

The Impact of Employer Payments for Health Insurance and Social Security on the Premium for Education and Earnings Inequality

The trend toward increased wage and income inequality that emerged in the 1980s—with “the rich getting richer and the poor poorer”—has attracted a great deal of attention and concern. Journalists have brought the growing gap between workers on the top and bottom rungs of the earnings ladder to the public’s attention,¹ while academics have sought the reasons for the change. One aspect of this phenomenon has been the growing premium for education, with the disparity between the wage and salary earnings of the least and best educated rising since 1979. Explanations generally focus on the slowing growth in the supply of college-trained workers entering the labor force as the baby boom generation has matured and, on the demand side, the widespread adoption of new technologies requiring skilled workers. However, many economists find that these explanations are not fully satisfactory. A related observation, also not fully understood, involves the increased earnings inequality among similar workers—young, male, high school graduates working full-time, year-round, for example. This rising within-group inequality occurred in the 1970s as well as the 1980s, unlike the increased between-group inequality seen only in the 1980s.

This exploratory article seeks to broaden the discussion by asking whether the rising cost of another element of compensation—employer-provided health insurance and employer payments for FICA taxes—has contributed to the growth in observed and actual inequality among workers over this period. The cost of these two benefits increased from 11 percent of total compensation in 1970 to 17 percent in 1990.² Because the cost of these fringe benefits looms large in comparison to the lowest wages, these employer obligations would be expected to take a relatively large bite out of the wages of workers on the bottom rung.³ Since workers with few years of work experience or schooling also tend to earn low wages, this country’s job-based system for financing health insurance and Social Security may have exaggerated the premium for education (and the growth in that premium) found when compensation is measured by

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wages alone. The rising cost of these benefits might also help to explain the observed increase in within-group inequality for groups defined in a variety of ways, including at the industry or plant level.

On the other hand, the share of the population covered by employer-provided health insurance has shrunk over this period as health insurance costs have soared and as the structure of employment has shifted from manufacturing, mining, and transportation (where health insurance benefits are common) to

The cost of employer-provided health insurance and employer payments for FICA taxes increased from 11 percent of total compensation in 1970 to 17 percent in 1990.

services (where they are less so). It seems quite likely, moreover, that the declining availability of employer-provided health insurance may have hit less-skilled workers particularly hard. If so, measures of the growth in between-group and within-group inequality based on wage trends would understate the real growth in compensation inequities.

Although several studies have explored the impact of including health insurance benefits and worker payments for FICA on family or household income inequality,⁴ discussions of the premium for education are generally based on relative wages rather than on the theoretically preferable concept of total compensation. Compensation is the preferred measure because that total is the value set by supply and demand conditions. If some component of total compensation—employer payments for health insurance, for example—rises as a share of the total, then, other things equal, real wages or other fringe benefits should fall. For this reason, using wage behavior as an indicator of changing supply and demand conditions could be misleading. Moreover, in addition to signaling imbalances in the supply of and demand for specific types of labor, an index of inequality can also serve as a gauge of economic or social equity. From this second perspective too, adding the value of health insurance and Social Security benefits to wages results

in a better measure of inequalities in all forms of remuneration than wages alone.

Admittedly—and particularly from the workers' perspective—this modification improves our measure of economic equity only partially because the value of these benefits is not equal for each employee. For example, health care costs vary considerably across states, and some workers might obtain insurance through a spouse's employer. Similarly, while employers view their legally required FICA tax payments as "benefits," the amount paid for each employee has little correlation with the value of the Social Security benefits that the employee eventually receives. Moreover, all face different tax situations. Thus, individual workers might prefer higher wages in lieu of certain benefits.

Researchers have been forced to use wages in studying the premium for education because other components of total compensation have not been available in a data base linking pay with personal characteristics like age (experience) and years at school. However, starting with the March 1980 Current Population Survey, the U.S. Bureau of the Census has collected information on employer-provided insurance and employee and (because they are equal) employer contributions for Social Security. The Bureau of the Census has been publishing this information, including estimates of the value of employer-provided insurance for Census respondents, starting with the March 1988 survey.

This study uses a small part of the published and unpublished data to explore the impact of employer

¹ Indeed, a recent article on the front page of *The New York Times* (Bradsher 1995) presented recent and forthcoming research indicating that among the industrial countries the United States has the most unequal distribution of income and wealth.

² As a share of benefits, moreover, employer payments for group health insurance and for Social Security—Old Age, Survivors, and Disability Insurance (OASDI) and Medicare hospital insurance (HI)—jumped from 46 percent to 63 percent over the same period.

³ Federal Insurance Contributions Act (FICA) taxes are proportional to wages only up to the maximum taxable earnings or wage base. This ceiling on taxable earnings results in the FICA taxes having a disproportionately small impact on the wages of workers whose earnings exceed the cutoff. The wage base for OASDI has risen from \$22,900 in 1979 to \$55,500 in 1992; the base for HI has risen from \$22,900 to \$130,200 over the same period.

⁴ Data in a study titled *Measuring the Effect of Benefits and Taxes on Income and Poverty: 1979 to 1991* (U.S. Bureau of the Census 1992) show that including health insurance benefits reduces family income inequality slightly, while including worker payments for FICA increases income inequality in any given year. However, these data also indicate that including health insurance benefits in income increases the *growth* in income inequality (measured by the Gini index) between 1979 and 1992.

payments for health insurance and FICA on the observed and actual premium for education from 1979 to 1992 for males⁵ working full-time and year-round.⁶ It concludes that adding the cost of health insurance to wages boosts the rise in the premium for education for all males working full-time, year-round, by as much as 25 percentage points, because over this 13-year period men with relatively little education lost access to jobs with health benefits to a disproportionate extent. For all full-time male workers, moreover, adding the cost of health insurance to wages also increases the growth in inequality within narrowly defined groups.⁷

The decreased availability of jobs with health insurance has had a particularly severe impact on less-skilled workers.

By exception, for the more limited group of men with employer-provided health insurance, adding the cost of these benefits to wages reduces the observed premium for education in any given year and the growth in that premium during the 1980s,⁸ as expected. Adding insurance payments to wages also tends to moderate the rise in within-group inequality for men with job-based health benefits.

In sum, then, the decreased availability of jobs with health insurance has had a particularly severe impact on less-skilled workers. As a result, the compensation of full-time male workers has actually become substantially more unequal since 1979 than the traditional measure based on wages alone indicates. The article ends with a brief consideration of the policy implications of these results.

I. The Premium for Education: The Picture to Date

According to Frank Levy and Richard Murnane's extensive review of trends in U.S. earnings levels and inequality and proposed explanations for these developments (Levy and Murnane 1992), inequality *between* groups of men defined by age and education declined slightly in the 1970s and grew in the 1980s. By contrast, inequality *within* groups defined by age and education grew steadily through both decades. Very

important in explaining the decline in the education premium in the 1970s was the entry of large numbers of the relatively well-educated members of the baby boom generation into the labor force, starting in the late 1960s.⁹ Between 1971 and 1979, the number of 25- to 34-year-old male college graduates in the labor force increased by 85 percent while the number of young male high school graduates rose just 13 percent. As a consequence of this influx, the premium for experience rose and the premium for a college education fell. During the 1980s, by contrast, the number of young college-educated males in the labor force grew slightly more slowly than the number of young high school graduates—perhaps because of the decline in the education premium during the 1970s and the move to a volunteer army.¹⁰

Table 1 shows the distribution by age and level of education for men working full-time, year-round in the two years used in this study, 1979 and 1992. In 1979 the first baby boomers were 33 years old. By 1992, the leading edge of the baby boom was just entering the 45–54 years of age category.

It is generally agreed, however, that the change in the relative supply of young college graduates does not fully explain the dramatic rise in the premium for education seen in the 1980s. Changes in the demand for skilled labor must also have been at work. Indeed, as Olivier Blanchard (1995) put it, the situation is best

⁵ This exploratory study focuses on males because the increase in the education premium during the 1980s noted by other studies for both men and women was particularly pronounced for men. In addition, the issue of the changing availability of employer-provided health insurance is undoubtedly clarified by examining men since they have held a disproportionate number of jobs in the industries, like manufacturing and transportation, that have traditionally offered employer-paid health insurance.

⁶ While it clearly would be preferable to have data for other components of total compensation, the employer cost of many of the excluded benefits, like vacation and sick pay, tends to be proportional to the individual worker's earnings; thus, these excluded benefits are less likely to have a disproportionate impact on the lowest wages.

⁷ Including FICA payments (where coverage has increased rather than contracted) tends to reduce the growth in the premium for education slightly but increases the growth in within-group inequality.

⁸ Except in the case of young, less educated workers, as will be discussed more fully below.

⁹ The first cohort of the baby boom (born in 1946) graduated from high school in 1964 and from college in 1968; thus, baby boom high school graduates began entering Census tabulations of the work force in 1965 while those with college degrees typically were included as full-time workers beginning in 1969.

¹⁰ Particularly during the Vietnam War, the existence of the draft may have given some young men an added incentive to continue their education in order to postpone or avoid military service. With the shift to a volunteer army, this added incentive to stay in school disappeared.

Table 1
Distribution of Males Working Full-Time, Year-Round, by Education and Age, 1979 and 1992

	1979				Memo on 25-34 ^a
	25-34	35-44	45-54	Total	
<High School	3.30	4.35	6.55	14.19	8.1
HS Diploma ^b	13.02	11.02	9.75	33.80	32.0
Some College	10.25	6.56	4.28	21.10	25.2
Coll Diploma ^b	8.39	4.45	3.71	16.55	20.6
Grad School	5.77	5.07	3.51	14.36	14.2
Total	40.74	31.46	27.80	100.00	100.0

	1992				Memo on 25-34 ^a
	25-34	35-44	45-54	Total	
<High School	3.08	2.70	2.46	8.25	8.5
HS Diploma ^b	12.75	11.64	8.04	32.43	35.0
Some College	9.75	10.47	6.60	26.82	26.7
Coll Diploma ^b	8.30	8.25	4.40	20.95	22.8
Grad School	2.57	4.77	4.21	11.55	7.0
Total	36.46	37.83	25.72	100.00	100.0

^aMemo: educational mix of 25- to 34-year-old males working full-time, year-round.

^bBecause of changes in the survey questions, in 1979 men in these categories attended high school or college, respectively, for four years but did not necessarily receive a diploma. In 1992, these men received diplomas.

Source: Based on data from the U.S. Bureau of the Census, *Current Population Survey*, March 1980 and March 1993.

described as “a race, over the last twenty years, between increases in relative demand for skills and increases in relative supply. In the 1970s, relative supply won; in the 1980s, relative demand won. But in both decades, the race has been fast on both sides.”

Two frequently cited explanations for the rise in the demand for skilled workers include the growth in world trade with a consequent decrease in the demand for unskilled workers in the United States and the other industrialized countries, and the spread of new technologies that increase the productivity of, and thus the relative demand for, highly skilled workers. Economists still have not entirely sorted out the relative contributions of these and other explanations (like the declining importance of trade unionism) to the increased premium for education, although the majority tend to give most weight to the technology-based explanations.¹¹ Whatever their relative importance, however, these developments

together do not appear to account for the entire change.¹²

Another important unsolved piece of the puzzle, according to Levy and Murnane, concerns the 20-year trend of rising earnings inequality within narrowly defined groups. For example, analysts have noted an increase in inequality among workers of similar age and skills—even within a given industry or firm. Because “skill” is usually measured by years at school,¹³ one suggested cause of this rise in within-group inequality (with the groups defined by age and years of education) is an increase in the demand for specific vocational skills or for abilities not necessarily associated with years of formal education—interactive skills like mentoring, negotiating, or supervising, for example.

Cross-country comparisons point to still another aspect of the wage gap phenomenon requiring explanation. While many OECD countries experienced a growing premium for education during the 1980s, wage dispersion increased more dramatically in the United States than in most other industrialized countries examined so far (Higgins 1994). This observation raises the role of institutional differences and their contribution to growing inequality in labor compensation.

¹¹ Although often treated as contending, these two explanations are not necessarily incompatible. For example, increased foreign competition may have prompted some U.S. firms’ efforts to improve productivity. In addition, while some analysts argue that the rise in the premium for education in many countries in different stages of development indicates that trade pressures cannot be an important reason for the rise in inequality here in the United States, U.S. firms often respond to rising foreign competition by establishing affiliates overseas. They then export U.S. capital equipment and production methods to these affiliates. As foreign workers using these new methods become more productive, their rising wages could exhibit a growing premium for education similar to that seen in the United States. Accordingly, increased income inequality in foreign countries, including the LDCs, could be a corollary of increased inequality caused by trade pressures experienced here in this country. Finally, many observers have deemphasized the trade-based explanations by suggesting that the rise in the U.S. merchandise trade deficit has simply been too small to account for much of the growing wage gap. However, this country’s rising surplus in services trade may have augmented trade’s role, since increased foreign demand for U.S. business and professional services may have boosted the demand for skilled workers within the service sector at the same time that the growing merchandise deficit has helped reduce demand for low-skilled production workers in manufacturing.

¹² Brauer and Hickok (1995), for example, find that technology, trade, and shifts in product demand across industries account for just 35 to 40 percent of the widening hourly wage gap between college graduates and high school graduates or dropouts between 1979 and 1989.

¹³ Of course, years at school may not be a very good measure of skill, especially since the quality of those years at school could vary considerably.

Altogether, recent reviews of the literature¹⁴ suggest that much work remains to be done in untangling the many intertwined developments that have contributed to growing labor income inequality in recent years. This article does not attempt to assess the relative merits of the explanations already posited. Rather it explores the impact of expanding our measure of compensation to include health benefits and payroll taxes for Social Security.

II. The Impact of Including Health and Social Security Benefits

To broaden the discussion of earnings inequality, this article examines the impact of shifting from wages towards compensation by adding employer contributions for health insurance and FICA taxes to pre-tax wage and salary earnings¹⁵ in measuring the premium for education and within-group inequality. The first step involved identifying in the Current Population Surveys conducted in 1980 and 1993 all males working full-time, year-round. These men were then classified by age (as a proxy for experience) and by years of education; a subgroup included men with employer-provided health insurance.¹⁶

The Premium for Education

Tables 2 and 3 show the ratios of the median annual wage and salary earnings for the members of each education group to the median for high school dropouts of the same age/experience; Table 2 provides data for males with health insurance benefits, while Table 3 covers all males. The columns labeled "W" measure the education premium in the traditional way, using annual wage and salary earnings. In the columns labeled "W+H," compensation includes employer contributions for health insurance. The tables show the results for insured men (Table 2) and for all men (Table 3) separately in order to distinguish the impact of employer payments for health insurance on wages and compensation from the impact of insurance availability.

In both tables, the ratios based on wages exhibit the premium for education noted in previous studies. Referring to Table 2, for example, in 1992, the median wage and salary earnings for 25- to 34-year-old males with a college degree and employment-based insurance were 73 percent greater than the median earnings for young men without a high school diploma. For all males, with or without employer-provided

health insurance, the comparable premium was 106 percent.

The wage-based data also show the increase in the premium for education over time found in other studies. In 1979, for example, the average young man who had completed high school earned 23 percent more than the average high school dropout (see Table 3), while young men with postgraduate education earned an average 54 percent more than men without a high school diploma. By 1992, young high school graduates earned 35 percent more and young men with some years in graduate school earned 135 percent more than young high school dropouts. As the tables show, much of the total increase in the premium for education occurred at the graduate level. In 1979, the bulk of the premium accrued to college graduates; men who studied beyond college made limited additional gains. By 1992, however, the relative reward for postgraduate study had risen considerably. The shift undoubtedly reflects a growing demand for men with professional degrees combined with a declining share of men holding such degrees, as shown in Table 1.¹⁷

Returning to Table 2, the figures in the columns labeled "W+H," with employer contributions for health insurance added to wages and salaries, also show a comparable premium for education and a

¹⁴ In addition to Levy and Murnane, see the January 1995 issue of the Federal Reserve Bank of New York's *Economic Policy Review*, which is devoted to that Bank's November 4, 1994 colloquium on U.S. wage trends in the 1980s and early 1990s.

¹⁵ Annual pre-tax wage and salary earnings or, for the self-employed, net earnings.

¹⁶ The sample used in this study includes all males, aged 25 to 54, working 50 to 52 weeks and at least 35 hours every week (including the self-employed). The subsample received health insurance paid in part or in full by their own employer. (In a very small number of cases, a union may have contributed to the health insurance. For most unionized workers, however, health benefits are largely paid by the employer. Self-employed workers who are incorporated and buy health insurance are treated as employees with employer-provided health benefits; unincorporated self-employed workers who buy health insurance are considered to have other private insurance, not provided by the worker's employer.) In an attempt to isolate the impact of health benefit costs on annual wage and salary earnings, men with health insurance were restricted to those working for just one employer in the year before the survey. In other words, the restriction reflects an effort to avoid including workers who were covered by job-related health insurance for just a fraction of a year. On the other hand, some men classified as not covered by employer-provided health insurance may have been working for a firm with health benefits but may have chosen not to participate in that firm's health plan.

¹⁷ Explanations for this decline in the share of men obtaining graduate degrees could include the impact of the draft and the Vietnam War on graduate enrollment in the 1960s. Alternatively, the data may simply reflect a growing tendency for individuals to attend graduate school after obtaining several years of work experience.

Table 2

Premium for Education as Measured by Wages and by Wages plus Employer Contributions for Health Insurance: Males Ages 25 to 54 with Health Insurance Provided by Own Employer and Working Full-Time, Year-Round for a Single Primary Employer

	1979			1992			Percent Growth in Premium		
	W	W + H	Change in Premium (Percent)	W	W + H	Change in Premium (Percent)	W	W + H	Difference (Percentage Points)
Ages 25-34									
HS Diploma ^a	1.22	1.21	-4.5	1.22	1.23	+4.5	.0	9.5	9.5
Some College	1.32	1.30	-6.3	1.41	1.36	-12.2	28.1	20.0	-8.1
Coll Diploma ^a	1.39	1.36	-7.7	1.73	1.67	-8.2	87.2	86.1	-1.1
Grad School	1.51	1.47	-7.8	2.05	1.95	-9.5	105.9	102.1	-3.8
Ages 35-44									
HS Diploma ^a	1.27	1.24	-11.1	1.38	1.35	-7.9	40.7	45.8	5.1
Some College	1.40	1.34	-15.0	1.64	1.57	-10.9	60.0	67.6	7.6
Coll Diploma ^a	1.67	1.60	-10.4	2.05	1.93	-11.4	56.7	55.0	-1.7
Grad School	1.73	1.66	-9.6	2.50	2.32	-12.0	105.5	100.0	-5.5
Ages 45-54									
HS Diploma ^a	1.20	1.19	-5.0	1.31	1.28	-9.7	55.0	47.4	-7.6
Some College	1.29	1.27	-6.9	1.54	1.49	-9.3	86.2	81.5	-4.7
Coll Diploma ^a	1.65	1.62	-4.6	1.85	1.78	-8.2	30.8	25.8	-5.0
Grad School	1.72	1.67	-6.9	2.27	2.13	-11.0	76.4	68.7	-7.7
Total									
HS Diploma ^a	1.16	1.17	+6.3	1.36	1.31	-13.9	125.0	82.4	-42.6
Some College	1.26	1.25	-3.8	1.58	1.49	-15.5	123.1	96.0	-27.1
Coll Diploma ^a	1.42	1.40	-4.8	1.90	1.77	-14.4	114.3	92.5	-21.8
Grad School	1.60	1.56	-6.7	2.35	2.23	-8.9	125.0	119.6	-5.4

Note: Premium for education is measured by the ratio of the median wages (or wages plus employer payments for benefits) for men with selected years of education and experience to the median for men of similar age and less than a high-school education. That is, the median for high school dropouts equals 1.00.

^aBecause of changes in the survey questions, in 1979 men in these categories attended high school or college, respectively, for four years but did not necessarily receive a diploma. In 1992, these men received diplomas.

Source: Based on data from the U.S. Bureau of the Census, *Current Population Survey*, March 1980 and March 1993.

large increase in that premium between 1979 and 1992. However, as the third column in each year's panel indicates, measuring the premium using wages plus health benefits generally reduces the premium for education by as much as 15 percent. By exception, in 1992, measuring the education premium with wages plus health insurance raises the reward for finishing high school. This exception may reflect that men with a high school education and a job with health insurance benefits may be disproportionately employed at unionized facilities in the northeast quadrant of the country, where health benefits and medical costs may both be above average.

Turning to the growth in the premium for education between 1979 and 1992, the final three columns in Table 2 show that for most groups with job-based insurance this premium has risen by less over the

13 years covered when compensation includes health insurance than when wages are the only criterion. The difference reflects the fact that health insurance benefits had grown as a share of compensation between 1979 and 1992, especially for low-paid, less-skilled workers.¹⁸

The data in Table 3, which cover all men working full-time, whether or not they receive health insurance benefits, present a very different picture from that shown in Table 2. When the sample contains all full-time male workers, including the employer cost

¹⁸ By exception, the growth in the premium for education is somewhat greater for young and prime age men with little education when the cost of insurance is included. This result may again reflect the concentration of men with a high school education and jobs with health benefits in unionized industries and in regions with relatively high health care costs.

Table 3
Premium for Education as Measured by Wages and by Wages plus Employer Contributions for Health Insurance: All Males Ages 25 to 54 Working Full-Time, Year-Round

	1979			1992			Percent Growth in Premium		
	W	W + H	Change in Premium (Percent)	W	W + H	Change in Premium (Percent)	W	W + H	Difference (Percentage Points)
Ages 25–34									
HS Diploma ^a	1.23	1.22	–4.3	1.35	1.35	.0	52.2	59.1	6.9
Some College	1.31	1.29	–6.5	1.59	1.57	–3.4	90.3	96.6	6.3
Coll Diploma ^a	1.38	1.36	–5.3	2.06	1.99	–6.6	178.9	175.0	–3.9
Grad School	1.54	1.48	–11.1	2.35	2.29	–4.4	150.0	168.8	18.8
Ages 35–44									
HS Diploma ^a	1.31	1.27	–12.9	1.48	1.46	–4.2	54.8	70.4	15.6
Some College	1.40	1.36	–10.0	1.75	1.70	–6.7	87.5	94.4	6.9
Coll Diploma ^a	1.72	1.66	–8.3	2.18	2.15	–2.5	63.9	74.2	10.3
Grad School	1.76	1.68	–10.5	2.75	2.65	–5.7	130.3	142.6	12.3
Ages 45–54									
HS Diploma ^a	1.24	1.20	–16.7	1.42	1.40	–4.8	75.0	100.0	25.0
Some College	1.31	1.28	–9.7	1.68	1.63	–7.4	119.4	125.0	5.6
Coll Diploma ^a	1.70	1.64	–8.6	1.99	1.94	–5.1	41.4	46.9	5.5
Grad School	1.75	1.70	–6.7	2.57	2.41	–10.2	109.3	101.4	–7.9
Total									
HS Diploma ^a	1.20	1.19	–5.0	1.35	1.38	+8.6	75.0	100.0	25.0
Some College	1.27	1.25	–7.4	1.60	1.62	+3.3	122.2	148.0	25.8
Coll Diploma ^a	1.40	1.40	.0	2.00	2.01	+1.0	150.0	152.5	2.5
Grad School	1.60	1.57	–5.0	2.58	2.59	+6	163.3	178.9	15.6

Note: Premium for education is measured by the ratio of the median wages (or wages plus employer payments for benefits) for men with selected years of education and experience to the median for men of similar age and less than a high-school education. That is, the median for high school dropouts equals 1.00.

^aBecause of changes in the survey questions, in 1979 men in these categories attended high school or college, respectively, for four years but did not necessarily receive a diploma. In 1992, these men received diplomas.

Source: Based on data from the U.S. Bureau of the Census, *Current Population Survey*, March 1980 and March 1993.

of health benefits generally increases the growth in the premium for education by as much as 25 percentage points. As before, adding the cost of insurance benefits to wages reduces the premium for education in any given year; however, the reduction shrinks from as much as 17 percent in 1979 to a maximum of 10 percent in 1992. Table 4 provides the explanation: for all male workers, access to jobs with health benefits declined sharply over this period, but the drop was particularly severe for men with limited education. While the share of full-time male workers with health insurance benefits fell from 87 to 70 percent between 1979 and 1992, the share of full-time male workers with less than a high school education and job-related health benefits fell from 88 percent to 54 percent. In 1979, men with no more than a high school education suffered little disadvantage in terms of access to health

insurance; in 1992, they did. Clearly, the decreased availability of employer-provided health insurance has hit the least educated particularly hard. This development almost surely reflects declining employment opportunities for males with little formal education in manufacturing and in highly unionized nonmanufacturing industries, like mining and trucking, where health insurance benefits have been an important part of the compensation package. By contrast, the sectors where many unskilled workers now find jobs—retailing, personal services, and construction—have below-average insurance coverage.

Of course, men employed in jobs without health benefits are not necessarily uninsured. They may, for instance, be covered through their wife's health plan, or they may pay the entire cost of insurance themselves. Alternatively, some workers—particu-

Table 4
Share of Full-Time, Year-Round Male Workers Ages 25 to 54 with Employer-Provided Health Insurance, by Age and Years of Education, 1979 and 1992
 Percent

	1979			
	25-34	35-44	45-54	Total
<High School	79.7	88.6	91.2	87.7
HS Diploma ^a	86.3	89.0	92.4	88.9
Some College	83.2	87.7	91.2	86.2
Coll Diploma ^a	82.0	90.3	89.8	86.0
Grad School	82.1	87.9	90.3	86.2
Total	83.5	88.7	91.3	87.3

	1992			
	25-34	35-44	45-54	Total
<High School	46.6	53.8	62.8	53.8
HS Diploma ^a	61.1	69.9	77.2	68.3
Some College	68.6	71.2	76.5	71.5
Coll Diploma ^a	72.1	76.8	77.9	75.2
Grad School	71.9	74.2	73.6	73.5
Total	65.2	71.2	75.2	70.0

^aBecause of changes in the survey questions, in 1979 men in these categories attended high school or college, respectively, for four years but did not necessarily receive a diploma. In 1992, these men received diplomas.

Source: Based on data from the U.S. Bureau of the Census, *Current Population Survey*, March 1980 and March 1993.

larly the young and healthy—may choose to take their chances and go uninsured. Appendix Table 1 shows the health insurance status of full-time male workers with no job-related health insurance benefits in 1993. The table indicates that, even taking other sources of insurance coverage into account, working men with limited education were much more likely to be uninsured in 1993 than were men with a college degree or more. Among workers ages 35 to 44, for instance, 71 percent of those with less than a high school diploma had no insurance; the comparable number for those with some post-graduate education was 23 percent. Relatively well-educated, and presumably well-paid, men were much more likely to have insurance coverage through a wife's health plan or to have other private insurance coverage purchased out-of-pocket than were men with a high school education or less.

Inequality within Groups Defined by Age and Education

To examine the issue of inequality within groups of similar individuals, Tables 5 and 6 show the coefficients of variation, a widely used index of inequality,¹⁹ for groups defined by age and education. Again, compensation is measured using both wages and wages plus employer payments for health insurance. As in other studies, these measures of within-group inequality increase considerably between 1979 and 1992 in almost every case. (By exception, inequality measured by wages falls slightly for young men with little schooling and for older men with graduate education. Again, the drop in inequality among less educated men probably results from the dwindling number of high-wage manufacturing jobs for workers with little education.) In any given year, moreover, adding employer payments for health insurance to wages almost always reduces the coefficient of variation (by as much as 4 percent) for men with health benefits and for all men. (The single exception is the coefficient for all young men with less than a high school education.)

As was the case for between-group inequality, adding the cost of health insurance to wages has a different impact on the growth in within-group inequality for all men than for men with health benefits. For men with job-based health insurance, the addition has mixed results (Table 5). For most groups, particularly young workers with little education and most older workers, using wages plus health benefits instead of wages reduces the growth in within-group inequality. For younger men with more than a high school education, however, using the expanded measure increases the growth in within-group inequality—presumably as the cost/quality of insurance packages available to these young workers has become increasingly variable. As premium costs soared in the 1980s, many employers felt compelled to cut the package of health services or the insurance options offered or have shifted a greater share of the premium payment onto their employees.

In contrast to the mixed results of switching from

¹⁹ The coefficients of variation shown in Tables 5 and 6 are ratios of the standard deviation to the mean multiplied by 100. The coefficient of variation has the attribute of being scale invariant (the degree of inequality does not change when all observations are multiplied by a constant). In addition, this measure has the desirable property that it always registers a decrease in inequality when income is shifted from the higher- to the lower-income person, regardless of where in the distribution the transfer occurs.

Table 5

Coefficients of Variation for Wages and for Wages plus Employer Contributions for Health Insurance: Men Ages 25 to 54 with Employer-Provided Health Insurance and Working Full-Time, Year-Round for a Single Primary Employer

	Ages 25-34						
	1979		1992		Percent Change, 1979 to 1992		Difference (Percentage Points)
	W	W + H	W	W + H	W	W + H	
<High School	41.22	39.61	41.14	39.30	-.2	-.8	-.6
HS Diploma ^a	36.39	35.30	43.30	41.71	19.0	18.2	-.8
Some College	37.42	36.39	41.95	40.90	12.1	12.4	.3
Coll Diploma ^a	38.80	37.99	45.63	44.73	17.6	17.7	.1
Grad School	40.29	39.56	43.03	42.47	6.8	7.4	.6
	Ages 35-44						
	1979		1992		Percent Change, 1979 to 1992		Difference (Percentage Points)
	W	W + H	W	W + H	W	W + H	
<High School	41.94	40.22	48.30	46.00	15.2	14.4	-.8
HS Diploma ^a	38.22	37.08	42.26	40.59	10.6	9.5	-1.1
Some College	35.03	34.10	41.55	40.07	18.6	17.5	-1.1
Coll Diploma ^a	39.67	38.98	43.97	43.22	10.8	10.9	.1
Grad School	39.58	39.11	42.36	41.85	7.0	7.0	0
	Ages 45-54						
	1979		1992		Percent Change, 1979 to 1992		Difference (Percentage Points).
	W	W + H	W	W + H	W	W + H	
<High School	40.31	38.79	44.67	42.47	10.8	9.5	-1.3
HS Diploma ^a	37.42	36.38	41.96	40.39	12.1	11.0	-1.1
Some College	40.65	39.70	45.13	43.45	11.0	9.4	-1.6
Coll Diploma ^a	39.65	39.02	45.66	44.64	15.2	14.4	-.8
Grad School	38.46	37.93	37.42	36.97	-2.7	-2.5	.2

^aBecause of changes in the survey questions, in 1979 men in these categories attended high school or college, respectively, for four years but did not necessarily receive a diploma. In 1992, these men received diplomas.

Source: Based on data from the U.S. Bureau of the Census, *Current Population Survey*, March 1980 and March 1993.

wages to wages plus health benefits in measuring the growth of within-group inequality among men with insurance, the results for all men are unambiguous (Table 6). Including the cost of health insurance increases the growth in within-group inequality for all men in all cases. The differences range from 4 to 7 percentage points for men with relatively little education to 0.6 to 1.8 percentage points for men with more than college. These results again reflect the reduced availability of health benefits, particularly for the young and unskilled, already noted.²⁰ In addition,

broadening the focus from men with health benefits to all men changes the industrial, firm-size, and geographic mix of the sample. Firms not offering health benefits tend to be small businesses in agriculture, construction, retail trade, and personal services. Such

²⁰ Of course, in response to rising premium costs, a growing number of workers, particularly young workers, may have chosen to self-insure. In addition, as women's labor force participation has increased, a growing number of men may be obtaining health insurance through their wives.

Table 6

Coefficients of Variation for Wages and for Wages plus Employer Contributions for Health Insurance: All Men Ages 25 to 54 Working Full-Time, Year-Round

	Ages 25-34						
	1979		1992		Percent Change, 1979 to 1992		Difference (Percentage Points)
	W	W + H	W	W + H	W	W + H	
<High School	42.88	41.06	48.35	49.24	12.8	19.9	7.1
HS Diploma ^a	38.22	37.03	48.84	48.62	27.8	31.3	3.5
Some College	38.99	37.82	49.83	49.29	27.8	30.3	2.5
Coll Diploma ^a	40.27	39.34	48.50	48.04	20.4	22.1	1.7
Grad School	41.81	40.93	47.89	47.61	14.5	16.3	1.8
	Ages 35-44						
	1979		1992		Percent Change, 1979 to 1992		Difference (Percentage Points)
	W	W + H	W	W + H	W	W + H	
	<High School	43.33	41.55	54.68	54.25	26.2	30.6
HS Diploma ^a	39.71	38.51	47.97	47.14	20.8	22.4	1.6
Some College	36.26	35.28	45.17	44.54	24.6	26.2	1.6
Coll Diploma ^a	41.18	40.42	47.19	46.85	14.6	15.9	1.3
Grad School	40.68	40.14	45.39	45.13	11.6	12.4	.8
	Ages 45-54						
	1979		1992		Percent Change, 1979 to 1992		Difference (Percentage Points)
	W	W + H	W	W + H	W	W + H	
	<High School	41.99	40.39	51.49	51.07	22.6	26.4
HS Diploma ^a	38.94	37.84	45.83	45.09	17.7	19.2	1.5
Some College	41.40	40.43	47.61	46.76	15.0	15.7	.7
Coll Diploma ^a	41.56	40.83	48.63	48.09	17.0	17.8	.8
Grad School	39.67	39.07	40.72	40.32	2.6	3.2	.6

^aBecause of changes in the survey questions, in 1979 men in these categories attended high school or college, respectively, for four years but did not necessarily receive a diploma. In 1992, these men received diplomas.

Source: Based on data from the U.S. Bureau of the Census, *Current Population Survey*, March 1980 and March 1993.

firms are also more likely to be in western and southern states where wages are relatively low.

The Impact of FICA Taxes

Appendix Tables 2 and 3 show the impact of adding employer contributions for Social Security taxes (as well as health insurance) to wages on the premium for education and on within-group inequality. The tables provide data only for all male full-time, year-round workers, age 25 to 54, since most workers are subject to FICA. Although employers are legally

required to make FICA tax payments for most employees, employers generally consider these payments to be part of the benefits package, and their cost clearly affects hiring decisions. From the individual worker's perspective, of course, the value of the benefit actually received may be little correlated with his own or his employer's contributions on his behalf.

As Appendix Table 2 shows, including FICA payments has only a modest marginal impact on the premium for education, compared with the impact of adding health insurance. Because the taxable wage base has risen over time, the addition tends to reduce

Table 7

Coefficients of Variation for Wages, for Wages plus Employer Payments for Health Insurance, and for Wages plus Employer Payments for Health and Social Security (FICA) Benefits: All Males Ages 25 to 54 Working Full-Time, Year-Round

1979			1992			Percentage Change, 1979 to 1992		
W	W + H	W + H + F	W	W + H	W + H + F	W	W + H	W + H + F
45.62	44.30	43.33	57.01	56.11	55.41	25.0	26.7	27.9
Difference (Percentage Points)							1.7	2.9

Source: Based on data from the U.S. Bureau of the Census, *Current Population Survey*, March 1980 and March 1993.

the growth in the education premium for younger (probably less well paid) workers and to increase it for older, better educated employees. By contrast, including employer contributions for FICA generally increases the growth in within-group inequality, particularly for older, better educated workers (Appendix Table 3).

The Increase in Total Inequality

Finally, Table 7 provides the coefficients of variation based on wages, wages plus employer contributions for health insurance, and wages plus employer contributions for health insurance and FICA for all men ages 25 to 54 without regard to age or education in 1979 and 1992. While overall inequality in both years is lower for the more comprehensive measures of compensation, adding the cost of health benefits and employer contributions for Social Security to wages increases the growth in overall inequality from 25 percent to 27 and 28 percent, respectively.

III. Policy Implications

The data reviewed indicate that as access to health insurance and the quality of insurance coverage have become increasingly uneven over the last decade, the premium for education and within-group earnings inequality measured to include the cost of benefits have grown somewhat faster than commonly recognized (up to 25 percentage points and 7 percentage points, respectively). Reduced access to health benefits between 1979 and 1992 has clearly had a disproportionately adverse impact on workers with the least education and the lowest wages. If growing earnings inequality and its impact on social cohesion

are of concern, this finding underscores the need to rethink the way this country finances its health insurance and Social Security systems.

Compared to other industrial countries where health care is financed by a tax on general revenues or a tax on wages, rather than by a flat premium, the U.S. approach to financing health insurance has a disproportionately adverse impact on the wages or job quality of the lowest-paid workers. Table 2 demonstrated how the U.S. approach to health care finance has had an unfavorable impact on the wages of low-skilled, low-paid workers when access to health insurance is held constant. As Table 2 showed, for workers with health insurance benefits, the wages of the least educated rose less than their total compensation (the value ultimately determined by supply and demand) as rising health insurance costs constrained their wage growth to a disproportionate degree. Alternatively, when access to health insurance is not held constant, as in Table 3, this study's results suggest that low-wage, low-skill workers lost access to jobs with health benefits to an above-average extent.²¹

In all likelihood, then, cross-country differences in methods of financing health care help to explain why the premium for education, measured in terms of wages, has grown more in the United States than in most other industrial countries. In no other high-income country would the growing cost of health care have contributed to rising earnings inequality as it has here in the United States.

Another reason for concern about growing in-

²¹ Consistent with the hypothesis that rising health insurance costs have depressed wage growth for workers with health benefits is the fact that the median annual wage and salary earnings for full-time, year-round male workers with health benefits rose 36 percent between 1979 and 1992, while the median for similar workers with no health benefits rose 71 percent.

come inequality relates to recent declines in labor force participation for prime-age men. If, as Olivier Blanchard has suggested, the supply of unskilled labor is more price-elastic than the supply of skilled men, the growing premium for education, with real wages stagnant, has probably contributed to the observed decline in labor force participation over the last decade. At current wages for high school graduates, Blanchard believes, the supply of unskilled men is likely to prove very elastic indeed. But, as is widely suspected and as this study confirms, including health insurance benefits in the compensation package only aggravates the growing discrepancies and disincentives for unskilled men to work.²²

Accordingly, one approach to ameliorating the recent increase in worker inequality might be to rethink the way this country finances health insurance and Social Security. For example, if citizens want to keep the U.S. system of job-based health insurance, total employer and employee premium payments

Health reform could contribute to reducing earnings inequality and to raising labor force participation, an issue likely to become increasingly important as the population ages.

could be allocated on a sliding scale by earnings rather than as a flat premium that weighs most heavily on the wages or job prospects of the lowest-paid workers. If needed, the government could cover any shortfall by subsidizing low-wage workers and their employers. Alternatively, policymakers might prefer to consider financing health care through a tax on income. Such an approach would neither aggravate income inequality nor encourage employers to substitute capital for labor. In other words, health reform could contribute to reducing earnings inequality and to

raising labor force participation, an issue likely to become increasingly important as the population ages.

A recent World Bank study (International Bank for Reconstruction and Development 1994) makes somewhat similar recommendations concerning social security. It suggests that public social security should be financed out of general revenues rather than through a capped tax on wages. Again, the ceiling on taxable earnings aggravates inequality while the taxation of wages distorts the choice between capital and labor. Likewise, Olivier Blanchard hints that a subsidy for low-skilled workers, possibly in the form of a reduction in the payroll tax, might be desirable, but he finds such a step to be highly unlikely politically.

Whether or not U.S. policymakers decide to change this country's approach to financing its health insurance and Social Security systems, U.S. voters need to recognize that our current financing methods contribute to growing compensation inequality and, most probably, to reduced labor force participation. Similarly, researchers may want to pay more attention to institutional issues in exploring earnings trends across various sectors and times.

IV. Conclusions

In sum, then, this article indicates that the U.S. system of employer-based health insurance and a capped payroll tax to fund Social Security has distorted our traditional wage-based measures of between-group and within-group inequality and their growth. In fact, the study points out, when compensation is measured to include employer costs for health and Social Security benefits, inequality among male workers has increased more than generally recognized. Accordingly, these findings underscore the need for U.S. citizens to rethink this country's approach to financing its health insurance and Social Security systems.

²² The data shown in Table 1 are clearly consistent with the suggestion that, as unskilled men mature, they have been dropping out of the full-time work force at an above-average pace.

Appendix Table 1

Health Insurance Status of Full-Time Male Workers Ages 25 to 54 Not Covered by a Private Plan Partially or Fully Paid by Own Employer, 1993

Percent

		25-34	35-44	45-54	
Less than high school	Job-based private plan, no employer payment	5.34	6.91	6.08	
	Other private plan in own name	2.96	7.82	8.88	
	Other private plan in other's name	9.98	11.25	14.86	
	Medicaid	6.17	1.83	3.23	
	Medicare	1.06	.42	.00	
	Champus ^a	.62	1.18	3.20	
	No coverage	73.87	70.59	63.75	
	Total	100.00	100.00	100.00	
High school diploma	Job-based private plan, no employer payment	10.29	8.62	13.27	
	Other private plan in own name	6.83	9.19	17.02	
	Other private plan in other's name	17.71	31.01	28.24	
	Medicaid	2.91	2.09	.39	
	Medicare	.11	.93	.16	
	Champus ^a	10.91	8.14	5.87	
	No coverage	51.23	40.01	35.06	
	Total	100.00	100.00	100.00	
Some college	Job-based private plan, no employer payment	9.73	10.18	10.27	
	Other private plan in own name	9.59	12.14	14.42	
	Other private plan in other's name	21.54	31.08	31.82	
	Medicaid	2.12	1.12	.23	
	Medicare	.34	.35	.42	
	Champus ^a	17.66	17.38	10.89	
	No coverage	39.02	27.74	31.95	
	Total	100.00	100.00	100.00	
College degree	Job-based private plan, no employer payment	9.34	10.61	11.81	
	Other private plan in own name	17.55	17.50	17.79	
	Other private plan in other's name	25.47	39.22	41.45	
	Medicaid	.00	.14	.00	
	Medicare	.19	.28	.39	
	Champus ^a	13.41	10.57	6.08	
	No coverage	34.04	21.67	22.48	
	Total	100.00	100.00	100.00	
Graduate work	Job-based private plan, no employer payment	10.14	8.73	12.45	
	Other private plan in own name	15.63	17.85	18.80	
	Other private plan in other's name	32.74	40.36	30.94	
	Medicaid	1.57	.00	.00	
	Medicare	1.57	.00	.00	
	Champus ^a	10.75	10.08	19.08	
	No coverage	27.61	22.99	18.73	
	Total	100.00	100.00	100.00	
Totals	Job-based private plan, no employer payment	9.28	9.18	11.09	9.65
	Other private plan in own name	8.89	12.15	15.57	11.59
	Other private plan in other's name	19.34	31.00	29.58	25.95
	Medicaid	2.72	1.24	.66	1.71
	Medicare	.39	.50	.21	.39
	Champus ^a	11.38	10.34	8.86	10.43
	No coverage	47.99	35.58	34.03	40.27
	Total	100.00	100.00	100.00	100.00

^aCivilian Health and Medical Program for the Uniformed Services and the Veterans Administration.
Source: U.S. Bureau of the Census, *Current Population Survey*, March 1993.

Appendix Table 2

Premium for Education as Measured by Wages and by Wages plus Employer Contributions for Health Insurance and FICA: All Males Ages 25 to 54 Working Full-Time, Year-Round

	1979			1992			Percent Growth in Premium, 1979 to 1992		
	W	W + H + F	Change in Premium (Percent)	W	W + H + F	Change in Premium (Percent)	W	W + H + F	Difference (Percentage Points)
Ages 25-34									
HS Diploma ^a	1.23	1.22	-4.3	1.35	1.35	.0	52.2	59.1	+6.9
Some College	1.31	1.29	-6.5	1.59	1.55	-6.8	90.3	89.7	-.6
Coll Diploma ^a	1.38	1.37	-2.6	2.06	1.99	-6.6	178.9	167.6	-11.3
Grad School	1.54	1.49	-9.3	2.35	2.30	-3.7	150.0	165.3	+15.3
Ages 35-44									
HS Diploma ^a	1.31	1.27	-12.9	1.48	1.45	-6.2	54.8	66.7	+11.9
Some College	1.40	1.36	-10.0	1.75	1.69	-8.0	87.5	91.7	+4.2
Coll Diploma ^a	1.72	1.65	-9.7	2.18	2.14	-3.4	63.9	75.4	+11.5
Grad School	1.76	1.68	-10.5	2.75	2.59	-9.1	130.3	133.8	+3.5
Ages 45-54									
HS Diploma ^a	1.24	1.21	-12.5	1.42	1.41	-2.4	75.0	95.2	+20.2
Some College	1.31	1.27	-12.9	1.68	1.65	-4.4	119.4	140.7	+21.3
Coll Diploma ^a	1.70	1.62	-11.4	1.99	1.98	-1.0	41.4	58.1	+16.7
Grad School	1.75	1.68	-9.3	2.57	2.42	-9.6	109.3	108.8	-.5
Total									
HS Diploma ^a	1.20	1.19	-5.0	1.35	1.38	+8.6	75.0	100.0	+25.0
Some College	1.27	1.25	-7.4	1.60	1.62	+3.3	122.2	148.0	+25.8
Coll Diploma ^a	1.40	1.39	-2.5	2.00	1.99	-1.0	150.0	153.8	+3.8
Grad School	1.60	1.57	-5.0	2.58	2.55	-1.9	163.3	171.9	+8.6

Note: Premium for education is measured by the ratio of the median wages (or wages plus employer payments for benefits) for men with selected years of education and experience to the median for men of similar age and less than a high-school education. That is, the median for high school dropouts equals 1.00.

^aBecause of changes in the survey questions, in 1979 men in these categories attended high school or college, respectively, for four years but did not necessarily receive a diploma. In 1992, these men received diplomas.

Source: Based on data from the U.S. Bureau of the Census. *Current Population Survey*, March 1980 and March 1993.

Appendix Table 3

Coefficients of Variation for Wages and for Wages plus Employer Payments for Health Insurance and Social Security: All Men Ages 25 to 34 Working Full-Time, Year-Round

	Ages 25-34						
	1979		1992		Percent Change, 1979 to 1992		Difference (Percentage Points)
	W	W + H + F	W	W + H + F	W	W + H + F	
<High School	42.88	40.92	48.35	49.01	12.8	19.8	7.0
HS Diploma ^a	38.22	36.56	48.84	48.38	27.8	32.3	4.5
Some College	38.99	37.15	49.83	48.92	27.8	31.7	3.9
Coll Diploma ^a	40.27	38.44	48.50	47.43	20.4	23.4	3.0
Grad School	41.81	39.89	47.89	46.87	14.5	17.5	3.0

	Ages 35-44						
	1979		1992		Percent Change, 1979 to 1992		Difference (Percentage Points)
	W	W + H + F	W	W + H + F	W	W + H + F	
<High School	43.33	40.99	54.68	53.76	26.2	31.2	5.0
HS Diploma ^a	39.71	37.69	47.97	46.83	20.8	24.3	3.5
Some College	36.26	34.49	45.17	44.12	24.6	27.9	3.3
Coll Diploma ^a	41.18	39.27	47.19	46.17	14.6	17.6	3.0
Grad School	40.68	39.07	45.39	44.42	11.6	13.7	2.1

	Ages 45-54						
	1979		1992		Percent Change, 1979 to 1992		Difference (Percentage Points)
	W	W + H + F	W	W + H + F	W	W + H + F	
<High School	41.99	39.79	51.49	51.10	22.6	28.4	5.8
HS Diploma ^a	38.94	37.11	45.83	44.66	17.7	20.3	2.6
Some College	41.40	39.46	47.61	46.19	15.0	17.1	2.1
Coll Diploma ^a	41.56	39.72	48.63	47.32	17.0	19.1	2.1
Grad School	39.67	38.20	40.72	39.39	2.6	3.1	.5

^aBecause of changes in the survey questions, in 1979 men in these categories attended high school or college, respectively, for four years but did not necessarily receive a diploma. In 1992, these men received diplomas.

Source: Based on data from the U.S. Bureau of the Census, *Current Population Survey*, March 1980 and March 1993.

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