



## Retirement costs for defined benefit plans higher than for defined contribution plans

**B**eginning in the 1980s, a dramatic shift occurred in employer-sponsored retirement plans. This shift was away from traditional defined benefit plans and towards portable defined contribution plans, such as the popular 401(k). Reasons for this shift were due, in part, to costs and flexibility for both employers and employees. Employer contributions required for defined benefit pension plans can fluctuate based on plan investment returns. By comparison, employer costs for defined contribution plans are often based on a fixed formula that matches employee contributions.<sup>1</sup> According to the Bureau of Labor Statistics (BLS) March 2012 Employer Costs for Employee Compensation (ECEC), private industry employers now spend more per employee hour worked for defined contribution plans than for defined benefit plans.<sup>2</sup> However, a slightly different picture can be revealed when ECEC data are averaged by plan participants only (those employees that use or are enrolled in a plan).

### Related articles

Additional BLS articles and information related to employment costs and benefits are available online:

- *Compensation and Working Conditions*, "Benefit Cost Concepts and the Limitations of ECEC Measurement," [www.bls.gov/opub/cwc/cm20120725ar01p1.htm](http://www.bls.gov/opub/cwc/cm20120725ar01p1.htm).
- *Beyond the Numbers*, "Who Has Benefits in Private Industry in 2012?" [www.bls.gov/opub/btn/volume-1/pdf/who-has-benefits-in-private-industry-in-2012.pdf](http://www.bls.gov/opub/btn/volume-1/pdf/who-has-benefits-in-private-industry-in-2012.pdf).
- *Program Perspectives*, "Defined Contribution Plans: Six Ways to Save For Retirement," [www.bls.gov/opub/perspectives/program\\_perspectives\\_vol3\\_issue3.pdf](http://www.bls.gov/opub/perspectives/program_perspectives_vol3_issue3.pdf).

**Table 1****Defined benefit and defined contribution retirement benefits: Employer costs per employee hour worked for employee compensation, participation, and worker participation costs, private industry workers, March 2012**

Characteristics	Employer costs per employee hour worked		Participation (in percent)		Worker participation cost <sup>1</sup>	
	Defined benefit	Defined contribution	Defined benefit	Defined contribution	Defined benefit	Defined contribution
<b>All workers</b>	\$0.43	<b>\$0.60</b>	17	<b>41</b>	<b>\$2.53</b>	\$1.46
<b>Worker characteristic</b>						
<b>Management, professional, and related</b>	0.72	<b>1.35</b>	24	<b>61</b>	<b>3.00</b>	2.21
<b>Sales and office</b>	0.22	<b>0.43</b>	14	<b>45</b>	<b>1.57</b>	0.96
<b>Service</b>	0.09	<b>0.13</b>	6	<b>16</b>	<b>1.50</b>	0.81
<b>Natural resources, construction, and maintenance</b>	<b>1.10</b>	0.56	23	<b>42</b>	<b>4.78</b>	1.33
<b>Production, transportation, and material moving</b>	<b>0.44</b>	0.37	21	<b>38</b>	<b>2.10</b>	0.97
<b>Union</b>	<b>2.00</b>	0.77	<b>66</b>	45	<b>3.03</b>	1.71
<b>Nonunion</b>	0.26	<b>0.58</b>	12	<b>41</b>	<b>2.17</b>	1.41
<b>Establishment characteristic</b>						
<b>1 to 99 workers</b>	0.23	<b>0.39</b>	7	<b>31</b>	<b>3.29</b>	1.26
<b>100 to 499 workers</b>	0.42	<b>0.65</b>	18	<b>49</b>	<b>2.33</b>	1.33
<b>500 workers or more</b>	0.99	<b>1.10</b>	42	<b>61</b>	<b>2.36</b>	1.80

1. Worker participation cost is a derived cost that equals the employer costs per employee hour worked individual benefit cost (from Employer Costs for Employee Compensation) divided by the individual benefit participation rate.

NOTE: Bolded numbers indicate the higher estimates per category for defined benefit versus defined contribution.

SOURCE: U.S. Bureau of Labor Statistics, National Compensation Survey.

This issue of **BEYOND THE NUMBERS** focuses on private industry employer retirement plan costs, estimating costs for defined benefit and defined contribution retirement plans by plan participant. Retirement based plan participant costs are reviewed by major occupational group, bargaining status, and establishment size.

Estimates of benefit provisions in this issue are from the BLS publication, *National Compensation Survey: Employee Benefits in the United States, March 2012*, available online at [www.bls.gov/ncs/ebs/benefits/2012](http://www.bls.gov/ncs/ebs/benefits/2012). Employer cost estimates for retirement plans are from Employer Costs for Employee Compensation (ECEC), March 2012, available online at [www.bls.gov/news.release/archives/ecec\\_06072012.pdf](http://www.bls.gov/news.release/archives/ecec_06072012.pdf). Worker participation costs are based on published estimates, in which costs are rounded to the nearest cent and participation is rounded to the nearest percent. Worker participation costs are derived for individual benefits only and should not be combined to form broader benefit categories, because estimates are based on different sets of participants for each benefit.

Statistical comparison statements involving estimates of worker participation costs cannot be validated due to unavailable standard error estimates.

### Retirement plan worker participation costs

Published ECEC benefit costs represent an average employer cost per employee hour worked, based on all workers (including those employers that do not offer a benefit or have zero cost for providing a benefit), not the average cost per employee plan participant, which can be substantially different by benefit due to large fluctuations in participation rates. Employer defined benefit or defined contribution per participant costs can be derived by dividing the ECEC benefit cost per hour by the benefit plan participation rate for that particular benefit. The result, referred to as worker participation costs, provide average employer costs only for those employees who are plan participants.

Table 1 shows March 2012 ECEC private industry employer costs for defined contribution plans are higher (60 cents) than the cost for defined benefit plans (43 cents). During

the same period, more than twice as many private industry workers participated in a defined contribution plan (41 percent) compared with defined benefit retirement plans (17 percent). If worker participation costs are derived (taking the ECEC cost divided by the participation rate for the benefit for that time period), data shows that private industry employer costs for defined benefit participants are more expensive than for defined contribution participants. In March 2012, private industry worker participation costs were more than 70 percent higher for defined benefit than for the defined contribution benefit.

Higher private industry defined benefit worker participation costs follow similar trends for other worker and establishment characteristics, such as by major occupational group, bargaining status, and establishment size. (See the exhibit for more information on determining ECEC and worker participation costs.)

### Worker participation costs by major occupational group

Private industry employer worker participation costs for natural resource, construction, and maintenance employees show higher defined benefit costs than other major occupational categories. Management, professional, and related occupations were highest for defined

contribution worker participation costs. Service workers showed the lowest worker participation costs for both defined benefit (\$1.50 per employee hour worked) and defined contribution (81 cents) benefits. (See table 1.)

### Worker participation costs by bargaining status

March 2012 ECEC data indicates that the employer cost of defined benefit for union workers is approximately 7 times higher than the cost for nonunion workers. This cost differential is caused, in part, by significantly higher participation rates for union workers. In March 2012, union participation rates for defined benefit plans were over 5 times higher than nonunion participation rates. Using worker participation costs, defined benefit costs for union workers were approximately 40 percent higher than nonunion workers. The difference in worker participation costs between union and nonunion workers for defined contribution benefits were more than 20 percent. (See table 1.)

### Worker participation costs by establishment size

Employers with 500 or more workers have ECEC defined benefit costs that are approximately four times higher than the ECEC defined benefit cost for employers that have 1 to

### Exhibit 1 Average benefit and worker participation costs

Want to identify average benefit costs for your organization? Shown is an example based on deriving average benefit costs for defined contribution plans. This approach can be applied to all individual benefits found in Employer Costs for Employee Compensation (ECEC).

401(k) plan – XYZ Company matches one half of all employee contributions up to 8 percent of their salary. (Employees are allowed to contribute up to the maximum permitted by law.) There are three employees in an occupation with various salary and contributions percentages, and

two employees choose to participate by contributing to their 401(k) plan. Employees in an occupation in XYZ Company work 40 hours per week, they work 80 hours of overtime annually, and use an average of 160 hours leave for vacation, sick, holidays, and personal leave. All employees in this occupation were eligible to participate in the 401(k) plan. The calculation is shown below. ECEC is based on a cost per hour worked per worker for all workers. The cost for each benefit follows the

Employees of XYZ	Salary	Employee contribution (in percent)	Employer match (in percent)	Annual employer cost
A	\$50,000	8	4	\$2,000
B	40,000	5	2.5	1,000
C	40,000	0	0	0
				\$3,000/3=\$1,000/employee

same concept dividing total annual employer benefit cost/employee by the average number of annual hours worked (standard hours worked + overtime – leave hours) per employee. Average ECEC employer defined contribution costs = \$1,000/ (2080+80-160) = \$1,000/2,000 hours = \$.50/cents per hour worked.

If you want to find the per worker participation costs, you divide the cost per hour worked (ECEC) by the participation percentage (the example above would be 67 percent rounded) = .50/cents hour worked/.67 participation percentage = .75/cents per hour worked.

99 employees. However, the defined benefit participation rate for the larger establishments was roughly 6 times higher (42 percent) than for smaller employers (7 percent). When worker participation costs are determined, smaller establishments show higher costs for defined benefit compared with larger establishments. Worker participation costs for defined contribution benefits were considerably higher for larger establishments, approximately 30 percent over smaller establishments. (See table 1.)

This **BEYOND THE NUMBERS** was prepared by the Bureau of Labor Statistics, National Compensation Survey staff, Office of Compensation Levels and Trends, in Washington, DC. Email: [NCSInfo@bls.gov](mailto:NCSInfo@bls.gov). For more benefits information, please see <http://www.bls.gov/ebs>. For additional assistance, contact one of our information offices: National-Washington, DC: (202) 691-6199, TDD (800) 877-8339; Atlanta (404) 893-4222; Boston: (617) 565-2327; Chicago: (312) 353-1880; Dallas: (972) 850-4800; Kansas City: (816) 285-7000; New York: (646) 264-3600; Philadelphia: (215) 597-3282; San Francisco: (415) 625-2270.

Information in this article will be made available to sensory-impaired individuals upon request. Voice phone: (202) 691-5200. Federal Relay Service: 1(800) 877-8339. This article is in the public domain and may be reproduced without permission.

#### Suggested citation:

"Retirement costs for defined benefit plans higher than for defined contribution plans," *Beyond the Numbers: Pay and Benefits*, vol. 1, no. 21 (Bureau of Labor Statistics, December 2012), <http://www.bls.gov/opub/btn/volume-1/retirement-costs-for-defined-benefit-plans-higher-than-for-defined-contribution-plans.htm>.

### Upcoming article

- Spotlight on Statistics: Media and Information

Visit our online archives to access past publications at <http://www.bls.gov/opub/btn/archive/home.htm>.

## Notes

1. National Compensation Survey produces data on employer provided benefits, including incidence and detailed provisions, available online at [www.bls.gov/ebs](http://www.bls.gov/ebs).
2. National Compensation Survey produces quarterly data on employer costs per employee hour worked for wages and salaries and benefits in *Employer Costs for Employee Compensation*, available online at [www.bls.gov/news.release/pdf/ecec.pdf](http://www.bls.gov/news.release/pdf/ecec.pdf).

## Glossary

**Defined benefit plan.** A defined benefit retirement plan provides employees with guaranteed retirement benefits that are based on a benefit formula. A participant's retirement age, length of service, and preretirement earnings may affect the benefit received.

**Defined contribution plan.** A defined contribution retirement plan specifies the level of employer contributions and places those contributions into individual employee accounts. Retirement benefits are based on the level of funds in the account at the time of retirement.

**Participation.** Participation is the percent of employees who actually enroll in a benefit plan. A plan may be a contributory plan that requires employees to contribute to the plan's cost in order to participate, or it may be a noncontributory plan for which the employer pays 100 percent of the cost of the benefit.

**Worker participation cost.** Derived cost that equals the ECEC benefit cost for an individual benefit divided by the participation rate for that benefit.

