**Work after Retirement:**

**Worklife Transitions of Career Public Employees**

**Data Appendix**

**Appendix A: Sample construction and restrictions**

This analysis of worklife transitions of public employees in North Carolina uses administrative records from the North Carolina Retirement Systems Division (RSD) and information from several surveys with responses merged with administrative records. The first and second survey are conducted among two cohorts of older workers who were employed full-time in 2014 and 2016, respectively. They are used to examine the retirement plans of older workers. The third and fourth survey follow these two cohorts into retirement in 2016 and 2018, respectively, and are used to report the employment choices made by these retirees. The two cohorts are combined for our analysis in the paper. This section describes the information from each cohort.

**I. Cohort 1: Actively employed in 2014 and have started claiming benefits in 2016**

Survey of active workers in 2014 (S2014)

The survey population is comprised of workers that were aged 50 to 69, actively employed in March 2014, and have valid 2013 salary information indicating an active membership, according to administrative records as of March 2014. We sent a survey through email to those with an email address and by postal mail to the remaining workers. The final target population of 15,000 (9,012 and 5,988 surveys sent for the email and print sample, respectively). We received 2,622 responses (2,075 and 547 for email and print, respectively) for an overall response rate of about 18 percent. Among those, we received 2,284 completed responses with valid answers to the main demographic characteristics (marital status, education, and race).

Resurvey of workers (S2016-retiree)

The Retirement System provided us with administrative data on the full sample of 2014 active workers as of April 2016. We observe their benefit claiming status in the administrative records. The administrative records also include information on job classification, benefit type, benefit amount, and year of service. In May 2016, we sent a survey through email to all 2,284 respondents in S2014. The survey has two versions, actives and benefit claimants, which were sent to individuals with respective working status in the North Carolina Retirement System. Only benefit claimants are included in this paper. We sent a survey to 582 benefit claimants and received 261 responses with a response rate of 44.8%. We consider them the first cohort in this paper.

**II. Cohort 2: Actively employed in 2016 and have started claiming benefits in 2018**

Survey of active workers in 2016 (S2016-actives)

The survey population is comprised of workers that were actively employment in March 2014 according to administrative records as of March 2014 and were not deceased or claiming benefits other than TSERS/LGERS as of April 2016. We then exclude individuals who were in the target population of S2014. The final target population of 16,000 (11,170 active workers and 4,830 benefit claimants). We sent two versions of the survey, actives and benefit claimants, to individuals with respective working status in the North Carolina Retirement System according to the retirement system. Only active workers are included in the paper. We received 3,311 responses for a response rate of about 30 percent. Among those, we received 3,292 completed responses with valid answers to the main demographic characteristics (marital status, education, and race).

In addition, the survey to active workers were sent to individuals who participated in S2014 who are identified as active workers as of April 2016 by administrative records. We sent 1,680 surveys and received 976 responses for a response rate of 58 percent. Among those, we received 943 completed responses with valid answers to the main demographic characteristics (marital status, education, and race).

Resurvey of workers (S2018-retiree)

The Retirement System provided us with administrative data on the population of active workers and benefit claimants as of December 2017. The administrative records include information on job classification, benefit type, benefit amount, but not on benefit claiming date and year of service. We cannot observe the benefit claiming status as of May 2018. In May 2018, we sent a survey through email to all respondents with completed responses in S2016. The survey has two versions, actives and benefit claimants, and we asked respondents to self-identify as active workers or benefit claimants. Among the 4,235 active workers in S2016 that we sent a survey to, 1,931 responded with a response rate of 45.6%. 329 respondents self-classify themselves as benefit claimants and we consider them the second cohort in this paper.

**Appendix B: Appendix Tables**

**Appendix Table B1. Sample Construction**

|  |  |
| --- | --- |
| **Restriction** | **Sample Size** |
|  |  |
| All active workers in admin records as of 3/4/2014 | 157,284 |
| S2014 target sample and sent survey  | 13,884 |
| Responded to S2014 (response rate = 18.3%) | 2,622 |
| S2016 resurvey target sample and sent survey  | 2,284 |
|  |  |
| Among S2016 resurvey target sample: |  |
| Sent survey and had started claiming benefits in admin records as of 4/6/2016  | 582 |
| Responded to S2016 (response rate = 44.8%) | 261 |
| **Sample 1** | **261** |
|  |  |
| Among S2016 resurvey target sample: |  |
| Sent survey and were active workers as of 4/6/2016  | 1,680 |
| Responded to S2016 (response rate = 58.0%) | 976 |
| S2018 resurvey target sample and sent survey  | 943 |
| Responded to S2018 (response rate = 51.6%) | 486 |
| Responded to S2018 and self-classify as retiree | 76 |
| **Sample 2 (part A)** | **76** |
| All active workers as of 3/4/2014 who were not in S2014 target sample and were observed in admin records as of 4/6/2016 | 137,327 |
| S2016 refresher target sample and sent survey  | 16,000 |
| Active workers as of 4/6/2016 | 11,170 |
| Responded to S2016 (response rate = 29.6%) | 3,311 |
| S2018 resurvey target sample and sent survey  | 3,292 |
| Responded to S2018 (response rate = 43.9%) | 1,445 |
| Responded to S2018 and self-classify as retiree | 253 |
| **Sample 2 (part B)** | **253** |
| Sample 2 (part A) | 76 |
| Sample 2 (part B) | 253 |
| **Sample 2** | **329** |
|  |  |
| Sample 1 | 261 |
| Sample 2 | 329 |
| **Full Sample** | **590** |
|  |  |

**Appendix Table B2. Data Representativeness**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variables | ACSUnited States | ACSNorth Carolina | Full sample | Sample 1 | Sample 2 |
|  | (1) | (2) | (3) | (4) | (5) |
| Number of Observations | 11,733 | 444 | 590 | 261 | 329 |
|  |  |  |  |  |  |
| Age at Survey (Ex Ante) |  |  | 59.9 | 59.1 | 60.6 |
| Age at Survey (Ex Post) |  |  | 62.0 | 61.2 | 62.6 |
| Age | 61.5 | 61.0 |  |  |  |
| Male | 39.8% | 33.3% | 32.4% | 31.4% | 33.1% |
| Non-Hispanic Black | 7.1% | 12.2% | 11.5% | 15.3% | 8.5% |
| Hispanic/Latino | 5.9% | 1.6% | 1.5% | 0.4% | 2.4% |
| Other Race/Ethnicity | 4.3% | 2.7% | 6.4% | 11.5% | 2.4% |
| BA or above | 49.2% | 54.7% | 71.2% | 70.5% | 71.7% |

Notes: ACS data include married individuals ages 50 or above who were working full time (14+ weeks and 30+ hours per week worked) at a state or local government employer last year but are currently either unemployed or not in the labor force. Survey respondents are disproportionally higher educated and are more likely to be of other race than the population average.

**Appendix Table B3. Variable origins of regression tables**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Table 4** | **Table 5** | **Table 6** |
| Male | Administrative | Administrative | Administrative |
| Age  | Administrative | Administrative | Administrative |
| Married  | Ex ante (S2014/S2016) | Ex post (S2016/S2018) | Ex post (S2016/S2018) |
| African American | S2016 | S2016 | S2016 |
| Other race | S2016 | S2016 | S2016 |
| Bachelor's degree or above | S2016 | S2016 | S2016 |
| 2013 Salary in $10k | Administrative | Administrative | Administrative |
| Has 1-2 kids | S2016 | S2016 | S2016 |
| Has more than 2 kids | S2016 | S2016 | S2016 |
| Own health is good  | Ex ante (S2014/S2016) | Ex post (S2016/S2018) | Ex post (S2016/S2018) |
| Expected mortality 85+  | Ex ante (S2014/S2016) | Ex post (S2016/S2018) | Ex post (S2016/S2018) |
| High financial knowledge  | S2016 | Ex post (S2016/S2018) | Ex post (S2016/S2018) |
| Time impatient | Ex ante (S2014/S2016) | Ex post (S2016/S2018) | Ex post (S2016/S2018) |
| Risk averse | Ex ante (S2014/S2016) | Ex post (S2016/S2018) | Ex post (S2016/S2018) |
| Spouse age difference (+) | S2016 | S2016 | S2016 |
| Spouse age difference (-) | S2016 | S2016 | S2016 |
| Spouse employed  | Ex ante (S2014/S2016) | Ex post (S2016/S2018) | Ex post (S2016/S2018) |
| Spouse health is good | Ex ante (S2014/S2016) | Ex post (S2016/S2018) | Ex post (S2016/S2018) |
| Spouse expected mortality 85+ | Ex ante (S2014/S2016) | Ex post (S2016/S2018) | Ex post (S2016/S2018) |
| Cared for children | - | Ex post (S2016/S2018) | Ex post (S2016/S2018) |
| Cared for grandchildren | - | Ex post (S2016/S2018) | Ex post (S2016/S2018) |
| Cared for anyone else | - | Ex post (S2016/S2018) | Ex post (S2016/S2018) |
| Plan to work | - | Ex ante (S2014/S2016) | Ex ante (S2014/S2016) |

**Appendix Table B4: Characteristics from post-claiming survey**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Full Sample** | **Sample 1** | **Sample 2** |
|  | **Count** | **Pct** | **Count** | **Pct** | **Count** | **Pct** |
| **N** | **590** |  | 261 |  | 329 |  |
| Worked after Retirement  | 247 | 41.9% | 115 | 44.1% | 132 | 40.1% |
| Missing work for pay  | 16 | 2.7% | 10 | 3.8% | 6 | 1.8% |
|  |  |  |  |  |  |  |
| Among those who worked for pay: |  |  |  |  |  |  |
| Currently working for pay | 199 | 80.6% | 93 | 80.9% | 106 | 80.3% |
| Descriptions for currently working: |  |  |  |  |  |  |
| Able to find a suitable position | 141 | 70.9% | 43 | 46.2% | 98 | 92.5% |
| Difficult to find current position | 23 | 11.6% | 5 | 5.4% | 18 | 17.0% |
| Stay active | 160 | 80.4% | 68 | 73.1% | 92 | 86.8% |
| Need income | 140 | 70.4% | 57 | 61.3% | 83 | 78.3% |
| Need health benefits | 8 | 4.0% | 2 | 2.2% | 6 | 5.7% |
|  |  |  |  |  |  |  |
| Hours worked: |  |  |  |  |  |  |
| Worked Full-time | 30 | 12.1% | 15 | 13.0% | 15 | 11.4% |
| Worked Part-time | 149 | 60.3% | 72 | 62.6% | 77 | 58.3% |
| Missing hours of work | 68 | 27.5% | 28 | 24.3% | 40 | 30.3% |
|  |  |  |  |  |  |  |
| Time of break from work |  |  |  |  |  |  |
| < 0 | 26 | 10.5% | 8 | 7.0% | 18 | 13.6% |
| < 3 months | 83 | 33.6% | 36 | 31.3% | 47 | 35.6% |
| 3-6 months | 40 | 16.2% | 23 | 20.0% | 17 | 12.9% |
| 6-12 months | 42 | 17.0% | 16 | 13.9% | 26 | 19.7% |
| 12+ months | 18 | 7.3% | 10 | 8.7% | 8 | 6.1% |
| Missing date began working | 23 | 9.3% | 13 | 11.3% | 10 | 7.6% |
| Don't know date began working | 3 | 1.2% | 1 | 0.9% | 2 | 1.5% |
| Missing date of initial benefit claiming | 12 | 4.9% | 8 | 7.0% | 4 | 3.0% |
|  |  |  |  |  |  |  |
| Type of work |  |  |  |  |  |  |
| Public sector full-time | 10 | 4.0% | 6 | 5.2% | 4 | 3.0% |
| Public sector part-time | 68 | 27.5% | 33 | 28.7% | 35 | 26.5% |
| Public sector hours not known | 1 | 0.4% | 0 | 0.0% | 1 | 0.8% |
| Private sector | 65 | 26.3% | 32 | 27.8% | 33 | 25.0% |
| Self-employed | 26 | 10.5% | 7 | 6.1% | 19 | 14.4% |
| Other | 11 | 4.5% | 11 | 9.6% | 0 | 0.0% |
| Missing type of work | 66 | 26.7% | 26 | 22.6% | 40 | 30.3% |

Notes: Data is comprised of two cohorts that include individuals who were working as of March 2014 and had initiated retirement benefits as of May 2016 and individuals who were working as of April 2016 and had initiated retirement benefits as of May 2018.

**Appendix Table B5: Regression of plan to work (married only)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **(1)** | **(2)** | **(3)** |
| Male | 0.054 | 0.026 | 0.019 |
|  | (0.053) | (0.057) | (0.057) |
| Age  | -0.013\*\* | -0.011\* | -0.010\* |
|  | (0.006) | (0.006) | (0.006) |
| African American | 0.039 | 0.046 | 0.037 |
|  | (0.089) | (0.088) | (0.088) |
| Other race | 0.199\* | 0.206\* | 0.235\*\* |
|  | (0.118) | (0.118) | (0.118) |
| Bachelor's degree or above | 0.087 | 0.071 | 0.084 |
|  | (0.062) | (0.062) | (0.061) |
| 2013 Salary in $10k | 0.012 | 0.013 | 0.013 |
|  | (0.011) | (0.011) | (0.011) |
| Has 1-2 kids | 0.134\*\* | 0.116\* | 0.120\* |
|  | (0.066) | (0.065) | (0.065) |
| Has more than 2 kids | 0.162\*\* | 0.146\* | 0.164\*\* |
|  | (0.075) | (0.074) | (0.074) |
| Own health is good  | 0.060 | 0.044 | 0.263 |
|  | (0.098) | (0.099) | (0.170) |
| Expected mortality 85+  | -0.038 | -0.039 | 0.012 |
|  | (0.048) | (0.052) | (0.056) |
| High financial knowledge | -0.133\*\* | -0.130\*\* | -0.131\*\* |
|  | (0.051) | (0.050) | (0.050) |
| Time impatient | -0.104\*\* | -0.114\*\* | -0.118\*\* |
|  | (0.049) | (0.049) | (0.049) |
| Risk averse | 0.024 | 0.031 | 0.020 |
|  | (0.051) | (0.050) | (0.050) |
| Spouse age difference (+) |  | 0.009 | 0.009 |
|  |  | (0.009) | (0.009) |
| Spouse age difference (-) |  | -0.005 | -0.005 |
|  |  | (0.007) | (0.007) |
| Spouse employed  |  | 0.113\*\* | 0.111\*\* |
|  |  | (0.051) | (0.051) |
| Spouse health is good |  | 0.089 | 0.367\* |
|  |  | (0.066) | (0.199) |
| Spouse expected mortality 85+ |  | -0.033 | 0.189 |
|  |  | (0.058) | (0.120) |
| Own health is good\*Spouse health is good |  |  | -0.318 |
|  |  |  | (0.209) |
| Expected mortality 85+\*Spouse expected mortality 85+ |  |  | -0.292\*\* |
| mortality 85+ |  |  | (0.133) |
| N | 404 | 404 | 404 |

Notes: Data is comprised of two cohorts that include individuals who were working as of March 2014 and had initiated retirement benefits as of May 2016 and individuals who were working as of April 2016 and had initiated retirement benefits as of May 2018. The sample is restricted to individuals who were married as of ex ante survey. Dependent variable is planning to work after retirement while still working. Coefficients are average marginal effects from a probit model with standard errors in parentheses. All specifications include agency type and year of claiming fixed effects. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Appendix Table B6: Regression of work after retirement (married only)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **(1)** | **(2)** | **(3)** |
| Plan to work | 0.297\*\*\* | 0.276\*\*\* | 0.277\*\*\* |
|  | (0.055) | (0.055) | (0.055) |
| DK plan to work | 0.001 | 0.000 | -0.000 |
|  | (0.077) | (0.075) | (0.075) |
| Male | 0.033 | 0.107\* | 0.106\* |
|  | (0.051) | (0.054) | (0.054) |
| Age  | -0.011\* | -0.004 | -0.004 |
|  | (0.006) | (0.006) | (0.006) |
| African American | -0.103 | -0.086 | -0.085 |
|  | (0.085) | (0.083) | (0.084) |
| Other race | -0.065 | -0.026 | -0.011 |
|  | (0.113) | (0.115) | (0.119) |
| Bachelor's degree or above | 0.033 | 0.030 | 0.028 |
|  | (0.062) | (0.060) | (0.060) |
| 2013 Salary in $10k | 0.016 | 0.014 | 0.014 |
|  | (0.011) | (0.011) | (0.011) |
| Has 1-2 kids | -0.091 | -0.112\* | -0.116\* |
|  | (0.065) | (0.064) | (0.065) |
| Has more than 2 kids | -0.081 | -0.108 | -0.111 |
|  | (0.076) | (0.075) | (0.076) |
| Own health is good  | 0.112 | 0.196\*\* | 0.238\* |
|  | (0.079) | (0.082) | (0.131) |
| Expected mortality 85+  | 0.040 | 0.137\*\* | 0.156\* |
|  | (0.055) | (0.065) | (0.086) |
| High financial knowledge | -0.067 | -0.050 | -0.052 |
|  | (0.049) | (0.048) | (0.049) |
| Time impatient | 0.011 | 0.018 | 0.017 |
|  | (0.047) | (0.046) | (0.046) |
| Risk averse | -0.038 | -0.052 | -0.052 |
|  | (0.049) | (0.047) | (0.048) |
| Cared for children | 0.229\*\* | 0.241\*\*\* | 0.242\*\*\* |
|  | (0.089) | (0.088) | (0.089) |
| Cared for grandchildren | 0.001 | -0.030 | -0.033 |
|  | (0.067) | (0.066) | (0.066) |
| Cared for anyone else | 0.105\* | 0.081 | 0.076 |
|  | (0.058) | (0.058) | (0.059) |
| Spouse age difference (+) |  | -0.013 | -0.012 |
|  |  | (0.009) | (0.009) |
| Spouse age difference (-) |  | 0.009 | 0.009 |
|  |  | (0.006) | (0.006) |
| Spouse is employed  |  | 0.205\*\*\* | 0.205\*\*\* |
|  |  | (0.047) | (0.047) |
| Spouse health is good  |  | -0.152\*\* | -0.099 |
|  |  | (0.068) | (0.148) |
| Spouse expected mortality 85+  |  | -0.130\* | -0.108 |
|  |  | (0.067) | (0.088) |
| Own health is good\*Spouse health is good |  |  | -0.067 |
|  |  |  | (0.167) |
| Expected mortality 85+\*Spouse expected mortality 85+ |  |  | -0.050 |
| mortality 85+ |  |  | (0.133) |
| N | 416 | 416 | 416 |

Notes: Data is comprised of two cohorts that include individuals who were working as of March 2014 and had initiated retirement benefits as of May 2016 and individuals who were working as of April 2016 and had initiated retirement benefits as of May 2018. The sample is restricted to individuals who were married as of ex post survey. Dependent variable is having worked for pay after initiating retirement benefits. Coefficients are average marginal effects from a probit model with standard errors in parentheses. All specifications include agency type and year of claiming fixed effects. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Appendix Table B7: Regression of Retirement Income Well-being** **(Alternative Plan to Work Definition)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Best timing** | **Best payment option** | **Enough info** | **Saved enough** | **Confident** | **Satisfied**  |
|  | **(1)** | **(2)** | **(3)** | **(4)** | **(5)** | **(6)** |
| Plan to work | 0.053 | 0.023 | -0.047 | -0.326\*\*\* | -0.075 | -0.161\*\* |
|  | (0.073) | (0.056) | (0.064) | (0.088) | (0.075) | (0.071) |
| DK plan to work | -0.050 | -0.021 | -0.020 | -0.054 | -0.010 | -0.029 |
|  | (0.047) | (0.041) | (0.050) | (0.050) | (0.051) | (0.056) |
| Worked | -0.046 | 0.022 | 0.025 | 0.004 | 0.016 | 0.046 |
|  | (0.041) | (0.036) | (0.043) | (0.043) | (0.044) | (0.048) |
| Plan to work \* Worked | -0.145 | -0.037 | 0.004 | 0.004 | -0.207\*\* | -0.034 |
|  | (0.088) | (0.072) | (0.083) | (0.111) | (0.099) | (0.093) |
| Male | 0.125 | -0.031 | 0.022 | 0.252\*\*\* | 0.240\*\* | 0.077 |
|  | (0.096) | (0.069) | (0.087) | (0.095) | (0.093) | (0.100) |
| Married | 0.003 | 0.021 | -0.027 | 0.157\*\*\* | 0.051 | 0.027 |
|  | (0.044) | (0.037) | (0.044) | (0.051) | (0.051) | (0.049) |
| Male \* Married | -0.121 | 0.058 | 0.057 | -0.191\* | -0.062 | 0.018 |
|  | (0.103) | (0.077) | (0.096) | (0.104) | (0.103) | (0.110) |
| Age  | -0.008\* | 0.001 | 0.006 | -0.001 | 0.006 | 0.001 |
|  | (0.004) | (0.004) | (0.004) | (0.005) | (0.005) | (0.005) |
| African American | -0.016 | -0.005 | -0.034 | -0.004 | -0.030 | -0.024 |
|  | (0.053) | (0.045) | (0.053) | (0.063) | (0.063) | (0.061) |
| Other race | 0.068 | 0.003 | 0.047 | 0.060 | -0.222 | -0.067 |
|  | (0.115) | (0.091) | (0.112) | (0.117) | (0.137) | (0.121) |
| Bachelor's degree or above | 0.032 | 0.042 | 0.034 | -0.000 | -0.045 | 0.014 |
|  | (0.044) | (0.037) | (0.044) | (0.050) | (0.050) | (0.051) |
| 2013 Salary in $10k | -0.007 | 0.011 | 0.013 | 0.023\*\*\* | 0.026\*\*\* | 0.022\*\* |
|  | (0.008) | (0.008) | (0.009) | (0.008) | (0.009) | (0.010) |
| Has 1-2 kids | -0.021 | -0.091\*\* | -0.019 | -0.163\*\*\* | -0.164\*\*\* | -0.142\*\*\* |
|  | (0.046) | (0.044) | (0.046) | (0.048) | (0.048) | (0.053) |
| Has more than 2 kids | -0.039 | -0.120\*\* | 0.007 | -0.144\*\* | -0.185\*\*\* | -0.098 |
|  | (0.057) | (0.051) | (0.058) | (0.061) | (0.061) | (0.066) |
| Own health is good  | 0.134\*\*\* | 0.135\*\*\* | 0.104\*\* | 0.287\*\*\* | 0.026 | 0.214\*\*\* |
|  | (0.049) | (0.038) | (0.050) | (0.070) | (0.060) | (0.057) |
| Expected mortality 85+  | 0.075\* | 0.071\* | 0.009 | 0.106\*\* | 0.080\* | 0.038 |
|  | (0.041) | (0.036) | (0.040) | (0.041) | (0.042) | (0.045) |
| High financial knowledge | -0.006 | -0.029 | 0.008 | 0.034 | 0.058 | 0.024 |
|  | (0.036) | (0.031) | (0.037) | (0.040) | (0.040) | (0.041) |
| Time impatient | 0.006 | -0.001 | 0.018 | -0.018 | 0.008 | -0.036 |
|  | (0.034) | (0.029) | (0.035) | (0.038) | (0.039) | (0.039) |
| Risk averse | -0.030 | 0.019 | 0.004 | 0.003 | -0.071\* | 0.021 |
|  | (0.036) | (0.031) | (0.037) | (0.039) | (0.039) | (0.041) |
| Cared for children | -0.078 | -0.099\*\* | -0.099 | -0.070 | 0.002 | -0.129\* |
|  | (0.061) | (0.049) | (0.062) | (0.076) | (0.075) | (0.072) |
| Cared for grandchildren | 0.081 | 0.079\* | 0.108\*\* | 0.007 | -0.015 | 0.020 |
|  | (0.050) | (0.044) | (0.054) | (0.054) | (0.054) | (0.056) |
| Cared for anyone else | 0.032 | -0.002 | 0.008 | -0.103\*\* | -0.136\*\*\* | -0.070 |
|  | (0.044) | (0.037) | (0.044) | (0.048) | (0.050) | (0.049) |
| N | 564 | 564 | 564 | 564 | 564 | 564 |

Notes: Data is comprised of two cohorts that include individuals who were working as of March 2014 and had initiated retirement benefits as of May 2016 and individuals who were working as of April 2016 and had initiated retirement benefits as of May 2018. Dependent variables are indicated in column headings. Plan to work variable now also equals zero for those who indicated plan to work and did not give stated reason as "need income".Coefficients are average marginal effects from a probit model with standard errors in parentheses. All specifications include agency type and year of claiming fixed effects. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Appendix Table B8: Regression of Work after Retirement (Alternative specification)**

|  |  |  |
| --- | --- | --- |
|  | **Planned to work** | **Did not plan to work** |
|  | **(1)** | **(2)** |
| Male | 0.037 | 0.141\*\*\* |
|  | (0.116) | (0.195) |
| Married | -0.009 | 0.066 |
|  | (0.066) | (0.080) |
| Male \* Married | 0.034 | -0.161 |
|  | (0.132) | (0.202) |
| Age  | -0.015\*\* | -0.016 |
|  | (0.006) | (0.008) |
| African American | -0.048 | -0.348 |
|  | (0.081) | (0.138) |
| Other race | -0.059 | - |
|  | (0.123) | - |
| Bachelor's degree or above | -0.049 | 0.247\* |
|  | (0.069) | (0.076) |
| 2013 Salary in $10k | 0.022\* | -0.011 |
|  | (0.012) | (0.014) |
| Has 1-2 kids | -0.113 | 0.105 |
|  | (0.073) | (0.074) |
| Has more than 2 kids | -0.083 | 0.055 |
|  | (0.090) | (0.099) |
| Own health is good  | 0.078 | 0.246 |
|  | (0.086) | (0.107) |
| Expected mortality 85+  | 0.069 | 0.024 |
|  | (0.065) | (0.061) |
| High financial knowledge | -0.018 | -0.145\* |
|  | (0.054) | (0.061) |
| Time impatient | -0.052 | 0.029 |
|  | (0.053) | (0.058) |
| Risk averse | -0.005 | 0.038 |
|  | (0.055) | (0.063) |
| Cared for children | 0.244\*\* | 0.168 |
|  | (0.095) | (0.144) |
| Cared for grandchildren | -0.060 | 0.030 |
|  | (0.079) | (0.080) |
| Cared for anyone else | 0.066 | 0.043\*\*\* |
|  | (0.064) | (0.080) |
| N | 351 | 213 |

Notes: Data is comprised of two cohorts that include individuals who were working as of March 2014 and had initiated retirement benefits as of May 2016 and individuals who were working as of April 2016 and had initiated retirement benefits as of May 2018. Dependent variable is having worked for pay after initiating retirement benefits. Coefficients are average marginal effects from a probit model with standard errors in parentheses. All specifications include agency type and year of claiming fixed effects. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Appendix C: Definition of Key Survey Variables**

**Plan to Work**

Plan to Work in Table 4-6 is defined as having checked any option except for “Completely retire and not work at all” in the question below in S2014 for Sample 1.

**Once you terminate your job as a government employee, which of the following do you plan**

* Completely retire and not work at all
* Return to work for my current employer as a contractor
* Leave my current job, but work full-time doing similar work
* Leave my current job, but work full-time doing different work
* Leave my current job, but work part-time doing similar work
* Leave my current job, but work part-time doing different work

Plan to Work in Table 4-6 is defined as having checked “Work for pay at another job within 6 months of retiring” or “Work for pay after a period of not working longer than 6 months” in the question below in S2016 for Sample 2. DK Plan to Work in Table 4-6 is defined as having checked “Don’t know” in the question below in S2016 for Sample 2.

**Once you stop working as a government employee, which of the following do you plan to do?**

* Completely retire and never work for pay again
* Work for pay at another job within 6 months of retiring
* Work for pay after a period of not working longer than 6 months
* Don’t know

**Worked**

Having worked for pay in Table 5 and 6 is defined as having checked “Yes” in the question below.

**After stopping working for the North Carolina state or local government employer indicated above, have you ever worked for pay?**

* Yes
* No

**Number of Children**

Has 1-2 Kids in Table 4-6 is defined as having checked 1 or 2 in the question below. Has More Than 2 Kids is defined as having checked 3, 4, or 5. The omitted group is those who checked none or don’t know.

**How many children do you have?**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<scroll box: none; 1; 2; 3; 4; 5 or more; don’t know>

**Health**

Own Health Is Good in Table 4-6 is defined as having checked “Good” or “Excellent” in the question below.

**How would you rate your health, generally?**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| * Excellent
 | * Very Good
 | * Good
 | * Fair
 | * Poor
 |

**Life Expectancy**

Expected Mortality 85+ in Table 4-6 is defined as having checked “85-89” or “90 or older” in the question below.

**Until what age do you expect to live?**

* Less than 75
* 75 to 79
* 80 to 84
* 85 to 89
* 90 or older
* Not sure

**Care for Family Members**

Care for Children variable in Table 5 and 6 is defined as having checked the “Children” option for the following question in S2016 for Sample 1 or in S2018 for Sample 2. Similarly, Care for Grandchildren is defined as having checked the “Grandchildren” option. Care for Anyone else is defined as having checked any option except for “Children”, “Grandchildren”, or “I do not typically spend time caring for any of these individuals”.

**In a typical week, do you spend time caring for any of the following family members? Check all that apply.**

* Children
* My own parents
* My spouse/partner's parents
* My spouse/partner
* Grandchildren
* Other family members
* I do not typically spend time caring for any of these individuals

**Financial Knowledge**

High Financial Knowledge variable in Table 4-6 is defined as correctly answering all three financial literacy questions listed below.[[1]](#footnote-1) Underlined text indicate the correct answer.

**Suppose you had $100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?**

|  |  |  |  |
| --- | --- | --- | --- |
| * More than $110
 | * Exactly $110
 | * Less than $110
 | * Do not know
 |

**Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?**

* More than today
* Exactly the same
* Less than today
* Do not know

**Is this statement True or False? Buying a single company’s stock usually provides a safer return than a stock mutual fund.**

* True
* False
* Do not know

**Time Preference**

Time impatient variable in Table 4-6 is defined as choosing “Claim $1,000 today” in the survey question listed below. 40.7% of sample is time-impatient under this definition in the ex-post surveys. The proportion of time-impatient workers is 39.0% in the ex-ante surveys.

**Suppose that you won a prize that is worth $1,000 if you take it today. Alternatively, you could wait one year to claim the prize and be guaranteed to receive $1,200. Would you claim the $1,000 dollars today, or would you wait one year for the $1,200?**

* Claim $1,000 today
* Wait one year and claim $1,200
* Not sure

**Risk Preference**

Risk averse variable in Table 4-6 is defined as choosing “Prize A” or “Not sure” in the survey question listed below, which is only available in the ex-post surveys. 40.7% of sample is risk-averse under this definition.

**Suppose that with Prize A, you are guaranteed to receive $1,000. Alternatively, if you choose prize B, you will have a 50-50 chance of receiving $4,000 and a 50-50 chance of receiving nothing. Which prize would you choose -- Prize A or Prize B?**

* Prize A
* Prize B
* Not sure

**Well-Being Outcomes:**

The six retiree well-being outcomes in Table 6 of the text are derived from the following questions. The outcome is binary with a 1 for “agree” or “strongly agree” and 0 otherwise. Results are similar when the outcome is alternatively “strongly agree” only.

**Please indicate whether you agree or disagree with the following statements regarding your retirement [Strong Disagree; Disagree; Neither Agree nor Disagree; Agree; Strongly Agree; Not Applicable/ Don’t know]:**

“Best timing”: I made the best possible decisions concerning the timing of my retirement

“Best payment option”: I made the best possible decisions concerning the payment option for my TSERS/LGERS pension benefit.

“Enough info”: I had enough information to make the best possible decisions regarding my retirement.

“Saved enough”: I saved enough for retirement while working.

“Confident”: I am confident that I will not outlive my savings.

“Satisfied”: I am satisfied with the standard of living I have had since I first started receiving a pension check.

1. These three questions were designed by Lusardi and Mitchell and first implemented in the 2004 Health and Retirement Study (see Lusardi and Mitchell 2011a). The same questions were subsequently added to several other surveys and have been used in numerous studies (Lusardi, Mitchell, and Curto, 2014; Lusardi and Mitchell, 2011b; Lusardi and Mitchell, 2017). While the questions seem rather simple, articles generally indicate a rather low level of correct answers across a wide range of sample populations. [↑](#footnote-ref-1)