Appendix

Table S1: *Results – Robustness checks*

|  |  |  |  |
| --- | --- | --- | --- |
|  | FE | FE | FE |
|  | (Model 1) | (Model 5a) | (Model 5b) |
|  |  |  |  |
| Retirement status (ref. cat.: not retired) | 1.661\*\*\* | 1.660\*\*\* | 1.680\*\*\* |
|  | (0.2) | (0.2) | (0.2) |
| Number of Persons in household |  | -1.522\*\*\* |  |
|  |  | (0.2) |  |
| Labour status other members in household  (ref. cat.: another household member gets labour income) |  |  |  |
| Living alone or no other household member with labour income |  |  | 2.780\*\*\* |
|  |  |  | (0.6) |
| Another person in household is retired |  |  | -0.386 |
|  |  |  | (0.3) |
| In all models it has been controlled for age (age dummies from 55-75 years) and period effects (1993–1996; 1997–1999; 2000–2005; 2006–2012; 2013–2019). | | | |
| *R*2 (within) | 0.010 | 0.015 | 0.012 |
| Number of breadwinners | 5,905 | 5,905 | 5,905 |
| Number of breadwinner-years | 47,873 | 47,873 | 47,873 |

Source: SOEP v36, own computations. Significance levels: \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001. Standard errors in parentheses.

The results from the table above show that when controlling for the number of persons in the household (Model 5a), we see that this has a negative effect on the housing cost burden. This can be due to the fact that the more persons in the household, the higher the probability that these other persons will be contributing income to the household. When controlling for the labour status of other members in the household (Model 5b), we see that living alone or with other household members who are not working has a positive effect on housing cost burden in comparison to the reference group of those living with a working household member. Living with a person who is retired does not have any statistically significant effect on housing cost burden.

Table S2: *Results – Robustness checks*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | RE  Model 1 | RE  Model 2 | RE  Model 3 | RE  Model 4 | | RE  Model 5 |
| Homeowner x Retirement status | -0.251 | -0.378 | -0.392 | -0.314 | | -0.276 |
|  | (0.3) | (0.3) | (0.3) | (0.3) | | (0.3) |
| Tenant x Retirement status | 5.340\*\*\* | 5.389\*\*\* | 5.259\*\*\* | 5.159\*\*\* | | 5.141\*\*\* |
|  | (0.3) | (0.3) | (0.3) | (0.3) | | (0.3) |
| Homeowner 🡪 Tenant x Retirement status | -0.722 | -0.932 | -1.034 | -1.180 | | -1.137 |
|  | (0.9) | (1.0) | (1.0) | (0.9) | | (0.9) |
| Tenant 🡪 Homeowner x Retirement status | -1.205\* | -1.188\* | -1.194\* | -1.122 | | -0.915 |
|  | (0.6) | (0.6) | (0.6) | (0.6) | | (0.6) |
| With children (ref. cat.: without children) |  | -3.259\*\*\* | -3.194\*\*\* | -2.805\*\*\* | | -0.805 |
|  |  | (0.3) | (0.3) | (0.3) | | (0.5) |
| Employment status before retirement (ref. cat.: full-time employment) |  |  |  |  | |  |
| Part-time employment |  |  | 4.334\*\*\* | 2.043\*\* | | 2.129\*\* |
|  |  |  | (0.7) | (0.7) | | (0.7) |
| Marginal employment or ‘Minijob’ |  |  | 5.483\*\*\* | 3.754\*\*\* | | 3.629\*\*\* |
|  |  |  | (1.1) | (1.0) | | (1.0) |
| Not employed |  |  | 6.906\*\*\* | 5.951\*\*\* | | 5.874\*\*\* |
|  |  |  | (0.5) | (0.4) | | (0.4) |
| Unknown |  |  | 0.900 | 0.607 | | 1.320 |
|  |  |  | (0.9) | (1.0) | | (1.0) |
| Gender: woman (ref. cat.: man) |  |  |  | 3.869\*\*\* | | 3.455\*\*\* |
|  |  |  |  | (0.5) | | (0.4) |
| Marital status (ref. cat.: married) |  |  |  |  | |  |
| Single |  |  |  | 3.003\*\*\* | | -0.960 |
|  |  |  |  | (0.8) | | (0.9) |
| Widowed |  |  |  | 2.591\*\*\* | | -0.979 |
|  |  |  |  | (0.6) | | (0.7) |
| Divorced |  |  |  | 4.086\*\*\* | | 1.091 |
|  |  |  |  | (0.5) | | (0.6) |
| Separated |  |  |  | 4.578\*\*\* | | 1.704 |
|  |  |  |  | (0.8) | | (0.9) |
| Unknown |  |  |  | 1.918\*\* | | 1.125 |
|  |  |  |  | (0.7) | | (0.7) |
| Number of persons in household (ref. cat.: one person) |  |  |  |  | |  |
| 2 persons in household |  |  |  |  | | -4.757\*\*\* |
|  |  |  |  |  | | (0.6) |
| 3 persons in household |  |  |  |  | | -6.108\*\*\* |
|  |  |  |  |  | | (0.9) |
| 4 persons in household |  |  |  |  | | -7.150\*\*\* |
|  |  |  |  |  | | (0.9) |
| 5 persons in household |  |  |  |  | | -7.793\*\*\* |
|  |  |  |  |  | | (1.0) |
| 6 or more persons in household |  |  |  |  | | -7.433\*\*\* |
|  |  |  |  |  | | (1.4) |
| Constant | 17.744\*\*\* | 19.309\*\*\* | 17.017\*\*\* | 15.430\*\*\* | | 20.261\*\*\* |
|  | (0.4) | (0.4) | (0.4) | (0.4) | | (0.7) |
| In all models it has been controlled for age (age dummies from 55-75 years) and period effects (1993–1996; 1997–1999; 2000–2005; 2006–2012; 2013–2019). | | | | |
| *R*2 (within) | 0.018 | 0.022 | 0.022 | 0.023 | | 0.026 |
| *R*2 (between) | 0.248 | 0.242 | 0.264 | 0.336 | | 0.354 |
| Number of breadwinners | 2,825 | 2,825 | 2,825 | 2,825 | | 2,825 |
| Number of breadwinner-years | 34,396 | 34,396 | 34,396 | 34,396 | | 34,396 |

Source: SOEP v36, own computations. Sample: only treatment group of individuals who retire. RE = Random Effects. Significance levels: \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001. Standard errors in parentheses.

Table S2 presents the coefficients of random effects models where different control variables are included stepwise in models where we interact tenure status with retirement. The results show that households with children have lower housing cost burden than those without children. Breadwinners who were not employed, were marginally employed or were in part-time employment before retirement have higher levels of housing cost burden than those who were in full-time employment before retirement. Female breadwinners also have higher levels of housing cost burden than men. In addition, breadwinners who are separated, divorced, widowed or single have higher levels of housing cost burden than those who are married. Finally, when controlling for the number of persons in the household, it can be seen that the more people there are, the stronger the negative effect on housing cost burden is. Regarding the interaction effect of tenure status with retirement, the inclusion of control variables does not have any significant effect on it.