Retirement during the COVID-19 Pandemic

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Abstract:
The COVID-19 pandemic led to an unprecedented loss of 21 million jobs, and the ensuring period has been marked by volatile stock markets and rising home prices. Past evidence suggests that retirement behavior responds to labor and stock market fluctuations. In this study, we explore how the COVID-19 pandemic has affected employment at older ages and retirement. We first compare employment trends after the Great Recession and the pandemic to investigate whether the former may be instructive for understanding the latter. We then conduct an analysis of retirement decisions before and during the pandemic, using data from the Current Population Survey and other sources, to examine how labor, stock, and housing market fluctuation as well as COVID conditions and policies affected retirement. We find that while higher unemployment led to more retirements before the pandemic, retirement transitions during the pandemic have been surprisingly insensitive to local economic conditions. There is little evidence that stock or house price gains drove the rise in retirement during the pandemic, although the ability to telework has emerged as a newly important factor. The return of the employment-to-population ratio to pre-pandemic levels for all except the oldest workers (those ages 70 to 74) suggests that the pandemic's effects on retirement are now mostly in the past.

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Retirement is a transition that many workers anticipate and plan for, but a recession can upend those plans. The COVID-19 pandemic led to the worst labor market since the Great Depression, as total civilian employment fell by 21 million between the fourth quarter of 2019 and the second quarter of 2020 and the unemployment rate vaulted from 3.6 to 13.0 percent (Smith et al., 2021). This period has been unique not only in terms of job loss, but also in the shift to telework in some occupations (Barrero et al., 2021) and the new health risks facing workers in non-teleworkable jobs, risks that loom larger for older workers due to their higher COVID-19 mortality (Yanez et al., 2020). The US government provided unprecedented assistance in the form of increased unemployment insurance (UI) benefits and stimulus checks for individuals and the Paycheck Protection Plan (PPP) and other programs for businesses. Finally, US stock markets have been exceptionally volatile (Baek et al., 2020) and housing prices have surged (Duca and Murphy, 2021), developments that may particularly affect older workers given that wealth holdings rise with age (Bhutta et al., 2020).

This study explores how the COVID-19 pandemic has affected employment at older ages and retirement. Have workers responded to changing labor, stock, and housing markets in the same way as in the past? How have different types of workers been affected? Are we experiencing the "Great Retirement," the "Great Un-Retirement," or neither?

Pre-Pandemic Retirement Trends

In the several decades before the pandemic, employment at older ages increased steadily, as evident in Figures 1 and 2. The labor force participation rate of men ages 60 to 64, 65 to 69, and 70 to 74 rose by 8.1, 13.4, and 8.7 percentage points, respectively, between 1990 and 2019. For women in these age groups, these increases were 16.3, 12.8, and 7.9 points, an even bigger change relative to 1990 levels. Due to participation gains and population aging, the share of the US workforce age 60 or older was 14.8 percent for men and 14.0 percent for women in 2020, more than twice the 2000 levels of 7.4 percent and 6.3 percent (National Academies, 2022).

Rising employment at older ages corresponds to later retirement. The average retirement age (defined as the age at which labor force participation falls below 50 percent) has risen by about 3 years for both men and women over the past three decades, to 64.7 years for men and 62.1 years for women in 2021 (Munnell, 2022). Later retirements are due both to demographic factors and changes in retirement benefits. Increases in longevity and health enable some individuals to work longer and require them to accumulate more resources for retirement (Bloom et al., 2014). Increases in education lead to later retirement since more educated workers work longer (Rutledge, 2018), while shifts towards more "age-friendly" jobs in the economy also support later retirement (Acemoglu et al., 2022). Changes to Social Security – a rise in the Full Retirement Age and in the benefit adjustment for delayed claiming past this age – have played a role, as has the shift from defined benefit to defined contribution pension plans and reduction in retiree health insurance benefits (Coile, 2019; Friedberg and Webb, 2005). While working longer is often touted as the logical response to longer lives and a changing retirement landscape (Bronshtein et al., 2019), there is growing awareness that this is less feasible for some groups due to substantial inequalities in health and labor market opportunities (Berkman and Truesdale, 2022).

Recessions and Retirement

Even an individual who has planned assiduously for retirement faces numerous risks that can threaten financial security (Johnson et al., 2005) – this includes the risk of job loss, which rises during labor market downturns. Job loss rates for older and younger workers have converged in recent years, reducing older workers' historical advantage on this front; moreover, older job losers are less likely to become re-employed and those who do return to work experience a larger decline in earnings, relative to younger job losers (Farber, 2017). One contributing factor is that age discrimination increases and the effectiveness of age discrimination protection decreases during recessions (Dahl and Knepper, 2020; Neumark and Button, 2014).

There is ample evidence that when the unemployment rate rises, more workers retire. This has been documented in the US, using variation across US states over time (Coile and Levine, 2007), and there are similar results using geographic variation in the UK (Disney et al., 2015) and industry-level variation in Sweden (Hallberg, 2011). The increased tendency to retire when the labor market is weak is particularly pronounced for US workers who have reached age 62, the age of eligibility for Social Security (Gorodnichenko et al., 2013; Marmora and Ritter, 2015). By contrast, US workers in states with more generous UI benefits are no more likely to retire when unemployment rises; the minimal impact of UI may be due to the limited duration of benefits, which is generally 26 weeks or less, depending on state (Coile and Levine, 2007).

The earlier retirement that occurs during a labor market downturn has long-term effects on well-being. Experiencing worse labor market conditions while in one's early 60s is associated with earlier claiming of Social Security benefits and lower retirement income in one's 70s; these outcomes are directly linked, as earlier claiming results in a reduced monthly benefit amount (Coile and Levine, 2011a). Workers who experience a weak labor market in the years just before reaching traditional retirement ages also have lower survival rates at older ages; this can be attributed to the reduced employment and income, loss of health insurance, and lower health care utilization that can follow a late-career job loss (Coile et al., 2014). Beyond the impact on individual well-being, recession-induced early exits from the labor force reduce GDP.

Recessions are typically accompanied by declining stock prices (Kroencke, 2022), which are expected to lead workers to delay retirement. Testing this prediction is challenging – one cannot simply compare retirement behavior of stockholders and non-stockholders, as the groups may vary in ways that affect retirement, and there is no geographic variation in asset returns. Analysts tend to look for groups that experienced unexpectedly large market gains or losses, but evidence from these studies has been mixed. Two studies found that workers with more stock exposure during the "dot-com" cycle of the late 1990s and early 2000s did not retire earlier during the boom and later during the bust (Coile and Levine, 2006; Hurd et al., 2009), while a third found that an additional $100,000 of unexpected gains during the boom led workers to retire two weeks earlier (Coronado and Perozek, 2003).

Another line of research explores whether cohorts that experience higher asset returns retire earlier. One study finds that when asset returns are measured over ten years (but not shorter periods), higher returns increase retirement for college graduates and those with some college,

groups more likely to own stocks, and not for less educated groups (Coile and Levine, 2011b), while another study finds "quantitatively small" effects of three-year returns on retirement for men and women (Bosworth and Burtless, 2010). Overall, the evidence suggests that stock gains increase the probability of retirement, but the magnitude of the effect may be small. Another reason to suspect that stock market fluctuations may not have a large impact on aggregate labor supply is that many older households have little in the way of stock assets – in 2016, 42 percent of households with a head aged 55 to 64 held no direct or indirect stock investments and seven in ten households had less than $80,000 in stock assets (Parker and Fry, 2020).

Recessions can also be coincident with declining home prices (Terrones et al., 2008), which are similarly expected to lead to later retirement. A larger share of older households have housing wealth than stock assets – in 2016, nearly three-quarters of households with a head ages 50 to 64 were homeowners and median home equity for this group was $115,000 (Joint Center for Housing Studies, 2018). The few studies in this area offer little support for the notion that house price fluctuations affect retirement. Home price appreciation at the metro area level (measured over one or five years) or state level (measured over 3 years) does not affect retirement, nor are there differential effects of appreciation for owners vs. renters (Coile and Levine, 2011b; Bosworth and Burtless, 2010). Despite being widely held, housing equity might not matter much for retirement because most older homeowners do not use housing equity until late in life, in the years prior to death when they enter assisted living (Mayer, 2017).

Lessons from the Great Recession

The Great Recession (2007-09) may offer lessons as to the effect of the COVID-19 pandemic on retirement. During this earlier downturn, there was a loss of 8.6 million jobs and an increase in the unemployment rate from 5.0 percent to 10.0 percent. The timing of job losses, however, was quite different, as shown in Figure 3. In the Great Recession, employment reached its lowest point 26 months after the recession's start and did not return to its original level until almost six and a half years into the crisis. By contrast, the nadir of employment during the pandemic occurred in April 2020, only weeks after widespread business closures began, and employment rebounded to pre-pandemic levels by August 2022. Another key difference is the trends in equity and housing markets – while average US home prices fell by more than 20 percent (Weinberg, 2013) and the S&P 500 Index plunged by over 50 percent during the Great Recession, during the pandemic national home prices (as measures by the S&P/Case-Shiller Index) have risen by over 40 percent and the S&P 500 has risen by about 15 percent during a period of unusual volatility.

The earlier discussion of recessions and retirement suggests that the Great Recession could have resulted in either an increase or a decrease in retirements, depending on whether the effect of the weak labor market (which would tend to increase retirements) or of stock market losses (which would tend to decrease retirements) was stronger. Figure 4, which shows the change in the employment-to-population ratio relative to 2007 for different age groups, can offer some insight on this question. Workers ages 55 to 64 experienced a decline of 1.8 percentage points in the employment-to-population ratio, far smaller than the 4.8 point drop seen among prime-age workers; this ratio also returned to its baseline level three years earlier

for the older group, in 2016 vs. 2019. Interestingly, among workers 65 to 74, the employment-to-population ratio rose throughout this period, in a continuation of the pre-recession trend.

The finding that the employment-to-population ratio fell moderately for 55-to-64 year olds while rising modestly for 65-to-74 year olds (a smaller population group) suggests that there was likely a small rise in retirements during the Great Recession. This matches the findings of two studies that empirically estimate workers' retirement response to labor and stock market fluctuations. Coile and Levine (2011b) project that about 380,000 workers would retire early due to layoffs while 260,000 would delay retirement due to market losses for a net increase of 120,000 retirements over five years, a small amount when compared to an estimated two million annual retirements. Bosworth (2012) concurs "that retirement decisions were influenced both by variations in household wealth and labor market conditions, but that the labor market was the more important determinant."

Focusing on the small net change risks obscuring how different the experience of the Great Recession was for those suffering layoffs vs. losses. Analyzing the flows of individuals between states of employment, unemployment, and non-participation, Burtless (2016) noted that rising employment rates over this period were "the combined result of continued decline in age-specific voluntary exit rates, mostly from the ranks of the employed, and worsening reemployment rates among the unemployed. The older workers who suffered involuntary layoffs were more numerous than before the Great Recession, and they found it much harder to get reemployed than laid off workers in years before 2008." The estimated 380,000 workers retiring early – or nearly 4 percent of all workers retiring during this period – face a risk of lower retirement income and higher mortality, based on findings from the past literature.

The "Great Retirement"?

There are reasons to believe that there could be a bigger increase in retirements during the COVID-19 pandemic than occurred during the Great Recession. First, workers who interact with the public in their jobs may have retired at higher rates due to health concerns, a factor unique to the pandemic. A counterpoint is that the shift to telework in some jobs may have made it easier for others to work longer – indeed, since mid-2021 there has been an increase in the share of individuals age 18 to 64 with a disability who are employed, relative to the trend for the non-disabled (Casselman, 2022). Second, the increases in stock and house prices during the pandemic would be expected to encourage some workers to retire earlier, unlike in the Great Recession, when losses led some to delay retirement. Finally, the federal government provided unprecedented support to individuals in response to the pandemic, expanding eligibility for and supplementing UI benefits and providing stimulus payments, potentially putting retirement in reach earlier than some workers had planned.

Figure 5 shows the change in the employment-to-population ratio over the past 2½ years. Within the first month of the pandemic, this ratio fell by over 10 percentage points for prime-age workers, 8 points for workers ages 55 to 64, and 5 points for workers ages 65 to 69. After this sharp decline, these ratios rebounded, with the groups that had larger declines experiencing larger increases. Thirty months into the pandemic, the employment-to-population

ratio has returned to pre-pandemic levels for all age groups except the age 70 to 74 group, for whom it remains 3 points below the initial level. This finding is underscored in Figure 6, which shows relative changes in the employment to population ratio. For every 100 individuals ages 70 to 74 who were working at the start of the pandemic, 75 were working just after the pandemic's start and 85 are working today. Among those ages 65 to 69, there were 90 to 95 workers (for every 100 at the start of the pandemic) for the pandemic's first two years, lagging the share of workers in the younger age groups, but the gap has recently closed.

In summary, 2½ years after the start of the pandemic, the share of the population ages 55 to 69 that is employed is similar to what it was pre-pandemic, while the share of those ages 70 to 74 that is employed is lower. Given that workers ages 70 and above are about 3 percent of the US workforce (National Academies, 2022), even a sizeable decline in this group has only a minor effect on the size of the overall workforce. In terms of how many workers retired early, a rough back-of-the-envelope calculation might suggest something like 400,000 additional retirements over the first two years of the pandemic, since the probability of retirement increased by about 10 percent during the pandemic (as discussed in the next section), though caution is warranted as this projection is not based on a formal analysis. With the employment-to-population ratio returning to pre-pandemic levels in all but the oldest age group, there is reason to think that the pandemic-induced early retirements have now mostly come to an end.

Retirement Decisions During the Pandemic

Next, we explore determinants of workers' retirement decisions before and during the pandemic. We seek to learn whether workers responded to labor, stock, and housing market fluctuations during the pandemic in the same way as in the past, as well as how workers responded to unique factors such as COVID cases and government responses to COVID.

The primary data for this analysis comes from the monthly Current Population Survey (CPS). The CPS is a short panel data set in which households are interviewed for four consecutive months, then out of the survey for eight months, then surveyed for an additional four months. This structure allows us to select individuals employed at the first interview and examine their transition to retirement over 15 months. We treat individuals as retired the first time that they report themselves to be out of the labor force, grouping unemployed individuals with employed individuals so that we do not treat an involuntary job loss as a retirement. We use data from January 2017 through September 2022, encompassing both pre-pandemic and pandemic periods, and focus on individuals ages 55 to 74 who are employed at the first interview. In our main analysis, we have a sample of nearly 700,000 person-wave observations.

We combine the CPS data with data from a variety of other sources: monthly unemployment rates from the Bureau of Labor Statistics, S&P 500 Index values, quarterly housing index from the Federal Housing Finance Agency (FHFA), monthly COVID cases from the New York Times database, the monthly Oxford COVID-19 Government Response index (a measure of closures, economic relief programs, public health actions, and vaccine policies), biannual data from the U.S. Department of Labor on UI policies, and occupation-level data on telework from Dingel and

Neiman (2020). All variables are measured at the state level (except the S&P 500 and occupation data, which are national).

In the empirical analysis, we estimate retirement regressions of the following form:

$$\begin{aligned} Retire_{iast} = {} & \beta_0 + \beta_1 UnemploymentRate_{st} + \beta_2 After_t \times UnemploymentRate_{st} \\ & + \beta_3 FHFAChg_{st} + \beta_4 After_t \times FHFAChg_{st} + \beta_5 SP500Chg_t \times College_i \\ & + \beta_6 SP500Chg_t \times College_i \times After_t + \beta_5 COVIDPer100_{st} \\ & + \beta_6 Teleworkable_i + \beta_7 After_t \times Teleworkable_i + \beta_8 COVIDPolicies_{st} \\ & + \beta_9 X_i + Interview4\_5_i + \gamma_a + \gamma_s + \gamma_t + \epsilon_{iast} \end{aligned}$$

In these models, the transition from employment to retirement depends on: the unemployment rate; the 12-month change in the housing index; the 12-month change in the S&P 500 Index interacted with an indicator for being a college graduate; COVID cases per 100 population; whether the individual's occupation accommodates telework; and COVID policies, including the Oxford index, maximum weeks of UI benefits, maximum weekly UI benefit, and availability of supplemental UI benefits. The interactions of these variables with *After* allows them to have a different effect in the pre-pandemic and pandemic era. The interaction of the S&P variable with college allows stock returns have a bigger effect on the group most likely to hold stocks (the main effect of returns is subsumed in the time controls); while not ideal, this approach offers one way to test for an effect given the lack of geographic variation in stock returns. The other variables control for differences in retirement due to gender, race/ethnicity, and education (*X*), the interview occurring after a gap (*Interview4_5*), and age, state, and year/month ($\gamma_a, \gamma_s, \gamma_t$).

The results of this analysis are presented in Table 1. The coefficient on *Unemployment Rate* reflects the effect of state-level economic conditions on transitions from employment to retirement before the pandemic. Consistent with the previous literature, the coefficient is positive. A one percentage point increase in unemployment raises the probability of retirement by 0.11 percentage points, or 3 percent relative to the mean retirement rate (of 3.7 percent). An increase of 5 points, as occurred during the Great Recession, would increase retirement by 15 percent. The coefficient on *After X Unemployment Rate* shows the additional effect of unemployment on retirement transitions during the pandemic. Surprisingly, the coefficient is negative and nearly equal in magnitude to the main effect, indicating that the total effect of unemployment on retirement during the pandemic (the sum of the two) is essentially zero. The coefficients are marginally significant at the 10 percent level (p-values of 0.078 and 0.101).

The *College X S&P 500 Change* coefficient is positive, indicating that in the pre-pandemic period there are more retirements among college graduates when returns over the past 12 months are higher (relative to the effect for less educated groups, which is subsumed in the time controls). This sign matches results in the prior literature and the effect is statistically significant. When this variable is interacted with *After*, its coefficient is of the opposite sign, of similar magnitude, and is statistically significant, indicating that there was essentially zero effect of stock returns during the pandemic for college graduates. The *FHFA* variables are insignificant in both periods, consistent with other studies that fail to find an effect of house prices on retirement.

The results in column 2 indicate that the level of *COVID Cases per 100 Population* in a state does not affect retirement. Working in a *Teleworkable* occupation reduces the probability of retirement in the pre-pandemic period by 0.46 percentage points, or 12 percent relative to the mean retirement; this large effect (even after controlling for education) may reflect that jobs that allow telework are more accommodating of older workers in general. Importantly, this effect nearly doubles during the pandemic, indicating that the ability to telework has become even more central to retirement decisions; both coefficients are highly significant.

The third column adds the *Government Response Index*, a measure of actions like closures and vaccine policies, as well as variables capturing the generosity of state UI benefits: *Max Benefits, Max Weeks,* and *UI Bonus*. The *Government Response* coefficient is negative and significant, indicating that the probability of retirement is lower when states take more actions to combat the pandemic. The *UI Bonus* coefficient is positive and significant, indicating higher rates of retirement when supplemental UI benefits from the Coronavirus Aid, Relief, and Economic Security (CARES) Act were in place. The other UI measures are not significant.

Table 2 reports results from the richest model estimated separately for those over and under age 62 and for men and women. In these subsamples, the unemployment results discussed above are evident for older workers and for women only. The effects of telework, government COVID response, and UI bonus are apparent for all groups (except UI bonus for men), and the telework effects are particularly large for older workers.

Discussion

Stepping back, there are some puzzling aspects to these results. On the one hand, the finding that workers are more likely to retire when unemployment is higher in the pre-pandemic period is in line with previous research. On the other hand, it is surprising that this relationship did not continue to hold during the pandemic. Similarly, higher stock market returns are found to have increased retirement for college graduates before but not during the pandemic. While the latter results should be treated as suggestive due to the limitations of the empirical approach, they do not support the idea that rising stock prices drove an increase in retirements during the pandemic, nor is there any evidence that rising home prices did so.

Turning to COVID-specific factors, COVID cases do not appear to affect retirement, but stronger government responses are associated with lower retirement. Supplemental UI payments are associated with higher retirement, though we cannot rule out that this could partly reflect the effect of other time-specific factors, since most of the variation in these payments was over time; state-level differences in maximum UI benefits or duration were not found to be associated with retirement before or during the pandemic. The ability to telework, always important in retirement decisions, became more important during the pandemic.

Retirements increased during the pandemic – the mean monthly retirement rate in the analysis sample is 3.5% prior to March 2020 and 3.9% thereafter, an increase of about 10 percent. Even after our analysis, the reasons for this remain opaque. However, the ability to telework seems like a potentially important piece of the puzzle. While workers with and without the ability to

telework both experienced an increase in the probability of retirement during the pandemic, the increase was much larger for the non-telework group. This fact is consistent with COVID-related health concerns, but it could be the case that other concerns that have come up in recent discussions of "the Great Resignation" are more pressing for individuals in these jobs. More generally, while we did not find that retirements increased more during the pandemic in places with worse labor market or COVID conditions, there could be other reasons for the rise in retirement that are more difficult to test empirically, such as a generalized fear of COVID (unrelated to current local COVID conditions) or the effect of (essentially) universal policies like the stimulus checks.

Whenever an economic downturn leads to an increase in retirements, there is reason for concern that this could lead to lower financial security in retirement. However, there are reasons to be optimistic that this might be less true than in earlier downturns. First, the tight labor market means that there is strong demand for workers of all kinds, including older workers, potentially mitigating concerns that displaced older workers will be unable to find new jobs due to age discrimination. Second, the longest-lasting effects on participation are occurring in the oldest group, those ages 70 to 74. Part-time work is particularly common at older ages and this group is almost universally eligible for Social Security, so earnings losses may be smaller and other retirement resources greater than for younger workers forced into an unplanned retirement. Overall, the return of the employment-to-population level to pre-pandemic levels for all but the oldest age group suggests that the pandemic's effects on retirement are now mostly in the past. Conditions are in place for the decades-long working longer trend to resume, but whether this will happen is impossible to predict.

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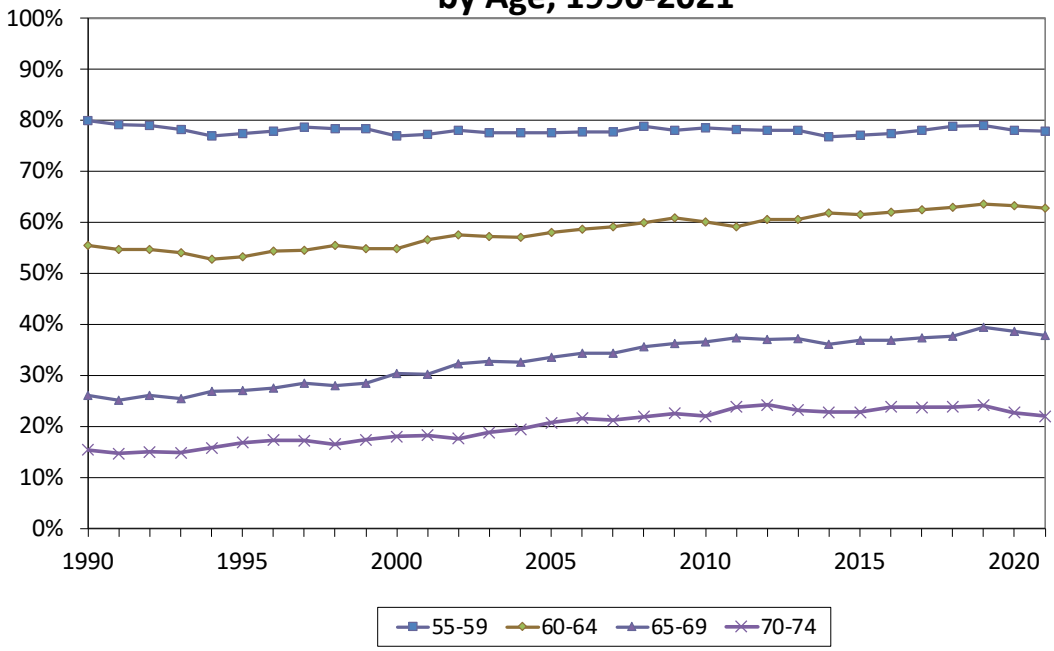
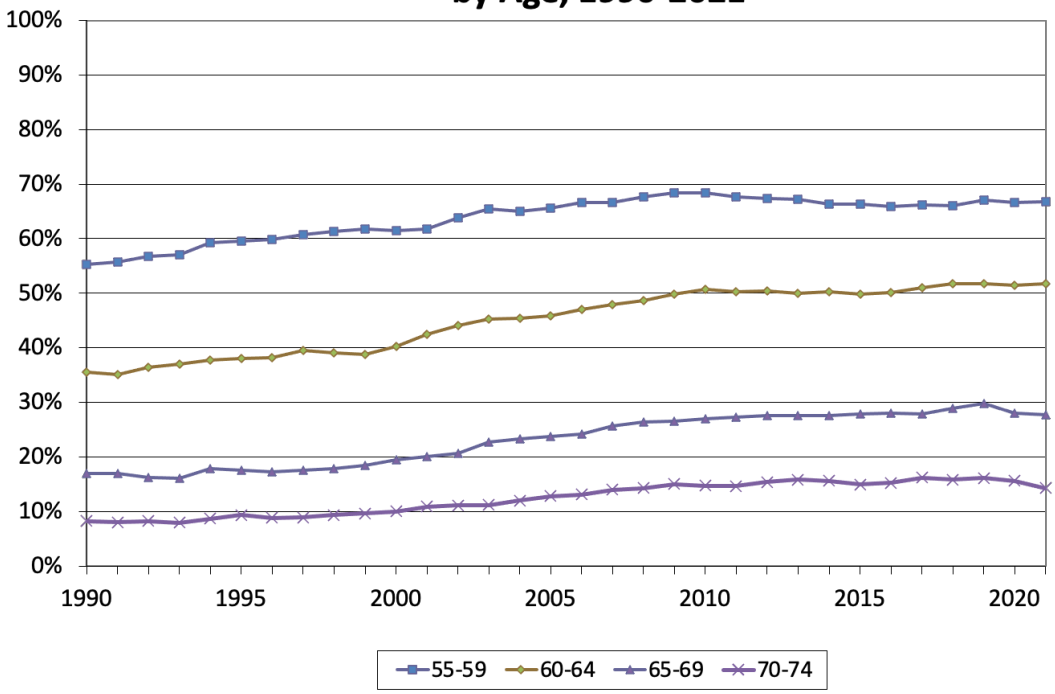
Figure 1: US Male Labor Force Participation Rate by Age, 1990-2021

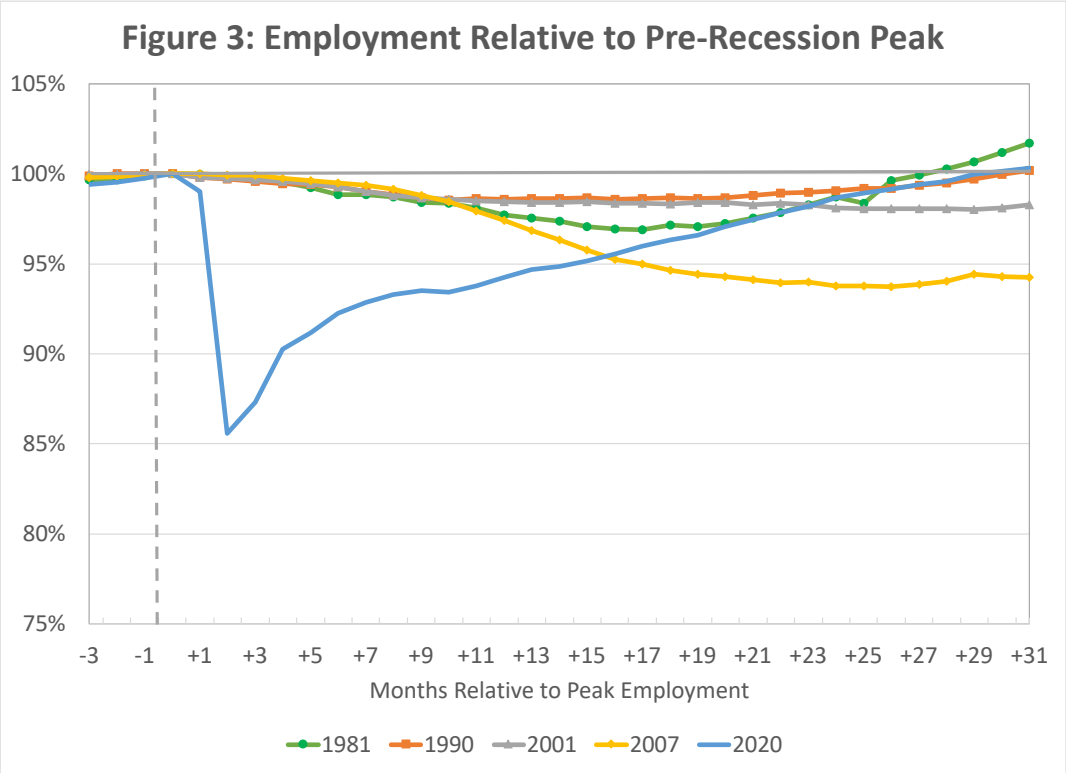


Source: BLS series LNU01300189, LNU01300197, LNU01300203, LNU01324939

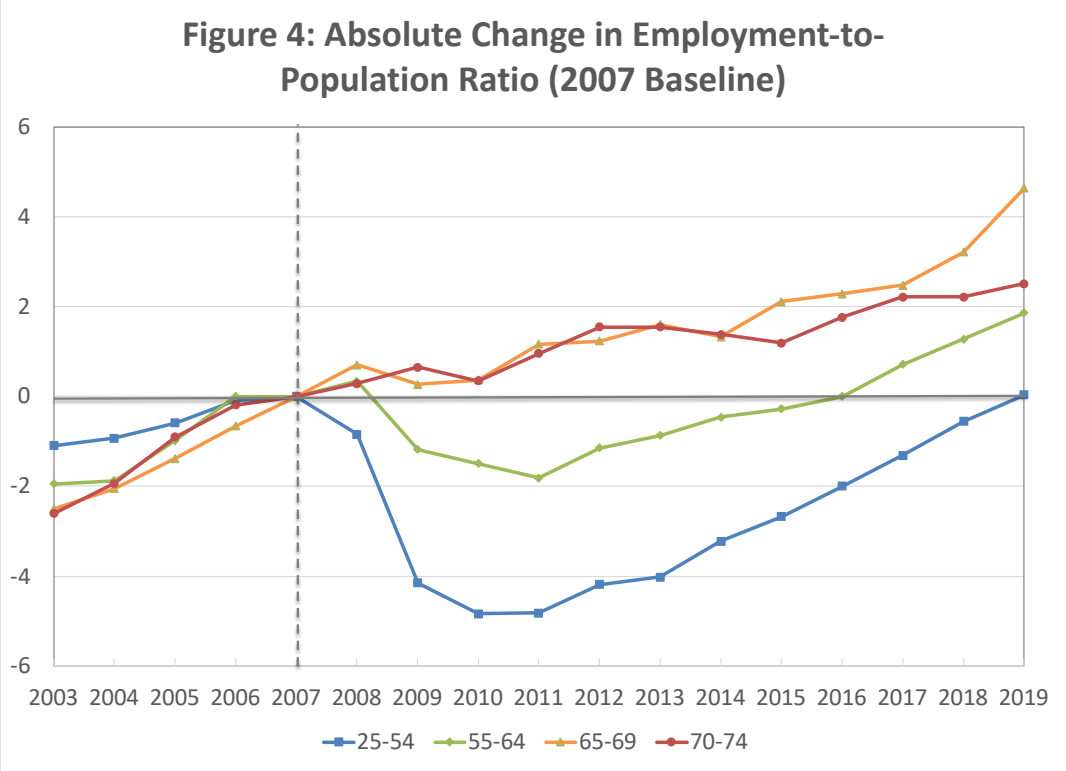
Figure 2: US Female Labor Force Participation Rate by Age, 1990-2021



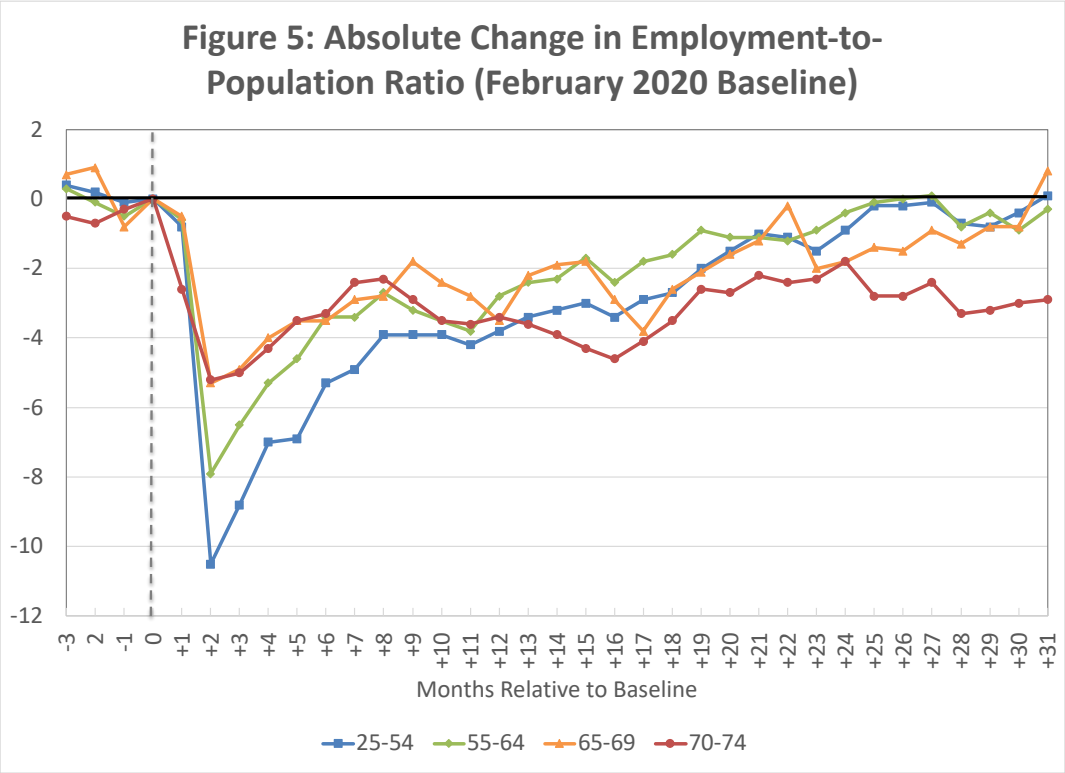
Source: BLS series LNU01300346, LNU01300352, LNU01300358, LNU01324940



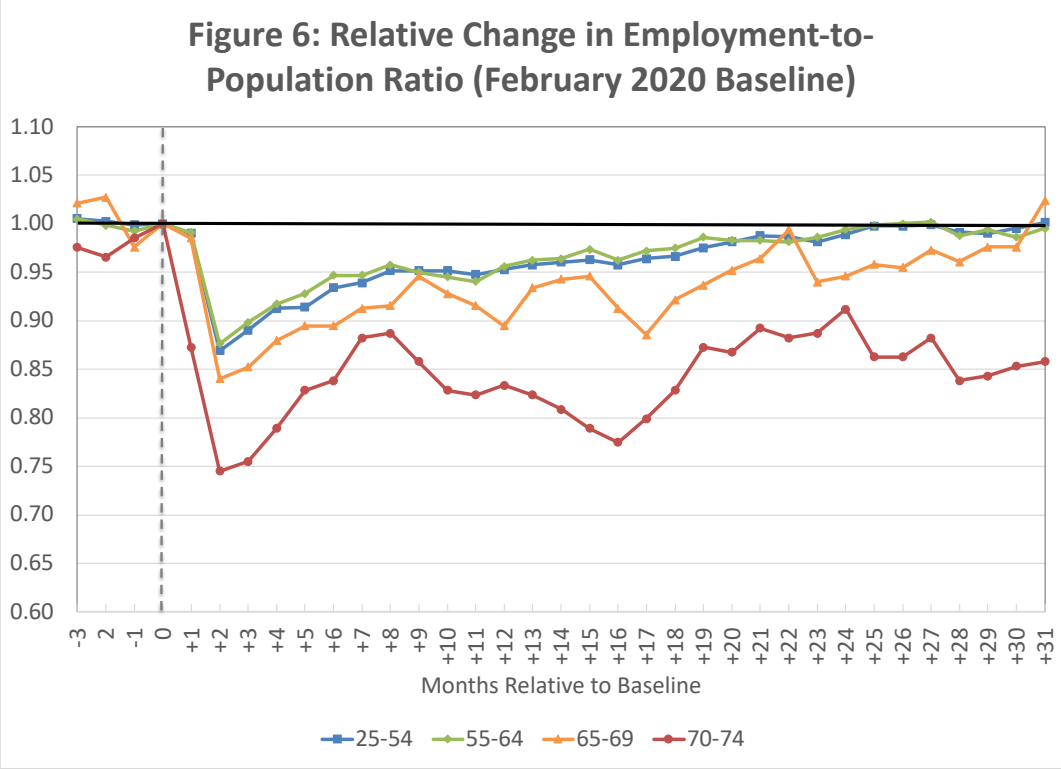
Source: BLS series CES0000000001



Source: BLS series LNU02300060, LNU02300095, LNU02324938, LNU02324941



Source: BLS series LNU02300060, LNU02300095, LNU02324938, LNU02324941



Source: BLS series LNU02300060, LNU02300095, LNU02324938, LNU02324941

Table 1 : Retirement Regressions

	(1)	(2)	(3)
Unemployment Rate (x10)	0.0012*	0.00114*	0.0008
	(0.0007)	(0.0007)	(0.0007)
After X Unem Rate	-0.0011	-0.0010	-0.0007
	(0.0006)	(0.0006)	(0.0007)
College X S&P500 Change	0.0186***	0.0149**	0.0146**
	(0.0070)	(0.0070)	(0.0073)
After X College X S&P500Chg	-0.0156**	-0.0098	-0.0089
	(0.0063)	(0.0065)	(0.0066)
FHFA Change	-0.0310	-0.0310	-0.0230
	(0.0266)	(0.0266)	(0.0276)
After X FHFA Change	0.0139	0.0134	-0.0017
	(0.0236)	(0.0236)	(0.0252)
COVID Cases per 100 Pop		-8.69e-05	-4.84e-05
		(6.78e-05)	(7.03e-05)
Government Response Index			-0.0002***
			(7.13e-05)
Teleworkable		-0.0046***	-0.0046***
		(0.0007)	(0.0007)
After X Teleworkable		-0.0040***	-0.0045***
		(0.0011)	(0.0012)
UI Max Benefit			2.51e-06
			(1.61e-05)
After X UI Max Benefit			5.54e-06
			(3.91e-06)
UI Max Weeks			0.0002
			(0.0002)
After X UI Max Weeks			-0.0001
			(0.0002)
UI Bonus			1.72e-05***
			(5.88e-06)
Female	0.0078***	0.0086***	0.0087***
	(0.0005)	(0.0005)	(0.0005)
White	-0.0071***	-0.0065***	-0.0065***
	(0.0008)	(0.0008)	(0.0008)
Hispanic	0.0038***	0.0032***	0.0032***
	(0.0011)	(0.0011)	(0.0011)
High School Grad	-0.0126***	-0.0117***	-0.0116***
	(0.0014)	(0.0014)	(0.0014)
Some College	-0.0175***	-0.0159***	-0.0163***
	(0.0014)	(0.0014)	(0.0014)
College	-0.0220***	-0.0190***	-0.0190***
	(0.0015)	(0.0016)	(0.0016)
Interview4_5	0.0543***	0.0542***	0.0536***
	(0.0011)	(0.0011)	(0.0011)
Mean of Dependent Variable	0.037	0.037	0.037
Observations	577,724	577,724	550,991
R-squared	0.021	0.022	0.022
Age/State/Year-Month	YES	YES	YES

Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Table 2: Retirement Regressions, by Age and Gender

VARIABLES	(1) Age 62+	(2) <Age 62	(3) Female	(4) Male
Unemployment Rate (x10)	0.0023*	-9.64e-05	0.0023**	-0.0002
	(0.0013)	(0.0008)	(0.0011)	(0.0010)
After X Unem Rate	-0.0024*	0.0004	-0.0021**	0.00026
	(0.0012)	(0.0007)	(0.0010)	(0.0009)
College X S&P500 Change	0.0193	0.0092	0.0051	0.0240**
	(0.0136)	(0.0076)	(0.0112)	(0.0097)
After X College X S&P500Chg	-0.0059	-0.0091	-0.0052	-0.0158*
	(0.0121)	(0.0068)	(0.0099)	(0.0088)
FHFA CHange	-0.0476	-0.0038	0.0354	-0.0703*
	(0.0510)	(0.0296)	(0.0426)	(0.0362)
After X FHFA Change	0.0375	-0.0265	-0.0368	0.0401
	(0.0470)	(0.0267)	(0.0394)	(0.0327)
COVID Cases per 100 Pop	2.46e-05	-8.87e-05	7.55e-06	-6.59e-05
	(0.0001)	(7.42e-05)	(0.0001)	(9.20e-05)
Government Response Index	-0.0002*	-0.0002**	-0.0002**	-0.0002*
	(0.0001)	(7.84e-05)	(0.0001)	(9.51e-05)
Teleworkable	-0.0062***	-0.0037***	-0.0031***	-0.0064***
	(0.0014)	(0.0008)	(0.0011)	(0.0010)
After X Teleworkable	-0.0065***	-0.0029**	-0.0055***	-0.0044***
	(0.0021)	(0.0012)	(0.0018)	(0.0016)
UI Max Benefit	-6.13e-07	3.55e-06	-6.61e-06	1.70e-05
	(2.98e-05)	(1.68e-05)	(2.42e-05)	(2.15e-05)
After X UI Max Benefit	7.00e-06	4.51e-06	1.05e-05*	8.87e-07
	(7.10e-06)	(4.21e-06)	(5.93e-06)	(5.16e-06)
UI Max Weeks	0.0001	0.0003	8.60e-05	0.0002
	(0.0003)	(0.0002)	(0.0003)	(0.0002)
After X UI Max Weeks	4.11e-05	-0.0003	-0.0003	0.0001
	(0.0003)	(0.0002)	(0.0003)	(0.0002)
UI Bonus	2.17e-05**	1.24e-05*	3.25e-05***	1.13e-06
	(1.04e-05)	(6.49e-06)	(8.96e-06)	(7.82e-06)
Female	0.0096***	0.0072***		
	(0.0010)	(0.0006)		
White	-0.0055***	-0.0060***	-0.0031***	-0.0063***
	(0.0016)	(0.0009)	(0.0012)	(0.0011)
Hispanic	-0.0012	0.0041***	0.0042**	-0.0043***
	(0.0022)	(0.0012)	(0.0018)	(0.0014)
High School Grad	-0.0164***	-0.00984***	-0.0166***	-0.0116***
	(0.0027)	(0.0016)	(0.0025)	(0.0018)
Some College	-0.0222***	-0.0128***	-0.0215***	-0.0129***
	(0.0027)	(0.0016)	(0.0025)	(0.0018)
College	-0.0239***	-0.0155***	-0.0211***	-0.0162***
	(0.0030)	(0.0017)	(0.0027)	(0.0020)
interview4_5	0.0794***	0.0313***	0.0608***	0.0506***
	(0.0020)	(0.0013)	(0.0018)	(0.0015)
Mean of Dependent Variable	0.055	0.023	0.041	0.034
Observations	236,644	314,347	258,023	292,968
R-squared	0.017	0.008	0.013	0.011
Age/State/Year-Month	YES	YES	YES	YES

Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1