Do you move when your partner passes away?

Preliminary April 2019

Aske Egsgaard[1] and Cecilie Dohlmann Weatherall[2]

Work in Progress

Abstract

The effect of an aging population in welfare states is much debated, but how can the demographic changes influence intermigration and demand for housing? In this paper we focus on how individuals react when changing civil status from couples to widower, which is a natural consequence of an ageing population. In other words, we empirical investigate the changes in housing demand and intermigration due to a loss of a partner. By using unique administrative panel data, where we can identify widowers who experience an unexpected death of a partner and a control group of individuals living together as couples, we can identify the relationship between widowers, intermigration and changes in demand for housing. As far as we know our study is only the second empirical study investigating how a partner's death affect the surviving partners future housing careers and moving patterns and the first to connect this to the future demand for housing. Our results indicate that both males and females have a higher risk of moving in the subsequent time following just after the death of a spouse than their comparison group of couples, but that the risk is higher for men than for women.

Keywords: intramigration, neighborhood, death, network

JEL: R0, R3, J6

[1] Kraks Fond, Institute for Urban Economic Research & University of Copenhagen, Department of Geosciences and Natural Resource Management
[2] Kraks Fond, Institute for Urban Economic Research

Introduction

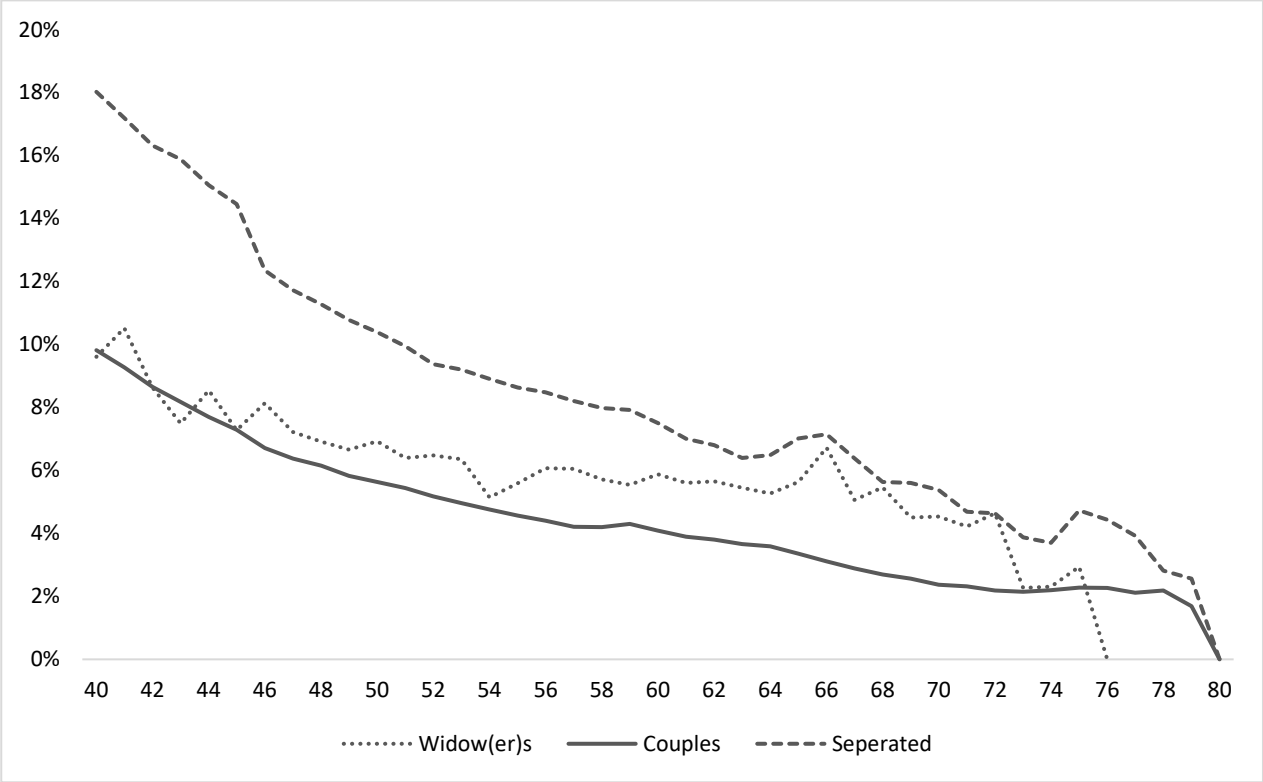
The match between housing demand and supply of homes is a key point in how cities develop, and how citizens migrate. Studies have shown that peoples demand for housing correlates with their age, income, employment, health status and family situation, among others (Herbers, Mulder, and Mòdenes 2014). We know that 70 percent of Danes between the ages of 30 and 80 years old live in a relationship in one form or another. Among this subpopulation about 0.8 percent, or just over 14,000 couples, each year experience a partner dying, although this number will be higher for couples in right side of the age distribution and lower for couples in the left side. These families experience a sudden shock to the family construction which might change their future housing demand.

Furthermore, Statistics Denmark (2018) predicts that more than 500,000 people or about 10 pct. of the population will be more than 80 years old in 2050 in Denmark (i.e. a nearly 95 pct. increase compared to 2018)[3]. One could expect that with an aging population the demand for housing changes, for example due a loss of a partner or health conditions. Studies have indicated that at least a quarter of all moves happens not as a result of either job- or housing related incidence but instead to other reasons (Clark 2012). As the population grow older these other reasons become even more prevalent. But ss pointed out by van Ham (2012), hardly any studies have empirically investigated how a partner's death can affect the surviving partners future housing careers and moving patterns.

Figure 1 illustrates all moves among couples irrespective of moving distance restricted on moves to other self-sustainable housing units, i.e. not nursing homes etc. Figure 1 shows that people losing a partner between the age of 40 to 80 years old have a higher moving frequency the following years compared to couples staying together. However, couples that separate within the observed period have the highest moving frequency even in the period before the break up.

[3] Statistics Denmark predicts that already in 2024 there will be an additional 200,000 people over the age of 65 in Denmark and that about three quarters of these, or 150,000 will be over 80 years old, corresponding to respectively a 17.9 pct. -, and a 58.4 pct. rise compared to 2018 (Danmarks Statistik 2018).

Figure 1: Share of people moving at different ages, divided in three groups



Note: *Widow(er)s* mark the share of widow(er)s who move within the sequential year after their spouse died. *Seperated* are people in a relationship who at some point in time within the sample period break with their partner. *Couples* are all other couples in the sample that neither die or break up in the sample period. **Source:** Own calculation based on data from Statistics Denmark.

The death of a spouse or partner has big emotional consequences for the surviving partner. However, the death can also have big economic consequences since the partner most likely was a contributor to the household income, especially in the Scandinavian countries where dual households are most likely also dual-earner households. Furthermore, Dansk Erhverv (2014) shows that the economic expenses to our homes have become an increasing larger part of the total Danish household budget. The death of a spouse, especially an unforeseen death, can therefore be a big economic burden, that can force the widow(er) to move to a less expensive home. Likewise, it could also be that the death of a spouse entails a shift in the housing needs for the surviving partner, as the residence no longer fulfil the demands of the widow(er) and thus the death of a spouse can cause a new housing demand for the surviving partner. This is motivated by studies that have shown that as people, and especially elderly people, move late in their housing career they are more likely to downsize (Banks et al. 2012). Furthermore, the importance of proximity to other relatives e.g. children and grandchildren is also likely to increase for widow(er)s after losing a partner.

The increased aging of the population and the possible demand for downsized housing for widow(er)s can influence the surrounding community and change the shaping and developments within cities and regions, especially if the match between housing supply and demand is not met in time.

The purpose of this project is first to describe the relationship between the death of partner and a subsequent move. Second, the project investigates how the survivors' choice of residence differs from others both in placement and size, including the distance to adult children.

1. Previous Literature

Widow(er)s mobility and moving patterns has not been subject to much focus in the residential mobility literature, even though it is an ever-present issue in society. However, much of the previous studies related to widow(er)s mobility can be divided into how the transition into widowhood affects physical and psychological wellbeing of newly widow(er)s and what the social and economic consequences they face.

Already back in 1968, Berardo (1968) called out for the need for more research on the effects of widowhood due to the large increase in widows in the United State, and the little attention the field had gotten even though there was an acknowledging within the academic community that it was an important subject. However, a wide literature exists on the effects of widowhood on physical and psychological health outcomes, showing that the transition into widowhood does have other subsequent consequences for the widow(er)s (Berardo 1968; Parkes 1970; Clayton 1974; Barrett and Schneweis 1981; Stroebe, Schut, and Stroebe 2007). Furthermore, studies have found that widows are affected almost homogenously and that there is none or only minor psychological health differences between widows when comparing for different causes of partner death (Balkwell 1981; Lowenstein and Rosen 1989; Grad and Zavasnik 1999). Although the underlying data information used in these studies is mostly based on surveys with limited sample sizes, giving the results a more descriptive rather than causal interpretation, they can still be used in order to give a hint as to how the transition to widowhood affects the widow(er)s.

Besides effects on health outcomes, other studies also find that widowhood have a negative effect on the widow(er)s social networks (Berardo 1968; Lowenstein and Rosen 1989). Especially widow(er)s

whose spouse died due to illness have been found to feel themselves more subsequent isolated that compared to those whose spouse died due to suicide or accident (Grad and Zavasnik 1999). Additional, Carolyn Balkwell (1981) shows that the literature finds that men are affected different socially than women, although there is disagreement whether men are effect more or less negatively compared to women. Likewise, the literature is inconclusive whether there is a difference between the effect of the transition to widowhood when it is expected compared to when it is sudden. Some studies finds positive effects for an expected- compared to a sudden transition to widowhood on some aspects of psychological wellbeing and negative effects on other aspects (Barry, Kasl, and Prigerson 2002), while others find no difference between the transition to widowhood as a results of either expected and sudden death (Carr et al. 2001). This difference could be caused by the small sampling sizes and the lack of a pre-death sampling in the study by Barry, Kasl and Prigerson.

Previous studies on residential mobility and downsizing have mostly looked at these aspects in relation to divorce and retirement (Banks et al. 2012; Ball and Nanda 2013; Angelini, Brugiavini, and Weber 2014; Blundell et al. 2016). In relation to an aging population studies find that as people grow older their demand for housing that are more specialized to their needs rises i.e. smaller residences located closer to sought after amenities, particular for the group over 65 years of age (Ball and Nanda 2013; Angelini, Brugiavini, and Weber 2014). But also, that there are national differences and that the mobility depends on moving cost and distance (Banks et al. 2012; Blundell et al. 2016).

Several studies have found, that the death of a partner is likely to be followed by a subsequent decline in the overall household income, (Berardo 1968; Balkwell 1981; Burkhauser, Butler, and Holden 1991; Burkhauser et al. 2005). This could indirectly result in subsequent residential change of the surviving partner. Others however, have found that the residential mobility effect of an exogenous wealth shock highly depends on the household's wealth before the shock (Leth-Petersen 2010; Bilal and Rossi-Hansberg 2018). Thus, the better of households are before the shock the more prone to staying when experiencing a exogenous wealth shock they are, compared to poorer households that are more likely to withdraw financial assets from their current residence and move. Likewise, Bitter and Plane (2012) suggest that housing affordability might also affect migration and residential mobility among the aging baby boomer generation.

Widow(er)s residential mobility and moving patterns has not been subject to much focus in the residential mobility literature, even though it is an ever-present issue in society and that researchers have pointed out that there is a gap in the literature (van Ham 2012). The few studies which have looked exclusively on the connection between the death of a partner and the survivors subsequent residential mobility have found a positive correlation in the residential mobility immediate after the death of a partner although the correlation declines and vanish after just 4-5 years (Chevan 1995; Bonnet, Gobillon, and Laferrère 2010a; Herbers, Mulder, and Mòdenes 2014). Furthermore, Herbers et al. (2014) find descriptive evidence that widows in Denmark in general are more residential mobile compared to widows in the Netherlands and Sweden, hinting that there might be some country specific differences among widows.

To our knowledge only one study have investigated how widows proximity to adult children is affected by the death of a spouse. Bonnet et al. (2010) find that widows that move, on average settle closer to adult children compared to widows that don't move and couples where both partners are still alive.

However, the common element of the few studies on widows and residential mobility is the focus on all deaths among elderly people using cross-sectional or survey data and that the findings are mostly descriptive and therefore cannot lead to causal conclusions.

Our project will add to the literature by exploring the mobility for all widow(er)s, through the utilization of a broader and more detailed dataset that uncovers the differences between widows and widowers as well as between sudden and more expected deaths.

The data allow us to follow all couples over an extensive time and hereby observe residential mobility both before and after the death of a partner and compare them to couples where no partner dies. Furthermore, we can use the information in data to observe mortality shocks in the form of unexpected deaths, where there doesn't seem to be any prior warnings about the forthcoming event, as a more exogenous residential shock in where the widow(er) hasn't had time to prepare for their partners death.

Additionally, the project will contribute by showing how residential decisions by widow(er)s are impacted by the relationship between residential supply and demand in the local area by using detailed information about the housing stock within each municipally.

2. Data and descriptive statistics

Data & sampling

In order to successfully conduct a detailed investigation of residential moving patterns after a loss of a partner it demands a lot of the data. First off, it is important to properly identify the death a partner. Equally important is it to identify residential relocation for both widow(er)s and non-widow(er)s alike. Furthermore, the possibility to differentiate between a loss of partner after long term sickness and a sudden death and different between types of moves can shed a light on different moving patterns.

In this section we will describe the data in our analysis, by first explaining its origin and then go through our sampling strategy. Finally, we go through key descriptive statistics in order to lay the ground work for the upcoming analysis.

Our data originates from two main sources, Statens Serum Institut and Statistics Denmark. By combining these data we can identify which families experience the death of a spouse, their geographically location and the widow(er)s subsequent residential choices. The administrative health data on hospital admissions, including cause of admission, from 1994-2012 gathered from Statens Serum Institut can help us identify cause of death as it contains health information on all citizen, including prescribed medication, hospitalizations, deaths, etc. While the data from Statistic Denmark give access to micro-data on all individuals living in Denmark from 1980 up to 2016, which include socioeconomic information, and allow us to identify family members and residential location for both themselves and their family. This allow us to monitor residential moving patterns after experiencing a partner's death and furthermore to identify the distance to adult children before and after experiencing a partner's death.

In order to perform our analysis, we sample all men and women residing in Denmark between 30 and 80 years of age within the period, excluding people living in institutions or are in other ways legally disempowered. By doing so we reach about ??% of the entire population in our sample while in the same time

ensuring that the people in our sample are adults who live by- and take care of themselves. Furthermore, we limit our data to only contain people living together with another person in a relationship, thus excluding singles and divorced couples, and allowing for the partner to differ from the age limit mentioned beforehand. This also entails that if a couple living together break up and one move away, they will subsequent be excluded from the sample through right censoring. Only exception to this is in the case that one of the spouses die, where in that case we continue to follow the widow(er) up until they either move residence or that our period end and they become right censored.

Descriptive statistics

By using the sampling strategy described above, we first end up with 7,681,006 observations spread across 418,201 unique individuals. When discarding people who are single and live alone we end up with 4,647,479 total observations across all years, or 302,122 unique individuals, living in 189,831 different households[4]. The households in the sample has on average moved 1.9 times within the sampling period and their median residential duration time is 10 years. Comparing this to the US where the US census report that the median duration for all residence over 15 years of age was 5.9 years[5] as of 2009[6] (Mateyka and Marlay 2010), the households in our sample seem to be quite immobile. Furthermore, of the 189,831 unique households, 56,940 individuals have experienced that a partner or spouse have died which is about the same ratio as in the US according to the Us census bureau (Roberts and Ogunwole 2018). These characteristics are presented in table 1 below.

[4] As some people can be in a relationship with several different individuals throughout our period of observation, and thus be part multiple households in said period, the number of unique individuals in the sample is not exactly double the number of unique households but instead slightly below.
[5] If only counting people over the age of 35, the medium residence duration rises to about 8 years.
[6] The median residence duration in 2009 is 11 years for the sample.

Table 1: First descriptive on observations, households, moves and deaths.

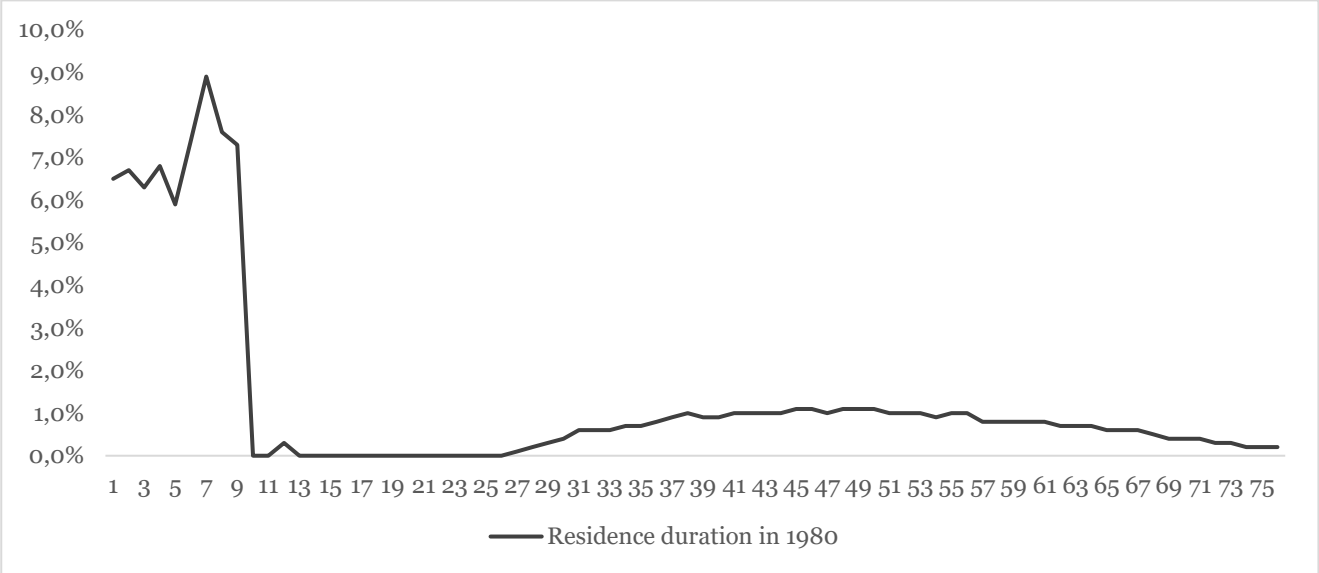
Total observations	4,647,479
Unique individuals	302,122
Unique housdeholds	189,831
Median residential duration in years	10
Mean number of moves	1.9
Number who loose partner	56.940

Source: Own calculation based on data from Statistics Denmark.

We define residential moves in the paper as a change in address from one year to another, no matter how long they have stayed in the old residence or how far they move, but only if both partners move to the new address. Biggest caveat to this definition would be in the rare case in where a couple within the same year move to a new residence and then afterwards move back to their old residence, resulting in the move not being monitored. Likewise, couples who move multiple times within the same year are only going to be accounted for their last move by this definition. This could be in the intermediate period between the sale of an old residence and the purchase of a new residence, or right after the death of a spouse before moving onto something more permanent. Whatever the case, this means that we may underestimate how much some people move, but they will nevertheless still be assigned a residential move under any circumstance.

Figure 2 below show how long people have already lived in their residence when first observed in 1980. It should be noted that most household haven't lived in their residence for more than 9 years, while a small share, under 3 %, have lived in their residence for more than 70 years. This together with the average number of moves the household make in the sampling period tells us that households in Denmark are somewhat rooted in not very mobile. This is full in line with the findings from previous studies on the household mobility in Scandinavia, Denmark included, and is partly attributed the Scandinavian flexicurity model which allows households to maintain an acceptable income even in periods without a job. This tells us that we shouldn't expect to find that the death of a spouse affects the possibility to move in a dramatic degree, but that we instead should expect more moderate effects.

Figure 2; Tenure time for households in 1980



Source: Own calculation based on data from Statistics Denmark.

Next, we define residential duration as the number of years a household has lived in their current residence measured as the difference between the current year and the year they original moved into their residence. This also entails that when a household move to a new address the residential duration time starts over.

Partner death is identified the year one of the spouses dies, regardless whether this being from natural causes or external ones, or if its sudden or have been under way for some time. We hereafter define duration after spouse death by following how long the widow(er) stay in the same residence after the partner has died, measured in years, until either moving or until the sample period runs out whereupon they become right censored. Table 2 below show the distribution in residential duration after spouse death. Table 2 shows that nearly half who experience the death of a spouse no longer reside in the same residence after 4 years which could indicate that the group have a larger moving frequency compared to couples that doesn't experience the death of a spouse.

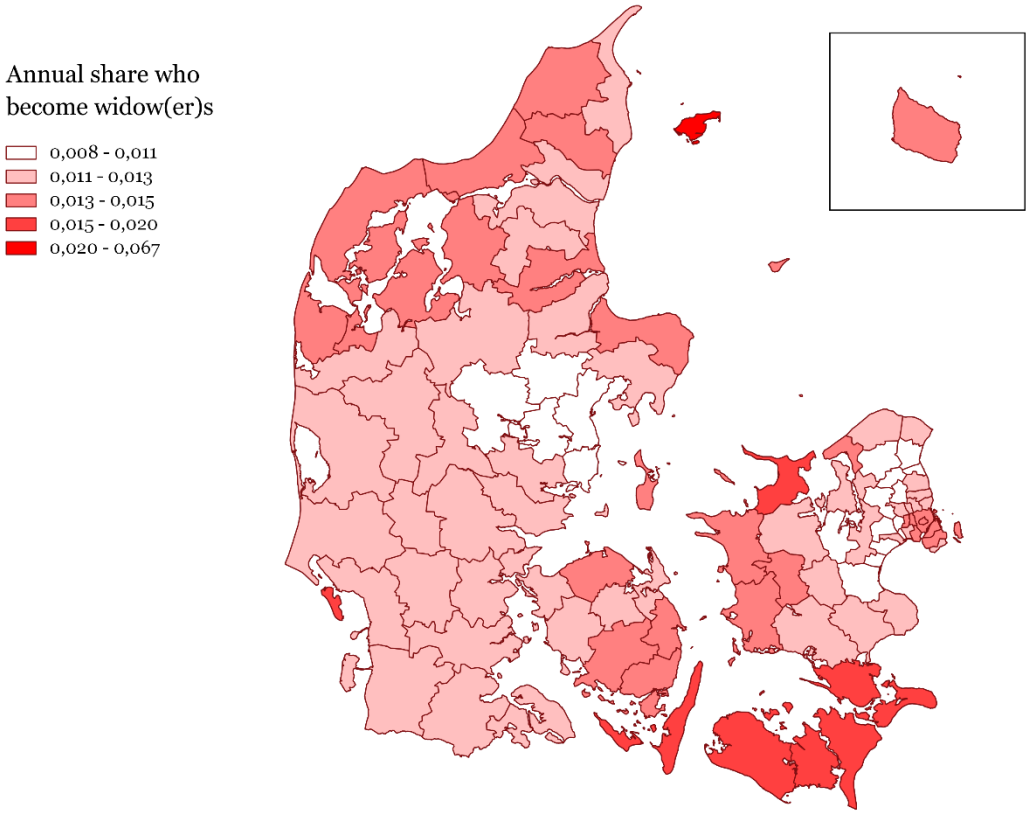
Table 2: Residential duration after death of a spouse

# Years	No.	%	Cum. %
1	58,013	17.7 %	17.7 %
2	44,622	13.6 %	31.3 %
3	36,059	11.0 %	42.3 %
4	29,729	9.1 %	51.4 %
5	25,037	7.6 %	59.0 %
6	21,109	6.4 %	65.5 %
7	17,946	5.5 %	70.9 %
8	15,272	4.7 %	75.6 %
9	13,015	4.0 %	79.6 %
10+	66,939	20.4 %	100 %
Total	327,741	100 %	100 %

Source: Own calculation based on data from Statistics Denmark.

As the map in figure 3 below shows there seem to be some geographical or regional differences in who are more predominant to become a widow(er). The map shown the annual mean of the share who become a widow(er) in each of the 98 municipalities in Denmark. While the annual share of new widow(er)s for most of the municipalities lies within 1.1 % to 1.3 %, some municipalities, mainly the ones located in the peripheral but also Copenhagen have an annual share that lies well above that of the others. A reason for this could be that these municipalizes might have a larger share of older citizen, which indeed partly seems to be the case as shown in appendix 1. Although this cannot serve as the full explanation, other causes could be geographically differences in socioeconomical conditions. Whatever the cause, this shows that we have to take geographical location into account when carrying out the analysis, as we otherwise would overlook a potential bias in our study, which could influence our results.

Figure 3: Map showing annual share of people becoming widow(er)s



Source: Own calculation based on data from Statistics Denmark.

Finally, we want to compare the two groups composed of couples where one of the partners doesn't die and couples where one of them die so we can uncover differences between the two groups that could otherwise bias our results in the form of unobserved heterogeneity if not accounted for.

In table 3 below, we show key characteristics for the two groups in which we have divided the couples where one partner dies into a pre-death and post-death group, taking their characteristics two years prior and to year after the death of the partner. This means that we in the table distinguish between couples, where both partners survive (control group), couples where one partner dies in the future (pre-treatment group) and couples where one of the partners have died (post-treatment group).

The table shows that there is significant differences between the two (three) groups, when it comes to several key characteristics, both socioeconomic and residential, which means that we will have to control for these characteristics in our analysis in order to avoid bias in the unobserved heterogeneity between the groups.

One of the key differences we also observe between the groups is the share that live in the same municipally or zip code as adult children are much larger for the groups that experience that a partner dies, where little over one third live in the same zip code or municipally as their adult children, compared to the couples that doesn't experience a partner death, where only about one eight live in the same zip code or municipally as their adult children. This could insinuate that people who lose, or are about to lose, a partner chooses to locate closer to other primary family members compared to people who are not about to lose a partner. We will therefore explore this further in the analysis to see whether the insinuation that people who lose a partner move closer to other primary family members holds true or not.

Table 3: Differences between groups

	Couples		**Widows**		
Men	0.458	(0.498)	0.458	(0.498)	
Women	0.542	(0.498)	0.542	(0.498)	
Age	61,418	(10750)	61,418	(10750)	
Danish or Western immigrant	0.97	(0.171)	0.978	(0.147)	***
Non-western immigrant	0.03	(0.171)	0.022	(0.147)	***
No education information	0.239	(0.427)	0.207	(0.405)	***
Preschool or High School	0.356	(0.479)	0.419	(0.493)	***
Vocational education	0.267	(0.443)	0.262	(0.440)	***
Higher education	0.138	(0.344)	0.112	(0.316)	***
In occupation	0.401	(0.490)	0.39	(0.488)	***
Student	0.002	(0.046)	0.002	(0.042)	
Unemployed	0.123	(0.328)	0.12	(0.325)	
Retired	0.474	(0.499)	0.488	(0.500)	***
Gross Income (2014)	210,918	(212156)	205,624	(205325)	***
No children	0.469	(0.499)	0.489	(0.500)	***

No children living at home	0.352	(0.478)	0.331	(0.471)	***
Children living at home	0.179	(0.383)	0.179	(0.384)	
Urban municipally	0.437	(0.496)	0.418	(0.493)	***
Intermediary municipally	0.154	(0.361)	0.16	(0.367)	***
Rural municipally	0.301	(0.459)	0.31	(0.462)	***
Peripheral municipally	0.107	(0.310)	0.112	(0.315)	**
No housing information	0.05	(0.218)	0.038	(0.192)	***
Public housing	0.152	(0.359)	0.185	(0.388)	***
Private rent	0.131	(0.338)	0.155	(0.362)	***
Private	0.665	(0.472)	0.616	(0.486)	***
Cooperative	0.002	(0.040)	0.003	(0.050)	***
insittution	0.001	(0.026)	0.003	(0.053)	***
Residence size	125,319	(66549)	120,698	(127090)	***
Children municipally	0.358	(0.479)	0.36	(0.480)	
Observations	79,893		79,893		

Source: Own calculation based on data from Statistics Denmark. Notes: standard errors are in parentheses; ****, ***, **, * indicate that estimates are significantly different from zero at the 0,1 %, 1 %, 5 % and 10 % levels, respectively.

When comparing the groups its evident that there are some big differences between the couples who, at some point within the timeframe, loses a partner and the couples where both partners still live when we stop observing them. This is even the case before the widow(er)s to be loses their partner. This of course also means that there can be other factors, besides the shock of losing a spouse, which might affect their subsequent residential choice and mobility. We therefore need to keep this in mind when conducting our analysis and choosing our design so that we are certain what effect it is that we are monitoring, e.g. by trying to use some type of matching between the couples in our sample.

3. Methodology and empirical approach

As the aim is to uncover how the death of a partner affects ones' subsequent moving probability, we want to utilize an empirical approach which can take all the relevant factors into consideration. Residential mobility literature has shown that one of the most important predictors for whether a household moves or not, is the time they have already lived in that residence. This means that the longer a household has lived in a residence, the lower the possibility is for them to move, or in other words, the duration stayed in the residence play is an important factor to account for. Furthermore, we expect, in line with the results from Bonnet et al (2010) that the time that have passed after a spouse has died plays an important role in the widow(er)s probability to move, in where the longer the duration since the spouses death the less the probability to move is.

With these factors in mind, we choose to utilize a duration model approach in our analysis since this approach allow us to account for both the residential duration time and the duration time that has passed since the spouse's death together with other relevant factors.

We can do this since our detailed administrative data not only allow us to identify whose partner died, and the time of their death, but also their residence at the time, including time lived in said residence and possible vacating for both the future widow(er)s and all other households. The hazard function of the duration model is characterized by:

$$h(t) = \lim_{dt \to 0} \frac{\Pr\{t \leq T < t + dt | T \geq t\}}{dt} \qquad (X.1)$$

Where $\Pr\{t \leq T < t + dt | T \geq t\}$ indicates the joint probability for the event T to happen within an infinite small time interval ($t + dt$, when dt goes towards zero), given that the event haven't happened yet but lies within the total time of the spell (Berg 2001). As we include 2 separate durations, time lived in residence and time since spouses death, were the latter only affect some households, we utilize a framework developed by Abbring and Van den Berg called 'timing of events' (2003), in where a bivariate duration model is put to use. The framework operates, as the name suggests, with two simultaneous hazard rates, one for the likelihood that a partner dies, and one for the likelihood to move.

Since our time indicating parameter, duration stayed in residence, in nature is continues, but in the data, is observed discrete as it's measured primo each year, we model the hazard of moving using a complementary log-log form. The discrete complementary log-log hazard (*h*) for moving in time period *t* has the following form:

$$h(a_j, X) = 1 - \exp\left[-exp\left(B'X + \gamma_j\right)\right] \qquad (X.2)$$

Where j is the time varying indicator for the variables a, given the relevant variables X.

In the empirical model used in this paper equation $X.2$ is ridden as:

$$h(t_{ist}; A_{ist}, X_{ist}, u_l) = 1 - \exp[-\exp(\gamma' t_{ist} + c'_{ist} + \theta' A_{ist} + \beta' X_{ist} + u_l)] \qquad (X.3)$$

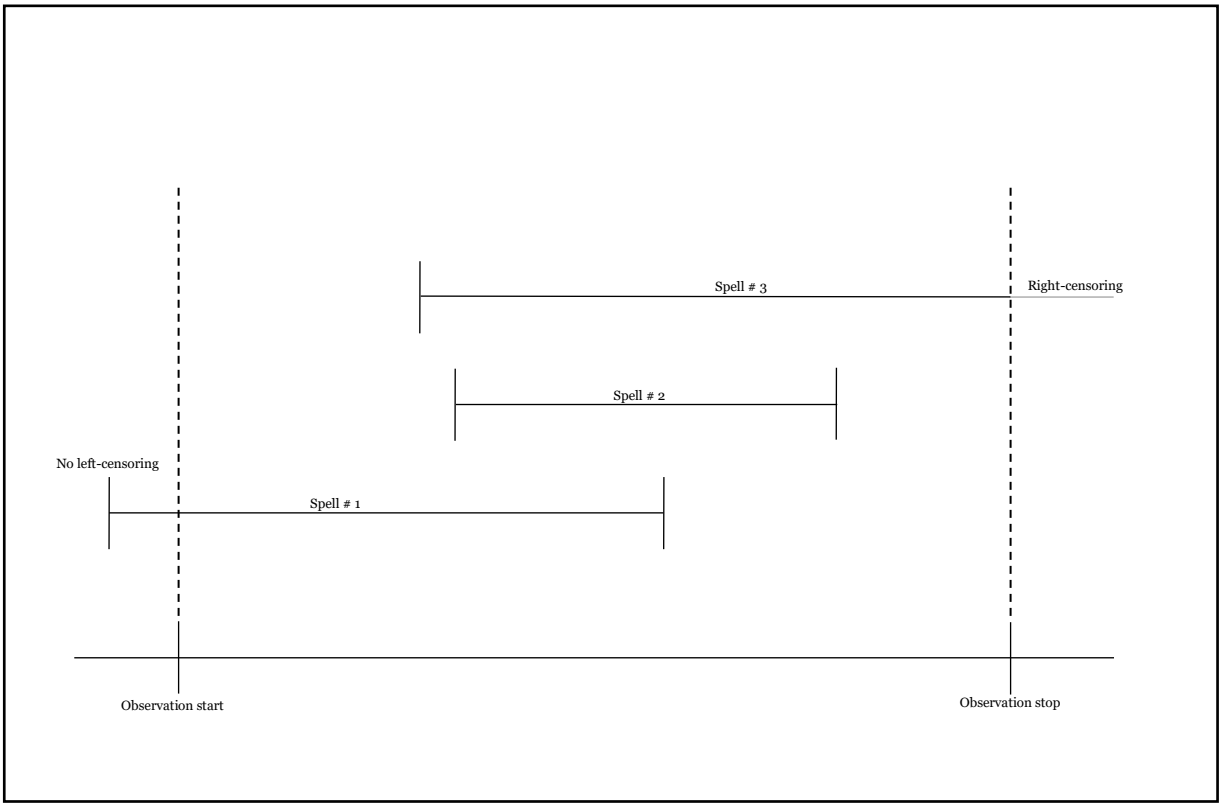
Where t_{ist} is a vector of indicator variables representing the spell duration at time t for individual i in spell s. γ' is a vector of parameters capturing the duration effect on the hazard, and c' is the corresponding spell constant vector for the parameters. A is a vector of indicator variables (where θ is a vector of our parameter of interest), and $\beta' X_{ist}$ is a scalar of both individual and residential specific parameters and relevant exogenous variables, including year of moving in, zip code and a interaction between the two. u_l is one of $l = 1, \dots, L$ time-constant error terms. In addition, all estimations will be clustered on municipality level to take into account for a uneven distributions on durations across municipalities.

The unit of observation in our duration analysis is the duration each individual has lived in their current residence. What we observe is thus durations and not households or individuals, and what we observe in the model is how these durations are correlated with the death of a spouse.

Given the richfullness character of our data we know what exact year people first moved into their residence even though it happened before we start observing them, and we thus know for how long they have stayed in their current residence when we first observe them in 2008. Therefore, we don't encounter any problems regarding left-censored data, and observation from 2008 is therefore left in the sample. Right-censoring, since many people still live in a residence in the greater Copenhagen area and thus haven't moved before the window of observation closes in 2016. Figure 4 below illustrates how left-, and right-censoring is handled in the paper.

While left-censoring could pose a problem for our analysis, right-censoring is to be expected in an analysis on moving behaviour and doesn't po se any significant problems for the weight of our empirical results. As long as some people does move within the interval of observation – which they do.

Figure 4: Illustration on how left-, and right-censoring is handled in the sample



4. Results

In this section we will show the results from the empirical model utilizing a duration model approach where we account for both the residential duration time and the duration time that has passed since the spouse's death together with other relevant factors. Table 4 shows that the risk of moving among adults is correlated with a lot of individual socioeconomic characteristics. Thereby, the probability moving increases when being younger, studying, having no children at home etc. Whereas for widowers the likelihood of moving is relatively high after the first following years. Figure 5 illustrates the parameter estimates for widows and widowers with confidence intervals. The figurer shows that widowers have a higher likelihood of moving than widows, and that they also have an increased likelihood to move for longer than the widows.

In the first years after a partner's death widowers are approximately double as likely to move than they non-widower counterparts and only 8 years after the partners death are their likelihood to move similar again. Widows likelihood to move just after the death of their partner goes up by about 50 % compared to their non-widow counterparts and have a significantly higher moving rate up to 5 years after experiencing a partner's death before being equal to non-widows.

Figure 5: Likelihood to move after partner dead w. 95 confidence intervals

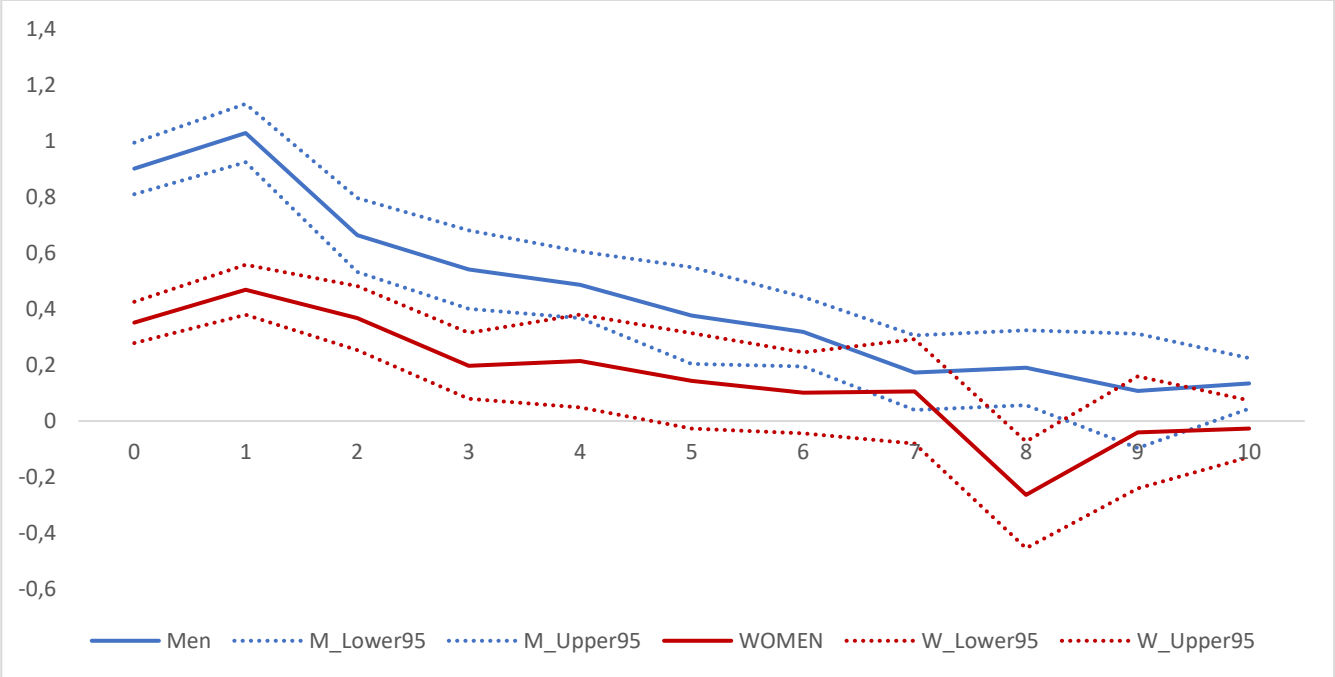


Table 4: Likelihood to move Duration after death or chock

	all	women	Men
Men	-0.046***		
	(0.015)		
Age	-0.060***	-0.048***	-0.064***
	(0.004)	(0.006)	(0.005)
Age squared	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)
Preschool or High School	-0.045***	-0.076***	-0.028
	(0.018)	(0.020)	(0.025)
Vocational education	-0.192***	-0.217***	-0.173***
	(0.021)	(0.026)	(0.025)
Higher education	-0.255***	-0.247***	-0.267***
	(0.023)	(0.024)	(0.032)
Student	0.215***	0.364***	0.161*
	(0.075)	(0.138)	(0.088)
Unemployed	0.213***	0.266***	0.205***
	(0.018)	(0.024)	(0.021)
Retired	0.130***	0.072***	0.176***
	(0.014)	(0.021)	(0.018)
No at home children	0.135***	0.151***	0.134***
	(0.013)	(0.018)	(0.017)
At home children	0.203***	0.235***	0.188***
	(0.017)	(0.024)	(0.019)
Gross Income (2014)	-0.000***	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)
No housing information	0.159***	0.198***	0.125***
	(0.030)	(0.031)	(0.040)
Private rent	0.260***	0.211***	0.292***
	(0.047)	(0.046)	(0.050)
Private	-0.135***	-0.255***	-0.033
	(0.020)	(0.025)	(0.024)
Cooperative	0.994***	0.962***	1.024***
	(0.182)	(0.219)	(0.172)
insittution	-0.954***	-0.860***	-0.994***
	(0.196)	(0.210)	(0.267)
2 rooms	-0.719***	-0.589***	-0.795***
	(0.069)	(0.098)	(0.077)
3 rooms	-0.777***	-0.607***	-0.889***
	(0.073)	(0.098)	(0.079)
4 rooms	-0.720***	-0.542***	-0.841***
	(0.074)	(0.096)	(0.084)
5 rooms	-0.694***	-0.544***	-0.797***
	(0.077)	(0.102)	(0.086)
6 rooms	-0.592***	-0.447***	-0.692***
	(0.076)	(0.099)	(0.087)
Log Residence size	0.219***	0.175***	0.253***
	(0.028)	(0.031)	(0.034)
Intermediary municipally	0.121***	0.096***	0.137***
	(0.034)	(0.030)	(0.038)

Table 4: continued

Rural municipally	0.100***	0.077***	0.112***
	(0.027)	(0.025)	(0.031)
Peripheral municipally	0.092***	0.103***	0.077**
	(0.029)	(0.028)	(0.035)
1 year from artificial schock	-0.046**	-0.013	-0.075***
	(0.020)	(0.033)	(0.027)
2 year from artificial schock	-0.091***	-0.047	-0.128***
	(0.018)	(0.031)	(0.028)
3 year from artificial schock	-0.033*	0.048	-0.105***
	(0.019)	(0.035)	(0.029)
4 year from artificial schock	-0.057**	0.002	-0.104***
	(0.024)	(0.038)	(0.034)
5 year from artificial schock	-0.065**	-0.022	-0.095***
	(0.028)	(0.043)	(0.035)
6 year from artificial schock	-0.124***	-0.115***	-0.124***
	(0.030)	(0.040)	(0.042)
7 year from artificial schock	-0.099***	-0.030	-0.149***
	(0.030)	(0.042)	(0.035)
8 year from artificial schock	-0.132***	-0.172***	-0.089**
	(0.030)	(0.048)	(0.044)
9 year from artificial schock	-0.111***	-0.027	-0.167***
	(0.032)	(0.046)	(0.041)
10 year from artificial schock	-0.141***	-0.121***	-0.133***
	(0.025)	(0.031)	(0.032)
1 year from partner death	0.787***	0.483***	1.020***
	(0.042)	(0.028)	(0.059)
2 year from partner death	0.547***	0.400***	0.675***
	(0.048)	(0.041)	(0.063)
3 year from partner death	0.309***	0.181***	0.428***
	(0.051)	(0.054)	(0.063)
4 year from partner death	0.264***	0.167***	0.352***
	(0.045)	(0.053)	(0.057)
5 year from partner death	0.158***	-0.017	0.293***
	(0.047)	(0.056)	(0.062)
6 year from partner death	0.150***	0.181***	0.141**
	(0.052)	(0.056)	(0.066)
7 year from partner death	0.092**	0.037	0.156***
	(0.046)	(0.061)	(0.060)
8 year from partner death	0.065	0.114	0.044
	(0.048)	(0.072)	(0.062)
9 year from partner death	0.081*	-0.099	0.216***
	(0.046)	(0.071)	(0.062)
10 year from partner death	0.006	-0.082**	0.068**
	(0.024)	(0.036)	(0.028)
FE residential duration	X	X	X
Constant	1.292	-1.541	-0.340
	(0.902)	(1.030)	(0.750)
Observations	1,197,497	505,291	692,137

Source: Own calculation based on data from Statistics Denmark. Notes: standard errors are in parentheses; ***, **, * indicate that estimates are significantly different from zero at the 0,1 %, 1 %, and 5 % levels, respectively

One of the hypotheses behind widows moving is that they move to cities, where their kids live. Table 5 shows the results of a multinomial risk model, where the outcome is moving combined with the municipality information about where the adult kids live, and the reference category is to move to municipality where no adult children live. Table 5 shows that there overall seems to be a higher likelihood for widows to move to a municipality with adult children compared to non-widows. However, when looking on widows and widowers, respectively, we see that this is only the case for widowers and not widows.

Table 5: Likelihood to move to other or same municipally as children by All, Women and Men

	Not move	Move to children	Not move	Move to children	Not move	Move to children
	all	all	women	women	men	men
Widow(er) group	-0.501***	0.089**	-0.359***	-0.043	-0.615***	0.140***
	(0.031)	(0.042)	(0.033)	(0.074)	(0.040)	(0.048)
1 year from artificial schock	-0.147***	-0.009	-0.139***	-0.055	-0.155***	0.019
	(0.027)	(0.039)	(0.048)	(0.068)	(0.036)	(0.049)
2 year from artificial schock	-0.040	-0.255***	-0.099*	-0.236***	0.003	-0.249***
	(0.031)	(0.057)	(0.051)	(0.083)	(0.039)	(0.071)
3 year from artificial schock	0.054*	-0.240***	-0.101*	-0.204**	0.179***	-0.227***
	(0.031)	(0.053)	(0.055)	(0.080)	(0.045)	(0.073)
4 year from artificial schock	0.108***	-0.263***	-0.041	-0.299***	0.227***	-0.203***
	(0.031)	(0.049)	(0.054)	(0.087)	(0.049)	(0.068)
5 year from artificial schock	0.187***	-0.251***	0.090	-0.289***	0.264***	-0.199***
	(0.037)	(0.060)	(0.063)	(0.098)	(0.050)	(0.075)
6 year from artificial schock	0.236***	-0.227***	0.018	-0.338***	0.415***	-0.100
	(0.043)	(0.071)	(0.071)	(0.095)	(0.061)	(0.094)
7 year from artificial schock	0.319***	-0.106	0.192***	0.067	0.421***	-0.190**
	(0.049)	(0.066)	(0.071)	(0.094)	(0.065)	(0.086)
8 year from artificial schock	0.330***	-0.132**	0.184**	-0.095	0.446***	-0.110
	(0.050)	(0.065)	(0.077)	(0.096)	(0.070)	(0.095)
9 year from artificial schock	0.264***	-0.204**	0.120	-0.146	0.379***	-0.192*
	(0.058)	(0.087)	(0.082)	(0.119)	(0.076)	(0.108)
10 year from artificial schock	0.381***	-0.120***	0.289***	-0.020	0.465***	-0.120*
	(0.035)	(0.047)	(0.051)	(0.070)	(0.051)	(0.062)
Men	0.124***	0.156***				
	(0.016)	(0.025)				
Age	0.127***	0.101***	0.100***	0.139***	0.161***	0.131***
	(0.009)	(0.018)	(0.013)	(0.025)	(0.014)	(0.026)
Age squared	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 5: continued

Preschool or High School	0.187***	0.185***	0.229***	0.155**	0.144***	0.234***
	(0.036)	(0.053)	(0.041)	(0.072)	(0.047)	(0.084)
Vocational education	0.314***	0.144**	0.346***	0.144*	0.278***	0.172*
	(0.036)	(0.056)	(0.042)	(0.075)	(0.049)	(0.091)
Higher education	0.383***	0.078	0.358***	0.038	0.395***	0.147
	(0.037)	(0.068)	(0.043)	(0.093)	(0.053)	(0.101)
Student	-0.405**	-0.173	-0.446	0.358	-0.381**	-0.327
	(0.160)	(0.301)	(0.325)	(0.533)	(0.186)	(0.330)
Unemployed	-0.262***	0.028	-0.375***	-0.138	-0.222***	0.109*
	(0.030)	(0.048)	(0.051)	(0.085)	(0.039)	(0.064)
Adult children in same municipally	2.115***	3.693***	2.191***	3.898***	2.051***	3.531***
	(0.129)	(0.154)	(0.144)	(0.170)	(0.126)	(0.151)
Adult children in same municipally * Widow group	-0.100	-0.151	-0.528***	-0.498***	0.240***	0.171*
	(0.087)	(0.099)	(0.146)	(0.149)	(0.068)	(0.090)
Gross Income (2014)	0.000**	-0.000	0.000**	-0.000	0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Owner type	X	X	X	X	X	X
	(0.180)	(0.204)	(0.231)	(0.342)	(0.235)	(0.272)
3 rooms	0.994***	-0.101	0.629***	0.108	1.265***	-0.121
	(0.178)	(0.187)	(0.232)	(0.330)	(0.230)	(0.253)
4 rooms	0.903***	-0.104	0.565**	0.142	1.152***	-0.154
	(0.182)	(0.184)	(0.231)	(0.323)	(0.241)	(0.253)
5 rooms	0.850***	-0.130	0.539**	0.142	1.079***	-0.201
	(0.187)	(0.190)	(0.237)	(0.330)	(0.244)	(0.256)
6 rooms	0.751***	-0.168	0.418*	0.044	0.995***	-0.202
	(0.187)	(0.190)	(0.248)	(0.352)	(0.243)	(0.253)
Log Residence size	-0.318***	0.085	-0.254***	0.112	-0.367***	0.064
	(0.047)	(0.060)	(0.066)	(0.101)	(0.048)	(0.063)
Intermediary municipally	-0.099**	0.033	-0.100**	-0.008	-0.097**	0.051
	(0.040)	(0.050)	(0.044)	(0.056)	(0.041)	(0.056)
Rural municipally	-0.023	0.098**	-0.006	0.102*	-0.035	0.086
	(0.028)	(0.045)	(0.037)	(0.055)	(0.030)	(0.053)
Peripheral municipally	-0.007	0.138***	0.001	0.201***	-0.007	0.090
	(0.038)	(0.051)	(0.045)	(0.060)	(0.044)	(0.061)
FE residential duration	X	X	X	X	X	X
Constant	-1.060***	-5.588***	-0.323	-7.479***	-1.755***	-5.977***
	(0.366)	(0.593)	(0.541)	(0.906)	(0.441)	(0.765)
Observations	524,188	524,188	213,611	213,611	310,577	310,577

Source: Own calculation based on data from Statistics Denmark. Notes: standard errors are in parentheses; ***, **, * indicate that estimates are significantly different from zero at the 0,1 %, 1 % and 5 % levels, respectively.

Another hypothesis is that widows will downside their residence when the relocate after the death of their spouse. Table 6 below show the results from a multinomial risk model for moving to a new residence that is large, same size or smaller than the residence they came from. The results clearly show that there is a larger likelihood to move to a smaller residence, or downsizing, compared to non-widows. Likewise, appendix 2 show that the likelihood to downsize is also significantly larger than not downsizing when moving. Furthermore, an OLS regression on the difference in square meters before and after moving, as presented in appendix 3, show that widows in general downsize by about 10 square meters compared to non-widows when moving. This is the case for both widows and widowers, where widows downsize by about 7.5 square meters and widowers by about 11.5 square meters.

Table 6: Likelihood to move to residence that are larger or smaller than the current residence

	Larger residence	Same size residence	Smaller residence
Widow(er) group	0.094**	-0.281***	0.716***
	(0.047)	(0.076)	(0.024)
1 year from artificial schock	0.161***	-0.180	0.162***
	(0.049)	(0.125)	(0.028)
2 year from artificial schock	0.129***	-0.192	-0.117***
	(0.044)	(0.153)	(0.029)
3 year from artificial schock	0.102**	-0.129	-0.235***
	(0.051)	(0.147)	(0.032)
4 year from artificial schock	0.000	-0.268*	-0.278***
	(0.060)	(0.141)	(0.033)
5 year from artificial schock	-0.121	-0.050	-0.337***
	(0.078)	(0.150)	(0.037)
6 year from artificial schock	-0.158**	-0.240	-0.375***
	(0.073)	(0.162)	(0.045)
7 year from artificial schock	-0.117	-0.527**	-0.430***
	(0.076)	(0.209)	(0.044)
8 year from artificial schock	-0.215***	-0.566**	-0.416***
	(0.079)	(0.238)	(0.044)
9 year from artificial schock	-0.140	-0.207	-0.418***
	(0.087)	(0.185)	(0.040)
10 year from artificial schock	-0.273***	-0.367**	-0.471***
	(0.057)	(0.155)	(0.027)
Men	-0.230***	-0.375***	-0.001
	(0.029)	(0.071)	(0.018)
Age	-0.043***	0.009	-0.103***
	(0.017)	(0.050)	(0.011)
Age squared	0.000	-0.000	0.001***
	(0.000)	(0.000)	(0.000)
Preschool or High School	-0.312***	-0.487***	0.025
	(0.067)	(0.117)	(0.037)

Table 6. continued

Vocational education	-0.422***	-0.854***	-0.128***
	(0.062)	(0.138)	(0.036)
Higher education	-0.327***	-0.802***	-0.274***
	(0.068)	(0.176)	(0.040)
Student	0.130	0.294	0.235
	(0.290)	(0.747)	(0.171)
Unemployed	0.050	-0.029	0.307***
	(0.039)	(0.129)	(0.031)
Retired	-0.194***	0.083	0.188***
	(0.046)	(0.120)	(0.027)
No at home children	-0.059	-0.283**	0.164***
	(0.040)	(0.115)	(0.024)
Gross Income (2014)	0.000***	-0.001***	-0.000***
	(0.000)	(0.000)	(0.000)
No housing information	0.407***	0.369*	0.035
	(0.071)	(0.202)	(0.071)
Private rent	0.456***	-0.318**	0.239***
	(0.060)	(0.131)	(0.060)
Private	0.193***	-0.897***	-0.268***
	(0.055)	(0.116)	(0.038)
Cooperative	0.907***	0.606	0.142
	(0.328)	(0.601)	(0.211)
institution	-16.336***	-16.664***	-0.594
	(0.535)	(0.419)	(0.850)
2 rooms	1.079***	-0.513	-0.418**
	(0.362)	(0.548)	(0.206)
3 rooms	1.078***	-0.775	-0.185
	(0.371)	(0.564)	(0.202)
4 rooms	1.020***	-1.096*	0.027
	(0.377)	(0.572)	(0.206)
5 rooms	1.091***	-1.198**	0.027
	(0.372)	(0.594)	(0.210)
6 rooms	1.118***	-1.207**	0.023
	(0.377)	(0.606)	(0.209)
Log Residence size	-2.199***	0.020	1.144***
	(0.090)	(0.234)	(0.043)
Intermediary municipally	0.213***	-0.029	0.064**
	(0.074)	(0.137)	(0.031)
Rural municipally	0.231***	0.220*	-0.005
	(0.052)	(0.125)	(0.027)
Peripheral municipally	0.313***	-0.027	-0.013
	(0.067)	(0.166)	(0.039)
FE residential duration	X	X	X
Constant	7.559***	-3.030	-5.227***
	(0.771)	(1.872)	(0.463)
Observations	517,760	517,760	517,760

Source: Own calculation based on data from Statistics Denmark. Notes: standard errors are in parentheses; ***, **, * indicate that estimates are significantly different from zero at the 0,1 %, 1 % and 5 % levels, respectively.

Lastly, a hypothesis regarding widows, moving and downsizing would be that the local housing market plays a role in the likelihood to move and where to move to. Therefore, we in table 7 below have the results from a multinomial risk model for moving to a municipally with a smaller or higher share of small residences compared to the one the people in our sample come from. We then compare whether this share is smaller or larger in the municipality they move to compared to the one they come from. We find that widows do have a significant larger likelihood to move to a municipality with a larger share of smaller residences compared to their non-widow counterparts. In appendix 4 we show that they also have a significant higher likelihood to move to a municipality with more smaller residences compared to moving within the same municipality, while the likelihood of moving to a municipality with fewer smaller residences is insignificant.

Table 7: Likelihood to move to a municipally with more or fewer smaller residences.

	Move within same municipality	Municipality w. more smaller residences	Municipality w. fewer smaller residences
Widow(er) group	0.512***	0.696***	0.544***
	(0.023)	(0.041)	(0.064)
1 year from artificial schock	0.109***	0.232***	0.223***
	(0.029)	(0.062)	(0.049)
2 year from artificial schock	-0.134***	-0.034	0.103**
	(0.028)	(0.067)	(0.050)
3 year from artificial schock	-0.216***	-0.171**	0.036
	(0.031)	(0.075)	(0.059)
4 year from artificial schock	-0.296***	-0.255***	0.043
	(0.032)	(0.088)	(0.049)
5 year from artificial schock	-0.366***	-0.278***	-0.069
	(0.037)	(0.088)	(0.064)
6 year from artificial schock	-0.397***	-0.266***	-0.167**
	(0.043)	(0.097)	(0.066)
7 year from artificial schock	-0.431***	-0.392***	-0.140
	(0.043)	(0.103)	(0.092)
8 year from artificial schock	-0.470***	-0.307***	-0.145*
	(0.042)	(0.109)	(0.075)
9 year from artificial schock	-0.374***	-0.634***	-0.209**
	(0.047)	(0.138)	(0.085)
10 year from artificial schock	-0.491***	-0.584***	-0.211***
	(0.024)	(0.090)	(0.052)
Men	-0.040**	-0.068*	-0.136***
	(0.018)	(0.038)	(0.031)
Age	-0.124***	-0.051*	-0.012
	(0.010)	(0.026)	(0.019)
Age squared	0.001***	0.000	-0.000
	(0.000)	(0.000)	(0.000)
Preschool or High School	-0.106***	-0.169	-0.125*
	(0.037)	(0.112)	(0.068)

Table 7: continued

Vocational education	-0.324***	-0.104	-0.091
	(0.037)	(0.114)	(0.064)
Higher education	-0.517***	0.069	-0.063
	(0.043)	(0.120)	(0.076)
Student	0.171	0.684**	0.473*
	(0.186)	(0.296)	(0.262)
Unemployed	0.249***	0.270***	0.317***
	(0.032)	(0.058)	(0.053)
Retired	0.125***	0.143***	0.214***
	(0.029)	(0.055)	(0.050)
No at home children	0.022	0.280***	0.314***
	(0.025)	(0.063)	(0.048)
Gross Income (2014)	-0.000***	0.000	-0.000
	(0.000)	(0.000)	(0.000)
No housing information	0.094	0.325*	0.339***
	(0.059)	(0.169)	(0.107)
Private rent	0.210***	0.566***	0.410***
	(0.056)	(0.135)	(0.062)
Private	-0.307***	0.705***	-0.127*
	(0.032)	(0.111)	(0.076)
Cooperative	0.450**	0.818**	0.528
	(0.217)	(0.374)	(0.361)
institution	-0.376	-13.758***	-0.035
	(0.517)	(0.457)	(1.074)
2 rooms	-0.977***	0.435	-1.093***
	(0.131)	(0.459)	(0.369)
3 rooms	-1.115***	0.770*	-1.381***
	(0.139)	(0.446)	(0.353)
4 rooms	-1.020***	1.127**	-1.480***
	(0.139)	(0.456)	(0.340)
5 rooms	-0.956***	0.991**	-1.367***
	(0.144)	(0.458)	(0.342)
6 rooms	-0.868***	0.228	-1.204***
	(0.143)	(0.481)	(0.332)
Log Residence size	0.358***	-1.197***	1.183***
	(0.051)	(0.128)	(0.116)
Intermediary municipally	0.282***	0.009	-0.357***
	(0.069)	(0.250)	(0.096)
Rural municipally	0.290***	0.026	-0.693***
	(0.055)	(0.219)	(0.079)
Peripheral municipally	0.329***	-0.035	-0.857***
	(0.060)	(0.220)	(0.131)
FE residential duration	X	X	X
Constant	0.462	0.888	-7.423***
	(0.370)	(1.007)	(0.804)
Observations	519,519	519,519	519,519

Source: Own calculation based on data from Statistics Denmark. Notes: standard errors are in parentheses; ***, **, * indicate that estimates are significantly different from zero at the 0,1 %, 1 % and 5 % levels, respectively.

One possible explanation for why widows seem to downsize could be that they choose to move to a nursing home where the individual residences natural is smaller than full homes. In table 8 below we show the results from a multinomial risk model on the likelihood to move to a nursing home or to normal residence by our own in where moving to a nursing home is the reference category. Table 8 shows that when looking at widows and widowers together they are significant more likely to move to a normal residence by themselves than movingto a nursing home (reference), and less likely not to move at all compared to non-widows. When differentiating on widows and widowers, the table however shows that there is no significant difference in the likelihood to move to a normal residence or to a nursing home for widows but that widowers are significant more likely to move to a normal residence.

Table 8: Likelihood to move to nursing home by All, Women & Men – Nursing home is reference

	Not move all	Move alone all	Not move women	Move alone women	Not move men	Move alone men
Widow(er) group	-0.214***	0.321***	-0.398***	-0.021	0.076	0.730***
	(0.072)	(0.074)	(0.108)	(0.105)	(0.147)	(0.162)
1 year from artificial schock	0.492***	0.643***	0.398**	0.527***	0.473*	0.641**
	(0.153)	(0.156)	(0.198)	(0.200)	(0.261)	(0.261)
2 year from artificial schock	0.704***	0.637***	0.652***	0.670***	0.545*	0.425
	(0.162)	(0.166)	(0.214)	(0.214)	(0.321)	(0.326)
3 year from artificial schock	0.529***	0.370*	0.256	0.278	0.745***	0.457
	(0.189)	(0.194)	(0.247)	(0.252)	(0.275)	(0.279)
4 year from artificial schock	0.510***	0.284*	0.420*	0.345	0.379	0.047
	(0.162)	(0.164)	(0.218)	(0.212)	(0.298)	(0.302)
5 year from artificial schock	0.475**	0.170	0.343	0.131	0.437	0.067
	(0.208)	(0.209)	(0.266)	(0.256)	(0.296)	(0.308)
6 year from artificial schock	0.408*	0.060	0.376	0.218	0.286	-0.196
	(0.217)	(0.220)	(0.283)	(0.285)	(0.335)	(0.337)
7 year from artificial schock	0.664***	0.295	0.446	0.297	0.792**	0.265
	(0.246)	(0.245)	(0.293)	(0.287)	(0.391)	(0.393)
8 year from artificial schock	0.465**	0.063	0.275	0.049	0.587*	0.063
	(0.229)	(0.234)	(0.305)	(0.306)	(0.354)	(0.360)
9 year from artificial schock	0.582**	0.213	0.647*	0.476	0.530	0.024
	(0.262)	(0.256)	(0.367)	(0.361)	(0.329)	(0.333)
10 year from artificial schock	0.874***	0.425***	1.060***	0.790***	1.012***	0.444
	(0.161)	(0.162)	(0.209)	(0.212)	(0.323)	(0.329)
Men	0.214**	0.177*				
	(0.093)	(0.092)				
Age	0.224***	0.049	-0.072	-0.152*	0.674***	0.475***
	(0.056)	(0.057)	(0.087)	(0.087)	(0.059)	(0.055)
Age squared	-0.002***	-0.001	0.000	0.001	-0.005***	-0.004***
	(0.000)	(0.000)	(0.001)	(0.001)	(0.000)	(0.000)
Preschool or High School	2.049***	2.027***	1.297***	1.187***	2.907***	2.977***
	(0.192)	(0.201)	(0.150)	(0.151)	(0.301)	(0.315)

Table 8: continued

Vocational education	2.217***	2.049***	1.433***	1.194***	3.277***	3.192***
	(0.237)	(0.237)	(0.215)	(0.211)	(0.378)	(0.379)
Higher education	1.981***	1.719***	1.035***	0.738***	3.446***	3.239***
	(0.221)	(0.231)	(0.193)	(0.200)	(0.521)	(0.534)
Student	1.091***	1.393***	1.401***	1.957***	1.416***	1.660***
	(0.227)	(0.240)	(0.332)	(0.352)	(0.311)	(0.325)
Unemployed	-0.664***	-0.384*	-1.394***	-1.088***	-0.249	0.042
	(0.201)	(0.198)	(0.291)	(0.287)	(0.276)	(0.278)
Retired	-0.942***	-0.809***	-1.091***	-1.061***	-0.895***	-0.696***
	(0.140)	(0.148)	(0.179)	(0.190)	(0.231)	(0.236)
No at home children	-0.020	0.143	0.013	0.189	-0.179	-0.038
	(0.155)	(0.157)	(0.219)	(0.224)	(0.247)	(0.251)
Gross Income (2014)	0.001***	0.001***	0.001***	0.001***	0.001	0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)
No housing information	0.358	0.551*	0.305	0.510*	0.295	0.466
	(0.295)	(0.318)	(0.288)	(0.308)	(0.515)	(0.534)
Private rent	0.112	0.418***	0.091	0.330**	0.077	0.422*
	(0.113)	(0.127)	(0.165)	(0.164)	(0.188)	(0.216)
Private	0.458***	0.315**	0.795***	0.513***	0.192	0.152
	(0.135)	(0.141)	(0.187)	(0.191)	(0.185)	(0.194)
Cooperative	-0.079	0.445	-0.689	-0.150	2.081***	2.575***
	(1.036)	(1.027)	(1.031)	(1.064)	(0.538)	(0.576)
institution	36.435	35.953***	87.825	86.977***	86.428***	86.457
	(0.000)	(0.347)	(0.000)	(0.535)	(0.460)	(0.000)
2 rooms	0.976***	-0.229	0.811	0.225	1.826***	0.350
	(0.343)	(0.374)	(0.582)	(0.590)	(0.423)	(0.441)
3 rooms	1.278***	-0.021	1.425**	0.819	1.814***	0.180
	(0.363)	(0.372)	(0.628)	(0.642)	(0.406)	(0.417)
4 rooms	1.147***	-0.060	1.392**	0.860	1.697***	0.166
	(0.381)	(0.402)	(0.631)	(0.651)	(0.449)	(0.467)
5 rooms	0.962**	-0.201	1.240*	0.732	1.589***	0.115
	(0.413)	(0.439)	(0.639)	(0.671)	(0.527)	(0.545)
6 rooms	1.130***	0.060	1.481**	1.054	1.879***	0.501
	(0.433)	(0.455)	(0.666)	(0.698)	(0.594)	(0.599)
Log Residence size	0.672***	1.025***	-0.342	-0.027	1.001***	1.385***
	(0.215)	(0.220)	(0.278)	(0.283)	(0.339)	(0.348)
Intermediary municipally	0.079	0.191	0.103	0.204	0.046	0.164
	(0.153)	(0.151)	(0.213)	(0.211)	(0.168)	(0.171)
Rural municipally	0.082	0.148	0.087	0.138	0.036	0.109
	(0.136)	(0.146)	(0.182)	(0.188)	(0.159)	(0.172)
Peripheral municipally	0.077	0.148	-0.066	0.025	0.265	0.313
	(0.250)	(0.265)	(0.271)	(0.295)	(0.276)	(0.286)
FE residential duration	X	X	X	X	X	X
Constant	-6.626***	-4.244**	8.101***	7.293**	-22.323***	-19.348***
	(2.054)	(2.025)	(3.008)	(2.949)	(2.174)	(2.003)
Observations	524,188	524,188	213,611	213,611	310,577	310,577

Source: Own calculation based on data from Statistics Denmark. Notes: standard errors are in parentheses; ***, **, * indicate that estimates are significantly different from zero at the 0,1 %, 1 % and 5 % levels, respectively.

1. Robustness test

One fear could be that widows and widowers moving to nursing homes could in some way also influence and drive the other results in the analysis. To check whether this should be the case we run the model represented in table 4 again, likelihood to move giving tine duration after partners death, but this time omitting moves to and from nursing homes from the sample. The results are shown in appendix 5 and shows that omitting nursing homes makes virtually no difference, leading us to believe that this also will be the case in the other models.

As an extra check we also try make a synthetic test of model 4 in where we move the chock date 10 years back for both the widow and non-widow groups and simulate the death of a spouse at that time instead. What we see, represented in appendix 6, is that the people who will experience a spouse's death are actually less likely to move in the synthetic test 10 years prior to the incident in contrast to being more likely to move as in table 4. This result is stable for both widows and widowers. If anything, this shows that the widow and widower group actually are less mobile than the non-widow group.
However, this could also be an indicator of some sort of anticipation of the death to come. This would remove some of the claimed effect the death of a spouse have on residential mobility and thus, more test is needed to make sure this is not the case.

2. Conclusion

In this paper we have focused on how individuals react when changing civil status from couples to widower, which is a natural consequence of an ageing population. In other words, we empirical investigate the changes in housing demand and intermigration due to a loss of a partner. Our results indicate that especially males who lose a partner has a higher risk of moving in near future, but that also female widows have a higher moving tendency, than their comparison group of couples.

Our project add to the literature by exploring the mobility for all widow(er)s, through the utilization of a broader and more detailed dataset that uncovers the differences between widows and widowers

as well as between sudden and more expected deaths. The data allow us to follow all couples over an extensive time and hereby observe residential mobility both before and after the death of a partner and compare them to couples where no partner dies. Furthermore, we can use the information in data to observe mortality shocks in the form of unexpected deaths, where there doesn't seem to be any prior warnings about the forthcoming event, as a more "clean" residential shock in where the widow(er) hasn't had time to prepare for their partners death. Additionally, the project contributes by showing how residential decisions by widow(er)s are impacted by the relationship between residential supply and demand in the local area by using detailed information about the housing stock within each municipally.

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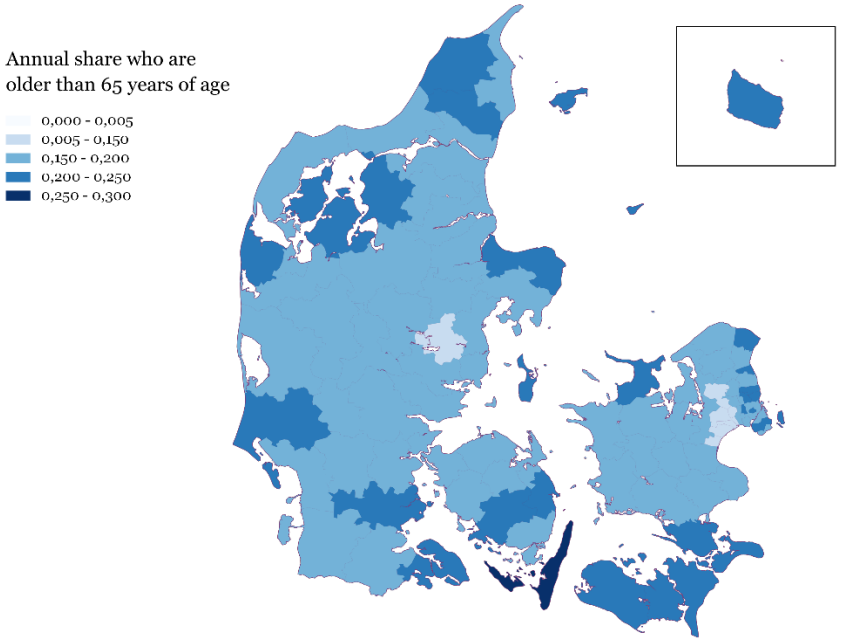
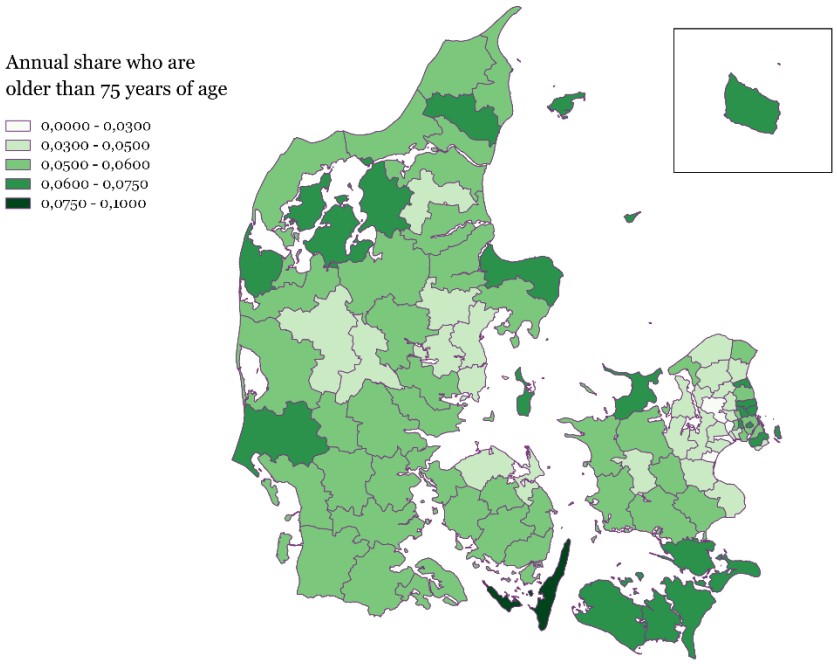
Appendix

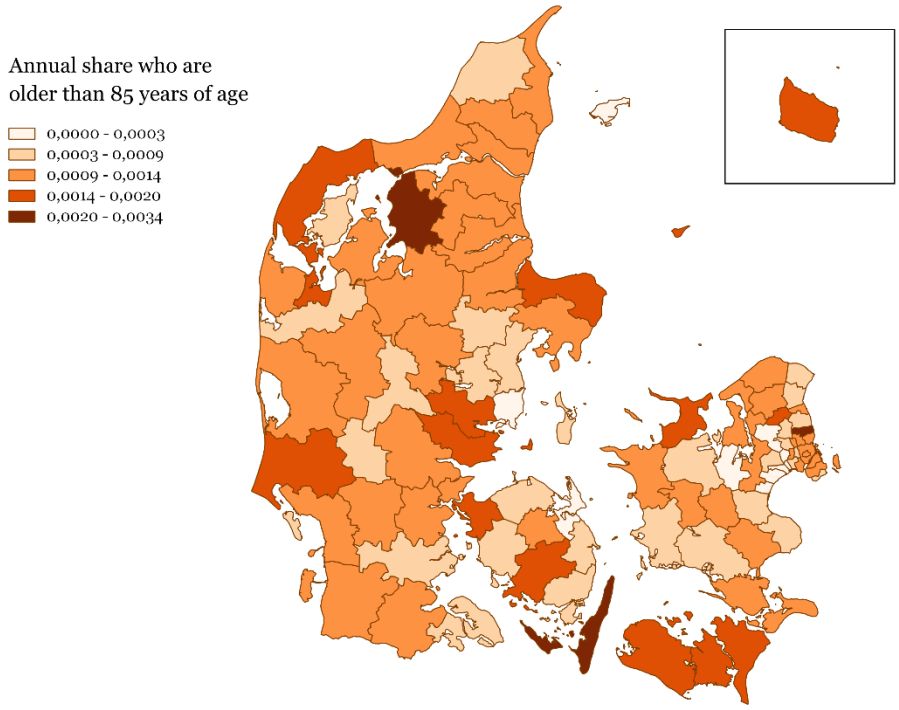
Appendix 1: Share of people over the age of 65, 75 and 85 respectively



Source: Own calculation based on data from Statistics Denmark.



Source: Own calculation based on data from Statistics Denmark.



Source: Own calculation based on data from Statistics Denmark.

Appendix 2: Likelihood for up or downsizing, with moving to larger residence as reference

Appendix 2: Likelihood of downsizing – Reference moving to larger residence

	No move	Move same size	Move smaller size
Widow(er) group	-0.094**	-0.375***	0.623***
	(0.047)	(0.086)	(0.039)
1 year from artificial schock	-0.161***	-0.341***	0.001
	(0.049)	(0.132)	(0.058)
2 year from artificial schock	-0.129***	-0.321**	-0.245***
	(0.044)	(0.163)	(0.051)
3 year from artificial schock	-0.102**	-0.231	-0.337***
	(0.051)	(0.158)	(0.068)
4 year from artificial schock	-0.000	-0.268*	-0.278***
	(0.060)	(0.157)	(0.067)
5 year from artificial schock	0.121	0.070	-0.217**
	(0.078)	(0.171)	(0.088)
6 year from artificial schock	0.158**	-0.082	-0.217**
	(0.073)	(0.180)	(0.085)
7 year from artificial schock	0.117	-0.410*	-0.313***
	(0.076)	(0.215)	(0.084)
8 year from artificial schock	0.215***	-0.351	-0.201**
	(0.079)	(0.238)	(0.088)
9 year from artificial schock	0.140	-0.067	-0.278***
	(0.087)	(0.198)	(0.095)
10 year from artificial schock	0.273***	-0.095	-0.198***
	(0.057)	(0.163)	(0.063)
Men	0.230***	-0.145**	0.229***
	(0.029)	(0.072)	(0.034)
Age	0.043***	0.053	-0.060***
	(0.017)	(0.053)	(0.021)
Age squared	-0.000	-0.000	0.001***
	(0.000)	(0.000)	(0.000)
Preschool or High School	0.312***	-0.175	0.337***
	(0.067)	(0.121)	(0.075)
Vocational education	0.422***	-0.432***	0.294***
	(0.062)	(0.143)	(0.069)
Higher education	0.327***	-0.475***	0.053
	(0.068)	(0.176)	(0.075)
Student	-0.130	0.165	0.105
	(0.290)	(0.691)	(0.377)
Unemployed	-0.050	-0.079	0.257***
	(0.039)	(0.132)	(0.050)
Retired	0.194***	0.277**	0.382***
	(0.046)	(0.117)	(0.050)
No at home children	0.059	-0.224*	0.222***
	(0.040)	(0.130)	(0.043)
Gross Income (2014)	-0.000***	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)
No housing information	-0.407***	-0.038	-0.372***
	(0.071)	(0.232)	(0.091)

Appendix 2: Continued

Private rent	-0.456***	-0.774***	-0.218***
	(0.060)	(0.151)	(0.052)
Private	-0.193***	-1.090***	-0.460***
	(0.055)	(0.122)	(0.061)
Cooperative	-0.907***	-0.301	-0.765**
	(0.328)	(0.621)	(0.335)
institution	16.336***	-0.329	15.742***
	(0.562)	(0.458)	(0.916)
2 rooms	-1.079***	-1.592***	-1.497***
	(0.362)	(0.580)	(0.405)
3 rooms	-1.078***	-1.853***	-1.263***
	(0.371)	(0.593)	(0.403)
4 rooms	-1.020***	-2.116***	-0.993**
	(0.377)	(0.614)	(0.408)
5 rooms	-1.091***	-2.289***	-1.064***
	(0.372)	(0.613)	(0.407)
6 rooms	-1.118***	-2.325***	-1.094***
	(0.377)	(0.639)	(0.417)
Log Residence size	2.199***	2.220***	3.343***
	(0.090)	(0.250)	(0.093)
Intermediary municipally	-0.213***	-0.242*	-0.149**
	(0.074)	(0.133)	(0.075)
Rural municipally	-0.231***	-0.012	-0.236***
	(0.052)	(0.119)	(0.058)
Peripheral municipally	-0.313***	-0.340**	-0.326***
	(0.067)	(0.166)	(0.070)
FE residential duration	X	X	X
Constant	-7.559***	-10.589***	-12.786***
	(0.771)	(2.043)	(0.890)
Observations	517,760	517,760	517,760

Source: Own calculation based on data from Statistics Denmark. Notes: standard errors are in parentheses; ***, **, * indicate that estimates are significantly different from zero at the 0,1 %, 1 % and 5 % levels, respectively.

Appendix 3: Difference in residence size after moving

Appendix 3: Difference in residence size after moving

	Size diff (all)	Size diff (Women)	Size diff (Men)
Widow(er) group	-9.873***	-7.460***	-11.469***
	(0.496)	(0.842)	(0.594)
1 year from artificial schock	1.004	1.983*	0.511
	(0.789)	(1.107)	(0.999)
2 year from artificial schock	4.394***	6.162***	3.229***
	(0.927)	(1.609)	(1.215)
3 year from artificial schock	5.360***	6.546***	4.648***
	(0.976)	(1.471)	(1.209)
4 year from artificial schock	5.511***	7.330***	4.358***
	(1.173)	(2.053)	(1.165)
5 year from artificial schock	3.712***	3.549*	3.785***
	(1.200)	(1.845)	(1.331)
6 year from artificial schock	3.384**	5.057***	2.195
	(1.319)	(1.871)	(1.582)
7 year from artificial schock	5.116***	5.191***	5.110***
	(1.138)	(1.761)	(1.679)
8 year from artificial schock	2.653**	3.983**	1.611
	(1.260)	(1.933)	(1.665)
9 year from artificial schock	3.654**	5.450**	2.341
	(1.527)	(2.586)	(1.782)
10 year from artificial schock	1.806**	3.506***	0.371
	(0.887)	(1.287)	(1.137)
Men	-2.021***		
	(0.590)		
Age	0.555*	0.398	0.391
	(0.303)	(0.449)	(0.444)
Age squared	-0.008***	-0.006*	-0.007*
	(0.002)	(0.004)	(0.004)
Preschool or High School	-3.258***	-3.326**	-2.977**
	(0.958)	(1.340)	(1.449)
Vocational education	-2.850***	-3.992***	-1.350
	(0.979)	(1.359)	(1.499)
Higher education	0.879	0.974	0.900
	(1.252)	(1.731)	(1.824)
Student	-2.329	4.892	-4.913
	(5.647)	(12.228)	(5.969)
Unemployed	-5.690***	-9.381***	-3.932***
	(0.842)	(1.679)	(1.021)
Retired	-7.144***	-9.407***	-5.120***
	(0.740)	(1.257)	(0.824)
No at home children	-3.387***	-4.125***	-3.023***
	(0.749)	(1.271)	(0.955)
Gross Income (2014)	0.012***	0.015***	0.009**
	(0.003)	(0.003)	(0.003)
No housing information	5.854***	6.803***	4.893**
	(1.868)	(2.157)	(2.145)

Appendix 3: Continued

Private rent	5.484***	6.399***	4.532***
	(1.367)	(1.836)	(1.298)
Private	8.819***	10.978***	7.111***
	(0.752)	(1.043)	(0.980)
Cooperative	10.605*	2.417	16.498**
	(5.677)	(7.800)	(7.105)
institution	-37.517***	-38.560***	-39.604***
	(1.985)	(3.268)	(2.864)
2 rooms	18.423***	31.747***	11.752
	(6.263)	(10.596)	(7.352)
3 rooms	30.412***	42.699***	24.744***
	(6.125)	(10.618)	(7.157)
4 rooms	34.107***	46.280***	28.557***
	(6.211)	(10.712)	(7.212)
5 rooms	35.819***	47.658***	30.339***
	(6.359)	(10.797)	(7.431)
6 rooms	31.006***	42.994***	25.360***
	(6.449)	(11.126)	(7.370)
Log Residence size	-104.621***	-104.729***	-104.938***
	(1.781)	(2.307)	(2.068)
Intermediary municipally	3.504**	3.044**	3.883**
	(1.397)	(1.487)	(1.584)
Rural municipally	4.269***	4.038***	4.362***
	(1.311)	(1.393)	(1.415)
Peripheral municipally	5.865***	5.481***	6.219***
	(1.378)	(1.836)	(1.469)
FE residential duration	X	X	X
Constant	435.615***	423.803***	449.214***
	(12.887)	(17.843)	(18.918)
Observations	26,824	10,847	15,977

Source: Own calculation based on data from Statistics Denmark. Notes: standard errors are in parentheses; ***, **, * indicate that estimates are significantly different from zero at the 0,1 %, 1 % and 5 % levels, respectively.

Appendix 4: Likelihood to move to municipally with fewer or more smaller residences, with moving within same municipally as reference

Appendix 4: Likelihood to move to municipally with fewer or more smaller residences, with moving within same municipally as reference

	No move	Move mun more small home	Move mun fewer small home
Widow(er) group	-0.512***	0.184***	0.032
	(0.023)	(0.047)	(0.052)
1 year from artificial schock	-0.109***	0.124*	0.114**
	(0.029)	(0.064)	(0.056)
2 year from artificial schock	0.134***	0.100	0.237***
	(0.028)	(0.067)	(0.060)
3 year from artificial schock	0.216***	0.045	0.252***
	(0.031)	(0.082)	(0.073)
4 year from artificial schock	0.296***	0.041	0.339***
	(0.032)	(0.086)	(0.061)
5 year from artificial schock	0.366***	0.088	0.297***
	(0.037)	(0.089)	(0.075)
6 year from artificial schock	0.397***	0.131	0.231***
	(0.043)	(0.096)	(0.077)
7 year from artificial schock	0.431***	0.038	0.291***
	(0.043)	(0.106)	(0.102)
8 year from artificial schock	0.470***	0.163	0.325***
	(0.042)	(0.115)	(0.087)
9 year from artificial schock	0.374***	-0.260*	0.165
	(0.047)	(0.142)	(0.106)
10 year from artificial schock	0.491***	-0.094	0.279***
	(0.024)	(0.088)	(0.057)
Men	0.040**	-0.027	-0.096***
	(0.018)	(0.043)	(0.031)
Age	0.124***	0.074***	0.112***
	(0.010)	(0.027)	(0.023)
Age squared	-0.001***	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)
Preschool or High School	0.106***	-0.063	-0.019
	(0.037)	(0.116)	(0.076)
Vocational education	0.324***	0.220*	0.233***
	(0.037)	(0.118)	(0.076)
Higher education	0.517***	0.586***	0.454***
	(0.043)	(0.125)	(0.093)
Student	-0.171	0.513	0.302
	(0.186)	(0.368)	(0.341)
Unemployed	-0.249***	0.021	0.068
	(0.032)	(0.066)	(0.061)
Retired	-0.125***	0.018	0.088
	(0.029)	(0.067)	(0.055)
No at home children	-0.022	0.258***	0.292***
	(0.025)	(0.070)	(0.050)
Gross Income (2014)	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)

Appendix 4: Continued

No housing information	-0.094	0.231	0.245**
	(0.059)	(0.184)	(0.117)
Private rent	-0.210***	0.356***	0.201**
	(0.056)	(0.122)	(0.082)
Private	0.307***	1.012***	0.180**
	(0.032)	(0.114)	(0.081)
Cooperative	-0.450**	0.368	0.078
	(0.217)	(0.371)	(0.393)
institution	0.376	-13.382***	0.341
	(0.517)	(0.570)	(1.208)
2 rooms	0.977***	1.412***	-0.116
	(0.131)	(0.451)	(0.366)
3 rooms	1.115***	1.886***	-0.266
	(0.139)	(0.416)	(0.371)
4 rooms	1.020***	2.147***	-0.460
	(0.139)	(0.431)	(0.348)
5 rooms	0.956***	1.947***	-0.411
	(0.144)	(0.435)	(0.350)
6 rooms	0.868***	1.096**	-0.335
	(0.143)	(0.457)	(0.343)
Log Residence size	-0.358***	-1.555***	0.825***
	(0.051)	(0.138)	(0.130)
Intermediary municipally	-0.282***	-0.273	-0.639***
	(0.069)	(0.282)	(0.142)
Rural municipally	-0.290***	-0.264	-0.983***
	(0.055)	(0.241)	(0.113)
Peripheral municipally	-0.329***	-0.364	-1.186***
	(0.060)	(0.236)	(0.154)
FE residential duration	X	X	X
Constant	-0.462	0.426	-7.885***
	(0.370)	(1.040)	(0.885)
Observations	519,519	519,519	519,519

Source: Own calculation based on data from Statistics Denmark. Notes: standard errors are in parentheses; ***, **, * indicate that estimates are significantly different from zero at the 0,1 %, 1 % and 5 % levels, respectively.

Appendix 5: Likelihood to move after the death of a spouse, where nursing homes have been omitted from the sample

Appendix 5: Likelihood to move Duration after death or chock – without nursing homes

	all	women	Men
Men	-0.035***		
	(0.013)		
Age	-0.058***	-0.050***	-0.058***
	(0.004)	(0.006)	(0.005)
Age squared	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)
Preschool or High School	0.019	-0.013	0.036
	(0.018)	(0.020)	(0.025)
Vocational education	-0.142***	-0.173***	-0.119***
	(0.021)	(0.025)	(0.026)
Higher education	-0.212***	-0.215***	-0.214***
	(0.025)	(0.025)	(0.034)
Student	0.217***	0.395***	0.159*
	(0.076)	(0.146)	(0.085)
Unemployed	0.209***	0.249***	0.210***
	(0.019)	(0.026)	(0.022)
Retired	0.117***	0.038*	0.181***
	(0.016)	(0.023)	(0.019)
No at home children	0.139***	0.155***	0.137***
	(0.014)	(0.020)	(0.017)
At home children	0.212***	0.252***	0.193***
	(0.017)	(0.026)	(0.019)
Gross Income (2014)	-0.000***	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)
No housing information	0.162***	0.204***	0.126***
	(0.032)	(0.034)	(0.043)
Private rent	0.262***	0.211***	0.294***
	(0.050)	(0.051)	(0.050)
Private	-0.136***	-0.255***	-0.037
	(0.021)	(0.026)	(0.026)
Cooperative	0.973***	0.925***	1.012***
	(0.172)	(0.219)	(0.162)
insittution	0.614	0.474	0.757
	(0.921)	(1.021)	(0.951)
2 rooms	-0.757***	-0.590***	-0.850***
	(0.072)	(0.097)	(0.091)
3 rooms	-0.794***	-0.583***	-0.927***
	(0.075)	(0.100)	(0.095)
4 rooms	-0.737***	-0.520***	-0.876***
	(0.078)	(0.099)	(0.097)
5 rooms	-0.715***	-0.527***	-0.837***
	(0.081)	(0.103)	(0.101)
6 rooms	-0.628***	-0.444***	-0.746***
	(0.080)	(0.099)	(0.102)
Log Residence size	0.285***	0.234***	0.321***
	(0.029)	(0.033)	(0.034)

Appendix 5: Continued

Intermediary municipally	0.125***	0.102***	0.139***
	(0.035)	(0.031)	(0.039)
Rural municipally	0.102***	0.083***	0.110***
	(0.029)	(0.028)	(0.032)
Peripheral municipally	0.088***	0.095***	0.077**
	(0.032)	(0.032)	(0.036)
1 year from artificial schock	-0.044**	-0.000	-0.081***
	(0.021)	(0.035)	(0.029)
2 year from artificial schock	-0.092***	-0.038	-0.136***
	(0.019)	(0.032)	(0.030)
3 year from artificial schock	-0.039*	0.044	-0.109***
	(0.021)	(0.039)	(0.029)
4 year from artificial schock	-0.069***	0.001	-0.123***
	(0.026)	(0.042)	(0.035)
5 year from artificial schock	-0.078***	-0.022	-0.117***
	(0.028)	(0.046)	(0.037)
6 year from artificial schock	-0.140***	-0.119***	-0.150***
	(0.033)	(0.043)	(0.044)
7 year from artificial schock	-0.111***	-0.036	-0.165***
	(0.031)	(0.044)	(0.036)
8 year from artificial schock	-0.140***	-0.162***	-0.109**
	(0.033)	(0.051)	(0.044)
9 year from artificial schock	-0.125***	-0.033	-0.185***
	(0.033)	(0.050)	(0.041)
10 year from artificial schock	-0.140***	-0.105***	-0.141***
	(0.028)	(0.034)	(0.035)
1 year from partner death	0.816***	0.498***	1.055***
	(0.042)	(0.030)	(0.059)
2 year from partner death	0.575***	0.410***	0.714***
	(0.047)	(0.040)	(0.065)
3 year from partner death	0.344***	0.215***	0.461***
	(0.049)	(0.052)	(0.062)
4 year from partner death	0.295***	0.183***	0.396***
	(0.043)	(0.052)	(0.058)
5 year from partner death	0.170***	-0.033	0.323***
	(0.047)	(0.056)	(0.063)
6 year from partner death	0.180***	0.186***	0.191***
	(0.053)	(0.058)	(0.067)
7 year from partner death	0.122**	0.058	0.193***
	(0.048)	(0.063)	(0.059)
8 year from partner death	0.080	0.115	0.071
	(0.052)	(0.072)	(0.068)
9 year from partner death	0.100**	-0.088	0.240***
	(0.050)	(0.077)	(0.064)
10 year from partner death	0.013	-0.093**	0.087***
	(0.025)	(0.039)	(0.030)
FE residential duration	X	X	X
Constant	-0.874	-1.702*	-0.628
	(0.703)	(1.030)	(0.733)
Observations	1,184,306	498,993	685,246

Source: Own calculation based on data from Statistics Denmark. Notes: standard errors are in parentheses; ***, **, * indicate that estimates are significantly different from zero at the 0,1 %, 1 %, and 5 % levels, respectively

Appendix 6: Likelihood to move duration after synthetic death or chock – 10 years prior

Appendix 6: Likelihood to move duration after synthetic death or chock – 10 years prior

	all	women	Men
Men	0.098***		
	(0.015)		
Age	-0.109***	-0.126***	-0.112***
	(0.006)	(0.009)	(0.008)
Age squared	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)
Preschool or High School	-0.011	-0.011	-0.092*
	(0.028)	(0.037)	(0.053)
Vocational education	-0.139***	-0.152***	-0.204***
	(0.029)	(0.037)	(0.059)
Higher education	-0.210***	-0.196***	-0.303***
	(0.033)	(0.041)	(0.059)
Student	0.292**	0.283	0.315**
	(0.131)	(0.241)	(0.138)
Unemployed	0.194***	0.240***	0.211***
	(0.022)	(0.039)	(0.025)
Retired	0.142***	0.018	0.247***
	(0.021)	(0.028)	(0.030)
No at home children	0.144***	0.108***	0.167***
	(0.022)	(0.030)	(0.026)
At home children	0.230***	0.215***	0.233***
	(0.024)	(0.030)	(0.031)
Gross Income (2014)	-0.000	-0.000	0.000**
	(0.000)	(0.000)	(0.000)
No housing information	0.132***	0.170***	0.098*
	(0.050)	(0.061)	(0.056)
Private rent	0.296***	0.255***	0.316***
	(0.077)	(0.074)	(0.081)
Private	-0.510***	-0.566***	-0.469***
	(0.032)	(0.040)	(0.039)
Cooperative	0.948***	1.041***	0.853***
	(0.190)	(0.225)	(0.218)
insittution	1.162***	1.086**	1.265***
	(0.257)	(0.432)	(0.332)
2 rooms	-0.408**	-0.224	-0.544***
	(0.163)	(0.250)	(0.173)
3 rooms	-0.599***	-0.450**	-0.715***
	(0.147)	(0.226)	(0.164)
4 rooms	-0.574***	-0.437*	-0.684***
	(0.152)	(0.234)	(0.170)
5 rooms	-0.511***	-0.368	-0.631***
	(0.151)	(0.230)	(0.170)
6 rooms	-0.413***	-0.289	-0.517***
	(0.152)	(0.232)	(0.173)
Log Residence size	0.317***	0.352***	0.300***
	(0.043)	(0.055)	(0.049)

Appendix 6: Continued

Intermediary municipally	0.056	0.063	0.052
	(0.044)	(0.055)	(0.042)
Rural municipally	0.054*	0.052	0.052
	(0.031)	(0.036)	(0.034)
Peripheral municipally	0.034	0.002	0.048
	(0.038)	(0.046)	(0.043)
1 year from artificial schock	-0.008	0.019	-0.029
	(0.037)	(0.048)	(0.051)
2 year from artificial schock	-0.012	0.041	-0.055
	(0.037)	(0.053)	(0.046)
3 year from artificial schock	0.033	0.053	0.015
	(0.039)	(0.053)	(0.053)
4 year from artificial schock	0.048	0.103*	-0.002
	(0.042)	(0.053)	(0.055)
5 year from artificial schock	0.029	0.022	0.028
	(0.043)	(0.056)	(0.058)
6 year from artificial schock	0.046	0.113**	-0.023
	(0.039)	(0.049)	(0.058)
7 year from artificial schock	0.004	0.021	-0.021
	(0.048)	(0.056)	(0.069)
8 year from artificial schock	0.106***	0.111**	0.086
	(0.040)	(0.056)	(0.053)
9 year from artificial schock	0.228***	0.112	0.301***
	(0.046)	(0.073)	(0.059)
10 year from artificial schock	0.292***	0.339***	0.224***
	(0.037)	(0.053)	(0.058)
1 year from partner death	-0.455***	-0.525***	-0.403***
	(0.033)	(0.056)	(0.045)
2 year from partner death	-0.466***	-0.615***	-0.357***
	(0.047)	(0.076)	(0.052)
3 year from partner death	-0.489***	-0.703***	-0.347***
	(0.051)	(0.075)	(0.060)
4 year from partner death	-0.506***	-0.644***	-0.400***
	(0.053)	(0.069)	(0.062)
5 year from partner death	-0.577***	-0.659***	-0.518***
	(0.053)	(0.078)	(0.066)
6 year from partner death	-0.613***	-0.872***	-0.419***
	(0.049)	(0.075)	(0.068)
7 year from partner death	-0.514***	-0.634***	-0.421***
	(0.052)	(0.074)	(0.072)
8 year from partner death	-0.605***	-0.767***	-0.482***
	(0.051)	(0.071)	(0.058)
9 year from partner death	-0.656***	-0.632***	-0.675***
	(0.052)	(0.090)	(0.056)
10 year from partner death	0.802***	0.430***	1.070***
	(0.055)	(0.058)	(0.075)
FE residential duration	X	X	X
Constant	-1.219***	-0.840*	-0.043
	(0.407)	(0.482)	(0.870)
Observations	809,746	370,400	439,307