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Social Isolation, Loneliness and Return Migration: Evidence from Older Irish Adults

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ABSTRACT

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Across the subjects of economics, sociology and demography, much has been written about the difficulties faced by immigrants. However, much less attention has been paid to the re-adjustment challenges migrants face on their return. In this paper, we examine whether and the extent to which a group of returned migrants experience higher degrees of social isolation and loneliness compared to compatriots who never lived abroad. The data used are from the first wave of the Irish Longitudinal Study on Ageing (TILDA). We find that social isolation is a significant feature of the lives of return migrants.

JEL Classification: F22, J61

Keywords: immigrants, social isolation, loneliness

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1. Introduction

Across the subjects of economics, sociology and demography, much has been written about the difficulties faced by immigrants in adjusting to life in their destinations. These difficulties range from the more modest forms, such as homesickness, to extreme forms such as discrimination and violent hostility. Between these extremes, immigrants have been shown to experience difficulties in accessing employment, social supports and housing.

While the situation of immigrants has been extensively studied, much less attention has been paid to the difficulties return migrants face when they come back to live in their countries of birth. This relative lack of research may be based on a view that once immigrants have returned to their home country, they blend back in and are then essentially no different to other natives in that country of origin. However, a number of studies which we describe below suggest that return migrants can experience significant re-adjustment challenges.

In this paper, we add to this strand of research by examining whether a group of returned migrants experience higher degrees of social isolation and loneliness compared to compatriots who never lived outside of their country of birth. The data used are from the first wave of the Irish Longitudinal Study on Ageing (TILDA). Given Ireland's long history of migration (and return migration), this large and nationally representative sample of older Irish adults provides a uniquely valuable resource upon which to base research on the experiences of returned migrants. In addition, our data allow us to control for early traumatic events in the lives of the survey respondents such as physical or sexual abuse in childhood. As such events are likely to be correlated with both migration and social isolation/loneliness later on in life, an inability to control for them would be a weakness. We also investigate whether unobserved heterogeneity between migrants and stayers (seen as a cause of endogeneity) biases our results.

Our research question is current and important for a variety of reasons. International migration has increased significantly in the last decade in Europe. According to Eurostat latest estimates on international migration, 2.3 million people left their country of origin in 2008 alone. Although some migrants will never return home (permanent migrants), many will spend a number of years abroad and then return to their country of origin (temporary migrants). At this stage, it is difficult to predict how many migrants will return home.

However, previous studies have estimated return migration rates in Europe in the range of 70 to 85% (Böhning 1987 and Glytsos 1988). For countries or regions which will face significant populations of (older) returned migrants, a high prevalence of social isolation will have implications for the use and delivery of social services.

At an individual level, the implications are clearly more immediate. The absence of loneliness and social isolation is seen as an important factor for good quality of life (Sinclair *et al* 1990). Also, a number of international studies have shown a strong positive association between social engagement and physical, cognitive and mental health outcomes, especially for older people (Conroy *et al* 2010; Glass *et al* 2006; Rodriguez *et al* 2011; Seeman *et al* 2010 and Sirven and Debrand 2008). Similarly, loneliness has been shown to predict a wide variety of mental and physical health outcomes, such as depression, nursing home admission, and mortality (Conroy *et al* 2010; Hawkley *et al* 2010; Grenade and Boldy 2008 and O´Luanaigh and Lawlor 2008).

The remainder of the paper is structured as follows. In section 2, we review the literature on the re-adjustment experiences of return migrants. In section 3, we investigate historical Irish migration and, in particular, the literature on the experiences of the Irish abroad in the second half of the twentieth century. In section 4, we describe the data used in the empirical analysis. In section 5, we illustrate the methodology employed in our paper. In sections 6 and 7, we

present both descriptive statistics and the results from the econometric analysis. Section 8 concludes.

2. The re-adjustment experiences of return migrants: evidence from previous studies

Many empirical studies have highlighted the sense of disappointment, isolation and feelings of alienation and not-belonging experienced by return migrants on their return to their home country (Constable 1999; Long and Oxfeld 2004; Christou 2006; Cerase 1967, 1970 and 1974). Cerase (1967, 1970 and 1974) investigated the re-adjustment experiences of Italian migrants from the US in the 1960s and 1970s. He found that the longer the time spent away, the more difficult the reintegration in Italy, with those who spent less than ten years in the US facing the least difficulties. Cerase (1967, 1970 and 1974) also found that those who retired back to Italy tended to become an isolated group, neither able nor willing to integrate themselves into the Italian society. In her study on second-generation Greek-American returning migrants, Christou (2006) found that return migrants were disappointed in finding that Greece, Greeks and Greek ways of life were not as 'pure' as they had imagined and were dissatisfied with their material circumstances and prospects following 'return' migration (p. 832).

In the Irish context, three studies are of particular interests: Gmelch (1985 and 1987), McGrath (1991) and Ni Laoire (2007 and 2008).

In 1977-1978, Gmelch (1985 and 1987) and collaborators interviewed 606 Irish migrants who had lived abroad for at least two years and then returned to Ireland and settled down in small communities in the west of the country. 51% of return migrants stated that they were not satisfied with their lives back in Ireland during their first year back. This compared to 21% for those who had been back for two or more years and 17% for those who had been back for more than five years. This suggests that the longer the time spent in the home

country after migration, the higher the degree of readjustment. The reasons for dissatisfaction after returning to Ireland included: the slow pace of life widespread inefficiency in Ireland; the perceived differences with the local community; the inability to develop a satisfactory social life; and the unfavourable economic situation. Also, return migrants felt that their interests were different from those of the local people and encountered problems in re-establishing relationships with friends and relatives at the pre-migration level of intimacy. The difficulties encountered in re-establishing relationships increased with the time spent abroad. 85% of respondents stated that they felt different from stayers. Gmelch (1985) also found that the variable most strongly related to adjustment was satisfaction with social life.

McGrath (1991) investigated the experiences of 142 return migrants who returned to the west of Ireland (Achill Island). The main reason for return was the desire to be close to family and friends or to care for (older) relatives. McGrath (1991) found that the returned migrants remained a separate and distinct community. Most returners faced a range of different re-adjustment problems, including: the poor economic situation and lack of employment opportunities; lack of variety in shopping; the unfriendly attitude of locals; and the inefficiency and slow pace of island life. 60% of the return migrants interviewed did not belong to a club, compared to 27.3% of stayers. Also, stayers tended to belong to or organise several clubs, compared to only one or two for return migrants. Return migrants were also twice as likely as stayers to have return migrants as their closest friends. More than a quarter of returnees 'definitely intended to reemigrate' (p.63).

Ni Laoire (2007 and 2008) collected 33 life narratives of migrants who left Ireland between the late 1970s and early 1990s and returned home in the mid 1990s/beginning of the 21th century. Ni Laoire (2008:40) concluded that "narratives of 'not quite belonging' recur[red] among return migrants".

3. Historical overview of Irish migration

The topic of migration has been of enormous importance for Ireland since the early part of the last century. For much of the twentieth century, emigration from Ireland was high and population decline continued until 1961. But even in the 1960s when the population grew, emigration continued. The 1970s saw unprecedented inflows but net outflows resumed in the 1980s, thereby leaving emigration as a defining feature of Ireland's demographic and economic experience.

Table 1 shows net migration flows and rates in Ireland in the period which is of most interest for our research (i.e. up to the early 1990s). Table 1 shows that, on an annual basis, net outward migration averaged 14.1 per 1,000 of the population in the 1950s and 4.6 percent 1,000 in the 1960s. These outflows were counterbalanced by net inflows in the 1970s (3.2 per 1,000). However, net outward migration averaged 5.9 per 1,000 of the population in the 1980s.

-- Table 1 around here –

With regard to the destinations of Ireland's emigrants, a major shift occurred at the beginning of the 1930s. Between 1880 and 1921, 87% of emigrants went to the United States whereas only 10 % went to Britain. However, it is estimated that by the late 1940s over 80% of the outflow went to Britain and this continued in the 1970s (Barrett 2005). The outflow was concentrated in the 15-24-year age category and so emigration was a young person's pursuit. Also, most migrants left as single people (Leavey *et al* 2004).

The literature on the Irish experience in Britain has revealed that most individuals migrated for economic reasons, although this generally co-existed with a 'push' factor of desire to escape or change (Gmelch 1985 and 1987, Ryan 2004 and Leavey *et al* 2004).

Turning to the occupation of migrants, Hughes and Walsh (1976) reported that a third of male migrants were 'construction workers' or 'labourers n.e.c. (not elsewhere classified)'. Nearly 60% were in the skilled, semiskilled, and unskilled manual socioeconomic group. The occupation distribution reveals a higher occupational status for Irish women in Britain than for Irish men. Walter (1989) reported that by the 1960s, 11% of all nurses recruited in hospitals in the south east of England were born in Ireland. Similarly, Daniels (1993) reported that by 1971 there were 31,000 Irish-born nurses in Britain, constituting 12% of all nursing staff.

4. Data

Data from the first wave (2009/2011) of The Irish Longitudinal Study on Ageing (TILDA) are used. This is a study of people aged 50 and over (and their spouses or partners of any age) resident in Ireland. TILDA collects detailed information on all aspects of the respondents' lives, including the economic dimension (pensions, employment, living standards), health aspects (physical, mental, service needs and usage) and the social domain (contact with friends and kin, formal and informal care, social participation). The study is closely harmonised with leading international research (e.g. The English Longitudinal Study of Ageing (ELSA); the Survey of Health, Ageing and Retirement in Europe (SHARE) which is pan-European, and the Health and Retirement Survey (HRS) conducted in the United States).

 TILDA is made of three components: the computer-aided personal interview (CAPI) questionnaire; the self-completion questionnaire (SCQ), designed to explore certain areas that were considered particularly sensitive for respondents to answer directly to an interviewer; and the health assessment component of the study, conducted both in dedicated TILDA health assessment centres and, alternatively, in respondents' homes.

The first wave of TILDA includes 8,504 respondents for the CAPI questionnaire, 7,191 for the SCQ and 6,153 for the Heath Assessment. In the CAPI questionnaire, individuals are asked about their nationality and - for the purpose of this analysis - the sample is restricted to Irish nationals only. TILDA also collects information on previous migration experiences. In particular, individuals residing in Ireland are asked if they have ever lived outside Ireland for at least six months. If they answer yes, individuals are coded as "return migrants'; if they answer no, they are coded as 'stayers'.

Also, information on the total number of years spent abroad and age at first migration is collected. Using the information on the total number of years spent abroad, we divide return migrants into two categories: i) short-term return migrants and ii) long-term return migrants. We investigated different cut-off points to distinguish between short-term and long-term return migrants. In our preferred specification, short-term migrants are classified as those who lived abroad for one to nine years and long-term migrants are classified as those who lived in another country for ten years or more. However, if a lower cut-off point was to be chosen (e.g. five years), the results of our models would not change significantly. Using information on current age, age at migration and number of years spent abroad, we are also able distinguish between those who returned to Ireland in the last decade (recent returners) and those who returned at an earlier stage (earlier returners).[1]

In the TILDA sample, 24% of men and 21% of women have lived abroad for at least 6 months. Forty six percent of the male return migrants and 43% of female return migrants have lived abroad for at least 10 years. Sixty seven percent of men and 74% of women left Ireland for the first time when aged 16-24.

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[1] This is an approximation because we assume that migrants spent a single period of time abroad. In reality, this might not be the case: migrants can have alternated periods of time spent in Ireland with periods of time spent abroad. However, our data do not allow us to distinguish between single and multiple migration experiences.

5. Methodology

5.1. Outcome variables and model specification

There are different ways to describe older adults' engagement (or lack of) in social activities, the type and number of social connections they have and loneliness. Although social isolation and loneliness are sometimes referred to as similar/identical concepts, they are separate concepts and do not necessarily co-occur. Social isolation is an objective measure and refers to the absence of relationships/minimal contact with other people. Loneliness is a subjective measure and refers to the feeling of missing intimate relationships, a specific desired companion or a wider network (Wenger *et al* 1996). A unified model of social isolation or loneliness does not exist in the literature. Different scholars have looked at a range of different variables, focusing either on demographics characteristics or on behavioural patterns. Also, the empirical results in the literature on social isolation and loneliness are fairly mixed. For a good review, please see Wenger *et al* (1996).

We employ three different models in our paper. In our first model (Model 1), we measure social connectedness using an adapted version of the Berkman-Syme Social Network Index (Berkman and Syme 1979). This index includes four components: 1) marital status: a dummy variable equal to one if the individual is married or cohabiting; 0 otherwise; 2) presence of close children, relatives or friends: a dummy variable equal to one if the individual has at least two children, other relatives or friends she feels close to; 0 otherwise; 3) membership of church groups: a dummy variable equal to one if the individual attends religious services at least once per month, 0 otherwise; and 4) membership of community organisations: a dummy variable equal to one if the individual participates in any groups such as a sports or social group or club, a church connected group, a voluntary association, a self-help or charitable body or other community group or a day care centre. Each connection type is scored either

zero or one and the four scores are summed to create four levels (0-4) of social connection or engagement: most isolated (0-1), moderately isolated (2), moderately integrated (3) and most integrated (4). We employ a standard probit model in which the outcome variable is equal to one if the individual is most or moderately isolated according to the Berkman-Syme Social Network Index, 0 if she is moderately or most integrated (Model 1).

We then turn to Model 2, in which we investigate close ties more closely. We employ an Ordinary Least Squares (OLS) model in which the dependent variable is the sum of close friends, children or other relatives (Model 2).

We finally investigate Model 3, which focuses on loneliness. In TILDA, loneliness is measured using a modified version of the University of California - Los Angeles (UCLA) Loneliness Scale (Russell 1996). Four negatively-worded questions and one positively-worded question are used: how often do you feel lack of companionship? How often do you feel left out? How often do you feel isolated from others? How often do you feel lonely? How often do you feel in tune with the people around you? The frequency of the outcome variable is assessed as: hardly ever or never; some of the time; or often. The responses to the five questions are summed and the final score can range from zero (not lonely) to ten (extremely lonely). We employ a two-limit tobit model, where the two 'limits' are the lowest (zero) and highest (ten) possible scores.

5.2 Explanatory variables

Focusing first on the variables which are of most interest for us, we control for return migration distinguishing between short-term and long-term migration and for number of years since return. We include three migration dummy variables in the model, with an omitted/reference category of stayers: i) a dummy variable equal to 1 if the individual is a short-term migrant (one to nine years spent abroad), 0 otherwise; ii) a dummy variable equal

to 1 if the individual is a long-term recent returner (ten or more years spent in another country and returned to Ireland in the last decade), 0 otherwise; iii) a dummy variable equal to 1 if the individual is a long-term earlier returner (ten or more years spent in another country and returned to Ireland at least eleven years prior to the interview).[2]

We then control for a number of 'standard' socio-economic characteristics that are associated the outcome variables. These include:

- Age (single year of age)

- Educational attainment: highest qualification attained, in three categories: primary or none, secondary and third or higher[3]

- Current self-reported labour market status, in five categories: employed, retired; permanently sick or disabled; unemployed; and other

- Current area of residence, in three categories: Dublin; town/city other than Dublin; rural area

- Current self-reported health: a dummy variable for whether the respondent self-rates her current health as fair or poor

- Number of living children and siblings

- A dummy variable for whether the mother (father) is alive

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[2] Only three people in our sample can be classified as short-term earlier returners. Hence, we do not distinguish for time since return for short-term migrants.

[3] In TILDA, education is measured by the highest level of formal education achieved. Irish-specific levels are reclassified into three categories: primary/none (not complete or primary or equivalent), secondary (intermediate/junior/group certificate or equivalent and leaving certificate or equivalent) and third/higher (diploma/certificate, primary degree and postgraduate/higher degree).

- Socioeconomic status in childhood: a dummy variable for whether the respondent was living in a rural area at age 14 and a dummy variable for whether the respondent grew up in a poor family

- Health in childhood: a dummy variable for whether the respondent self-rates her health in childhood (from birth to age 14) as poor

In Models 2 and 3 (which focus on the number of close ties and relatives and loneliness score, respectively), we also control for whether the respondent is married or cohabiting. The same does not apply to Model 1, given that being married or cohabiting is one of the four components of the Berkman-Syme Social Network Index (the outcome variable).

Beside controlling for standard socio-economic characteristics and migration, we are also able to control for negative life events in childhood. We believe it is important to control for negative early life events because they are likely to be correlated with both migration and social participation / loneliness later on in life (Seabook 1973 and Tornstam 1989). In the SCQ, TILDA respondents are asked to report whether before turning 18 they were either physically or sexually abused by either their parents or anybody else and whether their parents drank or used drugs so often that it caused problems in the family. Unsurprisingly, the number of missing observations for the negative early life events is significantly higher than for the other controls. To avoid losing important information, we include two dummies for each event: 1) event occurred; 2) respondent did not provide information on the specific event, with 'event did not occur' being the reference category.

5.3. Addressing endogeneity

A key empirical problem we are facing in the social isolation models (Models 1 and 2) is the potential endogenous nature of the migration variable. The intuitive justification is that migration might be endogenous if the decision to migrate is correlated with unobservables

that affect social isolation later on in life. For example, one could argue that those who decide to migrate are *a priori* more 'disconnected' from the society they live in. Ideally, one would also want to control for social participation/engagement before migration or for personality traits. We argue that this problem does not affect loneliness (Model 3): we do not see why those who decide to migrate are *a priori* more (or less) likely to feel lonely later on in life.

If migrants and stayers differ in unobservable factors that are correlated with social isolation later on in life, standard models may generate a biased estimate of the coefficients of the migration variables. The use of negative early life events helps us to control for endogeneity. Usually information on negative early life events is not collected in (migration) surveys. As a consequence, life events are normally confined to the error term, but are a potential source of endogeneity if are correlated with both migration and social isolation later on in life. However, even the inclusion of controls for negative life events may not be sufficient to account for unobservables. Hence, we also use an instrumental variable approach to explore more fully possible endogeneity problems. A key element in running this procedure is the identification of a variable which is correlated with the likelihood of being a return migrant but not with social isolation. As an instrument, we use the unemployment rates for the years in which the individuals in our sample would have been deciding whether to migrate or not. We believe that unemployment rates are strongly correlated with the individual's decision to migrate, with the individual being more likely to migrate in periods characterized by unemployment levels. However, we do not see a strong association between annual unemployment rates and social isolation later on in life.[4]

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[4] Barrett and Goggin (2010) use unemployment rates in the year individuals left full time education as an instrument in an analysis of the wages of return migrants relative to stayers. They argue that this capture economic conditions and hence is likely to influence migration decisions. Our use of unemployment rates is similarly motivated.

6. Descriptive statistics

We use variables from both the CAPI and the self-completion questionnaires and restrict our sample to respondents who have completed both. As previously mentioned, we exclude respondents who were not born in Ireland. For men, 76.1% are stayers and 23.9% are return migrants. The corresponding figures for women are 78.9% and 21.1%, respectively. 45.7% of male migrants have lived abroad for at least ten years. Of these, 17.7% have returned in the last decade and 82.3% at an earlier stage. 42.6% of female migrants are long-term return migrants. Of these, 18.3% have returned in the last decade and 81.7% at an earlier stage.

6.1 Men

In Table 2 we report the mean values (and standard deviations) of all the variables used in our analysis for males. These are presented separately for: i) stayers; ii) short-term return migrants; iii) long-term recent returners; and iv) long-term earlier returners.

Focusing first on the outcome variables, Table 2 shows that both long-term recent returners and long-term earlier returners are more likely to be most or moderately isolated, according to the Berkman-Syme Social Network Index. 31.8% of stayers are most or moderately isolated according to this index, compared to 34.2% of short-term migrants, 62.3% of long-term recent returners ($p<0.01$) and 45% of long-term earlier returners ($p<0.01$). Table 2 also shows the four components of the index separately: compared to stayers, long-term migrants are significantly less likely to be married or cohabiting ($p<0.05$), to go to church on a regular basis ($p<0.01$) and to be a member of a community organisation ($p<0.01$). Long-term recent migrants also have fewer children, other relatives or friends they feel close to (an average of 8.5 compared to 11.6 for stayers). The average score of the modified version of UCLA loneliness scale (where 0=not lonely and 10=extremely lonely) is significantly higher for long-term recent and earlier returners.

Turning to the explanatory variables, Table 2 shows that short-term and long-term migrants have different characteristics and in turn differ across a range of variables when compared to stayers. In general terms, long-term migrants are more likely to be older and poorly educated, have grown up in a poor family or in a rural area, be retired and have fewer living children. On the other hand, short-term migrants are more likely to be highly educated and have more living children. It is also interesting to note that long-term recent returners are least likely to be in employment and most likely to be permanently sick or disabled and to report their current health as poor.

Turning finally to negative early life events, Table 2 shows that 9.3% of stayers report to have been sexually or physically abused before turning 18, compared to 15.7% of short-term return migrants ($p<0.01$), 14.6% of long-term recent returners and 9.4% of long-term earlier returners. Also, 7.5% of stayers report that their parents were drinking / taking drugs so often that it caused problems in the family, compared to 13.5% of short-term migrants ($p<0.01$), 6.7% of long-term recent returners and 7.3% of long-term earlier returners. This supports the view that, although economic reasons were a key determinant of emigration from Ireland in the second half the 20th century, 'push' factors of desire to escape or change might have also played an important role.

-- Table 2 around here –

6.2 Women

Table 3 shows that a different picture emerges for women: both short-term and long-term female migrants are more likely to be most or moderately isolated, according to the Berkman-Syme Social Network Index. 33.4% of stayers are most or moderately isolated according to this index, compared to 38.9% of short-term migrants ($p<0.10$), 46.3% of long-term recent returners ($p<0.06$) and 43% of long-term earlier returners ($p<0.01$). However, there are not

statistically significant differences in the number of close ties between stayers, short-term migrants and long-term migrants. Also, short-term return migrants are most likely to participate in a community organization but least likely to go to church on a regular basis. Finally, there are not statistically significant differences in the mean loneliness score of female stayers and migrants.

Table 3 also shows that short-term and long-term female migrants have different characteristics, although these seem to be less clear-cut than for men. Compared to stayers, long-term migrants are more likely to be older, have grown up in a rural area, live in a rural area and have fewer living children. Table 3 also shows that 36.2% of stayers fall into the labour market category "other", which mostly includes women who are looking after home or family. This compares to 25.1% for short-term migrants, 18.5% for long-term recent returners and 21.8% long-term earlier returners. Similarly, 26.4% of stayers, 33% of short-term migrants, 57.3% of long-term recent returners and 48.2% of long-term earlier returners are retired. This supports the view that the majority of women who left Ireland in their youth were "economic agents" and spent time in employment as opposed to inactivity when living abroad. This seems to be particularly the case for long-term migrants.

As was the case for men, short-term migrants are also more likely to report having been sexually or physically abused before turning 18.

-- Table 3 around here –

7. Results

7.1 Men

Table 4 shows the results of Models 1, 2 and 3 for men. Marginal effects and standard errors are presented for Models 1 and 3 (probit and tobit models), coefficients and standard errors are presented for Model 2 (OLS model).[5]

Focusing first on the migration variables in Model 1, Table 4 shows that both long-term recent returners and long-term earlier returners are more likely to be most or moderately isolated when isolation is defined using (the adapted version of) the Berkman-Syme Social Network Index. The probability of being moderately or most isolated is 23.6% points higher for long-term recent returners ($p<0.01$) and 11.1% points higher for long-term earlier returners ($p<0.01$) than for stayers. The results of Model 2 also show that long-term recent returners have - on average - 2.3 close ties less than stayers ($p<0.05$). Our results seem to suggest that there are not statistically significant differences in the social participation/presence of close ties between short-term migrants and stayers. However, long-term migrants – and especially long-term recent returners – are at higher risk of social isolation. Turning to loneliness, we do not find evidence that return migrants are more likely to be lonely than stayers.

Focusing on the other explanatory variables, the results of Model 1 show that social isolation is more common amongst those who are poorly educated, unemployed or in 'other labour market status', in poor health and have been subject to physical or sexual abuse in childhood. Interestingly, those who are living or grew up in a rural area are less likely to be isolated. This might be partly explained by the fact that church attendance is one of the components of

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[5] Different marginal effects can be computed in tobit models. In Model 3, marginal effects describe how the *observed* dependent variable (which is bounded between 0 and 10) changes with respect to the regressors.

the social isolation index used in this paper. The results of Model 2 show that men living in Dublin or another city, in poor health and who have been subject to physical or sexual abuse in childhood have fewer close ties. Also, the higher the number of living children or siblings, the higher the number of close ties. However, respondents whose mother is still alive have fewer close ties. In lines with the results of the international literature (see Sundström *et al* (2009) for a review) being single and in poor health are positively correlated with feeling lonely. We also find that the likelihood of feeling lonely is higher for those who grew up in a poor family, were physically or sexually abused in childhood and grew up in a household in which the parents drank so much that it caused problems in the family.

-- Table 4 around here –

7.2. Instrumental variable approach

As explained in Section 5.3, we also control for endogeneity of the migration variables in Models 1 and 2 using the instrumental variable approach. As an instrument, we use the unemployment rate for the year in which a migrant left and for the year in which a stayer was most likely to decide whether or not to migrate. For stayers, this is not observed so we need to estimate the year. Based on those who did migrate, we compute the average age at migration - stratified by sex and educational attainment - and use it to estimate the age at which stayers were most likely to migrate. For example, the average age at migration for men with primary or no education was 19 years of age. For male stayers with primary or no education, we apply the unemployment rate for the year in which they turned 19. This is the year 'stayers were most likely to migrate', although they actually decided not to leave Ireland. Also, we were able to collect information on unemployment rates only from 1951 onwards. Thus, we had to exclude those who either migrated before 1951 or were 'most

likely to migrate' before 1951 when implementing the instrumental variable approach. This results in a loss of 10.0% of observations for men and 10.6% of observations for women.

Focusing first on Model 1, since both return migration - the potentially endogenous variable - and the outcome variable (i.e. the probability of being moderately or most isolated) are binary, the model estimation strategy is not a straightforward choice. Following Wooldridge (2002, section 15.7.3, p. 477) and Morris (2007) we use a bivariate probit model.[6] This specification allows us to account for the binary nature of both the migration and the outcome variables. It also allows us to deal with the issue of endogeneity by allowing the error terms in both the outcome and migration equations to be correlated. Evidence of exogeneity of the return migration variable is found if one fails to reject the null hypothesis that the error terms are independent. This is done through a Wald test of the rho parameter - the correlation between the error terms in the outcome and migration equations. To test for the relevance/non-weakness of the instrument, we check its significance in the migration equation.

We run three different bivariate probit models, including: a) stayers and short-term migrants; b) stayers and long-term recent returners; c) stayers and long-term earlier returners. We look at the different types of migrants separately because there could be differences in unobservable factors that are correlated with social isolation / number of ties between stayers and short-term migrants but not between stayers and long-term migrants or viceversa. Each hypothesis needs to be tested separately. Coefficients and standard errors for model c) are presented in Table 5. Results for models a) and b) can be made available on request. In all the three models, the unemployment rate is significant at 1% level in the migration equation. This supports our initial assumption that the correlation between annual unemployment rates and migration is high and confirms the relevance/non-weakness of the instrument. We find no

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[6] We use the biprobit command in STATA but implement it as an IV (instrumental variable) estimation.

evidence of endogeneity of the migration variable in a) and b): in these two models, we fail to reject the hypothesis that the error terms are independent (the p value of the rho parameters is 0.25 and 0.13, respectively). However, the p value of the rho parameter is less than 0.02 in c). This suggests a correlation in the error terms in the outcome and migration equations when comparing male stayers and long-term earlier returners. In the biprobit specification, we calculate the marginal effect of the migration variable in the following way. For each observation, we compute the difference in the conditional probability that the individual is moderately or most isolated given that he is a migrant and the conditional probability that the individual is moderately or most isolated given that he is a stayer. We then average the difference over all observations. The average marginal effect is 0.058, lower than the marginal effect obtained in the probit model but still positive. [7]

-- Table 5 around here –

We finally test for endogeneity in Model 2, in which the dependent variable is the sum of close ties. In this model, the dependent variable is continuous so we estimate the instrumental variable estimator using the 2SLS (two stage least squares) method and implementing it with the command ivreg2 in Stata 12. We find that the instrument is relevant/non-weak (high value of F statistics) but we do not find evidence of endogeneity. Hence, the OLS model that

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[7] The validity of the instrument can in general not be tested, especially when one has only one instrument. However, as a further robustness check, we run three additional regressions in which beside the standard controls and early negative life events, we also add the instrument (annual unemployment rate) as an additional explanatory variable. We find that the instrument does not have any impact on the probability of being isolated (p value is equal to 0.31 in the model including stayers and short-term migrants; 0.43 in the model including stayers and long-term recent returnebrs and 0.26 in the model including stayers and long-term earlier returners). Although these results are encouraging, one needs to remember that this is not a formal test of the validity of the instrument.

includes both 'standard' regressors, negative early life events and the migration variables is the preferred specification to use.

7.3 Women

Table 6 shows the results of Model 1 and 2 for women. Focusing first on the migration variables in Model 1, Table 6 shows that short-term migrants, long-term recent returners and long-term earlier returners are more likely to be most or moderately isolated when isolation is defined using (the adapted version of) the Berkman-Syme Social Network Index. There also seems to be an "isolation gradient", with short-term migrants being least likely to be at risk of isolation, followed by long-term earlier returners and then long-term recent returners. Compared to stayers, the probability of being moderately or most isolated is 5.4% points higher for short-term migrants ($p<0.06$), 8.9% points higher for long-term earlier returners ($p<0.05$) and 15.4% points higher for long-term recent returners ($p<0.05$).

However, the results of Models 2 and 3 show that there are not statistically significant differences in the number of close ties and the loneliness score between female stayers, short-term migrants and long-term migrants. Our results are less clear cut for women. We find that although female return migrants are at higher risk of isolation (according to the Berkman-Syme Social Network Index), they do not have fewer close ties and do not feel more lonely.

Turning to the other explanatory variables, the results of Model 1 show that isolation is more common amongst those who are poorly educated, unemployed or permanently sick or disabled or in 'other labour market status', in poor health and have been subject to physical or sexual abuse in childhood. Once again, women who are living or grew up in a rural area are less likely to be isolated. The results of Model 2 show that women who are unemployed, older, in poor health and who grew up in a poor family have fewer close ties. Also, as for men, the higher the number of living children or siblings, the higher the number of close ties.

Finally, also for women the likelihood of feeling lonely is higher for those who are not married or cohabiting, who are in poor health and who were physically or sexually abused in childhood.

-- Table 6 around here –

We finally control for endogeneity also for women. We employ a biprobit model when the dependent variable is the probability of being moderately or most isolated and the 2SLS method when the dependent variable is the sum of close ties. Once again, we find no evidence that the return migration variables are endogenous.

8. Conclusions

We began the paper by raising the possibility that return migrants may face re-adjustment difficulties when they return to live in their countries of origin. Our results suggest that social isolation is a significant feature of the lives of both male and female return migrants and that the degree of social isolation is typically stronger for people who spent longer away and who have returned more recently. We did not find evidence of higher degrees of loneliness among the returned migrants. Although both recent and earlier long-term male return migrants are more likely to feel lonely when one controls only for migration, the effect disappears when a wide range of controls - including self-reported health and marital status - are added to the model.

As explained in the paper, social isolation and loneliness are separate concepts. The former is an objective measure and refers to the absence of relationships/minimal contact with other people. The latter is a subjective measure and refers to the feeling of missing intimate relationships, a specific desired companion or a wider network. So why are older Irish return migrants more likely to be socially isolated but not more likely to feel lonely?

One possible explanation is that the return migrants in our sample have gone through a process of adaptation over the years, so although they are less likely to participate in clubs, go to church and be married or cohabiting and have less close ties, they do not feel that they are missing intimate relationships or a wider network. In other words, return migrants might have learnt to be 'self-sufficient' individuals and/or developed a coping mechanism. An alternative explanation is that the modified version of the University of California - Los Angeles Loneliness Scale is not a good measure to capture loneliness in the among TILDA respondents. The average loneliness score in the TILDA sample is relatively low: around 2, on a scale from 0 (not lonely) to 10 (lonely). As argued by Timonen et al (2011, p. 61), 60% of respondents in TILDA who are 'objectively' socially isolated report that they never feel isolated from others.

Previous research has also shown that there are profound cultural differences in the perception of loneliness. More than two decades of research on loneliness has shown that – in contrast to what one would intuitively think – loneliness amongst older people is higher in Southern Europe than in Northern Europe. Sundström *et al* (2009) used data from the first wave of the Survey of Health, Ageing and Retirement in Europe (SHARE) to compare loneliness across countries. They focussed their analysis on the question "how often have you experienced the feeling of loneliness over the last week?" and dichotomized loneliness into substantial loneliness (almost all of the time or most of the time) versus less frequent feelings of loneliness (some of the time or almost none of the time). They found that around 12% of respondents have felt "substantially lonely" in the week prior to the interview. However, substantial loneliness ranged from 4% in Switzerland, 5% in Denmark and 7% in Sweden to 18% in Italy and 20% in Greece. The loneliness question is slightly different in TILDA, but 'only' 6.6% of respondents say that they often feel lonely. Hence, Ireland seems to be a country with low level of reported loneliness amongst older people.

While the findings on loneliness are open to different interpretations, we do seem to have uncovered clear evidence that return migrants experience higher degrees of social isolation. From the perspective of the individual, such isolation is clearly a cost of migration although it may not be fully appreciated when initial migration decisions are made. To the extent that this later-life social isolation resulting from migration and return is anticipated, it may help to explain patterns of migration and return. From a broader social perspective, the presence of large numbers of return migrants in countries such as Ireland and Mexico leads to concerns of social isolation among these people with the potential consequences for health, both physical and mental, and care needs.

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Table 1: Net migration flows and rates in Ireland, 1926-1991 (annual averages)

Intercensal period	Net migration			Net migration rate over 1,000 average population
	Males	**Females**	**Total**	
1926-1936	-7,255	-9,420	-16,675	-5.6
1936-1946	-11,258	-7,453	-18,711	-6.3
1946-1951	-10,309	-14,075	-24,384	-8.2
1951-1961	-21,786	-19,091	-40,877	-14.1
1961-1971	-6,236	-7,215	-13,451	-4.6
1971-1981	+5806	+4583	+10389	+3.2
1981-1991	-8,283	-6,094	-14,377	-5.9

Source: 1926-1986 taken from NESC (1991); 1986-91 from Sexton (1996).

Table 2: Descriptive statistics – male stayers, short-term migrants, long-term recent returners and long-term earlier returners

	Stayers		Short-term return migrants		Long-term recent returners		Long-term earlier returners	
	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.
Outcome variable(s):								
Moderately/most isolated	0.318	0.466	0.342	0.475	0.623***	0.489	0.450***	0.499
Number of close ties	11.58	7.399	11.862	7.254	8.554***	5.990	11.040	7.640
Berkman-Syme Social Network Index Components:								
Married or cohabiting	0.738	0.440	0.782	0.413	0.556**	0.502	0.660**	0.475
Church	0.670	0.470	0.571***	0.496	0.469***	0.504	0.539***	0.499
Community organisations	0.506	0.500	0.507	0.501	0.270***	0.448	0.389***	0.489
At least 2 close ties	0.980	0.139	0.990	0.100	0.956	0.207	0.969	0.174
Mean loneliness score (UCLA scale)	1.907	2.194	2.019	2.231	2.526**	2.386	2.139*	2.252
Explanatory variables:								
Age	63.20	9.939	62.641	8.219	62.907	8.047	65.426***	8.630
Education dummies:								
None/primary	0.403	0.491	0.302***	0.460	0.477	0.504	0.510***	0.501
Secondary	0.441	0.497	0.390*	0.488	0.371	0.488	0.354**	0.479
Third/higher	0.157	0.364	0.309***	0.463	0.152	0.363	0.136	0.344
Current place of residence:								
Dublin	0.229	0.420	0.261	0.441	0.073**	0.262	0.121***	0.325
Town or city other than Dublin	0.271	0.444	0.332**	0.471	0.410**	0.497	0.283	0.451
Rural area	0.500	0.500	0.406***	0.492	0.517	0.505	0.596**	0.492
Labour market status:								
Retired	0.405	0.491	0.412	0.493	0.479	0.504	0.477**	0.500
Employed	0.458	0.498	0.454	0.499	0.209***	0.410	0.337***	0.474
Unemployed	0.072	0.259	0.051	0.219	0.147*	0.357	0.090	0.286
Permanently sick/disabled	0.051	0.220	0.053	0.225	0.166***	0.376	0.066	0.248
Other labour market status	0.014	0.118	0.030**	0.172	--	--	0.031*	0.173

Current poor self-rated health	0.234	0.424	0.236	0.425	0.386**	0.492	0.279	0.449
Father is alive	0.055	0.227	0.073	0.261	0.078	0.270	0.052	0.223
Mother is alive	0.170	0.376	0.161	0.368	0.237	0.429	0.175	0.381
Number of living children	2.757	2.090	3.025**	1.977	1.824***	1.644	2.283***	1.912
Number of living siblings	1.231	2.562	1.050	2.275	1.425	2.731	1.321	2.703
Socioeconomic status in childhood:								
Grew up in rural area	0.621	0.485	0.597	0.491	0.735	0.446	0.701**	0.459
Grew up in poor family	0.240	0.427	0.262	0.440	0.360*	0.485	0.388***	0.488
Poor health in childhood	0.053	0.224	0.067	0.249	0.059	0.238	0.066	0.249
Negative early life events in childhood:								
Parents had alcohol/drug problem	0.075	0.263	0.135***	0.343	0.067	0.252	0.073	0.261
Parents had NO alc./drug problem	0.903	0.296	0.852***	0.355	0.893	0.312	0.892	0.312
Missing information	0.022	0.148	0.012	0.111	0.040	0.198	0.035	0.185
Physically or sexually abused	0.093	0.291	0.157***	0.364	0.146	0.357	0.094	0.019
NOT physically or sexually abused	0.879	0.326	0.824***	0.382	0.828	0.381	0.882	0.323
Missing information on abuse	0.027	0.164	0.019	0.138	0.026	0.159	0.024	0.152
N	2,032		394		52		245	

Notes: ***p<0.01 **p<0.05 *p<0.10. Data is weighted.

Statistically significant differences between: short-term migrants and stayers; long-term recent returners and stayers; and long-term earlier returners and stayers are reported.

Table 3: Descriptive statistics – female stayers, short-term migrants, long-term recent returners and long-term earlier returners

	Stayers		Short-term return migrants		Long-term recent returners		Long-term earlier returners	
	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.
Outcome variable(s):								
Moderately/most isolated	0.334	0.472	0.389*	0.488	0.463*	0.503	0.430***	0.496
Number of close ties	10.47	5.876	10.701	5.731	11.070	7.520	10.042	6.428
Berkman-Syme Social Network Index Components:								
Married or cohabiting	0.649	0.477	0.579**	0.494	0.541	0.502	0.548***	0.499
Church	0.744	0.437	0.657***	0.475	0.696	0.464	0.720	0.450
Community organisations	0.441	0.497	0.508**	0.501	0.368	0.486	0.374*	0.485
At least 2 close ties	0.989	0.102	0.995	0.070	0.972	0.168	0.990	0.098
Mean loneliness score (UCLA scale)	2.029	2.195	2.110	2.299	1.803	0.316	2.208	2.125
Explanatory variables:								
Age	64.31	10.59	64.900	9.866	64.235	9.503	68.304***	9.320
Education dummies:								
None/primary	0.391	0.488	0.289***	0.454	0.393	0.492	0.459*	0.499
Secondary	0.456	0.498	0.395**	0.489	0.311*	0.467	0.361**	0.481
Third/higher	0.153	0.361	0.317***	0.466	0.297***	0.461	0.180	0.385
Current place of residence:								
Dublin	0.245	0.430	0.270	0.445	0.055***	0.231	0.135***	0.342
Town or city other than Dublin	0.271	0.444	0.295	0.457	0.263	0.444	0.287	0.453
Rural area	0.485	0.500	0.434	0.496	0.682***	0.470	0.578**	0.495
Labour market status:								
Retired	0.264	0.441	0.330***	0.471	0.573***	0.499	0.482***	0.501
Employed	0.295	0.456	0.312	0.464	0.178*	0.386	0.222**	0.417
Unemployed	0.028	0.165	0.034	0.181	0.021	0.146	0.018	0.133
Permanently sick/disabled	0.051	0.220	0.072	0.260	0.042	0.202	0.060	0.238
Other labour market status	0.362	0.481	0.251***	0.434	0.185**	0.392	0.218***	0.414
Current poor self-rated health	0.242	0.428	0.227	0.420	0.239	0.430	0.332***	0.472

Father is alive	0.044	0.204	0.043	0.202	0.044	0.208	0.032	0.177
Mother is alive	0.157	0.363	0.148	0.355	0.206	0.408	0.125	0.331
Number of living children	3.349	2.173	3.162	2.130	2.003***	1.491	2.470***	1.812
Number of living siblings	1.185	2.572	1.019	2.253	1.433	3.015	0.842*	2.390
Socioeconomic status in childhood:								
Grew up in rural area	0.639	0.480	0.640	0.481	0.616	0.490	0.771***	0.421
Grew up in poor family	0.193	0.395	0.162	0.369	0.266	0.445	0.204	0.404
Poor health in childhood	0.071	0.256	0.070	0.256	0.096	0.296	0.088	0.284
Negative early life events in childhood:								
Parents had alcohol/drug problem	0.076	0.265	0.090	0.286	0.069	0.255	0.068	0.252
Parents had NO alc./drug problem	0.901	0.298	0.879	0.327	0.920	0.273	0.915	0.279
Missing information	0.023	0.149	0.031	0.174	0.011	0.104	0.017	0.129
Physically or sexually abused	0.084	0.277	0.124***	0.330	0.096	0.297	0.071	0.257
NOT physically or sexually abused	0.885	0.319	0.828***	0.378	0.876	0.333	0.835*	0.372
Missing information on abuse	0.031	0.174	0.048	0.214	0.028	0.168	0.094***	0.293
N	2,467		445		60		235	

Notes: ***$p<0.01$ **$p<0.05$ *$p<0.10$. Data is weighted.

Statistically significant differences between: short-term migrants and stayers; long-term recent returners and stayers; and long-term earlier returners and stayers are reported.

Table 4: Results, men

	Model 1: probit model		Model 2: OLS model		Model 3: two-limit Tobit model	
	Y=1 if individual is moderately/most isolated according to the Berkman-Syme Social Network Index		Y = number of close children, other relatives or friends		Y = loneliness score (UCLA scale: ranging between 0 (not lonely) and 10 (extremely lonely)	
	Marginal effect	*Standard error*	*Coefficient*	*Standard error*	*Marginal effect*	*Standard error*
Age	0.000	0.001	-0.007	0.024	-0.012*	0.006
None/primary education	0.163***	0.026	-0.137	0.407	0.033	0.121
Secondary education	0.104***	0.023	-0.556*	0.296	0.089	0.102
Lives in Dublin	0.055**	0.028	-0.804*	0.415	0.026	0.117
Lives in another city	0.056**	0.024	0.180	0.397	0.114	0.103
Retired	-0.036	0.028	0.100	0.424	-0.054	0.113
Unemployed	0.101**	0.040	1.479**	0.676	0.241	0.180
Sick or disabled	0.074	0.048	0.129	0.778	0.039	0.230
Other labour market status	0.180**	0.083	-0.853	1.242	0.280	0.351
Married/cohabiting	--	--	0.458	0.380	-1.629***	0.114
N living children	-0.045***	0.005	0.935***	0.079	-0.001	0.021
N living siblings	-0.005	0.006	0.301***	0.089	0.012	0.025
Mother alive	0.004	0.034	-1.365***	0.515	-0.338**	0.154
Father alive	0.055	0.045	-0.076	0.663	-0.219	0.212
In poor health	0.087***	0.024	-1.087***	0.378	0.815***	0.112
Living in a rural area at age 14	-0.072***	0.022	0.753**	0.335	0.052	0.096
Poor health in childhood	0.063	0.042	-0.678	0.537	0.380*	0.196
Poor family in childhood	-0.021	0.022	0.769**	0.362	0.238**	0.099

Physical/sexual abuse in childhood	0.055*	0.030	-0.824*	0.448	0.519***	0.143
Missing information on abuse	-0.061	0.084	-0.416	1.131	0.193	0.439
Parents used to drink/take drugs	0.017	0.035	-0.047	0.605	0.483***	0.163
Missing information	0.091	0.101	-1.069	1.130	0.779	0.475
Short-term migrant	0.044	0.028	0.154	0.409	0.144	0.112
Long-term recent returner	0.236***	0.072	-2.301**	0.909	0.098	0.305
Long-term earlier returner	0.111***	0.035	-0.344	0.501	0.104	0.134
Constant	--	--	9.001***	1.532	--	--
N	2,723				2,657	

Notes: ***p<0.01 **p<0.05 *p<0.10. Data is weighted

Reference categories are: third/higher level of education; lives in a rural area; in employment; physically or sexually abused; and parents did not have an alcohol problem or used drugs; and stayer.

In Model 3, marginal effects describe how the observed dependent variable changes with respect to the regressors.

Table 5: Results of biprobit model including stayers and long-term earlier returners, men only

	Coefficient	Standard error
Outcome equation *(Y=1 if individual is moderately or most isolated)*		
Long-term earlier returner	1.376***	0.326
Age	-0.022***	0.006
Secondary education	0.259***	0.078
None/primary education	0.377***	0.092
Lives in Dublin	0.316**	0.096
Lives in another city	0.172	0.084
Retired	-0.010	0.095
Unemployed	0.197*	0.118
Sick or disabled	0.195	0.154
Other	0.349	0.251
N living children	-0.127***	0.021
N living siblings	-0.020	0.018
Mother alive	-0.068	0.108
Father alive	0.035	0.144
In poor health	0.285***	0.080
Living in a rural area at age 14	-0.201	0.080
Poor health in childhood	0.196**	0.135
Poor family in childhood	-0.075	0.076
Physical/sexual abuse in childhood	0.128	0.103
Missing information	-0.239	0.368
Parents used to drink/take drugs	-0.017	0.114
Missing information	0.157	0.415
Constant	0.764**	0.376

Migration equation *(Y=1 if individual is a long-term earlier returner)*		
Unemployment rate	0.159***	0.028
Age	0.074***	0.008
Secondary education	0.091	0.114
None/primary education	0.188	0.121
Lives in Dublin	-0.471***	0.131
Lives in another city	-0.061	0.111
Retired	-0.140	0.115
Unemployed	0.411**	0.159
Sick or disabled	0.280	0.194
Other	0.565**	0.279
N living children	-0.073***	0.022
N living siblings	0.036	0.023
Mother alive	0.097	0.154
Father alive	0.042	0.200
In poor health	0.018	0.096
Living in a rural aread at age 14	0.044	0.115
Poor health in childhood	-0.125	0.167
Poor family in childhood	0.277***	0.089
Physical/sexual abuse in childhood	-0.042	0.136
Missing information	-1.511***	0.515
Parents used to drink/take drugs	0.047	0.156
Missing information	1.306***	0.443
Constant	-6.665***	0.644
Wald test rho=0 [p value]	Chi-square(1)=6.52 [0.02]	
N	2,026	

Table 6: Results, women

	Probit model Y=1 if individual is moderately/most isolated according to the Berkman-Syme Social Network Index		OLS model Y = number of close children, other relatives or friends		Model 3: two-limit Tobit model Y = loneliness score (UCLA scale) ranging between 0 (not lonely) and 10 (extremely lonely)	
	Marginal effect	*Standard error*	*Coefficient*	*Standard error*	*Marginal effect*	*Standard error*
Age	0.006***	0.001	-0.046***	0.016	-0.015**	0.006
None/primary education	0.145***	0.025	-0.139	0.315	0.137	0.117
Secondary education	0.030	0.021	-0.489**	0.234	0.025	0.094
Lives in Dublin	0.092***	0.028	-0.041	0.322	-0.350***	0.106
Lives in another city	0.060**	0.025	0.060	0.284	-0.155	0.096
Retired	-0.116***	0.026	1.154***	0.310	0.248**	0.120
Unemployed	0.176***	0.053	-1.137**	0.575	0.555*	0.288
Sick or disabled	0.117**	0.049	-0.707	0.595	0.986***	0.248
Other	-0.097***	0.025	-0.507*	0.285	0.405***	0.116
Married/cohabiting	--	--	0.285	0.269	-1.013***	0.094
N living children	-0.015***	0.005	0.851***	0.061	-0.014	0.021
N living siblings	-0.003	0.005	0.130**	0.056	0.019	0.020
Mother alive	0.038	0.033	-0.080	0.344	-0.156	0.139
Father alive	0.054	0.045	-0.189	0.508	-0.278	0.207
In poor health	0.071***	0.024	-0.761**	0.301	0.969***	0.113
Living in a rural area at age 14	-0.063***	0.022	0.072	0.260	-0.087	0.094
Poor health in childhood	-0.016	0.036	-0.147	0.497	-0.041	0.147
Poor family in childhood	0.009	0.024	-0.746**	0.304	0.282**	0.112

Physical/sexual abuse in childhood	0.127***	0.030	-0.467	0.396	0.724***	0.167
Missing information	-0.127**	0.051	-0.152	0.819	0.080	0.265
Parents used to drink/take drugs	0.000	0.032	-0.599	0.377	0.072	0.148
Missing information	0.209**	0.073	-1.894*	0.730	0.804**	0.359
Short-term migrant	0.054*	0.028	0.309	0.307	0.036	0.122
Long-term recent returner	0.154**	0.064	1.236	1.014	-0.388	0.259
Long-term earlier returner	0.089**	0.037	0.250	0.498	0.086	0.144
Constant	--	--	10.889***	1.051	--	--
N	3,207				3,104	

Notes: ***p<0.01 **p<0.05 *p<0.10. Data is weighted

Reference categories are: third/higher level of education; lives in a rural area; in employment; physically or sexually abused; and parents did not have an alcohol problem or used drugs; and stayer.

In Model 3, marginal effects describe how the observed dependent variable changes with respect to the regressors.