Supplementary material for the paper ‘The Working Class and Early Retirement in Denmark: Individual Push Factors’, Ageing & Society

Table S1:*ICD-10 codes of diseases included in the study for constructing health of partner*

|  |  |
| --- | --- |
| Diseases | International Classification of Diseases (ICD-10) codes: |
| Diabetes | E10-E14, H360 |
| Cancer | C00-C96, D00-D48 |
| Heart diseases | I00-I79 |
| Dementia | F00-F09 |
| Depression | F32-F38 |
| Musculoskeletal diseases | M069, M159, M160, M161A, M 199, M170, M255, M420, M431, M478, M509, M501, M503, M510, M511, M513, M519, M531, M544, M545, M626, M653, M659, M704, M720, M750, M751, M754, M755, M759, M770, M771, M796 |

Table S2: *Discrete-time logistic models. Decomposition of the effect of social class on early retirement timing, all pathways for men and women. Logit coefficients, robust standard errors in parentheses, and odds ratios.*

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *Men* | | | | | | *Women* | | | | | |
| *Social class*  *(ref. Professionals)* | *Routine, non-manual workers* | | *Skilled manual workers* | | *Unskilled manual workers* | | *Routine, non-manual workers* | | *Skilled manual workers* | | *Unskilled manual workers* | |
|  | Logit | OR | Logit | OR | Logit | OR | Logit | OR | Logit | OR | Logit | OR |
| Reduced model | 0.265  (0.189) | 1.303 | 0.495\*\*\*  (0.138) | 1.641 | 0.469\*\*\*  (0.138) | 1.599 | 0.361\*\*\*  (0.114) | 1.434 | 0.617\*\*  (0.281) | 1.853 | 0.819\*\*\*  (0.141) | 2.268 |
| Full model | 0.108  (0.191) | 1.114 | 0.220  (0.147) | 1.246 | 0.079  (0.157) | 1.083 | 0.188  (0.115) | 1.206 | 0.309  (0.282) | 1.363 | 0.403\*\*\*  0.150 | 1.496 |
| Indirect effect | 0.156\*\*\* (0.033) | 1.169 | 0.275\*\*\*  (0.055) | 1.317 | 0.390\*\*\*  (0.066) | 1.477 | 0.173\*\*\* (0.038) | 1.189 | 0.307\*\*\*  (0.050) | 1.360 | 0.416\*\*\*  (0.066) | 1.517 |
| *Through:* |  | % |  | % |  | % |  | % |  | % |  | % |
| Poor health (diagnoses) | 0.034\*\*\*  (0.011) | 12.66 | 0.022\*\*\*  (0.008) | 4.41 | 0.052\*\*\*  (0.015) | 11.17 | 0.007\*  (0.004) | 1.84 | 0.049\*  (0.028) | 7.90 | 0.016\*\*  (0.007) | 1.92 |
| Previous spells of unemployment | 0.032\*\*\*  (0.010) | 11.92 | 0.060\*\*\*  (0.015) | 12.24 | 0.102\*\*\*  (0.024) | 21.73 | 0.035\*\*\*  (0.010) | 9.61 | 0.048\*\*\*  (0.016) | 7.81 | 0.083\*\*\*  (0.024) | 10.19 |
| Overly physical demands | 0.048\*\*\*  (0.015) | 18.01 | 0.156\*\*\*  (0.047) | 31.42 | 0.169\*\*\*  (0.051) | 36.11 | 0.107\*\*\*  (0.021) | 29.60 | 0.166\*\*\*  (0.035) | 26.88 | 0.269\*\*\*  (0.051) | 32.85 |
| Low decision latitude | 0.037\*  (0.019) | 14.06 | 0.027\*  (0.014) | 5.37 | 0.053\*\*  (0.027) | 11.37 | 0.009  (0.006) | 2.58 | 0.012  (0.009) | 2.00 | 0.025\*  (0.015) | 3.04 |
| Partner with poor health (retired) | 0.005  (0.004) | 1.83 | 0.009  (0.006) | 1.81 | 0.012\*  (0.007) | 2.60 | 0.016\*\*\*  (0.006) | 4.43 | 0.039\*\*\*  (0.014) | 6.31 | 0.022\*\*\*  (0.007) | 2.70 |
| Partner with poor health (not retired) | 0.002  (0.005) | 0.62 | 0.002  (0.006) | 0.36 | 0.001  (0.002) | 0.12 | -0.000  (0.001) | -0.13 | -0.007  (0.009) | -1.07 | 0.001  (0.002) | 0.14 |
| *Total per cent explained by push factors* |  | *59.09* |  | *55.59* |  | *83.09* |  | *47.93* |  | *49.82* |  | *50.85* |
| Observations (years) |  |  | 8636 |  |  |  |  |  |  | 8887 |  |  |

Note: Control variables are included in all models. \*p<0.10 \*\*p<0.05 \*\*\*p<0.01.

Table S3: *Discrete-time logistic models. Decomposition of the effect of social class on early retirement timing, separate pathways for men and women. Logit coefficients, robust standard errors in parentheses, and odds ratios*

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *Men* | | | | | | *Women* | | | | | |
| *Social class*  *(ref. Professionals)* | *Routine, non-manual workers* | | *Skilled manual workers* | | *Unskilled manual workers* | | *Routine, non-manual workers* | | *Skilled manual workers* | | *Unskilled manual workers* | |
| **Disability Pension and Social Security** | | | | | | | | | | | | |
|  | Logit | OR | Logit | OR | Logit | OR | Logit | OR | Logit | OR | Logit | OR |
| Reduced model | 0.713\*  (0.430) | 2.040 | 0.603\*  (0.338) | 1.828 | 0.718\*\*  (0.326) | 2.050 | 0.534\*\*  (0.271) | 1.707 | 0.171  (0.732) | 1.187 | 1.322\*\*\*  (0.284) | 3.750 |
| Full model | 0.478  (0.426) | 1.612 | 0.304  (0.339) | 1.355 | 0.247 (0.358) | 1.281 | 0.355  (0.273) | 1.427 | -0.192  (0.726) | 0.826 | 0.875\*\*\*  (0.307) | 2.340 |
| Indirect effect | 0.235\*\*\*  (0.065) | 1.265 | 0.299\*\*\*  (0.108) | 1.349 | 0.471\*\*\*  (0.134) | 1.601 | 0.179\*\*  (0.071) | 1.196 | 0.363\*\*\*  (0.094) | 1.437 | 0.446\*\*\*  (0.114) | 1.563 |
| *Through:* |  | % |  | % |  | % |  | % |  | % |  | % |
| Poor health (diagnoses) | 0.101\*\*\* (0.031) | 14.18 | 0.659\*\*\*  (0.021) | 10.93 | 0.158\*\*\*  (0.039) | 22.03 | 0.022\*  (0.012) | 4.07 | 0.160\*\*\*  (0.047) | 93.51 | 0.052\*\*\*  (0.018) | 3.90 |
| Previous spells of unemployment | 0.040\*\*\* (0.015) | 5.56 | 0.076\*\*\*  (0.024) | 12.63 | 0.128\*\*\*  (0.040) | 17.84 | 0.033\*\*  (0.016) | 6.15 | 0.046\*  (0.024) | 26.76 | 0.079\*\* (0.039) | 6.00 |
| Overly physical demands | 0.033  (0.029) | 4.56 | 0.106  (0.094) | 17.62 | 0.116  (0.102) | 16.10 | 0.094\*\*  (0.038) | 17.59 | 0.146\*\*  (0.060) | 85.45 | 0.237\*\*  (0.095) | 17.93 |
| Low decision latitude | 0.044  (0.039) | 6.10 | 0.031  (0.028) | 5.15 | 0.062  (0.056) | 8.68 | 0.017  (0.011) | 3.20 | 0.023  (0.018) | 13.22 | 0.046  (0.029) | 3.46 |
| Partner with poor health (retired) | 0.000  (0.008) | 0.01 | 0.000  (0.015) | 0.02 | 0.000  (0.021) | 0.02 | 0.017\*  (0.009) | 3.20 | 0.042\*  (0.022) | 24.35 | 0.024\*\*  (0.012) | 1.79 |
| Partner with poor health (not retired) | 0.018  (0.016) | 2.58 | 0.020  (0.017) | 3.31 | 0.006  (0.007) | 0.89 | -0.004  (0.008) | -0.69 | -0.053  (0.033) | -31.07 | 0.009  (0.010) | 0.69 |
| *Total per cent explained by push factors* |  | *33.00* |  | *49.65* |  | *65.56* |  | *33.51* |  | *212.23* |  | *33.77* |
| Observations (years) |  |  | 8636 |  |  |  |  |  |  | 8887 |  |  |
| **Early Retirement Scheme** | | | | | | | | | | | | |
|  | Logit | OR | Logit | OR | Logit | OR | Logit | OR | Logit | OR | Logit | OR |
| Reduced model | 0.182  (0.214) | 1.199 | 0.444\*\*\*  (0.157) | 1.559 | 0.690\*\*\*  (0.162) | 1.994 | 0.396\*\*\*  (0.133) | 1.487 | 0.861\*\*\*  (0.331) | 2.365 | 0.543\*\*\*  (0.166) | 1.721 |
| Full model | 0.045  (0.217) | 1.046 | 0.202  (0.170) | 1.224 | 0.332\*  (0.183) | 1.393 | 0.242\*  (0.136) | 1.274 | 0.537  (0.336) | 1.710 | 0.205  (0.176) | 1.227 |
| Indirect effect | 0.036\*\*\*  (0.047) | 1.146 | 0.242\*\*\*  (0.067) | 1.274 | 0.358\*\*\*  (0.085) | 1.431 | 0.155\*\*  (0.072) | 1.167 | 0.324\*\*\*  (0.087) | 1.383 | 0.338\*\*\*  (0.087) | 1.402 |
| *Through:* |  | % |  | % |  | % |  | % |  | % |  | % |
| Poor health (diagnoses) | 0.027\*  (0.016) | 14.58 | 0.024\*  (0.013) | 5.45 | 0.048\*\* (0.022) | 6.97 | 0.003  (0.004) | 0.73 | 0.005  (0.012) | 0.55 | 0.004 (0.006) | 0.77 |
| Previous spells of unemployment | 0.029\*  (0.015) | 15.68 | 0.056\*\*\*(0.018) | 12.70 | 0.101\*\*\*  (0.029) | 14.57 | 0.043\*\*\*  (0.016) | 10.75 | 0.078\*\*  (0.038) | 9.04 | 0.078\*\*\*  (0.028) | 14.40 |
| Overly physical demands | 0.028\* (0.015) | 15.56 | 0.108\*\*  (0.050) | 24.42 | 0.137\*\*  (0.063) | 19.80 | 0.086\*\*\*  (0.021) | 21.64 | 0.193\*\*\* (0.060) | 22.44 | 0.216\*\*\*  (0.050) | 39.82 |
| Low decision latitude | 0.042\* (0.023) | 23.24 | 0.042\*  (0.022) | 9.37 | 0.060\*\*  (0.030) | 8.66 | -0.001  (0.003) | -0.32 | 0.003 (0.007) | -0.37 | 0.002  (0.005) | 0.45 |
| Partner with poor health (retired) | 0.008 (0.009) | 4.56 | 0.009 (0.008) | 1.92 | 0.016  (0.015) | 2.33 | 0.024\*\*  (0.012) | 6.18 | 0.051  (0.036) | 5.97 | 0.037\*\*  (0.016) | 6.83 |
| Partner with poor health (not retired) | 0.003  (0.006) | 1.39 | 0.003 (0.007) | 0.62 | -0.003  (0.007) | -0.40 | 0.000  (0.003) | 0.02 | 0.000 (0.013) | 0.05 | -0.001  (0.003) | -0.02 |
| *Total per cent explained by push factors* |  | *75.01* |  | *54.48* |  | *51.93* |  | *39.01* |  | *37.68* |  | *62.24* |
| Observations (years) |  |  | 1962 |  |  |  |  |  | 2009 |  |  |  |

Note: Control variables are included in all models. \*p<0.10 \*\*p<0.05 \*\*\*p<0.01.

Table S4: *Discrete-time logistic models predicting early retirement. Logit coefficients and robust standard errors. Full models.*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **All pathways** | | | | | | | | | | | | **Disability Pension / Social Security** | | | | | | | | | | | | **The Early Retirement Scheme** | | | | | | | | | |
|  | **Men** | | | | | | **Women** | | | | | | **Men** | | | | | | **Women** | | | | | | **Men** | | | | | | **Women** | | | |
|  | **Logit** | **SE** | | **Logit** | **SE** | | **Logit** | **SE** | | **Logit** | **SE** | | **Logit** | **SE** | | **Logit** | **SE** | | **Logit** | **SE** | | **Logit** | **SE** | | **Logit** | **SE** | | **Logit** | | **SE** | **Logit** | **SE** | **Logit** | **SE** |
| Professionals (ref.) Routine, non-manual Skilled manual workers Unskilled manual workers  Poor health Previous spells of unemployment Overly physical demands Low decision latitude Partner in poor health (retired) Partner in poor health (employed)  Cohort: 1950 (ref.1945)  Age (ref.: 52-53) 54 55 56 57 58 59 60 61 62 63 64 | 0.296 0.514\*\*\* 0.496\*\*\*    -0.250  -0.457  -0.779  -0.332  -0.550  0.014  0.278  3.030\*\*\*  2.683\*\*\*  3.558\*\*\*  3.243\*\*\*  3.282\*\*\* | | (0.189) (0.139) (0.138)    (0.109)  (0.569)  (0.677)  (0.567)  (0.614)  (0.517)  (0.487)  (0.368)  (0.377)  (0.367)  (0.376)  (0.380) | 0.165 0.219 0.069  0.331\*\*\*  0.000\*\*\*  0.155\*\*\*  0.083\*\*  0.233  0.027    -0.235  -0.457  -0.779  -0.332  -0.550  0.014  0.278  3.030\*\*\*  2.683\*\*\*  3.558\*\*\*  3.243\*\*\*  3.282\*\*\* | | (0.191) (0.149) (0.156)  (0.081)  (0.000)  (0.051)  (0.038)  (0.148)  0.139  (0.110)  (0.569)  (0.677)  (0.567)  (0.614)  (0.517)  (0.487)  (0.368)  (0.377)  (0.367)  (0.376)  (0.380) | 0.631\*\*\* 0.595\*\* 0.817\*\*\*             -0.175\*   0.731\* -0.038 -0.187 0.116 0.250 0.139 3.761\*\*\* 3.237\*\*\* 3.762\*\*\* 3.655\*\*\* 3.438\*\*\* | | (0.115) (0.289) (0.141)             (0.098)   (0.407) (0.504) (0.525) (0.485) (0.472) (0.486) (0.339) (0.349) (0.346) (0.353) (0.365) | 0.184 0.342 0.364\*\*   0.377\*\*\* 0.000\*\*\*  0.166\*\*\* 0.054 0.568\*\*\*  -0.074   -0.206\*\*   0.730\* -0.038 -0.243 0.054 0.177 0.047 3.669\*\*\* 3.185\*\*\* 3.708\*\*\* 3.612\*\*\* 3.409\*\*\* | | (0.117) (0.291) (0.150)   (0.068) (0.000)  (0.039) (0.039) (0.129)  (0.146)   (0.098)  (0.407) (0.504) (0.525) (0.485) (0.472) (0.487) (0.340) (0.350) (0.347) (0.354) (0.365) | 0.713 0.553 0.677\*  -0.087   -0.435 -0.732 -0.225 -0.428 0.014 0.358 0.492 -0.550 0.501 0.236 1.116\*\* | (0.435) (0.344) (0.331)             (0.268)  (0.566) (0.684) (0.572) (0.618) (0.539) (0.501) (0.522) (0.795) (0.575) (0.693) (0.557) | 0.570 0.194 0.081   1.219\*\*\* 0.000\*\*  0.051 0.080 -0.090  -0.387   -0.114   -0.410 -0.705 -0.420 -0.596 -0.147 0.217 0.327 -0.652 0.407 0.171 1.051\* | | | (0.438) (0.356) (0.370)   (0.151) (0.000)  (0.101) (0.074) (0.444)  (0.420)   (0.274)  (0.565) (0.683) (0.565) (0.622) (0.539) (0.502) (0.512) (0.788) (0.577) (0.698) (0.572) | 0.634\*\* 0.144 1.383\*\*\*  0.185   0.812\* -0.009 -1.159 0.030 0.340 0.094 1.008\*\* 0.928\* 0.493 1.548\*\*\* 1.436\*\*\* | | (0.280) (0.770) (0.297)             (0.388)   (0.416) (0.516) (0.536) (0.510) (0.488) (0.514) (0.438) (0.489) (0.566) (0.478) (0.528) | 0.452 -0.024 0.859\*\*\*   1.181\*\*\* 0.000  0.026 0.056 0.705\*\*  -0.795\*   0.141   0.832\* 0.027 -0.300 -0.100 0.206 -0.056 0.862\* 0.829\* 0.390 1.444\*\*\* 1.383\*\*\* | | (0.280) (0.766) (0.322)   (0.108) (0.000)  (0.076) (0.075) (0.283)  (0.421)   (0.214)  (0.416) (0.515) (0.536) (0.508) (0.487) (0.519) (0.442) (0.491) (0.557) (0.482) (0.528) | 0.178 0.438\*\*\* 0.686\*\*\*             -0.530\*\*\*         (ref.) -0.329\* 0.626\*\*\* 0.348\* 0.347\* | | (0.213) (0.157) (0.161)             (0.126)          (0.189) (0.168) (0.193) (0.205) | | 0.92 0.211 0.344\*   0.130 0.000\*\*\*  0.130\*\* 0.100\*\* 0.200  -0.021   -0.471\*\*\*         (ref.) -0.298 0.655\*\*\* 0.375\* 0.375\* | (0.216) (0.170) (0.182)   (0.086) (0.000)  (0.061) (0.044) (0.164)  (0.154)   (0.129)          (0.189) (0.168) (0.194) (0.205) | 0.396\*\*\* 0.858\*\* 0.542\*\*\*             -0.202\*\*         (ref.) -0.604\*\*\* 0.054 -0.161 -0.481\*\* | (0.133) (0.335) (0.166)             (0.112)          (0.159) (0.150) (0.174) (0.209) | 0.245\* 0.541 0.210   0.000 0.000\*\*\*  0.206\*\*\* 0.032 0.494\*\*\*  0.017   -0.224\*\*         (ref.) -0.570\*\*\* 0.084 -0.111 -0.425\*\* | (0.137) (0.339) (0.176)   (0.078) (0.000)  (0.046) (0.439) (0.142)  (0.64)   (0.113)          (0.159) (0.150) (0.174) (0.209) |

Note: \*p<0.10 \*\*p<0.05 \*\*\*p<0.01.