By Steven P. Zell

Four decades after its creation, the Federal-state system of unemployment insurance (UI) remains one of our nation's principal tools for economic stabilization. As has been seen in Parts I and II of this series, the UI system has evolved into an enormously complex and varied organization. Almost every facet of the system has expanded tremendously. For example, since the mid-1950's, the number of covered workers has grown far more rapidly than the total work force, the level of average weekly benefits adjusted for inflation has increased almost twice as fast as real average spendable weekly earnings, and the potential duration of benefits has been expanded from 26 weeks to 65 weeks.

In recent years, economists have become extremely interested in the potential impact of these changes on the level of unemployment. Since the earnings a worker foregoes while unemployed can be thought of as the cost of that unemployment, economic theory predicts that as this cost is reduced via liberalized unemployment benefits, the level of unemployment in the economy might increase. Considerable research has been conducted on the nature and magnitude of these unintended effects of the UI program, often with conflicting results. This concluding article on unemployment insurance will examine some of the major criticisms of the UI system in the light of this research.

WHAT ARE WORK DISINCENTIVE EFFECTS?

Ever since the program's inception, UI benefits have been designed with two basic objectives directly related to the unemployed worker. First, on the assumption that the worker was involuntarily unemployed for a short period, benefits were established to replace a portion of his lost wages. Second, benefits were to go only to "regular" workers, and could not be set at so high a level as to make the receipt of benefits more attractive than working.

The difficulty with the second objective lies in that the desirability of working, or the

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1 Parts I and II appeared, respectively, in the February 1976 and June 1976 issues of this Review.
2 For one estimate of these changes from 1955 to 1973, see George M. von Furstenberg, "Stabilization Characteristics of Unemployment Insurance," unpublished paper, Council of Economic Advisors, p. 5.
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acceptability of a particular job, is affected by a large number of economic and noneconomic factors. On the noneconomic side, "some workers are choosier than others about jobs. Some place a higher value on spending time at home with their families than do others. And the psychic costs of being unemployed are higher for some workers than for others." Economically, the important question is how costly is unemployment and what alternative assets and income sources are available? If other things are equal, the better a worker can afford to be unemployed, "the less effort he is likely to devote to searching for a job and the more selective he is likely to be about the kind of job he will accept."  

The UI system can be said to have work disincentive effects to the extent that it results in a voluntary reduction in the supply of labor in the economy. For example, an unemployed worker might turn down as unsuitable a job which, in the absence of UI, he would have accepted. Similarly, a worker, knowing that his plant will be closing, might delay searching for a job in the knowledge that he can depend on UI benefits when he decides to search. Unlike collecting benefits under the pretense of seeking work, however, neither of these acts is illegal nor constitutes fraud. Furthermore, to the extent that additional job search does result in more pleasant or higher paying jobs, the subsidization of individual searchers can be justified only if it can be shown that an improved job match constitutes some benefit to society which does not simultaneously accrue to the individual searcher. Otherwise, the worker would be likely to search the optimum amount in the absence of subsidies.  

**THE CENTER OF THE CONTROVERSY**

While some research had been done previously on the unintended effects of the UI system, by far the greatest impact has resulted from the findings of Professor Martin S. Feldstein of Harvard University. In a study prepared for the Joint Economic Committee of Congress in September 1973, and reiterated in numerous professional and popular articles since that time, Feldstein concluded that the unemployment insurance system was responsible for a significant part of the observed unemployment in the United States. Much of the research that has been conducted since that  

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4 Ibid., p. 56.


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date on the UI system has been an attempt to either support or contradict Feldstein's findings and methodology.

**Feldstein's Research**

Feldstein begins his analysis with a discussion of the major characteristics of unemployment in the United States during nonrecessionary times. First, the duration of unemployment is quite short. For example, in 1973, when the unemployment rate was a relatively high 4.9 per cent, more than half of the unemployed were without jobs for less than 5 weeks and less than 8 per cent were unemployed for more than 30 weeks. Second, job losers account for less than half of all the unemployed, the remainder consisting of job quitters, new entrants, and reentrants to the labor force. Third, turnover is extremely high, especially in manufacturing, where "total hirings and separations have each exceeded 4% of the labor force per month for more than a decade." Lastly, most layoffs are brief and temporary. The average manufacturing company rehires about 85 per cent of those it lays off.

All of these factors are very important for understanding the effects of the UI system on unemployment. Consider, for example, the duration of unemployment. The total amount of unemployment in the economy is the sum over all individuals of the number of times they are unemployed multiplied by the average duration of their spells of unemployment. Therefore, unemployment can be increased by either increasing the number of spells of unemployment or lengthening the duration of the spells. Feldstein stresses that, in a variety of ways, unemployment insurance has both of these effects.

**The Effects of UI on the Structure of Employment**

According to Feldstein, the negative aspects of UI affect not only the unemployed worker but the structure of employment as well. UI benefits are financed by a payroll tax which tends to vary with the amount of labor turnover of the particular firm. However, because this "experience rating" system is imperfect, former employees of firms with high turnover can receive UI benefits well in excess of the tax cost to the firm. This creates an incentive for both employers and employees to structure employment with too much seasonal and cyclical variation and too many casual jobs. It has this effect because the net wage to employees (wages plus unemployment benefits) exceeds the cost to employers. "Because the price of unstable labor has been artificially subsidized, employers organize production in a way that makes too much use of unstable employment. Similarly, the economy as a whole consumes relatively too much of the goods that are produced in this way," because the prices of these goods are artificially low.

Likewise, workers may be induced to accept seasonal, cyclical, or temporary jobs, even knowing they are likely to be laid off, because they know that unemployment benefits will be available to supplement their lost income. The net effect is the preservation and expansion of the secondary sector of the dual labor market, with its low wages, poor working conditions, layoffs, little chance for advancement, and high turnover.

In the absence of unemployment compensation, most workers could be induced to accept unstable work only if the wages were sufficiently higher than those in available stable employment so as to compensate for the greater probability of becoming unemployed. Similarly, if employers had to pay the full cost of UI benefits, they would tend to incur the expense

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9 Zell, "Unemployment Insurance Part I," pp. 13, 16-17, footnote 18, and discussion later in the present article.
10 Feldstein, *The Public Interest*, p. 34.

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of improved scheduling, greater inventory variability, more off-season work, and new technology so as to reduce the instability of employment. Finally, consumer demand for the output of these firms would fall as their prices rose, further reducing the amount of unstable employment.

The Effects of UI on the Duration of Unemployment

The second side of Feldstein’s argument pertains to the work disincentive effects of unemployment compensation. Feldstein dismisses as a myth the often cited figure that UI benefits replace, on the average, about one-third of lost weekly wages. The flaw in these data, he notes, is that they ignore the fact that wages are taxed while UI benefits are not. Taking into consideration Federal and state income taxes and the Social Security tax, Feldstein found in his initial research that UI benefits in the state of Massachusetts for a family of four would replace more than 80 per cent of the wages lost from an additional week of unemployment. Under some special circumstances, the wage replacement figure might even exceed 100 per cent.

Criticized on the grounds that Massachusetts was an atypical state, Feldstein calculated wage replacement ratios for all states and for 13 different family types. His findings confirmed his initial results. Men and women with median earnings for their state were entitled to unemployment benefits which replaced, respectively, over 60 per cent and over 70 per cent of lost weekly after-tax wages. Furthermore, the income replacement effect is greater for those persons with lower-than-average earnings; e.g., men and women whose income was only 70 per cent of the median for their state had replacement rates of 69 per cent and 78 per cent, respectively.

Similar calculations for Kansas City, Mo., in 1975 also confirm Feldstein’s findings (Table 1). In each of four cases, a married worker, earning either $3, $4, $5, or $6 per hour, was

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<td>REPLACEMENT OF LOST AFTER-TAX WAGES BY UI BENEFITS</td>
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<td>(Kansas City, Mo., 1975)</td>
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<td>Hourly Wage</td>
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<td>1. Gross Wage Income - 52 weeks of work</td>
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<td>2. Gross Wage Income - 39 weeks (without UI)</td>
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<td>3. Gross Wage Lost</td>
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<td>4. After-Tax Income - 52 weeks</td>
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<td>5. After-Tax Income - 39 weeks</td>
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<td>6. Net Wage Lost</td>
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<td>8. Net Total Income Lost</td>
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<td>9. Replacement Rate: (a7 ÷ a6) %</td>
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<td>10. Implicit Tax Rate: (100 - (#8 ÷ #3) - 100) %</td>
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*Calculations assume 13 weeks of unemployment. After-tax income is net of all Federal, State, and local income taxes and the Social Security tax.
†After-tax income exceeds gross wage income due to low-income allowance.
assumed to have two dependent children and a nonworking spouse. Consider the worker who earned $3 per hour. If he worked 52 weeks during the year, his gross wage income would have been $6,240. Had he been unemployed for 13 weeks, this would have dropped to $4,680, yielding a loss of $1,560. This, however, represents his lost gross wages. Taking into consideration his reduced liability for Federal, state, and local income taxes and the Social Security tax, the amount of lost net wages would total only $1,211. His UI benefit entitlement of $1,014 for 13 weeks of unemployment would therefore replace 84 per cent of this net wage loss yielding a net income loss of only $197. Looked at another way, since working an extra 13 weeks yields the worker $1,560 of additional gross income, but only $197 of additional net income, the implicit tax rate on this extra work is 87 per cent. By staying unemployed 13 weeks rather than 12 weeks, the worker would actually lose only $15.20, or $0.38 per hour.

**Distributional and Unemployment Effects**

Feldstein uses his results to examine two important questions: (1) What groups in the population benefit most from the present structure of UI benefits? and (2) What are the total effects on unemployment of the distortions introduced by UI?

On this second question, Feldstein provides some rough estimates of the magnitudes that might be involved.

For example, a reduction of three weeks in the average ten-week spell of insured unemployment would lower the overall unemployment rate by 0.75 [percentage points]. If one-third of the purely seasonal unemployment were avoided, the overall unemployment rate would fall by an additional 0.25 [percentage points]. Reducing the cyclical variation in labor demand by 20% would reduce average unemployment by another 0.25 [percentage points].

Given a labor force of almost 94 million persons, these changes could represent a decrease in unemployment of almost 1.2 million persons.13

Regarding the first question, if it were true that the poor are the greatest beneficiaries of UI benefits, some of the distortions introduced by the system might be justified. Unfortunately, this is not the case. In a study using 1970 data, Feldstein discovered that, "Half of the benefits go to the families in the top half of the income distribution. Fifteen per cent of the benefits... went to the 18 per cent of families with incomes over $20,000. Only 17 per cent of the benefits went to families with incomes under $5,000."

Some of the reasons given for these surprising facts pertain to the different employment characteristics of poor workers relative to those with higher incomes, as well as to the basic structure of the UI system. When unemployed, poor workers are more likely to have quit their last job, to have worked too little to earn sufficient wage credits, or to have worked in employment not covered by the UI system. Even when qualifying for benefits, poor workers will frequently qualify for less than the maximum duration and will more often exhaust their benefits. Middle and higher income workers, on the other hand, will be entitled to higher benefits, will more often have two wage earners in a family, thus increasing the risk of unemployment, and be more likely to be laid off only temporarily and recalled by the same firm.

In addition to the fact that middle and higher income workers receive a dispro-

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13 The research of Stephen Marston and of Kathleen Classen, discussed below, presents alternative interpretations and estimates of these changes.
14 Feldstein, National Tax Journal, p. 237.
portionate share of UI benefits, a further distortion is added by the tax system. Because higher income families are in higher income-tax brackets, the tax savings resulting from the fact that UI benefits are not taxed go far more than proportionately to these higher income families. Thus, while 29 per cent of all families earned over $15,000 in 1970, they received 34 per cent of the UI tax savings. On the other hand, the 28 per cent of all families with incomes below $5,000 received only 15 per cent of the tax savings.\(^{15}\)

If unemployment benefits were taxed as income, the Government would receive about $1 billion in additional revenue (in nonrecessionary periods) and part of the regressivity of UI benefits would be reversed. Furthermore, the work disincentive effect of UI payments would be somewhat reduced. For example, in Kansas City, Mo., the effective tax rate on the income earned by accepting a job after 12 weeks of unemployment rather than 13 weeks would drop from 87 per cent to 76 per cent for the worker earning $3 per hour, if UI benefits were taxable.

RESOLVING THE CONTROVERSY

While many of Feldstein's findings pertaining to disincentive effects on individuals and firms are intuitively persuasive, his claims for their magnitude, especially in the aggregate, have been extensively debated. Much of the early criticism of his research, however, was based more on differing views of the structure and operation of the labor market than on contradictory empirical results.\(^{16}\)

The two most important criticisms were, first, that there was little evidence confirming the significant effect of the UI system on either the duration of unemployment or the amount

\(^{15}\)Ibid.


of seasonal, cyclical, or unstable employment in the economy. Second, it was argued, whatever effects there were on unemployment duration, they would be unlikely to be of such magnitude as to significantly affect the overall unemployment rate. While data problems continue, especially regarding the effects of UI on the structure of employment, recent research has greatly clarified the duration issue and other important questions about the impact of the UI system.

Recent Research on Duration

In a 1975 study for the Brookings Institution, Stephen T. Marston developed a sophisticated model for estimating the effects of UI benefits on the duration of unemployment.\(^{17}\) Like Feldstein, Marston compared the duration of unemployment of insured and uninsured workers, hoping to estimate the disincentive effects of UI benefits. Correctly criticizing Feldstein for misinterpreting published duration data, Marston adjusted these data through a complex procedure which he hypothesized would yield more accurate results. In this manner, Marston calculated that unemployment insurance lengthens the expected duration of completed spells of unemployment for the insured by between 15.7 per cent and 31.4 per cent. The net effect of this, according to Marston, would be to raise the overall unemployment rate by about 0.2 to 0.3 percentage points. This contrasts with Feldstein's rough estimate that the unemployment rate might be lowered by 0.75 percentage points by reducing the effect of UI benefits on unemployment duration.

Numerous problems exist, however, in interpreting Marston's results. The most important of these problems is inherent in any comparison of insured and uninsured workers. Basically, most insured unemployed workers

are job losers. On the other hand, the uninsured unemployed have either quit, been fired for misconduct, are new entrants or reentrants to the labor force, have not earned sufficient wage credits, or worked in uncovered employment. Furthermore, even the job loser group studied is a special group of such workers, since many job losers never become unemployed at all. Thus, besides the adjustments made by Marston to compensate for the differing demographic characteristics of the two groups, it is extremely difficult, if not impossible, to disentangle behavioral differences due to being an insured worker from those due to being a job loser.18

Other difficulties also exist with Marston's study. Because of problems with the restrictive nature of available data, Marston was required to use extremely "complex and often arbitrary techniques [to] circumvent these problems."19 As a consequence, it is difficult to assess the accuracy of his results or to interpret their meaning. For example, by adjusting for factors allegedly omitted by Marston, Feldstein deduces from Marston's figures that UI, operating solely through extended duration, causes an increase of 0.69 percentage points in the overall unemployment rate.20 Similarly, Hall notes that other findings of Marston's show that right after exhausting benefits, the rate of leaving unemployment rises rapidly. "Part of that increase clearly consists of people who leave the labor force, but part clearly consists of those who take jobs. If every insured worker were delaying his exit from unemployment to the same degree as, apparently, do those who have exhausted their benefits, unemployment insurance would be lengthening unemployment substantially."21 Marston does make the excellent point that in an economy with limited employment opportunities, shortening the unemployment duration of some workers by eliminating UI might well result in the displacement of other workers, thus reducing the aggregate effect on unemployment. Nevertheless, it appears that there are more fruitful approaches that can be taken to examine the duration issue.

One such approach is found in a study conducted by Kathleen Classen of the Public Research Institute of the Center for Naval Analyses. For her study, Classen had the advantage of a body of data which permits the examination within a single state of similar individuals who receive different benefit amounts. In Pennsylvania, benefits were significantly increased in 1968 only for those workers earning above a specified level. By examining a sample of claimants who filed the year before and the year after the change in the benefit schedule, Classen was able to estimate the effects of an increase in weekly benefit amount (WBA) on the duration of unemployment while avoiding many of the pitfalls inherent in other data sources.22

Looking first at aggregate data, Classen found a significant rise in the duration of unemployment for that group of individuals entitled to a WBA increase (of $15 from $45 to $65). On the other hand, those claimants entitled to only a very small benefit increase experienced an actual decline in unemployment duration. Studying the data through regression analysis confirmed these initial findings. Specifically, a $10 increase in WBA resulted in a 1.1 week increase in the average

18 See Comments by Robert C. Hall, pp. 51-52 and by Feldstein, pp. 52-58 in Marston, "The Impact . . . ". Both give several reasons why job losers would be likely to suffer shorter periods of joblessness than other unemployed workers, irrespective of UI benefits. If this is true, then Marston's study underestimates the true insured-uninsured duration differential.
19 Kathleen Classen, p. 11, and Feldstein, Comments, pp. 54-56.
20 Feldstein. Comments, pp. 54-55.
21 Hall. Comments, p. 50.
22 In an appendix to her Pennsylvania work, Classen examined similar data for Arizona and obtained strikingly similar results despite major differences between the UI systems of the two states.
unemployment duration of all claimants. Furthermore, when persons who were recalled by their former employers were excluded from the sample (on the grounds that their unemployment duration was largely determined by their employer and thus not a function of their WBA), the length of time by which duration was extended by a $10 rise in WBA climbed to 1.6 weeks. If these relationships are applicable to the nation as a whole they would imply that a $10 increase in WBA for all covered workers would have increased the unemployment rate for these workers by about 0.6 percentage points, a very large increase.23

**Other Research**

Several researchers, including Classen, have examined the related question of whether increased UI benefits result in longer and more productive job search, and, thereby, in better worker-job matches. If this is the case, it might be argued that the benefits deriving to society from improved job matches would more than compensate for the increased duration of unemployment.24 Four papers dealing with this issue were presented at the Symposium on the Economics of Unemployment Insurance, held at the University of Pittsburgh on April 8-9, 1976.25 The basic question examined by these papers was whether there was a positive relationship between UI benefits and, presumably as a result of increased job search, post-unemployment wages. The results ranged from no (Classen), to strongly yes for older men (Ehrenberg - Oaxaca).

In an incisive commentary on these papers, however, Professor Finis Welch of UCLA showed that none of the studies really proved its case.26 During the examination of data provided by the "real" world, econometric difficulties combine with institutional factors to enormously complicate the estimation procedure. For example, state benefit formulas determine a claimant's WBA as a direct function of his pre-unemployment wages. Thus, by trying to find a relationship between WBA and post-unemployment wages, one is actually estimating the relationship between pre- and post-unemployment wages. Not surprisingly, this relationship is strong and positive. This finding, however, reveals little about the relationship between UI benefits and job-search productivity. Furthermore, Welch noted, the fact that employers must initially pay (through higher taxes) for increased UI benefits could very well lower, over time, the entire schedule of wages employers are willing to offer. Since both pre- and post-unemployment wages could be lowered by increasing UI benefits (though not necessarily to the same degree), a theoretical case can be made for either a positive or a negative relationship between UI benefits and post-unemployment wages. Whatever the results, however, they would yield no clear information on the productivity of job search. It appears, therefore, that much more work must be done before a definite relationship between UI benefits and productive job search can be determined.

In addition to the above questions, many other important UI issues have yet to be examined in depth. Frank Brechling has

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23 Including the SUA program (see Part II), over 90 percent of the labor force is employed in or unemployed from covered industries. While there are some econometric problems with Classen's methodology, it appears that her findings are of the right order of magnitude.

24 As noted on page 15, however, subsidization of job search can be justified only if the benefits to society from this increased search do not simultaneously accrue to the searcher who would otherwise be likely to search the optimum amount in the absence of subsidies.

25 Kathleen Classen, "Effects . . . "; Jerry L. Kingston and Paul L. Burgess, "Unemployment Insurance and Earnings Changes From the Preunemployment to the Postunemployment Year"; Arlene Holen, "Effects of Unemployment Insurance Entitlement on Duration and Job Search Outcome"; and Ronald G. Ehrenberg and Ronald L. Oaxaca, "Unemployment Insurance, Duration of Unemployment, and Subsequent Wage Gain."

26 Finis Welch, "What Have We Learned From Empirical Studies of Unemployment Insurance?", unpublished paper presented at the Symposium.
conducted an extensive theoretical study designed to discover the incentive effects on individual firms of the unemployment insurance tax as it currently operates in most states. Brechling theorizes, for example, that the structure of the current experience rating system of UI taxation affects the hiring and layoff policies of firms in a complicated manner with potentially strong policy implications. The actual magnitude of these effects, however, remains to be estimated.

A related issue is that of determining who ultimately pays the tax cost of financing unemployment insurance. While employers initially pay the UI payroll tax, it is unlikely that they absorb all of the cost. Some of it is certainly passed on to consumers in the form of higher prices. In addition, much of it may be indirectly paid by labor in the form of lower wage offers made by employers, substitution of capital for labor in some processes, and the reluctance of employers to hire from groups with a history of high turnover. Furthermore, because some industries have very high turnover while others have very stable employment, there is an implicit cross-subsidization among industries and a potential distortion in the use of the nation's resources. The issues involved in these and other questions are very complicated, however, and much more theoretical and empirical work must be done before the magnitude of the effects can be estimated and the related policy implications assessed.

SUMMARY AND CONCLUSIONS

In this final article of a three-part series on unemployment insurance, some of the important issues regarding the unintended effects of the UI system have been examined. Ever since the inception of the system, economists have been concerned that the payment of UI benefits might result in a reduction of work effort or in an increase in unemployment duration. This possibility was recently highlighted by Martin Feldstein of Harvard University.

In his controversial 1972 congressional testimony, Feldstein illustrated how UI benefits replace most of the after-tax income that is lost from being unemployed. Feldstein also noted that because the system permits workers to receive benefits in excess of the cost to their former employers, an excessive amount of seasonal, cyclical, and temporary employment is encouraged. Much of the research done since then has attempted to either support or contradict Feldstein's findings and methodology.

Of the issues involved in the UI controversy, the one receiving the closest scrutiny has been the effect of UI on the duration of unemployment. While Feldstein suggested the potential for such an effect, he never accurately estimated its magnitude. Recent research, especially that studying the 'marginal effect on duration of increasing benefits,' seems to indicate that UI benefits are responsible for a sizable increase in the duration of unemployment of the insured unemployed.

On the question of whether this extended unemployment duration is spent in productive job search (yielding higher post-unemployment wages), the results are unclear. A theoretical case can be made for expecting either a positive or a negative relationship between unemployment benefits and post-unemployment wages. Furthermore, the very formulas by which UI benefit levels are determined (i.e., based on pre-unemployment wages) may make the empirical estimation of this relationship impossible using available data. Clearly, new experiments will have to be developed to deal with this issue.

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