

GROWTH IN FRINGE BENEFITS

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Recently, there has been an increasing interest in the effect on long-range OASDI cost estimates of the assumed growth rate in fringe benefits. ^{1/} Because the OASDI system receives most of its income from a tax on covered wages, the proportion of total compensation paid in the form of fringe benefits, which is not taxable, can affect the level of the tax rate necessary to adequately fund the system. The analysis of the rate of growth in fringe benefits involves many factors. Therefore, conclusions that are not based on a thorough study of these factors may result in oversimplifications. In this note, as is the case for cost estimation purposes, the term "fringe benefits" refers only to that portion of total compensation not subject to Social Security taxes, such as group insurance and pension plan contributions. Cash items, such as vacation pay, which are treated as a continuation of wages and taxed by Social Security are not included in fringe benefits.

The assumed ultimate average annual gain in real wages is a key economic parameter for OASDI cost estimates. Since, in the long run, significant gains in real wages are made possible only through gains in productivity, an analysis of real wage gains must involve an analysis of productivity gains and of the linkages between these two.

Productivity and each of these linkages can be described as follows:

- o Productivity - production per hour paid adjusted for changes in the GNP implicit price deflator
- o Compensation per Production - ratio of total employee compensation to GNP
- o Wages per Compensation - ratio of total wages and salaries to total employee compensation (the complement of this ratio is the ratio of fringe benefits to total employee compensation)
- o Hours per Year - average number of hours paid, not necessarily worked, per year per worker

^{1/} See for example, Chen, Yung-Ping, "The Growth of Fringe Benefits: Implications For Social Security", Monthly Labor Review, Bureau of Labor Statistics, Washington, D.C., November, 1981, pp 3-10.

According to this approach real wages are the product of the above four factors. Because the factors are not independent, the best projection of each of these factors cannot be done one at a time, but must be done as part of a consistent set.

In determining how an assumed change in one of the linkages may affect the productivity or real wage assumption, consideration must be given to the source, accuracy, and applicability of the historical data on which the assumptions are based. Data on productivity are compiled by the Bureau of Labor Statistics (BLS) from data in their surveys of private non-farm business establishments and from estimates of GNP supplied by the U.S. Department of Commerce. These data involve some sampling error and also exclude many workers who are covered by Social Security, such as many government workers, self-employed farmers, workers in the outlying areas of the U.S., and many U.S. citizens working overseas. When using BLS's productivity figures for Social Security cost estimating purposes, the implicit assumption is being made that the productivity of the workers who are covered by Social Security, but who are not included in the productivity data, will grow at the same rate as that of the workers in the data, that is, workers in the private non-farm business sector.

Real wage figures, however, are calculated from data that are a by-product of the administration of the Social Security program and can be directly used for cost estimates. These data pertain to all wages in employment covered by Social Security (and only to those wages). The data are collected on a 100 percent basis; therefore, the historical figures are not subject to sampling error.

Because of the greater accuracy and applicability of the data on real wages, more emphasis should be placed on the real wage assumption than on the productivity assumption for purposes of projecting the cost of Social Security. However, it is important that the real wage assumption be consistent with a reasonable set of productivity and linkage assumptions.

Although the proper analysis of the relationship between productivity and real wages requires the linkage "hours per year," the most reliable data available on hours paid are for "hours per week" from the BLS establishment survey. Of course, the one link "hours per year" is equivalent to the two links "hours per week" and "weeks per year". By using these two links, "hours per week" can be studied from the BLS data, and "weeks per year" can be studied as part of a residual factor that would also include discrepancies resulting from the linkage data coming from different sources. The number of weeks paid per year per worker will depend upon such factors as the age-sex composition of the work force, the proportion of the work force that is employed part-time, and the unemployment rate.

The growth in fringe benefits is analyzed by studying the wages per compensation link. Data on wages and compensation are included in the national income accounts published by the Department of Commerce. In 1951, this ratio was 94.6 percent. In 1971, this ratio was 88.9 percent, the result of an average annual rate of decline of 0.31 percent per year from 1951 to 1971. During the period 1971 to 1981 the

decline of this ratio accelerated to an average annual rate of 0.61 percent which resulted in a ratio of wages to compensation of 83.7 percent in 1981. The average annual rate of decline over the 30-year period 1951-1981 was 0.41 percent. In Alternative II-B of the 1982 OASDI Trustees Report, it is assumed that the rate of decline in this ratio will decelerate from recent experience to an ultimate rate of 0.4 percent per year, which would result in a ratio of 61.7 percent in 2056. Of course, the complement of this ratio represents the value of fringe benefits relative to total compensation. Thus, fringe benefits constituted 5.4 percent of total compensation in 1951, 16.3 percent in 1981, and an assumed 38.3 percent in 2056.

Table 1. Historical Annual Growth in Real Wages, Productivity, and Annual Declines in Their Linkages
(in percent)

Period	Real Wages	Annual Decline in			Productivity
		Hours per Week	Wages per Compensation	Compensation per Production	
1971	.60	.54	.41	-1.83	3.54
1972	3.89	.27	.74	.04	3.60
1973	.62	-.27	.87	-.22	2.59
1974	-3.25	1.08	.51	1.28	-2.26
1975	-2.36	1.10	.62	-1.74	2.31
1976	2.01	.00	.75	.32	3.30
1977	.80	.28	.58	-.39	2.10
1978	.35	.56	.38	.34	-.16
1979	-1.97	.56	.53	.40	.41
1980	-4.37	.84	.52	.45	.41
1981	.04	.00	1.03	.05	1.08
1951-61	2.50	.33	.28	.56	2.65
1961-71	1.75	.45	.35	.45	2.86
1971-81	-.46	.44	.65	.05	1.16
1951-81	1.25	.41	.41	.35	2.22

Table 1 gives historical growth rates for real wages, productivity, and their linkages based on available data. An exact solution of the linkage equation is unlikely with these data because data on weeks per year are not available and also because real wages are based upon all covered workers, not just workers in the private non-farm business sector, and are adjusted for changes in the CPI, not the GNP implicit price deflator.

A good projection of future real wage gains includes an analysis of the trends in productivity and the linkages, so that a complete set of consistent assumptions can be specified. Column (1) of Table 2 shows the Alternative II-B assumptions used in the 1982 Trustees Report. This table also illustrates some of the possible implications of a change in the assumed growth in fringe benefits. Column (2) shows a set of assumptions in which the growth in fringe benefits is lower than

that assumed under Alternative II-B, while the real wage and productivity assumptions are the same. In this case, the lower growth in fringe benefits could be assumed to result from employers themselves keeping a greater share of the fruits of production, and the workers being willing to accept a slower rate of growth in fringe benefits in an effort to work fewer hours while maintaining the growth in their real wages. Because the rate of growth in both real wages and productivity is the same in this case as under Alternative II-B, the projected OASDI cost as a percent of taxable payroll and as a percent of GNP is also the same.

Table 2. Assumed Alternative Ultimate Average Annual Growth in Real Wages, Productivity, and Declines in Their Linkages (in percent)

Item	Rate			
	(1)	(2)	(3)	(4)
Real Wages	1.5	1.5	1.9	1.5
Linkages—Total	<u>0.7</u>	<u>0.7</u>	<u>0.3</u>	<u>0.3</u>
Hours per Year	0.3	0.4	0.3	0.3
Wages per Compensation	0.4	0.2	0.0	0.0
Compensation per Production	0.0	0.1	0.0	0.0
Productivity	2.2	2.2	2.2	1.8

Of course, if the growth in fringe benefits relative to compensation was assumed to be lower in the future, and no changes were assumed for the other linkages, then a consistent set of assumptions would require either the assumed real wage growth be increased, or the assumed productivity increase be lowered, or both. Columns (3) and (4) in Table 2 show the two most divergent sets of assumption under these conditions. In both cases, the ultimate assumption is that there will be no future growth in fringe benefits relative to total compensation. In column (3), it is assumed that all of this slower growth in fringe benefits will result in a faster growth in real wages. In column (4), it is assumed that all of this slower growth in fringe benefits is the result of slower growth in productivity. Table 3 summarizes the estimated costs under each of these two divergent cases for selected periods, both as a percent of taxable payroll and as a percent of GNP, as well as including the estimated costs under Alternative II-B.

Columns (1) and (4) in Table 3 show the estimated cost as projected under the assumptions used in Alternative II-B in the 1982 OASDI Trustees Report. Columns (2) and (5) show the estimated cost under the first one of the two divergent sets of assumptions. In this set, productivity is assumed to grow at 2.2 percent per year, the same as under Alternative II-B, while real wages are assumed to grow at 1.9 percent per year instead of 1.5 percent. In this case, both benefits and taxable payroll are higher than under Alternative II-B. However, because payroll increases by a higher percentage than benefits, the estimated cost as a percent of taxable payroll, averaged over the 75-year period 1982-2056, drops from 14.08 to 13.48. Nevertheless, because the projected GNP is the same, the estimated cost as a percent of GNP, averaged over the 75-year period 1982-2056, increases from 5.28 to 5.85.

Table 3. Estimated Cost of OASDI Program Under Selected Sets of Productivity and Real Wage Assumptions

Period	Estimated Cost as a Percent of--					
	Effective Taxable Payroll			GNP		
	Productivity/Real Wage			Productivity/Real Wage		
	2.2/1.5	2.2/1.9	1.8/1.5	2.2/1.5	2.2/1.9	1.8/1.5
(1)	(2)	(3)	(4)	(5)	(6)	
1982-1990	11.68	11.59	11.68	5.03	5.04	5.07
1991-2000	11.35	10.96	11.35	4.72	4.76	4.93
2001-2010	11.06	10.55	11.06	4.41	4.58	4.80
2011-2020	13.02	12.41	13.02	4.99	5.39	5.65
2021-2030	16.00	15.26	16.00	5.87	6.62	6.94
2031-2040	16.96	16.12	16.96	6.00	7.00	7.36
2041-2050	16.68	15.80	16.68	5.70	6.86	7.24
2051-2056	16.79	15.90	16.79	5.56	6.90	7.29
1982-2006	11.37	11.07	11.37	4.75	4.80	4.93
2007-2031	14.08	13.42	14.08	5.30	5.82	6.11
2032-2056	16.81	15.94	16.81	5.78	6.92	7.30
1982-2056	14.08	13.48	14.08	5.28	5.85	6.11

Columns (3) and (6) show the estimated cost under the second one of the two divergent sets of assumptions. In this set, real wages are assumed to grow at 1.5 percent per year, the same as under Alternative II-B, while productivity is assumed to grow at 1.8 percent per year instead of 2.2 percent. In this case, both benefits and taxable payroll are the same as under Alternative II-B, therefore, the cost as a percent of taxable payroll is also the same. However, because GNP is lower, the cost as a percent of GNP, averaged over the 75-year period 1982-2056, increases from 5.28 to 6.11.

In summary, under the assumption that fringe benefits relative to total compensation will grow slower than assumed in Alternative II-B and that no change will occur in any other linkages, the projected OASDI cost as a percent of payroll is equal to or less than that projected in Alternative II-B, while the projected cost as a percent of GNP is always higher than that projected in Alternative II-B.

An analysis of the growth of fringe benefits over the last 30 years shows that such growth has been the result of new workers being covered by the various benefit plans, existing plans being expanded, and the costs of benefits of existing plans rising faster than compensation. There is still much room for this type of growth.

The costs of many current plans are expected to increase faster than compensation, even if there are no changes in plan provisions. For example, the OASDI tax rate paid by employers is already scheduled to increase in the future. Also, many employers have recently had to increase their contributions to private pension plans (partly as a result of ERISA funding and vesting requirements). Furthermore, the

costs of health insurance plans, have risen much faster than compensation. This trend in health care costs should be expected to continue for some time as more expensive technical advances occur.

Besides this increase in relative cost for existing fringe benefit plans, many of these plans are likely to expand in the future. Deferred compensation plans, in particular, are likely to increase as a result of recent changes to the Internal Revenue Code under Section 401(k), which allows for salary reduction plans in the private sector. Under a salary reduction plan, the reduction in salary is currently exempt from income and FICA tax and is distributed and taxed at a later date. Also, the possibility of more cost of living adjustments in pension plans could increase the cost of these plans significantly. Similarly, a significant lowering in the rate of inflation may increase the cost of pensions as a percent of compensation.

Coverage of many fringe benefit plans is by no means universal. Only about one half of the full-time employees in the private sector are covered under private pension plans.^{2/} However, the potential effect of new types of fringe benefits is even greater than the potential effect for increased coverage of existing types of plans. For example, a new national organization, the Employers Council on Flexible Compensation, has just been formed to lobby Congress and promote flexible compensation plans to employers.^{3/} The group consists of employers and consultant firms who aggressively encourage the use of these plans.

Much of the motivation for this activity appears to stem from the preferential tax treatment afforded fringe benefits. When an employee can receive much more value in fringe benefits than in cash compensation, there is strong incentive to do so. This is especially true when the fringe benefit covers a product that the employee would like to purchase in any case, thus saving more of his cash compensation for discretionary purchases, or when the salary reduction treatment can be applied to give tax shelter to a product that the employee is already buying, such as employee contributions to a conventional thrift plan. Note that the preferential tax treatment for these fringe benefits includes the FICA and other payroll taxes of both employees and employers in addition to income taxes. Many analysts assume that employers are indifferent to the mix of total employee compensation. However, the non-applicability of the employer share of the FICA tax to fringe benefits often provides an incentive for the employer also to prefer fringe benefits.

^{2/} Beller, Daniel J., "Coverage Patterns of Full-Time Employees Under Private Retirement Plans," Social Security Bulletin, Social Security Administration, Washington, D.C. 20009, July 1981, pp 3-11.

^{3/} Flexible compensation plans allow employees to choose among a combination of benefit and salary packages with a variety of health, vacation, insurance, retirement, and other benefits.

Table 4. Ratio of Wages and Salaries to Total Compensation For
Some Western European Countries and the United States

<u>Country</u>	<u>Ratio</u>	<u>Year of Data</u>
France	.728	1979
Italy	.739	1978
U.K.	.875	1979
W. Germany	.815	1977
United States	.842	1979

Source: National Accounts for OECD Countries V.II 1981 Published
by OECD.

As shown in Table 4, other western countries already have wage to compensation ratios lower than the U.S. At an annual rate of decline of 0.4 percent, the ratio in the U.S. would not reach the recent French level of 72.8 percent until the year 2017. Within the U.S., large sectors of the economy had ratios in 1979 near the French level. The motor vehicle and equipment manufacturing and the tele-communications sectors had ratios of 76.4 percent and 74.6 percent, respectively. If other industry sectors approach these benefit levels the overall ratio of wages and salaries to total compensation would decrease further.

It is impossible to know what the future holds during the next 75 years, but based upon historical evidence and informed projections of current trends, we believe that the projected ratios of wages to compensation in Alternative II-B of the 1982 Trustees Report are reasonable.