University of Michigan Retirement Research Center

Working Paper

WP 2003-064

# Early Retirement Windows

Charles Brown

M R
R C

Project #: UM02-07

# "Early Retirement Windows"

Charles Brown
University of Michigan and
National Bureau of Economic Research

December 2003

Michigan Retirement Research Center
University of Michigan
P.O. Box 1248
Ann Arbor, MI 48104

**Acknowledgements**

This work was supported by a grant from the Social Security Administration through the Michigan Retirement Research Center (Grant # 10-P-98358-5). The opinions and conclusions are solely those of the authors and should not be considered as representing the opinions or policy of the Social Security Administration or any agency of the Federal Government.

# Early Retirement Windows

Charles Brown

**Abstract**

What happens to the employment status and earnings of workers who accept early-retirement windows? Using data from the first six waves of HRS (1992-2002) I find that those who accepted window offers experience a sharp decline in employment - most do not go to work elsewhere. Those who do accept jobs elsewhere work fewer hours and receive significantly lower earnings per hour. Transitions to self-employment are more common among window acceptors than other workers.

**Authors' Acknowledgements**

The research presented in this report was supported by a grant to the U.S. Social Security Administration (SSA) via the Michigan Retirement Research Center (MRRC). The conclusions are solely those of the author, not SSA or MRRC.

When an employer offers an early-retirement window and the worker accepts, the worker "retires" -- from that firm. Most studies of such window offers focus on those working for a single employer (e.g., Hogarth, 1988; Lumsdaine, Stock, and Wise, 1990; Mehay and Hogan, 1998, Pencavel, 2001). Typically, we know little about what happens to these workers after leaving that employer -- e.g., whether the worker "retires" in the broader sense of leaving the labor force or goes to work for another employer; for those who return to work, how many hours they work and how their new wage compares to that earned on their previous job.

Because the HRS is a longitudinal study of workers that is not limited to a worker's spell of employment with a particular employer, we can follow workers who accept window offers to answer these questions. In the tables below, workers who accepted window offers are identified, and compared with workers who rejected offers or did not receive such offers. Because those who receive window offers are typically covered by DB pensions, the "no offer" group is limited to those covered by DB pensions. Other than sample sizes, all data in the tables are weighted, using baseline respondent weights.

The analysis is restricted to the original HRS cohort. I had originally hoped that the new "War Baby" cohort (who were 51-56 when they entered the HRS in 1998) could be compared to the subset of the original HRS cohort who were 51-56 in 1992. It turns out, however, that declining frequency of window offers and the smaller number of individuals each age in the War Babies cohort combined to produce a sample of "new" early out windows that was too small for this purpose.[1]

Before turning to the results, an important caveat is in order. While roughly 600 HRS respondents accepted window offers, the proportion doing so in any one two-year "between-wave" interval is much smaller, and is particularly small after 1996 (see the first column of Table 1). When we focus on the subset of these workers who are employed in adjacent waves (to compute wage changes, for example) the sample sizes

[1] Among those born in 1942-47, only 45 reported having previously accepted a window offer when first interviewed in 1998, and 14 reported accepting an offer between waves 4 and 5.

become smaller still, particularly among those who accepted window offers (who have lower subsequent employment rates). Thus, while the tables present a detailed summary of the data, I will focus on patterns that are stable across waves; the sample is just too small to say whether outcomes of interest were different near the end of the period than earlier.

## Employment Status

Table 1 reports the employment status of each group of workers at each of the first six waves of the HRS. The first two groups are those who rejected (all) window offer(s), and those with DB pensions who never received an offer. These groups show the expected pattern of declining employment probabilities; for both groups, the probability of employment falls by over half over the 10-year period spanned by the table. The probability of being **self**-employed increases substantially in proportional terms, though is still only about 6 percent of the sample at Wave 6.

Of those who accepted a window offer at some time prior to the baseline survey in 1992, 52 percent were employed Wave I. Employment probabilities for this group fall over time, too, though more gradually than for those who had not accepted, or had never received, a window offer. By Wave 6, they are about 10 percentage points less likely to be employed than those in the comparison groups. Those who accepted window offers before Wave 1 have high self-employment probabilities at baseline (14.4 percent), and 10 percent of this group is still self-employed at the end of the period. Thus, while those who accepted these early window offers are less likely to be employed, they are substantially more likely to be self-employed than are those in the comparison groups.

Of those who accepted window offers between Wave 1 and Wave 2, all are working (for someone else) at Wave 1. At Wave 2, only 35.1 percent are working, and a fifth of these (7.2 percent of the group) has become self-employed. The proportion employed remains remarkably constant over the next four waves, and the proportion self-employed actually increases. By Wave 6, one third are working, and one third of these are working for themselves.

For those who accepted window offers after Wave 2, patterns are broadly similar (though smaller numbers of accepted offers make the individual cells less reliable).

Employment probabilities in the wave following the acceptance are slightly higher (39 percent)[2], as are probabilities of being self-employed (10 percent); both probabilities fall as these groups are followed over time

Thus, compared to those who rejected or did not receive window offers, those who accept window offers experience a much sharper rate of labor force withdrawal after accepting the offer, and a significantly more gradual withdrawal thereafter. To a limited extent, those accepting window offers are more likely to move to self-employment than are those in the other groups. Further analysis (not shown in Table 1) reveals that re-entry into paid employment is more common among non-workers who accepted a window offer than among other non-workers.

## Changes in Hours Worked

Changes in hours worked can be measured in two ways – limiting he analysis to those who are employed at both the beginning and end of the period, or including non-workers by setting their hours worked to zero. Table 2 uses the first approach, and Table 3 uses the second. In both cases, the hours measure is the product of usual hours per week and usual weeks per year, on the (main) job (if any) held at time of interview.

Among those who are employed at adjacent waves, hours worked per year decline quite gradually. There is essentially no decline between Wave1 and Wave 2, and between-wave declines average 86 hours per wave thereafter. This is consistent with expectations – while much of the adjustment surrounding retirement takes the form of leaving the labor force altogether, modest adjustments reduce the annual workyears of those who remain employed. Similarly, for those who accepted an early window offer before Wave 1, workhours adjust downward, but quite gradually. Much sharper adjustments are evident for those accepting window offers, both in the period surrounding the window offer (averaging about 500 hours, or ten hours per week) and, for those who remain employed, again over the next two years (a further 300 hours). However, even after these adjustments, those who accepted a window offer are still on

[2] Statements about averages across table cells are based on averages that weight cells by sample size, and so give greater weight to earlier waves.

average working  nearly 1300 hours per year, and there is little evidence of further declines.

Table 3 is identical to Table 2, except that those who are not working are counted as working zero hours, rather than excluded from the calculation.  As expected, the reductions are much sharper when the data are presented this way, and the qualitative patterns can be predicted from Tables 1 and 2 – gradual (200-300 hour per wave) reductions for the comparison groups and sharp declines following a window acceptance. Combining those who accepted an offer prior to Wave 1 with experiences of those of later acceptors who are a few waves past the acceptance suggests that once the sharp initial adjustment to the offer is completed, subsequent hours reductions occur more gradually for window acceptors than for those who never accepted (or never received) an offer.

## Changes in Hourly and Annual Earnings

Tables 4 and 5 focus on changes in earnings per hour and annual earnings, respectively.  Because of the small samples involved (particularly for groups that have accepted a window offer) and the sensitivity to means in such small samples to outliers,[3] I present "trimmed" means and (untrimmed) medians.  The "trimmed" means are calculated by excluding values in the lowest and highest one percent of values for that variable for the full HRS cohort.  Broadly, the means and medians tell a similar story. But because even the trimmed means are sensitive to outliers, I put more emphasis on the medians.

In order to get some perspective on the results for those who have accepted window offers, it is useful to start with those who rejected window offers, or those who did not receive one.  In both of these samples, median wages increase by about 6 percent per wave (three percent per year), which is essentially the rate of increase in consumer

[3] I have looked directly at the outliers in the hope of finding a few important explanations, but so far an explanation has proved elusive.  Identifying and diagnosing outliers in the sample of workers who accept window offers is particularly difficult, since such workers will more often make large career changes and so have large "true" changes in wages or earnings.

prices over the period. Mean increases are slightly smaller for those who reject offers, but **very** similar for those who have not received one. For those who accepted a window offer prior to Wave 1, wage increases are at least as large as for the comparison groups.

For those who accept window offers after the baseline interview – for whom we can compute wage changes that bracket the accepted offer and subsequent job change – the transition is associated with a substantial wage reduction. At the time of an accepted window offers, workers suffer substantial wage reductions -- on average about 17 log points for the median change and 28 for the mean. These reductions are smaller for those who reported accepting offers at Wave 4 or Wave 5, so the overall picture is less dramatic than I reported in my earlier work (Brown, 2000). After this initial reduction, wage changes are not very different (and certainly not consistently different) from the .06 per wave experienced by other workers – one does not see the catch-up that those who accepted window offers prior to Wave 1 seem to have experienced, nor evidence of further deterioration.

The annual earnings data in Table 5 show similar patterns, though the losses surrounding an accepted window offer are larger, because they reflect both wage and hours changes. Those who accepted window offers prior to Wave 1 show somewhat faster earnings gains than those who did not receive or accept a window offer, but once again there is less evidence of such "catch up" among those who accepted offers since becoming part of HRS.

Tables 4 and 5 also provide limited evidence on the wage and earnings changes experienced by those accepting window offers **prior** to the offer. One might expect that workers at firms that are about to offer an early-retirement window would receive smaller raises than other firms, and that workers who had received below-average raises would be most likely to accept such offers. Thus, one might expect slower wage growth prior to the offer by those who accept such offers. There is little evidence of this in Tables 4 and 5, however. Whether one uses means or medians, and whether one focuses on wages or annual earnings, those who are about to accept a window offer look very much like those who are not.

## Conclusions

An analysis of those who accepted window offers shows a sharp decline in employment and hours worked, earnings per hour, and annual earnings immediately following the accepted offer. Transitions to self-employment are more common among window acceptors than other workers. In subsequent waves, employment and hours worked decline slowly. Employment and hours are falling significantly for other workers, and in a sense they "catch up" to the window acceptors on these dimensions. Evidence on changes in hourly earnings following the initial downward adjustment is mixed – those who accepted window offers prior to Wave 1 seem to experience slightly faster wage and earnings growth than other workers, but the experience of those who accepted offers since Wave 1 shows little pattern.

The reduced hours, lower wages, and increased incidence of self-employment of those who continue working after accepting early-retirement window offers are consistent with the literature on partial retirement or "bridge" jobs. An important difference, however, is that bridge jobs are often seen as relatively short-term transitions to full retirement, while employment probabilities of those who accept early-retirement windows decline relatively slowly.

One might expect those accepting window offers to experience slower wage growth prior to the offer than other workers, much as workers experiencing job displacement do. However, there is not much evidence of this in the HRS data.

## References


Brown, Charles. 2000. "Early Retirement Windows" in Olivia S. Mitchell, Brett Hammond, and Anna Rappaport, eds., *Forecasting Retirement Needs and Retirement Wealth* (Philadelphia: University of Pennsylvania Press): 253-273.

Hogarth, Jeanne M. 1988. "Accepting an Early Retirement Bonus," *Journal of Human Resources* 23 (1): 21-33.

Lumsdaine, Robin L., James H. Stock, and David Wise. 1990. "Efficient Windows and Labor Force Reduction," *Journal of Public Economics* 43 (2): 131-151.

Mehay, Stephen and Hogan, Paul. 1998. "The Effect of Separation Bonuses on Voluntary Quits: Evidence from the Military's Downsizing," *Southern Economic Journal* 65(1): 127-139.

Pencavel, John. 2001. "The Response of Employees to Severance Incentives," *Journal of Human Resources* 36 (1): 58-84.

Table 1
Employment Status of Those Who Accept Window Offers
(in percent)

| Group | N | Employment Status | Wave 1 (1992) | Wave 2 (1994) | Wave 3 (1996) | Wave 4 (1998) | Wave 5 (2000) | Wave 6 (2002) |
|---|---|---|---|---|---|---|---|---|
| Rejected (all) window offer(s) | 598 | Working | 94.7 | 85.1 | 75.6 | 65.3 | 56.3 | 46.3 |
| | | Self-employed | 1.6 | 1.4 | 2.6 | 4.0 | 4.9 | 6.4 |
| Defined-benefit pension, no window offers | 1780 | Working | 100.0 | 87.3 | 77.0 | 64.4 | 53.9 | 41.5 |
| | | Self-employed | 2.2 | 3.3 | 4.7 | 4.7 | 4.6 | 5.8 |
| Accepted window offer before Wave 1 | 240 | Working | 52.2 | 50.4 | 44.2 | 40.2 | 38.5 | 33.6 |
| | | Self-employed | 14.4 | 13.0 | 12.7 | 10.3 | 10.7 | 9.7 |
| Accepted window offer between wave1 and wave 2 | 119 | Working | 100.0 | **35.1** | 32.9 | 34.1 | 29.4 | 32.0 |
| | | Self-employed | 0.0 | **7.2** | 7.9 | 10.5 | 11.3 | 11.7 |
| Accepted window offer between Wave 2 and Wave 3 | 127 | Working | 100.0 | 99.2 | **42.8** | 43.2 | 35.9 | 26.2 |
| | | Self-employed | 0.0 | 0.4 | **9.0** | 13.0 | 11.1 | 7.2 |
| Accepted window offer between Wave 3 and Wave 4 | 76 | Working | 100.0 | 100.0 | 90.6 | **37.0** | 29.4 | 25.9 |
| | | Self-employed | 1.4 | 1.5 | 1.6 | **11.9** | 7.2 | 6.9 |
| Accepted window offer between Wave 4 and Wave 5 | 44 | Working | 100.0 | 96.9 | 100.0 | 100.0 | **33.9** | 31.6 |
| | | Self-employed | 2.1 | 5.3 | 0.0 | 0.0 | **9.3** | 8.4 |

Table 2
Mean Change in Hours Worked per Year
(sample = those employed at both waves)

| Group | Wave 2 – Wave 1 | Wave 3 – Wave 2 | Wave 4 – Wave 3 | Wave 5 – Wave 4 | Wave 6 – Wave 5 |
|---|---|---|---|---|---|
| Rejected (all) window offer(s) | -14.7 | -98.3 | -115.6 | -113.9 | -91.8 |
| | (21.2) | (28.9) | (34.3) | (42.3) | (46.6) |
| Defined benefit pension, | 4.7 | -80.0 | -53.8 | -85.9 | -116.5 |
| No window offers | (11.4) | (15.0) | (16.7) | (21.2) | (26.1) |
| Accepted window offer | -16.2 | -110.3 | -58.2 | -94.7 | -7.5 |
| before Wave 1 | (62.3) | (64.2) | (68.9) | (77.5) | (109.7) |
| Accepted window offer | **-488.2** | -385.8 | 186.2 | -28.4 | -198.9 |
| between Wave 1 and Wave 2 | **(121.9)** | (195.4) | (143.6) | (99.3) | (50.3) |
| Accepted window offer | 59.9 | **-564.7** | -457.5 | -73.0 | -29.7 |
| between Wave 2 and Wave 3 | (30.1) | **(119.5)** | (150.1) | (128.5) | (57.8) |
| Accepted window offer | 64.0 | -119.2 | **-414.3** | -81.8 | -164.3 |
| between Wave 3 and Wave 4 | (46.3) | (46.9) | **(206.4)** | (164.5) | (253.5) |
| Accepted window offer | 7.1 | 4.1 | -25.2 | **-556.3** | 69.5 |
| between Wave 4 and Wave 5 | (74.0) | (78.0) | (41.4) | **(270.4)** | (262.1) |

Note: Standard errors in parentheses.

Table 3
Mean Change in Hours Worked per Year
(with non-workers counted as working zero hours)

| Group | Wave 2 – Wave 1 | Wave 3 – Wave 2 | Wave 4 – Wave 3 | Wave 5 – Wave 4 | Wave 6 – Wave 5 |
|---|---|---|---|---|---|
| Rejected (all) window offer(s) | -196.1 | -269.5 | -281.8 | -288.8 | -264.7 |
| | (33.8) | (38.1) | (37.4) | (40.0) | (42.0) |
| Defined benefit pension, | -261.0 | -299.9 | -305.7 | -277.7 | -286.0 |
| No window offers | (20.6) | (23.2) | (23.9) | (23.8) | (23.8) |
| Accepted window offer | -18.6 | -135.5 | -71.1 | -51.6 | -75.1 |
| before Wave 1 | (56.1) | (47.7) | (47.7) | (35.6) | (52.5) |
| Accepted window offer | **-1490.8** | -154.7 | 49.1 | -72.7 | -9.1 |
| between Wave 1 and Wave 2 | **(86.2)** | (95.3) | (65.2) | (67.3) | (50.4) |
| Accepted window offer | 41.6 | **-1495.9** | -305.6 | -61.0 | -136.0 |
| between Wave 2 and Wave 3 | (34.9) | **(95.9)** | (86.8) | (64.4) | (60.2) |
| Accepted window offer | 64.0 | -316.4 | **-1238.0** | -199.3 | -95.5 |
| between Wave 3 and Wave 4 | (46.3) | (87.2) | **(144.6)** | (86.9) | (92.6) |
| Accepted window offer | -58.5 | 72.5 | -25.2 | **-1663.7** | -79.3 |
| between Wave 4 and Wave 5 | (91.3) | (95.8) | (41.4) | **(155.8)** | (138.9) |

Note: standard errors in parentheses.

Table 4
Mean and Median Change in ln (Earnings per Hour)
(sample = those employed at both waves)

| Group | | Wave 2 – Wave 1 | Wave 3 – Wave 2 | Wave 4 – Wave 3 | Wave 5 – Wave 4 | Wave 6 – Wave 5 |
|---|---|---|---|---|---|---|
| Rejected (all) window offer(s) | Mean | .058 | .022 | .000 | .006 | .066 |
| | (std. error) | (.014) | (.021) | (.026) | (.023) | (.036) |
| | Median | .056 | .059 | .042 | .059 | .074 |
| Defined benefit pension, No window offers | Mean | .058 | .057 | .058 | .052 | .075 |
| | (std. error) | (.008) | (.009) | (.010) | (.012) | (.015) |
| | Median | .064 | .062 | .060 | .064 | .080 |
| Accepted window offer before Wave 1 | Mean | .168 | .097 | .038 | .059 | .215 |
| | (std. error) | (.068) | (.051) | (.063) | (.038) | (.063) |
| | Median | .079 | .067 | .048 | .057 | .134 |
| Accepted window offer between Wave 1 and Wave 2 | Mean | **-.319** | -.190 | -.267 | .143 | .183 |
| | (std. error) | **(.091)** | (.187) | (.222) | (.062) | (.023) |
| | Median | **-.234** | -.012 | .030 | .084 | .160 |
| Accepted window offer between Wave 2 and Wave 3 | Mean | .100 | **-.320** | .146 | -.011 | .132 |
| | (std. error) | (.024) | **(.098)** | (.107) | (.054) | (.082) |
| | Median | .057 | **-.147** | .074 | .018 | .035 |
| Accepted window offer between Wave 3 and Wave 4 | Mean | .039 | .081 | **-.235** | -.135 | -.133 |
| | (std. error) | (.023) | (.023) | **(.107)** | (.107) | (.172) |
| | Median | .051 | .078 | **-.182** | .000 | .000 |
| Accepted window offer between Wave 4 and Wave 5 | Mean | .054 | .095 | .083 | **-.077** | -.435 |
| | (std. error) | (.027) | (.022) | (.028) | **(.142)** | (.327) |
| | Median | .078 | .079 | .069 | **.057** | -.118 |

Note: In order to minimize the influence of outliers, means are based on samples that exclude values that are less than or equal to the first percentile or greater than or equal to the 99$^{th}$ percentile values (based on the entire HRS sample).

Table 5
Mean and Median Change in ln (Earnings per Year)
(sample = those employed at both waves)

| Group | | Wave 2 – Wave 1 | Wave 3 – Wave 2 | Wave 4 – Wave 3 | Wave 5 – Wave 4 | Wave 6 – Wave 5 |
|---|---|---|---|---|---|---|
| Rejected (all) window offer(s) | Mean | .039 | -.014 | -.073 | -.009 | -.045 |
| | (std. error) | (.015) | (.027) | (.033) | (.034) | (.053) |
| | Median | .062 | .060 | .041 | .069 | .047 |
| Defined benefit pension, No window offers | Mean | .062 | .014 | .025 | .000 | .014 |
| | (std. error) | (.010) | (.011) | (.013) | (.019) | (.026) |
| | Median | .069 | .054 | .058 | .061 | .066 |
| Accepted window offer before Wave 1 | Mean | .090 | .058 | -.037 | .025 | .071 |
| | (std. error) | (.090) | (.064) | (.078) | (.097) | (.132) |
| | Median | .106 | .072 | .023 | .091 | .134 |
| Accepted window offer between Wave 1 and Wave 2 | Mean | **-.536** | -.158 | -.032 | -.003 | -.012 |
| | (std. error) | **(.139)** | (.298) | (.226) | (.149) | (.088) |
| | Median | **-.494** | .134 | .101 | .074 | .079 |
| Accepted window offer between Wave 2 and Wave 3 | Mean | .124 | **-.666** | -.351 | -.028 | .175 |
| | (std. error) | (.023) | **(.141)** | (.197) | (.121) | (.087) |
| | Median | .083 | **-.405** | .000 | .039 | .107 |
| Accepted window offer between Wave 3 and Wave 4 | Mean | .063 | -.019 | **-.373** | -.064 | .006 |
| | (std. error) | (.022) | (.049) | **(.195)** | (.228) | (.267) |
| | Median | .059 | .053 | **-.182** | .051 | -.357 |
| Accepted window offer between Wave 4 and Wave 5 | Mean | .094 | .072 | .072 | **-.520** | -.364 |
| | (std. error) | (.018) | (.019) | (.024) | **(.283)** | (.206) |
| | Median | .080 | .079 | .049 | **-.465** | -.223 |

Note: In order to minimize the influence of outliers, means are based on samples that exclude values that are less than or equal to the first percentile or greater than or equal to the 99$^{th}$ percentile values (based on the entire HRS sample).