Footnotes

For further information on employee absenteeism, contact Joseph R. Meisenheimer II at (202) 523-1944.

[1] Because of the conceptual difficulties with measuring the cost to the U. S. economy of employee absences, no broad-based measure has been developed. Some studies, however, have attempted to measure the costs of absences in individual firms. One such study, which focused on tellers in a midwestern bank, was Philip H. Mirvis and Edward E. Lawler III, "Measuring the Financial Impact of Employee Attitudes," *Journal of Applied Psychology*, 1977, vol. 62, pp. 1–8.

[2] The Current Population Survey, conducted monthly by the Bureau of the Census for the Bureau of Labor Statistics, is a sample survey of approximately 60,000 households. The CPS provides estimates for a broad variety of characteristics of the U.S. population and labor force. Absence data are obtained from questions asked each month on the *actual* number of hours worked during the survey reference week and the *usual* number of hours worked per week. The question on actual hours is asked of all employed persons in the CPS sample, while the question on usual weekly hours is normally asked of one-fourth of the CPS sample. In special CPS supplements collected in May of 1973–80, 1985, and 1989, the question on usual weekly hours was asked of the entire sample.

[3] These data have long been available monthly, but have never been analyzed in the context of absences. An advantage of using annual average data is that the sample size for the question on usual weekly hours is three times larger than that of the May supplement. Thus, annual averages have better statistical reliability than do the May data. The difference in sample size can be shown with the following equation:

Sample size for the May supplement = S

Sample size in a normal month = ¼(S)

Sample size for the 12 months of 1989 = 12(¼)(S) = 3(S)

[4] In past BLS reports on absences, the absence rate was referred to as the "incidence rate," and the lost worktime rate was referred to as the "inactivity rate."

[5] In addition to the annual and quarterly averages, data for May 1989 were tabulated separately to examine whether absence behavior in May is typical of that throughout the year. As this tabulation shows, the May data differ sharply from the annual averages and also from the quarterly data for April to June. This indicates that the new tabulation procedure reflects absence behavior throughout the year more accurately than the former method.

[6] Unmarried women include widowed, divorced, separated, and never-married women.

[7] This may be explained by the ages of married men with and without children. Nearly a third of married men without children are 55 or older—an age group with a relatively high incidence of absences. By comparison, 94 percent of married fathers are in the central working ages (25 to 54), which have a relatively low incidence of absences.

[8] Absence data by occupation of men and women separately are available from the author.

[9] One possible explanation for the high lost worktime rate in mining may be unusual work schedules, rather than absences from work. In the oil and gas extraction industry, mining's largest component, offshore workers may work 80 or more hours in one week and no hours the following week. A worker with such a schedule could be tabulated in the CPS as working less than 35 hours due to "other" reasons, even though this worker did not actually have an absence. Overall, unusual work schedules affect relatively few workers, but in some industries, such as mining and transportation, and in some occupations, such as teaching, the nature of work schedules could have a substantial impact on CPS absence data. Thus, absence data for these industries and occupations should be viewed with caution.

Would a higher minimum wage help poor families headed by women?

Linda R. Martin and
Demetrios Giannaros

While the incidence of poverty in the United States has fallen from 22.2 percent in 1960 to 13.5 percent in 1987, a significant component of the decrease occurred in the 1960's. In fact, the poverty rate, the proportion of the population that fell below the Federally established poverty level, remained relatively stable during the decade of the 1970's, increased in the early 1980's, and then experienced a slight decrease again in the mid-1980's. More significantly, over the same period, the demographic composition of the poor has changed.

On one hand, poverty among the elderly declined from 25 percent of all elderly in 1969 to 12.4 percent in 1986. On the other hand, the poverty rates of blacks and of households maintained by women remained relatively constant, at 31 percent and 34.6 percent. However, the percentage of all households which are headed by women grew from 28.5 percent in 1969 to 37 percent in 1986, and the proportion of the poor residing in such households rose from 18 percent in 1959 to approximately 38 percent in 1986.[1] The increase of the poor in these households, referred to as the feminization of poverty, has rekindled interest in and discussion on the causes and possible solutions to the problems of poverty.

Earlier studies of the feminization of poverty focused on the effect of government transfer payments on family structure. Labor market conditions have not been emphasized as possible dominant factors in explaining the upward trend in the poverty rate. The minimum wage rate set by the Federal Government influences both the national unemployment rate and the real level of income of low-income households and, thereby, affects the rate of poverty. The nominal minimum wage rate was $3.35 per hour from 1981 until this year, resulting in a significant decrease in the real minimum wage as inflation increased.

Ralph Smith and Bruce Vavrichek suggested that low-wage workers who had no other earners in their families faced a 50-percent incidence of poverty.[2] Because women are overrepresented in the low-wage labor market, a relationship between the minimum wage and poverty in households headed by women may exist.[3] Therefore, we hypothesize that not only the unemployment rate but also the real minimum wage would be a determinant of the rate of poverty.

A number of other studies on the determinants of overall poverty have suggested that economic growth is a primary factor in reducing poverty. In 1965, Lowell E. Galloway observed that decreasing real economic growth and increasing unemployment are the primary determinants of rising poverty rates.[4] However, Henry Aaron argued that Galloway was overly optimistic.[5] Using more disaggregated data, Aaron concluded that economic progress would not touch the hard-core poor and, therefore, government antipoverty programs would be needed. A 1978 study by James Thornton and others concluded that "economic growth no longer affects poverty irrespective of whether a relative or the absolute definition of poverty is used. Our findings indicate that the contribution of growth has been overstated."[6] The authors suggested that income transfers and unemploy-

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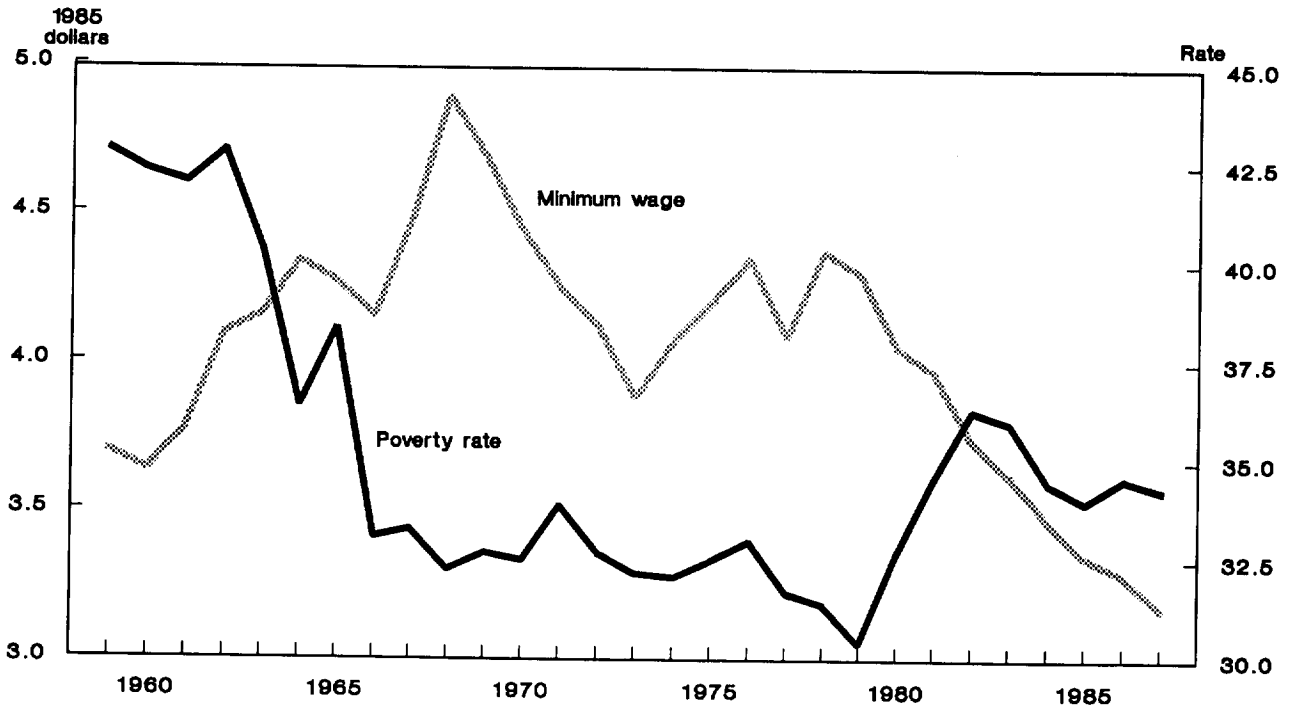
ment play a role in determining the incidence of poverty, although their empirical results indicate that transfers are not statistically significant.

In a more recent study, we also observed that changes in real per capita government income transfers were not significant, but real per capita income and the rate of unemployment were most influential in explaining the variation in the poverty rate.[7] Peter Gottschalk and Sheldon Danziger concluded that, in addition to economic growth, the degree of income distribution inequality and government transfers are the primary determinants of poverty.[8] The increasing degree of income inequality and its effect on poverty can be attributed partly to the relative effects of unemployment. Rebecca M. Blank and Alan S. Blinder found that decreases in unemployment had a positive effect on all earnings but that increases in unemployment had greater effects on the earnings of low-income recipients.[9] Edward M. Gramlich and Deborah S. Lauren also observed a similar cyclical effect.[10]

Aaron first observed that the source of poverty among diverse population groups may differ. Julius W. Wilson and Kathryn M. Neckerman suggested that the high rate of unemployment of black males had led to the formation of households maintained by women and thus has contributed to women's high poverty rates.[11] Other studies on the feminization of poverty have focused on the effects of government transfer payments, rather than on economic growth and unemployment, hypothesizing that the availability and scope of these payments encouraged poverty among women. However, these studies have shown conflicting results. In a review of several articles, Isabel Sawhill indicated that, while government transfer payments have reduced poverty, the impact has been small.[12] Studies suggesting that transfer payments reduce work incentives and promote the formation of households headed by women assume that receipt of Aid to Families with Dependent Children (AFDC) payments reduces the dependency of women on male wage earners. Other studies suggest various forces influencing formation of households. Empirical studies on the indirect effect of income transfers on family structure provide mixed results.[13]

While sociological and demographic changes may affect family structure, we propose that the real minimum wage has a pronounced effect on the poverty rate of households maintained by women, because the participation of these women in low-wage labor markets is relatively high. Chart 1 reveals that from 1959 to 1968 the real minimum wage increased, while poverty decreased dramatically. The real minimum wage declined after 1968, increased briefly between 1973 and 1978, and then continued to decrease. Note that the poverty rate rose from 1979 to 1982, while the real minimum wage fell. In fact, the real minimum wage level of 1987 was lower than that of 1960.

Chart 1. Poverty rate of households headed by women and the real minimum wage, 1959–87



SOURCES: *Money Income and Poverty Status of Families and Persons in the U.S.* (Bureau of the Census, various issues); and *Statistical Abstract of the United States* (Bureau of the Census, 1988).

Table 1. **Estimated equation for the level of poverty in households headed by women(*V*), 1959–87**

Equation	Constant	*RMIN*	*UNF*	*RFMEDY*	*PCGNP*	*RFAFDC*	*TR*	R^2	Durbin-Watson statistics	*F*-statistics
1	74.59 (3.93)*	−4.53 (.68)*	0.34 (.23)	−3.81 (.32)				0.88	1.81	58.53*
2	78.77 (4.65)*	−5.65 (.79)*	.31 (.26)		−1.67 (.16)*			.84	1.48	44.05*
3	74.55 (4.04)*	−4.62 (1.19)*	.36 (.28)	−3.82 (.33)*		.07 (.75)		.88	1.82	42.16*
4	82.62 (3.61)*	−2.29 (.96)*	−.13 (.22)		−1.72 (.12)*	−2.74 (.61)*		.91	1.95	63.11*
5	71.68 (4.95)*	−4.96 (.82)*	.58 (.34)**	−2.97 (.93)*			.01 (.01)	.88	1.93	44.03*
6	84.39 (17.60)*	−5.47 (.98)*	.02 (.92)		−2.20 (1.60)		.01 (.03)	.84	1.43	31.89*

*Significant at the 0.05 level.

**Significant at the 0.10 level.

NOTE: Variables are defined as follows:

V = Percent of households headed by women that fall below poverty level.

RMIN = Real minimum wage.

UNF = Unemployment rate for women.

RFMEDY = Real median income of women in thousands of dollars.

PCGNP = Real per capita GNP, in thousands of dollars.

RFAFDC = Real annual per family payment of AFDC, in thousands of dollars.

TR = Real government transfer payments in billions of dollars.

Values in parentheses are standard errors.

The primary objective of this study is to determine whether the real minimum wage, unemployment, economic growth, and transfer payments play a significant role in determining the rate of poverty of households headed by women. The second section describes the model and data, the third section discusses the empirical results, and the fourth presents the concluding remarks.

The model and data

To empirically examine the stated propositions regarding the determinants of poverty, a simple model is used. This model expresses the rate of poverty of households headed by women as a function of the real minimum wage rate, the rate of female unemployment, and economic growth as measured by either the real median income of women or real per capita gross national product.

The changes in the real minimum wage affect poverty in two ways. First, the earnings potential of working women is closely associated with the real minimum wage. Joan Smith observed that industries most responsible for the growth in female employment pay a wage rate that requires the recipient to find additional resources to remain above the poverty level.[14] Lauri Bassi noted that the number of hours of compensated work by women is positively associated with increasing poverty.[15] The declining value of the real minimum wage seems to be one of the underlying reasons for working women's poverty. Secondly, when potential job earnings are low, the unemployed female head of household may continue to rely on government transfer payments, such as AFDC, even when these payments are decreasing.

Because Galloway and Thornton and others used different measures of real economic growth for their estimates, two measures are used here to determine the better performing model. While the real median income of women and real per capita GNP both reflect general economic conditions, one would expect the former to better represent the effect of changes in general economic conditions on women and their households.

One would also expect the real minimum wage and economic growth to be negatively related with the dependent variable. That is, as real earnings for individuals and real income in the economy as a whole increase, the poverty rate decreases. The sign of the coefficient of unemployment would be positive because increasing unemployment would increase the percentage of the population in poverty. The basic equation to be estimated is expressed as follows:

$$(1)\quad V = a_0 + a_1 RMIN + a_2 UNF + a_3 RFMEDY + u_1$$
$$a_1, a_3 < 0, a_2 > 0$$

where V is the percentage of families in households maintained by women that fall below the Federally defined poverty line, *RMIN* is the real minimum wage, *UNF* is the female unemployment rate, *RFMEDY* is the real median income of women, and u is the random error term. The alternative basic equation to be estimated substitutes the real per capita GNP (*PCGNP*) for *RFMEDY*.

$$(2)\quad V = b_0 + b_1 RMIN + b_2 UNF + b_3 PCGNP + u_2$$
$$b_1, b_3 < 0, b_2 > 0$$

We also introduce a measure of government transfer payments to determine whether these payments affect poverty in households headed by women, as suggested by Gottschalk and Danziger. Thus, we get the following alternative formulations:

$$(3)\quad V = c_0 + c_1 RMIN + c_2 UNF + c_3 RFMEDY + c_4 RFAFDC + u_3$$
$$c_2, c_3\, c_4 < 0, c_2 > 0$$

and

$$(4)\quad V = d_0 + d_1 RMIN + d_2 UNF + d_3 PCGNP + d_4 RFAFDC + u_4$$
$$d_1, d_3, d_4 < 0, d_2 > 0$$

The variable *RFAFDC* is the real value of annual AFDC payments per family. AFDC payments can be considered representative of the transfer payments received by households headed by women. The real value of Federal and State transfer payments (*TR*) was

also used as an alternative measure of total transfer payments.

For the empirical estimations, we use annual data for the period of 1959–87. The parameters of the equations are estimated using the ordinary least squares technique. All monetary variables are measured in real terms with a base year of 1985. The Consumer Price Index for Urban Consumers was used to deflate all the variables with the exception of *PCGNP*. For *PCGNP*, the GNP implicit price deflator was used instead.

Empirical results

The empirical results of equations (1) to (6) in table 1 allow us to make some suggestions regarding the propositions tested. The summary statistics of all the estimated equations are at satisfactory levels. The most interesting result is that in all of the equations, regardless of the model structure applied, the real minimum wage (*RMIN*) is statistically significant and negatively related to the dependent variable. Therefore, the results satisfy the *a priori* expectations. The rate of poverty of households maintained by women seems to be significantly affected by changes in the real minimum wage. The magnitude of the impact is also important. For example, in equation (1), the estimated coefficient indicates that a $1 increase in the real minimum wage would decrease poverty by approximately 4.5 percentage points. The statistical results imply, as one would expect, that low wages are a significant factor in determining poverty rates. If the real minimum wage had remained constant at its maximum 1968 value ($4.90), poverty would have been reduced by 7.8 percentage points from its 1987 level of 34.3 percent. Alternatively, if the 1987 real minimum wage maintained the 1959–87 average value, the poverty rate would have declined by 3.9 points in 1987.

Some authors have suggested that changes in the rate of poverty are partly explained by the variation in the percentage rate of unemployment. Our estimations do not support this proposition. Overall, unemployment seems to be insignificant. This may be because the effect of unemployment is captured indirectly through the production/income variables.

The real median income of women (*RFMEDY*) is statistically significant in all equations. The real per capita GNP (*PCGNP*) is significant in 2 of 3 equations. These results substantiate findings in earlier studies by Galloway, Thornton and others, Gottschalk and Danziger, and ourselves. Although the statistical results are more consistent with *RFMEDY* as an independent variable, there appears to be no substantial improvement in the equation structure and explanatory power when the real median income of women is used (equations 1, 3, and 5, table 1) instead of real per capita GNP. The observed signs of the income coefficients are negative, satisfying our *a priori* expectations. The magnitude of the coefficients indicates that the real median income of women has a somewhat greater effect on poverty rates than real per capita GNP. A coefficient value of approximately –3.8 in equation (1) implies that for every $1,000 increase in the real median income of women, poverty will decrease by 3.8 percentage points.

In equations 3 to 6 of table 1, real per-family payment of AFDC (*RFAFDC*) and, alternatively, real government transfer payments (*TR*) are introduced to test for their statistical significance. The empirical results, in general, do not conform with the theoretical suggestions of Thornton and others, and Gottschalk and Danziger that transfer payments significantly affect the poverty rate but support the conclusions we reached in our study of general poverty behavior. The results do substantiate Sawhill's report that the effect of government transfers on the feminization of poverty has been small. In 3 of 4 equations, the real transfer payments are statistically insignificant. The neutral impact of real transfer payments on poverty may indicate that these benefits affect family structure and the formation of households headed by women but may not have a direct effect on the level of poverty of these households.

Conclusion

A number of studies have been carried out to investigate the determinants of poverty. Some have suggested that economic growth is the vehicle to decrease the level of poverty; however, others have suggested that government policy regarding income transfers and unemployment are also important factors in explaining the incidence of poverty. Research on the feminization of poverty indicates that the formation of households headed by women in itself was the cause of increased poverty in that segment of the population. We suggest that the real minimum wage set by the Federal Government is a determinant of the poverty rate in these households.

The overall results and analysis of the estimated poverty equations allow for the following observations regarding the propositions tested:

- The most important empirical conclusion of this study is that, in relative terms, the real minimum wage plays a major role in explaining the feminization of poverty.
- Changes in the real median income of women and real per capita income are statistically significant in determining changes in the poverty rate of households headed by women. That is, fluctuations in economic activity affect overall income and labor market conditions and, therefore, impact poverty rates.
- The rate of unemployment does not seem to directly affect the variation in the poverty rate of households maintained by women. This may be because economic activity variables may indirectly reflect the unemployment effects.
- Government transfer payments do not seem to play an important role in explaining poverty rate variations for this household cohort.

It should be noted that a number of studies suggest negative employment consequences as the minimum wage is increased. This may not affect poverty among households headed by women because the unemployment rate does not seem to play a statistically significant role in determining the poverty rate of this cohort. An increased real minimum wage might also encourage a higher rate of labor market participation and also automatically lift some working women who head households above the poverty line.

The conclusions reached here are suggestive and have major implications

regarding economic policy to fight poverty. More analysis is required before one reaches definitive conclusions. We hope that this study will stimulate further research and discussion on the determinants of poverty. □

Footnotes

[1] Victor R. Fuchs, *The Feminization of Poverty?* Working Paper, 1934 (Cambridge, MA, National Bureau of Economic Research, Inc., 1986).

[2] Ralph Smith and Bruce Vavrichek,"The minimum wage: its relation to incomes and poverty," *Monthly Labor Review*, June 1987, pp. 24–30.

[3] Richard V. Burkhauser and T. Aldrich Finegan,"The Minimum Wage and the Poor: The End of a Relationship," *Journal of Policy Analysis and Management*, 1989, vol. 8, no.1, pp. 53–71.

[4] Lowell E. Galloway,"The Foundations of the 'War on Poverty'," *The American Economic Review*, 1965, vol. 55, pp. 123–31.

[5] Henry Aaron,"The Foundations of the 'War on Poverty' Reexamined," *The American Economic Review*, 1967, vol. 57, pp. 1229–40.

[6] James Thornton, Richard Agnello, and Charles Link, "Poverty and Economic Growth: Trickle Down Peters Out," *Economic Inquiry*, 1978, vol. 16, no. 3, pp. 385–93.

[7] Demetrios Giannaros, "Government Transfers, Growth and Unemployment Effects on Poverty: An Empirical Investigation," *Journal of Economics*, 1988, vol. XIV, pp. 84–91.

[8] Peter Gottschalk and Sheldon Danziger, "A Framework for Evaluating the Effects of Economic Growth and Transfers on Poverty," *The American Economic Review*, 1985, vol. 75, pp. 153–61.

[9] Rebecca M. Blank and Alan S. Blinder, "Macroeconomics, Income Distribution, and Poverty, " in Sheldon H. Danziger and Daniel Weinberg, eds., *Fighting Poverty* (Cambridge, MA, Harvard University Press, 1986).

[10] Edward M. Gramlich and Deborah S. Lauren, "How Widespread Are Income Losses in a Recession?" in D. Lee Bawden, ed., *The Social Contract Revisited* (Washington, Urban Institute Press, 1984).

[11] Julius W. Wilson and Kathryn M. Neckerman,"Poverty and Family Structure: The Widening Gap Between Evidence and Public Policy Issues," in Sheldon H. Danziger and Daniel Weinberg, eds., *Fighting Poverty* (Cambridge, MA, Harvard University Press, 1986).

[12] Isabel Sawhill, "Poverty in the U.S.: Why Is It So Persistent?" *Journal of Economic Literature*, 1988, vol. 26, no. 3, pp. 1073–1119.

[13] For details, see Sheldon Danziger, George Jakubson, Saul Schwartz, and Eugene Solensky, "Work and Welfare as Determinants of Female Poverty and Household Headship," *Quarterly Journal of Economics*, 1982, vol. 97, no. 3, pp. 519–34; David T. Ellwood and Mary Jo Bane, "The Impact of AFDC on Family Structure and Living Arrangements," Report on Grant 92A–82, unpublished paper (Washington, U.S. Department of Health and Human Services, 1984); Wilson and Neckerman, "Poverty and Family Structure;" Martha E. Giminez, "The Feminization of Poverty: Myth or Reality?" *The Insurgent Sociologist*, 1985, vol. 75, pp. 5–30; and David T. Ellwood and Lawrence Summers,"Poverty in America: Is Welfare the Answer or the Problem?" in Sheldon H. Danziger and Daniel Weinberg, eds., *Fighting Poverty* (Cambridge, MA, Harvard University Press, 1986).

[14] Joan Smith,"The Paradox of Women's Poverty: Wage Earning Women and Economic Transformation," in Barbara Gelpi, Nancy Hartsock, Clare C. Novak, and Myra Strober, eds., *Women and Poverty* (Chicago, University of Chicago Press, 1986).

[15] Laurie Bassi,"Poverty Among Women and Children: What Accounts for the Change?" *American Economic Review*, 1988, vol. 78, no. 2, pp. 91–95.

States act to improve literacy of workers

Comprehensive programs or policy initiatives designed to improve the literacy rate of workers have been developed in nine States. A report of the Council of State Policy and Planning Agencies profiles the literacy plans of these States. The Council's State Policy Academy group assisted officials of the States in defining problems related to literacy, determining appropriate goals and objectives, and developing approaches to ease the problems. One problem the Academy found common in all States was the growing disparity between the literacy levels of certain segments of the work force and the level of skills required to obtain jobs or advancement. The report outlines three methods used by the States to improve literacy—comprehensive, special project, and "groundwork."

Comprehensive approach. In Florida, policymakers emphasized the problem of adults who lacked functional literacy skills needed to participate in economic growth opportunities. The State, assisted by the Academy, developed the Florida Adult Literacy Plan. The plan has two objectives to attain by 1995: to reduce Florida's basic skills (fourth-grade level) illiteracy rate from 3.5 percent of the adult population to 2 percent, and to reduce the functional skills (ninth-grade level) illiteracy rate from 18 percent of the adult population to 10 percent. The plan fits into the State's recent welfare reform measures because it ties literacy enhancement to reduction of welfare dependency. Local school districts will provide literacy services to populations named through State interagency plans.

Special project approach. According to lawmakers in Tennessee, one-third of the State's adult population still believes that little or no education can carry a worker through a lifetime of productivity. The State's literacy plan has 13 objectives. Among them are objectives to increase the high school literacy rate, create work force literacy programs, form a Literacy Volunteer Corps, and increase the funding for State literacy by 400 percent. Although the funding increase was not fully appropriated, several new programs have begun, and 207 businesses in private industry support the overall program.

Groundwork approach. Idaho's literacy plan was in response to two major problems: more than half of the State's dislocated workers and poverty-stricken adults do not have high school diplomas, and the State's investment in public schools is low—about $8 per adult served. The literacy improvement plan includes increasing public awareness of the literacy problem, increasing the State's funding for literacy, and increasing public and private collaboration and support. The initiative is part of the Governor's Workforce 2000 Task Force.

THE REPORT ALSO profiles the literacy plans for Massachusetts, Michigan, Missouri, North Carolina, Utah, and Virginia. The full report, *Enhancing Literacy for Jobs and Productivity: Academy Final Report*, is available from the Council of State Policy and Planning Agencies, 400 North Capitol Street, Washington, DC 20001 —Laurie B. Lande, Office of Publications. □