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U.S. Workers are Delaying Retirement: Who and Why, and Implications for Businesses

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Abstract

One of the main trends in the labor market in recent years is the aging of the workforce, which partly results from older workers delaying retirement. Using the Current Population Survey (CPS) from the Bureau of Labor Statistics (BLS), we find that the trend of delaying retirement began as early as the mid-1990's, accelerated since the beginning of the latest recession, and has continued into the first four months of 2011. We also find that the development of this trend varied significantly across socioeconomic groups, industries, and occupations. We then use The Conference Board Consumer Confidence Survey to measure the impact of home prices and labor market conditions on retirement decisions, and find that workers in households that experienced labor loss/compensation cuts and significant declines in home prices were more likely to plan to delay retirement. These results also indicate that workers from states that suffered from large declines in home prices and high unemployment are more likely to delay retirement. We conclude by discussing potential economic and business implications.

I. Introduction

One of the main trends in the labor market in recent years is the aging of the workforce. In the mid-1990's, roughly 12 percent of workers were 55 and older, while in the beginning of 2011 more than 20 percent of workers were 55 and older (see Chart 1). The rate at which the workforce is aging has been accelerating in recent years, due largely to the aging baby boomers in tandem with older workers who have increasingly decided to delay retirement.

The growing trend of delaying retirement has economic and business implications. For example, consumer spending and the unemployment rate would have been lower if retirement rates had remained at pre-recession levels. At the same time, the pool of workers now delaying retirement may ease business concerns about labor shortages and skill gaps. However, for companies that would like to reduce headcount, cut labor costs, or hire new staff, delays in retirement could pose significant challenges.

Chart 1 – Percent 55+ in civilian employment (January 1990 – May 2011)
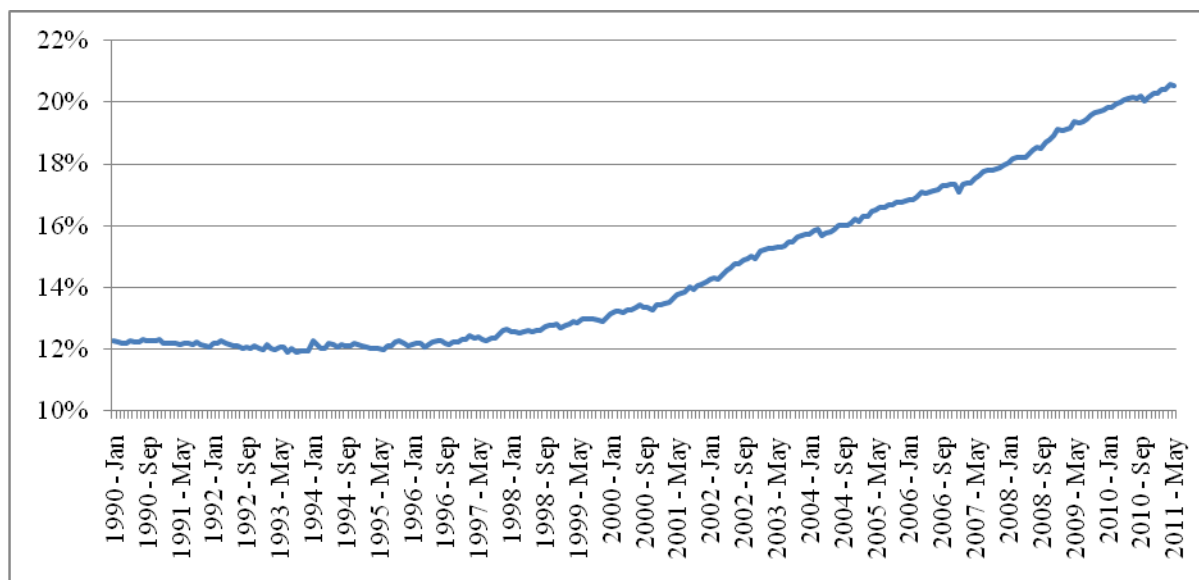
Percent of employed age 55 or older out of total civilian employment
Source: Bureau of Labor Statistics

The purpose of this paper is to document the trend of delaying retirement, its causes, and implications. The trend of delayed retirement is occurring despite strong pressures to retire early. Many employers have been reducing their work force and either pressuring older workers to retire early or laying them off. In many cases, older workers who have been laid off have had difficulty finding a new job, and have thus withdrawn from the workforce. In this paper, we attempt to measure voluntary retirement, excluding workers stopped working because they were unable to find a job after being laid off.

Using the Current Population Survey (CPS) from the Bureau of Labor Statistics (BLS), we find that the trend of delaying retirement started in the mid-1990's, and has accelerated since the beginning of the latest recession. Since the recession, there has yet to be a bounce-back in retirement rates as retirement rates continue to decline through the first four months of 2011.

In addition to finding an overall acceleration in delaying retirement since the beginning of the recession, we find that this acceleration varied significantly across socioeconomic groups, industries, and

occupations. For example, we find that workers who have at least a BA degree were more likely to delay retirement than less educated workers. In addition, business owners were more likely to delay their retirement than employees. Workers in highly paid occupations, such as managers and professionals, were more likely to delay retirement than workers in lesser paid occupations. Industries that were relatively insulated from the latest crisis, such as education, health, agriculture, and mining, were more likely to delay retirement. Finally, public administration workers, many of whom have defined-benefit pension plans, tended not to delay retirement at all.

In order to have a clear picture as to why older workers have been retiring later, we first investigate the general determinants of the decision to retire. In doing so, we dispel the notion that developments of these determinants over time, such as industry composition or demographic shifts, drive the movement towards delaying retirement. Instead, we see that delaying retirement persists within socioeconomic groups, industries, and occupations in retirement age. For example, we find that all else equal, more educated workers retire later. We also find that workers whose activities are physically taxing are more likely to retire earlier, while those whose activities include qualitative characteristics such as judgment and communication are more likely to retire later. Even after controlling for a variety of factors impacting retirement decisions, we find that health care workers are more likely to retire later than any other occupation. We also find that workers in industries with large union membership tend to retire earlier.

The most talked-about reasons for delaying retirement have been the decline in household net worth and unemployment (or underemployment) during the recession. Both of these developments have reduced the retirement preparedness of households and may have contributed to the delaying retirement trend. Like Bosworth and Burtless (2010) and Coile and Levine (2011) who have tried estimating the impact of state-level home prices and labor market conditions on labor force participation and retirement, this paper's use of such state-level data show that these variables are insignificant in explaining the trend of delaying retirement. However, we do not conclude from these results that home prices and labor market conditions have had no impact on decisions to delay retirement. Rather, we believe that those state-level variables are too crude to reflect individuals' decision-making processes.

We therefore turn to a different dataset, The Conference Board Consumer Confidence Survey, to better assist us in measuring the impact of home prices and the labor market on retirement decisions. This is the first study to use micro data from The Conference Board Consumer Confidence Survey. In this dataset, we find that workers in households that experienced labor loss or compensation cuts and significant declines in home prices were more likely to plan to delay retirement. To the best of our knowledge, this is the first study that finds a direct connection between home prices and labor loss, and the decision to delay retirement. These results also indicate that workers from states that suffered from large declines in home prices and high unemployment rates, such as California, Florida, Michigan, Arizona, and Nevada, are more likely to delay retirement.

We conclude by discussing the economic and business implications of delaying retirement.

II. Voluntary or involuntary retirement: how do you define a "retiree"?[1]

Many Americans have delayed retirement—or wished to—after witnessing their household net worth fall and retirement preparedness waver. However, older workers who lost their jobs and faced difficulty finding new ones in the weak labor market may have retired earlier than desired. When looking at

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[1] This section relies on previous work done in *The Conference Board Executive Action Report No. 350*, "U.S. Workers Delaying Retirement: What Businesses Can Learn from the Trends of Who, Where, and Why"

aggregate retirement numbers, it is difficult to disentangle these factors. Yet for businesses, the increase in workers consciously planning to delay retirement is perhaps the more important factor, as strategic workforce planning hinges on the retirement decisions of the existing workforce.

In this study, we define workers who retired in the past year as full-time workers who identified themselves as retired one year after they were initially surveyed. Retirees as those who are fully retired and no longer in the labor force in any capacity. Furthermore, to partly isolate those who decided to retire on their own from those who were "forced" to retire (because they could not find work), we refined the definition by excluding individuals who were more likely to have been laid off. In particular, we excluded participants, who 9-11 months after they were first surveyed were unemployed, working part-time for economic reasons, or stated a desire for a job despite identifying themselves as retired[2].

III. Data

We use two major data sources: the Current Population Survey basic microdata from the Bureau of Labor Statistics and the Conference Board Consumer Confidence Survey, a monthly survey based on a representative sample of 5,000 U.S. households.

A. The Conference Board Consumer Confidence Survey

A unique sample of over 12,000 respondents was drawn from four monthly surveys (January, March, May, and September of 2010) of The Conference Board Consumer Confidence Survey. The survey asks specific questions about the impact of the recession as well as demographic and socioeconomic information such as industry, occupation, state, household structure, and business ownership.

The Consumer Confidence Survey provides additional information that does not exist in government surveys, such as the intentions of working respondents to delay retirement. On the other hand, since it is measuring intentions rather than actions, survey respondents who report planning to delay retirement may not end up doing so. In the March and May surveys, we asked several questions regarding the impact of the 2008-2009 recession.

Among these questions were the following:

- Did Self/Household member lose job during the financial crisis?
- Did Self/Household member have salary/benefits reduced?
- Has the value of your home declined by more than 20 percent since the beginning of the housing crisis in 2006?
- Has the value of your financial assets declined by more than 20 percent since the beginning of the crisis?

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[2] Even the existing definition is still likely to include workers for which the retirement reason was not voluntary for two reasons. First, we are only able to detect unemployment or underemployment up to three months before the of the 12 month period (months 9-12 from the initial interview). If workers were laid off in the first 8 months after the initial interview and managed to find a job before the ninth month we would not be able to detect that. Second, in many cases, especially periods of downsizing, workers may had preferred to keep working, but their employers pressured/incentivized them to retire earlier. Also, note that we only look at the transition from fulltime work to complete retirement. Workers who instead transitioned into a voluntary part time position are not counted as retired in this paper. The reason is that we suspect that in hard economic times the transition to part time work may not be entirely voluntary.

B. The question we use as the measure for the likelihood to delay retirement is: *"As a result of the financial crisis that began in 2008, are you or a household member planning to postpone retirement?"* The possible answers to this question are "Yes", "No", and "Don't know/Not sure". Percentages are calculated by dividing the number of "Yes" responses over the sum of "Yes" and "No" responses, thereby disregarding neutral responses. *The Bureau of Labor Statistics Current Population Survey*

The Bureau of Labor Statistics' (BLS) Current Population Survey (CPS) is a monthly survey based on a sample of roughly 50,000-60,000 households. Each household is interviewed for four consecutive months, dropped out of the sample for eight months, and again interviewed for four additional consecutive months. The BLS CPS provides detailed information on labor force status and an array of demographic characteristics such as age, family income, education, race, industry, occupation, business ownership, and unionization.

We utilize the BLS CPS dataset from January 1998 to April 2011 in order to observe movements of unique individuals from one labor force status to another over a period of 12 months. To do this, we follow the procedure as described by Madrian and Lefgren (1999)in order to drop mismatched respondents using the Sex, Race, and Age (S|R|A) criteria[3].

In addition, we reaggregated existing industry classifications of respondents to create a consistent classification of industries from 1998-2011.

C. *Other Data Sources*

In addition to the above sources, we also make use of:

- Federal Housing Finance Agency's (FHFA) House Price Index by state. Changes in house prices are calculated over a 12-quarter period.
- Employment growth by state and industry from the Bureau of Labor Statistics Current Establishment Survey. Employment growth rates are calculated over a 36-month period.
- O*NET 15.0 Database (June 2010 Release, http://www.onetcenter.org/database.html.) Levels on Work Activities are matched and aggregated to SOC occupations consistent with 3-digit occupation categories from the CPS basic monthly data from 2003-2011.

IV. Determinants of the decision to retire

A. *Socioeconomic factors*

In attempting to understand why older workers have been retiring later, we first want to understand the determinants of the decision to retire. Existing literature such as Feldman (1994) studied this topic and in this paper we apply it to the 2003-2011 period with the variables available in the CPS. To investigate the impact of select socioeconomic factors on workers' likelihood of retiring, we run a series of controlled regressions, as shown in Table 1. For each of these variables, we analyze its impact on a worker's likelihood to retire; and, moreover, how this effect changes as we control for additional factors, including demographic variables (gender, race, age, and marital status), education and household, and labor characteristics (such as occupation, industry, and worker's activities). **It should be noted that saying that individual A has a lower likelihood of retiring than individual B is equivalent to saying that individual A is more likely to retire at an older age than individual B.**

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[3] See Madrian and Lefgren (1999) for matching CPS monthly data.

1. Demographics

As one would expect, the rate of retirement increases significantly as workers grow older. Workers age 65-69 are roughly 4 percent more likely to retire than those of age 60-64, and roughly 9 percent more likely than those of age 55-59. Meanwhile, blacks are as much as 2.2 percent more likely to retire than whites are. While this difference wanes as we control for variations in education and income, this differential remains significant at about 1.5 percent. Whether an individual is Hispanic, however, appears to have little impact on the likelihood of retiring.

The family structure of an individual appears to play a significant role in retirement decisions. In particular, it appears that being married with a spouse present (our reference group) makes a worker more likely to retire than other groups (namely widowed, never married, and divorced). This result suggests that married individuals may be more prepared for retirement, due both to better financial planning and pooled resources. Moreover, it is likely that there is a reinforcing effect in which one spouse's decision to retire impels the other to do so as well. This reinforcing effect between spouses is supported by an additional result, which shows that those whose spouse is retired are as much as 3.8 percent more likely to retire than those who did not have a retired spouse. In addition, this phenomenon is likely to grow in magnitude during upswings and downswings in the economy- in the next section, we suggest that part of the acceleration to delay retirement rooted from a worker's decision to continue working, which then increases the likelihood that his/her spouse continues working as well.

2. Education and Family Income

In general, a higher level of education is correlated with a lower rate of retirement. If the overall correlation between education and decisions to retire is due to the implicit wage premium of education, then we would expect this relationship to dissipate once we control for income. However, we observe that those who are more highly educated are still more likely to delay retirement, even after controlling for income. This result suggests that beyond variations in income and other factors such as industry, and occupation, there is remains some implicit characteristic of higher educated individuals that makes them more prone to continue working as they get older. It is possible that the residual effect roots from some correlation between education and ambition, or education and nonfinancial reward such as personal satisfaction, passion, or interest. Moreover, it is possible that highly educated individuals have more job opportunities available to them and are thus less likely to be in a situation in which they are discouraged from finding a job and prematurely retiring, a differential that may widen during harsh economic conditions and an issue we discuss further in Section V.

In terms of income, we can expect two conflicting effects on retirement. An income effect would suggest that families earning a higher income are more financially prepared and able to leave the labor force and retire. Touching upon what was previously discussed concerning the wage premium and retirement, a substitution effect would suggest that families earning a higher income have more to forego by leaving the labor force, thus making retirement less attractive. Initially, it appears that there is no direct relationship between family income and the likelihood to retire. However, once we control for education, we see that individuals with higher incomes are as much as 0.9 percent more likely to retire, suggesting that the income effect dominates the substitution effect. In addition, we also find that business owners are more than 1 percent less likely to retire than other workers.

Table 1 – Socioeconomic Factors

Socioeconomic Characteristic	Value	Statistic	Demographic Variables, Time	Plus education and income	Plus industry, occupation, and worker characteristics
Gender	*Women*	coefficient	0.95%	0.84%	0.94%
	(compared to Men)	t	6.18	5.08	4.72
Race	*Black*	coefficient	2.23%	1.85%	1.45%
	(compared to Whites)	t	7.36	5.64	4.39
	Non-hispanic	coefficient	0.08%	0.07%	0.29%
	(compared to hispanic)	t	0.23	0.20	0.76
Age	*60-64*	coefficient	5.33%	5.21%	5.29%
	(compared to age 55-59)	t	32.45	29.80	30.24
	65-69	coefficient	9.45%	9.17%	9.39%
	(compared to age 55-59)	t	35.92	32.16	32.85
Marital Status	*Widowed*	coefficient	-0.90%	-0.95%	-0.96%
	(compared to married with spouse present)	t	-2.47	-2.45	-2.46
	Never Married	coefficient	-1.06%	-0.88%	-0.86%
	(compared to married with spouse present)	t	-3.25	-2.46	-2.41
	Divorced	coefficient	-1.54%	-1.31%	-1.29%
	(compared to married with spouse present)	t	-7.29	-5.70	-5.62
	No retired spouse present	coefficient	3.78%	3.71%	3.65%
	(compared to those with a retired spouse)	t	13.82	12.70	12.49
Education	*HS Diploma*	coefficient	0.01%	-0.14%	-0.11%
	(compared to less than a HS Diploma)	t	0.04	-0.41	-0.32
	Some college - no degree	coefficient	-0.77%	-0.84%	-0.71%
	(compared to less than a HS Diploma)	t	-2.29	-2.31	-1.87
	BA or associate	coefficient	-1.01%	-1.11%	-0.85%
	(compared to less than a HS Diploma)	t	-3.03	-3.02	-2.15
	Master's	coefficient	-0.70%	-0.99%	-1.09%
	(compared to less than a HS Diploma)	t	-1.92	-2.43	-2.41
	Professional	coefficient	-3.28%	-3.75%	-2.48%
	(compared to less than a HS Diploma)	t	-6.18	-6.47	-3.62
	Doctorate	coefficient	-2.44%	-2.79%	-2.41%
	(compared to less than a HS Diploma)	t	-4.61	-4.88	-3.78
Family Income	*$30,000 to 74,999*	coefficient	0.23%	0.41%	0.26%
	(compared to less than 30,000)	t	0.88	1.57	1.00
	$75,000 +	coefficient	0.22%	0.86%	0.86%
	(compared to less than 30,000)	t	0.82	2.99	2.89
Business Ownership	*Not a business owner*	coefficient	1.59%	1.47%	1.04%
	(compared to business owners)	t	9.07	7.83	5.18
Worker Characteristics (ONET)	*Assisting and caring for others*	coefficient	-0.03%	0.04%	0.43%
		t	-0.33	0.46	3.11
	Performing general physical activities	coefficient	0.35%	0.29%	0.34%
		t	4.72	3.49	2.94
	Communicating with persons outside organization	coefficient	-0.22%	-0.27%	-0.49%
		t	-2.18	-2.51	-3.39
	Judging the qualities of things, services, or people	coefficient	-0.30%	-0.30%	-0.42%
		t	-2.20	-2.01	-2.19
Geography	*Northeast*	coefficient	-0.81%	-0.70%	-0.65%
	(compared to Midwest)	t	-3.74	-3.01	-2.77
	South	coefficient	0.10%	0.38%	0.45%
	(compared to Midwest)	t	0.51	1.75	2.03
	West	coefficient	-0.38%	-0.29%	-0.19%
	(compared to Midwest)	t	-1.72	-1.24	-0.79

Results are taken from a linear probability regression. In each, the dependent variable is a dummy variable for whether or not the full-time worker (55 and older) retired 12 months later. For each of the independent variables in the second column, we observe its impact on the probability to retire as we modify the specification as indicated in the fourth, fifth, and sixth columns.

Source: Bureau of Labor Statistics Current Population Survey (January 2003 – April 2011)

3. Work Characteristics

We observe four major work activities associated with occupations of respondents[4]:

- "assisting and caring for others"
- "performing general physical activities"
- "communicating with persons outside the organization"
- "judging the qualities of things, services, and people"

These work activities, measured as rated levels from 0-7, are proxies for the physical intensity and qualitative skills required by each occupation. We observe that workers whose activities are physically taxing, namely "assisting and caring for others" and "performing general physical activities," are less likely to delay retirement. This makes sense as those in physically laborious occupations may find it difficult to continue working as they get older. Further, it is even more difficult for older individuals of such occupations to reenter the labor force, pushing those who are currently out of work to retire.

On the other hand, activities that are more qualitative, namely "judging the quality of things, services, and people" and "communicating with persons outside organization" are negatively correlated, implying that individuals in occupations that require softer, potentially more transferrable, skill sets are less likely to retire, either because it is easier to find another job requiring similar skills, or because such skills do not deteriorate with age. In fact, just the opposite, certain employers and industries may view such skills to increase in value as experience becomes an appreciating asset with age. This is particularly relevant in the growing concern of brain drain, in which older individuals with valuable knowledge and experience leave the labor market, leaving a void in their absence.

4. Geography

Generally, where individuals live (i.e. geographic regions) do not play a significant role in retirement behavior. However, individuals in the Northeast are roughly 0.7 percent less likely to retire than the Midwest and West, while the South is as much as 0.5 percent more likely to retire than the Midwest and West. These residual effects may be explained by the differing levels of urbanization, environment and climate, as well as cultural differences between the South and the Northeast.

B. Industry and Occupation

Aside from socioeconomic factors, we also consider the role of workers' industry and occupation in determining retirement rates. In similar fashion as the socioeconomic factors, we investigate workers of which industries and occupations are more/less likely to retire. Moreover, we believe that whether or not an employee is unionized to be a significant determinant, particularly with respect to an employer's ability to incentivize its workers to retire early as a way of reducing labor costs.

1. Industry

We see in Table 2 that after controlling for worker characteristics, industries in which workers are notably more likely to retire sooner are:

- Public administration

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[4] O*NET rates occupations by various metrics, one which are types of "work activity". We separately regressed the probability of retirement on each of the 41 available work activities and selected the four most significant work activities.

- Transportation and utilities
- Educational services
- Telecommunications
- Transportation equipment manufacturing and beverage and tobacco products.

Two potential key factors cause public administration workers to have a lower likelihood of delaying retirement. First, those working in public administration are more likely to receive defined benefits rather than defined contribution plans compared to most other industries, which can increase the attractiveness and preparedness to retire. Second, state governments undergoing significant budget cuts are likely to reduce their workforce by encouraging older workers to retire rather than laying them off. Because certain industries such as public administration, utilities, and educational services are more likely to have unionized workers, employers in these industries may have a harder time cutting labor costs through layoffs and may instead attempt to cut costs by incentivizing workers to retire.

2. Occupation

In Table 3, we see that the estimated likelihood of retiring in different occupations is strongly influenced by the control variables we use. The table shows that the ranking of the occupations changes dramatically once we control for education, income, industry, and worker's characteristics. When we control only for demographics and time, we find that workers in mostly high-skilled occupations are less likely to retire. However, this is no longer the case once we control for variables including education, income, industry, and unionization rate.

One notable exception is healthcare occupations, which even after controlling for all available variables, remain among the occupations least likely to retire early. Another notable exception are computer and mathematical science occupations which, despite being highly skilled, is ranked as the second most likely to retire. In addition, workers in farming, fishing, and forestry occupations are most likely to retire in every specification.

Table 2 - Industries

Industries	Demographic variables, time		Plus education, income, occupation, worker characteristics		Plus unionization		Demographic variables, time	Plus education, income, occupation, worker characteristics	Plus unionization
(compared to Agriculture)	coefficient	t	coefficient	t	coefficient	t	rank	rank	rank
Beverage and tobacco products	6.50%	3.31	5.68%	2.70	5.18%	2.45	1	1	1
Telecommunications	3.49%	3.43	3.95%	3.36	3.29%	2.77	2	3	3
Utilities	2.81%	3.19	3.68%	3.56	3.00%	2.86	3	4	4
Transportation equipment manufacturing	2.59%	3.45	3.96%	4.36	3.32%	3.58	4	2	2
Wood products	1.46%	1.13	2.10%	1.48	1.80%	1.26	5	10	9
Public administration	1.38%	2.39	2.89%	3.84	2.20%	2.84	6	5	5
Petroleum and coal products manufacturing	1.26%	0.59	2.73%	1.23	2.07%	0.93	7	6	6
Electrical equipment, appliance manufacturing	1.20%	0.98	2.06%	1.50	1.58%	1.14	8	11	10
Educational services	0.98%	1.80	2.20%	2.90	1.45%	1.85	9	9	11
Chemical manufacturing	0.80%	0.83	1.62%	1.49	1.19%	1.08	10	15	15
Transportation and warehousing	0.68%	1.15	2.03%	2.66	1.34%	1.72	11	12	13
Plastics and rubber products	0.48%	0.41	2.31%	1.76	1.92%	1.45	12	8	8
Computer and electronic product manufacturing	0.47%	0.55	1.66%	1.65	1.30%	1.27	13	14	14
Other information services	0.21%	0.13	2.49%	1.43	1.97%	1.13	14	7	7
Construction	0.14%	0.23	0.90%	1.17	0.60%	0.77	15	18	18
Food manufacturing	0.05%	0.06	0.75%	0.75	0.19%	0.19	16	21	22
Primary metals and fabricated metal products	-0.08%	-0.11	0.79%	0.85	0.30%	0.32	17	20	20
Insurance	-0.18%	-0.25	1.73%	1.92	1.36%	1.49	18	13	12
Nonmetallic mineral product manufacturing	-0.19%	-0.15	0.35%	0.25	-0.14%	-0.10	19	25	25
Finance	-0.22%	-0.33	1.46%	1.72	1.08%	1.25	20	16	16
Machinery manufacturing	-0.24%	-0.28	0.85%	0.85	0.40%	0.39	21	19	19
Paper and printing	-0.33%	-0.37	0.60%	0.58	0.11%	0.10	22	22	23
Wholesale trade	-0.54%	-0.85	1.38%	1.71	1.01%	1.23	23	17	17
Miscellaneous and not specified manufacturing	-0.61%	-0.67	0.52%	0.49	0.21%	0.20	24	23	21
Retail trade	-0.83%	-1.52	0.39%	0.55	0.05%	0.07	25	24	24
Textile, apparel, and leather manufacturing	-1.01%	-0.92	0.02%	0.01	-0.32%	-0.26	26	27	27
Furniture and fixtures manufacturing	-1.14%	-0.87	-0.61%	-0.42	-0.92%	-0.63	27	30	30
Hospitals	-1.15%	-1.88	0.33%	0.41	-0.15%	-0.18	28	26	26
Mining	-1.27%	-1.22	-0.61%	-0.52	-1.09%	-0.93	29	31	31
Real estate	-1.89%	-2.74	-0.06%	-0.07	-0.34%	-0.40	30	28	28
Health care services, except hospitals	-2.06%	-3.53	-0.53%	-0.67	-0.85%	-1.06	31	29	29

Results are taken from a linear probability regression. In each, the dependent variable is a dummy variable for whether or not the full-time worker (55 and older) retired 12 months later. For each of the industry dummy variables in the first column, we observe its impact on the probability to retire as we modify the specification as indicated in the subsequent columns.

Source: Bureau of Labor Statistics Current Population Survey (January 2003 – April 2011)

Table 3 - Occupations

Occupations	Demographic variables, time		Plus education, income, industry, worker characteristics		Plus unionization		Demographic variables, time	Plus education, income, industry, worker characteristics	Plus unionization
(compared to Managers)	coefficient	t	coefficient	t	coefficient	t	rank	rank	rank
Farming, fishing, and forestry occupations	3.25%	3.20	1.26%	1.02	1.06%	0.86	1	1	1
Protective service occupations	2.45%	3.95	-0.42%	-0.55	-0.57%	-0.76	2	8	7
Installation, maintenance, and repair occupations	1.98%	4.40	-1.20%	-1.90	-1.32%	-2.08	3	14	14
Production occupations	1.63%	4.62	-1.12%	-1.96	-1.25%	-2.18	4	13	13
Computer and mathematical science occupations	1.63%	2.58	1.13%	1.61	1.05%	1.49	5	2	2
Education, training, and library occupations	1.62%	4.60	-0.26%	-0.51	-0.63%	-1.22	6	7	8
Construction and extraction occupations	1.42%	3.35	-1.01%	-1.53	-1.12%	-1.69	7	12	12
Building and grounds cleaning and maintenance	0.89%	1.92	-2.12%	-3.33	-2.18%	-3.42	8	20	20
Transportation and material moving occupations	0.88%	2.37	-1.39%	-2.59	-1.45%	-2.70	9	16	16
Architecture and engineering occupations	0.75%	1.39	-0.21%	-0.35	-0.26%	-0.43	10	6	5
Office and administrative support occupations	0.55%	1.88	-0.62%	-1.51	-0.73%	-1.78	11	9	9
Personal care and service occupations	0.48%	0.89	-1.44%	-1.92	-1.38%	-1.84	12	17	15
Food preparation and serving related occupation	0.25%	0.41	-1.33%	-1.68	-1.45%	-1.84	13	15	17
Business and financial operations occupations	-0.04%	-0.09	-0.06%	-0.13	-0.12%	-0.25	14	4	4
Life, physical, and social science occupations	-0.20%	-0.27	0.28%	0.35	0.15%	0.19	15	3	3
Community and social service occupations	-0.32%	-0.57	-1.63%	-2.30	-1.85%	-2.62	16	18	18
Sales and related occupations	-0.51%	-1.71	-0.91%	-2.24	-0.88%	-2.18	17	11	11
Healthcare practitioner and technical occupation	-0.69%	-1.75	-1.90%	-3.01	-1.99%	-3.15	18	19	19
Arts, design, entertainment, sports, and media	-1.15%	-1.79	-0.85%	-1.16	-0.78%	-1.05	19	10	10
Healthcare support occupations	-1.29%	-1.90	-2.96%	-3.36	-3.04%	-3.45	20	21	21
Legal occupations	-1.79%	-2.88	-0.18%	-0.23	-0.32%	-0.41	21	5	6

Results are taken from a linear probability regression. In each, the dependent variable is a dummy variable for whether or not the full-time worker (55 and older) retired 12 months later. For each of the occupation dummy variables in the first column, we observe its impact on the probability to retire as we modify the specification as indicated in the subsequent columns.
*Source: Bureau of Labor Statistics Current Population Survey (January 2003 – April 2011)*

V. Delaying retirement

A. *Long-running trends behind increasing retirement age*

Data show that the tendency to delay retirement already began more than a decade ago. In Chart 2, we see the percentage of full-time workers who identified themselves as retired one year after they were initially surveyed, beginning in 1998 for three age groups. In all age groups, the proportion of full-time workers who retired in 2010-2011 was much larger than in the late 1990s. For example, among full-time workers ages 60-64, over 12 percent of full-time workers retired between 1998 and 1999. In contrast, less than 7 percent of the same age group retired between 2009 and 2010. Therefore, the tendency to delay retirement was not just a result of the latest recession, but is likely to be rooted in long-term structural factors in the U.S. labor markets.

Several trends have been pushing retirement age higher. In general, people are living longer with advances in medicine and need to accumulate more wealth to sustain their standard of living. Changes in Social Security have also had an impact: the minimum age for receiving benefits has risen from 65 to 67, and penalties for collecting benefits while working after full retirement have been lifted, thus providing incentives for older workers to continue working into their later years.

Chart 2 – Change in the percent of retiring workers (1998 – 2011)
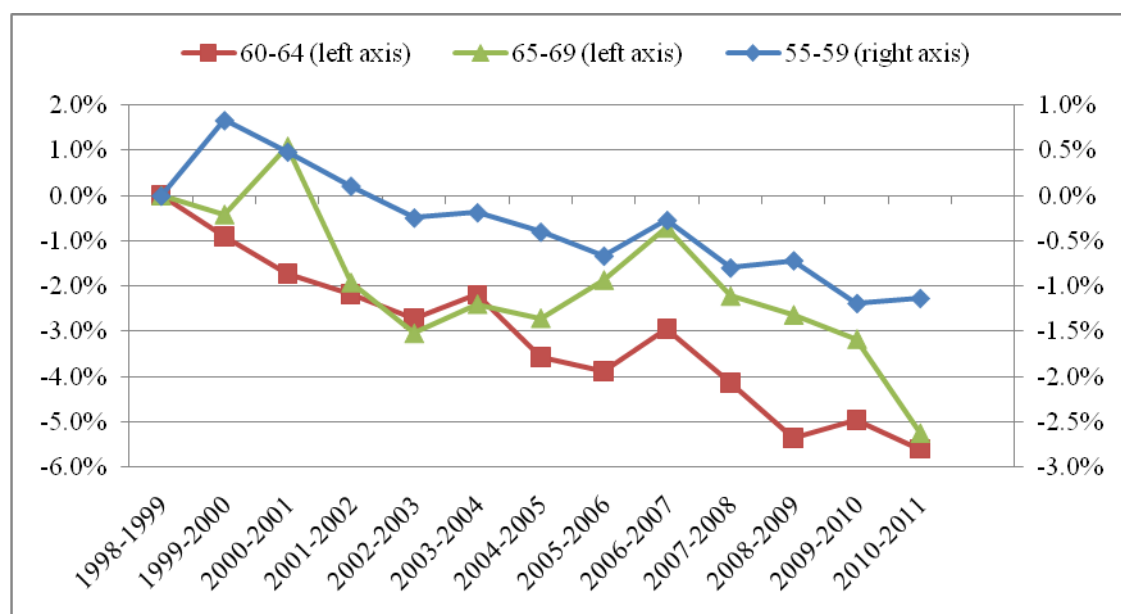
Results are taken from a linear probability regression. In each, the dependent variable is a dummy variable for whether or not the full-time worker (in the three age groups) retired 12 months later. The values in the chart reflect the coefficients of year dummies relative to the base year (1998).
Source: Bureau of Labor Statistics Current Population Survey

Restructuring of benefits in the private sector has had an impact as well. The share of companies providing post-retirement health care coverage continues to decline, encouraging many employees to continue working until they are 65 and become eligible for Medicare coverage. Also, the shift from defined benefit plans to defined contribution plans has reallocated much of the investment risk from employers to employees. (A defined benefit plan provides a fixed stream of retirement payments regardless of asset performance; a defined contribution plan provides a variable stream of income dependent on investment returns). Defined contribution plans may be insufficiently funded, encouraging employees to continue working. Defined benefit plans, which were more prevalent in the past, had often included incentives to retire at a younger age. The overall shift to defined contribution plans has provided an additional incentive to continue working.

B. The Impact of the Great Recession [5]

Recessions always harm retirement preparedness. But the 2008–2009 crisis will have a much larger impact than any recession in the post-war era because of two factors. First, it featured a large decline in home prices, while previous recessions did not. Second, the duration of very high unemployment is likely to be much longer than during previous recessions.

The Great Recession included significant cuts to households' net worth. Between 2007 and 2009, home prices in the United States fell by about 20 percent on average. Stock prices from peak to trough fell by

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[5] This section relies on previous work done in *The Conference Board Executive Action Report No. 350*, "U.S. Workers Delaying Retirement: What Businesses Can Learn from the Trends of Who, Where, and Why"

over 50 percent, and while they have recovered since then, they are still well below their 2007 peak. As a result, households' net worth declined from 66 trillion in the 2nd quarter of 2007 to 48.5 trillion in the 1st quarter of 2009.

The ratio of household net worth to income is a rough proxy for how prepared individuals are for retirement. In Chart 3 we see this ratio for three age groups from 1989 to 2009. Due to the Great Recession, the ratio significantly declined between 2007 and 2009 for all groups. In the case of the 65-74 age group, the ratio of net worth to income in 2009 was the lowest since 1989. This suggests that older age groups may decide to delay retirement in the face of reduced net worth.

Chart 3 – Ratio of household net worth by age group (1989 – 2009)
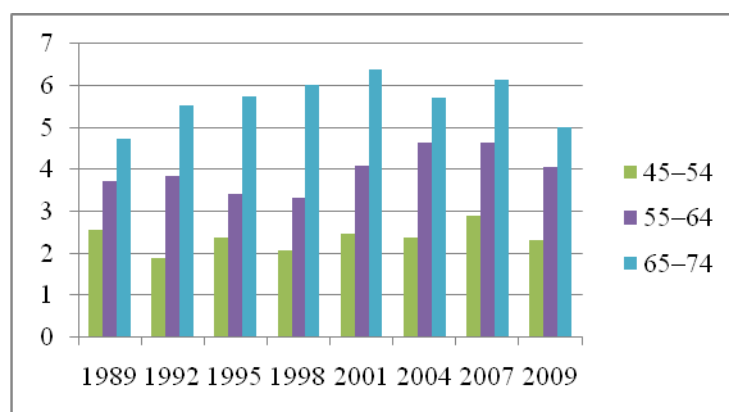
Source: Federal Reserve Board, Survey of Consumer Finances[6]

C. The role of the labor market

According to the *Consumer Confidence Survey*®, 17 percent of households experienced a job loss during the recession, 24 percent experienced a compensation cut, and 36 percent experienced either job loss or a compensation cut—all indications that labor market conditions significantly worsened. Workers who wish to delay retirement, and especially older ones, may experience the impact of the recession as a kind of "double-bind:" workers may *want* to delay retirement because their net worth has dropped, but they cannot find jobs in the continuing poor labor market and are "forced" into retirement. A recent survey by the Bureau of Labor Statistics describes how likely it is for older laid-off workers to find jobs again. Only 49 percent of "long-tenured" workers displaced during the 2007-2009 period were reemployed in January 2010. ("Long-tenured" workers had worked for their employer for three or more years at the time of displacement.) Among older workers, the prospects of finding a job were even grimmer. Reemployment rates for older workers between 55–64 years of age and those 65 years and over were 39 and 23 percent, respectively. Among those aged 65 and over, 45 percent were no longer in the labor force when surveyed in January 2010. It is quite possible that many of these older workers get discouraged over time and decide to retire earlier than planned. [7]

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[6] 2009 data is from a smaller sample that only includes respondents that participated in the 2007 survey and were avaialable to participate in the 2009 survey.

[7] U.S Department of Labor, Bureau of Labor Statistics, "Worker Displacement: 2007-2009," (Washington, DC: USDL-10-1174), August 26, 2010. www.bls.gov/news.release/pdf/disp.pdf

In reaction to the recession, households can choose a combination of three options: come to terms with more limited financial resources at the end of their lives, delay retirement, or increase savings. We have already seen evidence of increased savings. As the crisis began, households cut spending and the saving rate shot up to about six percent within a year. Previously, households only saved between one and two percent of their disposable income from 2005 through 2007, a historic low.

D. Trends in delaying retirement

To estimate the changes in the likelihood to retire over the period of 1998 to 2011, we used a linear probability model where the dependent variable is a binary variable assigned the value of 1 if a full-time worker retires 12 months later (see our definition of retirement in Section II), and 0 otherwise. The independent variables are age and year dummy variables[8].

Table 4 - Average annual change in the likelihood of retiring – Socioeconomic factors

	Dif 1998/9-2010/11	Dif 1998/9-2006/7	Dif 2006/7-2010/11
Male	-0.20%	-0.16%	-0.30%
Female	-0.27%	-0.25%	-0.31%
White and nonhispanic	-0.24%	-0.22%	-0.27%
All other ethnic groups	-0.19%	-0.06%	-0.45%
Less than BA	-0.22%	-0.19%	-0.26%
BA+	-0.21%	-0.16%	-0.31%
Business owner	-0.19%	-0.06%	-0.44%
Not business owner	-0.25%	-0.25%	-0.27%
Total	**-0.18%**	**-0.12%**	**-0.30%**

Results are taken from a linear probability regression. In each, the dependent variable is a dummy variable for whether or not the full-time worker (55 and older) retired 12 months later. For each of the restricted sample groups in the leftmost column, we observe the coefficients of year dummies to calculate the average annual change in the probability of retiring after controlling for the impact of age and month on the probability of retiring.
Source: Bureau of Labor Statistics, Current Population Survey (January 1998 – April 2011)

We then calculated the two-year average of the year coefficients for 1998-1999, 2010-2011, and 2006-2007. In Table 4, we report the average annual change in the likelihood to retire for three time periods: from 1998-1999 to 2010-2011, from 1998-1999 to 2006-2007, and from 2006-2007 to 2010-2011[9]. For all groups, there has been a downward trend in the likelihood of retiring between 1998 and 2011. Moreover, this trend appears to have accelerated during the Great Recession (2008-2009), suggesting an acceleration in the delaying retirement.

However, the acceleration was stronger in some groups than others. To identify which type of worker was more likely to delay retirement during the recession, we divided the sample between whites (and nonhispanic) and all other ethnic groups. For all other ethnic groups, the tendency to delay retirement was stronger in the latest period.

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[8] In all of the regressions in this paper, we include monthly dummy variables to control for seasonality since for 2011 we only have the first four months of data.
[9] We use two-year average to smooth the data

We also witnessed a significant acceleration in delaying retirement among business owners (relative to non-business owners). There are two potential explanations for this occurrence. First, small businesses particularly suffered during the Great Recession. Therefore, they were likely to find themselves less financially prepared for retirement than expected prior to the crisis. Second, as opposed to business owners, regular employees in struggling industries or businesses in many cases were pressured or incentivized by employers to retire earlier in order to cut costs.

We also saw stronger acceleration in delaying retirement among workers with a higher education degrees (i.e. BA or higher) compared others (those with less than a BA). Workers who are more educated are more likely to work in managerial and professional occupations. As we see in Table 5, workers in managerial and professional occupations were much more likely to accelerate the delaying of retirement during the 2006-2011 period. There are a few potential explanations for this. First, there is a higher demand and lower unemployment rate for highly educated workers. Therefore, employers of highly educated workers are less likely to encourage their workers to retire earlier. In addition, among workers without a job, less educated workers might find it more difficult to find employment, especially during times of high unemployment. As a result, they are more likely to be discouraged into retirement.

Table 5 - Average annual change in the likelihood of retiring – Occupations

	Dif 1998/9-2010/11	Dif 1998/9-2006/7	Dif 2006/7-2010/11
Managers	-0.25%	-0.16%	-0.44%
Professionals	-0.24%	-0.18%	-0.35%
Service	-0.11%	-0.07%	-0.19%
Sales	-0.16%	-0.12%	-0.24%
Office Support	-0.32%	-0.41%	-0.15%
Other	-0.19%	-0.16%	-0.24%
Total	**-0.18%**	**-0.12%**	**-0.30%**

Results are taken from a linear probability regression. In each, the dependent variable is a dummy variable for whether or not the full-time worker (55 and older) retired 12 months later. For each of the restricted sample groups in the leftmost column, we observe the coefficients of year dummies to calculate the average annual change in the probability of retiring after controlling for the impact of age and month on the probability of retiring.
Source: Bureau of Labor Statistics, Current Population Survey (January 1998 – April 2011)

Moreover, in some occupations, including ones involving manual labor, less educated workers may find it physically difficult or undesirable to continue working. In fact, in Section IV, we saw that work activities that are more physically intensive are also more likely to retire. From this viewpoint, it is thus unsurprising that lower educated workers are more likely to retire.

Table 5 also shows that managers were the most likely occupation to delay retirement, which may seem surprising since they are among the top earners of the economy and consequently would be better financially prepared than most for retirement. However, the results from the consumer confidence survey shows that managers were the occupation most likely to experience a compensation cut during the recession. This may be due to the large share of bonuses and other performance-based compensation for managers, which generally declined more than wages and salaries during the downturn.

Another determinant of the tendency to delay retirement is how much the company or industry of the worker was affected by economic conditions in recent years. In Table 6, we see that the industries with the largest decline in the likelihood to retire in the past 4 years were agriculture, mining, and educational/health services. Not surprisingly, they were also among the industries most insulated from the recent recession. In contrast, workers in financial services, an industry that has significantly and structurally contracted since the recession, did not experience a decline in the likelihood to retire in the same period.

**Table 6 - Average annual change in the likelihood of retiring – Industries**

	Dif 1998/9-2010/11	dif 1998/9-2006/7	Dif 2006/7-2010/11
Agriculture	-0.01%	0.29%	-0.60%
Mining	-0.59%	-0.63%	-0.50%
Construction	-0.12%	-0.02%	-0.30%
Manufacturing	-0.31%	-0.32%	-0.28%
Trade	-0.18%	-0.13%	-0.29%
Finance	-0.15%	-0.21%	-0.04%
Professional Services	-0.29%	-0.26%	-0.35%
Education/Health	-0.25%	-0.17%	-0.40%
Public Adminstration	-0.21%	-0.33%	0.03%
Other	-0.27%	-0.24%	-0.35%
Total	**-0.18%**	**-0.12%**	**-0.30%**

Results are taken from a linear probability regression. In each, the dependent variable is a dummy variable for whether or not the full-time worker (55 and older) retired 12 months later. For each of the restricted sample groups in the leftmost column, we observe the coefficients of year dummies to calculate the average annual change in the probability of retiring after controlling for the impact of age and month on the probability of retiring.
Source: Bureau of Labor Statistics, Current Population Survey (January 1998 – April 2011)

Interestingly, government workers saw virtually no change in the likelihood to delay retirement in the past four years. This may be the result of two defining factors of public administration. First, many state and local governments are struggling financially, motivating them to reduce their workforce. As a large share of government workers are in fact unionized, it is relatively difficult to lay off workers. As an alternative, government employers can incentivize their workers to retire earlier in order to reduce labor costs. Second, government workers are more likely to receive defined benefits pension plan than other workers, and are therefore more insulated from the overall decline in financial markets.

Chart 4 - Annual change in the likelihood to retire (2006/7-2010/11)
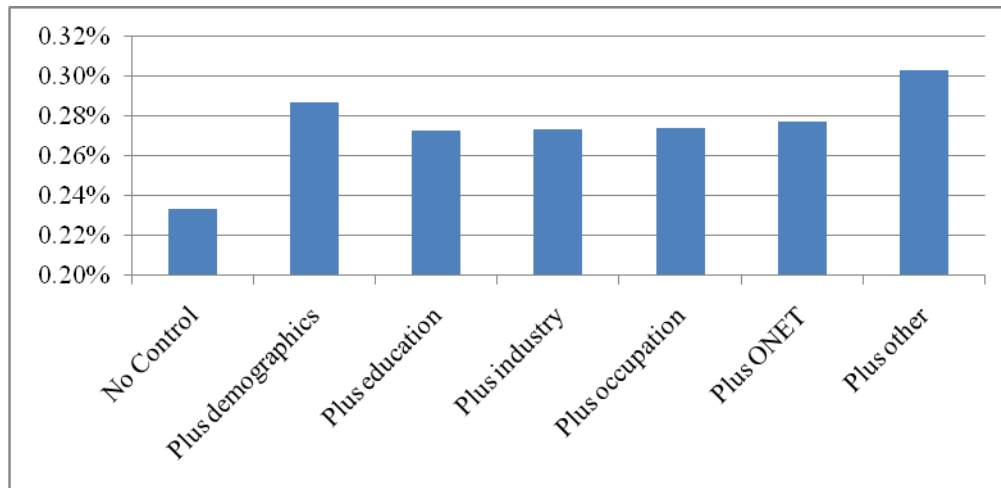
Results are taken from a linear probability regression. In each, the dependent variable is a dummy variable for whether or not a full-time worker (55 and older) retired 12 months later. The values in the chart reflect the average annual difference in the year dummy coefficients between 2006/7-2010/11.
Source: Bureau of Labor Statistics, Current Population Survey

We next estimate if and how much the trend of delaying retirement is impacted by characteristics such as demographics, education, industry, occupation, type of worker's activities, and business ownership. In the last column, we control for employment growth of the worker's state and industry, change in housing price of the worker's state, and whether or not another household member was underemployed. In Chart 4, we see how the annual change in the likelihood to retire between 2006-7 and 2010-11 is impacted by the type of independent variables we include in the regression. Chart 4 shows that once we control for demographic characteristics, the estimated tendency to delay retirement *increases* and remains remarkably stable as we continue to control additional variables.

Ideally, the labor market situation would be captured by two separate variables: First, whether or not an individual experienced labor loss in recent years and for how long- the longer the period of labor loss, the higher the expected tendency to delay retirement in order to make up for depleted savings. Second, we would want to capture whether the worker's employer is cutting its workforce, and, as a measure to do so, incentivizing its older workers retire earlier. Unfortunately, we do not have these variables in this dataset. As an alternative, we control for the 3-year employment growth in the worker's industry in his/her state. For example, a manufacturing worker in Virginia in April 2011 is assigned a growth rate from the April 2008 in manufacturing in Virginia. This variable is used as a proxy reflecting employers' respective employment conditions, but is also correlated with the likelihood of the worker experiencing job loss in recent years. Therefore, theoretically it is not clear what the expected direction of this variable should be.

However, we do believe that this variable is a better measure of labor market conditions than the unemployment rate, which has been used in other studies [10] for two reasons. First, by using the BLS Current Establishment Survey, we are matching individuals to both state and industry level data, not just

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[10] See Bosworth and Burtless (2010) and Coile and Levine (2011)

state (as is the case for the unemployment rate). Second, the CES is based on a larger sample and thus more accurately measures employment.

In addition, we use the housing price index by state provided by the Federal Housing Finance Agency (FHFA). We expect that a decline in home prices would reduce household net worth and financial preparedness, consequently increasing the likelihood of delaying retirement.

Lastly, we define whether another individual of a respondent's household is underemployed (defined as being either unemployed or working part-time for economic reasons). We expect that those living with another who is underemployed to be more likely to continue working so as to make up for lost income of the other household member.

In Table 7, we show the estimated coefficients for these variables. The growth in employment and household member underemployment are initially negatively related to the probability of retirement, which is aligned with our expectations. Lower employment growth implies greater cuts in the workforce by employers through incentivization of retirement. Similarly, workers whose fellow household member is underemployed face an added pressure of continuing to work for the sake of financial security. At the same time, a weak housing market implies that individuals are suffering from a fall in household wealth, increasing the necessity to continue working and decreasing the rate of retirement. Upon controlling for demographics, education, industry, occupation, and time, we find that both employment growth and housing prices are no longer significant in determining the likelihood of retiring[11]. These results are in line with Bosworth and Burtless (2010), who find that the weak job market and plummeting asset returns had little to no effect on labor force participation.

Table 7 – The impact of labor and housing market conditions

	No control		Demographics and Education		Industry and Occupation		Time	
	coefficient	t	coefficient	t	coefficient	t	coefficient	t
Growth in employment (3-yr avg)	-4.93%	-1.83	-2.67%	-0.94	-3.05%	-0.78	-3.38%	-0.80
Change in housing price (3-yr avg)	1.22%	2.84	2.02%	4.57	1.97%	4.06	-0.10%	-0.15
Household member is underemployed (compared to otherwise)	-1.06%	-1.92	-1.45%	-2.64	-1.34%	-2.35	-1.26%	-2.21

Results are taken from a linear probability regression. In each, the dependent variable is a dummy variable for whether or not the full-time worker (55 and older) retired 12 months later. For each of the independent variables in the first column, we observe its impact on the probability to retire as we modify the specification as indicated in subsequent columns

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[11] It is possible that housing prices are not significant because we were unable to separate homeowners from non-homeowners, and we expect the decline in home prices to only impact homeowners in a significant way.

However, we do not view the results in the final column of this table to mean that labor and housing market conditions have no impact on retirement decisions. It should be noted that both the employment and housing data used are only crude measures of the financial impact experienced by each respondent since the data reported at the state and industry level can be quite different from an individual's own experience during the crisis. Therefore, we believe that in this dataset we do not have the appropriate microdata pertaining to these conditions to measure the individual impact each respondent experienced. Therefore, we turn to The Conference Board Consumer Confidence Survey, with which we can better measure the labor market and home price impact on retirement decisions.

F. Using the Conference Board Consumer Confidence Survey to analyze retirement plans

We use the Consumer Confidence Survey (as described in Section III) to estimate the impact of labor market conditions and housing prices on plans to delay retirement. We define the variable "labor loss" as a binary variable, which is assigned the value of 1 if the respondent or someone in his/her household experienced either job loss or a compensation cut during the recession. We then use the question that asks whether the individual's home value declined by more than 20 percent since the beginning of the housing crisis in 2006. In Chart 5, we show that people who had experienced labor loss or a decline in home prices by more than 20 percent were much more likely to plan to delay retirement than those who didn't.

Given these results, one would expect that respondents living in states that suffered a significant decline in home prices and job losses to be more likely to plan to retire later. Indeed, in Chart 5 this is the case, demonstrating the impact of the recession on workers' willingness to postpone retirement. The respondents from the hard hit states, which we identify as Arizona, California, Nevada, Florida, and Michigan, a total of 24% of the sample, were more likely to plan on delay retirement than those from other states. This result suggests that businesses with operations in multiple areas of the United States may face stronger tendencies to delay retirement in hard hit states than other areas of operation.

Chart 5 – Percent planning to delay retirement
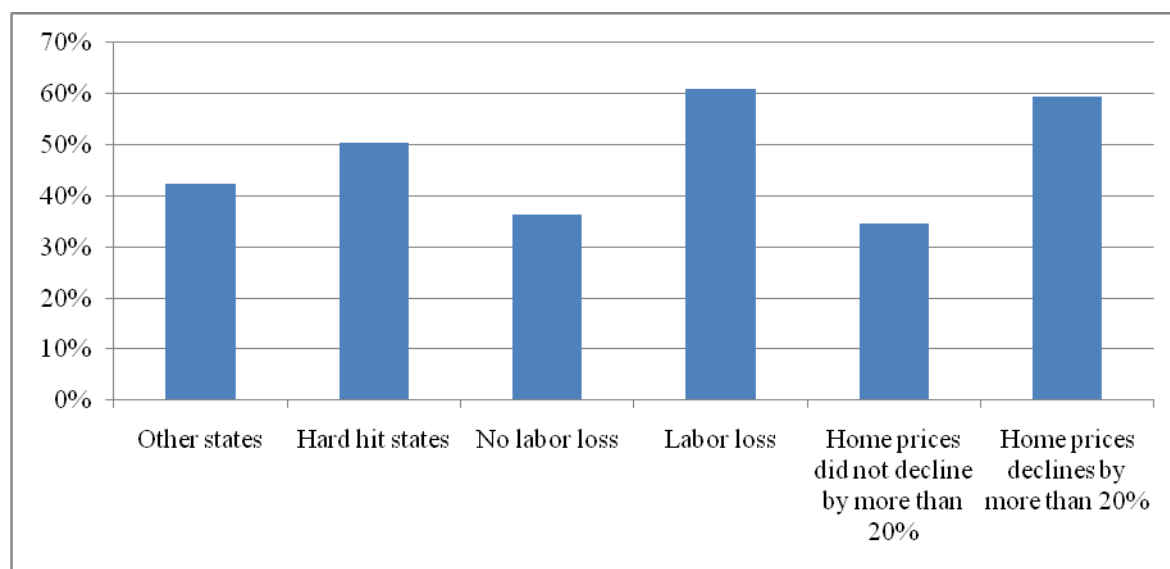
We observe whether the difference between hard hit states and other states comes from the impact of housing prices and labor loss, or if other factors are responsible for the gap. In Table 8, we show the result of a multinomial probit regression. We show the estimates of choosing "yes" rather than "no."[12] In all of the specifications, we use a set of individual independent variables, including income, age, gender, race, education, family structure, business ownership, and employment status.

In the first specification, we add a dummy variable for the hard-hit states, whose coefficient proves very significant. In the second specification, we add a labor loss dummy variable, in which case the coefficient for the hard-hit states variable declines but remains significant. In the third specification, instead of controlling for labor loss, we control for home prices falling by more than 20%, in which case the coefficient of hard-hit states shrinks by almost 50% and is no longer significant. In the fourth specification, when we control for both labor loss and home prices, the coefficient for the hard hit states is a little over a third of its original value, and is completely insignificant.

In the latter three specifications, the impacts of labor loss and home prices are very significant. The results suggest that declining home prices and prevalence of job loss and compensation cuts had a dramatic impact on individuals' plans to delay retirement, and that these two variables are responsible for the entire gap between hard-hit and other states.

Table 8 –Hard hit versus non-hard Hit States

	1		2		3		4	
	Coefficient	t	Coefficient	t	Coefficient	t	Coefficient	t
Hard hit states	0.283	3.66	0.245	3.12	0.151	1.62	0.1	1.06
Labor loss			0.786	11.07			0.897	11.32
Home prices declines by more than 20%					0.66	6.63	0.581	5.69

Results are taken from a multinomial probability regression since there are three choices("yes", "no", "don't know/not sure"). The coefficients in the table present the impact on the probability of answering "yes" rather than "no." For each of the independent variables in the first column, we observe its impact on the probability to delay retirement as we modify the specification as indicated in subsequent columns. In (1), we test the effect of hard hit states on the probability of delaying retirement. In (2), we add whether or not the individual experienced labor loss during the recession. In (3), we instead add whether or not the individual experienced a decline in home price by more than 20 percent. In (4), we add both labor loss and decline in home price to the regression.
Source: The Conference Board Consumer Confidence Survey

G. Annual number of workers retiring in the near future [13]

Unless households' net worth strongly recovers in the next several years, which is unlikely, we can expect that the current lack of retirement preparedness may ripple through retirement rates for decades to come.

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[12] The third answer is "not sure/don't know".

When looking at the likelihood to plan to delay retirement across age groups, we found that workers aged 45-54 and 55-64 have surprisingly similar attitudes toward retirement, which suggests that the tendency to delay retirement may be strong for some time (not shown).

Among the *Consumer Confidence Index*® respondents planning to delay retirement, nearly half planned to do so five years or more from the survey date (September 2010). However, in predicting the number of workers retiring annually in the next several years, it is important to recognize three developments contributing to an increased number of retirees in the coming years. First, the negative effect of the Great Recession on decisions to retire is likely to wane as the recovery continues and the number of individuals delaying retirement out of financial necessity declines. Second, the size of the cohort near or at retirement age will grow due to the aging of the baby boomers. Lastly, those who have already delayed retirement, particularly from 2008-2010, will eventually leave the labor force and retire.

Moreover, an additional development could lead to an above-normal level of retirees beginning in 2014. In that year, according to health care reform legislation, the health care exchanges could be up and running. If they function properly, that could enable workers to retire before 65 instead of waiting until they are eligible for Medicare. This is especially true for employees in companies without postretirement health care coverage.

On the other hand, the trend of increased retirement age is likely to continue due to previously mentioned long-term trends, such as increased lifespan, shifts to defined contribution plans, changes in Social Security, decline of postretirement health care coverage, and the like.

VI. Economic and business implications[14]

The macroeconomic implications of delaying retirement are mixed. Delayed retirement allow households to consume more today and thus reduce the probability of a prolonged slowdown in the U.S. economy. It will also allow households to reach retirement with more financial resources. On the other hand, delaying retirement is probably increasing the already high unemployment rate as older workers continue to compete over the small number of available job vacancies.

Delayed retirement has even affected the demographic distribution within the United States. Since the recession begun, there has been a change in migration patterns between U.S. states (Chart 6). Most importantly, the three largest migration destinations prior to the recession fell "off the map" in the last two years. Net migration rates for Nevada and Arizona fell dramatically, while Florida's even turned negative. Part of the decline in net migration to states like Florida and Arizona is likely due to the trend of delayed retirement. Fewer individuals are leaving the labor force and moving to retirement destinations.

The overall business impact of delayed retirement is mixed. On the positive side, delayed retirement provides relief for several more years in industries that will suffer significant "brain drain" from baby boomers reaching retirement age. On the other hand, there are several potential problems. For companies that would like to reduce headcount, slash labor costs, or hire new workers, workers delaying retirement could pose a challenge. Older workers are usually more expensive due to higher salaries and health care costs. Delayed retirement could clog promotion pipelines and prevent younger workers from being hired or promoted. In addition, older workers who would rather retire than keep working could be less engaged. In a survey conducted among HR executives in 2011, the respondents indicated that the two most

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[13, 14] This section relies heavily on previous work done in *The Conference Board Executive Action Report No. 350*, "U.S. Workers Delaying Retirement: What Businesses Can Learn from the Trends of Who, Where, and Why"

negative impacts of delaying retirement are the impact on succession planning of younger workers and the impact on health benefits[15].

The survey also showed that only 29 percent of companies have a Human Capital Strategic Plan that addresses retirement issues. This proportion went up to 43 percent among companies in which the average age of the workforce was above 45. Because of the 2008-2009 recession, 25 percent of companies changed their forecasting methods and/or assumptions for number of workers retiring. This percent was even greater (roughly 40 percent) among companies who observed a tendency to delay retirement within their workforces.

Chart 6 - Annual Net Migration Rates for Selected U.S. States
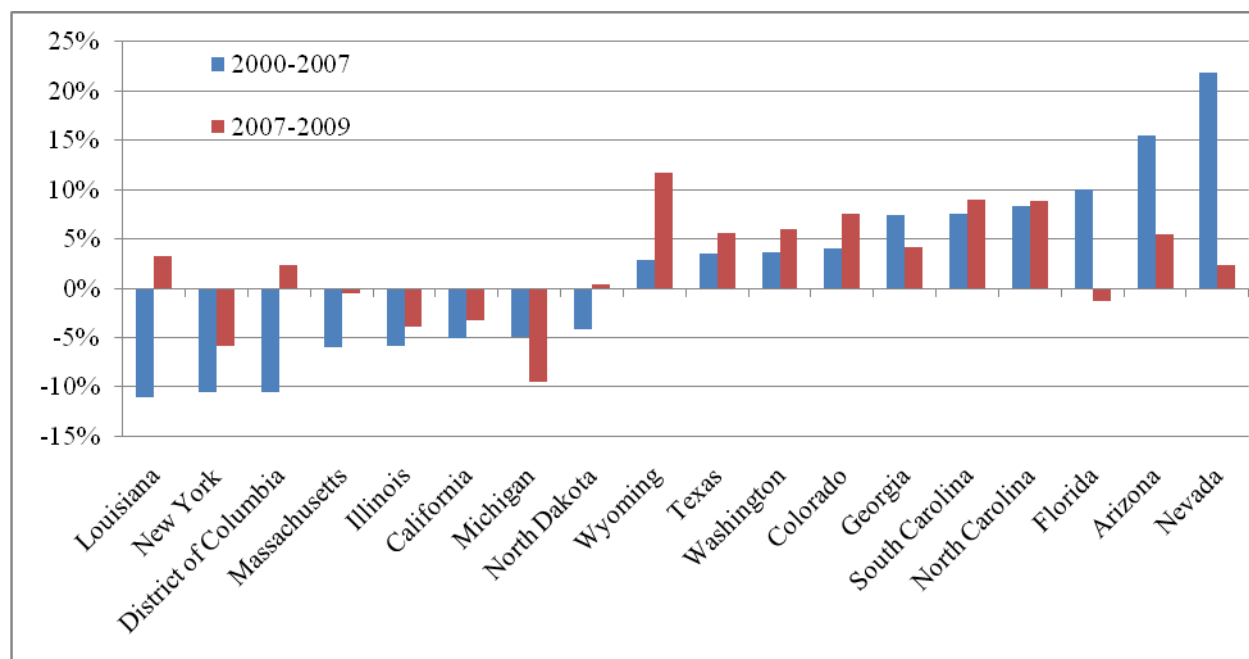
Source: Bureau of Labor Statistics

Companies can forecast future retirement rates for specific segments of their workforce based on historical patterns. The results of this study suggests that since the beginning of the recession, the trend of delaying retirement accelerated, but the acceleration varied considerably across different groups in the population. For example, businesses are likely to find that delaying retirement occurred more among managers than unionized workers, employees living in Arizona rather than Pennsylvania (because of the housing crisis), or those with defined contribution plans rather than defined benefit plans, and so on.

With these insights, businesses can adjust to the retirement trends in their industry and region by restructuring job options if necessary. Changes in schedule, place, and work duties may be necessary to ensure a good fit for employees in different situations. One such policy is phased retirement, which transitions older workers from full-time positions to full retirement. In particular, policies regarding executives may be needed—businesses can move senior executives into advisory roles, thus using their knowledge and experience while allowing for promotions among the less tenured. Whatever the approach, companies can be proactive by assessing how delayed retirement in their workforce will affect their business in the short and long term by considering the principal trends.

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[15] The survey was conducted among 160 HR executives from companies that are members of The Conference Board.

VII.   Further Research

In this paper we documented the important trend of US workers delaying retirement and discussed its economic and business implications. Further research should focus on monitoring the trend in retirement rates and whether they return to more normal levels as economic conditions improve. In particular, research should assess the impact of health care reform on retirement decisions. Second, more research is needed on the implications of delaying retirement on businesses to better understand how delaying retirement reduces the expected skill shortage and impacts workers' health and retirement benefits.

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