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Zachary Zimmer
Codrina Rada
Cătălin Augustin Stoica

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University of Utah
Department of Economics
260 S. Central Campus Dr., Rm. 343
Tel: (801) 581-7481
Fax: (801) 585-5649
http://www.econ.utah.edu

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Zachary Zimmer
University of California San Francisco
e-mail: Zachary.Zimmer@ucsf.edu

Codrina Rada
University of Utah
e-mail: rada@economics.utah..edu

Cătălin Augustin Stoica
National School for Political and Administrative Sciences and
Center for Urban and Regional Sociology (CURS)

Abstract

The combined demographic developments of population aging and high rates of migration of young adults are consequential for older parents who face a potential decline in support from adult children. These developments also impact the lives of migrant adults who face the challenge of providing support to aging parents from a distance. Systematic data that allow examination of associations between the location of migrants and the provision of support to aging parents are difficult to find for Eastern Europe, a region undergoing enormous demographic and socio-economic transition. Using recently collected data from Romania, a country facing both rapid aging and out-migration, and building upon a family altruism framework, this study models provision of monetary and instrumental support as a function of migrant's location of residence, location of their siblings in relation to parents, and other characteristics that fall under domains of parental need, ability of migrant to provide, and predisposing characteristics of migrant and parent. Models are run using a mixed methods approach accounting for the random effects at the family level. Results indicate international migrants are more likely to give money while those migrating within Romania are more likely to provide instrumental support. Regardless of type of support or location of migrant, the probability of support increases when other sources are less available and when a parent has greater need. Results provide support for the altruistic framework and help to build upon the understanding of intergenerational exchanges within rapidly changing demographic environments.

Keywords: population aging; migration; intergenerational support; Romania
JEL Classification: F22; F24; N30; R23

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Introduction

The current paper asks to what degree migration status and proximity of an adult child associates with the probability of providing either or both of two types of support – monetary and instrumental – to a parent aged 60 and older living in Romania, and whether this is mediated by other likely determinants of the tendency to provide support. The topic is of importance since informal support provided by adult children consistently and persistently associate with well-being outcomes of older parents across countries and cultures where it has been studied (Aboderin, 2006; Beckett, Goldman, Weinstein, Lin, & Chuang, 2002; Chen & Silverstein, 2000; Cohen & Syme, 1985; Dupertuis, Aldwin, & Bosse, 2001; Seeman, Seeman, & Sayles, 1985; Sherbourne & Stewart, 1991). Examining determinants of support is therefore critical for understanding intergenerational relations and successful aging across diverse settings. This is particularly true in societies where, because of demographic change, older persons are commonly thought of as a population facing a decline in sources for informal support.

Romania is one of these places. Like many developing and transitioning economies, Romania is experiencing population aging, defined as a growth in the proportion of a population in old age. In most of the world population aging has been largely driven by a decline in fertility. The decrease in the young entering a population makes other age groups, including the elderly, a larger proportion of the total (Kinsella & Phillips, 2005). This is the case for Romania as well. Its fertility has been declining for decades and today the average woman can expect to have 1.3 children if they live to the end of childbearing years (United Nations, 2011). But, population aging in Romania is also a function of massive outmigration by younger adults. Certainly, migration across the globe has been a natural response to globalization and economic change. But outflows from Romania have been particularly substantial and the main cause behind a 12 percent decline in Romania's population from 2002 to 2011 (Institutul National de Statistica, 2011). This outmigration was prompted by a

lessening of visa restrictions for Romanians in the early 2000s and the ascension of the country into the European Union in 2007 (Horváth & Anghel, 2009; Roman & Voicu, 2010). The majority of Romanians have been migrating to two destination countries– Italy and Spain– where more than 2 million Romanians currently reside (Vasileva, 2010). In addition, younger adults have been moving rapidly within Romanian borders. These internal and external migrating trends have resulted in extremely high rates of migration away from places of origin.

Low fertility and increasing migration in Romania, phenomena that are in fact occurring across the Eastern European region, have been driving up old-age dependency ratios while increasing physical distance between older persons and adult children. This means that the number of adult children living in close proximity that might be able to offer the types of instrumental support that require a physical presence has been declining. Still, remittances from adult children living abroad represent an important source of income and a potential positive outcome of migration. According to World Bank statistics, remittances in Romania increased 70 fold between 2004 and 2008, a time during which outmigration was very rapid. According to Murafa (Murafa, 2011), Romania receives the greatest amount of remittances of all EU countries. Despite high rates of migration and low fertility, the consequences for older adults have been greatly under-examined in Eastern European countries.

Demographic change and provision of support to older persons

While it has been greatly ignored across Eastern Europe, elsewhere in the world a growing discourse on the provision of material and physical support to older persons has been prompted by population aging and the related concern that rapidly growing numbers of older persons will translate into a greater societal burden. This concern has practical policy implications. With the exception of more developed countries that instituted formal social security schemes some time ago,

support has traditionally come from intergenerational exchanges, with older persons relying to a great degree on adult children who often co-reside with their old-age parents (Bongaarts & Zimmer, 2002; de Jong Gierveld, Dykstra, & Schenk, 2012; R. Lee, D, 2000; Piotrowski, 2007; Silverstein, Conroy, & Gans, 2012). Demographers and other social scientists have for some time now been asking whether smaller family size places greater burden on fewer adult children while reducing the probability that support is provided (DaVanzo & Chan, 1994; Martin, 1989; Zimmer & Kwong, 2003). As the burden for older adult care increases, the state may be obliged to fill gaps, or older persons may have to fend for themselves. In societies where older persons traditionally rely on family for the majority of their material and physical support, these outcomes are often seen by policymakers and the general public as unfavorable. Still, a decline in rates of co-residence between an older parent and an adult child and increasing distance between the two changes the nature of support, reducing some types but possibly increasing others. Remittances from those living further away may be a replacement for the types of support that require time commitments and which can be provided with closer living proximity (Cong & Silverstein, 2008; Frankenberg, Lillard, & Willis, 2002).

Perspectives on what might happen to informal support into the future in the face of demographic change can be divided into those that forecast negative and those that forecast positive or negligible impacts. Negative viewpoints tend to derive from modernization theory that suggests reductions in fertility and family size and increased industrialization reduce the complexity of family formations, weaken kinship ties and diminish the tendency for younger adults to feel a responsibility towards the older generation (Aboderin, 2004; Cowgill, 1972). Economic development within the developing world brings about changes in economic activities, decreasing requirements for agricultural labor and pulling labor into urban areas. The need to rely on family for material well being is thus being reduced. Values and social norms related to family change accordingly.

Individual accomplishments are increasingly appreciated over family undertakings. Older persons that once benefited from social and material capital gained over years progressively lose their influence once younger individuals are able to support themselves without reliance on the family. Norms about filial piety and reciprocity fade and older persons become less likely to live with family members and will interact with their adult children less often.

A contrasting group of perspectives on the likelihood of support for older adults within changing demographic realities have their origins in Becker's model of family economics (Becker, 1991). These put forth the general notion that the family strategizes to assure survival of its members and maximize its collective well-being. Within this view family values are slower to change than are demographic and economic structures. While traditional household formations may be threatened by changing demographic and economic conditions, moral obligations toward family members are retained (Silverstein et al., 2012; Vanwey, 2004).

One offshoot of this view that suggests the tendency to provide support to the older generation depends upon a set of determinants that includes markers of dependency or vulnerability of older adults can be referred to as an altruistic notion of family (Frankenberg, Chan, & Ofstedal, 2002; Y.-J. Lee, Parish, & Willis, 1994). This simply means that as need for support increases, there is a greater tendency for family members to provide. An adult child will be more likely then to provide assistance to older parents that are, for instance, in ill health, widowed, or do not have their own personal means of providing support. This is because factors such as those related to health, marital status and socioeconomic status associate with parental physical and material condition. For instance, poor health relates to financial needs for health care or need for physical help in conducting daily tasks; marital status relates to availability of support from a spouse; socioeconomic status relates financial well-being in old age. Poor health, widowhood and low socioeconomic status impel support from adult children, and changes in these factors have been shown in some research

to result in a fairly swift support reactions (Korinek, Zimmer, & Gu, 2011; van Eeuwijk, 2006; Zimmer, 2010).

However, each family member is tied into a network. The likelihood that any one of these family members is providing support is dependent on the notion that obligations are shared across the network in a way that maximizes its well-being and as such those with greater ability tend to be more likely to provide. Plus, the type of support that is provided is also a function of ability. Those living far from their old age parents will obviously not be able to provide the type of support that requires proximate living. They could however use remittances as a substitute for other types of giving. The tendency to remit would depend on their working status but also on the situation of the wider network. How siblings are geographically dispersed for instance can impact on the tendency that a migrant provides monetarily. There are also demographic characteristics that determine the propensity of support being given or received. For instance, much has been written about variations in support by sex of child and parent (Chen & Silverstein, 2000; Whyte & Qin, 2003; Yount & Agree, 2004; Zimmer, 2005). As such, a model to predict support includes characteristics across a complex set of circumstances that can be separated into domains that indicate needs, abilities and predisposition, which together influence the tendency to provide support.

Romanian context

Research that has provided the strongest support for altruistic theories of intergenerational relations has generally been conducted in East and Southeast Asia where populations are large in size and both aging and socioeconomic changes have been extremely rapid (Chen & Silverstein, 2000; Kinsella & Phillips, 2005; Whyte, 2003). Studies in these societies are showing that long held values of filial obligation are being maintained in the face of rapid migration, urbanization and changes in other social structures (Bian, Logan, & Bian, 1998; Guo, Aranda, & Silverstein, 2009;

Sereny, 2011; Whyte, Hermalin, & Ofstadel, 2003). Evidence also suggests that the dispersion of family has not left older adults behind to fend alone (Knodel, Kespichayawattana, Wiwatwanich, & Saengtienchai, 2010). Moreover, in Asia, the decision to migrate or to return can depend upon the needs of an older parent (Giles & Mu, 2007; Zimmer & Knodel, 2010).

Romania provides a very different and vastly understudied context within which to examine provision of support to older persons (Robila, 2004). In some ways, traditional associations between family members in Romania resemble those seen in other parts of the developing world (Mitrut & Nordblom, 2010). This might suggest that an altruistic mentality of intergenerational exchanges exists in Romania. For instance, prior to World War II, adult children commonly co-resided with aging parents and the family was guided by strong feelings of kinship and a dominating norm of reciprocity which motivated the transfer of income and services from adult children to older family members (Nadolu, Nadolu, & Asay, 2007).

But, much has changed in Romania from the middle of the twentieth century to current times, and these changes are likely mirrored in other parts of the Eastern European region. In some ways, values that accompany modernization were thrust upon Romanians in the Post World War II communist era. This is because the communist regime instituted a type of development promoted by urbanization and industrialization and advocated for devotion to the state over and above other informal social institutions. There are those that believe this put pressure upon the values and obligations towards reciprocity that may have been felt prior to the communist era (Nadolu et al., 2007). The regime that existed after World War II encouraged a reconfiguration and detachment of the traditional Romanian family both physically and psychologically. This separated older persons and their adult children physically and, according to some, created a marginalization and loss of respect for the older generation (Carmen, 2012).

This disruption of traditional norms may continue to influence familial responsibility today. Moreover, more sanguine theories of intergenerational exchange that are supported through research on families in Asia are based on sibship sizes still being large and older adults subsequently having a large number of adult children on which to rely. Thus in many Asian societies, the obligation for care of older parents is distributed across a large number of adult children. One adult child may migrate to an urban area or out of country and another may remain behind. Romania, in contrast, has witnessed decreasing fertility for some time now, and family sizes are smaller than they are in the developing countries of Asia.

Although it is but one study, some information about intergenerational exchanges in Romania has been provided by the multi-country Genders and Generations program which involved a 2005 survey of about 12,000 Romanians (Herlofson, Hagestad, Slagsvold, & Sorensen, 2011). The survey suggested that in some ways deep traditional norms toward care of older adults by adult children and family solidarity remain. As an example, 70% of those sampled agreed or strongly agreed with the statement "Children should have their parents live with them when parents can no longer look after themselves," and over 80% agree or strongly agreed with the statement "Children ought to provide financial help if parents are in financial difficulty."

Current study

The current study seeks to expand upon the literature described above by asking if migration and location of residence of adult children impact upon provision of support to their old-age parents. It begins with an assumption of a trade-off in the provision of monetary versus instrumental support. Migration for those that move internationally is often labor related and these migrants have the means with which, and perhaps feel an obligation, to provide monetary support. Alternatively, those that live close to their parents may contribute money, but they are also in a

better position to help instrumentally. While location of residence of a migrant adult child influences the type of support, obligation for support is shared across a family network. The location of an individual cannot be viewed in isolation from the location of their siblings. It is assumed that the further away siblings live from the older parent, the more likely it is that a migrant will be providing support.

Besides migration and location of a migrant and their siblings, additional characteristics of the migrant, their older parent and their network are considered to be acting upon provision of support. These characteristics fall into domains: need of the parent for support, which can include ability of parent to support him or herself, ability of the migrant to provide support, and other predisposing characteristics. The assumption is that the greater the parental need, the lesser the ability of the parent and greater the ability of the migrant, the higher will be the likelihood of providing support. Health is a key indicator of parental need. As noted earlier, poor health increases need by raising health care costs and requirements for instrumental assistance for daily living tasks. An older person's socioeconomic status, such as level of education, and who they live with are need indicators since they indicate ability to provide own support and having alternate sources besides a migrant adult child. Ability that an adult child has to provide support can be indicated by work and socioeconomic status. Finally, demographic covariates that predispose individuals to providing support include characteristics such as age and sex of the adult child and of the old-age parent. Using these assumptions and covariate domains as guidance, the current study develops and tests a model for the provision of support using data that was collected with the specific intent to study the impact of migration on older persons in Romania.

Methods

Data

Data are from the Romanian Aging and Migration Study (RAMS). Funded through a pilot grant from The Center on Aging at the University of Utah, the study included a survey of 1,509 persons 60 and older living in Romania in 2011 (Stoica, 2011). Justification of the project included the lack of data allowing for examination of the well-being of older adults in Romania generally and a need for specific information that could be used to analyze impacts of migration on well-being. Data were collected between May and June, 2011. The survey was administered by the Center for Urban and Regional Studies (CURS) in Bucharest. Survey instrumentation was informed by other major surveys on older adults including the range of Health and Retirement type surveys around the world, particularly those being conducted in Europe (SHARE) and NIH funded data collection efforts in Asia; however the major focus was on migration status of children and intergenerational exchanges. In the process of gathering survey information, a broad range of questions about the older persons were posed, including the location of each of their children, their health status and their socio-economic background.

Sampling involved two components. First, there was a nationwide, random, stratified sample of 1,125 respondents from across administrative districts within Romania. Comparisons of this sample to census data confirmed this component is 'self-weighted,' in that it is representative of households containing one or more older adult (Stoica, 2011). Second, there was an over-sample of 384 randomly selected individuals that had one or more international migrant adult child aged 15 and older. The over-sample was conducted to gather enough responses that allow for analysis of exchanges taking place with international migrant children. A weighting scheme is adopted to account for oversampling by migration status. Weights are applied when examining descriptive statistics but not applied in multivariate procedures that already adjust for migrant location.

A total of 1,401 respondents had at least one living child. The current study examines the data from the perspective of these children. There are 3,089 living children in total, which is an average of 2.2 per older parent with any children. A number of observations are removed from the analysis. First, because there is ambiguity in measuring support provided by adult children living in the same household as their parent, 507 adult children living in same household are removed. The remaining children can be labeled, in all cases, as adult migrant children. Second, parents did not know the specific whereabouts of 26 adult children. An additional five cases were removed because the parent could not report on the location of at least one sibling of the migrant. The remaining valid sample is 2,551.

Measures

The survey asked older persons whether they received a number of types of support from each migrant child. This study concentrates on two of these. In each case, the receiver was referenced as the parent being interviewed, their spouse, or both; the provider is the migrant child; and, the reference period is within the year leading up to the date of the survey. The first type of support is monetary. The second is instrumental help. For instrumental, two survey items are combined: whether the migrant provided help with housework or other work around the house; and whether the migrant provided help with work, business or with a family farm. Instrumental help is considered to have been given if the answer to either of these questions was affirmative. The dependent variable for the multivariate analysis combines the provision of these two types of support into a single multi-category variable indicating whether: no support was provided; the migrant provided money only; the migrant provided instrumental help only; the migrant provided both types of support.

Location of each migrant adult child was collected using a roster wherein child information was recorded. After examining various ways of dividing location of migrant residence, it was determined the most efficacious coding is: local migrant; internal migrant; and, international migrant. A local migrant is a child that lives in the same administrative locality as the parent. Locality is akin to counties in the U.S. For Bucharest, Romania's largest city, and for other urban areas, those living within the city are considered to be local migrants. Local migrants are, by definition, living near to their older parent. Internal migrants live outside the locality but within Romania. International migrants live in a different country. The most frequent destination of international migrants in these data is Italy (40%), followed by Spain (17%), Germany (8%), the USA, France and the UK (5% each). The remaining 20% are scattered across 25 additional destinations.

Central to this analysis is the residential location of siblings with the assumption that the farther away siblings live, the more likely it is that a migrant will be providing support. This study examines the location of the nearest sibling to the parent given an assumption that it is this sibling that has the greatest impact on provision of support. This sibling is coded as being: in the parental household; a local migrant; an internal migrant; an international migrant. In addition, a separate code is created where there are no other siblings, that is, when the adult child under scrutiny is an only living child.

The remainder of the covariates represents indicators of needs of the parent for and ability of the migrant to give support as well as several predisposing characteristics of migrant and parent. The domain of parental need includes functional status, household size, education, whether the parent in question lives with a spouse and whether they live with a grandchild. Functional status considers whether the older parent, or in cases where this person is married either the parent being interviewed or their spouse, reports difficulty conducting a functional task based on basic upper and lower body movements such as walking a certain distance, climbing a flight of stairs or reaching

above ones head. If either respondent or spouse reports a problem with a functional item, they are coded as having a functional limitation. Household size is measured as residual household size, which is number of persons in the household minus those that are accounted for in the model by other variables, that is spouse, grandchild and an own child. Educational status contains categories less than secondary, secondary and post secondary. Living with spouse and a grandchild are dichotomously coded.

Measures considered to indicate ability to give on behalf of the migrant child include their educational status and working status. Education contains categories less than secondary, secondary and post secondary. Work status is coded dichotomously. Demographic predisposing characteristics of the migrant include their age, sex and marital status. For the parent, they include their age, sex and whether they live in a rural or urban area. Descriptive statistics for covariates are shown in Table 1.

Modeling

One older person may have more than one adult child and more than one may be a migrant. The 2,551 observations come from 1,294 families, thus there is an average of two migrant children per family. Adding non-migrant children, that is, those living in the parental household, the number of children whose location are known increases to 3,063. Since there is more than one migrant child per family there is the likelihood of heterogeneity in the tendency to provide support across families explained by unmeasured family characteristics. The best way of accounting for this is to estimate a mixed model with random and fixed effects (Rabe-Hesketh & Skrondal, 2008). The random effects provide variation in intercepts across families. The fixed effects are slopes for variables being modeled, and these slopes are considered to be parallel across families. Given a multi-categorical dependent variable, the link function is a multinomial logit. The model is estimated using the

'gllamm' procedure that is available as an add-on in STATA 12.1. The procedure provides coefficients for the fixed effects as well as the variance (θ) and standard error of the variance for the random effect.

The analysis begins with descriptive results showing the geographic dispersion of adult children and the bivariate association between location and provision of support. Next are the multinomial mixed effects results that are presented in nested models. The first model includes only the migrant location. The second adds location of the nearest sibling. The third adds the remaining covariates. The difference in the log-likelihood multiplied by -2, which is distributed as chi-square, indicates whether there is a fit improvement when adding variables to models. Finally, given that coefficients in multinomial regressions are difficult to interpret intuitively since they are represented by multiple models with a single contrast category, we provide predicated probabilities across some key covariate categories.

Interactions between location of migrant and other covariates were tested. In a couple of instances, small cell sizes resulted in inability to achieve model convergence. In these cases, tests were conducted using binary logistic regressions contrasting the provision of a type of support, for instance money only, versus other categories, for instance, instrumental only, both and neither. Significant interactions are shown in the form of predicted probabilities.

Results

Location of migrants

To get a sense of the distribution of location of migrant adult children, table 2 shows the percent living locally, internally and internationally by location of nearest sibling and sibship size. Of the total sample, about 39% live locally, 50% internally within Romania but outside of the administrative locality within which their parent lives, and 11% internationally. This distribution

varies substantially depending on the number and location of siblings, with the greatest variation being in the percent of migrants living internationally. A migrant is much more likely to be international when a sibling lives in the parental household and there are a large number of siblings. The percent living internationally is 46% when there is one sibling and that sibling lives in the parental household, about 62% if there are two siblings with the nearest to parent living in the parental household, and fully 85% when there are three or more siblings and the nearest is in the parental household. Conversely, a migrant is unlikely to be living internationally when one of their siblings lives internationally or internally within Romania but not in the locality of the parent.

Provision of support by migrant location

Table 3 presents results showing percent of migrants that provide money or instrumental support to older parents. The first two rows show the total percent giving money or instrumental support. The latter four rows show whether neither, money only, instrumental only or both are provided. Findings indicate that instrumental support is provided with greater frequency than money, but this depends on the location of the migrant. While for the entire sample only about 18% give money, this number jumps to 41% within the international migrant group. While 48% provide instrumental help it is only 15% when living internationally. Then again, it is interesting that despite living internationally, some do provide instrumental help. Since instrumental help often requires being present, it is likely that those that live internationally and do provide are returning to their parents' home for the provision of support. It is also interesting how infrequently money is provided by those living locally and even internally within Romania. Only about 13% of those living local and 17% of those living internally give money to their parents. Divided into the four exhaustive categories of provision, a very small percent living locally or internally give money only, but these migrants are much more likely to be giving instrumental help only. However, while about

33% of those living internationally give money only, there are still some that give instrumental and not money or both types of support. Those living internationally are most likely to be giving neither, which also means they are least likely to be giving any type of support. Finally, the percent giving both money and instrumental help is not statistically different across migrant locations. It is around 10% regardless of where the migrant lives.

Location and other determinants of support provision

The results of three mixed effects multinomial models are shown in Table 4. Presented are the log odds of giving money only, providing instrumental support only, or both, in comparison to providing neither form of support. Log odds center on zero, so a negative value indicates a lower probability and odds of providing the type support in question in comparison to neither type, the reference category, while a positive value indicates higher probability and odds.

Model 1 considers only location of the migrant. This matters a great deal. In comparison to being a local migrant, being an internal migrant substantially and significantly increases the log odds of providing money only and decreases the log odds of providing instrumental help only. The same is true for international migrants across the three comparisons. Exponentiation of the log odds indicates that in comparison to local migrants, the odds that international migrants provide money are greater by a factor of more than 10.

Model 2 adds location of nearest sibling. Log odds of migrant location barely change between Models 1 and 2. Model 2 demonstrates that both the location of migrant and nearest sibling associate strongly with the provision of support. Generally, the further away the sibling, and having no sibling, increases the probability and odds of any type of support in comparison to no support. Coefficients are extraordinarily robust. For instance, in comparison to a sibling being in the parental household, having no sibling increases the log odds of money support by 1.049, and the

odds (determined by exponentiation of log odds) by a factor of almost three. When it comes to money only, coefficients for sibling locations are not significant but the direction of the association implies the farther away the nearest sibling in relation to the elder parent, the greater the likelihood of providing money support only. Generally, the farther away the sibling, the greater are the chances of providing instrumental support. The location of nearest sibling is most linear and has the greatest magnitude with respect to the provision of both types of support in comparison to neither. The chances of giving both types of support are highest where there is no other sibling, next highest where the nearest sibling is an international migrant, then an internal migrant, local migrant and finally lowest where the nearest sibling is in the same household as the parent.

The rest of the covariates representing domains of parental need, ability to give, and predisposition, are added in Model 3. Again, effects of migrant and sibling location remain robust. Several other covariates have notable effects, all of which are in the expected directions. When a parent has a functional limitation, the chances of providing support increases substantially. Migrants with higher levels of education are more likely to give instrumental and both instrumental and money support in comparison to neither. Those currently working are more likely to give money as well as both money and instrumental support. Two predisposing characteristics of the parent are statistically significant. First, migrants are more likely to give both types of support to female elderly parents in comparison to male. Since having a spouse in the household is adjusted for, this suggests that migrants are more likely to provide support to their widowed elderly mothers. Support of all types is much more likely to be provided to parents living in rural areas in comparison to urban.

The large variance component (θ) shown at the bottom of each model's results together with the standard error of the variance indicate substantial unmeasured family variation. This explains variation in the provision of support across families after taking into account fixed effects The

change in log-likelihood (Δ -2 X LL) across models is significant as well, indicating that the addition of variables from one model to the next significantly improve model fit.

A clearer picture of associations between migrant and sibling location and provision of support is provided in Figure 1 that plots predicted probabilities of providing support across these two factors. Each bar is divided into three sections which indicate the predicted probability of providing money only, instrumental support only and both. The height of the bar then indicates the net probability of providing any type of support. The probabilities are derived from Model 3 and hold other variables constant at their means. Therefore, assuming a normal distribution for other variables, they can more or less be interpreted as probabilities for a person that is average with respect to all other characteristics in the model. Of course, there is no single person that is average with respect to these variables, and as such the figure is used heuristically to show the magnitude of effects in a more intuitive fashion.

The figure illustrates extreme variation the probabilities of providing support depending upon location of migrant and nearest sibling. Several observations can be made. First, with respect to money support only, the probability of provision is high when the migrant is living internationally, and is highest when the migrant lives internationally and there is no sibling. In contrast, the probability of providing only money support is practically zero when the migrant lives locally. There is some chance that money is given in combination with instrumental support when migrants are living locally, although this likelihood is substantially greater when the nearest sibling lives internationally or there is no sibling. Second, the chances for provision of only instrumental support are greatest when the migrant lives locally and minimal when the migrant lives internationally. This again varies with location of nearest sibling. Even international migrants will give instrumental support either alone or in combination with money when there is no other sibling. Finally, with respect to the provision of any type of support, which is the sum of the probabilities of

money only, instrumental only and both, a strong gradient by location of migrant is clear. But, the probability of giving any support varies robustly by location of nearest sibling. For instance, when the migrant lives internationally and a sibling lives in the same household as the parent, there is a little greater than a 0.30 probability of providing support. The same international migrant has a 0.60 probability if there is no other sibling. The probability of providing support is more than 0.80 when a migrant is local and there is no other sibling present.

Interactions

Two interactions were found to be significant. These were area of residence of the parents and functional status of parents. In neither instance do the interaction effects alter the overall interpretation of results regarding the association of location of migrant and provision of support, nor does the inclusion of the interaction effects change the general findings with respect to other covariates. However, they do add further insight into the association and therefore they are shown as predicted probabilities in Figures 2 and 3.

Figure 2 shows the probability of support by location of migrant and urban/rural residence of parents. As is detected by the relatively flat height of bars across migrant location in urban areas versus a steep slope across rural areas, the interaction effect demonstrates that with respect to the net probability of any support, location of migrant matters only when parents lives in a rural area. The real difference, however, is when it comes to instrumental support, which is provided with high probability when migrant lives locally and internally, but not internationally, and parents are in a rural area. But, it is much less likely to be provided when parents live in an urban area. Rural/urban residence may, in fact, be an indicator of parental need. In urban areas, the parents will be likely to be living in a small apartment complex. Help around the house, which is an indicator of

instrumental support, is often not imperative. But in rural areas, parents tend to have land, larger houses and are engaged in farming, and instrumental support is more helpful.

Figure 3 shows the probability of support by location of migrant and functional status of parent. Comparing overall support probabilities when a parent does and does not have a functional limitation makes it clear that support is much more likely to be provided when there is a limitation. The interaction effect demonstrates however that this is more likely true when the child lives locally and internally. When the migrant child lives internationally, functional status has somewhat less impact. This may have to do with availability of the migrant child. When they live internationally, opportunities to provide support may be limited even when the parent has a functional limitation.

Conclusion

Romania is confronting demographic challenges that are certain to be consequential for its elderly population. Like elsewhere in Eastern Europe, lower fertility today than in the past means the older population is becoming a larger segment of the total. International migration is having a similar impact. High rates of internal and international migration signal that adult children are increasingly living farther away from their aging parents. These phenomena working together could leave older Romanians isolated. With this as a backdrop, the current study examined determinants of the provision of support from a migrant adult child to their older parents. The focus was on the migrant's location of residence, be it local or nearby, further away but internally within Romania, or international. Those living further away and especially internationally were expected to be more likely to be providing money and less likely to be providing instrumental support, suggesting a trade-off between the two types of support. A model was constructed based on an altruistic perspective of family. The perspective suggests that regardless of location of migrant, the chance of support increases when parents are in need, with indicators of need being functional health of parent,

household size, education, living with spouse and living with grandchild. It also assumes families work as a unit with shared obligations. Therefore ability to provide support and location of nearest sibling, the latter of which is an indicator of availability of alternate sources, is important. Several predisposition factors, such as age and sex, were also incorporated into the model.

About half of migrants living in each location provide one or the other type of support, and in some cases both. Those living within the borders of Romania are much more likely to provide instrumental support while those living internationally are much more likely to provide monetary support. The association between living internationally and giving money to an older parent is strong. Clearly, international migration is a vehicle through which money makes its way from international locations to older parents back home. Results confirm a trade-off between monetary and instrumental assistance. But, the trade-off is imperfect. Despite living outside the country, a fair percent of international migrants provide instrumental help (about 15%). Interestingly, few living locally give money (about 12%).

A mixed effects model assessed determinants of the combination of the provision of monetary and instrumental support. Location of migrant and location of nearest sibling were shown to strongly associate with provision of support. These relationships were highlighted in predicted probability graphs that indicated chances of providing support vary strongly depending upon these characteristics. It is noteworthy that regardless of where a migrant child is living, they are more likely to provide both types of support if they have no siblings or their siblings live internationally. This may suggest that some international migrants are returning from time to time to help out even in instrumental ways when alternative sources of support for parents are absent.

Functional status of parents, education of migrant and residential area of the parents is also strongly associated with provision of support. Rural/urban residence and functional status interact with location of migrant in ways that further implicate needs of parent as an important

distinguishing factor related to provision of support. The models therefore provide confirmation of an altruistic nature of the family working in Romania. This suggests several factors are working together to determine whether support is being provided, including needs, availability of alternate means of support and the ability to give. Furthermore, the amalgamation of these factors points to the provision of support to an older parent being part of a larger household strategy – one that values the well being of older parents. For instance, it was found that a migrant is more likely to be living internationally when there is a sibling living near an older parent. It was found that international migrants are unlikely to be giving instrumental help when there is a sibling living nearby. International migrants are likely to be providing money regardless of the situation, but even more so when other sources are unavailable.

Indeed, the results here are either not much different or may even be more robust than those from other parts of the world that have lent support to altruistic motives for inter-familial exchange (e.g., Gans & Silverstein, 2006; Lillard & Willis, 1997; Osaki, 2003; Secondi, 1997; Vanwey, 2004) and those that have lent support to notions that migration is part of a household strategy for maximizing family well being (Agesa & Sunwoong, 2001; Lauby & Stark, 1988). This is striking given the history of the country. Nadolu, Nadolu and Asay (2007) write that:

> "(d)uring almost half of a century until 1989, Romania suffered through a particularly destructive period. Under this totalitarian regime a major alteration of all macro-social structures and functions, by arbitrary, unlegitimized and non-efficient constraints of inadequate social and economical politics occurred. Thus, the movement toward massive industrialization from a primarily agrarian society directly correlated with an artificial urbanization and a reorganization of the rural areas…The distortions generated by the communist government are still felt today, after more

than 15 years since the 'Revolution,' both at the economic level and mostly at the social level, including social values" (Nadolu et al., 2007: p. 422-423).

The urbanization and industrialization that was arbitrarily thrust upon Romanians may have served to disconnect family and marginalize older persons, particularly in rural areas. This, together with smaller family size and filtering of younger population out of the country, may have functioned to change family values in Romania, as might be predicted by modernization theories (Aboderin, 2004; Cowgill & Holmes, 1972; Levy, 1966). Yet, in the face of social and economic upheaval that Romania has experienced, the results here suggest that traditional Romanian family values that promote intergenerational exchange and altruism continues to be a motivation for the provision of support.

With this in mind, it is interesting that even international migrants do, at times, provide instrumental support. These migrants may be returning to their parental home from time to time. Furthermore, they are more likely to return to provide this help when siblings do not live nearby and when a parent has a functional limitation. It may be that those that move internationally choose their location strategically in a way that facilitates their return in cases where there is a greater need for the provision of instrumental support. Although, a preliminary view of the data shows little pattern of international migrant destination according to whether or not the migrant provided instrumental help. For instance, among all migrants in this study, about 40% live in Italy and 20% live in Spain regardless of whether or not they are providers of instrumental help. Even 4 of the 34 migrants living in the U.S. were reported to have provided instrumental help in the last year.

Despite these results, the scenario for Romanian elders is not completely encouraging. While, parents are not being abandoned, when family sizes are small there are few providers. We do not know, based on these results, whether the support older persons are getting is sufficient; we only know that children tend to provide some support if older parents are in need. Continuing low

fertility in Romania may result in a larger burden of care placed on a smaller population. Also unknown is how this burden is influencing the well-being of migrants and non-migrants. This should be an issue of concern to policy makers within Romania. Future research should examine the individual burden being placed upon migrants without siblings or with say only one sibling. While today's older generation in Romania do have an average of a little more than two children each, lower fertility means the upcoming generations will have an average of only about one child, which will push individual burdens higher and effects on well-being may be substantial.

This study has limitations, each of which provides impetus for further analysis. Information about support of migrants comes from interviews with the older persons. There is the possibility of error in these reports. Future studies may attempt to link data collection of older persons with their migrant children. The data analyzed here are from a cross sectional study, which has an inherent limitation with respect to causal implication. Longitudinal data are difficult to come by and none are available on this topic for Eastern Europe. Therefore, there was no alternative to the current dataset for this analysis. Efforts to collect panel information can be extraordinarily valuable for both policy and theory building. In addition, there are a number of potential indicators of need, availability of support and ability to provide support that were not part of this analysis due to unavailability. Other types of support in additional to monetary and instrumental assistance might also be considered, such as the provision of material goods or contact between the migrant and the older person. Finally, while the current study modeled the provision of any support, we know that monetary support can be minimal or substantial and instrumental support can be regular or infrequent. Future modeling of the magnitude of support would be enlightening.

In sum, the current study provides some reasons for optimism and some for pessimism for the future of Romania's older population. Like elsewhere around the world, older persons are generally not being abandoned due to migration and lower fertility. However, the onus of support

may land upon a small number scattered around the world. This is clearly not an optimal situation for a society that relies on family for the support of older persons. Romania is a country that is undergoing development, but in many measures it is behind its Eastern European neighbors. Crises in the rest of Europe could reduce employment opportunities for Romanian migrants. This might also have mixed impact for older people as it could reduce migration or influence return migration, thus bringing offspring of older adults closer to their parents. But, based on the current study, it may also reduce monetary support.

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Table 1: Descriptive statistics for sample (N=2,551)[1]

Variable	Percent or mean (standard deviation in parentheses)
Migrant location	
% Local	38.9
% Internal	50.3
% International	10.8
Location of nearest sibling	
% In parent household	25.0
% Local migrant	27.2
% Internal migrant	27.8
% International migrant	5.0
% No sibling	15.1
Parental need	
% Has functional limitation	45.3
Mean residual household size	0.62 (1.19)
% Less than secondary education	48.2
% Secondary education	41.3
% Post secondary education	10.5
% Lives with a spouse	56.0
% Lives with a grandchild	17.1
Ability to give	
% Less than secondary education	11.1
% Secondary education	58.4
% Post secondary education	30.5
% Currently working	80.6
Predisposing characteristics of migrant	
Mean age	43.0 (8.8)
% Female	51.4
% Married	87.0
Predisposing characteristics of parent	
Mean age	70.4 (7.5)
% Female	57.5
% Rural resident	57.2

[1] Results are based on weighted sample

Table 2: Distribution of location of migrant children by location of their siblings and sibship size[1]

			Migrant location			
Sibship size	Location of nearest sibling	N[1]	Local	Internal	International	Total
All number	All locations	2,551	38.9	50.3	10.8	100.0
All number	In parental household	327	18.0	28.1	53.8	100.0
	Local migrant	680	15.6	75.1	9.3	100.0
	Internal migrant	642	64.1	28.1	7.9	100.0
	International migrant	568	42.5	50.4	7.2	100.0
	No siblings	334	37.4	51.9	10.8	100.0
1	In parental household	226	22.6	31.4	46.0	100.0
	Local migrant	322	18.2	75.1	6.8	100.0
	Internal migrant	250	70.7	23.1	6.2	100.0
	International migrant	155	40.9	53.1	6.0	100.0
	All locations	953	39.7	50.6	9.8	100.0
2	In parental household	60	6.7	31.7	61.7	100.0
	Local migrant	207	13.6	77.1	9.3	100.0
	Internal migrant	193	59.8	33.4	6.8	100.0
	International migrant	137	37.3	53.2	9.5	100.0
	All locations	597	65.6	53.8	10.5	100.0
3+	In parental household	41	9.8	4.9	85.4	100.0
	Local migrant	151	8.9	70.6	20.5	100.0
	Internal migrant	199	56.5	30.9	12.6	100.0
	International migrant	276	46.3	47.0	6.8	100.0
	All locations	667	42.0	45.0	13.0	100.0

[1] N's based on unweighted sample. Distribution of migrant location based on weighted sample.

Table 3: Percent providing money and/or instrumental help by migrant location

		Migration location			P-Value[1]
Support provided	Total	Local	Internal	International	
Unweighted N	2,551	782	1,056	713	
Money	17.9	12.8	16.8	41.4	.00
Instrumental	47.8	51.3	52.2	14.6	.00
Neither money nor instrumental	45.1	46.6	42.4	52.0	.02
Money only	7.1	2.0	5.4	33.4	.00
Instrumental only	37.1	40.6	40.9	6.6	.00
Both money and instrumental	10.7	10.7	11.3	8.0	.27

[1] Based on chi-square testing association across between migration location.

Table 4: Mixed effects multinomial regression log odds ratios for predictors of money and instrumental support[1]

	Model 1			Model 2			Model 3		
	Provides…			Provides…			Provides…		
	money	instr. help	both	money	instr. help	both	money	instr. help	both
Migrant location									
Local	---	---	---	---	---	---	---	---	---
Internal	.806*	-.429*	-.327	.861*	-.393	-.356	.720*	-.880*	-.806*
International	2.385*	-2.373*	-.749*	2.389*	-2.337*	-.937*	2.311*	-2.860*	-1.296*
Location of nearest sibling									
In parent household				---	---	---	---	---	---
Local migrant				.258	.643*	.985*	.091	.802	1.002*
Internal migrant				.567	1.017*	1.572*	.316	.833	1.349*
International migrant				.576	.580	1.799*	.381	.544	1.775*
No sibling				1.049*	1.143*	2.044*	.949	1.510*	2.160*
Parental need									
Has a functional limitation[2]							1.057*	.694*	.795*
Residual household size							-.122	-.067	.066
Less than secondary education[3]							---	---	---
Secondary education							.191	.227	-.042
Post secondary education							-.653	-.119	-.554
Lives with a spouse							-.194	.161	-.035
Lives with a grandchild							-.370	-.038	-.665
Ability to give									
Less than secondary education							---	---	---
Secondary education							.381	1.016*	1.250*
Post secondary education							.455	1.004*	1.449*
Currently working							1.486*	.414	1.372*

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Table 4 Continued

	Model 1			Model 2			Model 3		
	Provides…			Provides…			Provides…		
	money	instr. help	both	money	instr. help	both	money	instr. help	both
<u>Predisposing characteristics of migrant</u>									
Age							.010	.002	.027
Female							-.216	.301	.256
Married							.290	.444	-.011
<u>Predisposing characteristics of parent</u>									
Age							-.028	-.005	.003
Female							.313	-.091	.620*
Rural resident							.703*	2.006*	1.514*
Constant	-2.752	0.384	-1.047	-3.215	-.312	-2.230	-4.212	-3.286	-7.291
Θ (S.E)	9.827 (1.025)			9.550 (1.021)			10.889 (1.348)		
Δ -2 X LL[4]	582.4*			45.44*			202.16*		

* $p < .05$

[1] Contrast category is giving neither money nor help.

[2] Either parent in case of married couple.

[3] When married, education measured as highest of married couple.

[4]Model 1 is compared to intercept only. Models 2 and 3 compared to previous model.

Table 4: Mixed effects multinomial regression log odds ratios for predictors of money and instrumental support[1]

	Model 1			Model 2			Model 3		
	Provides…			Provides…			Provides…		
	money	instr. help	both	money	instr. help	both	money	instr. help	both
Migrant location									
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Table 4 Continued

	Model 1			Model 2			Model 3		
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	money	instr. help	both	money	instr. help	both	money	instr. help	both
<u>Predisposing characteristics of migrant</u>									
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Constant	-2.752	0.384	-1.047	-3.215	-.312	-2.230	-4.212	-3.286	-7.291
Θ (S.E)	9.827 (1.025)			9.550 (1.021)			10.889 (1.348)		
Δ -2 X LL[4]	582.4*			45.44*			202.16*		

* $p < .05$

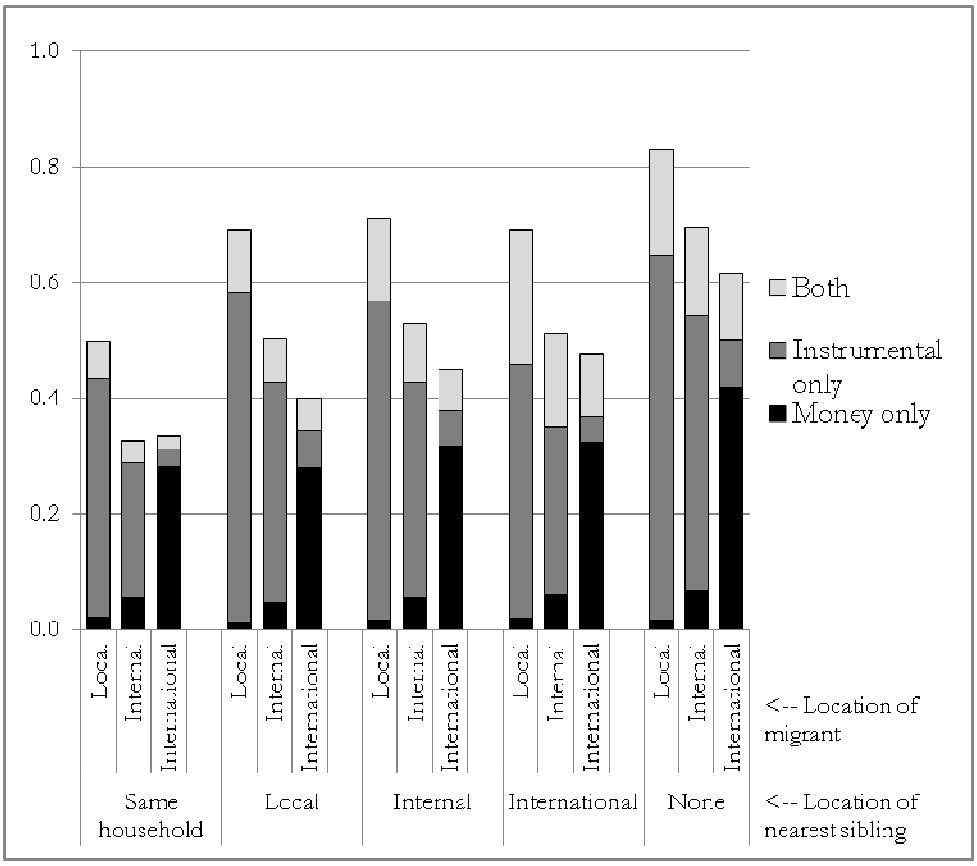
[1] Contrast category is giving neither money nor help.

[2] Either parent in case of married couple.

[3] When married, education measured as highest of married couple.

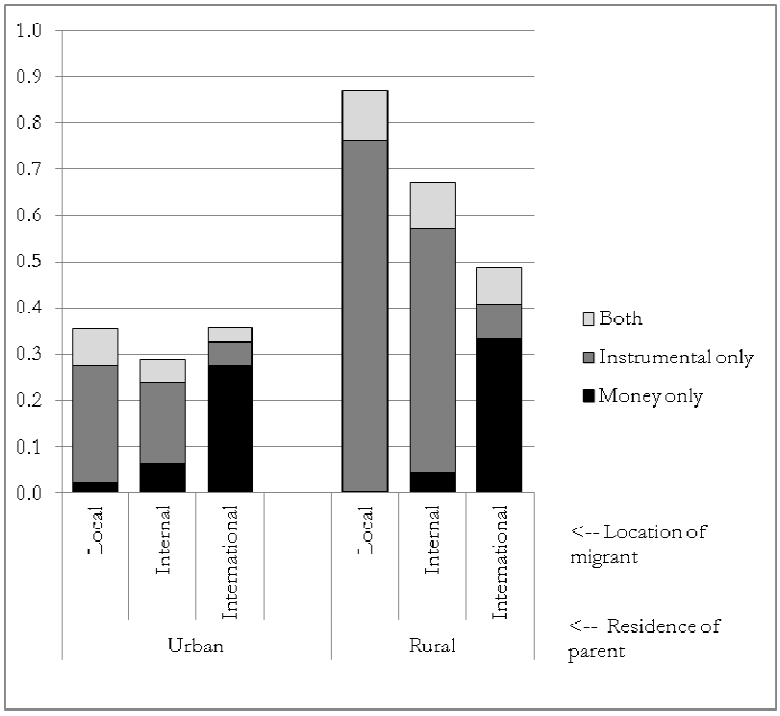
[4]Model 1 is compared to intercept only. Models 2 and 3 compared to previous model.

Figure 1: Probability of providing support by type of support, location of residence and location of nearest sibling[1]



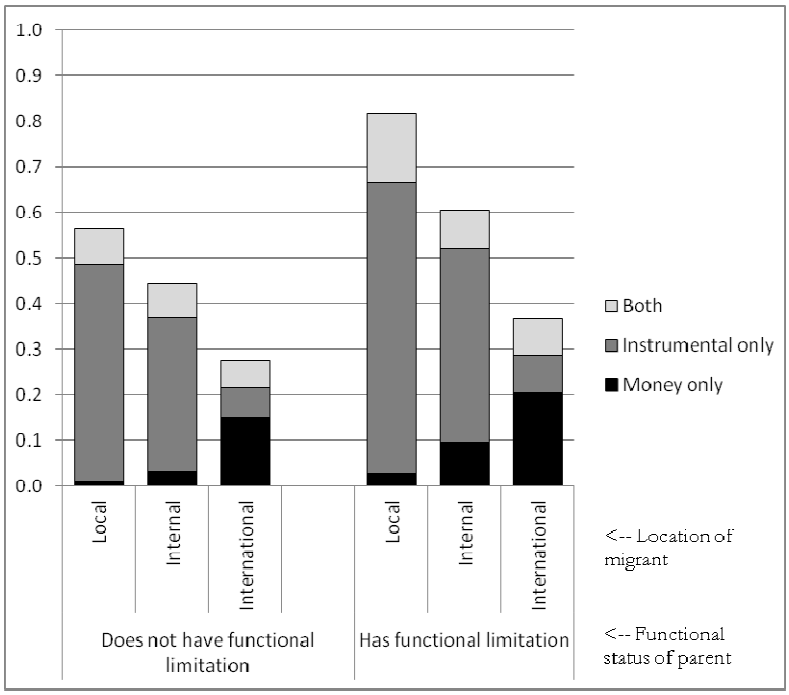
[1] Predicted probability of providing money only, instrumental support only, or both, calculated from coefficients from Model 3 of Table 4, holding other variables constant at their mean values. This is not clear. Is the location of nearest sibling missing? Should be under each cluster of "Local, Internal, Intl" I guess. Same for the next two graphs.

Figure 2: Probability of providing support by type of support, location of residence and rural versus urban residence of parent[1]



[1] Same as Figure 1.

Figure 2: Probability of providing support by type of support, location of residence and functional status of parent(s)[1]



[1] Same as Figure 1.