

# The Changing Role of Employer Pensions: Tax Expenditures, Costs and Implications for Middle Class Elderly

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## Abstract:

By any measure, pension coverage should be at an all time high: the nation is richer and workers are older. However, the pension world is a paradox, as pension security falls for middle class workers and pension spending increases. The United States government directly and indirectly spends over half a trillion dollars on the elderly each year. Direct spending is mainly through Social Security and indirect spending through the tax code's special treatment of employer and personal retirement plans. The tax favoritism is an astonishing one fourth of the direct spending. But the nature of the tax subsidy is changing. The tax subsidy for 401(k) plans, which are beneficial to employers and higher income workers, is overtaking that for traditional pensions, which both cover lower income workers and help expand pension coverage. Since tax policy is designed to meet a public purpose, perhaps over \$100 billion dollars per year spent indirectly on pensions could be better spent? Using tax expenditure data from the federal budget, data from employers' surveys -- the Chamber of Commerce and the National Compensation Survey --, and from workers' survey from the Bureau of Census's Current Population Survey, this study reflects on alternative pension policies that transforms the tax subsidy and expands Social Security and traditional pensions. Such a sharp change in federal policy may stem the loss of pension security of middle class workers and expand it for lower income workers.

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What puzzles the nation is why pensions can be so expensive and deliver so little. All workers are feeling the pension pinch: those without pensions, those with pensions, and those who have lost pensions. The stagnation in pension coverage coupled with employer adoption of 401(k) plans means the hopes of those without pensions is smaller; those with pensions have experienced more risks and responsibilities for saving and investing; and those who have lost pensions feel robbed and forced to work longer.

Here are some key findings of this study.

- Tax favoritism, and consequently tax expenditures, are key pieces of federal retirement income security policy. The tax expenditures for employer-pensions are the largest of any category and the composition is changing from subsidizing DB plans to 401(k) plans. See Section 1.
- Employer pensions are institutionalized savings and the key component of American household savings to a middle-class retiree standard of living. See Section 2.
- Paradoxically, pension participation is stagnating despite the rapid increase in: DC coverage, tax expenditures, and pension spending, which increased faster than cash compensation and medical insurance. See Section 3.
- The participation/spending paradox may be explained by the distribution of pension coverage shifting to higher income workers and away from middle class workers and the motives of employers to make the shift. See Section 4.
- Younger workers could be worse off with the typical 401(k) plan than the typical DB plan because job tenure is not diminishing (see Section 6.3.) and 401(k) plans are used mostly as severance plans, rather than pension plans. See Section 5.
- There are good reasons employer based pension plans may and should survive (retirement financing is inextricably tied to work; occupational plans help raise productivity and retain older workers -- a major future human resource challenge). Social Security expansion can help most workers, which can be funded from rearranging tax expenditures for 401(k) plans and IRAs. See Section 6.
- The proposed “so-called” winning solution to strained pension budgets of people working until age 70 may not be possible as jobs held by the elderly become more difficult. In addition, though some elderly may find work attractive; as retirement income fails older people lose the ability to seek the work on their terms, and those of the employer prevail. See Appendix.

## 1. Government Spending on the Elderly and Tax Expenditures

Every year the federal government spends a little over one third of its budget on programs and transfer payments for people 65 years old and over. Most of the spending is on entitlement programs – programs whose expenditures are based on the costs of the services or transfers to those eligible and collecting. Of these, Social Security and Medicare take up the lion’s share. In 2010, projected spending on the elderly is \$471 billion for Social Security, \$10 billion for Supplemental Security, and \$377 billion for Medicare. Currently, total federal spending for the elderly is \$ 1,026 billion, \$441 billion is in Social Security (Congressional Budget Office 2000).<sup>1</sup>

These direct costs understate the true spending on programs directed at retiree well-being. American legislators have long used tax policy, through “tax expenditures,” to direct private spending in socially approving ways. Tax expenditures are the value of the tax code’s exemption of income that is generated for certain activities.

Tax expenditures for private retirement plans – including revenue not collected because earnings and contributions in traditional employer pensions (defined benefit [DB] plans; in 401(k) plans; in Individual Retirement Accounts (IRAs); and in similar savings vehicles dedicated for disbursement at older ages totaled full fourth of total annual Social Security contributions--\$114 billion in 2004. Even more amazing, total household saving, at \$102 billion, was lower than the federal pension tax expenditure (Bell, Carasso, Steuerle 2005). Federal spending in the form of tax expenditures for 401(k) plans is expected to grow 28 percent by 2009 while that for traditional plans is falling by 2.1 percent. (See Table 1 below.) Since tax expenditures aim to meet a social purpose, this study focuses on how this shift affects workers and retirees and assesses whether the \$114 billion could be spent in better ways.

Table 1  
Selected Tax Expenditures for the U.S. Budget

	2005	2009	growth rate
	(billions \$)		
Net exclusion of pension contributions and earnings: 401(k) plans	58.9	75.4	28.0%
Net exclusion of pension contributions and earnings: Employer plans	61.7	60.4	-2.1%
Exclusion of employer contributions for medical insurance premiums and medical care (the largest)	112.9	150.3	33.1%
Deductibility of mortgage interest on owner-occupied homes	69.7	87.9	26.1%

Source: U.S. Budget 2004. Analytical Perspectives, Table 18-3

Tax expenditures have distributional effects and since higher income individuals with higher marginal tax rates have the greatest financial incentive to take advantage of this source of federal spending, tax policy can be partially blamed

for the relatively small rates of pension coverage among lower income workers. The distribution of tax expenditures can be inferred by who is covered by the various forms of tax favored plans.

## 2. Middle Class Retirement Income and Household Saving

Social Security benefits replaces about 41 percent of income for retirees who were average career earners.<sup>2</sup> But financial planners recommend a minimum 70 percent replacement rate so middle-class workers reach that target mainly through employer-linked pension plans. In 2002, elderly households in the middle of the income distribution (the middle 20 percent) received 9.2 percent of their total retirement income from private employer pensions, which is lower than the 13.8 percent the top quintile receives.<sup>3</sup> Yet, the gap in personal assets is much larger. Middle households obtained 7.4 percent of their retirement income from personal assets, including 401(k) plans, whereas the top 20 percent of households receive a much larger share, 18.9 percent, from personal assets. It seems the top-heavy distribution of personal assets is caused partly by 401(k) plans being more unevenly distributed than private pension plans. Wolff (2006) reports that inequality is much higher among households with pension wealth is much higher for those with DC accounts than with those with DB accounts. It is clear, combined with Social Security, traditional employer pensions are the key to middle class status in old age and 401(k) plans help higher income workers more.

It also seems these institutionalized forms of savings is the only reason that the overall savings rates are not smaller (Bosworth and Bell 2005, Munnell et. al. 2005). In 2005, Americans spent more than their income, yet 20 years ago savings rates were 10 percent (Munnell, Sass and Varani 2005). This is mysterious. Savings should be increasing. Middle-aged workers save more, and more workers are middle aged. Educated people save more, and more workers are educated. Most savings comes from the households at the top of the income distribution, and these have had the most income gains (Bosworth and Bell 2005). Although American practically stopped saving out of take-home pay in the 1980s, the deep decline in contractual savings, especially by traditional defined benefit (DB) pension plans, explains a large part of the current savings rate decline. Therefore, the savings drop is directly caused by diminishing DB pension. Yet, tax expenditures for retirement plans are going up by almost 26 percent! Part of the paradox is explained by stagnating coverage among lower income and middle class workers and increasing coverage and tax deductible limits increasingly utilized by upper income workers. First we discuss workers and their pensions.

## 3. Employer Pension Coverage is Shrinking among Middle Class Workers

Despite considerable federal tax incentives to employer provided pensions, workers surveyed in the Current Population Survey (CPS) report their participation in an employer pension plan has been falling for years: the pension participation of workers who work full time and for an entire year fell from 54.1 to 53.4 percent between 2003 to 2004 (Purcell 2005a).

The Department of Labor's survey of private employers, the 2005 National Compensation Survey (NCS, also reports stagnation, although employers report pension coverage and participation rates recently rose slightly. In 2005, employers reported a 2 percentage point increase in private sector participation to 50 percent from 48 percent in 1999. (The comparable participation figure – for all private sector workers in the 2005 CPS -- is a lower 46 percent participation rate.)<sup>4</sup> There is a great deal of variation of participation rates among workers and whether the pension is a DB or defined contribution –type plans, like 401(k) plans. 401(k) type plans are growing and DBs are not. For some, union workers and workers in small firms coverage rates increased 7.6 percent and 8.8 percent respectively. Manufacturing workers and nonunion workers had the least growth in pension participation (See table 2).

DCs are increasingly dominating DB plans: DB participation rates have been flat since 2004 while DC rates are up 19.4 percent. Remarkably, the growth in DC plans has not raised pension participation rates. In 2005, employers reported 43 percent of workers participated in DC plans and 21 percent participated in DB plans. If these shares were added, 64 percent of the workforce would be in retirement plans, but only 50 percent are. If DC coverage and participation growth expanded access to pension plans rather than replacing or supplementing an already existing DB plan, then growing DC rates should have pulled up total pension coverage and participation rates.<sup>5</sup> The correlation between the overall expansion of pension participation and DB participation rates is a strongly positive 79 percent. However, the correlation between all pension and DC growth is a negative 10 percent. This means that groups with the highest growth rates in DC plans are less likely to experience a significant increase in pension access. The highest growth rate in DB coverage was 12.5 percent for workers in small firms and this group also happened to have the largest increase in overall growth rates – a boost of 8.8 percent.

More troubling is that the gap between the participation rates and coverage rates has grown larger. In 1983, some 54 percent of workers were covered by a pension plan whereas only 43 percent of those workers participated in the plan their employer sponsors. This means, the fraction of workers participating in a pension plan among those who were covered by a plan was 82 percent. That fraction fell to 75 percent by 2004.<sup>6</sup> The coverage rates exceed participation rates because workers can choose not to be covered only in a 401(k) and they can be disqualified from a plan if they have less than one year of service or work fewer than 1,000 hours per week. Yet, as defined contribution plans become more important the voluntary participation feature of 401(k) plans becomes more significant for whether lower income workers are covered (Purcell. 2005b). Since 1983, (which is about the time 401(k) plans were being adopted widely) participation rates have fallen behind coverage rates.

The bottom line is that regardless of the database used, pension coverage is stagnating as a percentage of the labor force. Furthermore, the evidence suggests that increases in DC plan coverage have not been correlated with increases in total pension coverage, perhaps because DCs relentlessly exclude many lower income

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workers.<sup>7</sup> This conclusion begs the question whether the pension tax expenditures meet social goals.

**Table 2**  
**Pension Participation and Growth Rates of All Private Sector Workers**  
**by Selected Category and Ranked by Participation Rates in 2005**

	Participation Rates in All Pension Plan		Participation Rates in DB Pension Plan		Participation Rates in DC Pension Plan		Changes from 1999-2005		
	1999	2005	1999	2005	1999	2005	Changes in Over All Pension Participation	Changes DB Participation	Changes DC Participation
Union	79	85	70	72	39	43	7.6%	2.9%	10.3%
Firms over 100	64	67	37	36	46	53	4.7%	-2.7%	15.2%
Goods-producing	61	64	36	32	44	50	4.9%	-11.1%	13.6%
Full time	56	60	25	25	42	50	7.1%	0.0%	19.0%
Service industries	44	47	17	18	34	39	6.8%	5.9%	14.7%
Non union	44	46	16	15	35	41	4.5%	-6.3%	17.1%
Small firms 0-99	34	37	8	9	27	32	8.8%	12.5%	18.5%
All workers	48%	50%	21%	21%	36%	43%	4.2%	0.0%	19.4%

Notes: All participation rates are in percent. The source of the data is the National Compensation Survey: employee benefits in private industry, author's computations from the data available on the website: [www.nbls.gov/ncs/ebs](http://www.nbls.gov/ncs/ebs).

#### 4. The Disconnect between Employer Pension Spending and Pension Security

It makes sense that tax expenditures are increasing because pension spending has risen dramatically, though, it might not make much sense that many workers are not benefiting. According to the Chamber of Commerce's survey of private sector employers, from 1989 to 2005, the nominal increase in total compensation for all employees in manufacturing was 56.5 percent; but, the increase for DB spending was 450 percent.<sup>8</sup> DC costs increased by 90.9 percent. In 2005, the average DB pension cost for all employees in private manufacturing was \$4.40 per hour; DC costs were \$2.10 per hour. In the non-manufacturing sector, the growth in spending for all types of compensation was more balanced. Between 1989

and 2005, DB pension spending rose by 60 percent, DC by 120 percent, and total compensation increased by 66 percent. See Table 3.

Table 3  
 DB Pension Spending Has Increased  
 Faster than Cash Compensation and Medical Insurance  
 For All Workers (Production and Salary expressed in dollars per hour)

	Manufacturing			Growth	
	1989	1998	2005	2005 – 1998	2005 – 1989
DB*	\$0.80	\$1.20	\$4.40	266.7%	450.0%
DC	\$1.10	\$1.40	\$2.10	50.0%	90.9%
Retiree Health	\$1.00	\$1.00	\$1.20	20.0%	20.0%
Medical Insurance	\$8.30	\$6.90	\$9.40	36.2%	13.3%
total compensation	\$14.48	\$20.58	\$22.67	10.1%	56.5%
	Non- Manufacturing			Growth	
	1989	1998	2005	2005 – 1998	2005 – 1989
DB	\$2.50	\$3.90	\$4.00	2.6%	60.0%
DC	\$1.00	\$2.10	\$2.20	4.8%	120.0%
Retiree Health	\$0.80	\$0.90	\$0.50	-44.4%	-37.5%
Medical Insurance	\$7.90	\$6.40	\$10.90	70.3%	38.0%
total compensation	\$14.67	\$18.82	\$24.35	29.4%	66.0%

\*DB includes cash balance and hybrid plans

Source: *Employee Benefits Report*, US Chamber of Commerce various years,

Table 1

Companies, especially in manufacturing, had to increase pension spending dramatically in 2004 and 2005 when the sudden declines in the stock market placed company DB plans in a severely underfunded position. It may be difficult to feel sympathy for companies that were required to sharply increase DB contributions because many had taken pension holidays in the 1990s when the stock market returns and interest rates were such that assets grew at the very same time liabilities fell (the high interest rates deeply discounted them). To their credit these companies did not ask for pity, instead they boosted DB contributions and many planned their exit out of DBs. Some used bankruptcy courts and exited in a non-orderly and brutal way (some airline pilots lost 80 percent of their expected pensions); and many other employees will never get what they expected from their DB plan (VanDerhei 2006), other companies emphasized their 401(k) supplement and eased out of the DB plan. Some companies officially froze their healthy DB plan.<sup>9</sup>

Tax and accounting rules have been blamed for causing employers to move away from DB pensions.<sup>10</sup> But I argue here that the primary reason is more straightforward, many employers switch to DC plans to lower costs. IBM, Hewlett

Packard, Motorola and other major corporations announced their that this was the rationale for changing their pension policies. I.B.M.'s savings are projected in the billions of dollars (Walsh 2006) (A full accounting of healthy companies freezes are available from Munnell et. al. [2006]).

#### How Firms Save Money with DC Plans

VanDerhei (2006) argued that though firms cited cost volatility as the DB feature firms wanted to avoid, the Aon company found that 45 and 35 percent of the companies they surveyed froze their DB plans for reasons identified as “the amount of contribution” required or “the impact on corporate expense.” The human resource consulting firm, Mercer, found that 25 percent of their surveyed firms froze their DB plan for “long-term cost savings.” VanDerhei found there is tremendous variability regarding what types of workers were fully compensated by employer 401(k) plan contributions when they lost DB benefits. He concludes, in general, older, longer-tenured, workers are less likely than younger workers to be compensated. And, if workers do not earn over 4 percent return on the 401(k) plan contributions and remain with the firm between 10 – 14 years, they will more likely lose from a DB to 401(k) switch.

The 2005 cost for DBs costs are much larger than DC plans which makes bare the simplest and most obvious reason employers may prefer DC plans to DB plans is probably the chief explanation for the shift -- shifting to DCs lowers worker pay without workers retaliating. In other words, the fact that 401(k) plans can reduce pension costs powerfully motivates some employers to choose 401(k) plans despite DBs positive effects in retaining and attracting older workers -- an especially important feature as the workforce ages. The motivation is apparent when the vexing problem that eligible employees irrationally “leave money on the table” by not participating in 401(k) plans is viewed from the vantage of the employers’ delight, not the policy-economist’s dismay.

In addition to the public announcements made by firms cutting DBs is the evidence that despite the convenience of payroll deduction and the proliferation of expensive investor education programs, the average participation rate for 401(k)-eligible workers has stagnated at about 80 percent. Twenty percent of employees do not take advantage of an employer’s match or tax break. Pension experts and academics invariably write this off to “quirky” human nature.(Turner 2006) This view ignores the obvious reality that when workers leave money “on the table” they leave it on the employers’ table and that the outcome could be anticipated and factored into the employers’ compensation strategy.<sup>11</sup> In fact, if all eligible workers participated in their employers’ 401(k) plans between 2002 and 2004, employers would have had to contribute 26 percent more -- for an annual total of \$3.18 billion. Employers not wanting 100 percent participation solves some of the mystery why, although automatic enrollment is a documented, effective way to increase participation in 401(k) plans, 82 percent of 401(k) sponsors do not offer it. As mentioned above, one-fifth of employers are credited with providing a pension even though they contribute nothing to their employees’ 401(k)s.<sup>12</sup> Ghilarducci, Sun, and Nyce (2004) and Ghilarducci and Sun (2006) found that merely adopting a 401(k)

can reduce pension costs by as much as 25 percent. Crucially, the cost savings from switching from a DB to a DC is not distributed equally, it is likely for a numerous reasons the biggest losers are lower paid workers.

Indirect evidence that profit maximization motivates firms to discourage 401(k) participation can be found in the fact that those employers with the highest participation rates are primarily not-for-profit firms and government agencies. In 2003, Plan Sponsor magazine celebrated these employers for above average participation rates in 401(k) type plans. Those achieving 99 to 100 percent participation used a simple, surefire method: they mandated participation. Therefore what is not so obvious is made clear. The long-standing stagnation in pension coverage is partially explained by firm's ability to reduce employee compensation by replacing DB plans with 401(k) plans. Evidence above showed that increasing DC coverage is correlated with slow growth in pension coverage; whereas growth in DB coverage is associated with an increase in coverage. Cost savings in DC plans may explain the reason.

Employers move from DB plans to DC plans, in part, because such a move saves money without an appreciable loss in productivity. Employers are able to adopt inferior pension plans, in part, because the workers are not resisting the loss. As noted earlier, one of the most important sources of climate change threatening pensions is the decline in unions. Collectively bargained compensation packages traditionally contain more employee benefits and other forms of non-wage compensation than non-union compensation packages. There are various mechanisms that explain the union effect on employee benefits. Unions may facilitate benefits by informing and educating members about the importance of insurance and pensions. Unions also may promote employee benefits relative to cash wages because unions represent the older worker rather than the marginal, younger worker who likely prefers cash relative to insurance. Union workers have almost twice the coverage rates for lower income workers and over 10 percent more for higher paid workers.

##### 5. Are DCs Better for Workers and Retirees in a Changing World?

A main argument against DBs is that they are, supposedly, a bad fit with today's workers. An extreme form of the argument is that DBs reward workers who stay with the same employer for their entire career and if workers are more mobile this pension form makes little sense – young workers hardly vest or only accumulate miniscule DB credits. Yet, the mobility argument is fragile, built on exaggerated claims about worker mobility.

In fact, younger workers have always engaged in “job hopping” but, formerly, they were more likely to end up in a beneficial DB plan. In this way mobile workers benefit from the existence of a DB plan even if they do not settle into a job or jobs until age 40. After 10 years at an advanced age, a worker can lock-in a significant DB pension benefit. DBs allow middle aged workers to accumulate a reasonable retirement income in their 40s and 50s even if they've changed jobs a lot in their twenties and thirties. Furthermore, the fact that most workers use their 401(k) account balances as severance payments, spending them when they quit, are laid off

or fired, means that job-hopping has even worse consequences for retirement savings in a 401(k) world.

However, before we allow that mobility determines the most effective pensions, we need to know the facts. Mobility trends differ depending on the point of view – what time period, what industries, what aged workers, for men or for women. In many ways, workers have become more stable. One measure is that the share of employees with more than 10 years of service has increased since 1996, up for men from 30.5 to 30.6 percent and women up from 27.9 to 28.6 percent (Wiatrowski 2005). It is true that compared to the 1970s and early 1980s men are staying less times in their jobs (the share of male employees with 10 or more years of tenure was 37.7 percent in 1983). In addition, older men, who experience more job displacement and have lost their employer pensions have had to “to screw their courage to the sticking-place” in order to save for retirement on their own. In 1983, over 57 percent of men aged 45 – 50 years would have been with their current employers for over 10 years; that probability fell 48.1 percent in 2004. Nevertheless, women have become more stable: the probability a women in this age group would have been with her employer for over 10 years increased from 33 percent to 36.2 percent from 1983 to 2004.

Another reason mobility increases are exaggerated is that mobility actually is decreasing in industries where the most new jobs are appearing. Industries adding the most jobs are retail trade, employment services and computer design, state and local governments, food services, and in health care: offices of health practitioners, ambulatory health care services and hospitals. In all but one of these large job growth areas mobility is decreasing and tenure is increasing. Over all, the average growth in job tenure for most of the fastest growing industries is 16.3 percent, compared to the average of 14.3 percent. (see Table 4). Furthermore, the average tenure for all workers over age 16 increased from 3.5 years to 4 years from January 2000 to January 2004, which means more workers will have reached the 5-year mark when they must be vested (Bureau of Labor Statistics 2004, 2005). Bottom line: job security has improved slightly rather than the workforce becoming more mobile. This means the environment is favorable to DB plans.

Table 4  
Changes in Job Tenure for Industries with the Largest Job Growth:

Industries expected to grow the fastest (2002 to 2012)	Average years of Tenure with Current Employer		Increase in job tenure to January 2004
	January 2000		
Retail trade	2.5		12.0%
Employment services and Computer	2.6		38.5%

design*			
State and local government **	5.5		16.4%
Food services	1.4		14.3%
Offices of health practitioners, Ambulatory services	3.2		3.1%
Construction	2.7		11.1%
Educational services	3.2		18.8%
Hospitals	5.1		-7.8%
Average for all industries			13.3%
Average for all industries without hospitals	3.5		14.3%

Notes: Source is US Census, *Statistical Abstract of the United States:2004-2005*. \* The job tenure figures often include categories that do not correspond with the employment growth categories. The tenure figures are for professional and technical services, which is a larger category than “employment services and computer design.” \*\* The job tenure figures only include state employment because the employment growth categories are reported in larger categories than for job tenure. Average tenure in local employment decreased slightly from 6.7 to 6.4)

#### Head on Comparisons: DB vs. 401(K) simulations

A simulation of a worker working in three scenerios show that even in a mobile society a worker would likely accumulate a pension worth much more when DBs plan exist rather than when all plans are 401(k) plans. The simulation assumes a worker has three jobs after age 30 and four jobs before age 30. The simulation also assumes that the worker with a 401(k) saves 25 percent of her 401(k) balance when she changed jobs before age 30 and then 100 percent after age 30. Participation in 401(k) plans is voluntary and there are many exclusions so most workers do not participate (Munnell and Sunden 2004, 56), but participation rates do increase with a person’s age. Munnell and Sunden (2004 56) calculate that participation rates are about 28 percent until age 30 and then grow gradually to 44.2 percent by age 45, and then drop down to 38.8 percent. Assuming that workers and employers together contribute 9 percent to a 401(k) (Munnell and Sunden (2004 58) and it earns 3 percent per year (after adjusting for risk and fees), then under real life circumstances this worker will accumulate \$33,335. This amount is not far-fetched since the median account balance for a 60-64 year old is \$59,000 (Munnell and Sunden 2004 69). The annuity value is only about \$2,700 per year<sup>13</sup>. On the other hand, the DB annuity accumulated under a common formula of 2 percent of salary per year of service credit adds up to \$35,000 per year. Workers are automatically in a DB plan and the amounts are guaranteed by the government

agency, the PBGC. The 401(k) is worth more only under ideal circumstances, which are that the worker never skips a contribution, always participates, and never withdraws. Under these ideal circumstances, the lump sum is over \$647,000 and the annuity value is over \$51,000 per year.

However, the ideal 401(k) world in which young workers always have a job, steadily save 12 percent of their income, always get low fees, and never touch the accrual or principal is in the big rock candy mountain in the sky, not on this planet, even with investor education.

Employers are causing the move away from DB plans. Employers, not workers, determine pension design. However, not all employers are alike and not all are adopting individual-based employee benefits. As argued above, many employers who do adopt the individual model choose 401(k)-style plans in order to lower short-term pension costs and help manage cash flow problems. A firm offering 401(k)s does not have to commit to contributions at all. In fact, over 20 percent of employers stopped contributing to their 401(k) plans in 2001 (Munnell and Sunden 2004). While DBs are superior in retaining workers in their late forties and early fifties (Johnson and Uccello 2004), and employers face impending shortages of skilled labor, worker loyalty seems less highly valued today by some large firms. It has always been the case that some business models stress low pay labor and a tolerance for high turnover. A memo from Wal-Mart's human resource director leaked to the press (Greenhouse and Barbaro 2005) advised supervisors to include vigorous physical tasks in all jobs so that senior workers, who are paid higher wages, are subtly encouraged to quit.

These trends away from offering pay to longer tenure employees may come back to haunt firms. Industries enjoying rapid growth may face high turnover costs, especially if they must recruit from other companies making hiring more expensive than retaining older workers. As the baby boomers retire over the next 20 years, and more companies -- especially those that depend on skilled and semi-skilled labor -- find it difficult to hire without raising wages, they likely will regret not having DBs. Certainly, many successful employers maintain DBs or DB hybrids in order to attract and retain older workers. Federal policy should not make DBs extinct for lack of action or imagination or because fads are moving in another direction in the short term.

#### Under Real Life Conditions DBs are Better than 401(k)s

This is a simulation of a worker's pension accrual. This simulation assumes that the worker and the employer contribute the average to their 401(k) and participate at the average rates if they are covered by a DB or DC plan. The resulting pensions under both types of plans are compared with a career where the worker has the ideal rates of contribution, withdrawal and participation.

This simulated worker has eight jobs, retires at age 65 with an ending salary of \$52,240. Ideally, she would have \$647,379 in her account and take it out in an annuity of \$51,072 per year. The ideal 401(k) is better than the average DB plan, which yields \$35,364 for life. However, under real life conditions, the real-life 401(k) is worth \$33,335 or \$2,628 per year for life for a woman aged 65.

Table 4

Job	Age	Sal-ary	Yrs on the job	Contri-bution rate 9%	Real Life 401(k) plan			Ideal Behavior in a 401(K0 plan			f ε s y
					With-dra wal Rates	Partic- ipa- tion rates	net at age 65	With- drawal	Partic ipation	lump and annuity	
										\$21,177	
1	20	\$35,000	2	0.09	75%	0.28	\$1,482	0%	1	\$32,718	C
2	22	36,050	3	0.09	75%	0.28	\$2,224	0%	1	\$11,233	C
3	25	37,132	1	0.09	75%	0.28	\$678	0%	1	\$11,570	C
4	26	38,245	1	0.09	75%	0.28	\$699	0%	1	\$35,752	C
5	27	39,393	3	0.09	75%	0.28	\$1,862	0%	1	\$223,452	C
6	30	49,241	15	0.09	0%	0.416	\$14,916	0%	1	\$153,437	\$
7	45	50,718	10	0.09	0%	0.442	\$6,025	0%	1	\$158,040	\$
8	55	52,240	10	0.09	0%	0.388	\$5,448	0%	1		\$
Retire	65	same	0	0	lump	Leakages for adult children etc.	\$33,335 or \$2,628 per year for life	annuity		\$647,379 or \$51,072 per year for life	\$ f y f

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## 6. Policy Implications

Conventional wisdom explaining the DC dominance over DBs takes on an evolutionary view that DB plans are dinosaurs that could not evolve to meet the demands of the new economic environment. The “dinosaur” interpretation argues that employees have come to prefer the 401k-type DC plan to the traditional DB plan because workers are mobile and the DC accounts are transparent, i.e. workers can better understand their benefits. I argue DB plans are more like pandas, a worthwhile species endangered by shortsighted policies and decisions. This “DB pensions are pandas” interpretation holds that DB coverage rates have stagnated because many companies have adopted 401(k) plans to take advantage of temporary changes in accounting standards and to lower pension costs, not to respond to worker preferences for DC plans or to changes in labor processes and technology.

Appropriate government policy should look like a retirement policy designed on purpose. In basic public finance economics, social security systems have clear goals: adequacy, efficiency, horizontal and vertical equity, and contribute to economic growth. Giving tax favoritism to qualified private sector plans reasonably extends these goals to voluntary employer plans. Since the plans are voluntary

employers' needs are key: employers want to provide personnel tools and limit risk and volatility. Also for employer pension plans to have a social purpose and justify their tax expenditures, they must make sense in people's lives. Given the recent wave of DB and DC pension plan , all three groups of workers – the more than 50 percent without a pension at any one point in time; workers who have lost or spent their DB and DC plans; and those with pensions--- are worried about retirement security.

There is great opportunity for policymakers to reverse this deterioration of retirement income. In particular, policies should be designed to encourage efficient pension plans and voluntary working. Although not a focus of this paper, the contours of pension reform include the following platforms:

First, policy goals should ensure more coverage in defined benefit (DB) type plans. This can be accomplished in two ways: 1.) expand the traditional multiemployer portable DB plans that have existed in dynamic industries with mobile workforces for forty years; and, 2.) Bring more DB features into defined contribution (DC) plans; for instance by instituting a "DB(k)," which is an Academy of Actuaries proposal allow workers to supplement their DB plan with their own contributions (Gebhardt'sbauer 2004).

New Jersey hospital nurses offers an example of the first option. In the late 1990s, these nurses finally obtained a longstanding demand in collective bargaining to join the multiemployer pension plan that the hospital's operating engineers belonged to. Why operating engineers?! The hospital had changed ownership so many times that each single employer plan ended when another firm bought the hospital. The employees did not move – it was the employers who were mobile. Joining the multiemployer plan let the nurses build up credits in one DB plan (Ghilarducci 2003). There should be more single employer plans merged with multi-employer plans. Through collective bargaining, the union representing mechanics and other workers brought in employees from United, US Airways, and Aloha airlines after their other plans terminated and were taken over by the PBGC. This means that when the single employer DB plan in the airline industry failed, the International Association of Machinists multiemployer plans stepped up to replace them, offering better benefits than the airlines' proposed DC plans for the same contribution. The plan is more stable for the workers because it is a DB plan that includes the other airlines. These workers could lose their jobs at US Airways or any other airline; but not necessarily active membership in their pension plans.

Promoting the transfer of single employer DB plans to multiemployer DB plans cannot be done easily without enabling legislation and regulatory changes. The law is not helpful, nor is the PBGC, in preventing single employer terminations. The PBGC should encourage multi-employer plans to take on distressed single-employer plans by offering financial assistance. This may be much cheaper than taking over an entire plan. The law already allows the PBGC to assist financially a distressed multiemployer plan to be merged into a multiemployer plan.

A demonstration project in the airline or auto parts industries could greatly expand the multiemployer universe.

Polices that bring DB designs into DC plans include DB hybrid pension designs could help calm those now in existing DB plans as long as current expected benefits are protected. Good policy would devise incentives to keep firms from exiting the DB system (Weller 2005, GAO 2005b). Also, sensible protections that already govern the investment behavior of DB plan fiduciaries could be a good place to start, as, for example, in the percent of a portfolio allowed to be in the employee's company's stock. Other considerations include mandatory minimum contributions, incentives for at least partial annuitization, limits on fees.

The later can be accomplished by allowing individuals to use efficient not-for-profit individual account vendors such as Michigan Gov. Jennifer Granholm's proposal to let Michigan small businesses use the Michigan state pension fund to administer their 401(k) plans (Plan Sponsor 2006) and the proposed legislation in Washington State that would give state residents access to the professionals managing the state employee pension funds (Watkins, 2002).

Economist Zvi Bodie 200 has suggested that workers should be able to top-off their Social Security benefits with an investment in government inflation indexed bonds). Others have also argued that expanding Social Security is the only way to secure middle and lower income workers retirement. Options to expand Social Security are beyond this study; but there could be ample money to do so if the tax expenditures for 401(k) plans were restricted to 90% of workers not in the top 10 percent of the earnings distribution.

Last, as explained in the appendix there are several pieces of evidence that suggest that older workers may be working under duress. Labor market policies should protect older workers and ensure that work after an advanced age is under workers' terms. Perhaps, extending the American with Disabilities Act protections could help protect older workers and help employers resist the temptation to solve perceived labor supply shortages by cutting pensions.

## 7. Conclusion

DB plans seem more suitable to a rapidly aging workforce and the projected labor skill shortage because older worker respond well to DB plans. Four environmental changes enabling financially healthy companies to save costs by creating a hostile environment for DB plan: one, the national decline in union contracts has helped employers adopt 401(k) plans without apparent loss in productivity; two, the inhospitable regulatory environment for DB plans compared to DC plans (Gebhardt'sbauer 2004, Eickelberg 2005); the dramatic shift in Presidential and Congressional attitudes about employer and government responsibility for social insurance; three, uncertainty over DB pension costs (Weller 2006). And four, an has been increased commercial vendor interest in 401(k)-type accounts relative to traditional defined benefit pensions (McCaw 2004) which would be an important topic for another paper.

In sum, the shift to DCs corresponds with paradoxical trends: federal costs for pensions are increasing through tax expenditures while pension participation

rates are stagnating. It seems companies are switching to save money. This adds up to a conclusion that pensions are become more skewed towards upper income workers (Wolff and Weller's (2005) study of household wealth come to the same conclusions). The American system of retirement security is in transition. Private sector DB plans, which never covered more than 40 percent of the work force, are declining. Meanwhile, 401(k) plans have grown by leaps and bounds. Yet none of this growth is likely to increase the number of workers covered by pensions or reduce their risk of losing them. Ultimately, it matters less which pensions systems we use to achieve a secure national retirement system, what really matters is that we ensure a secure retirement for all American workers and their families.

**Comment [j4]:** This anecdote doesn't fit in the conclusion. It is a tangent that derails the thrust of the conclusion.

## Appendix: Impact on Workers of Changing Pensions: More Savings or More Work

The changes in employer spending on pensions means that large, trend-setting employers are eroding retirement income security for most workers who will never efficiently accumulate enough assets nor effectively choose payout options to provide a steady adequate amount of income for life after retirement. It is doubtful that employees will save vigorously in voluntary retirement savings vehicles given that the 20-year old experience with 401(k) plans reveals that employees have been either unwilling or unable to save enough (Vanguard 2005, Munnell and Sunden 2004). Only one third of workers are on track to achieve the 70 percent target retirement income replacement rate (Vanguard 2005). Although a full 90 percent of workers have thought about how much income they would need in retirement only 41 percent of workers have specific plans about how to obtain the necessary assets. Some 40 percent of households are at risk of not having enough income in retirement; to avoid this problem they would need to double their savings rates or defer retirement until age 70. When it comes to planning for an adequate retirement income, there is a large disconnect between thinking and doing. Financial education (FE) does not help much: only 40 percent of those who receive counseling or attend an FE class change their saving behavior. In fact, planning itself may be on the decline! The percentage of workers who thought about calculating savings needs ranged from 31 to 53 percent in 2000; then it fell to 42 percent in 2004 (EBRI 2004). If pensions are not enough the elderly will have to work --- indeed Butrica et. al. (2005) predict that earnings from work will be a greater source of retirement income for baby boomers. That fact that earnings will become more important than investment income for future American retirees makes sense. Thus, to emphasize, the elderly will seek work as pensions fall short but on whose terms? There is no reason to believe that the employer attitudes and work conditions will welcome the older worker.

### More Seek Work At Older Ages

Since 1949, men and women over age 65 have left the labor market in recessions. Men withdrew from the labor force at the average yearly rate of 2.4 percent and women by 1.5 percent. Yet, in the most recent recession, men over age 65 left at a rate of 3.9 percent, but women entered the work force by increasing work effort by 5.3 percent. The labor force participation rate for slightly younger men and women, aged 55 to 64, was higher over the most recent business cycle. However, labor force participation and working are not the same thing. Despite the rapid increase in labor force participation, many of the elderly found unfavorable working conditions. If the elderly were laid off, they had half as much chance of being reemployed than younger people. The average duration of unemployment is higher for older workers and rose in 2002; the average search for job seekers over age 55 was 16 weeks, up from 12.7 in 2001. Significantly, older men's job security has gotten much worse; their median years of tenure—the number of years a person has been employed by their current employer—has fallen dramatically, by

almost 50 percent from 15.3 years for men aged 55–64 to just 10.2 years. (The decline is much smaller for women, from 9.8 years in 1983 to 9.6 years in 2002.)

#### Jobs for Older Workers Are Not Getting Easier for Old People to Do

A recent Urban Institute study (Butrica et. al. 2006) makes a clear hard-hitting case for the most sought after policy solution: a win-win opportunity. They argue that everyone wins if workers are persuaded to work more years. Social Security, Medicare, and workers all win if workers would work until age 70. Their simulations reveal that workers especially win. If they work several years longer they could enjoy a 25 percent increase in their standard of living. This finding is suspicious. A neoclassical economist would reject this conclusion faster than saying Economics 101. Since a standard of living consists of money and leisure, and if workers could have enjoyed more money by working longer and they wanted to they would have. We would have to assume workers have revealed their preferences for leisure over a 25 percent increase in income by retiring, unless Butrica and colleagues argue that something like ignorance, custom, discrimination, and heuristic problems (all of which I am disposed to accept) bar, cajole, and inhibit workers from working more. Nevertheless, the paper makes no such claims. The puzzle— workers retire despite the huge gains from working longer -- might be understood by recognizing the disutility of working for older people. An obvious reason people retire instead of working to gain 25 percent more income is that the value of time increases as time becomes scarce, as one approaches death.

A fundamental question for policy makers and for our scrutiny of federal spending on the elderly is whether federal policy is creating more older workers because they want jobs or because they have lost pensions. Currently, it seems employers are offering jobs to older people that employers have reserved for other marginal workers. Instead of 60 being the new 30, it has become the new 17 as older people fill the job segment with the predicted largest growth in new jobs – retail clerks. This is the direction we appear to be headed.

There is little evidence that older people have an increased ability to work longer. In fact, since 1981, the share of older workers reporting limitations in their ability to work has stayed steady at about 15–18 percent. While jobs demanding heavy lifting, stooping, and kneeling, and overall physical effort are declining, especially for men, older workers report an over 17 percent increase in job stress and the need for intense concentration. Older women report an over 17 percent increase in jobs requiring good eyesight. See Table A1. Only magical thinking can conclude that the computer has made jobs easier for older workers. (Johnson 2005).

Table A1  
Selected Characteristics of Job as Reported by People Working age 55 - 60 in 2002 (Source Johnson 2004.) age 55 - 60 in 2002

	Percentage Change since 1992	Percentage Change since 1992

	Men	Women
Good for Older People		
Hardly no lifting heavy loads required	8.60%	17.10%
Hardly no stooping or kneeling required	6.90%	0%
Hardly no physical effort	26%	2.90%
Difficult for Older People		
Always or Almost always requires good eyesight	8%	17.70%
Always or Almost always requires intense concentration	17.80%	15.10%
Strongly agree that job involves a lot of stress	18.10%	17.80%

The fact that older people find jobs harder to get, more difficult to perform, and unemployment duration much longer suggests that older people are forced into the market because of eroding pensions. In the last recession, the unemployment rate went up faster for older women than any other group, while in the subsequent economic recovery the unemployment rate declined for older men and women more slowly than for younger workers..

Since older people are working more today, we need policies that speak to their special needs. The elderly will likely be attracted to the fastest-growing jobs, which happen to be dominated by women and ironically are those serving the elderly. The two occupations experiencing the fastest growth are registered nurses and home health care and personal health care aids. These jobs are better for the client and worker, no matter how old, when collective bargaining determines wages, hours, and working conditions,. Older people in these jobs need the protections that the Americans with Disabilities Act provide such as the right for reasonable accommodations in scheduling and equipment. In the end, the only way to ensure that older workers have jobs on their terms depends on them having secure retirement income.

#### Impact on Employers of Workers Working Longer

What Butrica et. al. do not address is whether extending work life will help employers out. Clearly, some workers will want to work longer, at least part time. It is not clear, however, that employers will provide the jobs older workers want. All older workers want to work on their own terms, but if pension and retiree health care is less secure that may not be possible. Robert Hutchens (Hutchens and Papps 2004, Hutchens and Grace-Martin 2004) shows that the overwhelming number of employers and workers tell researchers that they would be open to phasing in retirement but, in fact, such arrangements hardly ever exist. One reason may be that what older workers want from employers is not what employers want from workers.

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Endnotes

<sup>1</sup> Other federal spending for the elderly include pensions for federal and military personnel; the portions of the food stamp and Medicaid (the federal share) programs spent on the elderly, elder housing assistance, veterans' compensation and pensions, and Home Energy Assistance Program spending for the elderly.

<sup>2</sup> The average Social Security replacement rate will fall in the two decades to 30.5 percent as the average benefit decreases due to the normal retirement age rising to age 67 and increases income taxes and Medicare premiums (Munnell 2003 Table 4. page 3)

<sup>3</sup>

Employer Pensions Are Important for Middle Class Retirees

	First	Second	<b>Third</b>	Fourth	Fifth
Social Security a	82.6	84.0	<b>67.0</b>	47.0	19.8
Private pensions or annuities	2.5	4.1	<b>9.2</b>	13.8	10.0
Income from assets	2.4	3.6	<b>7.4</b>	9.8	18.9
Earnings	1.1	2.3	<b>7.0</b>	14.7	38.4
Government employee pensions and railroad b	1.0	2.7	<b>5.8</b>	11.7	10.5
Other	1.5	1.7	<b>2.7</b>	2.9	2.4
Public assistance	8.9	1.6	<b>1.0</b>	0.2	0.1

Notes: Total income to each quintile by source of income of household units with member over Age 55. Quintile upper limits are: \$9,721, \$15,181, \$23,880, \$40,982. Source: Table 7.5 Percentage distribution, by marital status and quintiles of total money income [www.ssa.gov/policy/docs/statcomps/income\\_pop55/2002](http://www.ssa.gov/policy/docs/statcomps/income_pop55/2002) released March 2005

<sup>4</sup> The actual number is probably closer to the NCS results because employers have a better idea of who is covered than workers do. (Also, many CPS respondents are not the actual worker but his or her spouse or other relative and may not be knowledgeable about the employee's pension plans.

<sup>5</sup> Union workers experienced one of the largest increases in pension coverage rates – from 79 percent in 1999 to 85 percent in 2005 -- and this group had already started from a high base remarkably this group also had one of the largest increases in DB coverage – 70 percent to 72 percent -- and a large increase in DC coverage – from 39 to 43 percent. Because unions usually bargain DC plans to complement DB plans, we can be certain that in this case, the increase in the DB rate likely boosted pension access. This relationship holds up in an evaluation of the correlation between general pension and DB participation rates.

<sup>6</sup>

Private Sector nonagricultural wage and salary workers, aged 21 and over (in 2004 the ages are 21-64)			
	Coverage rates	Participation rates	Sponsored-participation rate*
1979	54%	43%	80%
1983	49	40	82
1988	51	37	73
1993	55	39	71
2004	55	41	75
Private Sector nonagricultural wage and salary workers, aged 21 and over			
* the fraction of workers participation in a plan among those whose employer or union sponsors a plan for any of the employers at the worker's place of employment (for 2004 the age range is only 21 – 64).			
(Source: for years 1979 - 1993 the data comes from the Employee Benefits Research Institute. 1995. EBRI Data book on Employee Benefits. EBRI, Washington DC and the data for 2004 comes from EBRI, 2005. "Employment - Based Retirement Plan Participation: Geographic Differences and Trends, 2004." Issue Brief. No. 286. October page 7			

<sup>7</sup> There are significant differences in pension coverage and the share of worker who actually participate in a plan. DB plan coverage, with some exceptions for part-time or newly hired employees, is largely universal. In contrast, while DC plans may be offered to a large majority of a sponsoring employer's workforce, employee non-participation rates can be quite large average over 20 percent (Purcell 2005a).

<sup>8</sup> Manufacturing firms do not have more DB plans, nor are the benefits levels higher, but the pension holidays may have been more prevalent. In 2005 23% of non-manufacturing firms and 18 percent of manufacturing firms offered DB plans in the Chamber of Commerce's sample (p. 40) and the average employer costs were \$ 1,985 for non-manufacturing firms and \$1,410 for manufacturing firms (Chamber of Commerce 2005 p. 10).

<sup>9</sup> The Employee Benefit Research Institute (VanDerhei, 2006) surveyed DB plan changes and found that the PBGC concluded most frozen plans were small and, if they were large, the companies were in some financial distress. If the firms surveyed by Aon consulting firm that say they are considering a plan freeze actually do, then, in a few years, 23 percent of their 1000 clients surveyed with DB plans will have frozen their plans. Watson and Wyatt surveyed Fortune 1000 firms revealed 11 percent had and they had below invest grade ratings. VanDerhei 2006.)

<sup>10</sup> The funding rules affect pension plan contributions in a variety of ways. For example, some rules allow plan sponsors to choose interest rates that can reduce plan liabilities; other rules limit the maximum amount of contributions that a sponsor can make, while others permit the use of "credits" earned from passed asset gains as a substitute for cash contributions. See GAO 2005a.

<sup>11</sup> Ippolito (1997) and Burham (2003) argue that the voluntary participation feature of 401(k)s help employers' screen for the most productive employees. The idea is that workers who save are more productive. The forms can passively and easily tie

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compensation to productivity by matching the voluntary savings of what turns out to be their best workers.

<sup>12</sup> I used information from Munnell and Sunden (2004) on participation rates, average contribution levels by earnings, the distribution of employees by earnings (Calculated from the CPS (2003) to make the three billion dollar estimate. The average savings per worker is \$156, Madrian, Choi, and Laibson (2005) calculated for their sample of over 800 employees in one firm that the employer saved over \$250 per older worker who did not participate in the 40(k) even when they were eligible.

<sup>13</sup> Calculated from [immediateannuity.com](http://immediateannuity.com) May 7, 2006.