parentheses. The dependent variable in Models (1) and (4) is whether the respondent donated money in the past one month; in Models (2) and (5), it is whether the respondent volunteered in the past month, and in Models (3) and (6) it is whether the respondent helped a stranger in the past month. The results are in terms of average marginal effects. See Table 1 for variable definitions. This estimation sample excludes the observations for missing regions as the marginal effects could not be estimated when they were included in the regressions. The difference between Panel A and Panel B is that in Panel B both "left behind" variables enter in the estimated equations at the same time. Models (4)-(6) in Panel B include controls for personal unemployment.
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

findings suggest that a transmission of behavioral norms occurs from the destination countries abroad and migrants are the vehicles or agents of this transfer. As explained above, while migrants bring their culture to the new destination country, they are influenced by and adapt to the new norms and behavior. This process occurs through watching television, reading newspapers, participating in formal education or training, and interacting with neighbors, friends, and colleagues. Migrants transmit these new values and behaviors to the left behinds via communication modes and return visits to the home country, which alters the behaviors and attitudes of friends and families back home. As noted above, by being concrete behaviors rather than vague values and norms, the pro-social behaviors studied in this paper are likely to be quickly adopted.[32]

This result has important implications for the bottom-up, or grassroots, formation of civic engagement in Bulgaria and Romania. Given that in both countries, civic society engagement was initially top-down, i.e., with the help of foreign NGOs and foreign governments (Bieri and Valev, 2015; GHK, 2010b; Gorchilova, 2010; Petrova, 2007), understanding the facilitators of the bottom-up process are instrumentally important for policymakers and civil society organizations in both countries. This result begs the more general question of whether the bottom-up revival of civic engagement values in post-socialist societies is possible without the influence of outsiders' ideas and assistance.

6.5. Robustness checks

As explained in Section 5.2 above, we relied on a propensity score matching estimator to test the robustness of our main results to controlling for selection on observables. In Table 10, we show the PSM results using nearest neighbor matching (with one neighbor and a conservative caliper of 0.00001). The balancing tests for these estimations are available in Tables A4–A5 and show that the covariates are balanced between the treated and control groups. Specifically, a perfectly balanced covariate should have a standardized difference of 0 and a variance ratio of 1. Looking at the "Matched" columns in Tables A4–A5, we can conclude that the matching procedure was successful.

[32] Further research into the speed and directionality of the transmission could provide answers to several open questions. For example, it is likely that the transmission of values would be accelerated by the frequency and length of contact between the migrants and the left behinds. In addition, the transmission of social remittances also likely occurs from the left behinds to the migrants and from migrants to their destination communities. The degree to which native communities are influenced by the norms brought by immigrants remains a question for further exploration.

Table 9
Testing the effects of the location of family member on civic engagement.

	(1) Full sample	(2) Full sample	(3) Only those with family and friends abroad	(4) Only those with family and friends abroad	(5) Only those with family and friends abroad	(6) Only those with family and friends abroad	(7) Only those with family and friends abroad	(8) Only those with family and friends abroad
Having family and friends in destination countries in the…								
Least civically engaged tertile	2.424	1.889	2.306	1.290	2.401	0.899	2.954	1.541
	(1.526)	(1.873)	(2.228)	(2.895)	(2.348)	(2.945)	(2.263)	(2.969)
Moderately civically engaged tertile	3.423***	3.644***	3.093	2.390	3.007	2.702	3.511*	2.508
	(0.979)	(1.377)	(1.960)	(2.587)	(2.100)	(2.658)	(1.974)	(2.609)
Highly civically engaged tertile	4.483***	4.854***	4.985**	4.694*	5.040**	4.506*	4.316**	4.371*
	(1.098)	(1.455)	(1.934)	(2.518)	(1.992)	(2.523)	(1.999)	(2.612)
Linguistic distance					0.116	−0.674		
					(0.959)	(1.288)		
Geographic distance							0.000	0.000
							(0.000)	(0.000)
Unemployed control		Y		Y		Y		Y
Region dummies	Y	Y	Y	Y	Y	Y	Y	Y
Survey waves	Y	Y	Y	Y	Y	Y	Y	Y
Observations	4441	2660	1380	815	1380	815	1380	815
Adj. R^2	0.091	0.118	0.084	0.098	0.083	0.097	0.085	0.097

Source: Authors' estimation based on Gallup World Poll data for Bulgaria and Romania
Notes: Robust standard errors in parentheses. The dependent variable in all models is the civic engagement index (0-100). See Table 1 for variable definitions. See Table A1 for classification of countries according to civic engagement. Respondents could list up to three locations of their family members and friends and therefore the variables Least Civically Engaged Tertile- Most Civically Engaged Tertile do not represent mutually exclusive categories. Models (1)-(2) include respondents without friends and family abroad. Models (3)-(8) are estimated only for those with family and friends abroad. The regressions in Models (1), (3), (5), (7) are for 2007, 2009-2010. When the employment control is included in Models (2), (4), (6), (8) the regressions are for 2009-2010. All regressions include the set of individual and household-level controls as in the main models.
*** $p<0.01$,
** $p<0.05$,
* $p<0.1$

Table 10
Civic engagement and being left behind, average treatment effects, nearest neighbor matching results.

N Treatment	N Control	ATT	Robust S.E.	P-value	Employment status control
Panel A: Treatment: relatives or friends abroad					
4641	4641	5.023	0.619	0.000	N
3823	3823	4.911	0.696	0.000	Y
Panel B: Treatment: remittances					
836	836	3.391	1.241	0.006	N
751	751	2.824	1.314	0.032	Y

Source: Authors' estimation based on Gallup World Poll data for Bulgaria and Romania
Notes: Summary of results from caliper propensity score matching. The treatment group is those with family and friends abroad in Panel A and those receiving remittances in Panel B. The control group is those without family and friends abroad in Panel A and those not receiving remittances in Panel B. The number of observations refers to the post-matching estimation sample. Nearest neighbor matching, with a caliper of 0.00001 was used. The matching covariates are identical to the ones used in the main analyses (see Table 2). The second specification in Panel A and Panel B includes an additional covariate for the individual's employment status. Exact matching on within-country region, country, and year is used in Panel A, and exact matching on county and year is used in Panel B. Panel B includes the within-country regions as a matching covariate.

While the PSM estimates provide a sensitivity check, they should not be interpreted as causal as they cannot eliminate selection on unobservables. The average treatment effects (ATT) reported are very similar in magnitude to the OLS results reported in Table 3, confirming the robustness of the findings. Specifically, those with family and friends abroad corresponds to about a 5 point increase in the civic engagement index (compared to 4.5 in the main results in Table 3) and remittance receipts is linked with about a 3.1 to 3.5 point increase in the civic engagement score (compared with 3.3 in the main results).

7. Discussion and conclusion

Can the out-migration of family and friends have positive effects for those who stay in the origin countries? To our knowledge, we are the first ones to investigate the relationship between having family and friends abroad and being civically engaged in the home country. Using individual-level data from the Gallup World Poll, we study two former socialist countries—Bulgaria and Romania—which since the fall of socialism have faced large out-migration flows but have lacked vibrant civil society cultures. In fact, the legal framework concerning civic society did not exist until 15 years ago. Bulgaria and Romania are also the EU's poorest and among the most corrupt countries. A vibrant civil society underpins social trust and the quality of the social fabric and as such could be instrumental for improving economic and political institutions in the two countries. Therefore, studying what factors are associated with and shape civic engagement behavior is of great importance for the EU as well as for national policymakers in the two societies.

Our results show that having family and friends abroad is positively associated with pro-social behavior (donating, volunteering, and helping strangers), a result whichholds across different socio-demographic groups and across different measures of such behaviors. Remittances are also a determinant of pro-social behavior but have no effect on civic engagement above and beyond the effects of having friends and family abroad. Using information on the country to which the friends and family are located and data on the strength of the civil society of these destination countries, our results provide support for the social transmission hypothesis. Respondents with contacts in countries with strong civil societies have higher pro-social behavior index scores in the home country compared with respondents in countries with weaker civil societies. Given that the out-migration of skilled individuals from the two countries is often considered a major problem seen as a brain drain, our results showing evidence of induced cultural changes provide a positive story.

Acknowledgements

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Appendix

Table A1
Civic engagement classification, Gallup World Poll countries, all available years and countries.

Country name	Civic engagement index value	Proportion donated money	Proportion volunteered	Proportion helped stranger	Civic engagement rank (1 = Best)	Civic engagement category, 1 = least; 3 = most Engaged
Myanmar	61.972	0.909	0.465	0.488	1	3
United States	60.817	0.696	0.445	0.688	2	3
New Zealand	59.846	0.703	0.437	0.667	3	3
Australia	59.018	0.746	0.389	0.645	4	3
Ireland	58.602	0.757	0.388	0.620	5	3
Canada	57.739	0.689	0.406	0.641	6	3
Cuba	56.500		0.459	0.687	7	3
Netherlands	55.430	0.776	0.378	0.521	8	3
United Kingdom	54.720	0.757	0.300	0.591	9	3
Bhutan	51.485	0.605	0.397	0.552	10	3
Sri Lanka	49.754	0.510	0.450	0.550	11	3
Austria	48.269	0.632	0.278	0.551	12	3
Malta	48.147	0.746	0.255	0.455	13	3
Switzerland	48.123	0.615	0.309	0.529	14	3
Liberia	47.906	0.161	0.469	0.821	15	3
Norway	47.898	0.567	0.374	0.507	16	3
Iceland	47.458	0.694	0.272	0.477	17	3
Denmark	47.192	0.674	0.240	0.514	18	3
Qatar	47.068	0.625	0.187	0.686	19	3

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Table A1 (*continued*)

Country name	Civic engagement index value	Proportion donated money	Proportion volunteered	Proportion helped stranger	Civic engagement rank (1 = Best)	Civic engagement category, 1 = least; 3 = most Engaged
Trinidad & Tobago	46.961	0.475	0.290	0.654	20	3
Hong Kong	46.544	0.654	0.169	0.576	21	3
Northern Cyprus	46.297	0.482	0.238	0.678	22	3
Libya	46.041	0.304	0.374	0.735	23	3
Guyana	46.041	0.370	0.339	0.699	24	3
Laos	45.792	0.671	0.295	0.499	25	3
Sierra Leone	45.002	0.237	0.378	0.742	26	3
Thailand	44.374	0.759	0.155	0.424	27	3
Nigeria	44.038	0.309	0.373	0.654	28	3
Turkmenistan	43.520	0.247	0.514	0.567	29	3
Oman	43.333	0.375	0.215	0.726	30	3
Mauritius	43.317	0.545	0.347	0.409	31	3
Luxembourg	43.267	0.581	0.305	0.418	32	3
Germany	42.726	0.508	0.247	0.534	33	3
Philippines	42.324	0.300	0.378	0.596	34	3
Indonesia	41.999	0.637	0.300	0.343	35	3
Finland	41.729	0.473	0.303	0.481	36	3
Iran	41.350	0.476	0.212	0.565	37	3
Chile	41.283	0.525	0.165	0.553	38	3
Jamaica	41.193	0.255	0.304	0.688	39	3
Cyprus	41.044	0.484	0.250	0.507	40	3
Slovenia	40.975	0.444	0.325	0.464	41	3
Sudan	40.644	0.229	0.267	0.741	42	3
Guatemala	40.578	0.378	0.327	0.522	43	3
Sweden	40.566	0.600	0.140	0.486	44	3
Ghana	40.264	0.279	0.316	0.616	45	3
Kuwait	39.697	0.391	0.176	0.646	46	3
Kenya	39.663	0.284	0.281	0.627	47	3
Swaziland	39.533	0.278	0.285	0.623	48	3
Somaliland region	39.486	0.407	0.186	0.593	49	3
Dominican Republic	39.348	0.286	0.314	0.585	50	3
Costa Rica	39.238	0.361	0.230	0.593	51	3
Puerto Rico	39.200	0.368	0.212	0.606	52	3
Israel	39.149	0.536	0.213	0.435	53	3
United Arab Emirates	39.071	0.490	0.141	0.587	54	3
Zambia	38.858	0.200	0.295	0.674	55	3
Malawi	38.771	0.272	0.301	0.591	56	2
South Sudan	38.267	0.240	0.292	0.648	57	2
Haiti	37.853	0.446	0.334	0.416	58	2
Belgium	37.621	0.435	0.272	0.430	59	2
Malaysia	37.558	0.451	0.283	0.409	60	2
Somalia	37.000		0.176	0.605	61	2
Taiwan	36.984	0.433	0.190	0.494	62	2
Colombia	36.937	0.264	0.211	0.636	63	2
Uzbekistan	36.338	0.219	0.393	0.488	64	2
Honduras	36.262	0.334	0.291	0.476	65	2
Italy	36.250	0.465	0.192	0.439	66	2
Afghanistan	36.080	0.345	0.202	0.550	67	2
Panama	35.571	0.354	0.248	0.478	68	2
Bahrain	35.294	0.406	0.178	0.495	69	2
Uganda	35.289	0.191	0.255	0.614	70	2
Syria	34.736	0.371	0.129	0.665	71	2
Mongolia	34.695	0.390	0.300	0.369	72	2
Paraguay	34.533	0.395	0.241	0.403	73	2
Tajikistan	34.090	0.172	0.404	0.468	74	2
Lesotho	33.767	0.107	0.179	0.727	75	2
Belize	33.698	0.283	0.269	0.485	76	2
South Korea	33.189	0.322	0.248	0.431	77	2
Lebanon	33.004	0.378	0.122	0.523	78	2
Tanzania	32.964	0.319	0.177	0.501	79	2
Guinea	32.793	0.212	0.202	0.572	80	2
France	32.544	0.348	0.268	0.363	81	2
Botswana	32.481	0.164	0.214	0.599	82	2
Cameroon	32.449	0.172	0.178	0.626	83	2
Saudi Arabia	32.400	0.332	0.141	0.541	84	2
Spain	32.383	0.311	0.164	0.498	85	2
South Africa	32.353	0.194	0.217	0.601	86	2
Singapore	32.031	0.493	0.146	0.325	87	2

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Table A1 (*continued*)

Country name	Civic engagement index value	Proportion donated money	Proportion volunteered	Proportion helped stranger	Civic engagement rank (1 = Best)	Civic engagement category, 1 = least; 3 = most Engaged
Bolivia	31.834	0.226	0.222	0.512	88	2
Namibia	31.567	0.143	0.185	0.621	89	2
Senegal	31.189	0.169	0.185	0.587	90	2
Nepal	31.154	0.319	0.232	0.402	91	2
Suriname	31.151	0.249	0.226	0.472	92	2
Central African Republic	31.100	0.157	0.278	0.502	93	2
Nicaragua	30.753	0.292	0.200	0.438	94	2
Mauritania	30.643	0.263	0.196	0.469	95	2
Comoros	30.375	0.151	0.224	0.537	96	2
Kosovo	29.553	0.363	0.130	0.408	97	2
Peru	29.544	0.220	0.204	0.468	98	2
Iraq	29.432	0.204	0.127	0.600	99	2
Argentina	29.322	0.224	0.160	0.502	100	2
Brazil	29.182	0.261	0.150	0.468	101	2
Mexico	29.113	0.241	0.187	0.468	102	2
Kyrgyzstan	28.975	0.176	0.295	0.414	103	2
Azerbaijan	28.843	0.169	0.264	0.447	104	2
Gabon	28.685	0.141	0.127	0.596	105	2
Congo Brazzaville	28.167	0.126	0.157	0.566	106	2
Pakistan	28.146	0.342	0.151	0.377	107	2
Zimbabwe	27.981	0.102	0.203	0.536	108	2
Uruguay	27.965	0.251	0.141	0.453	109	2
Djibouti	27.867	0.197	0.167	0.476	110	2
Poland	27.820	0.338	0.107	0.400	111	1
Vietnam	27.812	0.270	0.117	0.463	112	1
Angola	27.708	0.175	0.221	0.448	113	1
Bangladesh	27.494	0.178	0.120	0.533	114	1
Portugal	27.298	0.253	0.140	0.435	115	1
Ethiopia	26.407	0.170	0.149	0.479	116	1
Chad	26.274	0.165	0.215	0.412	117	1
India	26.146	0.263	0.181	0.354	118	1
Macedonia	25.938	0.310	0.106	0.376	119	1
Mozambique	25.933	0.155	0.198	0.428	120	1
Slovakia	25.689	0.319	0.132	0.326	121	1
Japan	25.487	0.256	0.251	0.259	122	1
Ivory Coast	25.454	0.137	0.085	0.542	123	1
El Salvador	25.255	0.158	0.161	0.446	124	1
Moldova	25.015	0.181	0.179	0.406	125	1
Cambodia	24.815	0.437	0.076	0.235	126	1
Kazakhstan	24.782	0.143	0.225	0.393	127	1
Belarus	24.755	0.142	0.287	0.328	128	1
Czech Republic	24.470	0.276	0.138	0.330	129	1
Egypt	24.460	0.182	0.070	0.509	130	1
Mali	24.454	0.139	0.120	0.477	131	1
Latvia	24.341	0.252	0.143	0.340	132	1
Hungary	24.304	0.240	0.087	0.406	133	1
Nagorno-Karabakh Republic	24.100	0.092	0.095	0.537	134	1
Niger	23.662	0.096	0.115	0.501	135	1
Tunisia	23.429	0.115	0.082	0.573	136	1
Ecuador	23.284	0.183	0.138	0.380	137	1
Burkina Faso	23.252	0.122	0.133	0.445	138	1
Estonia	23.095	0.153	0.172	0.374	139	1
Bosnia and Herzegovina	23.071	0.320	0.057	0.332	140	1
Benin	22.306	0.123	0.145	0.406	141	1
Armenia	22.196	0.074	0.125	0.471	142	1
Ukraine	22.016	0.110	0.227	0.333	143	1
Congo Kinshasa	21.840	0.118	0.150	0.392	144	1
Morocco	21.817	0.068	0.080	0.513	145	1
Palestinian Territories	21.781	0.129	0.114	0.413	146	1
Albania	21.745	0.192	0.101	0.375	147	1
Yemen	21.507	0.113	0.066	0.471	148	1
Jordan	21.504	0.196	0.063	0.416	149	1
Romania	20.758	0.200	0.054	0.376	150	1
Montenegro	20.657	0.211	0.083	0.333	151	1

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Table A1 (*continued*)

Country name	Civic engagement index value	Proportion donated money	Proportion volunteered	Proportion helped stranger	Civic engagement rank (1 = Best)	Civic engagement category, 1 = least; 3 = most Engaged
Venezuela	20.605	0.150	0.126	0.377	152	1
Madagascar	20.246	0.116	0.229	0.263	153	1
Algeria	20.136	0.117	0.071	0.424	154	1
Georgia	19.986	0.043	0.175	0.391	155	1
Croatia	19.872	0.196	0.082	0.323	156	1
Rwanda	19.844	0.154	0.180	0.295	157	1
Russia	19.809	0.064	0.200	0.339	158	1
Togo	19.592	0.085	0.168	0.342	159	1
Bulgaria	19.237	0.183	0.054	0.345	160	1
Lithuania	19.052	0.103	0.108	0.369	161	1
Turkey	18.609	0.128	0.071	0.368	162	1
China	17.800	0.144	0.055	0.341	163	1
Serbia	17.047	0.197	0.046	0.274	164	1
Greece	16.188	0.096	0.060	0.332	165	1
Burundi	13.208	0.072	0.099	0.225	166	1

Source: Authors' Calculation based on Gallup Analytics (Gallup Inc., 2015b)

Table A2
Migration flows from bulgaria and romania to top five destinations.

Bulgaria							
1990-1994		1995-1999		2000-2004		2005-2009	
Destination	*Number*	*Destination*	*Number*	*Destination*	*Number*	*Destination*	*Number*
Turkey	230,694	Turkey	45,080	Spain	37,351	Spain	36,598
Greece	21,682	United States	21,829	Italy	8559	Italy	10,476
Germany	20,502	Greece	20,303	United Kingdom	7522	United Kingdom	7193
United States	17,705	Italy	5435	Germany	4850	Germany	6329
Israel	12,376	Canada	4438	Romania	3661	Belgium	3927
Romania							
1990-1994		1995-1999		2000-2004		2005-2009	
Destination	*Number*	*Destination*	*Number*	*Destination*	*Number*	*Destination*	*Number*
Germany	179,793	Germany	179,793	Italy	144,814	Italy	103,489
Israel	68,628	United States	42,443	Spain	127,792	Spain	63,062
Hungary	59,076	Italy	55,325	United Kingdom	8220	United Kingdom	36,598
Italy	55,325	Hungary	59,076	Portugal	2846	Belgium	10,476
United States	42,443	Canada	23,959	Belgium	2517	Portugal	7193

Source: Authors' tabulations based on Global International Migration Flows (Sander, Abel, Bauer, 2015)
Notes: The table shows the number of Bulgarians and Romanians who changed their country of residence over five-year periods for the top 5 destination countries. The estimates reflect migration transitions and thus cannot be compared to annual movements flow data published by United Nations and Eurostat. The data are estimated from sequential stock tables and are comparable across countries.

Table A3
Heterogeneity analyses by year of survey.

Panel A

	(1) 2006	(2) 2007	(3) 2009	(4) 2010	(5) 2011	(6) 2012	(7) 2013	(8) 2014
Relatives or friends abroad (1=Yes)	8.328***	0.824	3.244***	6.404***	3.400***	4.498***	4.185***	3.784***
	(2.110)	(1.647)	(1.233)	(1.228)	(1.126)	(1.232)	(1.246)	(1.202)
Unemployed control	N	N	N	N	N	N	N	N
Region dummies	Y	Y	Y	Y	Y	Y	Y	Y
Survey waves	Y	Y	Y	Y	Y	Y	Y	Y
N	881	903	1813	1797	1827	1848	1887	1741
Adj. R^2	0.085	0.050	0.108	0.118	0.088	0.110	0.109	0.117

Panel B

	(1) 2009	(2) 2010	(3) 2011	(4) 2012	(5) 2013	(6) 2014
Remittances (1=Yes)	2.642**	6.602***	3.835***	4.782***	3.741***	3.685***
	(1.341)	(1.324)	(1.243)	(1.306)	(1.292)	(1.248)
	2.019	−0.343	−1.168	−2.519	5.227**	1.848
	(2.337)	(2.377)	(2.084)	(2.316)	(2.603)	(2.179)
Unemployed control	N	N	N	N	N	N
Region dummies	Y	Y	Y	Y	Y	Y
Survey waves	Y	Y	Y	Y	Y	Y
TaN	1732	1763	1738	1831	1876	1709
Adj. R^2	0.106	0.116	0.100	0.111	0.112	0.115

Source: Authors' estimation based on Gallup World Poll data for Bulgaria and Romania
Notes: Robust standard errors in parentheses. The dependent variable in all models is the civic engagement index (0–100). Panel A's focal independent variable is having friends or relatives abroad. Panel B's adds receiving remittances from abroad to the regressions. See Table 1 for variable definitions.
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table A4
Balancing tests after propensity score matching.

Nearest neighbor matching, caliper (0.00001), treatment: relatives and friends abroad	Without an employment control				With an employment control			
	Standardized differences		Variance ratio		Standardized differences		Variance ratio	
	Raw	Matched	Raw	Matched	Raw	Matched	Raw	Matched
Age	−0.348	−0.220	1.081	1.167	−0.349	−0.242	1.079	1.179
Age^2	−0.334	−0.191	0.961	1.104	−0.338	−0.213	0.961	1.109
Education								
Elementary	−0.177	0.004	0.846	1.005	−0.170	−0.004	0.844	0.996
Secondary	0.016	−0.066	0.997	1.016	0.000	−0.062	1.000	1.014
Married or living with partner	−0.020	−0.124	1.008	1.064	−0.003	−0.105	1.001	1.051
Female	−0.024	−0.031	1.009	1.011	−0.019	−0.023	1.007	1.008
Household income								
Poorest 20%	−0.110	0.008	0.809	1.018	−0.085	0.028	0.844	1.065
2nd quintile	−0.064	−0.015	0.903	0.976	−0.053	−0.011	0.919	0.982
3rd quintile	−0.048	0.001	0.927	1.001	−0.074	−0.013	0.893	0.978
4th quintile	−0.007	−0.010	0.989	0.985	−0.016	−0.001	0.977	0.998
Richest 20%	0.209	0.003	1.344	1.004	0.197	0.000	1.288	1.000
No of adults in HH age 15+								
1	−0.022	−0.003	0.968	0.996	−0.043	−0.024	0.946	0.969
2	0.022	−0.088	1.010	0.969	0.010	−0.093	1.003	0.980
3	0.038	0.047	1.065	1.081	0.032	0.056	1.052	1.095
4	0.010	0.064	1.026	1.182	0.004	0.083	1.010	1.253
5 or more	0.011	0.035	1.050	1.166				
Child(ren) in household	0.127	0.129	1.151	1.154	0.138	0.154	1.182	1.210
Large city	0.085	0.031	1.023	1.007	0.065	0.021	1.013	1.003
Religiosity								
Important	0.084	0.000	0.957	1.000	0.091	0.009	0.960	0.995
Not important	−0.078	−0.010	0.950	0.993	−0.080	−0.019	0.954	0.988
Internet access	0.370	0.154	1.084	1.001	0.350	0.175	1.013	0.977
Social support	0.341	0.031	0.562	0.931	0.299	0.020	0.602	0.958
Unemployed					0.026	0.108	1.098	1.538

Source: Authors' estimation based on Gallup World Poll data for Bulgaria and Romania

Table A5
Balancing tests after propensity score matching, treatment: remittances.

Nearest neighbor matching, caliper (0.00001), treatment: remittances	Without an employment control				With an employment control			
	Standardized differences		Variance ratio		Standardized differences		Variance ratio	
	Raw	Matched	Raw	Matched	Raw	Matched	Raw	Matched
Age	−0.266	−0.186	1.058	1.129	−0.256	−0.207	1.063	1.117
Age^2	−0.253	−0.161	0.969	1.069	−0.243	−0.184	0.980	1.057
Education								
Elementary	−0.003	0.097	0.999	1.107	0.007	0.096	1.008	1.108
Secondary	0.046	−0.090	0.992	1.030	0.037	−0.075	0.994	1.024
Married or living with partner	−0.105	−0.131	1.031	1.042	−0.096	−0.100	1.029	1.029
Female	0.145	0.057	0.936	0.969	0.143	0.083	0.935	0.956
Household income								
Poorest 20%	0.006	−0.010	1.012	0.982	0.019	0.004	1.038	1.007
2nd quintile	0.050	0.000	1.079	1.000	0.056	0.010	1.090	1.014
3rd quintile	−0.012	0.043	0.983	1.072	−0.020	0.041	0.972	1.068
4th quintile	−0.091	−0.016	0.866	0.973	−0.091	−0.038	0.869	0.940
Richest 20%	0.042	−0.017	1.059	0.979	0.056	−0.015	1.076	0.982
No of adults in HH age 15+								
1	0.120	0.041	1.151	1.044	0.138	0.015	1.168	1.014
2	−0.056	−0.109	0.980	0.965	−0.044	−0.105	0.985	0.969
3	0.010	0.052	1.016	1.089	−0.024	0.053	0.963	1.098
4	−0.098	0.044	0.773	1.144	−0.085	0.080	0.798	1.290
Child(ren) in household	0.172	0.176	1.199	1.203	0.170	0.185	1.200	1.223
Large city	0.001	0.085	1.001	1.030	−0.013	0.076	0.998	1.025
Religiosity								
Important	0.114	−0.026	0.935	1.020	0.098	−0.034	0.954	1.022
Not important	−0.076	0.021	0.949	1.017	−0.055	0.028	0.969	1.020
Internet access	0.173	0.141	1.002	0.996	0.176	0.160	0.994	0.991
Social support	0.210	−0.045	0.678	1.112	0.205	−0.033	0.684	1.080
Unemployed					0.092	0.098	1.358	1.384
Region								
North-east RO	0.184	0.000	1.622	1.000	0.189	0.000	1.690	1.000
South-east RO	0.119	0.000	1.475	1.000	0.127	0.000	1.552	1.000
South RO	−0.135	−0.006	0.596	0.974	−0.126	0.000	0.602	1.000
South-west RO	−0.006	0.000	0.977	1.000	−0.010	0.000	0.958	1.000
West RO	0.094	0.000	1.470	1.000	0.095	0.000	1.515	1.000
North-west RO	0.041	0.000	1.158	1.000	0.049	0.000	1.205	1.000
Central RO	0.076	0.005	1.307	1.015	0.090	0.000	1.394	1.000
Bucarest RO	−0.033	0.000	0.886	1.000	−0.079	0.000	0.731	1.000
North west BG	0.078	0.000	1.430	1.000	0.087	−0.006	1.462	0.978
North central BG	−0.047	0.000	0.853	1.000	−0.042	0.005	0.874	1.018
North east BG	−0.051	0.005	0.845	1.017	−0.047	−0.005	0.866	0.984
South West BG	−0.193	−0.008	0.635	0.977	−0.194	−0.009	0.654	0.977
South central BG	−0.017	0.004	0.961	1.010	−0.008	0.012	0.982	1.030

Source: Authors' estimation based on Gallup World Poll data for Bulgaria and Romania

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