



A Study of the Decline in Employment-Based Health Insurance

By:

**David Shactman, MPA, MBA
Stuart H. Altman, Ph.D.**

May 1, 1995

Research for this paper was supported by a grant from the Robert Wood Johnson Foundation to the Council on the Economic Impact of Health System Change, which is chaired by Stuart Altman and administered at the Institute for Health Policy, The Heller School, Brandeis University.

EXECUTIVE SUMMARY

In 1993, the number of Americans without health insurance was 41.2 million. Of those under the age of 65, 18% or 40.9 million were uninsured. Approximately two thirds of Americans who have health insurance receive it through their employer, but employment based insurance (EBI) has been declining for the past 15 years.

A substantial increase in the number of Medicaid recipients has moderated the impact of the decline in EBI on the overall rate of the uninsured. This has been especially true in the case of children, as some employers have eliminated dependent coverage or workers have dropped dependent coverage as the cost to them has increased. Married men have also experienced a substantial decline in employment based coverage through their own employer, although this has been partially mitigated by an increased amount of spousal coverage.

If private EBI continues its present decline, it will not only impact the health and well being of increasing numbers of the uninsured, but will also entail a monetary cost to government and the privately insured. Some of the uninsured will inevitably require health services from the government, which will make federal and state budgets harder to balance and will exert upward pressure on taxes. Others will seek care in the emergency rooms of private hospitals, the cost of which will eventually be shifted back to private payers.

Whether government can or should attempt to influence these trends depends, in part, on why they are occurring. In this paper we have tried to summarize what is known about this issue and what still needs to be understood.

Who Are the Uninsured?

Only a segment of the population that lost EBI have been picked up by public insurance. Among them are the lowest income individuals whose access to health insurance has improved as Medicaid eligibility has increased. Throughout the rest of the working population the decline has been pervasive, occurring across all sizes of companies and within nearly all industries. Despite the widespread decline, particular economic, demographic, and industrial segments have been more strongly affected. Individuals who work in low wage companies, small firms, and service industries are less likely to work for employers who offer insurance, and are less likely to participate in EBI when offered. The same is true for less educated, low wage earning, younger people, particularly males.

The 16.7 million workers who have no health insurance represent less than 41% of the 41.2 million Americans who are uninsured. Many of the balance represent children or other dependents of workers. Dependent coverage has recently undergone a considerable decline. Between 1988 and 1993, EBI for children under 10 years of age dropped sharply from 65 to 58% although increases in Medicaid caused the actual number of uninsured children to decrease.

What Factors Have Caused the Decline in EBI?

We have posited an analytical construct that divides the possible factors into three categories:

1. A combination of decreased real wages and increased inflation adjusted cost of health insurance has reduced both the willingness of employers to provide health insurance and the propensity of workers to participate in EBI.
2. Structural changes in the labor market have caused demand for employment to shift *between* industries, generally from the goods-producing sector which typically provides EBI to the service-producing sector that does not.
3. A number of other structural changes in the labor market have had an indirect effect on EBI by causing a decline in real wages *within* industries which in turn affects the affordability of EBI. These changes include such factors as reduced demand for less-educated and less-skilled workers, increased amounts of part-time and temporary work, reduced penetration of unions, and increased global competition.

What is the Relative Importance of Factors Causing the Decline in EBI?

Most researchers seem to agree that declining real wages and family incomes have had the most negative impact on EBI. This has been exacerbated by the increase in health insurance premiums. Many of the "working poor," after paying for daily necessities such as food and shelter, simply do not have the disposable income left to pay their share of EBI or to purchase individual insurance.

Researchers also seem to agree that employment shifts *between* industries have accounted for approximately 10-15% of the decline in EBI in recent years. Although this is a relatively small amount, the long term changes in employment between industries have had a substantial effect.

Few health researchers have examined the pervasive decline of EBI over all industries, or in other words, *within* industries, beyond concluding that declining wages have been the central factor. We have reviewed literature from labor economists who attribute the decline in real wages to decreased demand for less skilled and less trained workers. This has also caused an increase in wage inequality. Some of these economists theorize that a major factor behind these wage movements may be "non-neutral technological change" -- that is, technological changes, such as increased reliance on the computer, which have changed the nature of work and the skills required of workers. It is likely that these changes and a number of other structural labor market changes have exacerbated recent wage trends and thus have had both a direct and indirect effect on the decline of EBI.

Are the Current Trends Likely to Continue?

If these are the factors that explain the decline in EBI, are the current trends likely to continue? The evidence seems to suggest that structural labor market shifts *between* industries are likely to continue. The Department of Labor predicts that between 1992 and 2005 the service sector will produce 24 million of the 25.1 million projected increase in non-farm wage and salary jobs. Health insurance premiums are likely to continue to rise, although there is some indication that the rate of increase and the amount of volatility may be more moderate. Even in 1993, a year in which increases in health prices were considered relatively small, the cost of insurance premiums for active employees increased by 10.5%. We cannot predict the future trend of wages. In this study, however, we identify numerous structural factors that have contributed to the decrease in real wages and to the increase in wage inequality. Without evidence to the contrary, there is no obvious reason to believe that the influence of these factors will not continue.

What Are the Implications for Public Policy?

If public policy makers do not take any action, the availability and use of private insurance, particularly EBI, is likely to continue to decline. This cost will eventually be borne by government and private users of health care as aforesaid. It is also likely to lead to a decline in the availability of health services to the uninsured. There have been policy proposals in the current Congress to limit the scope and payment amounts of the Medicaid program as well as to move from an employer based insurance system toward a system of individual vouchers. There are good arguments both for and against these proposals. But, considering the magnitude of the decline in EBI, if some of these proposals are instituted before effective parallel or replacement systems are created, there is likely to be a sharp increase in the number of uninsured.

What are some of the alternatives? Policy makers must decide whether mechanisms can be created to reverse the declining trend of EBI, such as making it less expensive for small firms and individuals to purchase insurance, or assisting low income families with tax benefits. If not, more far reaching alternatives may be needed, such as government sponsored individual vouchers or employer mandates. There is also the possibility that if the problem becomes serious enough, pressure will build for a system totally financed by the government.

Because the combination of declining real wages and increasing real cost of health insurance is the major factor in the decline of EBI, policies making EBI more affordable to employers and individuals have the potential to be effective. However, our research also points out potential limitations. Voluntary measures are unlikely to provide sufficient incentive for those at less than 125% of poverty to purchase health insurance. Those measures that are aimed at the population from 125% to 200% of poverty may increase insurance coverage, but could be very expensive because much of the subsidy is likely to go to those already purchasing insurance.

Employer mandates would solve the coverage problem, but sufficient subsidies would have to be targeted to avoid adverse employment effects, particularly in small and low wage firms. Mandates

might also cause a welfare loss, because low-wage individuals with little disposable income may desire not to purchase health insurance before other necessities but might be forced to do so. There may be a combination of subsidies, insurance market reforms, and increased marketplace competition that might be effective without mandated payroll deductions.

Our analysis of labor market trends indicated that less-educated and less-skilled workers experienced declines in real wages and were less likely to be offered or to be able to afford EBI. If further research indicates that a widespread skills mismatch exists, then any long term health insurance solution should include an allocation of funds for education and training of the workforce.

Last year, even as the country found itself in an economic recovery, 1.1 million more Americans became uninsured. It is the purpose of this paper to inform public policy makers of the immediacy of this problem, to stimulate further discussion and research, and to encourage policy makers to focus on the difficult choices that must be confronted.

TABLE OF CONTENTS

EXECUTIVE SUMMARY

1.0	THE DECLINE IN EMPLOYMENT BASED HEALTH INSURANCE	1
1.1	INTRODUCTION	1
1.2	CHARACTERISTICS OF THE UNINSURED	3
2.0	THE IMPACT OF DECLINING REAL WAGES AND RISING REAL COSTS OF HEALTH INSURANCE ON EMPLOYMENT BASED INSURANCE	9
2.1	OVERVIEW: RISING REAL HEALTH INSURANCE COSTS AND DECLINING REAL WAGES	9
2.1.1	The Rising Cost of Health Insurance Premiums	9
2.1.2	The Decline in the Level of Real Wages	10
2.2	THE SUPPLY AND DEMAND FOR HEALTH INSURANCE	12
2.2.1	The Propensity of Employers to Supply Health Insurance	12
2.2.2	The Propensity of Employees to Demand Health Insurance	13
2.3	THE RELATIVE IMPORTANCE OF EMPLOYER SUPPLY AND EMPLOYEE DEMAND FOR HEALTH INSURANCE	15
3.0	THE IMPACT OF STRUCTURAL CHANGES IN THE LABOR	20
3.1	OVERVIEW	20
3.2	STRUCTURAL FACTORS IN THE LABOR FORCE	21
3.2.1	Employment Shifts Between Industries	21
3.2.2	Employment Shifts Within Industries	23
3.2.3	Employment Shifts Among Occupations	27
3.2.4	International Competition	28
3.2.5	Impact of Part-Time, Temporary, and Contract Workers	28
3.2.6	Decline of Labor Unions	30
3.2.7	Other Considerations: Minimum Wage, Structural Unemployment, and Taxes	31
4.0	THE RELATIVE IMPORTANCE OF FACTORS THAT AFFECT EMPLOYMENT BASED INSURANCE	32
5.0	CONCLUSIONS AND POLICY IMPLICATIONS	34

1.0 THE DECLINE IN EMPLOYMENT BASED HEALTH INSURANCE

1.1 INTRODUCTION

In 1993 the number of Americans without health insurance increased by 1.1 million to 41.2 million. 16.1% of all Americans, and 18% of those under 65 lacked health insurance as of January, 1994, and that number has been increasing for more than a decade.¹

Most Americans under the age of 65 who have health insurance get their insurance through employers. But employment based insurance (EBI) has declined steadily over the past several years. Among all wage and salary workers, EBI decreased from 66% in 1979 to 61% in 1993. This decline was most pronounced among private sector workers whose coverage declined from 64% to 58% in the same period.² The decline was particularly severe among less educated and lower paid workers.

Medicaid reduced the negative impact of the decline in EBI on the actual number of uninsured, but did so only for certain groups. Those individuals and family members whose incomes were near or below the poverty level benefited from increased enrollment in Medicaid, but other parts of the population, including the working poor, experienced widespread declines in health insurance coverage. Holahan estimated that Medicaid coverage increased from 9% of the non-elderly population in 1988 to 13% in 1994.³ Hence, while the increase in the overall rate of the uninsured appeared to be moderate, a closer look reveals that increases in Medicaid offset substantial declines in private, EBI.

This was particularly evident in the case of children. In 1992, 9.8 million or 14.8% of all American children were uninsured.⁴ Holahan⁵ estimated that the percentage of children under age 11 covered by EBI plummeted from 65% to 58% from 1988 to 1994, but was masked by an

¹ U.S. Department of Commerce, "Bureau of the Census Statistical Brief: Health Insurance Coverage - 1993" (October 1994)

² U.S. Department of Labor et al., "Pension and Health Benefits of American Workers: New Findings from the April 1993 Current Population Survey," (1994)

³ J. Holahan, C Winterbottom, Shruti Rajan, "The Changing Composition of Health Insurance Coverage in the United States," (1995)

⁴ Employee Benefit Research Institute, "Sources of Health Insurance and Characteristics of the Uninsured: Analysis of the March 1993 Current Population Survey," *Employee Benefit Research Institute Special Report and Issue Brief No. 145* (January, 1994)

⁵ J. Holahan, C. Winterbottom, Shruti Rajan, *Supra*, Note 3

increase in the percentage covered by Medicaid from 18% to 30%. Similarly EBI coverage for children aged 11-17 fell from 67% to 61% while Medicaid coverage increased from 13% to 18%.

The decline in EBI for children is evident in data showing recent declines in the amount of dependent coverage. The reasons for this decline are not yet clear. Analysts theorize that increased cost sharing demanded by employers, international competition exerting pressure on costs of benefits, and declining real wages making family coverage less affordable for workers, have all played a role. The causes of reduced dependent coverage may be an important area for further research.

The decline in the number of working, married males receiving health insurance from their own employer has also been somewhat mitigated by an increase in spousal coverage. Between 1979 and 1982 the proportion of prime aged, married, working men receiving health insurance from their employer declined steeply from 89% to 77%. Although partially offset by spousal coverage, the actual rate of uninsured for this group still increased substantially from 7.3% to 12% during that period.⁶

A continued decline in private EBI has serious implications for the insured, working population both as taxpayers and private payers (consumers). If private sources of insurance continue to decline, government inevitably will be asked to pick up a portion of the tab. This will render attempts to balance the budget and to avoid tax increases much more difficult. Some of those lacking insurance will end up in the emergency rooms of private and public hospitals as a last resort. This is an expensive alternative that will increase hospital uncompensated care, the cost of which will eventually be shifted back to private payers and the government.

If we are to avoid either of these occurrences and stem the declining tide of private insurance, we must understand the reasons behind these trends and determine whether they are likely to continue. Policy makers must then assess whether there are realistic alternatives to increase employment based insurance, or whether replacement or parallel systems should be developed to increase the availability and utilization of private sources of health insurance.

These issues are particularly important in the context of current policy debates. Various recommendations have been made to limit Medicaid coverage and payments as well as to move from an employment based insurance system to a system of personal vouchers. Reasonable arguments exist in both support and opposition to these proposals. However, it is incumbent upon policy makers to understand that the availability and use of EBI, although sometimes masked by other factors, has been declining steadily. Therefore, if reductions in public insurance or dis-incentives for employment based insurance are instituted before good parallel or replacement systems are in effect, additional millions of Americans will become uninsured.

⁶ C. Olson, "Health Benefits Coverage Among Male Workers," *Monthly Labor Review* (March, 1995).

1.2 CHARACTERISTICS OF THE UNINSURED

An analysis of the decline in EBI yields a revealing picture about which segments of the population are likely to be uninsured. Those who gained coverage through Medicaid and other public programs are generally not the same people as those who lost EBI (with the exception of children). The decline in EBI has been widespread, and although it has occurred across all income levels, firm sizes, and nearly all industries, some groups have been impacted much more than others.

Many of those squeezed out of the insurance market represent a familiar and increasingly powerful political constituency. It is not the lowest income individuals in our society who are uninsured -- their access to health has improved as Medicaid eligibility has increased. Rather it is the working poor and non-college educated, some of whose jobs have been outsourced or exported due to increased international trade and global competition. Many are white, male, former blue collar manufacturing workers who have been forced to accept lower paying service jobs with no health benefits. The following is a brief statistical summary of the characteristics of the uninsured:

% OF PRIVATE WAGE AND SALARY WORKERS COVERED BY EMPLOYMENT BASED INSURANCE⁷

Wage Level	% Insured
Less than \$5.00 per hour	14%
\$5.00 - \$7.49 per hour	38%
\$7.50 - \$9.99 per hour	62%
\$10.00 - \$14.99 per hour	72%
\$15.00 or more per hour	83%

⁷ U.S. Department of Labor et al., *Supra*, note 2 --except the charts in this section with separate references

Firm Size	% Insured
1 - 9 employees	24%
10 - 24 employees	42%
25 - 99 employees	56%
100 - 499 employees	68%
500 - 999 employees	74%
1,000 employees and over	75%

Usual Hours Worked Per Week	% Insured
1 - 20 hours	10%
21 - 34 hours	23%
35 hours and over	70%

Union Status	% insured
Covered by union contract	84%
Not covered by union contract	56%

Industry	% Insured
Agriculture, forestry, and fisheries	31%
Mining	85%
Construction	44%
Durable Manufacturing	85%
Non-durable manufacturing	74%
Transportation	68%
Communications and public utilities	91%
Wholesale trade	72%
Retail trade	39%
Finance, insurance and real estate	68%
Services	49%

Education ⁸	% Insured
College graduate	76%
High school graduate	60%
High school drop-out	36%

Age	% Insured
16 - 24	30%
25 - 34	63%
35 - 49	66%
50 - 64	64%

⁸ R. Reich, "America's Anxious Class," *New Perspectives Quarterly* (Winter, 1995)

Marital Status	% Insured
Married, not separated	61%
Single or separated	53%

Gender	% Insured
Male	63%
Female	51%

Married men, aged 25-55, working full-time as wage and salary workers in the private sector⁹

	1979	1992
Per Cent Covered by Own Employer	89%	76.6% ¹
Per Cent Covered by Spouse	3.5%	10%
Per Cent Insured	92.7%	88%

¹ Approximately 1.5% of this decrease may be attributable to the CPS survey change in 1988

The major conclusions we can draw from this data are as follows:

- ! Insurance coverage varied very strongly with the level of wages. Only 14% of wage and salary workers earning less than \$5.00 per hour had EBI (although some likely qualified for Medicaid). Price effects appeared greatest at the \$5.00 - \$10.00 range.
- ! The likelihood of having EBI for employees in small firms was much less than that in large firms. In firms with over 1,000 employees, 75% had EBI, but in firms with less than 25 employees, only 31% had EBI.
- ! The chances of having EBI was much smaller for part-time workers. 70% of employees who worked over 35 hours per week had EBI versus 23% for those who worked 21-34 hours.

⁹ C. Olson, Supra, note 6

- ! Union membership significantly increased a worker's chance of having EBI. 84% of union workers had EBI versus 56% of non-union workers.
- ! Coverage rates for EBI varied considerably across industries. As expected, mining and manufacturing had coverage rates of 85% while service and retail industries had rates of 49% and 39% respectively.
- ! Education significantly affected the chances that a worker had EBI. College graduates had over twice the coverage rate of high school drop-outs.
- ! Young people were much less likely to have EBI. Coverage rates for those aged 16-24 were less than half of any older age group below 65.
- ! Gender differences were not obvious because of spousal insurance. However, the last table illustrates the declining number of married men that had their own coverage, and the increasing number of men who were covered by spouses.

Although many health services researchers have examined the characteristics of individuals who are uninsured, few studies have taken a more global perspective of all the factors that might be associated with the decline in EBI. What has been the impact of de-industrialization and shifts in the labor market from manufacturing to services? What is the relative importance of increasing technology and changes in occupational demand and the nature of work? What has been the relative importance of the increased cost of health benefits during a period of declining real wages? What is the relative importance of such factors as increased global competition, outsourcing, and the rise of temporary employment?

In an effort to address these issues in an orderly fashion, we have classified the potential factors into two main categories similar to Kronick in 1971¹⁰ and Acs in 1994.¹¹

1. The impact of declining real wages and rising real costs of health insurance on employment based insurance
2. The impact of structural changes in the Labor Market on employment based insurance (factors such as industry shifts, occupational shifts, international competition, part-time and temporary work, decreased union penetration, etc.)

In Sections 2 and 3, employing this construction, we will examine these factors from the

¹⁰ R. Kronick, "Health Insurance, 1979-1989: The Frayed Connection Between Employment and Insurance," *Inquiry* (Winter, 1991): 318-333

¹¹ G. Acs, "Explaining Trends in Health Insurance Coverage Between 1988 and 1991," *Inquiry* (Spring, 1995 in press)

perspectives of both labor market economists and health services researchers. We will attempt to identify the causes, summarize the findings in the recent literature, and indicate questions that are still unresolved.

In Section 4, we will summarize recent studies in regard to the relative importance of changes in real wages, health insurance costs, and structural changes in the labor market. In the final section, we will discuss the implications of these findings for the future of employment based health insurance. We will then briefly identify policy alternatives that could be considered in light of the findings.

2.0 THE IMPACT OF DECLINING REAL WAGES AND RISING REAL COSTS OF HEALTH INSURANCE ON EMPLOYMENT BASED INSURANCE

2.1 OVERVIEW: RISING REAL HEALTH INSURANCE COSTS AND DECLINING REAL WAGES

In this section we will consider the impact of increasing health insurance premiums and decreasing wages on EBI. We will delay consideration of shifts in industry employment, shifts in occupational demand, changes in the part time and temporary workforce, and other structural changes in the labor market until Section III. It is useful to approach this as a problem of supply and demand similar to Long and Marquis (1993).¹² We will call the provision of health insurance by employers the "supply" and the participation of employees in employment provided programs as the "demand."

2.1.1 The Rising Cost of Health Insurance Premiums

The cost of health insurance increased sharply over the past 15 years. Spending by employers per insured worker for health and dental insurance increased from under \$860 in 1980 to \$3,044 in 1993, an increase of 254%.¹³ During the same period wages were fairly stagnant, and real wages actually declined. Hence, the cost of health insurance relative to wages increased substantially.

The volatility in the cost of health benefits was also an important consideration. KPMG Peat Marwick surveys show high rates of premium increases in the years 1988-1991, reaching a maximum of 15 - 20%, depending on the type of plan, in 1989.¹⁴ The rates of increase moderated somewhat in 1991-1993, declining to around 7-8% for HMO and PPO products. Businesses seek to avoid or limit uncertainty, and skyrocketing premium increases in recent years have encouraged employers to protect themselves against unpredictable costs. The recent appearance in the market of a two year fixed premium is indicative of the concern with price volatility.

Not only did the cost of health premiums rise, but the cost of other employee benefits, such as pensions, severance pay, life insurance and retiree health benefits, increased as well. Average

¹² S. Long, S. Marquis, "Gaps in Employer Coverage: Lack of Supply or Demand?" *Health Affairs* (Supplement, 1993)

¹³ Chamber of Commerce, "1994 Employee Benefits Report"

¹⁴ KPMG Peat Marwick, "Survey of Employment Sponsored Health Benefits" (1991, 1992, 1993), HIAA, "Health Benefits Survey" (1988, 1989, 1990), from presentation by Ann K. Gauthier, Washington, D.C. (3/22/95)

employee benefits as a proportion of payroll increased from 36.6% in 1979 to 41.3% in 1993.¹⁵ This rising cost has made employers more cost conscious about all benefits and has resulted in more firms re-defining their contributions in a fixed amount, thus shifting the burden of increased premiums on to employees.

Employers also demanded a greater level of cost sharing for EBI from workers. Particularly in small firms, employers have dramatically increased the amount of cost sharing paid by employees. For example, firms of 25-49 workers went from an average 80% contribution for family coverage in 1988 to an average of 50% in 1993. This may account for some of the large drop in dependent coverage and in the decreasing number of children that were covered through private EBI.

2.1.2 The Decline in the Level of Real Wages

The other side of the coin to increased costs of health premiums is decreased levels of wages. Levy and Murname¹⁶ identified 1973 and 1979 as two benchmark years dividing earning trends. Between World War II and 1973 there was a rapid growth in real wages. Earnings of full-time male workers (an above average earnings statistic but a stable subset of the workforce) nearly doubled in that period from \$16,700 to \$31,862. Between 1973 and 1988, however, earnings for the same group increased just \$900 or .6% per decade. Adjusted for increased employee benefits, the increase was still only 1.9% per decade. 1979 also marked the beginning of a sharp growth in earnings inequality in which the percentage of men earning less than \$20,000 and greater than \$40,000 both increased. The middle of the income range "hollowed out" between 1969 and 1983, with the percentage of full-time male workers earning middle class incomes declining from 56% to 47%. Of this decline, 2/3 moved to lower income levels and 1/3 to upper levels.

Levy and Murname found that a "significant number of workers - particularly younger, less educated men - now earn less in real terms than their counterparts during the mid-1960s." They found that women fared considerably better, experiencing slow hourly wage growth but a significant increase in hours worked.

¹⁵ Chamber of Commerce, *Supra* note 13

¹⁶ F. Levy and R. Murname, "U.S. Earnings Levels and Earnings Inequality: A Review of Recent Trends and Proposed Explanations," *Journal of Economic Literature* (September 1992): 1333-1381

Bound and Johnson¹⁷ computed the wage level changes for civilian workers between ages 18-64 as follows:

Estimated Values of Real Hourly Average Wage Rates (1988 dollars)

	1973-1979	1979-1988
Unadjusted Real Wage Annual Growth Rate	-.010	-.008
Adjustment for Employee Benefits	.006	.001
Adjusted Real Wage Annual Growth Rate	-.004	-.007

This indicates a decrease in real wages of 15% over the 17 year period or 9.8% adjusted for increased fringe benefits. Bound and Johnson identified three major shifts in the structure of wages:

- ! Increase in the relative wages of more educated workers
- ! For non-college graduates, increase in the relative wage of older workers, particularly men.
- ! Increase in wages of women relative to men

These general trends have clear implications for employment based health insurance. Declining wages make it ever more difficult for employers to provide health benefits, particularly when the cost of those benefits are increasing. Declining wages also mean that workers will have less disposable income to pay their portion of employer provided programs, particularly as increases have occurred in both employee cost sharing and in the price of health premiums.

It is important to note that the same population groups identified in Section 1.2 that experienced the largest decline in employment based health insurance are demographically similar to the groups having the steepest decline in earnings. Those with less education, younger, less skilled, blue collar, lower income and male characterized both population groups. Reich¹⁸ gives a clear example in terms of employer provided health insurance and education:

¹⁷ J. Bound, G. Johnson, "Changes in the Structure of Wages in the 1980's: An Evaluation of Alternative Explanations, *The American Economic Review* (June, 1992): 371-392

¹⁸ R. Reich, *Supra*, note 8

Employment Based Insurance Coverage By Education

	1979	1993
College Graduate workers with EBI	79%	76%
High School Graduates workers with EBI	68%	60%
High School Drop-out workers with EBI	52%	36%

Note the relatively small decline for college graduates as compared to the erosion of benefits for workers with less education.

2.2 THE SUPPLY AND DEMAND FOR HEALTH INSURANCE

Since we need to consider both the supply and demand of EBI, we want to examine how much of the decline in EBI is due to declining employer sponsorship and how much to declining worker participation? We also would like to understand what determines the propensity of employers to sponsor insurance as well as what the employer's demand curve looks like. Is it uniform, or does it vary according to firm size, or other characteristics?

Similarly, we want to know what factors determine the propensity of employees to participate in employer sponsored plans? Does the employee's demand curve have uniform price elasticity or does it vary with income, age, family status or other characteristics? Is there a threshold level of income that employees need before they respond to price changes in EBI? How is employee demand affected by substitutes such as spousal insurance, Medicaid, and free emergency care?

2.2.1 The Propensity of Employers to Supply Health Insurance

The descriptive statistics that we examined in Section 1.2 show that there was a substantial decline in EBI among lower income workers. This leads us to ask, what were the underlying reasons that the cost of health insurance relative to wages caused employers to provide fewer health benefits? The theory of compensating wage differentials posits that employers set total compensation for labor and are relatively indifferent about how compensation is divided into salary and fringes, leaving that preference primarily to employees. An increase in the cost of EBI would presumably be offset by a decrease in other wage components.

But this is not possible for lower wage workers since a reduction in pay to compensate for the cost of health insurance could drive wages close to or below the minimum wage. Also, at low wage levels, with the division of compensation that attracted employees in the past, the cash left over after health benefits may not be enough to attract the required workforce. In both cases, employers would substitute cash payments for insurance benefits in order to attract workers.

Cutler¹⁹ acknowledges the theory that health insurance costs will be offset by lower wages but contends that work hours and employment levels will be affected as well. He theorizes that wage costs are a variable expense, but that health insurance is a set price per employee and is a fixed cost. Hence, he argues that increased health insurance will raise marginal cost relative to fixed cost. This will cause employers to hire less workers and demand longer hours from their current employees. Cutler presents statistical evidence to support this theory, showing that rising health insurance costs increased work hours by up to 2% in the 1980s.

Several other factors can be posited to explain the propensity of employers to provide fewer health insurance benefits in reaction to higher prices relative to wages. First, the volatility of health insurance prices increases the risk that employers will have to pay more than the expected amount of compensation. Second, once an employer initiates a program of providing health benefits, it is difficult to retract those benefits, even if it is economically costly. These two reasons taken together increase the risk of employers getting locked into providing higher than desired total compensation. Since employers are assumed to be risk averse in regard to expenses, increased volatility of health costs should lead to decreased supply of EBI. This is an area that could be empirically tested by researchers.

Another factor impacting employer demand is the potential availability of Medicaid coverage if large amounts of health services are needed. If low-income workers can qualify for free care from hospitals or clinics (either because of income or "spending-down"), they will want to substitute cash wages for private health benefits they can potentially obtain for free. A similar effect could occur if a decline in real wages makes more workers eligible for Medicaid. This latter effect is called "crowding out," and although it is believed to be relatively small, it is worth considering. In these cases, employees will value a dollar of benefits less than a dollar of wages and employers will substitute cash for benefits to attract employees at the most beneficial total cost. The magnitude of these effects could be empirically tested. The actual shape of the employer's demand curve may be a fruitful area for future research.

2.2.2 The Propensity of Employees to Demand Health Insurance

We know from descriptive statistics that declining levels of real wages are associated with low employee participation rates in EBI. This leads us to examine the nature of income and price effects on workers' demand for insurance. It is clear that if we were discussing a "normal" good or service, we would expect a decrease in demand in response to an increase in price. However, insurance is not necessarily a "normal" good. In the case of insurance, risk averse individuals maximize their utility by purchasing insurance to avoid potentially catastrophic costs. Under the theory of insurance, it might be expected that as medical cost increase, the potential for loss will be greater and, hence, individuals will demand more insurance.

¹⁹ D. Cutler, B. Madrian, "Labor Market Responses to Rising Health Insurance Costs," Unpublished (February, 1995)

There are a number of reasons, however, that lead us to believe that this may not be the case for all individuals. People earning very low incomes simply may not have the disposable income to pay for health benefits. Having to choose between paying for immediate necessities, such as food and shelter, and the future risk of paying for uncertain medical expenses, low income families often choose the former.

Kathleen Thomas²⁰ found that demand for health insurance actually decreased with income for low-income families, but increased with income once a "threshold" of 125% of poverty was reached. She posited that risk aversion gives people an incentive to purchase health insurance, but not until they have enough income to meet their basic needs. Once income exceeds this "threshold," the probability that an individual will purchase insurance rises quite steeply. The implication of Thomas' study is that voluntary programs with incentives for people to purchase insurance may be effective for people above a "threshold" level of income, but likely will not provide sufficient incentive for the working poor.

Kronick²¹ explains that low income, uninsured families who otherwise would lack access to medical care, can obtain free care through public insurance such as Medicaid or by "charity" care in hospitals and clinics. This is not the case for higher income families. If they lack insurance, it is unlikely they would seek or qualify for free care, and therefore they would face the threat of catastrophic financial losses as a result of large medical bills. Hence, higher income people insure against financial ruin whereas the poor, with few financial assets to lose, insure mostly against the health risk of less timely care. In the case of low income individuals, this "substitution effect" causes an increasing number of employees to reduce their demand for insurance as real wages and family income decline.

Employee demand for health insurance varies with the out-of-pocket price. Many researchers have estimated consumer's price elasticity of demand for health insurance. Marquis and Buchanan²² examined how additional tax incentives would affect the demand for health insurance among working families who did not have access to EBI. They estimated that these working families have an elasticity of demand of -0.6 (i.e., a 10% decrease in the price of insurance would increase demand by 6%). They cite numerous studies that have shown similar results.²³

²⁰ K. Thomas, "Are Subsidies Enough to Encourage the Uninsured to Purchase Health Insurance," *Inquiry* (Winter 1994/1995)

²¹ R Kronick, *Supra* note 10

²² M.S. Marquis, J.L. Buchanan, "Subsidies and National Health Reform: The Effect on Workers Demand for Health Insurance Coverage,"

²³ They state that their findings are consistent with Holmer, 1984; Taylor and Wilensky, 1983; Farley and Wilensky, 1984; Broyles and Rosko, 1988

Hence, it appears that the slope of the demand curve for employees is close to zero up to approximately 125% of poverty, and is positive beyond that amount. The slope can also be expected to decrease as income ranges are reached in which a high proportion of employees are insured.

Since cost sharing determines the out-of-pocket price for employees to purchase EBI, it is also an important factor in considering the propensity of workers to demand health insurance. We saw in Figure 2.2 that employers have demanded increased cost sharing from workers. This would clearly have the affect of reducing worker's demand for EBI. Hewlitt Associates²⁴ found that "where employers subsidize less than 70% of the total cost of health coverage 22% of employees waive coverage. However, where the employer subsidy ranges between 90% and 100%, only 3% of employees opt out of coverage." This could help explain the recent downtrend in dependent coverage and the decreasing proportion of children covered by private EBI. A potential research question would be to predict the difference in employee demand and dependent coverage if cost-sharing had been constant over the period of declining EBI coverage.

Long and Marquis²⁵ have also offered an interesting perspective on this topic. They point out that over three-quarters of non-elderly workers are offered EBI and only about 2% of those that are eligible turn it down and remain uninsured. Hence, most of the uninsured work for firms that do not offer insurance. Because of these statistics, one tends to conclude that the decline of EBI does not reflect a lack of demand from workers, but a lack of supply from employers.

However, Long and Marquis then make the partially contradictory hypothesis, and present descriptive data that show that many of the employees who are not offered EBI from employers fit the profile of people who would not "take-up" health benefits even if they were offered. For example, they point out that 56% of employees in firms that do not supply EBI earn less than \$5 per hour or work fewer than 35 hours per week. When workers with these same characteristics are offered EBI only 59% participate, whereas 91% of workers earning over \$5.00 per hour participate in EBI when offered. This finding suggests that policies formulated to increase EBI should not only target employer's supply, but should target worker's demand as well.

2.3 THE RELATIVE IMPORTANCE OF EMPLOYER SUPPLY AND EMPLOYEE DEMAND FOR HEALTH INSURANCE

Has the decline in EBI primarily been due to decreased provision of health insurance by employers (supply) or by decreased participation in employer sponsored plans by employees (demand)? The following figures, compiled from the May, 1988 and April, 1993 CPS on private wage and salary workers indicate that the "take-up" rate or the demand for EBI has declined slightly more than the

²⁴ Hewlitt Associates, "The New Frontier of Benefit Flexibility," *On Employee Benefits* (January 1995)

²⁵ S. Long, S. Marquis, note 12

supply by employers. However, because of spousal coverage and the wording of the survey questions, the declines are likely to be more nearly equal than indicated.

Private Wage and Salary Workers²⁶

	1988	1993
% of Workers whose employers supplied a plan	76%	74%
% of workers covered by an employer supplied plan	62%	58%
% of workers whose employer supplied a plan that participated in the plan (worker demand or "take-up")	81.6%	78.4%

We can gain further insights into the reason behind these declines by examining an EBRI analyses of the CPS.²⁷ Their study found the following:

Overall Supply and Demand:

Civilian Workers Aged 18-64

	1988	1993
Total number of civilian workers aged 18-64	106 million 100%	112.5 million 100%
% of workers whose employers supplied a plan	72.6% *	73.1%
% of workers covered by an employer supplied plan	65.0%	58.3%
% of workers whose employer supplied a plan that participated in the plan (worker demand)	82.0%	79.6%

There are 13.5 million individuals in this survey whose sponsorship we do not know about. 9 million of those were unincorporated, self-employed workers who were not asked in 1988

²⁶ U.S. Department of Labor et al., supra, note 2

²⁷ Employee Benefit Research Institute, supra, note 4

Analysis of Workers with Sponsored Plans Who Did Not Participate:

	1988	1993
Total number of workers whose employers supplied a plan but did not participate	14.0 million 100%	16.5 million 100%
Voluntary non-participation	57.1%	51.5%
Ineligible to participate	37.1%	35.8%
Indeterminate or other reason	6.4%	12.7%

Analysis of Voluntary Non-Participants:

	1988	1993
Total number of workers whose employers supplied a plan but who voluntarily chose not to participate	8 million 100%	8.5 million 100%
Worker had other coverage	83.7%	74.6%
Worker declined coverage because it was too expensive or because it was not wanted or needed	16.3%	30.7%
Other		3.0%*

* Numbers may add to more than 100% because respondents gave more than one reason

Analysis of Ineligible Non-Participants:

	1988	1993
Total number of workers whose employer supplied a plan but were ineligible to participate	5.2 million 100%	5.9 million 100%
Worker was part-time, temporary, or contract		66.6%
Worker was still in a probationary period		26.4%
Worker was turned down due to pre-existing condition or age		1.9%
Indeterminate or other reason		6.6%

Analysis of Employees Whose Employer Did Not Offer EBI - 1993*

	%
Total number of workers whose employer did not offer EBI	37.4 million 100%
Insured by spouse	54.5%
Other group insurance	11.0%
Other individual insurance	15.8%
Other government plan	5.3%
Insured by former employer	2.9%
Insured by Medicaid	2.4%
Other Plan	7.8%
Don't know	1.6%
NO INSURANCE	44.7%

numbers add to more than 100% because some respondents give more than one reason

The major conclusions we can draw from this data are as follows:

- ! Approximately 3/4 of workers worked for employers who supplied EBI, and that proportion declined very slightly from 1988 to 1993.
- ! Almost 80% of workers who were offered EBI participated, and that "take-up" rate declined approximately 3-4% from 1988 to 1993 depending on exactly which population was measured.
- ! Of those workers who were not offered EBI in 1993, approximately 45% lacked any health insurance coverage. Approximately half were insured through their spouse, and others had various other kinds of coverage (available statistics add to 146% because some respondents gave multiple sources).
- ! Of those workers who were offered EBI and did not participate in 1993, slightly over 1/2 voluntarily declined coverage and slightly over 1/3 were ineligible.
- ! Of those workers who were offered EBI and voluntarily declined in 1993, about 3/4 got health insurance from another source, and the rest declined primarily because it was too

expensive or they felt they did not want or need health insurance.

- ! Of those workers who were offered EBI and were ineligible in 1993, about 2/3 were part-time, temporary, or contract personnel, slightly more than 1/4 were in a probationary period, and another 2% were turned down due to pre-existing conditions or age.
- ! Of those workers who were offered and were eligible to receive EBI, less than 3% declined coverage and remain uninsured. This figure did not change substantially between 1988 and 1993.
- ! Approximately 95% of full-time workers who do not have EBI work for employers who do not offer it. Hence, policies designed to increase employment based coverage should target those employers, many of which are in the service-producing sector. Additionally, since the profile of workers whose employers do not offer insurance, resembles those that might not accept if offered, policies aimed at subsidizing or giving tax credits to those individuals should not be ignored.
- ! The above conclusions pertain to the 16.7 million workers who had no health insurance. It is important to understand that this represents less than 41% of the 41.2 million Americans who are uninsured. Many of the balance represent children or other dependents of workers. Additional research in this area is needed to understand the recent trends in declining dependent coverage.

3.0 THE IMPACT OF STRUCTURAL CHANGES IN THE LABOR MARKET ON EMPLOYMENT BASED INSURANCE

3.1 OVERVIEW

The American labor market has undergone enormous change. Employment has shifted from the goods-producing to the service-producing industries. In 1992, manufacturing constituted less than 1/2 the proportion of the labor force that it did in 1950, and blue collar jobs were in a steady decline. Occupational demand for professionals, managers, and technically skilled employment increased, while demand for operators, farmers and craftsmen declined.

Most of the press and popular literature have concentrated on the employment shift *between* industries. Labor economists, however, have presented clear evidence that the primary reasons for the decline in real wages and for increasing wage inequality occurred *within* industries. That is to say, the shift of labor *between* industries, while significant over the long term, explained only about 10-15% of the decline in wages, so the remainder was due to other factors.

Little research has been done to explain *within* industry wage movements. Researchers who have offered analyses have theorized that "non-neutral technological change," that is, technologic change which is biased in its effect on the required skills of workers, was an important factor. They contend that changes in technology, many brought on by computers, altered not only the nature of the work place, but the required skills of the worker as well. As a consequence, the demand for skilled labor *within* industries increased and demand for semi-skilled workers declined. These structural changes forced many less educated and younger workers to accept lower wages within their industries or to move *between* industries and compete for lower paying service jobs for which the supply of labor was plentiful.

The implications for employment based health insurance are twofold. First, structural labor market change *within* industries indirectly affects EBI because of its downward affect on real wages. Second, structural labor market shifts *between* industries accounts for a smaller but significant (perhaps 10-15%) part of the decline in EBI as demand for employment shifts from the goods-producing to the service-producing sector.

There are numerous structural factors in addition to employment and occupational shifts that have implications for EBI. The decline of union membership, the increase in part-time and temporary employment, the rise of global competition and international trade, and numerous other factors bear on this issue. In this section, we will identify those issues, discuss recent historical trends, analyze government projections, and assess problem areas with which public policy makers will have to contend.

3.2 STRUCTURAL FACTORS IN THE LABOR FORCE

3.2.1 Employment Shifts Between Industries

America has undergone several decades of de-industrialization. As global competition has increased and consumption of imported goods has risen, the demand for employment has shifted from the goods producing to the service producing sector. The following exhibit shows the percentage changes in non-farm wage and salary employment for selected years since 1950.

Nonfarm wage & salary employment, selected years, 1960-92

Nonfarm employment	1960	1970	1980	1990	1992
Total (in thousands)	54,189	70,880	90,406	109,419	108,519
Percent distribution	100.0	100.0	100.0	100.0	100.0
Mining	1.3	.9	1.1	.6	.6
Construction	5.4	5.1	4.9	4.7	4.1
Manufacturing	31.0	27.3	22.4	17.4	16.6
Transportation, communications, and public utilities	7.4	6.4	5.6	5.3	5.3
Wholesale trade	5.8	5.7	5.9	5.6	5.6
Retail trade	15.2	15.6	16.6	17.9	17.8
Finance, insurance, and real estate	4.8	5.1	5.7	6.1	6.1
Services	13.6	16.2	19.7	25.5	26.8
Government	15.4	17.7	18.0	16.7	17.2

Source: Bureau of Labor Statistics Current Employment Statistics program.

The most important trends are the decline in manufacturing and the increase in service and retail industries. Note that government employment has substantially increased from 1950 but has been fairly stable for over two decades. The figure below shows health insurance coverage rates by industry in 1986 and 1992.

Civilian Workers Aged 18-64

Industry	% Insured 1986 ¹	% Insured 1993 ²
Agriculture, forestry, fisheries	39.4	21.4
Mining	87.2	83.1
Construction	62.5	35.9
Manufacturing	89.4	79.7
Transportation, communications, and utilities	85.1	74.6
Wholesale trade	83.6	69.7
Retail trade	64.6	38.2
Finance, insurance, real estate	86.1	64.0
Business, personal, and entertainment services	61.1	33.7
Professional and related services	79.6	54.4
Source: ¹ EBRI Databook on Employee Benefits ² EBRI Special Report & Issue Brief, Aug. 1994		

The fact that manufacturing is among the industries with the highest coverage, and service and retail are among the lowest, illustrates the potential impact of industry change on EBI. Whereas 93% of private, wage and salary durable manufacturing workers were offered EBI in 1992, only 68% of service workers had employers who sponsored insurance.²⁸ The impact of these shifts are likely to continue, as the Department of Labor predicts that the service sector will produce 24 million of the 25.1 million expected increase in non-farm wage and salary jobs between 1992 and 2005.²⁹

Perhaps the two most important questions in this area are; What has been the magnitude of the impact of between industry shifts on EBI over the recent past, and what is likely to be the trend in the future?

Kronick³⁰ employed a shift-share analysis to examine the impact of between industry shifts from

²⁸ U.S. Department of Labor et al., Supra note 2

²⁹ U.S. Department of Labor, "The American Work Force 1992-2005" (April, 1994)

³⁰ R. Kronick, Supra note 10

1979-1989 on low income employees. He concluded that between-industry shifts explained 1.4% of the 10+% decline for that population over the period, a relatively small but significant effect. He suggested that the methodology was crude and that additional analysis might show a larger effect.

Using BLS labor force projections for the years 1992-2005, we performed a similar shift-share analysis for non-farm wage and salary workers. Holding the percent of workers having insurance constant at 1992 levels, we simply multiplied the per cent coverage by the projected change in the labor force for each industry. According to this relatively crude methodology, employment shifts between industries for all non-farm wage and salary workers would decrease the coverage rate of EBI from 61.2% in 1992 to 59.6% in 2005. Almost all of the decline would be in the private sector, which would decrease from 57.9% to 56.1%. Over the 12 year period, this would result in over 2 million additional uninsured Americans than would exist if employment grew at the same rate but without between industry shifts.

We can posit several limitations of this model. First, there may be interdependence between industry shifts and the EBI coverage rates. The growing supply of less educated, less skilled, younger workers competing for lower wage service sector jobs is likely to negatively impact both the provision of insurance by employers and the income to "take-up" coverage on the part of the workers. Similarly, goods-producing manufacturers, with an excess number of lower skilled workers, may be less inclined to supply benefits. Lastly, the industry shifts may further erode the power of unions, which tend to secure health benefits for their members. Acs,³¹ commenting on Kronick's study, suggested that a shift-share analysis might not disentangle interdependent trends, and that a finding that falling incomes are the dominant factor explaining the decline in EBI may partially overlook that falling incomes may be the result of industrial shifts.

Both shift-share analyses indicate that between industry shifts play a small but significant part in the decline of EBI. Over a period of years, a considerable increase in the number of uninsured Americans would result from these trends.

3.2.2 Employment Shifts Within Industries

In addition to large shifts in employment between industry sectors, the country has also experienced large shifts within industries. The nature of work in American workplaces has changed, and the demand for employment reflects the needs within the same industries for different levels of skill to perform different kinds of work. Levy and Murname³² provide an excellent example of changes within the manufacturing industry between 1979 and 1987 in the exhibit below. Note that the wage differential between young, high-school and college male

³¹ G. Acs, Supra note 11

³² F. Levy, R, Murname, Supra note 16

graduates increased by over 21%. In such a case, one could posit that all else being equal, manufacturing employers would substitute high-school for college graduates. However, they actually increased the number of college graduates by 34% compared to an increase of less than 6% for High-school graduates. Clearly, the relative demand for higher skilled workers within manufacturing has been an important factor in the changing demand for labor.

Median Annual Earnings and Number of Full-Time Equivalent,
25-34 Years Old, Male, High School and College Graduates, 1988 Dollars

Manufacturing Industry	High-School Graduates			College Graduates		
	1979	1987	% change	1979	1987	% change
Median Annual Earnings (Full-Time Workers)	\$25,525	\$22,732	-10.9%	\$30,864	\$34,098	+10.5%
Number Employed (Millions, FTE)	1.711	1.810	+5.7	.519	.695	+33.9

Levy and Murname concluded the following:

"The plight of young, less educated males cannot be viewed primarily as a consequence of de-industrialization. Declines in the relative demand for less educated workers occurred within industries - most dramatically within manufacturing where semi-skilled jobs declined at a much faster rate than overall manufacturing employment. These declines played a key role in explaining both the loss in real earnings for young, high school graduates and high school dropouts, and the increase in the gap between the earnings of high school graduates and college graduates."

Little research has been done on the reasons behind "within-industry" wage change and its relative importance in the changing labor market. We see this as an important area for future research. Those that have done initial research in this area have theorized that "non-neutral technological change" may be an important factor. This refers to changes in technology that are not neutral with respect to different characteristics of the labor force. Chief among these has been the pervasive use of the computer.

Bound and Johnson referred to a study by Krueger in 1991³³ regarding the effect of computer usage. Krueger estimated that the proportion of workers using computers on the job rose from 25% to 37% from 1984 to 1989. He concluded that between 1/3 and 2/3 of the 1984-1989 increase in the estimated effect of education on wages was directly attributable to computers.

³³ A. Krueger, "How Computers Have Changed the Wage Structure: Evidence From Microdata, 1984-1989," Princeton University (1991) from J. Bound, G. Johnson, Supra note 17

Bound and Johnson also referred to a study by Berndt and Morrison³⁴ on the effect of "high-tech capital" (e.g. computers, communication, and photocopy equipment) on the structure of labor demand within manufacturing. From 1976 to 1986, the ratio of high-tech capital equipment to total capital equipment dramatically increased from .095 to .257. They argued that these shifts are associated with shifts in labor demand from production to non-production workers, and in increases in the average educational level of production workers.

Bound and Johnson concluded the following:

"The principal reason for the increases in wage differentials by educational attainment and the decrease in the gender differential is a combination of skilled-labor-biased technical change and changes in unmeasured labor quality...Given a continuation in the increase in the relative demand within industries for highly educated labor, wage differentials are likely to continue to increase unless there is a sharp rise in college attendance and completion rates."

Levy and Murname concluded similarly:

"The single most important change within the male earnings distribution is the declining position of young, less educated men. The proportion of 25-34 year old men with 12 years of education who had earnings above \$20,000 declined from .57 in 1979 to .46 in 1987. For young males that did not go to college, the economy of the 1980s provided a diminished opportunity to earn a middle class income."

How does the shift in employment demand within industries impact the provision of EBI? This has been an unanswered question and one that is fertile ground for future research. However, a new study by Long and Rodgers³⁵ specifically addresses the relative impact of between industry shifts and within industry shifts on the decline in EBI.

Long and Rodgers performed shift share analyses, first holding health insurance coverage rates constant to measure the impact of between industry shifts and then holding employment shifts constant to measure within industry changes in insurance coverage. Examining data from 1980-1987, they concluded that the between industry shifts accounted for less than 15% of the decline in EBI, and that the major share of the decline was due to the reduction of EBI within industries. Long and Rodgers caution that the importance of between industry shifts should not be minimized because they could cause a major change in health insurance coverage over the long term.

³⁴ E. Berndt, C. Morrison, "High-Tech Capital, Economic Performance and Labor Composition in U.S. Manufacturing Industries: An Exploratory Analysis," Massachusetts Institute of Technology (1991) from J. Bound, G. Johnson, *ibid*.

³⁵ S. Long, J. Rodgers, "Do Shifts Toward Service Industries, Part-time Work, and Self-Employment Explain the Rising Uninsured Rate?," *Inquiry* (Spring, 1995 in press)

What conclusions can we draw from the analyses of both the labor economists and the health economists? At this point we can only draw inferences and hopefully point out avenues for future research. We posit the following:

- ! Health economists have presented evidence that the most important factor behind the decline in EBI is the effect of declining real incomes and the rising price of health insurance. Most researchers appear to agree that the direct effect of between industry shifts explains 10-15% of the decline in EBI, and that the balance has been "across the board" decreases that have occurred within industries.
- ! Health economists have presented evidence that the decline in EBI has been widespread, but it has been particularly severe among less educated, younger males.
- ! Labor economists have presented evidence that the decline in real wages and the widening wage gap due to differences in education, age, and gender are caused mostly by changes within industries and much less by shifts between industries.
- ! Labor economists have theorized that a major factor explaining these within industry shifts may be non-neutral technological change - changes that increase the demand for more highly skilled and educated workers.
- ! Given the above findings, we posit that structural changes in the labor force have both direct and indirect effects on EBI and that the decline in EBI can potentially be measured by three categories of structural factors as follows:
 - 1) The direct effect of rising health insurance costs and lower wages which decrease both the employers supply and workers demand for EBI.
 - 2) The direct effect of structural changes in the labor market which has shifted employment demand from goods-producing industries that generally supply EBI to service-producing industries that do not.
 - 3) The indirect effect of structural changes in the labor market that contribute to lower real wages, which in turn have a negative impact on the supply and demand for EBI.

We theorize that the indirect effects of structural labor market change may be largely the result of technological changes that have decreased the demand for less-educated, less-skilled workers. If this is true, it suggests that in the long term, policy makers should consider strategies to both increase the affordability of health insurance for workers and to devote resources to education and training of the work force.

3.2.3 Employment Shifts Among Occupations

In addition to structural shifts that occurred between and within industries, it is instructive to look at the shift in occupational demand for labor. The exhibit below presents shifts in the occupational structure of employment for selected years, 1972-1992.³⁶ Note that increases occurred among managers, professionals, and technicians, whereas farmers, operators, and craftspeople exhibited declines.

**Occupational structure of employment, selected years,
1972-92**

Occupation	1972	1980	1985	1990	1992
Total (percent)	100.0	100.0	100.0	100.0	100.0
Managers	8.9	10.3	11.4	12.6	12.6
Professionals	10.8	11.9	12.7	13.4	13.9
Technicians	2.3	2.9	3.0	3.3	3.6
Sales	10.4	10.9	11.8	12.0	11.8
Clerical	16.0	16.8	16.2	15.8	15.8
Service	13.2	13.2	13.5	13.4	13.7
Craft	12.6	12.4	12.4	11.6	11.2
Operators	21.2	18.2	15.7	15.1	14.4
Farm	4.7	3.7	3.3	2.9	2.9
Source: Current Population Survey, a monthly household survey conducted for the Bureau of Labor Statistics by the Bureau of the Census.					

These occupational shifts reinforce the findings that demand for more highly educated, better trained workers is increasing whereas demand for semi-skilled labor is declining. Changes in the demand for occupational skills directly effects the level of health insurance as workers move between industries, and may indirectly effect EBI as more workers compete for lower skilled jobs. Some researchers have theorized that there is a mismatch between occupational skills demanded and those that exist in the present labor market. Such a mismatch would tend to result in higher

³⁶ U.S. Department of Labor, *Supra* note 29

wages for the most skilled and declining wages for the less skilled which, in fact, mirrors the existing market. Again, the health insurance policy implications of such a mismatch would lead to consideration of resource allocations for education and training in addition to strategies to make health insurance more affordable to workers.

3.2.4 International Competition

An increased amount of international trade and competition has resulted in significant structural labor market change. Factors such as the increased mobility of capital, information and labor, the diffusion of technology, and decreased tariffs and political barriers have opened markets to an unprecedented degree of international trade. This has numerous effects on the U.S. labor market including the following:

- ! Consumption of an increased amount of imported goods which has lowered the demand for goods-producing labor in the U.S.
- ! Outsourcing and the placement of production facilities in other countries that reduces the cost of labor for industry and reduces goods-producing employment in the U.S.
- ! World-wide price competition which has forced some industries to reduce production costs by downsizing and by reducing the cost of labor. Competitive pressures may also have led to a need for greater technological efficiency which may have been non-neutral in its effect on labor demand.
- ! Increased demand for high-tech, high quality, and specialty goods and management and information services that has tended to increase the demand for labor in related industries.

All of these factors tend to exacerbate the movement of labor from goods to services and to increase the demand for more skilled versus unskilled workers. These factors are influenced by the strength of the U.S. dollar and by national trade and tariff policies such as GATT and NAFTA. A strong dollar encourages more imported goods, more outsourcing of labor, and is likely to have a negative impact on EBI. It is difficult to assess the impact of agreements such as GATT and NAFTA, but they are likely to reinforce the trend for more skilled versus unskilled labor.

3.2.5 Impact of Part-Time, Temporary, and Contract Workers

It has been a common perception that a significant part of the decline of EBI can be attributed to an increase in part-time, temporary and contract employment. There are several reasons for this perception: 21% of part-time workers or 5.9 million Americans are uninsured; there is a lack of both supply and demand of EBI associated with part-time workers; and the part-time and

temporary workforce has been growing rapidly. Supporters of this argument point out that part-time employment has increased from 10.8 million to 20.7 million between 1969 and 1993, an increase of 91.7%.³⁷ This increase represented over 20% of the new jobs created during that period.³⁸

However, a look at the overall statistics provides evidence for a somewhat contrary point of view. EBRI reports that during the period that part-time jobs increased by 91.7%, the proportion of part-time jobs to the total workforce increased from 15.5% to 18.8%. This represents an increase of 3.3% over 24 years. Although this increase is significant, it explains a relatively small portion of the total decline in EBI. They also point out, however, that while the voluntary part-time workforce increased 2.2% annually over this period, the involuntary part-time workforce increased at a 5.2% annual rate. Furthermore, the report points out that the retail and service industries, which comprise 38% of all workers, account for 60% of part-time workers, indicating that industry shifts have been a factor in these changes.

Levenson³⁹ also argues that the increase in the overall rate of part-time jobs relative to total employment has been very moderate, and that it has been fairly constant since the mid 1970s. He points out, however, that there has been a gender difference with the rate of part-time employment for males increasing (particularly in the 60s and 70s) and the rate for females relatively unchanged, increasing in the sixties and declining since the early 80s.

Long and Rodgers⁴⁰ studied the years 1980-1987, a period in which the number of uninsured Americans increased from approximately 30 to 37 Million people or about 25%. They found that the proportion of part-time workers in the total workforce was the same (17.5%) in 1987 as it was in 1980. Furthermore, they found that the proportion of self-employed workers, a proxy for contract workers and consultants, actually decreased from 8.6% to 8.4%.

The impact of increased part-time work compared to other factors we have identified, probably accounts for only a small part of the decline in EBI. However, it mirrors a worker profile that we have seen repeatedly (young, less educated, male), and mirrors structural changes in the labor force (industry shifts, excess of less skilled workers, growth of lower wage employment) that are

³⁷ Employee Benefit Research Institute, "Characteristics of the Part-Time Work Force: Analysis of the March 1993 Current Population Survey," *EBRI Special Report and Issue Brief No. 149* (May, 1994)

³⁸ L. Mishel, J. Bernstein, "The Joyless Recovery: Deteriorating Wages and Job Quality in the 1990s," *Economic Policy Institute Briefing Paper*

³⁹ A. Levenson, "New Evidence on the Growth of Part-Time Employment," *Jobs and Capital* (Fall, 1994)

⁴⁰ S. Long, J. Rodgers, *Supra* note 34

consistent with previous observations. The fact that the temporary employment industry has grown rapidly, and that involuntary part-time employment has not declined after the most recent recession, has led some researchers to speculate that a long-term structural change in part-time work has occurred. There is probably insufficient evidence for a definitive opinion at this time, but this is an area that warrants continued monitoring and research.

3.2.6 Decline of Labor Unions

Membership in labor unions has undergone a long, steady decline. From 30% of workers in 1970 union membership fell to just over 16% in 1993⁴¹. Unions traditionally have been successful in securing health benefits for their members. The following table illustrates the sponsorship (supply), participation rates (demand) and the coverage differences between union and non-union members:

Private Wage and Salary Workers, 1992⁴²

	Union	Non-Union
% of workers whose employer supplied EBI	92%	73%
% of workers who "took-up" EBI given that it was offered by the employer (worker demand)	91%	76%
% of workers covered by EBI overall	84%	56%

Clearly, a structural change toward less union membership has been deleterious to EBI. We can posit that the shift in employment demand from goods producing to service producing sectors has been a major factor in union membership decline. The effects of increasing international competition, the restructuring of many companies resulting in an excess of semi-skilled labor and the increase in the relative strength of management as opposed to labor have likely been contributing elements in this decline. The decline in union membership, aside from directly affecting EBI by the lost strength of collective bargaining, also is likely to have indirect effects due to the inability to collectively bargain for higher wages.

⁴¹ Employee Benefit Research Institute, "EBRI Databook on Employee Benefits," (1990) and Employment Benefit Research Institute, *Supra* note 22. Note: these proportions are not strictly comparable because differences occurred in the parameters of the populations measured over the years.

⁴² U.S. Department of Labor et. al., *Supra* note 2

3.2.7 Other Considerations: Minimum Wage, Structural Unemployment, and Taxes

There are several other structural changes in the labor market which may have accounted for a small amount of the decline in EBI individually, but are worthy of consideration. Between 1980 and 1988, the real value of the minimum wage declined by 25%. Workers whose wage levels are at or slightly above the minimum wage now have substantially less real purchasing power, and many cannot afford health insurance, even if it is offered by employers. Hence, both the provision of insurance by employers and the take-up rate by workers may have been affected by minimum wage levels.

Michel and Bernstein⁴³ contend that there are a significant number of people who have stopped looking or who never looked for work. These individuals, who they term the "labor force absentees" are not counted among the unemployed. Mishel and Bernstein estimate that if labor force participation had grown in the 90s at a similar rate as in other recoveries, an additional 1.3 million people would be available for work but probably unemployed. This represents an additional supply of potential workers, many of whom are probably uninsured, and who would likely have a high rate of uninsurance even if employed.

Taxes are a significant consideration for both the employer and employee in the supply and demand for EBI. At the present time, EBI is fully tax deductible to the employer, and benefits conferred by the employer are tax free to the employee. In addition, 25% of the cost of insurance for self-employed families has been tax deductible. Proposals have been made to make self-employed contributions fully deductible in order to provide an incentive for increased coverage. Since we have seen that both the employer supply and employee demand for EBI varies inversely with the relative level of prices to wages, any changes in the tax code will have definite implications for EBI.

⁴³ L. Mishel, J. Bernstein, *Supra* note 37

4.0 THE RELATIVE IMPORTANCE OF FACTORS THAT AFFECT EMPLOYMENT BASED INSURANCE

There have been only a few studies in which researchers have attempted to disaggregate the many factors that might be correlated with the decrease in EBI. Studies have been made more complicated by the fact that the Current Population Survey (CPS) changed its health insurance questions in 1988, making pre- and post 1988 data difficult to compare.

The Council on the Economic Impact of Health Care Reform commissioned a study by the Employee Benefit Research Institute in conjunction with the research for this paper. In that study, Fronstin et al.⁴⁴ identified factors underlying the decrease in EBI between 1988 and 1993 and constructed a model which explained about one half of the decline. They found that decreased real wages were the most important factor accounting for almost 30% of the decline in EBI. The next most important factor was increased health care costs (a proxy for the cost of health insurance) which accounted for approximately 10% of the decline. Shifts toward part-time work and between industry shifts, such as shifts from the manufacturing sector to the service sector, were somewhat smaller but important factors.

Fronstin et al. concluded:

"We can expect to see a continued erosion in the availability of employment based health insurance as long as changes in the composition of the labor force continue and movements across sectors in the labor market continue."

Acs undertook a similar study in 1994.⁴⁵ He posited two potential explanations for the decline in coverage. First, that the cost of insurance relative to income and profits became so large that firms could not afford to supply and employees could not afford to participate (demand) in EBI. Second, that jobs shifted away from industry sectors in which insurance coverage was prevalent.

Acs analyzed the trends in health insurance coverage among the non-elderly from 1988-1991. His major findings are paraphrased as follows:

- ! Fewer employers offered health insurance because of economy-wide changes. A secular decline (what we have called a decline *within* industries) occurred across all industries, firm sizes, income levels, etc., and was the single most important

⁴⁴ P. Fronstin, s. Snider, D. Salisbury, "Labor Market Trends and Their Impact on Employment Based Health Insurance, Paper and Address prepared for The Council on the Economic Impact of Health Care Reform (April 1995)

⁴⁵G. Acs, Supra note 11

factor among the working population.

- ! Falling family incomes were nearly as important as the secular decline in explaining the decrease in EBI and were the most important factor in explaining the overall decline in insurance from all sources (as opposed to only the working population).
- ! Industrial shifts explained about 10% of the decline in EBI in a workers own name, but did not explain the decline in EBI in general or the overall decline in health insurance coverage.

AcS concluded that his findings were consistent with previous researchers and that falling incomes and rising health insurance prices drove employers and individuals out of the market for health insurance. We find that other researchers attribute shifts between industries to be somewhat more significant (particularly in the long run). AcS does not address the reasons for falling incomes.

Kronick, as referenced earlier, employed a shift-share analysis to examine the reasons for the decline in EBI from 1979-1989.⁴⁶ He concluded that the increase in medical care prices relative to wage and income levels was the dominant factor in the decline of EBI over that period. He contended that industry shifts explained 1.4% of the 10+% decline over the period for a population of low income workers, a relatively small but significant amount. He also suggested that the methodology was crude and that additional analysis might show a larger effect.

Long and Rodgers,⁴⁷ as referenced earlier, employed shift share analyses to address the relative impacts of between industry shifts and within industry shifts on the decline in EBI. They concluded that between industry shifts accounted for somewhat less than 15% of the decline and that the remainder occurred within industries, but they do not speculate about the cause of within industry shifts.

Different researchers have used a variety of methods to estimate the relative importance of the various factors that have contributed to the decline in EBI. Our conclusions from an informal review of the literature are presented in the next section.

⁴⁶ R. Kronick, *supra* note 10

⁴⁷ S. Long, J. Rodgers, *Supra* note 34

5.0 CONCLUSIONS AND POLICY IMPLICATIONS

Approximately two thirds of Americans obtain their health care insurance from employers, but employment based insurance has been declining steadily over the past 15 years. The negative impact of this decline on the total number of uninsured has been reduced by increases in the number of Medicaid recipients, particularly among children, and by increases in spousal coverage for working males who did not receive insurance from their own employer.

The number of uninsured Americans continues to grow, and the decline in EBI has been widespread across all firm sizes and wage groups and nearly all industries. However, some sectors and population groups have been impacted much more than others. This has been particularly the case in low wage industries and in small firms. Workers with less education, lower wages, younger age, and male were less likely to work for firms that provided health insurance and were less likely to participate in EBI when it was provided.

We drew the following conclusions from our review of the literature and analysis of the problem:

- ! Researchers generally agree that declining levels of real wages are the most important factor explaining the decline in EBI.
- ! Researchers agree that the increased cost of health premiums has also been an important factor in the decline of EBI.
- ! Most researchers have agreed that structural employment shifts *between* industries explain approximately 10%-15% of the decline in EBI.
- ! Researchers theorize that structural labor market changes have led to a decline in wage levels *within* industries, particularly for less educated, less skilled workers. Lower wage levels in turn are the primary factor associated with declining levels of EBI.
- ! Most researchers appear to agree that the impact of the growth of part-time, temporary and contract labor explains a very small portion of the decrease in EBI and is not nearly as important as sometimes indicated in the press and popular media.
- ! We identify numerous structural changes in the labor market such as occupational shifts, international competition, decline of labor unions, and decrease in the real value of the minimum wage, which likely have contributed to employment shifts between industries and lower wage levels within industries, and have thus exacerbated the decline in EBI.

- ! Declines have occurred in both the proportion of employers who provide EBI and in the proportion of workers who participate in EBI when offered. It appears that the participation rate may have declined slightly more than the rate of insurance provision by employers.
- ! The demand for EBI generally varies directly with income and inversely with the price of insurance. However, there is evidence that below a certain threshold of income, subsidies may not be enough to encourage voluntary participation by low wage workers.
- ! Substantial declines in dependent coverage have occurred that have left many children without coverage from private EBI.
- ! The 16.7 million workers with no health insurance represent only 41% of the 41.2 million Americans who are uninsured. Many of the balance represent children or other dependents of workers. Additional research in this area is needed to understand the recent trends in declining dependent coverage.
- ! Substantial declines in coverage for prime-aged, married men have occurred although they have been partially mitigated by increases in spousal coverage.
- ! The Department of Labor projections of industry employment through 2005 indicate that employment shifts from the goods producing sector to the service sector will continue. Labor economists also project a continuation of trends outside the service industry that demand more higher skilled and less semi-skilled workers. Therefore, we conclude that the decline in EBI is likely to continue. Even if prices of health insurance stabilize, structural changes in the labor market are still likely to cause declines in EBI.

The major implication of the above findings is that if no action is taken by policy makers, the use of private insurance will continue to decline, and the number of uninsured Americans will continue to increase. If Medicaid funds are limited, or if policies are enacted to move away from employment based insurance before parallel or substitute programs are in place, the number of uninsured is likely to rise steeply.

Such an increase in the number of uninsured will mean that government will inevitably be asked to take care of some of this population and some will seek charity care in the emergency rooms of private hospitals. In the former case, taxpayers will see more of their money paying for public programs and attempts to balance the budget will be made more difficult. In the latter, cost shifting by hospitals will increase the price of health premiums for private citizens.

Policy makers must decide whether the trends in coverage for EBI can be reversed, or whether parallel or substitute systems must be developed. EBI can be extended either through voluntary incentives or government mandates.

Voluntary incentives must be aimed at making EBI more affordable to low income wage earners and at extending EBI into the service sector and small business. A combination of subsidies and tax incentives targeted to both employers and workers could be effective in that regard. However, unless nearly total subsidies are offered to those earning below 125% of poverty, incentives alone will probably not be sufficient to entice them because they need their disposable income for immediate necessities. Subsidies can certainly improve coverage rates for those between 125-200% of poverty, but the challenge will be targeting incentives to those that are not already covered.

Mandated insurance can succeed in covering uninsured workers. However, subsidies would be necessary to make EBI more affordable to low wage and small size firms so that adverse employment effects are minimized.

We have theorized that part of the decline in EBI is a result of structural changes in the labor market that have caused a decline in wage levels, particularly for less educated, less skilled workers. If this is true, and if a widespread mismatch exists regarding the demand for skilled labor, than part of any long term solution should provide that funds be allocated for education and training. Otherwise, it will be difficult for policies to ameliorate the decline in EBI, and even if they do, a continued decline in wages will precipitate a persistent need for greater subsidies.

The number of uninsured continues to increase, and the use of private insurance continues to decline. The problems facing public policy makers are immediate, but the solutions are complex. We encourage policy makers and researchers to focus on these issues, and we hope to provide a forum in which to enhance the level of debate.