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Article

Moving to become healthier?

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ABSTRACT

This paper examines individuals' health and whether it improves when individuals move from a region with poorer health on average to a region with better health on average. We used data from Finland, which is a country with large regional differences in health behaviours and outcomes. We found no evidence that moving from a less healthy region to a healthier region would have any significant effect on the health of individuals who move compared with the health of other individuals. We also examined the potential heterogeneity in the analysed relationships. We found evidence of a relationship between moving itself and health improvements, but this generally true only for our subsample of individuals who had only average or poorer health before moving.

1. Introduction

Can a person's health depend on the place where he or she lives within a country? What happens if people from a region with poor health on average moved to another region with better health on average? Or, from a public policy perspective, would anything be gained if regional policy were reformulated in such a way as to encourage migration to regions with better health on average using economic incentives? Obviously, for this to happen, the health of individuals with poorer health who move to a region with better health would need to converge with the health of the residents in the receiving region.

In one strand of the international literature on migration, such a health convergence process is referred to as acculturation. In this process, immigrants' health converges with the level of native residents' health over a period of time (e.g., Antecol & Bedard, 2006, 2015). If positive acculturation occurs, individuals who move from a country with poor health on average to a country with better health on average would experience an improvement in health behaviours and outcomes (Constant, García-Muñoz, Neuman, & Neuman, 2018).

This research question has also been investigated in the context of internal migration, such as neighbourhood effects. Neighbourhood effects imply that individuals will be affected by the behaviours of other individuals in the neighbourhood (Topa & Zenou, 2015). Thus, persons moving from an area with poor health on average to an area with better health on average would improve their health by imitating the health behaviour individuals in the neighbourhood. The relevant studies in this literature include Jokela (2014, 2015) and Airaksinen et al. (2015). Interestingly, with perhaps the exception of Airaksinen (2015), these other studies have found limited evidence of neighbourhood effects. On the other hand, however, there are influential studies based on the "Moving to Opportunity" randomised trial housing experiment in the USA involving low-income individuals that indicate that neighbourhood effects may be important for subsequent outcomes, such as obesity, diabetes, mental health and subjective well-being (Ludwig et al., 2011, 2012). However, while the internal validity of those studies of course very high due to randomisation, it may be difficult to generalise those the findings to other relevant settings in other countries. In a slightly different setting, a study using U.K. data based on the British Household Panel Study (BHPS), found that "selective migration" was responsible for a substantial fraction of variation in geographical inequality in mortality (Brimblecombe, Dorling, & Shaw, 1999). This result is in accordance with those finding only limited evidence for neighbourhood effects.

Furthermore, in health economics, there is also research focusing on "person" and "place" effects (e.g., Finkelstein, Gentzkow, & Williams, 2016, 2018). This literature basically examines whether, for instance, the health care utilisation of an individual is due to the time-invariant characteristics of the individual or the characteristics of the place to

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which the individual is moving. The analysis again is made possible by the ability to observe the same individual residing in two different places. The results of the analyses find quite considerable place-related effects of health care utilisation in a U.S. setting.

Overall in the literature, however, a somewhat overlooked aspect of acculturation or the existence of neighbourhood effects, or "place effects", appears to be that those effects are only relevant for individuals whose health diverges from the average health of the receiving country or region. Thus, if an unhealthy migrant moves from an unhealthy region to a healthy region, we would expect the health of that individual to improve if there is positive acculturation or a neighbourhood effect. However, if a healthy migrant moves from an unhealthy region to a healthy region, we would not expect the health of that individual to improve. Thus, earlier research that have been right to assert that there is no acculturation for migrants as a whole but that the heterogeneity of migrants may have been overlooked.

In this study, we investigate whether the health of an individual improves if the individual moves to a place where health better than on average than in the place from where the individual moved. As indicated, we particularly examine the effect of moving on those having poor health. Empirically, we combine two data sets: the Morbidity Index, describing health on a regional level compiled by Finland's National Institute for Health and Welfare, and the Health 2000/2011 in Finland data sets comprising comprehensive health data of the same individuals measured at two different points in time for each individual. With these data, we estimated health change models where the dependent variable is the change in an individual's self-reported health over 11 years. Our main explanatory variable is a dichotomous moving/not moving variable. In the empirical specifications, we controlled for baseline health. We also employed instrumental variable techniques to control for potential reverse causation.

For the entire sample of individuals, we found limited evidence in favour of a link between moving and changes in health. However, for a sample of individuals who had average or worse self-reported health initially, we found a positive and significant link between moving and improvements in health. We also propose and estimate instrumental variable models, where the decision to move is dependent on whether the father of the person who moves was a farmer. Our idea here is that being a farmer, at least in Finland, entails ownership of land, which in turn, would significantly decrease the probability of moving for the offspring, because the offspring will inherit the farm at some point in time and therefore be less likely to move in future. Our instrumental strategy works in the sense that the individuals whose father was a farmer have a much lower probability of moving, and the effect is significant and not too small. However, the instrument is not sufficiently powerful for our instrumental variables to provide a conclusive answer to our research question in the setting of an instrumental variables model.

1.1. Data

As briefly mentioned, the data set we used comes from two sources. The first source is the Morbidity Index comprising data on regional health in Finland, which is composed by Finland's National Institute for Health and Welfare on the basis of national registers on causes of death, hospital care, entitlements to specially reimbursed medicines, disability pensions and cancer incidence (Sipilä et al., 2014). This data set was used in this study to measure the general health in a municipality. This index comprises seven sub-indices including cancer, coronary heart disease, cerebrovascular disease, musculoskeletal disease, mental health, accidents and dementia. The diseases included in the Morbidity Index were chosen because they constitute the cover nearly two thirds of deaths in Finland and cause four fifths of all disability retirement. The data are also readily available from registers. In the composite index, which we used in this paper, the sub-indices were weighted according to how important the diseases included in a particular sub-index are as causes of death, disability, reduced quality of life and health expenditure. The Morbidity Index is presented as deviation for each region from the national average, which was set to 100. Furthermore, the data were also calculated as an average of three years in order to smooth out random disturbances in the data. Thus, the latest available data, which were published in 2017, is an average of 2013–2015. Our analysis in this paper is based on municipalities, of which there were 311 in Finland in 2017. Thus, a region is in this paper one of the municipalities in Finland. Municipalities are the smallest administrative units covering all regions of the country. This implies that every farm is located in a municipality. There are large size differences between municipalities in Finland. The smallest municipalities in Finland have only some hundred inhabitants, whereas the largest municipality is the capital Helsinki, which has some 650 000 inhabitants. The average population of a municipality is around 17 000 inhabitants.

According to the Morbidity Index, health in general improved in Finland during this time but not evenly across municipalities. On a municipality level, health improved in 241 of 311 municipalities (77.5%) between 2000 and 2011, which are the years that are relevant for our analysis. Regional health differences were also persistent to a large extent: the correlation coefficient at municipal level between 2000 and 2011 was 0.82.

The other data we used in this study come from the panel based on the Health 2000 and Health 2011 data sets. The Health in Finland 2000 Survey comprehensively represents the Finnish population aged 30 years and over at the individual level. The methods and baseline results of the 2000 survey have been previously described in detail (Heistaro, 2008, Aromaa et al., 2004), and they are available at http://www.terveys2000.fi/. Briefly, the survey featured a two-stage, stratified cluster sampling design, with double sampling of people over 80 years of age (Aromaa, 2004). The data were collected between August 2000 and July 2001. Of the original sample of 8028 people, 93% participated in at least one part of the study. In all regressions in this paper, we accounted for the two-stage sampling by applying the relevant corrections to standard errors.

In 2011, the data for a follow-up to this survey, Health in Finland 2011, were collected. Of the sample of persons aged 30 and over (n = 7964) 72.9 percent participated in at least one of the phases of the data collection while 58.6 percent took part in the health examination. The National Institute for Health and Welfare in Finland, in collaboration with a broad-based network of experts (Koskinen et al., 2012). Thus, the follow-up sample that we are using in this study consists of individuals aged 41 or over in 2011. As already mentioned, in all estimations presented in this paper accounted for the stratified cluster sampling procedure. These corrections, i.e., weighting, help to alleviate issues of attrition in the sample.

1.2. Methods and empirical setup

In studying the relationship between individual health and the characteristics of the neighbourhood, cross-sectional data are insufficient (Eid, Overman, Puga, & Turner, 2008; Jokela, 2014). This is because there may be selective migration such that individuals with good health move to places where health is good on average and vice versa. In a cross-section, a positive correlation between the characteristics of a neighbourhood (such as average health) and an individual's health may be due to selective migration.

In this paper, we are interested in the effect of neighbourhood on health and whether moving will affect health. Let H_{it} denote the (self-reported) health status of individual i at time t. An empirical model of the effect of neighbourhood on health could then be as follows:

$$H_{it} = c_i + \beta_1 \overline{x}_{it} + \beta_2 \overline{y}_{it} + u_{it} \quad (1)$$

where c_i is the unobserved time-invariant variables that affect health, $\overline{x}_{it}$ is a vector of time-varying variables that affect an individual's health, $\overline{y}_{it}$

is a vector of time-varying health characteristics of the neighbourhood (i.e., the regional sickness index) and u_{it} is a time-varying individual error.

The first fundamental problem with this simple approach is the possibility of unobservable personal characteristics that affect both health and the location where an individual lives, i.e., c_i. When estimating (1) with cross-sectional data, the coefficients would be biased as more healthy individuals would, for instance, have a higher probability to move to a region with better health on average.

To overcome this problem, we differentiated the equation with respect to time, yielding:

$$\Delta H_{it} = \Delta\beta_1 \overline{x}_{it} + \Delta\beta_2 \overline{y}_{it} + \Delta u_{it} \tag{2}$$

This operation eliminates c_i. Now, if the regional health characteristics $\overline{y}_{it}$ does not change over time, then the only source of within-person variation in $\overline{y}_{it}$ would be if an individual moved from one region to another (e.g., Jokela (2014, 2015), Airaksinen et al. (2015)). However, in our setting $\overline{y}_{it} - \overline{y}_{it-1} \neq 0$ not only if an individual moves but also because the average health of regions changes over time. Thus, we cannot identify the effect of moving on health. Therefore, we need to add to equation (2) an indicator variable z_i which takes the value 0 if the individual lives in the same region both in period t and in period $t-1$ and 1 otherwise. Then, equation (2) becomes:

$$\Delta H_{it} = \Delta\beta_1 \overline{x}_{it} + \Delta\beta_2 \overline{y}_{it} + \beta_3 z_i + \Delta u_{it} \tag{3}$$

Furthermore, there are other challenges. Although unobservable time-invariant characteristics that may affect health are addressed using the difference operator, we may still have a problem with reverse causation or unobservable time-varying characteristics. Thus, health would be endogenous and would affect the probability of moving instead of the opposite, which we are interested in. This calls for an instrumental variables approach, where the instrument is uncorrelated with the change in health but would predict z_i, i.e., why an individual would move. In short, the idea of instrumental variables as a solution is to introduce an exogenous variation in the explanatory variable in order to disentangle the causal effect of this explanatory variable on the outcome variable (Cameron & Trivedi, 2005, p. 95).

As stated in the introduction, the aim of this paper is to investigate whether an individual's health improves by moving to an area where the average health is better. First, however, we studied whether the health before moving is correlated with moving, thereby introducing selection bias. We accomplished this by estimating simple OLS models where the dependent variable is a dummy variable taking the value 1 if the individual has moved and 0 otherwise. Our main explanatory variables in those regressions were the individual's self-reported health and the level of the regional Morbidity Index before moving. We also included controls for age and education. These regressions should be seen as extensions to the descriptive statistics, and we did not attempt to include all possible explanatory variables in these regressions, such as family, home ownership, etc.

Using the two observations on health we have per individual, we then estimated health change equations with the difference in self-reported health between 2011 and 2000 as the dependent variable. This was also accomplished using straightforward OLS methods. Of course, a deterioration in health over a time period of 11 years is the norm, so in practice it is a question regarding whether the health of individuals who move on average deteriorates less quickly than the health of others. The main explanatory variable is whether the individual's relocation interacted with the change in the Regional Mortality Index. We also ran regressions of health change where we controlled for the level of health in 2000.

2. Results

In the individual-level data from the Health in Finland 2000 and 2011 data sets, individuals who move were defined as individuals who reside in one municipality in 2000 but in another in 2011. It should be noted that there have been quite a few municipality mergers during this period in Finland, which have been taken into account in our analysis.

There were significant differences between individuals who move and individuals who do not move (Table 1). Individuals who move are younger and better educated, and they live in regions with better health on average before they move. Education was measured in this paper using three indicator variables, where "low" education denotes less than upper secondary education, "middle" education denotes upper secondary education or post-secondary education and "high" education denotes at least tertiary education. The movers' own self-reported health also appeared to be somewhat better. Self-reported health in this study was measured on a 5-point scale, where 5 is "good" self-reported health, 4 is "rather good" self-reported health, 3 is "moderate" self-reported health, 2 is "rather poor" self-reported health, and 1 is "poor" self-reported health. Moving also seems to be slightly more common among females. The indicator variable "male" took the value 1 if the individual is male and 0 otherwise.

In appendix Tables A1 and A2 these differences are investigated in more detail. In those tables, we report results of the OLS regression with the dichotomous moving/not moving as the dependent variable. In the first column, we only included the individual's health in 2000. These regressions should be seen as extensions to the descriptive statistics, and we did not attempt to include all possible explanatory variables in these regressions, such as family, house ownership and so on. As seen in column 1 of Table A1, the relationship between self-reported health and the probability of having moved is notably non-linear, as the indicator variables for "rather good" health and "moderate" self-reported health are negative compared with the left-out category of "good" self-reported health. The indicator variables for "rather poor" health and "poor" health were not significantly different from the reference category of "good" health. As we move to the right and introduce more explanatory variables such as age and education, the significant result for "moderate" health disappears, but the indicator variable for "rather good health" is still significantly different at the 10% level from the reference category of "good" self-reported health in the fifth column. The Regional Morbidity Index is negative and statistically significant in some of the specifications, which means that the probability of moving is smaller if the region where the individual lived in 2000 had poorer health on average. Unsurprisingly, our controls for age reveal that the probability of moving decreases with age. Education is also important, as those with "high" education in general are more likely to move. Finally, we did not find any significant differences between men and women.

In appendix Table A2, this analysis is repeated but only for those individuals who had "moderate" self-reported health, "rather poor" self-reported health, or "poor" self-reported health in 2000. In this sample, the results are less clear-cut compared with those in Table A1, but the general picture remains the same. The most notable difference perhaps

Table 1
Descriptive statistics.

	Individuals who do not move	Individuals who move
Age in 2000	49.79	44.41
	(12.51)	(10.87)
Male	0.46	0.45
Self-reported health 2000	3.93	4.03
	(1.00)	(1.04)
Low education	0.35	0.21
Middle education	0.33	0.34
High education	0.32	0.45
Regional Morbidity Index 2000	108.90	105.88
	(21.05)	(20.39)
N	5192	715

concerns the age dummies, where the profile quite clearly differs from that of Table A1. However, the likely explanation is that self-reported health itself is highly age dependent, with younger individuals having better health.

The main goal of this paper is to investigate whether it is beneficial for an individual to move to a region where other people are healthier in general. In Table 2, we present the results of regressions where the dependent variable is an individual's change in health between 2000 and 2011. As this is an investigation of changes, it should be noted that apart from those indicating Health in 2000 in column 4, the variables are entered to the model as changes. This also implies that education, gender and so forth were eliminated from the estimation, as they do not change over time.

In the first column, we note that the coefficient for the change in the Morbidity Index is not significant. This means that we did not find that an improvement in a region's overall health as measured by the Morbidity Index was associated with improvements in individual health as measured by changes in self-reported health, both for individuals who move and individuals who do not move. We then, in column 2, add the dummy variable describing whether the individual has moved or not. While it is positive, it is not significant, indicating no particular gain from moving between regions from a health perspective. In column 3, we add an interaction term that multiplies the change in the Regional Morbidity Index with the moving variable to investigate whether there is an effect of moving over and above that, which is given by the change in the Regional Morbidity Index. We found no significant effects from the introduction of this variable. In the rightmost column we also introduced controls for the level of the individual's health in 2000. The reason for this is technical, as health cannot decrease if it is already at the worst category "poor" (cf. Böckerman and Ilmakunnas, 2009). The results indicate that the worse the health in 2000, the larger was the potential for health improvement. Nevertheless, the conclusions from the other columns did not truly change from this.

In Table 3, we repeat the analysis of which the results were presented in Table 2 but this time with only the individuals who had "moderate", "rather poor" or "poor" health in 2000. The results are quite different, with the moving dummy being positive and highly statistically significant. Thus, we found that for individuals who had "moderate", "rather poor", or "poor" self-reported health in 2000, health did improve in relative terms if they moved. Furthermore, we can see in column 4 that the controls for the level of self-reported health in 2000 functioned similarly as in the analysis for the entire sample.

Table 2
Individual changes in health 2000–2011.

	(1)	(2)	(3)	(4)
Regional health improvement	0.001	0.001	0.001	−0.000
	(0.001)	(0.001)	(0.001)	(0.001)
Individual has moved		0.024	0.023	0.081*
		(0.052)	(0.052)	(0.043)
Moved x regional improvement			−0.001	0.001
			(0.002)	(0.002)
Rather good SR health 2000				0.456***
				(0.034)
Moderate SR health 2000				0.984***
				(0.034)
Rather poor SR health 2000				1.400***
				(0.067)
Poor SR health 2000				1.719***
				(0.127)
Constant	−0.022	−0.025	−0.025	−0.529***
	(0.016)	(0.017)	(0.017)	(0.021)
R-squared	0.000	0.000	0.000	0.225
N	5854	5854	5854	5854

Note: The reference group for self-reported health is having good self-reported health.
*p < 0.1, **p < 0.05, ***p < 0.01.

Table 3
Individual changes in health 2000–2011: individuals with average, quite bad or bad health.

	(1)	(2)	(3)	(4)
Regional health improvement	−0.000	0.000	−0.001	−0.001
	(0.002)	(0.002)	(0.002)	(0.002)
Individual has moved		0.252***	0.255***	0.228***
		(0.089)	(0.089)	(0.085)
Moved x Regional Improvement			0.005	0.006
			(0.004)	(0.004)
Rather poor SR health 2000				0.415***
				(0.070)
Poor SR health 2000				0.733***
				(0.127)
Constant	0.584***	0.558***	0.560***	0.442***
	(0.028)	(0.030)	(0.030)	(0.032)
R-squared	0.000	0.006	0.007	0.057
N	1920	1920	1920	1920

Note: The reference group for self-reported health is having average self-reported health.
*p < 0.1, **p < 0.05, ***p < 0.01.

In Table 4, we report the results of instrumental variable regression, where moving is instrumented with the individual's father having been a farmer. It should be noted that while farming is not currently a very common occupation in Finland, it was quite common at the time when the fathers of the individuals in our sample were of working age. The idea behind our instrument is straightforward. Farming entails land-ownership, at least in the case of Finland, and our hypothesis for the first stage of a two-stages least squares regression is then that having a father who was a farmer should decrease the probability that offspring will move later in life. This indeed holds true, as the coefficient for having a father who was a farmer was negative and significant in our linear probability first-stage regression of explaining the probability to move (regression results available upon request). This is the case both for the entire sample and our limited sample of those who had moderate or worse self-reported health in 2000. The coefficients are in the order of 0.04, which in the context of a linear probability model entails that having had a father who was a farmer decreased the probability of moving from one municipality to another between 2000 and 2011 by approximately 4 percentage points.

However, as seen from Table 4, the second-stage regression of the

Table 4
Individual changes in health, 2000–2011: Instrumental variable estimates.

	(1)	(2)	(3)	(4)
Regional health improvement	0.001	0.000	0.003	0.001
	(0.002)	(0.001)	(0.004)	(0.003)
Individual has moved	1.131	1.095	2.368	2.151
	(0.942)	(0.918)	(1.768)	(1.668)
Moved x regional improvement		0.003		0.009
		(0.004)		(0.008)
Quite good SR health 2000	0.488***	0.487***		
	(0.047)	(0.047)		
Average SR health 2000	1.030***	1.029***		
	(0.056)	(0.055)		
Quite bad SR health 2000	1.413***	1.415***	0.343***	0.356***
	(0.072)	(0.071)	(0.108)	(0.101)
Bad SR health 2000	1.740***	1.740***	0.682***	0.688***
	(0.132)	(0.132)	(0.161)	(0.153)
Constant	−0.681***	−0.675***	0.226	0.251
	(0.136)	(0.133)	(0.178)	(0.167)
R-squared	0.107	0.115	.	.
N	5854	5854	1920	1920

Note: The reference group for self-reported health is having average self-reported health.
*p < 0.1, **p < 0.05, ***p < 0.01.

relationship between having moved and individual health changes did not yield precise results with both the coefficients, and the standard errors became implausibly large. Indeed, this is not surprising given that the instrument, although significant in the first-stage regression at the 0.001% level, is not sufficiently strong in the sense of Staiger and Stock (1997). Nevertheless, we maintain that the possible link between whether the father was a farmer and (not) moving may be useful in future research on migration.

3. Discussion

This paper concerns individuals' health and whether it is improved if individuals move from a region with poorer health on average to a region with better health on average. Regarding this, we found no evidence that moving from a less healthy region to a healthier region has any effect on the health of individuals who move compared with the health of other individuals. However, we did find evidence of a relationship between moving itself and health improvement, but this was generally only true for our subsample of individuals who had only moderate or poorer health before moving.

There are relevant limitations to this study, which at the same time serve as avenues for future research. First, it is obvious that a better instrument that would predict why some people move while others do not that is not correlated with health changes later on would improve the study. However, it is very challenging to find such an instrument. Second, more detailed information on exactly when someone has moved would also improve the analysis. Clearly, if the point of the investigation is to look for potential "area" effects, then one would envisage that the longer the "exposure" to a certain area the more powerful the effect of the "area" would be.

Ethics approval statement

No ethics approval is necessary for this paper. The data used (Health 2000/2011) is a data set that has been collected by the National Institute of Health and Welfare, and ethics approval has been acquired by the Institute at the time of data collection.

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Declaration of competing interest

None.

Appendix

Appendix Table A1 Determinants of moving between municipalities 2000–2011.

	(1)	(2)	(3)	(4)	(5)
Quite good SR health 2000	−0.031**	−0.030**	−0.016	−0.015	−0.012
	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
Average SR health 2000	−0.045***	−0.042***	−0.016	−0.013	−0.006
	(0.012)	(0.012)	(0.013)	(0.013)	(0.013)
Quite bad SR health 2000	−0.002	0.003	0.030	0.034	0.045*
	(0.024)	(0.023)	(0.023)	(0.023)	(0.023)
Bad SR health 2000	−0.025	−0.022	0.004	0.007	0.025
	(0.048)	(0.049)	(0.047)	(0.047)	(0.050)
Regional Morb. index 2000		−0.067***		−0.060***	−0.047**
		(0.021)		(0.021)	(0.022)
Male			−0.013	−0.013	−0.009
			(0.010)	(0.010)	(0.010)
Age 35–40 years			−0.014	−0.013	−0.017
			(0.020)	(0.020)	(0.020)
Age 40–45 years			−0.034*	−0.034*	−0.035**
			(0.018)	(0.018)	(0.018)
Age 45–50 years			−0.037**	−0.037**	−0.034**
			(0.016)	(0.016)	(0.016)
Age 50–55 years			−0.035**	−0.035**	−0.031*
			(0.016)	(0.016)	(0.017)
Age 55–60 years			−0.048***	−0.048***	−0.040**
			(0.018)	(0.017)	(0.018)
Age 60–65 years			−0.060***	−0.059***	−0.049***
			(0.018)	(0.017)	(0.018)
Age 65–70 years			−0.132***	−0.130***	−0.113***
			(0.016)	(0.015)	(0.016)
Age 70–75 years			−0.114***	−0.111***	−0.089***
			(0.022)	(0.022)	(0.023)
Age over 75 years			−0.132***	−0.129***	−0.106***
			(0.027)	(0.027)	(0.027)
Middle education					0.025**
					(0.012)
High education					0.057***
					(0.014)
Constant	0.142***	0.214***	0.180***	0.243***	0.192***
	(0.009)	(0.025)	(0.016)	(0.028)	(0.031)
R-squared	0.003	0.005	0.018	0.019	0.023
N	5949	5949	5949	5949	5913

Note: The reference group for the age dummies is 30–35 years old in 2000.
The reference group for the male dummy is female.

The reference group for self-reported health is having good self-reported health.
*p < 0.1, **p < 0.05, ***p < 0.01.

Appendix Table A2

Determinants of moving between municipalities 2000–2011. Individuals who have average health or worse in 2000.

	(1)	(2)	(3)	(4)
Quite bad SR health 2000	0.046*	0.044*	0.045**	0.050**
	(0.023)	(0.023)	(0.023)	(0.023)
Bad SR health 2000	0.020	0.019	0.019	0.032
	(0.049)	(0.047)	(0.047)	(0.049)
Regional Morb. index 2000	−0.080**		−0.066*	−0.056
	(0.037)		(0.036)	(0.038)
Male		0.024	0.025	0.027
		(0.018)	(0.018)	(0.018)
Age 35–40 years		0.026	0.028	0.019
		(0.051)	(0.050)	(0.051)
Age 40–45 years		−0.036	−0.035	−0.038
		(0.039)	(0.039)	(0.039)
Age 45–50 years		−0.065**	−0.063**	−0.061*
		(0.032)	(0.032)	(0.032)
Age 50–55 years		−0.025	−0.024	−0.020
		(0.031)	(0.031)	(0.032)
Age 55–60 years		−0.053*	−0.053	−0.039
		(0.032)	(0.032)	(0.032)
Age 60–65 years		−0.029	−0.028	−0.017
		(0.032)	(0.031)	(0.031)
Age 65–70 years		−0.138***	−0.134***	−0.112***
		(0.026)	(0.026)	(0.025)
Age 70–75 years		−0.070*	−0.065	−0.032
		(0.041)	(0.041)	(0.040)
Age over 75 years		−0.106**	−0.103**	−0.072
		(0.047)	(0.047)	(0.049)
Middle education				0.053**
				(0.021)
High education				0.072***
				(0.025)
Constant	0.185***	0.140***	0.212***	0.157***
	(0.044)	(0.029)	(0.050)	(0.054)
R-squared	0.006	0.027	0.029	0.037
N	1959	1959	1959	1936

Note: The reference group for the age dummies is 30–35 years old in 2000.
The reference group for the male dummy is female.
The reference group for self-reported health is having good self-reported health.
*p < 0.1, **p < 0.05, ***p < 0.01.

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