DISCUSSION PAPER SERIES

IZA DP No. 4652

Older Men: Pushed into Retirement by the Baby Boomers?

Diane J. Macunovich

December 2009

Forschungsinstitut
zur Zukunft der Arbeit
Institute for the Study
of Labor

Older Men: Pushed into Retirement by the Baby Boomers?

Diane J. Macunovich
University of Redlands
and IZA

Discussion Paper No. 4652
December 2009

IZA

P.O. Box 7240
53072 Bonn
Germany

Phone: +49-228-3894-0
Fax: +49-228-3894-180
E-mail: iza@iza.org

IZA Discussion Paper No. 4652
December 2009

ABSTRACT

Older Men: Pushed into Retirement by the Baby Boomers?

The United States has experienced over the past forty years an apparent correspondence between the pattern of retirement among men aged 55-69, and the proportion of workers aged 25-34 working part-year and/or part-time. The latter was an effect of overcrowding among the baby boomers as they moved through the labor market. The former is hypothesized here to be a function of the increasing difficulty older men experienced in obtaining "bridge jobs" – part-year and/or part-time – between career and retirement. It has been demonstrated in a series of studies that a large proportion (as many as two-thirds) of older men – especially those in lower-wage jobs – seek such bridge jobs before retirement. And in many cases these bridge jobs are not in the same industry or even occupation as the career job, leading one to suspect that in many cases there might be little transfer of skill or human capital. If this is the case, then the older workers would at least to some extent be in direct competition with younger workers for these jobs. Given difficulty in finding bridge jobs, a higher proportion of older workers might choose to enter retirement directly from career jobs, skipping the bridge jobs. A relative cohort size measure – the number of 25-34 year olds working part-year and/or part-time, relative to the number of older men, at the state level – has been shown here to be highly significant – both statistically and substantively – in explaining changes in older men's annual hours worked, labor force participation, and propensity to retire, and propensity to claim Social Security benefits. In general terms, relative cohort size can be said to have generated between 25-40% of the observed changes in these variables, with the strongest effects being on the propensity to claim Social Security benefits. Somewhat weaker effects were found for older women, in a companion to this study.

JEL Classification: J14, J21, J22, J26

Keywords: retirement, men's labor supply, labor force participation, relative cohort size, relative wage, part-time employment, bridge jobs, baby boom

Corresponding author:

Diane J. Macunovich
Department of Economics
University of Redlands
Redlands, CA 92346
USA
E-mail: diane_macunovich@redlands.edu

Older men's labor force participation declined steadily through the 1970s and into the early 1980s. But in the mid 1980s this decline tapered off, and rates remained fairly constant for a few years, after which they began an increase that has continued largely unabated through the most recent data. The increase among those aged 65-69 has been particularly marked. Early documentation of this trend was provided by Quinn (1997, 1998, 1999). There is a voluminous literature on the rising patterns of retirement in the 1970s and 1980s among men aged 55-64, but much less attention seems to have been paid to explaining the tapering off and decline in the last decade. This paper is an attempt to address the full secular trend of labor force participation and retirement, among men aged 55-69 in the four decades from 1968 through 2009. A similar study has been conducted for older women (Macunovich, 2009).

The most intensively examined factors with regard to early retirement appear to be changes in Social Security and pensions, and the availability of health insurance. Engelhardt and Kumar (2007) found a significant positive effect on labor force participation of the Senior Citizens' Freedom to Work Act of 2000, which abolished the Social Security earnings test for workers aged 65-69. Wise (2004), in a cross-country comparative analysis, indicated that public provision for support in retirement has significantly affected the trend toward earlier retirement. No attempt was made in that study to address the decline in rates that has occurred since the mid 1990s. However, Krueger and Pischke (1992) suggest that Social Security may not have played such a significant role in rising retirement rates in the 1970s and 1980s. Their analysis looked at the "notch babies" born in 1917-1921, who experienced a decline in Social Security benefits relative to expectations, and yet continued to retire at earlier ages.

Anderson, Gustman and Steinmeier (1999) on the other hand found that changes in pensions and Social Security accounted for about one-quarter of the decline in retirement age in the 1970s and 1980s among men in their early sixties, but that these changes could not explain patterns among those 65 and over. Friedberg and Webb (2005) found that the increasing prevalence of defined contribution plans since the 1980s has caused workers to retire two years later, on average, than when defined benefit plans

predominated. On a related note, Coile and Levine (2006) considered the effect of the stock market boom and bust cycle between 1995 and 2002 on patterns of retirement, and found no significant effect of stock market exposure in this period.

With regard to access to health insurance, Karoly and Rogowski (1994), using SIPP data, found a significant positive effect of the provision of post-retirement health insurance on the likelihood of early retirement – a finding echoed by that of Blau and Gilleskie (2001) using HRS data. Similarly, Johnson, Davidoff and Perese (2003) found that the cost of post-retirement health insurance premiums had a negative and significant effect on retirement rates.

At least two other studies looked at the effect of local (state-level) economic conditions on the retirement behavior of older workers. Black and Liang (2004) found a negative effect of industry-level shocks (steel, coal and manufacturing generally) on employment, while Munnell, Soto, Triest and Zhivan (2008) found a significant effect of state-level economic indicators on differences across states in the labor force participation of 55-64 year olds. However, neither the health insurance studies nor the state-level studies specifically addressed the changing pattern of labor force participation over time – the fact that retirement rates have begun to decline after a long period of increase.

Most significant to the purposes of this study are a set of papers which point to the increasing prevalence of "bridge" employment among older men – that is, the tendency to exit career full-time jobs not directly into retirement, but rather into various forms of part-time work. Ruhm (1990) was perhaps the first to identify (and name) this phenomenon. He found that fewer than 40% of household heads retire directly from career jobs, and over half partially retire at some point in their lives. He also stressed that this post-career work is frequently in jobs outside the industry and occupation of the career position. This may have changed, to some extent, in more recent years, however: Giandrea, Cahill and Quinn (2008a) suggest that transition within occupations may be more frequent – in particular in moving to self employment. And the

same authors (2008b) found that younger cohorts seem to be following the same patterns as older cohorts. Peracchi and Welch (1994) emphasized the complexity of the patterns of transitions, with workers both entering to and exiting from retirement into these types of part-time work. In addition, they found that the prevalence of reduced participation was greatest among low-wage workers, and that the patterns of decreased participation among older workers paralleled those among younger workers during the 1970s and 1980s. This suggests some common underlying factor or factors affecting both older and younger workers – at least among those in low-wage jobs.

Ruhm, in a later study (1995), used data from the Retirement History Survey to study men in 1969, and from the HARRIS survey (commissioned by the Commonwealth Fund) to study men in 1989. In the earlier cohort he found that 62% who had left career jobs at age 54 or 55 were employed again at the later survey date – but in the later cohort this figure dropped to 41%. He found that early departures from career jobs – at ages 58 to 63 – correlate with high re-employment probabilities. Quinn (1998, 1999) and a more recent study – Cahill, Giandrea and Quinn (2008) – referred to this phenomenon as a "do-it-yourself" form of retirement. Using the Health and Retirement Study Cahill et al. found that two-thirds of younger retirees transition to part-time work from career jobs.

Approach

The approach in the current study builds on this concept of "bridge jobs", especially the findings that

- the majority of these bridge jobs are not in the same industry or occupation as the career job (Ruhm 1990), leading one to surmise that there is little transfer of skill or human capital from the career job to bridge job;
- the characteristics most highly correlated with the transition to bridge jobs are those associated with low-wage workers (Welch and Peracchi 1994), which again suggests lower levels of skill or human capital;

- the proportion of workers transitioning to bridge jobs declined significantly between 1969 and 1989 – a period when retirement rates were rising and labor force participation rates were falling, suggesting that access to bridge jobs may have declined during this period;
- the patterns of transitions among older workers paralleled those among younger workers in the 1970s and 1980s (Welch and Peracchi 1994).

These findings lead to the hypothesis that there may be a high level of competition and substitutability between older and younger workers for the types of part-time jobs typical of "bridge jobs", and that some common factor affected both older and younger workers in an increasing pattern during the 1970s and 1980s, which then attenuated in the 1990s and 2000s.

The "culprit" identified in this study – the common factor affecting both younger and older workers – is the post WWII baby boom. Their large relative cohort size – typified in a lagged Total Fertility Rate (TFR) – affected relative wages, unemployment, and the proportion of younger workers in part-time and/or part-year jobs, due to overcrowding in the cohort (Macunovich 1999, 2002). The relative cohort size measure used here for older males is consequently the ratio of 25-34 year old men working part-time and/or part-year, to the number of men aged 55 to 69, and it is instrumented (given the possibility of endogeneity in the contemporaneous relative cohort size variable) using a 30-year lag of the Total Fertility Rate.

The rationale behind these measures is that older men are using part-time and part-year jobs as "bridge jobs" prior to retirement, and because there is little transfer of human capital from career jobs they are at least to some extent competing with younger men for these jobs. To the extent that they find it difficult to find such jobs, they will be more likely to skip the "bridge jobs" and move directly into full retirement – or, alternatively, they will be less likely to re-enter the labor force after retirement.

Figures 1-3 display the patterns of four labor force indicators for older men: average annual hours worked, the proportion out of the labor force, the proportion reporting themselves as retired, and the proportion receiving Social Security benefits. There it can be seen that major changes have occurred over the last forty years, with older men withdrawing from the labor force in the period up to the mid 1980s, and reversing trends after the mid 1990s. The proportions out of the labor force rose from .12, .28 and .58 in 1968, to .24, .53 and .75 in 1985, for men aged 55-61, 62-64 and 65-69, respectively. The rate for men aged 55-61 then remained fairly constant, but the rates for the two older age groups declined to .44 and .64 by 2009. Average hours worked dropped by 8-15% for the three age groups between 1968 and the mid 1980s, and then rebounded afterward – the 65-69 group increasing by 24% in the period from 1990 to 2008.

Although at least some of the significant changes which occurred for the 65-69 age group after 1990 can probably be explained by changes in Social Security that occurred after 1983 (increases in the delayed retirement credit between 1990 and 2008) and in 2000 (the Senior Citizens' Freedom to Work Act, which removed the earnings test for workers aged 65-69), these Social Security changes cannot explain the fact that the early declines in hours worked, and increases in proportions retired, were halted well before 1990.

Also displayed in Figures 1-3 is the relative cohort size variable used to approximate the forces hypothesized to be influencing all three age groups: the ratio of the number of men aged 25-34 working part-year and/or part-time, to the number of men aged 55-69. Superimposed on this pattern is a 30-year lag of the Total Fertility Rate: the earlier pattern of births which produced the large cohort with its overcrowding and high proportions working part-year and/or part-time.

And finally, Figures 1-3 display men's relative hourly wages, which declined precipitously in the period prior to 1985, at the same time that labor force participation declined and rates of retirement rose. The relative wage for each age group is defined here as the average wage of part-year part-time workers

relative to the average full-time wage of the previous five year age group. That is, the assumption is that a worker, in deciding whether to take a bridge job at, say, age 55-59, will compare the wage that he could earn in that bridge job, relative to the wage he has been earning in a full-time career job, at age 50-54. That ratio fell from 1.29, 1.38 and 1.18 in 1967 to only 0.80, 0.92, and 0.85 in the 1984-87 period for the 55-61, 62-64 and 65-69 groups, respectively. But it then recovered to 1.12, 1.00 and 1.11 in the 2001-2004 period, presumably as baby boomers moved on and the market for part-year part-time jobs eased.

Data and Methodology

The data used in these analyses has been drawn exclusively from the March Current Population Survey (CPS) 1968-2009, as prepared in uniform files in *CPS Utilities* by Unicon. Data covered all men aged 25-34, and 55-69, with the 25-34 age group used for the numerator of a relative cohort size variable, and all men aged 55-69 for the remainder of the analyses[1].

The methodology employed is that of a typical labor supply model, but with relative cohort size variables added. The relative cohort size variable used was calculated as the number of 25-34 year old men working part-year and/or part-time, relative to the number of men aged 55-69 in each year and state[2]. Age-specific unemployment rates were calculated for each of the three groups groups – 55-61, 62-64 and 65-69 – calculated at the Metropolitan Statistical Area (MSA) level[3], and regressions were run using individual-level micro data with these state- and MSA-level variables attached to each record. In addition, each age-group's model was also tested with a 30-year lag of the Total Fertility Rate, as an instrument for the relative cohort size measure. Summary statistics describing the data are presented in Appendix Tables A1-A3.

[1] Those in the military were excluded from the analysis, however.
[2] There were 51 separate states (and DC) identified from 1977-2009, 22 from 1973-1976, and 30 from 1968-1972.
[3] MSA was not available prior to 1977, so state-level variables were used, specific to each age group, for those years. After 2004, BLS changed from MSAs to Consolidated Statistical Areas (CSA). The resulting number of levels used in each year was 1969-76: 21, 1977-85:45, 1986-2004:248, 2005:281 and 2006-09:265. For those not living in an MSA, the state-level variable was used.

Four models were estimated, for four labor supply indicators, separately for each of the three age groups:

$$H = \beta_0 + \beta_1 \ln W + \beta_2 I_e + \beta_3 I_o + \beta_4 RCS_{State} + \beta_5 U_{MSA} + \beta_6 M + \mathrm{B}'X + u \quad (1)$$

$$OLF = \gamma_0 + \gamma_1 \ln W + \gamma_2 I_e + \gamma_3 I_o + \gamma_4 RCS_{State} + \gamma_5 U_{MSA} + \gamma_6 M + \Gamma' X + u \quad (2)$$

$$R = \alpha_0 + \alpha_1 \ln W + \alpha_2 I_e + \alpha_3 I_o + \alpha_4 RCS_{State} + \alpha_5 U_{MSA} + \alpha_6 M + \mathrm{A}' X + u \quad (3)$$

$$R_{SS} = \delta_0 + \delta_1 \ln W + \delta_2 I_e + \delta_3 I_o + \delta_4 RCS_{State} + \delta_5 U_{MSA} + \delta_6 M + \Delta' X + u \quad (4)$$

Where

H represents annual hours worked in the previous year (including those with zeroes);

OLF represents a binary variable set to one for those out of the labor force;

R represents a binary variable set to one for those identifying themselves as retired;

R_{SS} represents a binary variable set to one for those receiving Social Security benefits;

W represents the man's own (instrumented) hourly wage, in constant 2008 dollars;

I_e represents the earnings of others in the family, defined as total family earnings minus own earnings, again in constant 2008 dollars;

I_o represents other income, which comprises interest, dividends, and rent, in 2008 dollars;

RCS_{State} represents the year- and state-specific relative cohort size;

U_{MSA} represents the age- and MSA-specific unemployment rate, in the year prior to the survey;

M represents a binary variable set to one for those who are married with spouse present; and

X is a vector of control variables.

The control variables included single year age dummies, four education dummies (with 16 years as reference group), three race dummies (with non-Hispanic white as reference group), twenty state

dummies[4], a time trend, and three indicators of MSA status (principal city, balance of MSA, and non-MSA).

In addition, each of models (1)-(4) was estimated for each age group substituting a 30-year lag of the Total Fertility Rate for the relative cohort size variable. And finally, the models for those aged 65-69 were tested with controls for the major changes in Social Security which occurred during the study period: a dummy for the years after 1990, the period in which the delayed retirement credit was increased, and another for the period after 2000, when the Senior Citizens' Freedom to Work Act was passed.

The methodology comprised three steps. In the first, hourly wages were calculated – in 2008 dollars using the Consumer Price Index – as total annual wages and salary in the previous year divided by annual hours worked, with the latter calculated as weeks worked times the usual number of hours worked per week in the previous year[5]. The annual wages and salary were first multiplied by a factor if 1.45 if topcoded, as in Blau and Kahn (2007). The hourly wage was imputed for those with no reported wage, the self-employed, and those whose calculated wage fell outside the range $2.50 – $250 in 2008 dollars. The imputation process was based on separate logwage regressions for those with less than 20 weeks worked and those with 20 or more weeks worked, separately for each age group. That is, it was assumed, as in, for example, Blau and Kahn (2007), that wages should be imputed based on the reported wage of those in groups with similar numbers of weeks worked.

The imputation regressions were run separately in each of 14 three-year groupings. Three-year groupings were used to achieve larger sample sizes for the imputation process, and March Supplement weights were

[4] Twenty-one state groupings were consistently available over all forty-two years.

[5] Since the variable "hours worked per week in the previous year" was not available prior to 1976, and weeks worked in the previous year was available only in groupings, an imputation algorithm developed by Finis Welch (1979) was used to allocate hours and weeks worked for these years. Details available on request from the author.

normalized to sum to one in each year, so that each year carried equal weight in the regressions. The regressions each included four age dummies, two year dummies, four education dummies, three race dummies, twenty state dummies, and three indicators of MSA status.

In the second step, treating own wages as endogenous, wages were instrumented – again separately for each age group and time period – by regressing logwage on four age dummies, four education dummies, three race dummies, twenty state dummies, and three indicators of MSA status. In addition, following on Blau and Kahn (2007), a series of dummy variables representing wage deciles was included, which served as excluded instruments in the final hours, participation, and retirement equations. As indicated in Blau and Kahn, use of the deciles "corrects to some degree for measurement error in the wage" (p. 406).

The third step involved estimating each of the equations in (1) - (4), separately for each age group, over the entire 42-year period. Equation (1) was treated as a weighted IV linear model, while (2), (3) and (4) were weighted IV binary probit models.

Results

The results of this procedure are presented in Tables 1 – 4, for each of the three age groups, 55-61, 62-64 and 65-69. The top half of each table presents results using the lagged Total Fertility Rate (TFR), and the bottom half presents results using the state-level relative cohort size variable (RCS). Table 1 presents results for annual hours worked, Table 2 for the propensity to be out of the labor force, and Table 4 for the propensity to claim Social Security benefits. Table 3 presents results of the probit regressions for the binary variable "retired". This is a self-reported variable, and is derivative in the CPS. That is, the CPS is not designed specifically to elicit statistics on retirement; rather, retirement is a reason that can be given for not having worked in the previous year.

In all cases, the coefficients on the relative cohort size and Total Fertility Rate variables display the expected signs and all are highly significant. The variables have a strong negative effect on hours worked, and positive effects on the proportions out of the labor force, retired, and claiming Social Security benefits. This is consistent with the hypothesis that overcrowding in the market for part-year and part-time jobs induces older men to reduce their labor force participation: the competition for part-year and/or part-time jobs leads men to skip bridge jobs and move directly out of the labor force from career jobs.

The strength of the estimated effects varies across age groups and across the four variables. For the 65-69 age group, the effects are strongest on hours worked, with elasticities of -.4(RCS) and -.7(TFR). For the other two age groups, the estimated effects are strongest for the likelihood of reporting oneself as retired: .7-.8 for TFR and .3 for RCS). This is similar to the results found for older women, in the companion to this paper – although there, this is also the strongest effect for the 65-69 group, with the effect on hours worked the next strongest for this oldest age group.

The estimated elasticities are also strong for the likelihood of 62-64 year olds to claim Social Security benefits: .7(TFR) and .3(RCS). This is again similar to the results obtained for older women, in the companion paper. The weakest estimated elasticities were for hours worked among those in the 55-61 age group (-.15 for TFR and -.09 for RCS).

Adding controls for the changes in Social Security in the 65-69 age group reduces the estimated effect of the relative cohort size variable, but the coefficients remain highly statistically significant. In the case of claiming Social Security benefits, the estimated effect of the Total Fertility Rate is actually increased when these controls are added.

The estimated effect of the delayed retirement benefit on the 65-69 age group is not statistically significant in combination with the lagged Total Fertility Rate, but it is significant in combination with the Relative Cohort Size variable, with the expected signs: positive on hours worked, and negative on the other three variables. For older women in the companion paper, this control was either not significant, or only marginally significant for all but the likelihood of claiming Social Security benefits, where it had the expected negative effect.

The Freedom to Work Act has a more mixed effect. It has a significant positive effect on hours worked, and a negative effect on being out of the labor force or thinking of oneself as retired, but in terms of claiming Social Security benefits its estimated effect is positive in combination with the TFR, but negative in combination with the RCS. The effect was similar for older women.

In terms of own-wage elaticities, the results in Tables 1-4 show a marked difference across age groups. For hours worked, proportions out of the labor force, and proportions reporting themselves retired, the coefficient on the logwage is either not statistically significant for the 62-64 age group, or just barely significant. But the coefficient on the logwage differs in sign between the other two age groups. For hours worked, the effect is positive for those aged 55-61, but negative for those aged 65-69: the income effect dominates in the older age group. Correspondingly, for being out of the labor force or retired, the effect is negative for those aged 55-61 and positive for those aged 65-69. In terms of claiming Social Security benefits, however, the effect of the logwage is strongly negative for both of the older age groups. These patterns are nearly identical with those estimated in the companion paper, for older women.

Marriage has a very strong and significant positive effect on hours worked for all three age groups, and a negative effect on the probability of being out of the labor force, or claiming Social Security benefits in the 62-64 age group. Its estimated effect is negative on claiming benefits among the 65-69 age group, however, and it is not statistically significant in terms of the tendency to report oneself as retired. And

related to that, the effect of "others' earnings" – presumably in most cases a wife's earnings – is also consistently and significantly positive for hours worked for all age groups – and negative for the three retirement indicators. These two effects – the effect of marriage generally and of a wife's employment – suggest support for the hypothesis that men tend not to retire when their wives are still in the labor force.

However, in the companion paper the estimated effect of marriage on older women is almost the opposite: negative on hours worked, and positive on being out of the labor force or thinking of oneself as retired. But in terms of claiming Social Security benefits, the estimated effect of marriage is negative for both age groups. In terms of "others' earnings", however, the estimated effects on women are the same as for men – positive on hours worked and negative on the other three variables – except for women aged 55-61, where the effect of others' earnings is negative on hours worked and positive on the likelihood of being out of the labor force.

Other income – interest, rent, and dividends – as might be expected, has a negative effect on hours worked, and a positive effect on the other three variables for the two younger age groups. For those aged 65-69 the effects are only significant, however, for the two retirement variables. For older women in the companion paper, the signs of the effects are the same, and coefficients are significant in all cases.

The effect of the time trend is strongly negative on hours worked, and positive on the other three indicators, even after controlling for other variables. For older women, the trend is negative on hours worked only for women aged 62-64, and negative for all three age groups in terms of being out of the labor force – but positive in terms of the two retirement variables.

Table 5 is an attempt to estimate the significance of the relative cohort size variables in terms of the percentage of observed change that might be attributed to them. The table provides estimates of the maximum change which might be generated in the dependent variable, given the estimated elasticity and

the maximum observed percentage change in the independent variable, from its mean. In each case, that estimated change is then calculated as a percentage of the maximum change from the mean that was observed in the dependent variable. On this basis, in general terms it can be said that the lagged Total Fertility Rate would have generated an average of about 40%, and the Relative Cohort Size generated about 25%, of the observed change in the dependent variables: hours worked, and the probability of being out of the labor force, retired, and/or claiming Social Security benefits. These effects are strongest in terms of the propensity to claim Social Security benefits. Except for that propensity, the men's effects are all stronger than the women's, in the companion paper.

Summary

The post WWII baby boom began entering the labor market in the late 1960s, and their numbers swelled through the 1970s and into the 1980s. Their large size, relative to the size of the cohort of prime-aged workers, forced a whole host of dislocations for them: high unemployment, low relative wages, and increasing proportions forced into part-time and part-year work (Macunovich 1999, 2002). The peak of the baby boom had entered the labor force by 1985, but the dislocations did not end there, since the bottleneck created by those in the peak continued to block those following. Members of the baby boom did not escape the effects of their cohort's large size even in their thirties, as a result, and even members of the relatively smaller cohorts following the peak of the boom continued to find themselves pushed into part-time and part-year work. However, as relative cohort size eased in the 1990s, many of these effects began to ease, as well. In particular, the proportion of men aged 25-34 working part-year and/or part-time fell from 0.27 in 1992 to 0.19 in 2007 – comparable to its level before the entry of the baby boom into the job market.

At the same time that this was happening, the retirement rate rose fairly dramatically in the 1970s and 1980s among men aged 55 and above, and their labor force participation rates fell accordingly. The proportions reporting themselves as retired rose from 1968 levels of .02, .10 and .31 for those aged 55-

561, 62-64 and 65-69, respectively, to highs of .09, .30, and .58 in the mid 1990s, but then declined to .07, .23 and .49, respectively, in 2009.

Evidence suggests that the correspondence between these two phenomena – with strong increases in the period before 1985 and declines after 1995 – is not coincidental. It has been demonstrated in a number of studies that to a great extent older men do not retire directly from their career jobs. Instead, they tend to move through part-time and/or part-year "bridge jobs" before retiring – especially those in lower wage jobs. And very often these bridge jobs do not occur in the same industry or even the same occupation as the career job, suggesting a fairly low level of transference of skills and human capital. Thus to some extent, at least, these older men may have been competing for the same part-time, part-year jobs that the baby boomers were crowded into. Older men's relative wages in these jobs – defined as the wage they could earn in a part-time and/or part-year job relative to the wage they were earning in a full-time full-year job – fell from 1.29, 1.38 and 1.18 in 1967 to only 0.80, 0.92, and 0.85 in the 1984-87 period for the 55-59, 60-64 and 65-69 groups, respectively. But they then recovered to 1.12, 1.00 and 1.11 in the 2001-2004 period as baby boomers moved on and the job market for part-year part-time jobs eased (shown in Figures 1- 3).

As a result, this study has made use of a measure of relative cohort size – the number of 25-34 year old men working part-year and/or part-time, relative to the number of men aged 55-69. The measure was calculated, using March Current Population Survey (CPS) data, for each man at the level of his state for purposes of analysis. This relative cohort size measure might be thought of as a direct function of a 30-year lag of the Total Fertility Rate, a measure often used to illustrate the effects of the post WWII baby boom, as shown in the bottom right of Figures 1-3.

More importantly this measure has been shown here to be a highly significant factor – both statistically and substantively – affecting older men's annual hours worked, labor force participation and propensity to

retire and claim Social Security benefits. In general terms, relative cohort size can be said to have generated between 25-40% of the observed changes in these variables, with the strongest effects being on the propensity to claim Social Security benefits.

However, a significant portion of the sharp decline in annual hours worked, and in labor force participation, in the 1970s remains unexplained, indicating the considerable role played by the other factors which have been identified as important in affecting older men's decision to retire: access to health insurance, and changes in Social Security and pensions.

We have begun to experience the entry of the "echo boom" into the labor market, and one might initially expect that this would once again tend to motivate older workers to retire at higher rates, as the echo boom moves into its twenties and thirties. However, the ratio of these young workers, to older workers, will remain low since the older workers will themselves be members of the large baby boom cohort – so it remains to be seen whether it is the absolute or the relative size of the younger cohort which is significant in affecting patterns in the older cohort – or whether the large size of the retiring cohort itself may affect its labor force participation patterns. Any attempt to tease out the effects will have to differentiate them from the effects of the recent recession and diminution of 401Ks.

Bibliography

Anderson, P.M., A.L.Gustman and T.L.Steinmeier (1999). "Trends in male labor force participation and retirement: some evidence on the role of pensions and Social Security in the 1970s and 1980s", *Journal of Labor Economics*, 17(4, pt.1):757-782.

Black, D.A**.** and X.Liang (2005). "Local labor market conditions and retirement behavior." Working Paper 2005-08. Chestnut Hill, MA: Center for Retirement Research at Boston College.

Blau, D.M. and D.B.Gilleskie (2001). "Retiree health insurance and the labor force behavior of older men in the 1990s", *The Review of Economics and Statistics*, 83(1):64-80.

Blau, F.D. and L.M.Kahn (2007). "Changes in the labor supply behavior of married women, 1980-2000", Journal of Labor Economics, 25(3):393-438.

Cahill, K.E., M.D. Giandrea, and J.F. Quinn (2008). "A micro-level analysis of recent trends in labor force participation among older workers", Working Paper 2008-08. Chestnut Hill, MA: Center for Retirement Research at Boston College.

Coile, C.C. and P.B.Levine (2006). "Bulls, bears and retirement behavior", *Industrial and Labor Relations Review*, 59(3):408-429.

Englehart, G. and A.Kumar (2007). "The Repeal of the retirement earnings test and the labor supply of older men", Center for Retirement Research, Working Paper 2007-1, Center for Retirement Research at Boston College

Friedberg, L. and A.Webb (2005). "Retirement and the evolution of pension structure", *The Journal of Human Resources*, 40(2):281-308.

Giandrea, M.D, K.E.Cahill and J.F.Quinn (2008a). "Self-employment transitions among older American workers with career jobs", Boston College Working Paper 684.

Giandrea, M.D, K.E.Cahill and J.F.Quinn (2008b). " Bridge jobs: a comparison across cohorts", Boston College Working Paper 670.

Gustman, A.L. and T.Steinmeier (2008). "How changes in Social Security affect recent retirement trends", National Bureau of Economic Research, Inc, NBER Working Papers: 14105

Johnson, R.W., A.J.Davidoff and K.Perese (2003). "Health insurance costs and early retirement decisions", *Industrial and Labor Relations Review*, 56(4):716-729.

Karoly, L.A. and J.A.Rogowski (1994). "The effects of access to post-retirement health insurance on the decision to retire early", *Industrial and Labor Relations Review*, 48(1):103-123.

Krueger, A.B. and J-S.Pischke (1992). "The effect of Social Security on labor supply: a cohort analysis of the notch generation", *Journal of Labor Economics*, 10(4):412-437.

Macunovich, D.J. (1999). "The fortunes of one's birth: relative cohort size and the youth labor market in the U.S." *Journal of Population Economics*, 12(2,1999):215-272.

Macunovich, D.J. (2002). *Birth Quake: The Baby Boom and Its After Shocks*, University of Chicago Press: June 2002.

Macunovich, D.J. (2009). "Older women: pushed into retirement by the Baby Boomers?" IZA Discussion Paper # .

Munnell, A.H., M.Soto, R.K.Triest and N.A.Zhivan (2008). " How much do state economics and other characteristics affect retirement behavior?", Center for Retirement Research, Working Paper 2008-12, Center for Retirement Research at Boston College

Peracchi, F. and F.Welch (1994). "Trends in labor force transitions of older men and women", *Journal of Labor Economics*, 12(2):210-242.

Quinn, J.F. (1997). " Retirement trends and patterns in the 1990s:the end of an era?", Boston College Working Paper 385.

Quinn, J.F. (1998). " New paths to retirement", Boston College Working Paper 406.

Quinn, J.F. (1999). " Has the early retirement trend reversed?", Boston College Working Paper 424.

Ruhm, C. (1990). "Bridge jobs and partial retirement", *Journal of Labor Economics*, 8(4):482-501.

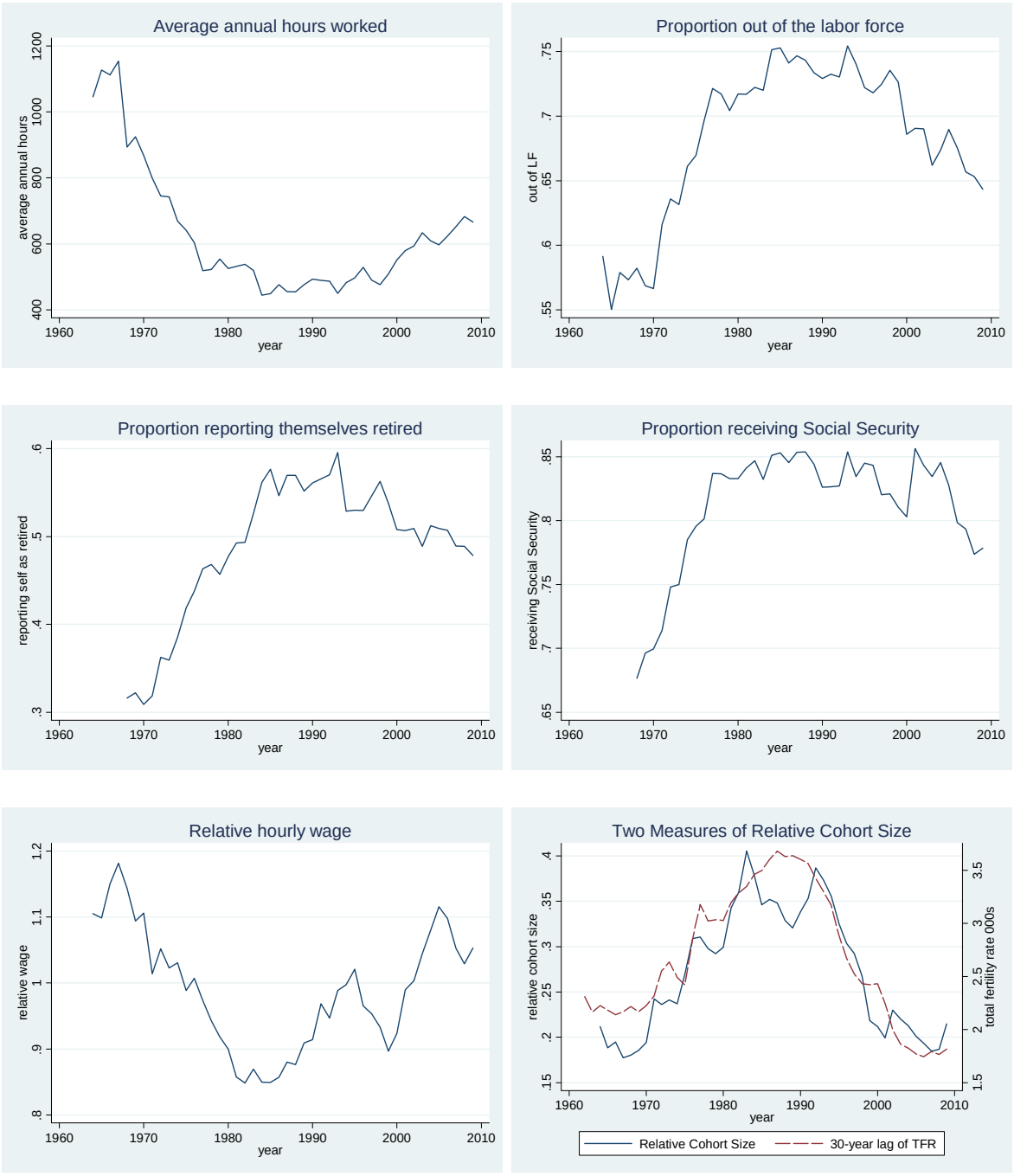
Ruhm, C. (1995). "Secular changes in the work and retirement patterns of older men", *The Journal of Human Resources*, 30(2):362-385.

Unicon Corporation (2009). *CPS Utilities, 1968-2009*.

Welch F (1979) Effects of Cohort Size on Earnings: the Baby Boom Babies' Financial Bust. *Journal of Political Economy* 87(5,pt.2):S65-S97.

Wise, D. (2004). "Social Security provisions and the labor force participation of older workers", *Population and Development Review*, 30(supplement):176-205.

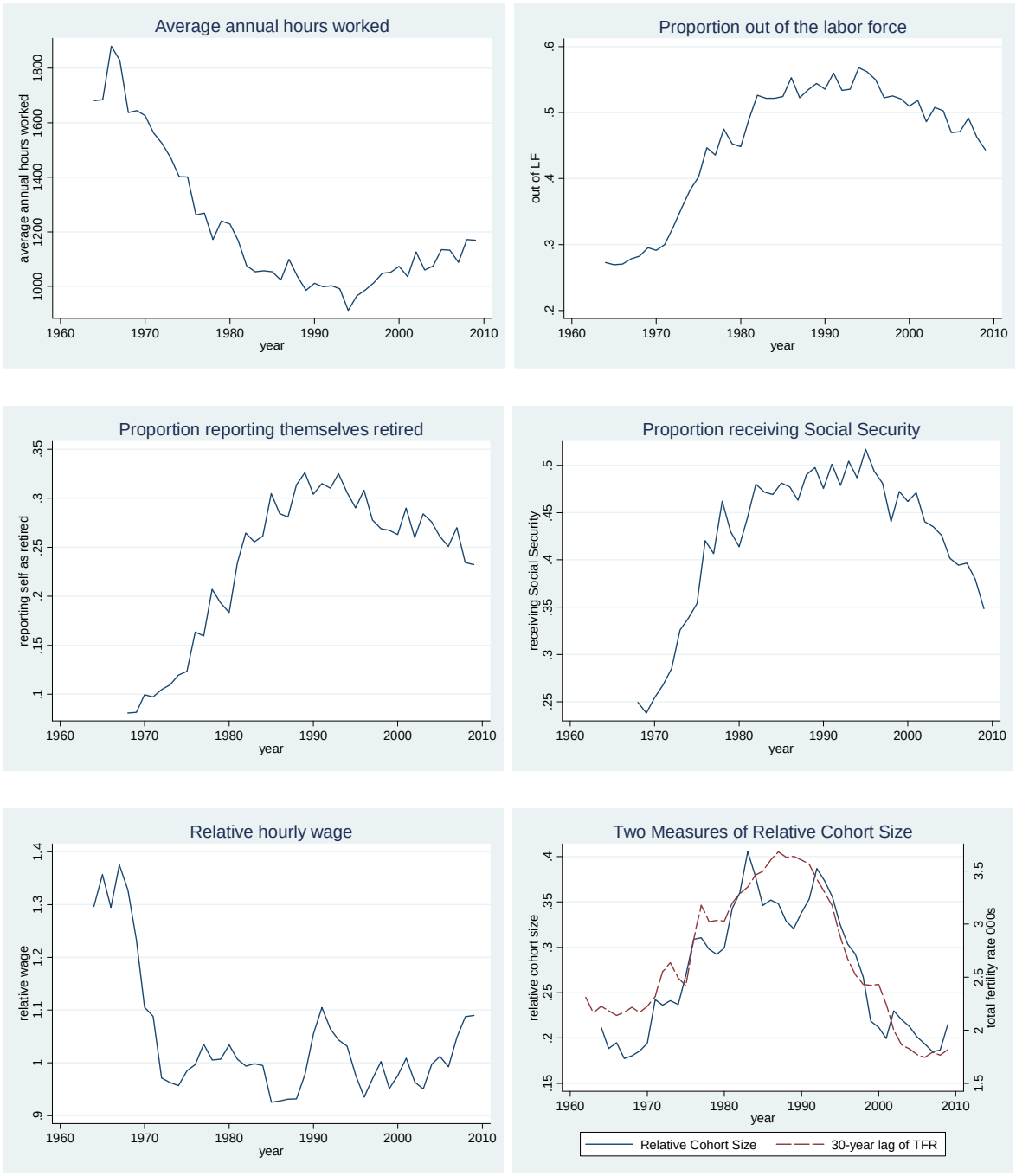
Figure 1: Labor Force and Retirement Characteristics for Men Aged 65-69



The relative wage is defined here as the average wage of part-year part-time workers relative to the average full-time wage of the previous five year age group. That is, the assumption is that a worker, in deciding whether to take a bridge job at age 65-69, will compare the wage that he could earn in that bridge job, relative to the wage he has been earning in a full-time career job, at age 60-64.

Relative cohort size is defined as the number of men aged 25-34 working part-year and/or part-time, relative to the number of men aged 55-69.

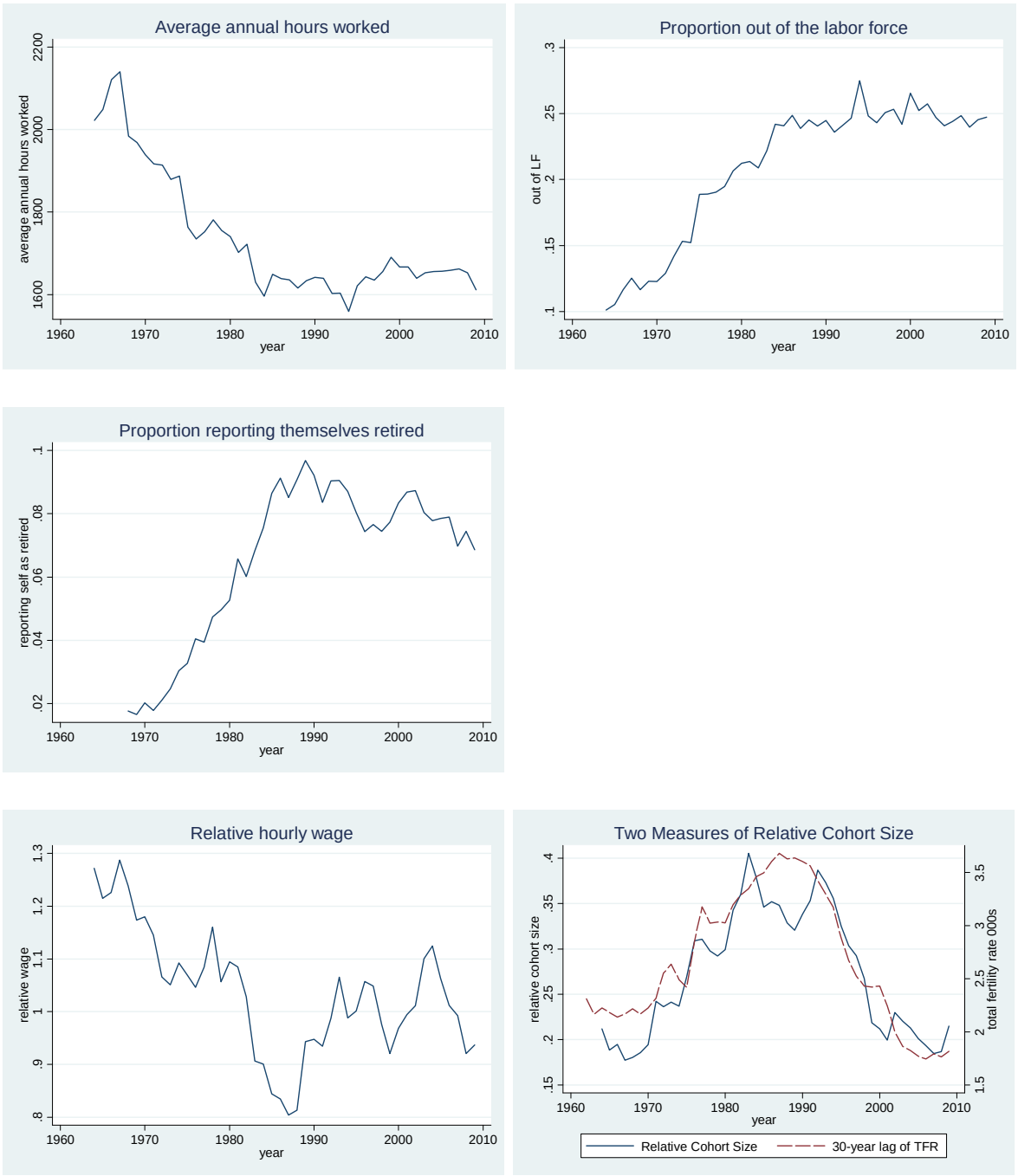
Figure 2: labor Force and Retirement Characteristics for Men Aged 62-64



The relative wage is defined here as the average wage of part-year part-time workers relative to the average full-time wage of the previous five year age group. That is, the assumption is that a worker, in deciding whether to take a bridge job at age 60-64, will compare the wage that he could earn in that bridge job, relative to the wage he has been earning in a full-time career job, at age 55-59.

Relative cohort size is defined as the number of men aged 25-34 working part-year and/or part-time, relative to the number of men aged 55-69.

Figure 3: Labor Force and Retirement Characteristics for Men Aged 55-61



The relative wage is defined here as the average wage of part-year part-time workers relative to the average full-time wage of the previous five year age group. That is, the assumption is that a worker, in deciding whether to take a bridge job at age 55-59, will compare the wage that he could earn in that bridge job, relative to the wage he has been earning in a full-time career job, at age 50-54.

Relative cohort size is defined as the number of men aged 25-34 working part-year and/or part-time, relative to the number of men aged 55-69.

Table 1: IV Regression Results for Annual Hours Worked (including zeroes)

	Men aged 55-61	Men aged 62-64	Men aged 65-69	
Lagged Total Fertility Rate (000s)	**-95.0 (-23.3)**	**-198.2 (-27.7)**	**-153.7 (-30.6)**	**-128.5 (-14.7)**
Logwage[1]	160.8 (28.9)	19.1 (2.3)	-82.3 (-15.3)	-83.3 (-15.4)
Others' earnings (000s)[2]	2.8 (40.4)	4.9 (29.7)	6.0 (36.4)	6.0 (36.4)
Other income (000s)[3]	-1.0 (-5.8)	-1.5 (-5.2)	0.3 (1.7)	0.3 (1.7)
Married?	294.2 (40.8)	202.7 (17.8)	56.3 (7.4)	56.2 (7.4)
Time Trend	-12.4 (-55.4)	-20.5 (-50.8)	-11.4 (-37.5)	-12.9 (-17.6)
Delayed Retire. Benefit?				9.8 (0.7)
Freedom to Work Act?				69.1 (4.0)
Adjusted R-square	0.1148	0.1258	0.1177	0.1179
TFR elasticity	**-.152**	**-.465**	**-.717**	**-.600**

	Men aged 55-61	Men aged 62-64	Men aged 65-69	
Relative Cohort Size (state-year specific)	**-561.7 (-20.7)**	**-1010.0 (-21.1)**	**-764.2 (-22.6)**	**-395.8 (-10.2)**
Logwage[1]	159.5 (28.6)	14.4 (1.7)	-86.2 (-16.1)	-83.5 (-15.5)
Others' earnings (000s)[2]	2.8 (40.5)	4.9 (29.9)	6.0 (36.7)	6.0 (36.5)
Other income (000s)[3]	-1.1 (-6.5)	-1.6 (-6.5)	0.2 (0.16)	0.2 (1.3)
Married?	294.7 (40.8)	200.7 (17.6)	56.7 (7.5)	56.5 (7.4)
Time Trend	-11.3 (-52.4)	-17.9 (-45.8)	-9.3 (-32.0)	-17.6 (-29.1)
Delayed Retire. Benefit?				106.6 (9.3)
Freedom to Work Act?				201.9 (16.5)
Adjusted R-square	0.1142	0.1210	0.1135	0.1167
Number of observations	207,238	74,031	106,663	106,663
RCS elasticity	**-.093**	**-.244**	**-.367**	**-.190**

* Reporting hours worked for years 1967-2008.
t-statistics in parentheses.
All regressions included 20 dummies for state groupings, age dummies, 4 education dummies, 3 race dummies, an MSA-specific unemployment rate, and 3 indicators of MSA residency status.
[1]Logwage is imputed for those reporting no wage, and instrumented for all.
[2]Defined as total family earnings minus own earnings
[3]Comprising interest, dividends and rent.

Table 2: IV Binary Probit Results for "Out of the Labor Force"

	Men aged 55-61	Men aged 62-64	Men aged 65-69	
Lagged Total Fertility Rate (000s)	**.034 (19.4)**	**.095 (26.4)**	**.064 (23.5)**	**.057 (11.5)**
Logwage[1]	-.073 (-32.7)	.005 (1.1)	.061 (20.3)	.062 (20.5)
Others' earnings (000s)[2]	-.001 (-28.7)	-.003 (-20.9)	-.002 (-27.5)	-.002 (-27.6)
Other income (000s)[3]	.0008 (12.8)	.0006 (4.3)	-.0001 (-1.6)	-.0001 (-1.6)
Married?	-.100 (-33.3)	-.073 (-12.5)	-.035 (-8.2)	-.035 (-8.2)
Time Trend	.005 (50.0)	.009 (42.4)	.005 (30.3)	.005 (11.8)
Delayed Retire. Benefit?				0.01 (1.3)
Freedom to Work Act?				-.026 (-2.6)
Pseudo R-square	0.0929	0.0764	0.0708	0.0710
TFR elasticity	**.424**	**.550**	**.251**	**.223**

	Men aged 55-61	Men aged 62-64	Men aged 65-69	
Relative Cohort Size (state-year specific)	**.184 (16.4)**	**.478 (20.0)**	**.339 (18.2)**	**.191 (8.7)**
Logwage[1]	-.073 (-28.7)	.007 (1.7)	.063 (20.9)	.062 (20.6)
Others' earnings (000s)[2]	-.001 (-28.7)	-.003 (-21.2)	-.002 (-27.7)	-.002 (-27.7)
Other income (000s)[3]	.0008 (13.5)	.0008 (5.6)	-.00002 (-0.2)	-.00009 (-1.1)
Married?	-.097 (-33.3)	-.071 (-12.2)	-.035 (-8.2)	-.035 (-8.2)
Time Trend	.005 (48.9)	.008 (38.3)	.004 (26.0)	.007 (20.4)
Delayed Retire. Benefit?				-.032 (-4.8)
Freedom to Work Act?				-.085 (-12.0)
Pseudo R-square	0.0922	0.0725	0.0688	0.0703
Number of observations	207,238	74,031	106,663	106,663
RCS elasticity	**.236**	**.285**	**.137**	**.077**

* Reporting labor force status in years 1968-2009.
t-statistics in parentheses.
All regressions included 20 dummies for state groupings, age dummies, 4 education dummies, 3 race dummies, an MSA-specific unemployment rate, and 3 indicators of MSA residency status.
[1]Logwage is imputed for those reporting no wage, and instrumented for all.
[2]Defined as total family earnings minus own earnings
[3]Comprising interest, dividends and rent.

Table 3: IV Binary Probit Results for "Retired" (as self-reported)

	Men aged 55-61	Men aged 62-64	Men aged 65-69	
Lagged Total Fertility Rate (000s)	**.021 (21.1)**	**.075 (24.8)**	**.079 (26.2)**	**.070 (12.9)**
Logwage[1]	-.033 (-28.1)	-.006 (-1.8)	.046 (14.0)	.047 (14.2)
Others' earnings (000s)[2]	-.0006 (-17.4)	-.002 (-18.7)	-.003 (-24.2)	-.003 (-24.3)
Other income (000s)[3]	.0005 (18.3)	.001 (10.0)	.0005 (4.9)	.0005 (4.9)
Married?	-.003 (-1.8)	.003 (0.6)	.008 (1.6)	.008 (1.6)
Time Trend	.002 (38.7)	.008 (44.2)	.008 (45.9)	.008 (18.4)
Delayed Retire. Benefit?				.010 (1.1)
Freedom to Work Act?				-.030 (-2.8)
Pseudo R-square	0.0909	0.0779	0.0670	0.0671
TFR elasticity	**.802**	**.732**	**.429**	**.380**

	Men aged 55-61	Men aged 62-64	Men aged 65-69	
Relative Cohort Size (state-year specific)	**.081 (13.5)**	**.330 (16.9)**	**.371 (18.5)**	**.181 (7.6)**
Logwage[1]	-.033 (-28.0)	-.004 (-1.3)	.049 (14.4)	.047 (14.1)
Others' earnings (000s)[2]	-.0006 (-17.4)	-.001 (-11.1)	-.003 (-24.4)	-.003 (-24.3)
Other income (000s)[3]	.0006 (19.0)	.001 (11.1)	.0006 (6.5)	.0005 (5.4)
Married?	-.003 (-1.8)	.004 (0.9)	.007 (1.6)	.008 (1.6)
Time Trend	.002 (37.5)	.007 (41.5)	.007 (41.7)	.011 (29.7)
Delayed Retire. Benefit?				-.045 (-6.2)
Freedom to Work Act?				-.107 (-14.4)
Pseudo R-square	0.0874	0.0728	0.0641	0.0660
Number of Observations	207,238	74,031	106,663	106,663
RCS elasticity	**.321**	**.331**	**.207**	**.101**

*Retirement given as the reason for not working in years 1967-2008.
t-statistics in parentheses.
All regressions included 20 dummies for state groupings, age dummies, 4 education dummies, 3 race dummies, an MSA-specific unemployment rate, and 3 indicators of MSA residency status.
[1]Logwage is imputed for those reporting no wage, and instrumented for all.
[2]Defined as total family earnings minus own earnings
[3]Comprising interest, dividends and rent.

Table 4: IV Binary Probit Results for "Receiving Social Security"

	Men aged 62-64	Men aged 65-69	
Lagged Total Fertility Rate (000s)	**.104 (29.1)**	**.050 (21.9)**	**.058 (14.0)**
Logwage[1]	-.060 (-14.5)	-.039 (-15.8)	-.041 (-16.4)
Others' earnings (000s)[2]	-.002 (-20.4)	-.001 (-22.3)	-.001 (-22.3)
Other income (000s)[3]	.0006 (4.2)	.0002 (2.7)	.0002 (2.7)
Married?	-.030 (-5.2)	.021 (6.0)	.021 (5.9)
Time Trend	.008 (38.9)	.004 (34.0)	.004 (12.7)
Delayed Retire. Benefit?			-.018 (-2.6)
Freedom to Work Act?			.032 (4.1)
Pseudo R-square	0.0951	0.0848	0.0855
TFE elasticity	**.673**	**.168**	**.195**

	Men aged 62-64	Men aged 65-69	
Relative cohort size (state-year-specific)	**.489 (20.7)**	**.240 (15.4)**	**.157 (8.6)**
Logwage[1]	-.057 (-13.7)	-.039 (-15.4)	-.041 (-16.5)
Others' earnings (000s)[2]	-.002 (-20.6)	-.001 (-22.6)	-.001 (-22.4)
Other income (000s)[3]	.0008 (5.8)	.0003 (3.9)	.00.2 (3.2)
Married?	-.029 (-5.1)	.021 (5.9)	.021 (5.9)
Time Trend	.007 (33.8)	.004 (30.0)	.007 (24.0)
Delayed Retire. Benefit?			-.066 (-11.8)
Freedom to Work Act?			-.032 (-5.5)
Pseudo R-square	0.0898	0.0821	0.0839
Number of Observations	74,031	106,663	106,663
RCS elasticty	**.326**	**.083**	**.054**

*Social Security benefits received in the years 1967-2008.
t-statistics in parentheses.
All regressions included 20 dummies for state groupings, age dummies, 4 education dummies, 3 race dummies, an MSA-specific unemployment rate, and 3 indicators of MSA residency status.
[1]Logwage is imputed for those reporting no wage, and instrumented for all.
[2]Defined as total family earnings minus own earnings
[3]Comprising interest, dividends and rent

Table 5: Potential Explanatory Power* of Relative Cohort Size Variables

	Men aged 55-61	Men aged 62-64	Men aged 65-69
Average Annual Hours Worked			
Maximum % change from mean	14.0	38.5	47.6
Max. % explained by change in RCS	4.5 (32.5%)	11.9 (31.0%)	9.3(19.5%)
Max. % explained by change in TFR	5.2(37.3%)	16.0(41.5%)	20.6(43.4%)
Proportion out of the Labor Force			
Maximum % change from mean	43.4	37.5	16.2
Max. % explained by change in RCS	11.5(26.6%)	13.9(37.2%)	3.8(23.2%)
Max. % explained by change in TFR	14.6(33.6%)	18.9(50.5%)	7.7(47.4%)
Proportion Reporting Themselves as Retired			
Maximum % change from mean	74.6	66.8	37.0
Max. % explained by change in RCS	15.7(21.0%)	16.2(24.2%)	4.9(13.2%)
Max. % explained by change in TFR	27.6(37.0%)	25.2(37.7%)	13.1(35.4%)
Proportion Claiming Social Security Benefits			
Maximum % change from mean		40.0	13.4
Max. % explained by change in RCS		15.9(39.9%)	2.4(18.2%)
Max. % explained by change in TFR		23.2(57.9%)	6.7(50.1%)

*Combining estimated elasticity with maximum % change from the mean, of each relative cohort size variable.

Table A1: Summary Statistics for Men Aged 55-61

	1969-71	1974-76	1979-81	1984-86	1989-91	1994-96	1999-01	2007-09	1968-2009
Average annual hours worked[6]	1942.9	1795.9	1732.9	1626.0	1637.6	1606.7	1670.0	1636.6	1704.7
Proportion out of labor force	.124	.176	.211	.243	.241	.257	.255	.247	.219
Proportion retired[7]	.018	.035	.056	.085	.091	.096	.098	.086	.071
Relative cohort size[8]	.207	.272	.311	.359	.337	.328	.210	.195	.281
Lagged Total Fertility Rate	2.236	2.588	3.085	3.519	3.600	2.906	2.366	1.791	2.731
Unemployment rate	.033	.043	.035	.054	.048	.048	.033	.050	.044
Logwage	2.924	3.021	3.100	3.070	3.061	3.056	3.097	3.079	3.063
Other's earnings[9]	21,074	20,862	22,394	22,470	26,083	25,785	29,767	31,242	25,653
Other income[10]	Na	na	4,830	6,467	6,783	6,204	7,405	5,310	4,743
Proportion married	.867	.828	.828	.819	.792	.786	.748	.715	.798
<12 years of school	.548	.446	.368	.343	.268	.203	.144	.104	.295
12 years of school	.265	.335	.334	.335	.363	.341	.333	.294	.322
13-15 yrs of school	.086	.101	.125	.119	.139	.204	.224	.267	.163
16 years of school	.053	.065	.098	.106	.108	.141	.159	.199	.119
>16 years of school	.048	.053	.075	.097	.122	.111	.140	.136	.101
Black	.026	.077	.083	.090	.093	.091	.088	.097	.081
Hispanic	.008	.025	.033	.045	.060	.065	.075	.087	.051
Other	.003	.011	.015	.019	.025	.032	.042	.054	.026

[6] Includes those with zero hours. Hours imputed for years before 1976, using algorithm from Finis Welch (1979).

[7] As self-reported : reason given for not working.

[8] Number of males aged 25-34 working part-time and/or part-year, divided by number of males aged 55-69.

[9] Total family earnings minus own earnings.

[10] Interest, dividends and rent. Not available in first two periods.

Table A2: Summary Statistics for Men Aged 62-64

	1969-71	1974-76	1979-81	1984-86	1989-91	1994-96	1999-01	2007-09	1968-2009
Average annual hours worked[11]	1,611.3	1,355.6	1,212.6	1,044.8	995.1	947.1	1,040.0	1,130.9	1,163.0
Proportion out of labor force	.295	.411	.464	.533	.548	.563	.523	.472	.472
Proportion retired[12]	.093	.135	.204	.284	.317	.335	.309	.280	.280
Proportion claiming Social Security benefits	.253	.371	.429	.476	.491	.500	.469	.377	.422
Relative cohort size[13]	.207	.272	.311	.359	.337	.328	.210	.195	.281
Lagged Total Fertility Rate	2.236	2.588	3.085	3.519	3.600	2.906	2.366	1.791	2.731
Unemployment rate	.028	.048	.039	.051	.041	.050	.033	.048	.043
Logwage	2.882	2.941	3.011	3.004	3.076	2.855	3.007	3.123	3.001
Others' earnings[14]	17,878	17,791	18,759	17,730	20,477	19,739	25,078	26,483	20,763
Other income[15]	na	na	5.549	7,859	8,454	6,424	6,934	6,433	5,358
Proportion married	.831	.823	.824	.808	.805	.796	.774	.754	.801
<12 years of school	.612	.543	.435	.368	.331	.242	.198	.116	.347
12 years of school	.210	.266	.322	.337	.322	.329	.334	.287	.307
13-15 yrs of school	.079	.091	.116	.117	.138	.190	.208	.248	.148
16 years of school	.099	.050	.071	.098	.113	.130	.141	.194	.107
>16 years of school	.049	.050	.056	.080	.096	.109	.119	.155	.091
Black	.025	.087	.081	.084	.089	.087	.085	.082	.078
Hispanic	.006	.025	.026	.042	.048	.061	.074	.078	.046
Other	.003	.008	.012	.020	.022	.022	.039	.048	.024
Sample size	8,495	10,707	10,402	9,801	8,956	7,378	6,771	12,282	128,820

[11] Includes those with zero hours. Hours imputed for years before 1976, using algorithm from Finis Welch (1979).

[12] As self-reported: reason given for not working.

[13] Number of males aged 25-34 working part-time and/or part-year, divided by number of males aged 55-69

[14] Total family earnings minus own earnings.

[15] Interest, dividends and rent. Not available in first two periods.

Table A3: Summary Statistics for Men Aged 65-69

	1969-71	1974-76	1979-81	1984-86	1989-91	1994-96	1999-01	2007-09	1968-2009
Average annual hours worked[16]	863.7	637.8	541.0	469.9	518.6	538.8	574.8	653.9	585.1
Proportion out of labor force	.584	.676	.713	.748	.732	.727	.701	.651	.697
Proportion retired[17]	.317	.414	.476	.562	.559	.560	.548	.516	.503
Prop. receiving Social Security benefits	.703	.794	.836	.850	.832	,841	.823	.783	.812
Relative cohort size[18]	.207	.272	.311	.359	.337	.328	.210	.195	.281
Lagged Total Fertility Rate	2.236	2.588	3.085	3.519	3.600	2.906	2.366	1.791	2.731
Unemployment rate	.040	.062	.045	.042	.032	.035	.033	.051	.044
Logwage	2.681	2.762	2.815	2.894	2.873	2.923	2.967	2.905	2.861
Other's earnings[19]	12,309	11,698	11,398	11,236	12,761	13,769	16,347	17,475	13,237
Other income[20]	na	na	7,166	9,589	10,223	7,818	10,279	8,287	6,914
Proportion married	.778	.814	.798	.796	.794	.777	.778	.767	.788
<12 years of school	.696	.609	.544	.440	.377	.300	.237	.156	.409
12 years of school	.157	.207	.260	.326	.320	.324	.326	.339	.287
13-15 yrs of school	.056	.081	.089	.103	.125	.174	.199	.210	.133
16 years of school	.054	.058	.059	.064	.097	.116	.139	.154	.095
>16 years of school	.037	.045	.048	.067	.081	.086	.099	.141	.076
Black	.025	.089	.087	.080	.081	.078	.089	.081	.079
Hispanic	.006	.023	.028	.035	.045	.058	.067	.073	.042
Other	.003	.010	.015	.019	.027	.023	.039	.054	.025
Sample size	6,524	8,877	8,537	7,990	7,736	6,503	5,540	9,110	106,870

[16] Includes those with zero hours. Hours imputed for years before 1976, using algorithm from Finis Welch (1979).

[17] As self-reported: reason given for not working.

[18] Number of males aged 25-34 working part-time and/or part-year, divided by number of males aged 55-69.

[19] Total family earnings minus own earnings

[20] Interest, dividends and rent. Not available in first two periods