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ABSTRACT

A study examined the effect of the Targeted Jobs Tax Credit (TJTC) on a variety of employer- and employment-related outcomes. Data were collected from two databases and a set of case studies. Although most employers report having heard of TJTC, only a small number of firms were actually participating in the program. TJTC did not appear to change hiring practices, and employers systematically underestimated the expected productivity of TJTC-eligible persons and thus often incorrectly believed that they were lowering hiring standards by hiring these workers. Although most employers were surprised by how well TJTC-eligible workers performed on the job, they did not revise their opinions about the average productivity of these workers. The TJTC could be improved by increasing the effectiveness of TJTC referral services, tightening eligibility determination, increasing funding for administration, and limiting eligibility to referrals by client-centered agencies. (Appendixes include a brief description of the first wave of the employer survey, the employer questionnaire, the Poisson model of TJTC participation, the case study interview form, and the TJTC questionnaire administered by the interviewer.) (MN)

THE EFFECTS OF TJTC ON EMPLOYERS

Task 4 Final Report

by

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I. INTRODUCTION

1. THE ECONOMIC RATIONALE FOR TARGETED EMPLOYMENT SUBSIDIES

Over the last two decades, the federal government has repeatedly attempted to induce private employers to increase their hiring of welfare recipients and other disadvantaged workers. The government's purpose has been to enlist the help of the private sector in "getting people off the welfare rolls and on to the tax rolls." The primary examples of this effort are the Targeted Jobs Tax Credit (TJTC), the Work Incentive (WIN) tax credit for recipients of Aid to Families with Dependent Children (AFDC), and Job Training Partnership Act (JTPA) [formerly Comprehensive Employment - Training Act (CETA)] on-the-job training contracts. Most of these programs have not achieved a very high rate of employer participation, however, and there is controversy about how effective they have been in inducing changes in employer behavior.

The rationale behind targeted employment subsidies is a straightforward one: by reducing the price of specified groups of disadvantaged workers, employment of these workers will increas . Such subsidies lower the costs of increasing output, so they could be expected to generate a small expansion in output and to weaken pressure for price increases. The primary benefits of such subsidies are said to come from the fact that they are targeted on a group of potential workers who (1) would not be able to find employment without the subsidy and (2) are deserving of assistance (i.e., needy). Thus there is both an efficiency and distributional rationale for targeted employment subsidies.

The Efficiency Rationale. The efficiency case for a targeted employment subsidy rests on its presumed ability to stimulate employment without causing skill shortages, production bottlenecks, and accelerating inflation and on its ability to

reduce existing factor market distortions. In an environment where unemployment seems to remain at unacceptably high levels, even when many labor markets are tight and rates of wage increase are accelerating, noninflationary increases in employment and output can be achieved only by stimulating an increase in aggregate supply (i.e, increasing the supplies of factors of production or the efficiency of their use). Measures such as targeted employment incentives that bring into regular employment workers who would not otherwise have jobs and give them the training and experience necessary to become regular workers should produce noninflationary increases in total employment and output.

If employment subsidies are targeted on groups of workers in excess supply or groups which will readily enter the labor market if the time required to find a job is shortened or the wage rate is increased, GNP will rise without causing inflation to increase. An employment subsidy targeted on low-income youth, transfer program recipients, and handicapped workers would seem to meet this test, as large numbers of these workers are unemployed because of labor market rigidities (e.g., legal and conventional minimum wages). Hence, substantial employment increases could occur without upward wage pressure, and both actual and potential GNP will increase. Econometric work suggests that these target groups respond readily to changes in the demand for labor (Masters and Garfinkel, 1978).

The benefits of expanding potential GNP in this manner are increased by the fact that labor supply decisions of targeted groups are distorted by high employer and employee taxes on labor income and even higher benefit reduction rates in welfare and other transfer programs. Because these distortions tend to reduce the work effort of people who would in their absence prefer to work, employment increases induced by employment subsidies will increase GNP without causing any serious loss in highly valued leisure. Moreover, the resulting increase in tax revenues and decrease in transfer costs reduces the net budgetary

cost of the program and benefits other taxpayers. Even if the costs were equal, the public seems to prefer to help people by giving them a job rather than a handout.

Assistance to the needy rationale. The costs of inadequate economic performance in the U.S. are shared unequally. The unemployment rates of certain demographic groups--e.g., blacks and youth--are very high. Behind each of these high unemployment rates lies a pool of discouraged workers--nonparticipants in the labor force who would look for employment if they thought there was much chance of finding it. Employment subsidies targeted on these disadvantaged workers may be able to change the composition of nonemployment so as to reduce the heavy burden which now falls on them.

If TJTC is to accomplish these objectives--increasing total output and employment without inflation and helping the disadvantaged--it must first induce hundreds of thousands of employers to participate and then it must induce these firms to change their hiring and employment practices (in ways that benefit the disadvantaged). This report addresses these two questions by analyzing data obtained from employers on their use and response to the Targeted Jobs Tax Credit. As the federal agency with major responsibility for administering these programs, the Department of Labor needs to know (1) whether TJTC is increasing the employment of its target groups and (2) how the program can become more cost effective and successful.

2. OBJECTIVES AND HISTORY OF TJTC

(1) Program Objectives and Legislative History

The federal government has offered to subsidize the hiring of disadvantaged workers by private employers through the TJTC and WIN tax credit (now part of TJTC) programs. The original TJTC program, authorized by the Revenue Act of 1978, subsidized

the costs of hiring workers from certain target populations, which were as follows:

- Economically disadvantaged youth (ages 18-24)
- Youth (ages 16-18) participating in a cooperative education program
- Economically disadvantaged Vietnam-era veterans (under age 35)
- Economically disadvantaged ex-offenders
- Handicapped persons receiving or having completed vocational rehabilitation
- General assistance recipients
- Supplemental Security Income (SSI) recipients

The Revenue Act permitted employers who hired individuals in the target groups to claim a tax credit of 50 percent of the first $6,000 in wages paid to an employee in the first year on the job, and a 25 percent tax credit on the first in $6,000 wages paid in the second year.

A criticism of the original program was that it gave employers a subsidy for workers they would have hired in any case. This criticism stemmed from the fact that (1) half of the certifications were for cooperative education program participants, whom employers probably would have hired in the absence of the TJTC program; and (2) a large share of the remaining certifications were obtained retroactively (that is, after the hire occurred).

Countering this criticism, the Economic Recovery Tax Act of 1981 (ERTA) eliminated both the general eligibility for cooperative education program participants (economically disadvantaged studerts remained eligible) and retroactive certification. Furthermore, this Act added two new target groups--AFDC recipients/WIN participants and involuntarily terminated CETA/Public Service Employment (PSE) employees--and abolished WIN as a separate program. The Act also extended the program to December 31, 1982.

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The Tax Equity and Fiscal Responsibility Act (TEFRA) of October 1982 established a new target group for the program--economically disadvantaged summer youth--and extended the program until December 31, 1984. The Deficit Reduction Act of 1984 further extended it through December 1985. An "economically disadvantaged summer youth employee" is any individual certified by a designated local agency as meeting the following criteria:

- Performs services for the employer between May 1 and September 15
- Has attained age 16 but not 18 on the hiring date
- Has not been an employee of the employer at any time previously
- Is a member of an economically disadvantaged family

Under TEFRA, an employer hiring a TJTC-vouchered summer youth is eligible for a tax credit of 85 percent of the first $3,000 (or less) of the employee's qualified wages for any 90-day period (or less) between May 1 and September 15.

(2) TJTC Vouchering and Certification Procedures

For specific eligibility operations, two basic forms are used in the processing of TJTC cases: a voucher and a certification. A voucher is issued by the State Employment Security Agency (SESA) or other vouchering agency to a qualified applicant. The applicant presents the voucher to the employer, who, after deciding to hire the applicant, completes the employer declaration section of the voucher and returns the form to the SESA listed on the voucher. If an employer plans to hire an employee who seems to be eligible but does not have a voucher, the employer is permitted to request certification of eligibility (in writing) from the SESA. In all cases, the certification

request must be postmarked on or before the day the individual begins to work.[1]

The employer certification form is completed by the SESA after receipt of the employer declaration or certification request. The certification is then sent to the employer for purposes of completing the IRS tax return (the certification is not filed with the return).

With regard to eligibility, the employment service office and other vouchering agencies, determine an individual's eligibility by completing the Applicant Characteristic Form. For verification purposes, the vouchering agency may require the applicant to present proof of family income and other information at the time of vouchering. On the other hand, the employment service offices have the option of conducting income verifications "after the fact" on a sample of all vouchers issued. The rules defining income eligibility are quite complex and can not be implemented reliably by employers.

(3) Experience with TJTC

The TJTC program started slowly but by fiscal 1981, 400,000 workers were being certified per year. Eligibility was tightened in 1981. That, combined with the economic recession, reduced the number of certifications to 202,261 in fiscal year 1982. With the end of the recession certifications rebounded to 431,182 in fiscal 1983 and then rose to 563,381 in fiscal 1984. There were 1,337,637 vouchers issued in fiscal year 1984. The TJTC program continues to grow, though at a slower pace. Fiscal year 1985 certifications were 621,889, about 10 percent greater than in 1984.

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[1]The Deficit Reduction Act of 1984 gives employers a grace period of 5 days after the start date for requesting a certification, if the worker had been vouchered prior to the start date.

The primary population group subsidized by TJTC has been youth. A breakdown of the number of TJTC vouchers and certifications by eligibility category is provided in Exhibit I-1 and I-2. Prior to the 1981 ERTA amendments, cooperative education students were the largest single group of TJTC eligibles served, with economically disadvantaged youth a close second. The ERTA requirement that co-op students be disadvantaged has greatly reduced the use of TJTC as a subsidy of co-op education placements. Economically disadvantaged youth (ages 18-24) and the new summer youth group account for 67 percent of all certifications. AFDC recipients are the next most important group, accounting for 12 percent of all certifications.

TJTC has had greater success at obtaining employer participation than previous targeted employment subsidies, such as the WIN tax credit, the National Alliance of Business (NAB) JOBS program, and CETA on-the-job training. This is due to the following features of TJTC:

- TJTC is an entitlement. Reluctance on the part of local agencies to administer it cannot prevent a persistent employer from obtaining certification of employees who are eligible. In fact, ETA's 1979 study of early implementation of TJTC found "the rather limited vouchering and certification activity that had taken place by then was largely in response to employer and applicant inquiries rather than active promotion by their staff."
- Participation in TJTC requires less paperwork than CETA on-the-job training or the JOBS and early WIN programs did and requires fewer contacts between government agencies and the employer.

Nevertheless, the TJTC is currently helping a minority of those eligible for the program. The Congressional Budget Office (CBO) has calculated that the participation rate for disadvantaged youth is less than 10 percent.[2]

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[2]The Targeted Jobs Tax Credit. Congressional Budget Office Staff Memorandum written by Sandra Christensen, May 1984.

EXHIBIT I-1

Employment and Training Administration

TJTC VOUCHERS

Variables	Pre-ERTA	Post-ERTA		
	First Nine Months of FY 1981	Fiscal Year 1982	Fiscal Year 1983	Fiscal Year 1984
Economcially Disadvantaged				
Youth (18-24 yrs. old)	267,751	299,688	581,795	619,147
Summer youth (16-17 yr. old)	--	--	87,308	61,876
Vietnam-era veterans	31,976	43,434	80,808	76,322
Ex-offenders	35,232	46,055	94,545	75,322
Coop education students	132,232	48,055[a]	8,324[a]	--
Handicapped	2,900	48,029	78,683	95,443
CETA (involuntary terminees)	--	8,147	1,130	--
General assistance	47,653	54,654	65,169	92,600
SSI recipients	1,481	2,288	3,115	3,755
AFDC recipients	WIN	121,939	294,394	313,493
Total	545,407	624,687	1,286,947	1,337,637

Source: U.S. Department of Labor. Reports prepared by the U.S. Employment Service Office of Planning and Review/Operation, and dated June 31, 1981; October 6, 1983; December 27, 1983; and January 15, 1985.

[a]The number of coop education student certifications in FY 1982 and FY 1983 are not available, so the numbers of eligibility determinations have been used in their place (but are not included in the totals for the program).

EXHIBIT I-2

Employment and Training Administration

TJTC CERTIFICATIONS

Variables	Pre-ERTA	Post-ERTA		
	First Nine Months of FY 1981	Fiscal Year 1982	Fiscal Year 1983	Fiscal Year 1984
Economically Disadvantaged				
Youth (18-24 yrs. old)	124,701	132,195	259,309	328,213
Summer youth (16-17 yrs. old)	--	--	33,538	30,137
Vietnam-era veterans	11,818	13,271	24,141	29,000
Ex-offenders	11,414	13,332	21,929	27,278
Coop education students	132,314	48,055[a]	8,324[a]	--
Handicapped	12,318	14,727	25,412	38,263
CETA (involuntary terminees)	--	8,147	383	--
General assistance	6,006	8,136	14,480	24,101
SSI recipients	677	782	1,254	1,620
AFDC recipients	WIN	18,503	50,736	84,769
Total	299,248	202,261	431,182	563,381

Source: U.S. Department of Labor. Reports prepared by the U.S. Employment Service Office of Planning and Review/Operation, and dated June 31, 1981; October 6, 1983; December 27, 1983; and January 15, 1985.

[a]The number of coop education student certifications in FY 1982 and FY 1983 are not available, so the numbers of eligibility determinations have been used in their place (but are not included in the totals for the program).

3. DATA SOURCES

This study of the TJTC program as it effects employers analyzes two data bases. The first is a survey of 3,412 employers sponsored by the National Institute on Education (NIE) and the National Center for Research in Vocational Education (NCRVE) conducted between February and June 1982. The survey represented the second wave of a two-wave longitudinal survey of employers from selected geographic areas across the country. The first wave was funded by the U.S. Department of Labor to collect data on area labor market effects of its Employment Opportunity Pilot Project (EOPP). The survey encompassed 10 EOPP pilot sites and 18 comparison sites selected for their similarity to the pilot site. The survey design specified a strategy of oversampling firms with a relatively high proportion of low-wage workers. The second wave attempted to interview all of the respondents in the first-wave survey. About 70 percent of the original respondents completed surveys for the second wave. The data collected by this second survey on the use of TJTC are more extensive than those available in the first wave (or in any other data set known to the authors).

In the bulk of the sample, respondents were the owners/managers of the establishments. In large organizations, the primary respondent was the person in charge of hiring, generally the personnel officer. When primary respondents were unable to answer a question, they were asked if someone else in the organization would have the information, and that part of the interview was completed with this other official. Other respondents included comptrollers, wage and salary administrators, and line supervisors (for questions about a particular recent hire). A description of the sample frame of the first wave of the survey and a copy of the relevant portions of the questionnaire are included as Appendix A and B.

The second data source is a set of case studies, conducted during the course of the present contract, of firms that have hired a large number of TJTC eligible workers. These firms were in six industries: Eating and drinking establishments, Hospitals and nursing care facilities, General merchandise stores, Textiles, Food stores, and Hotels and motels. About 35 corporations were studied, with interviews conducted at headquarters, regional, divisional, and local establishments. Respondents were queried about recruitment and hiring practices, experiences with TJTC eligible workers, incentives for hiring TJTC workers, and intrafirm communications and policies regarding TJTC.

Although many interesting and important questions can be answered by analysis of the NCRVE employer survey and the case study data, there are other questions that a policymaker/analyst may ask that cannot be examined with these data sets. The report does address questions such as "Did TJTC induce participating firms to increase total employment or change their hiring policies so as to hire more disadvantaged workers?" But determining whether such impacts resulted in displacement of other workers or in net increase in economy-wide employment is beyond the scope of this report.[3]

In this respect--not examining the full general equilibrium effects--this report follows the pattern set by nearly all of the empirical evaluations of employment and training initiatives. General equilibrium effects can be calculated by simulating the impact effects in a fully specified general equilibrium model or by estimating impact effects in aggregate data on geographic areas which encompass all displacement/replacement effects. Both of these avenues will be pursued in the future but they are not part of the current report.

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[3]A theoretical discussion of these issues is provided in Haveman and Palmer (1981) and in Bishop (1979).

Chapter II of this report estimates multivariate behavioral models of utilization of TJTC and uses them to help understand why TJTC has a low participation rate among the universe of all employers and which types of firms are the biggest users of the program. Chapter III examines the impact of successful and unsuccessful experiences with TJTC hires on future use of the program. Chapter IV analyzes data on the impact that TJTC has upon the growth of employment at participating firms and the share of that employment that is under the age of 25. Chapter V examines the impact of TJTC on the recruitment practices and hiring standards of firms. Chapter VI examines the impact of TJTC on retention rates and the productivity of the workers who are retained. Chapter VII examines the effect that knowledge that an applicant is in a TJTC target group has on the perceived desirability of hiring that applicant. Chapter VIII examines how the large users of TJTC are implementing the program. Chapter IX summarizes the results and reviews the implications of the research for policy.

II. MULTIVARIATE MODELS OF EMPLOYER USE OF TJTC

II. MULTIVARIATE MODELS OF EMPLOYER USE OF TJTC

This chapter reports the results of multivariate analyses of employer use of the TJTC.

1. THEORETICAL FRAMEWORK

The Targeted Jobs Tax Credit is a recruitment subsidy; that is, it only subsidizes newly hired workers, not workers already employed by the firm. A subsidy of 50 percent of the wages of eligible new hires is not equivalent to a 50 percent reduction in the market wage of this type of worker. First, no payment is made for workers already employed by the firm, and second, the firm receives the payment only if it applies for the subsidy and verifies the eligibility of new workers for subsidization. Even a firm that is aware of the existence of such a program may not have all the necessary information about which job applicants are eligible and which are not. The cost of obtaining this information, of getting the necessary government certifications, and then applying for the subsidy may deter some firms from participating in the program.

(1) The Decision to Participate in TJTC

This section develops a simple model of the TJTC participation of a profit-maximizing firm that buys inputs and sells outputs in competitive markets. For simplicity, targeted labor (L) is treated as a single factor of production, and W represents the market price of this factor. Suppose the federal government offers the firm a subsidy of proportion S of the wages of all newly hired targeted workers. If L_o is defined to be the number of targeted workers employed by the firm in the period prior to the subsidy offer, and t to be the periodic rate of turnover of subsidized workers, the total subsidy payment made to the firm is

$SW[L - (1-t)L_o]$.[4] L_o is assumed to be greater than or equal to zero.

To participate in a subsidy program, the firm must bear both fixed and incremental costs. Fixed costs involve such factors as making the initial applications for the subsidy and setting up a system to evaluate job applicants for their eligibility. An additional fixed "cost" is the fear that participation may entail closer government scrutiny of tax records and hiring extra costs of recruiting, screening, and verifying the eligibility of an additional subsidized worker. If new hires from the target group are less productive or more likely to quit or be fired than new hires not from the target group, there are additional incremental costs. Suppose we represent these participation costs by C and assume that they are a linear function of the number of subsidized workers. That is:

$$(1) \quad C = a + b[L - (1 - t)L_o]$$

where

a is the fixed cost of participation, $a > 0$; and

b is the marginal cost of participation per subsidized worker,

$b > 0$; $b<SW$.

The firm will elect to participate in the program if the benefits from doing so exceed the costs. Because the cost of participation is linear in the number of subsidized workers hired, the first-order condition for a maximum of profit with respect to L is the same for the participating firm whether the

[4]Note that is has been implicitly assumed that the firm is constrained from firing all of the targeted workers currently employed and replacing them with subsidized new hires. Most firms are at least partly constrained from simply firing workers without apparent cause. This assumption is reasonable because the training costs for new workers often exceed the magnitude of the subsidy, and because there have been as yet no documented cases of experienced workers being fired to hire a subsidy-eligible worker.

subsidy is marginal or on all units of targeted labor. Thus, the firm's profit function evaluated at the effective post-subsidy wage of (1 - S)W+b, after subtracting participation costs and the subsidy on the previously employed workers, can be used to express profits when the firm participates. Letting π be the profit function and P be the vector of all other prices, the net benefits to participation, B, can be expressed as:

$$(2) \quad B = \pi(P, (1 - S)W + b) + (b - SW)(1-t)L_o - a - \pi(P,W)$$

The firm will participate only if $B > 0$.

Because the firm's profit function is continuous in W, there will exist some subsidy rate such that the firm can be induced to participate in the program; that is, there must be some value of S for which $B > 0$. Suppose we let S* represent the subsidy rate that sets $B = 0$. At any subsidy greater than S*, the firm will participate, and at any rate less than S* it will not. The variable S*, therefore, is a convenient device for observing the impact of firm characteristics on the likelihood of participation. Any characteristics of the firm that increases (or decreases) S* decreases (or increases) the probability of participation in a program with subsidy rate S.

To observe the effects of various characteristics of the firm S, we can convert equation (2) into a more easily interpretable form. First, we approximate the difference between the profit function evaluated at the market wage and at the subsidized wage with a second-order Taylor series.[5] Then at S, equation (2) becomes:

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[5]The truncation of the Taylor series at the second-order term is not as limiting as it may appear. If we assume that the labor demand function is isoelastic (like the restricted Cobb-Douglas, for example) and that the marginal product of labor approaches zero as labor increases without bound the approximation will be exact. These assumptions are not far removed from the standard production theory. For a more complete description of the theory see Montgomery (1982).

$$(3)\quad \frac{\partial \pi(P,W)}{\partial W}(b - S^*W) + \frac{\partial^2 \pi(P,W)}{\partial W^2}\frac{(b - S^*W)^2}{2} + (b - S^*W)$$

$$(1-t)L_o - a = 0$$

The profit function has the property that its derivative (with respect to W) is the negative of the level of labor hired at the wage (i.e., the wage if no subsidy is offered or accepted) assuming that the firm faces a horizontial supply curve. If we let g be the autonomous periodic growth rate of the firm's labor demand, the number of targeted employees would be $(1 + g)L_o$, assuming no subsidy. Using this expression and rearranging terms in equation (3) gives us an implicit function of the minimum acceptable subsidy in terms of various characteristics of the firm, including η, the elasticity of demand for the targeted labor.

$$(4)\quad 1 - \frac{\eta}{2}\left(S^* - \frac{b}{W}\right) - \frac{(1 - t)}{(1 + g)} - \frac{a}{(S^*W - b)\ (1 + g)L_o} = 0$$

(2) Impact of characteristics of the firm and the local labor market

Equation (4) give us a means of determining the impact of firm characteristics upon the probability of participation in a program, with given subsidy rate S. For example, differentiating implicitly with respect to L_o yields:

$$(5)\quad \frac{\partial S^*}{\partial L_o} = \frac{-a}{(S^*W - b)\ (1 + g)L_o^2} \Big/ \left(-\frac{\eta}{2} + \frac{Wa}{(S^*W - b)^2\ (1 + g)L_o}\right) < 0$$

Equation 5 implies that, ceteris paribus, the more targeted workers a firm employed prior to the subsidy offer, the lower is the minimum subsidy rate necessary to induce participation. Therefore, we would expect higher participation rates among large firms and among firms that hire larger proportions of unskilled labor (since firms with either or both of these characteristics

should have higher absolute numbers of targeted employees). Observe that it is the existence of fixed costs of participation that cause this effect. If a = 0, the effect of L_o is also zero.

Implicit differentiation of (4) with respect to L_o, g, t, and η indicate that the likelihood of participation of a firm will be positively related to the following:

- The firm's total employment.
- The growth rate of the firm's employment.
- The proportion of the work force in low-skill occupations.
- The rate of turnover of unskilled workers.
- The elasticity of demand for unskilled labor. The labor demand elasticity can be expected to vary with such characteristics as the price elasticity of product demand, the elasticity of substitution between skilled and unskilled workers, the share of cost going to unskilled workers, and the type of industry.

The parameter b in equation (5) is the incremental participation cost of each subsidized worker. The derivative of S* with respect to b is the inverse of the wage rate. Thus, anything that increases b reduces the probability of participation. The incremental participation cost may be expected to vary with a number of characteristics of the firm and its location. It is therefore expected that the following characteristics will positively influence participation:

- The proportion of local population that is eligible. More eligible workers lower the cost of "searching" for a certified applicant.
- Flexibility in terminating unwanted workers. The purpose of these subsidies is to induce firms to hire difficult-to-employ workers. Many employers feel that hiring a subsidized workers means they are taking a greater risk that things will not work out. If the firm can easily correct its mistake by firing the worker, the risk is minimized. Thus, we anticipate that non-union firms that have a low firing threshold will be likely to participate.

- Proportion of workers who are full-time: Marginal participation costs are the same for each worker, regardless of the number of hours worked. They are proportionately lower, therefore, for full-time workers.
- On-the-job training (OJT) that is general rather than specific. The turnover rates of TJTC eligibles are believed to be higher than for other competing workers. If OJT is extensive and specific to the firm, these higher rates of turnover will impose significant costs on the firm and raise the marginal cost of participation. If training is general and workers pay for the training, higher turnover rates will not be particularly burdensome.
- An employer practice of hiring untrained workers and training them rather than hiring already trained and experienced workers for that same job. The marginal costs of participation will be lower in these circumstances because the firm will already be accustomed to providing the additional training that TJTC eligibles would probably require. Such a practice may be signaled by a tendency of starting wage rates to be below those typical for the job or for training to be greater than what is typical for the job.
- Being prevented from setting lower starting wage rates by minimum wage legislation. TJTC eligibles are perceived to have poorer work habits and to be less skilled than ineligible workers. The high unemployment experienced by these groups is partly a consequence of their inability to overcome this stigma by offering to work at a wage that is below the legal minimum. Firms that in the absence of minimum wage legislation would have offered jobs paying below the minimum wage are probably the firms that would have employed these workers if there had not been a minimum wage. Being forced to pay a higher wage has reduced employment at these firms and probably induced the firm to raise the qualifications and experience required to be hired. These firms will generally have less difficulty adapting their hiring and training to eligible workers than firms that pay wages that are considerably above the minimum wage.

The parameter a in equation (5) is the fixed cost of participation in the program. The fixed cost of participating involves the costs of learning what the rules of the subsidy program are, how the paperwork must be processed, and how to obtain qualified eligibles. The lower these costs are, the

higher is the probability that the firm will participate in the program. Consequently, we can predict that firms with the following characteristics will be more likely to participate in TJTC:

- Firms that have personnel directors. The personnel directors have more free time to learn about programs like TJTC than owners or plant managers, and they are also more likely to be targeted for outreach by agencies seeking to place TJTC eligibles.
- Members of local business organizations. These employers are much more likely to be contacted by government agencies and offered referrals of TJTC eligibles. This lowers the fixed costs of learning how to take advantage of the program. They also may get a sales pitch about TJTC at meetings or in a newsletter.
- Firms that are contacted by local program administrators.
- Firms that have participated in this or similar programs in the past. Once one has participated, the fixed costs of participating the next year decline almost to zero.
- Employers with a positive attitude toward government officials.
- Regular users of the employment service.

The policies of the local agencies administering the program influence both the fixed and marginal costs of participation and therefore are important determinants of participation. Administration of the TJTC is primarily in the hands of the local employment service offices. In some communities, employment service staff members have marketed TJTC by telephoning local employers and offering to come to their plants to help identify and then certify the TJTC eligibles who were working there. In other communities, employers who seek referrals of eligible workers or more information about the program may get no help at all. Firms cannot participate in a program if they do not know who to contact locally about application and certification. Consequently, it is expected that participation (as well as

familiarity) will be greater in communities in which there has been extensive promotion by the local employment services.

2. RESULTS

This section presents the results of a multivariate analysis of the determinants of TJTC use. The number of TJTC eligibles hired are modeled as a function of the following characteristics of the employer: size of the establishment and firm; descriptors of the firm's work force composition; characteristics of the firm's personnel policies; industry; and miscellaneous variables, such as whether the employer belongs to a business organization. The definition, means, and standard deviations of the variables used in the models are presented in Exhibit II-1.

In the sample of more than 2,641 firms, about 90% of them did not hire any TJTC certified workers, 5% hired 1 to 5, and the remaining 5% hired more than 6. Because of the highly skewed and discrete nature of the distribution we employed a Poisson specification of the model as proposed by Hausman, Hall, and Griliches (1984). Appendix C details this estimation technique.

The model is estimated for the number of TJTC workers certified in 1980, 1981, and 1982. The explanatory variables are a set of indicators that represent the number of eligibles in the firm, firm characteristics that relate to the fixed and variable cost of vouchering and certification, measures of government effort to encourage firms to hire TJTC workers, and the firms' past experience with government sponsored subsidy programs, such as NJTC, WIN, CETA-OJT, and TJTC. Except for the variables that pertain to the previous experience with TJTC, we do not have yearly observations on the right hand side variables.

EXHIBIT II-1

Employment and Training Administration

DESCRIPTIVE STATISTICS FOR INDEPENDENT VARIABLES

Variable	Mean	Standard Deviation	Description
Employment Size			
Log establishment size	2.912	1.475	Number of employees plus one.
Log firm/est. emp.	.490	1.188	Ratio of firm to establishment employment for multiestablishment firms.
Composition of Work Force			
Unionized	.103	.280	Collective bargaining coverage of nonsupervisory workers.
New hire rate in 1979	.233	.200	Ratio of new hires in 1979 to sum of Dec. 79 emp. and new hires in 1979.
Proportion under 25	.271	.256	Proportion work force under 25 in 1980.
Proportion craft	.162	.254	Proportion work force that are craft workers in 1979.
Proportion white-collar	.470	.360	Proportion white-collar in 1979.
Proportion managerial	.163	.204	Proportion managerial in 1979.
Proportion part-time	.179	.274	Proportion part-time in 1979.
Personnel Policies			
Has personnel office	.115	.319	Dummy for respondent worked in the personnel office.
Log length probationary period	2.806	1.242	Number of weeks in probationary period.
No probationary period	.241	.428	Dummy for no probationary period
Layoff based on seniority	.410	.271	If there had to be permanent/temporary layoff of one-third of staff would it be based on seniority or productivity from one to zero.
Other Firm Characteristics			
Log cost of machinery	1.699	1.492	Cost of the most expensive maching the new hire will work with if purchased today.
Log weeks to be fully trained	1.844	1.283	Weeks for a new employee to become fully trained and qualified if he/she has no previous experience.
Member of business organizations	.510	.500	Firms or respondent a member of a local business organization.
Avoids dealing with bureaucrats	.659	.315	Responses to "as much as possible I try to avoid having to bureaucrats" scaled from one to zero.
Profitable last year	.535	.310	Responses to "from a profit point of view, was 1981 a very good year, not a good year, or a year of losses?" scaled from one to zero.

The model was estimated separately for each of the 3 years in order to capture how the employer response to the TJTC program changed over the observation period. Changes in employer response to the program are to be anticipated because (1) the program was new in 1979 and many of the employers learned of the program after 1980, (2) response to the program is likely to evolve over time as the firm becomes more familiar with its paperwork and how to recruit and train members of the target groups, (3) the rules of the program changed significantly in 1981, and (4) efforts of local administrators to promote the program changed over time. The estimation results are presented in Exhibit II-2.

(1) The Impact of the Number of Eligibles

The indicators of the number of eligibles included in the regression are the log of the establishment size in 1980, the new hire rate in the fourth quarter of 1979, the proportion of the workers under age 25 in 1979, and the proportion of unskilled workers in 1979.

The net effect of the establishment size is derived from the coefficient for establishment size minus the coefficient for log of the ratio of firm size to establishment size. The difference gives the elasticity of the number of certified workers with respect to establishment size. The elasticity estimates are 0.83 and 0.78 in 1980 and 1981 but the estimate dropped to 0.10 in 1982. The elasticity estimate in 1980 indicates that the expected number of TJTC certified workers increased with the size of establishment but the rate of increase was slightly less than proportional to establishment size--a 1% increase in establishment size was associated with 0.83% increase in TJTC employment.

The new hire rate in the 4th quarter of 1979 had the expected large positive effect on TJTC use. A one percentage point increase in the new hire rate was associated with a 1% percent

EXHIBIT II-2

Employment and Training Administration

DETERMINANTS OF TJTC HIRING
(Number of Observations = 2,621)

Variables	1980		1981		1982	
Indicators of the Number of Eligibles						
Log estab. empl. in 1980	0.761***	(26.9)	.855***	(31.63)	.462***	(12.65)
New hire rate in 1979: IV	1.101***	(3.10)	3.139***	(11.48)	3.606***	(11.66)
Proportion under 25 in 1980	-1.125	(.65)	1.113***	(6.90)	.702***	(3.48)
Proportion unskilled in 1979	0.266**	(2.17)	-.195*	(1.70)	1.468***	(9.53)
Indicators of Incremental Participation Cost						
Log index of general training	.280***	(7.49)	.218***	(6.12)	-.106**	(2.04)
Log index of specific training	-.130*	(1.79)	-.318***	(4.71)	-.084	(.90)
Unionized	-.271**	(2.37)	.409***	(4.00)	-1.040***	(6.19)
Proportion part-time	-.237	(1.28)	-.284*	(1.73)	.193	(1.13)
Log cost of machine	-.075***	(3.86)	-.103***	(5.43)	.157***	(6.17)
Wage residual	-.347***	(3.57)	.051	(.54)	.162	(1.22)
Someone fired in 1979	.144*	(1.83)	.233***	(3.09)	-.557***	(5.60)
Layoff based on seniority	.111	(.98)	-.191*	(1.80)	.322**	(2.23)
Indicators of Fixed Cost						
Log firm/estb. employment	-.071**	(2.08)	.083***	(3.26)	.364***	(12.85)
Has personnel office	-.120	(1.43)	.201*	(2.50)	.263***	(2.29)
Member of local business organization	.310***	(4.17)	.006	(.08)	.146	(1.65)
Listed opening with employment service in 1979	-.503***	(6.92)	-.167**	(2.49)	.467***	(4.78)
Outreach						
Government officiate offers eligible referral	2.467***	(20.9)	1.58***	(18.25)	2.204***	(17.83)
Conversation about TJTC not initiated by firm	.626***	(3.74)	.351***	(3.00)	.563***	(3.06)
Both a conversation and a referral offer	-.937***	(5.18)	-1.019***	(7.40)	-1.222***	(5.82)
Previous Receipt of Subsidies						
New jobs tax credit	.376***	(4.31)	.250***	(2.97)	.928***	(8.62)
WIN in 1977, 78, or 79	.122	(1.04)	.064	(.63)	.290**	(2.16)
CETA-OJT in 78 or 79	.614***	(6.23)	.891***	(10.85)	1.092***	(9.06)

t-value in parenthesis

*significant at the 10% level (two sided)
**significant at the 5% level (two sided)
***significant at the 1% level (two sided)

increase in TJTC employment in 1980 and a more than 3 percent increase in 1981 and 1982. The share of employees that are under age 25 had very large positive effects on use of TJTC in '81 and '82 but inexplicably not in 1980. The proportion of the firm's jobs that were unskilled (i.e., in laborer, operative, or service occupations) had the expected positive effect on TJTC use in 1980 and 1982 but not in 1981.

(2) Impacts of Incremental Participation Cost

The regressions indicate there was a significant shift in the types of firms that made use of TJTC after the ERTA amendments went into effect in September 1981. The indicators of low skill, low wages, and lack of job security that were hypothesized to be associated with low incremental costs of participation and therefore with high utilization of TJTC did have the expected effects on TJTC use in 1980 and early 1981. The big users of TJTC tended to:

- offer new employees more than the usual amount of general training
- offer new employees less than the usual amount of specific training
- have low capital investment per worker
- have lower than average wage rates
- offer less job security (as indicated by having fired someone in the 4th quarter of 1979)

Nonparticipants had the opposite set of characteristics. After September 1981, however, the pattern changed and the firms that were big users of TJTC tended to:

- offer new employees less than the average amounts of training

- be nonunion
- have high capital investments per employee
- offer more job security (as indicated by not having fired someone in the 4th quarter of 1979)
- layoff workers on the basis of seniority rather than productivity

The results for the post ERTA period support our hypotheses about unionization but contradict our hypotheses regarding the effect of the other indicators of participation costs. One can only speculate as to why indicators of incremental participation costs which had the predicted effects on utilization in 1980 and 1981 should no longer have such effects after the ERTA amendments went into effect. The ERTA amendments made two major changes in TJTC: the blanket eligibility of cooperative education students was ended and retroactive certifications abolished. The first change might very well have reduced the training content of the typical TJTC subsidized job. Since cooperative education placements can be thought of as low skilled workers being placed in and trained for medium skilled jobs, another consequence of the decrease in the number of the cooperative education students getting TJTC certifications might have been a shift towards firms with predominantly unskilled jobs. This might explain the big increase between 1981 and 1982 in the response of TJTC hiring to the proportion of the firm's jobs that are unskilled.

Utilization of TJTC dropped in 1982 partly because of the ERTA amendments and partly because of the recession. The recession hit unionized firms particularly hard. Since these firms were required to fill openings by recalling laid off workers little use of TJTC by unionized firms was to be expected. For some reason, non-union firms which did not offer job security reduced their TJTC participation as well. We have no explanation for this change.

(3) Indicators of Fixed Cost

The results reported in panel 3 of Exhibit II-2 provide support for the hypothesis that fixed costs are an important determinant of TJTC use and that the pattern of fixed costs have substantially changed. Being a member of a local business organization had a big effect on participation in 1980 but not in later years. Having a personnel office did not increase utilization at first but it became important in 1981 and 1982. Probably the most dramatic change in the pattern of use of TJTC has been the growth in the use of TJTC by multi-establishment firms. In 1981, establishments which were part of a chain of stores were less likely to use TJTC. This turned around in 1981 and by 1982 the ratio of firm to establishment employment had become one of the most important determinants of TJTC use. Apparently, the managers of the local establishments were at first reluctant to get involved in TJTC because the tax benefits did not get passed through to their establishment's profit and loss statement. Apparently, in 1981 the corporate staff of many of these companies started to encourage their local managers to use TJTC and promoted its use by offering incentives to local managers for hiring TJTC eligibles (see Chapter VIII). Multi-establishment firms now account for the great bulk of TJTC use. The size of the establishment is no longer a primary determinant of TJTC usage. Turnover rate, proportion unskilled or young and the size of the firm (rather than the establishment) seem to now be the primary determinants of the use of TJTC.

The impact of being a user of the employment service in 1979 on the use of TJTC changed dramatically between 1980 and 1982 as a result of the ERTA amendments. Government contacts about TJTC and offers of eligible referrals are positively associated with having listed job openings in 1979. Holding referral offers constant, listing with the employment service apparently reduced use of TJTC in 1980 but increased it in 1982. This change is no doubt due to the abolition of retroactive certification and the

resulting greater use of employment service referrals to identify TJTC eligibles prior to hiring (see Chapter V for evidence of changes in use of the employment service after September 1981).

(4) Outreach

We now turn to the impact that government outreach efforts--personal contacts to explain the program and offers to refer eligible individuals--has on TJTC use. The analysis of the first wave of the employer survey found that firms that first learned of the WIN program from a personal contact by a representative of a government agency or local business organization were 84 percent more likely to participate in WIN during 1979, and 63 percent more likely to participate in TJTC than firms that had first heard about it from other sources (Bishop and Montgomery 1984). Having first heard of CETA-OJT from a personal contact more than doubled the chances of participating in CETA-OJT during 1979.

The second wave of the employer survey is an even better data set for studying the effects of government-initiated contacts promoting TJTC. The 80.4 percent of our sample of employers who reported having heard of TJTC were asked two questions about government-initiated contacts endeavoring to promote the TJTC program. The first question began as follows: "Have you or any of your staff spoken to a representative of government, a trade association, or a local business organization about these tax credits?" The 36 percent who answered yes were then asked by whom the initial conversation about tax credits was initiated. The responses were "you" (17.6 percent), "your staff or company" (13.8 percent), by "government" (43.8 percent), "a trade association" (4.3 percent), "a local business organization" (7.2 percent) or "other" (8.5 percent). Thus, 12.9 percent of the sample of employers were personally contacted about TJTC by a governmental official.

The second question about government contacts was, "Have you been asked by the employment service or any other agencies to accept referrals of job applicants who are eligible for Targeted Job Tax Credits or Work Incentive tax credits?" Twenty-one percent responded that they had received such a request. Considerably fewer (only 13 percent) of the firms reported having a conversation about TJTC that was initiated by a governmental official. Approximately 10 percent reported both types of interactions. In many of these cases one conversation probably produced yes answers to both questions.

In a previous report (Bishop 1985), we have shown that both kinds of contacts had large, statistically significant impacts on participation probabilities (i.e., hiring at least one TJTC eligible) and on trying to select eligibles. In this report, we examine the impact of such contacts on the magnitude of TJTC use--the actual number of TJTC eligibles hired. The coefficients reported in Exhibit II-2 measure the percentage increase in hiring of TJTC eligibles that was induced by each type of government-initiated contact. Contacts with an employer that include an offer to refer TJTC-eligible job candidates to the firm had a much larger impact on TJTC hiring than conversations that promoted the program but did not offer a referral.

The coefficient on the dummy variable indicating that government offered to refer an eligibile is 2.467. This implies that making such an offer increases the expected number of TJTC hires at that form by a factor of 12. In the next two years the coefficients are positive and highly significant, the point estimates in 1981 and 1982 are 1.58 and 2.201, respectively.

(5) Previous Receipt of Other Subsidies

Previous participation in other subsidy programs was expected to be associated with greater use of TJTC for three reasons. First, the firm is likely to be more familiar with the

paper work required to hire eligibles. This reduces the fixed costs of participation in the TJTC program and thus increases their likelihood of hiring TJTC workers. Second, past experience with similar programs may have changed the firm's assessment of the targeted group. If the firms found that the productivity of disadvantaged workers is as high as those of non-targeted groups, or is high enough so that the benefit from the subsidy exceeds the disadvantage in productivity, the firms will continue to hire subsidized workers. Third, firms that found it desirable to obtain subsidies for hiring disadvantaged workers in the past are probably different from other firms in many ways not captured by the firm characteristics variables included in the model. Past use of similar subsidy programs picks up the influence of these unmeasured characteristics. As hypothesized, participation in similar subsidy programs prior to 1980 had a large statistically significant impact on TJTC hiring. These effects of the participation prior to 1979 were even larger in 1982 than they were in 1980. Firms that participated in all three of the programs prior to 1980 hired 10 times as many TJTC eligibles as firms that had participated in none.

III. THE IMPACT OF PREVIOUS EXPERIENCE WITH TJTC ON FUTURE USE

III. THE IMPACT OF PREVIOUS EXPERIENCE WITH TJTC ON FUTURE USE

The impact of the program on employer perceptions of the productivity of target group workers is a very important issue for it influences both the utilization of the program and its cost effectiveness. In his re nt testimony, Bishop (1984) pointed out that:

> "What is important for the cost effectiveness of the program is how the existence of the program and resulting experiences with eligible workers change employer perceptions of the productivity of eligible workers. If the very fact that government has chosen to subsidize the hiring of a particular group causes employers to anticipate even lower output from the group, the program will not be cost effective. If, on the other hand, participating employers discover that eligibles are better than they previously thought, the program will be very cost effective."

We will address this issue in the first section of the chapter by examining whether employers stigmatize target group eligibles and how the propensity to stigmatize the target group is associated with participation in and use of TJTC. Longitudinal data on beliefs about the productivity of TJTC eligible are not available so the causal structure of these associations cannot be determined. Longitudinal data is available on the use of TJTC so in the second section of the chapter we will study whether positive past experiences with a TJTC hire are associated with increased use of TJTC.

1. EMPLOYER STIGMA

All firms that had heard of TJTC were asked if they thought "that tax-credit-eligible people usually make better or poorer new employees than people who are not tax-credit eligible." The

employers that were using the program had a more favorable opinion of TJTC eligibles than those who were not.[7] The typical firm that had heard of TJTC (whether or not it had hired a TJTC eligible) tended to have a negative attitude toward TJTC eligibles. Only 7 percent said TJTC eligibles made better workers, and 35 percent said eligibility made no difference in the quality of a worker, while 28 percent thought they were poorer than average.

A scale was constructed assigning +1 for employers who thought eligibles made better-than-average workers, 0 for those who thought it made no difference, and -1 for those who thought eligibles mad poorer workers. For employers who expressed an opinion, the weighted (by number of employees) mean of this scale was -.26. The unweighted mean was even more negative, -.43. Clearly, this negative attitude contributed to the low participation rate in the TJTC program.

All participant firms, which is a number dominated by small users, had a better but still relatively low opinion of TJTC eligibles. The mean for this group was -.17. Weighting the participants by the size of the firm or number of subsidized hires significantly raised the average opinion of TJTC eligibles. When participants were weighted by their size, the mean value of the opinion scale was .03. When weighted by usage of TJTC, the mean opinion was also roughly zero (-.05 and .04 depending on whether before ERTA or after ERTA usage of TJTC serves as the weighting factor). These firms felt that TJTC-eligible workers

[7]Employers who had not participated in the program typically did not know which of their current employees are eligible for TJTC and may not even have known what makes a person eligible. Their opinions may more often reflect prejudice rather than actual experience. Although the employers who participated in the program typically had a chance to observe directly how well particular TJTC eligible employees did, there seldom was a basis for objective measurement of productivity and their opinion is probably some mixture of previous prejudices and recent experiences.

were just as productive as the other workers they hired. Roughly as many reported that TJTC eligibles made better workers as reported that they were poorer. This finding implies that among TJTC users large firms and large users had a more favorable impression of TJTC workers. Large users who had good experiences with TJTC workers seemed to have continued to use the program after eligibility rules were tightened in 1981.

Because employers are reporting that the TJTC eligibles they knowingly hire are just about as productive as other workers in the same job and some employers are rapidly expanding their hiring of TJTC eligibles, the tax credit may be having the desired effect of raising some employers' opinions of the productivity of disadvantaged workers. Because there is no longitudinal data on employer beliefs about the productivity of TJTC eligibles or disadvantaged individuals in general, there is no way of testing this speculation. Another plausible interpretation of the results is that the growth of the TJTC program has been due to the spread of knowledge about how to use the program. Once the costs of learning how to use the program are incurred, the costs of continuing to use it are very low. They may, in fact, fall as the firm develops better methods of recruiting TJTC eligibles and of selecting from the pool of eligibles who have applied. Eligibles may be turning out to be just as productive as other new hires because employers have not lowered their hiring standards to increase their hiring of TJTC eligibles. Our case study evidence suggests that many firms have responded to the program by adding eligibles to the pool of candidates considered but have left their hiring standards unchanged.

2. IMPACT OF SUCCESSFUL PREVIOUS USE

We have just seen that many employers stigmatize job applicants who are members of TJTC's target groups. Job applicants know that telling a prospective employer that they are a welfare recipient is likely to reduce their chances of being hired so

they do not volunteer the information. Job applications are not allowed to ask about receipt of welfare or whether one is living with low or high income parents. Consequently, most of the disadvantaged workers hired by employers are not known to be disadvantaged when the hiring decision is made.

Not knowing which of their current employees are members of the stigmatized target groups, employers have no empirical basis upon which to reevaluate their prejudice, and so it is perpetuated. Believing that TJTC eligibles make poor workers, these employers see no reason to learn more about the program and so never become participants. However, when a firm receives a tax credit for hiring a TJTC eligible, it learns which of its employees are in TJTC target groups. As a result it gains an empirical basis for revising its opinions about target group members. Our research has found that the TJTC eligibles hired are just as productive and often more productive than other workers hired for the same job (see chapters V, VI, and VIII). This suggests that among those who use TJTC, prejudices against TJTC eligibles should diminish over time. While repeated measures of prejudice are not available to test this hypotheses, we do have repeated measures of TJTC utilization. The 1982 employer survey also contains data on the success of a TJTC eligible who was hired in 1980 or early 1981. The impact of success (or non success) with a previous TJTC eligible on later utilization of TJTC can therefore be examined.

This was done by reestimating the models in Exhibit II-2 with additional variables representing past use of TJTC and the success of past use of subsidy programs. The model predicting TJTC hiring after September 1981 contains 3 additional variables: a dummy for TJTC participation in 1980, a dummy for TJTC participation in the first 9 months of 1981 and a continuous variable measuring the relative productivity of a subsidized worker who was hired in 1980 or the first nine months of 1981. The model predicting TJTC hiring between December and September 1981 con-

tains two additional variables: a dummy for TJTC participation in 1981, and a continuous variable measuring the relative productivity of a TJTC eligible hired in 1980 or the first 3 months of 1981.

The results of this exercise are presented in Exhibit III-1. Not surprisingly, participation in TJTC at one point in time is associated with greater TJTC hiring at later time periods. Having participated in 1980 quadrupled TJTC hiring in 1981 and doubled it in 1982. Hiring one or more TJTC eligible in the first 9 months of 1981 multiplies expected TJTC hiring after September 1981 by 6. The coefficients on Favorable Past Experience are positive as hypothesized and in 1982 statistically significant. The coefficient implies a modest response of TJTC use to successful past experience with a subsidized employer.[8]

In chapter V, TJTC eligibles in the retail and service sector are found to be an average of 9 percent more productive in the third through twelfth week than unsubsidized workers doing the same job. A nine percent productivity advantage by an early TJTC hire is predicted by the equation to increase TJTC hiring by 29 percent in 1981 and 18 percent in 1982. Since the favorable past experience variable is based on the experience with only one of possibly many TJTC hires in the last few years it probably

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[8]The relative productivity of the subsidized employee is the difference in reported productivity during the 3rd through 12th week between a specific randomly selected subsidized new hire and the typical new hire for that job. The scale on which productivity was reported ranged from zero for absolutely no productivity to 100 for the highest productivity ever achieved by a worker in the same job. CETA/JTPA-OJT workers were included amongst the subsidized workers because it was thought that positive (or negative) experiences with either program would color opinions of the other program. The mean of the productivity variable is 6.7. If we randomly select two of a firm's new hires for a particular position, the typical magnitude of the difference between the productivity of these two workers is 15 points. This is equivalent to the standard deviation of the productivity variable.

EXHIBIT III-1

Employment and Training Administration

DETERMINANTS OF TJTC HIRING AND IMPACT OF OUTREACH AND PREVIOUS USE
(Number of Observations = 2,621)

Variables	1980		1981		1982	
Indicators of the Number of Eligibles						
Log estab. empl. in 1980	.761***	(26.9)	.792***	(29.9)	.283***	(7.92)
New hire rate in 1979 IV	1.101***	(3.10)	3.525***	(12.4)	3.105***	(9.20)
Proportion under 25 in 1979	-1.125	(.65)	.937***	(5.86)	.330	(1.56)
Proportion unskilled in 1979	.266**	(2.17)	-.204*	(1.81)	1.608***	(9.74)
Indicators of Incremental Participation Cost						
Log index of general training	.280***	(7.49)	.136***	(5.36)	-.174***	(3.40)
Log index of specific training	-.130*	(1.79)	-.342***	(5.40)	-.012	(.14)
Unionized	-.271**	(2.37)	.466***	(4.49)	-.806***	(4.62)
Proportion part-time	-.237	(1.28)	-.509***	(3.07)	.362**	(2.02)
Log cost of machine	-.075***	(3.86)	-.093***	(4.87)	.230***	(8.41)
Wage residual	-.347***	(3.57)	.254***	(2.61)	.387***	(2.70)
Someone fired in 1979	.144*	(1.83)	.242***	(3.15)	-.594***	(5.34)
Layoff based on seniority	.111	(.98)	.112	(1.02)	.331**	(2.20)
Indicators of Fixed Cost						
Log firm/estab. employment	-.071**	(2.08)	.011	(.41)	.254***	(7.70)
Has personnel office	-.120	(1.43)	.140*	(1.68)	-.106	(.82)
Member of local business organization	.310***	(4.17)	-.061	(.92)	.260***	(2.73)
Listed opening with employment service in 1979	-.503***	(6.92)	-.297***	(4.32)	.475***	(4.47)
Outreach						
Government office of eligibility referral	2.467***	(20.9)	1.646***	(18.9)	1.914***	(14.8)
Conversation about TJTC not initiated by firm	.626***	(3.74)	.444***	(3.77)	.167	(.87)
Both a conversation and a referral offer	-.937***	(5.18)	-.400***	(9.94)	-1.160***	(5.22)
Previous Receipt of Subsidies						
New jobs tax credit	.376***	(4.31)	.093	(1.09)	.946***	(8.67)
WIN in 1977, 78, or 79	.122	(1.04)	-.188*	(1.73)	.070	(.48)
CETA-OJT in 78 or 79	.614***	(6.23)	.757**	(8.77)	.981***	(7.75)
Participated in TJTC in 1980	N/A		1.307***	(18.3)	.829***	(7.15)
Participated in TJTC in 1981	N/A		N/A		1.777***	(14.0)
Favorable past experience (subsidized workers relative productivity)	N/A		.042	(1.49)	.020***	(2.85)

t-value in parenthesis

*significant at the 10% level (two sided)
**significant at the 5% level (two sided)
***significant at the 1% level (two sided)

N/A--variable not available on data set or not appropriate in equation

measures the average experience with subsidized hires with a good deal of error. This should bias coefficients toward zero, so the long run impact of making successful placements of disadvantaged workers on future willingness to hire disadvantaged workers is probably greater than that suggested by the results just reported.

IV. THE IMPACT OF TJTC ON EMPLOYMENT AT SUBSIDIZED FIRMS

IV. THE IMPACT OF TJTC ON EMPLOYMENT AT SUBSIDIZED FIRMS

1. INTRODUCTION

When a firm applies for a targeted subsidy it may be (a) applying for a credit for an employee who was already a part of its labor force, or would have been selected even if there had been no subsidy, (b) hiring a targeted worker for a job which would have otherwise been filled by a non-targeted worker, or (c) hiring a targeted worker for a job which would not have existed in the absence of the subsidy. When the employment subsidy influences who is hired but not how many are hired, there is "within firm" displacement of other workers. Since those displaced may be unskilled and may have some difficulty finding new jobs, such an outcome is not as desirable as hiring a targeted worker for a newly created job. This chapter examines the extent and nature of "within firm" displacement. The specific questions addressed are:

- What impacts do the TJTC and JTPA-OJT programs have on the level of employment at participating firms? How much displacement?
- What impacts do these programs have on the proportion of employees that are under the age of 25 at participating firms? Who is displaced?

A subsidy program may influence a firm's employment level in at least two ways. First, subsidies lower by nearly 50 percent the marginal costs of certain types of labor--tax credit eligible workers. This creates an incentive to expand employment. The incentive is greatest when the firm consciously tries to increase the share of its new hires that are eligible for subsidy, when the wages of these types of workers are a major share of total costs and when the firm is able to easily substitute the subsidized workers for unsubsidized workers, capital or other purchased inputs.

A second effect of targeted employment subsidies on employment might come through their effect on the working capital available to firms whose expansion is constrained by lack of access to capital markets.[9] When business is good, many (small) firms claim their expansion is constrained by lack of working capital. Any tax cut that benefits such firms will stimulate employment at those firms. Such increases in employment may however be offset by reductions in employment at other firms that compete with the firm that receives the tax credit or that must pay additional taxes.

Does the fact that most employers choose not to participate in a subsidy entitlement like TJTC imply that it is not cost-effective? The low rates of employer participation in these tax credit programs suggest that nonpecuniary costs of participation are high for many firms.[10] Some of these costs are fixed--learning enough about the program to use it, making arrangements for the referral of eligible workers, establishing a system to identify which job applicants are eligible and the risk of being

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[9]For example, let us assume that a company with no access to new loan or equity financing and no money in the bank has a business opportunity that requires the immediate hiring of an additional worker at $1,000 a month. Revenues of $1,200 a month will be generated by this activity but the revenues will not begin for six months. The firm will be unable to undertake this potentially profitable activity because it lacks the working capital to finance it. If, however, the firm had hired and certified two TJTC eligible workers the previous year, its tax payments are $6,000 lower which is precisely the working capital necessary to respond to this business opportunity and the additional worker will be hired. How common a phenomenon this type of example is and the participation rates of these types of firms are not known.

[10]The features of these programs that cause the nonpecuniary coats of participation to be high are (a) the complicated eligibility rules, (b) the basing of eligibility upon characteristics of the employee that are not generally known by the employer, (c) the necessity of certification of the employee's eligibility by a government agency, (d) the use of stigmatizing categories such as welfare recipient and ex-convicts to define eligibility (Bishop 1982, p. 89).

subjected to greater scrutiny by EEOC or the IRS. These costs discourage participation, but for firms who do participate, fixed costs should have no effect on the impact of the subsidy on employment. Other costs depend upon the number of workers hired through the program. The variable costs are the costs of searching for, identifying, and certifying eligible workers and the risk of hiring workers that are less productive than the typical unsubsidized job applicant. These costs lower the net benefit of hiring extra subsidized workers, and therefore, reduce the impact of the subsidy on participating firms. The study of participation in TJTC presented in the previous chapter found that fixed costs were a more important deterrent to a firm's participation in these programs than the incremental costs of participation. Many of the firms that choose to participate seem to participate very heavily. These findings suggest that, in some participating firms, the marginal costs of hiring subsidized workers are low and remain so as the number of subsidized workers increases. This means that low participation rates do not necessarily imply that TJTC has negligible effects on those firms which participate. In fact, a reasonable argument can be made that the response (extra employment) per dollar of expenditure will be bigger in a small program than a large program. When there are important fixed costs to participation, firms with high elasticities of demand for the subsidized class of workers and low marginal costs of certifying extra workers are more likely to participate than firms with low elasticities of demand and high marginal costs of participation. As a result, one might expect that the first firms to volunteer to participate will be more responsive than the firms that are convinced to participate at a later date.

This chapter examines the empirical evidence on the effects of targeted employment subsidies on firm employment growth provided by a multi-wave survey of employers conducted during the late spring of 1980 and 1982. Section 2 presents econometric estimates of the impact of TJTC on employment growth over the 18

month period from December 1981 to June 1982 and on changes in the share of the firm's workforce that is under the age of 25 over the two year period preceding the 1982 interview. Section 3 presents a summary of the results, compares them to earlier work on the same subject (Bishop 1985) and reviews the limitations of the findings.

2. EMPIRICAL FINDINGS

(1) Specifying the Employment Change Equation

Let us assume that the growth of the jth firm's labor force over the relevant period, g_j contains an exogenous component, gA_j, and a component induced by the subsidy, gI_j.

$$(1) \quad g_j = gA_j + gI_j$$

The exogenous component gA may be greater than or less than zero. The null hypothesis that we are testing is that the subsidy-induced portion gI is zero. It is impossible to directly observe either component. The growth of the firm's employment is assumed to depend on a vector of firm and location characteristics, X, and a growth component induced by the subsidy.

$$g_j = f(gI_j, X_i)$$

The vector X contains the following variables--

- The rate of growth of real sales at the company over the previous two years. There is no reason to expect the response to increases in sales to be the same as the response to reductions in sales so the sales change variable is splined with a kink point at zero. In addition there are dummy variables for companies reporting real growth in sales or real declines in sales that could not estimate how large the change was. The sales growth mean was .042 and with a standard deviation (SD) of .268. The positive sales growth mean was .084 with a SD of .228. The sales increase but don't know how

much dummy had a mean of .045. The sales decrease but don't know how much dummy had a mean of .083.

- **Expectations of growth or declines in employment over the next two years reported in the first wave interview in May 1980.** Two variables were constructed from questions about expected growth of employment. The first was the ratio of anticipated employment two years hence to current employment capped at .1 and 10. The mean and standard deviation of this variable were 1.36 and .84 respectively. The second variable the actual number of additional (or fewer) employees anticipated over the next two years. Its mean was 10.7 and its standard deviation was 48.3.

- **Establishment employment (logged) in 1980.** Large firms are less likely to be fast growing. The effect of size is probably nonlinear so this variable was splined with a kink at 50 employees. The mean was 2.93 with a standard deviation of 1.45. The upper portion of the spline had a mean of .26 and a standard deviation and .64.

- **The ratio of firm employment to establishment employment (logged).** Multi-establishment firms have become big users of TJTC. Since these firms might have different exogenous growth rates, a control for multi-establishment firms is needed. We have no a priori hypotheses about the sign of the coefficient on this variable. The mean of this variable was .49 with a standard deviation of 1.19.

- **New hire rate during the 4th quarter of 1979.** Expectations of future growth may have influenced willingness to hire people in 1979. Since the new hire rate is known to be related to TJTC usage, it is important to control for this variable in models of employment growth. The mean of this variable was .089 and its standard deviation was .117.

- **Proportion of the work force that is skilled.** The operational definition of skilled was white collar or craft worker. This variable is related to use of TJTC and may have an impact on growth so needs to be controlled. Its mean was .795 and its standard deviation .467.

- **Proportion of the work force that is part time.** The continuing flow of women and young people into the labor force has made it easier for firms that use part-time workers to expand so we expect this to have a positive effect on employment growth. The mean of this variable is .179 and its standard deviation is .274.

- **Relative wage of the workers at a firm.** Given the sales growth at a firm, we would expect firms that pay higher than average wage rates to find it easier to get

qualified employees without raising wages further. This leads to an expectation of a positive coefficient on this variable. The variable was constructed as follows: A regression was estimated predicting the log of the wage rate at two years of tenure for the typical worker of a randomly selected job at the firm using DOT characteristics of the occupations, and dummies for occupation and location as the independent variables. The residual from this regression was then used as the measure of the firm's relative wage rate. The standard deviation of this variable was .324.

- **Log cost of machinery.** The Reagan tax reductions were enacted during 1981 so employers should have anticipated declines in the user cost of capital. This should have worked to the advantage of capital intensive firms, so their expansion should have been greater than the expansion of less capital intensive firms. The scaling of the variable prior to its being logged was in thousands of dollars. Its mean was 1.70 and its standard deviation 1.49.

- **Layoff based on seniority.** Respondents were asked whether temporary and permanent layoffs were based on seniority or on productivity. A variable scaled from 0 to 1 with a mean of .41 and a standard deviation of .27 was created from these questions. We have no a priori expectations about the sign of the coefficient on this variables.

- **Whether there is a probationary period and its length (logged).** Firms with long probationary periods have greater flexibility in releasing unproductive new employees, and therefore should be more willing to expand. Twenty four percent of the jobs had no probationary period. The mean and standard deviation of the log of the length of the probationary period was 2.8 and 1.24 respectively (jobs with no probationary period were assigned a 2 year probationary period).

- **Vector of dummies for industry.** The growth of demand and output elasticities of demand for labor vary across industries so controls for industry were included. Separate dummies were constructed for the following industries: construction (.07), mining and manufacturing (.114), transportation and communications (.04), wholesale (.09), restaurant (.096), restaurant where there are tips (.015), hotels (.018), finance (.07). The residual category was the remainder of the retail and service sectors.

- **Vector of dummies for location.** Both demand and labor availability varies with location. Each of the major sites of the survey was distinguished: Columbus (.07), Toledo (.036), Cincinnati (.039), Dayton (.060), Corpus Christi (.057), San Antonio (.050), Beaumont (.033),

Baton Rouge (.063), New Orleans (.030), Lake Charles/ Lafayette (.035), Mobile (.065), Birmingham (.043), Pensacola (.023), Kentucky (.048), Virginia (.019), Missouri (.096), Western Washington (.133), Central Wisconsin (.053), and Colorado (.044).

(2) The Subsidy Variables

Theory suggests that the level of a subsidy influences the equilibrium level of a firm's employment. This implies that the dependent variable--change in employment at a firm--should respond to changes in participation in or use of a subsidy program. The results of regressions in which employment change was a function of changes in the number of subsidized workers have been presented in a report for the Department of Health and Human Services (Bishop 1985). A different approach is employed in this chapter. Here we examine the impact of a yes-no indicator of whether the company participated in TJTC or CETA/JTPA during that year. The disadvantage of the dummy variable specification is that it does not distinguish between heavy and small users of the program so the power of our tests of subsidy impacts is reduced. The important advantage of the approach, however, is that a zero-one participation variable is less likely to be endogenous--influenced by the actual growth of the firm--and more likely to be accurately measured than the number of subsidized new hires. Since TJTC is a recruitment subsidy, the number of TJTC eligibles that a firm hires will depend upon the number of new hires at the firm and therefore on the growth of employment at the firm. Thus the scale of TJTC usage is almost certainly endogenous. With their high turnover rates, most low wage firms have many opportunities to hire a TJTC eligible if they so desire even when total employment is stagnant. Consequently a reasonable case can be made that the growth rates and a dummy variable for TJTC

participation are not simultaneously determined. The following models were estimated:

$$(2)\quad \frac{E81-E80}{E} = a_1 DTJTC81 + a_2 DTJTC80 + a_3 DCETA81 + a_4 DCETA80 + a_5 \frac{SUB79}{E79} + a_6 \ln E80 + \underline{aX} + u$$

$$(3)\quad \frac{E81-E80}{E} = b_1 \widehat{DTJTC81} + b_2 DTJTC80 + b_3 \widehat{DCETA81} + b_4 DCETA80 + b_5 \frac{SUB79}{E79} + b_6 \ln E80 + \underline{bX} + u$$

where

E80, E81 = employment in December 1980 and December 1981 (or interview date) respectively

E = the average level of employment over the time period for which growth is defined

E79 = the average level of employment in 1979 measure in the first wave

DTJTC80 = a dummy variable indicating the company obtained at least one TJTC certification in 1980

DTJTC81 = a dummy variable indicating the company obtained at least one TJTC certification in first 9 months of 1981 (or between January 1981 and interview when growth over the longer period is the dependent variable)

DCETA80 = a dummy variable indicating the company had a CETA-OJT contract in 1980

DCETA81 = a dummy variable indicating the company had a CETA/JTPA OJT contract between January 1981 and date of interview

SUB79 = the sum of TJTC, WIN, and CETA-OJT subsidized hires in 1979

X = a vector of characteristics of the company and location

u = random error term

The first specification assumes that the proportionate rate of growth is a function of present and lagged dummies for participation. Ordinary least squares estimates of (2) will be unbiased if whether the firm participates in TJTC and CETA is exogenously determined by knowledge of the program, beliefs about the productivity of eligibles, and the referral policies of the agencies that place disadvantaged workers and are not influenced by the actual growth experienced by the company.

The number of subsidized hires in 1979 and participation in 1980 are predetermined and the model includes a control for employment at the beginning of the period over which growth is defined, so these variables are not a source of simultaneity bias.

If there is a simultaneity problem it arises from the inclusion of DTJTC81 and DCETA81. The second specification employs two stage least squares and thus corrects for any simultaneity bias. Instrumental variable estimates of equation (3) are obtained by regressing growth on predicted rather than actual value of DTJTC81 and DCETA81. These results are discussed in section (4).

(3) Ordinary Least Squares Estimates

In our sample, 1980 participation rates were 7 percent for TJTC and 4.57 percent for CETA-OJT.[11] The participation rates for 1981 and the portion of 1982 prior to the interview was 9.5 percent for TJTC and 3.75 percent for CETA-OJT. During the first 9 months of 1981, 6.9 percent of the employer's participated in TJTC. Estimates of the impact of this participation on employment growth are given in the 1st and 3rd columns of Exhibit IV-1.

[11]These statistics overestimate the proportion of the population of all employers that participate in subsidy programs because some of the firms were selected for inclusion in the sample because they were participating in CETA-OJT in 1978.

EXHIBIT IV-1

Employment and Training Administration

IMPACT OF TJTC ON EMPLOYMENT GROWTH

Variables	Growth Dec 80 - June 82		Growth Dec 80 - Dec 81	
	OLS	2SLS	OLS	2SLS
Program Variables				
Participated in TJTC				
in 1980	.011	-.150**	.001	-.148***
in 1981	--	--	.024	.346***
in 1981 or 82	.039*	.380***	--	--
Received CETA/JTPA				
in 1980	.023	.067	.003	.021
in 1981 or 82	.055*	-.321**	.089***	-.102
Participated in either subsidy in 79	--	.019	--	.009
Ratio of subsidized employment 79	-.166***	--	-.102**	--
Changes in Demand				
Dummy sales growth	.042	.011	.009	.019
Dummy sales decline	-.032	-.022	-.017	-.021
Change in sales	.388***	.430***	.260***	.322***
Change in sales if positive	-.268***	-.300***	-.151***	.197***
Planned increase in employment (100's)	.064***	.055***	.000	.000
Planned proportionate increase in employment	.000	.003	.014***	.013
Other Employer Characteristics				
Log establishment employment in 1980	-.067***	-.064***	-.038***	-.037***
Log establishment employment in 1980 > 50	.048***	.019	.043***	.024*
Log ratio firm/establishment employment	-.004	-.007	.000	-.002
New hire rate - 1979	-.015	-.041	.016	-.005
Proportion skilled	-.002	-.002	-.008	.009
Proportion part-time	.000	.000	.028*	.033*
Residual log wage	.061***	.051***	.041***	.043***
Log cost of machinery	.010**	.010**	.006**	.006*
Layoff based on seniority	.007	.016	.015	.026
No probationary period	-.075**	-.067**	-.044**	-.049**
Log length probationary period	.026**	.025**	.011	.013*
Capacity to expand	--	--	.001	.001
Dummies for Industry	X	X	X	X
Dummies for Location	X	X	X	X
R-square	.106	.086	.094	.079
Standard Error of Estimate	.307	.321	.223	.235
Number of Observations	3255	3109	3255	3109

*Significant at the .10 level
**Significant at the .05 level
***Significant at the .01 level

--Variable not used in equation

X - Set of dummies enter into the equation

The analysis of the period from December 1980 to the interview yields an estimate that TJTC apparently causes an increase in growth of 3.9 percentage points and CETA-OJT causes an increase of 5.5 percentage points. Both of these effects are significant at the 10 percent level on a two tail test. The analysis of growth between December 1980 and December 1981 yields a large and significant 8.9 percentage point estimate of the impact of CETA-OJT. TJTC's impact (2.4 percentage points) is much smaller and not significant. The ratio of 1979 subsidized hires to 1979 employment has the anticipated negative effect on employment growth.

Program participation in 1980 has small nonsignificant positive effects on employment growth in 1981. Theory predicts that a firm that participated in 1980 but not in 1981 should have a lower growth rate than a firm which participates in neither or both years. This hypothesis was supported in our previous work where the scale of subsidy program usage in 1980 and 81 (not participation dummies) captured the effect of the program. It is not supported here.

How does the estimated magnitude of the aggregate response to TJTC derived from these equations stack up against the number of TJTC certifications received by these firms? Between January 1981 and the interview date, the typical firm participating in TJTC certified 12.5 percent of its employees for TJTC and the typical firm participating in CETA-OJT hires 17 percent of its employees through CETA-OJT [note these statistics are dominated by very small firms]. The corresponding ratio for TJTC participants in the first 9 months of 1981 is 10.3 percent. By dividing the point estimate of the increase in employment stimulated by participation in the program with the above estimates of the scale of the program at participating firms, we can obtain an

estimate of the increase in end of period employment generated by one TJTC certification. Those ratios are 23 percent for calendar 1981 and 31 percent for the period from December 1980 to the interview. These results correspond very closely to the coefficients (approximately .28) on the ratio of TJTC certifications to employment obtained in our earlier work. The comparable ratio for CETA is .32. This finding is considerably more favorable to CETA-OJT than those obtained in our previous work.

(4) Two Stage Least Squares Estimates

Since the level of subsidy usage is potentially endogenous, estimates of TJTC's impact on employment growth may be biased. A firm cannot participate unless it has at least one new hire and increases in the number of new hires raise the probability of encountering, hiring and certifying a TJTC eligible. The firm's growth rate in turn influences the new hire rate. As a result, a circle of causation may exist in which subsidy use increases growth, growth increases new hires and new hires increase the probability of participation. Figure 4-1 is a stylized representation of the causal circle just described.

To control for simultaneity a system of 6 equations was estimated. The endogenous variables of the system were:

- New Hire rate in 1981
- Employment growth December 80 to the interview date
- Employment growth December to the interview (if positive, else 0)
- Dummy for participation in TJTC in 1981/82
- Dummy for participation in CETA 1981/82
- Proportion of work force under age 25 in 1982

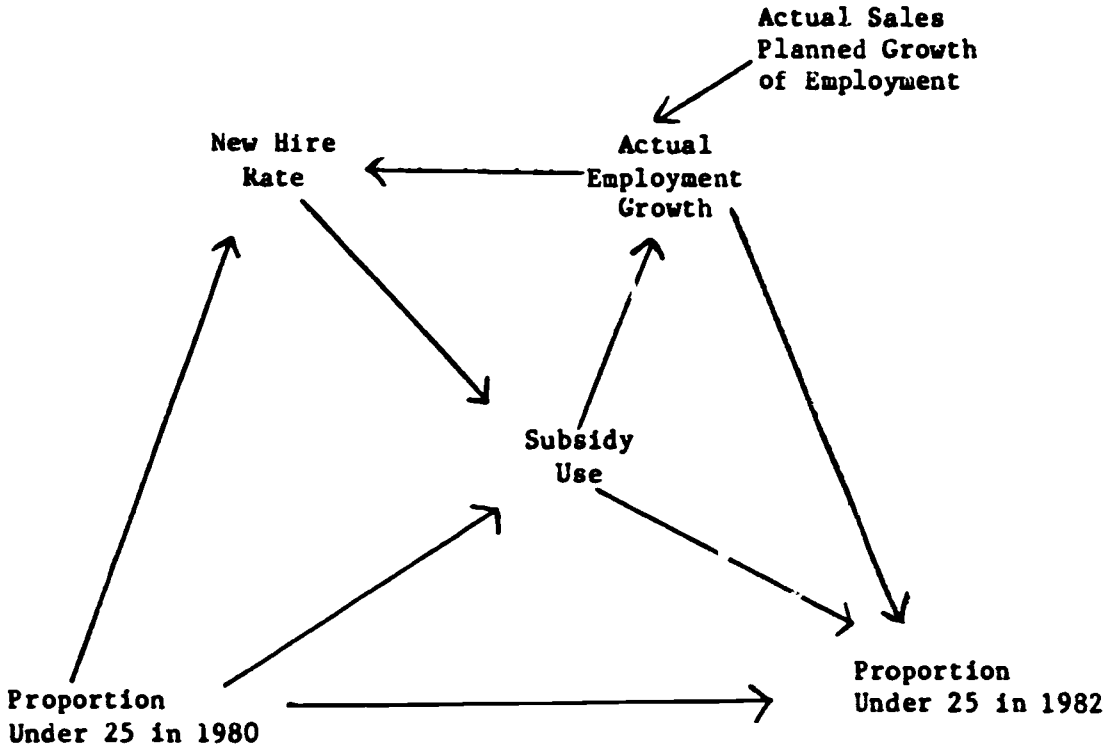

FIGURE 4-1
Representation of the causal circle

The quality of the 2SLS estimates of a structural model depends critically on the instruments that are available. Estimates of the impact of subsidy programs on employment growth and the share of employment under 25 depend on having exogenous predictors of subsidy usage that are not influenced by turnover and growth and that also do not have direct impacts on turnover and growth. The variables that serve this function are dummy variables for previous use of subsidy programs, government and employer organization-initiated contacts about TJTC or CETA/JTPA and offers of TJTC or JTPA referrals, previous use of the employment service, membership in a local business organization, firm has a personnel department, the perceived amount of paperwork required to obtain an OJT contract, a variable for negative attitudes toward government and interactions between government-initiated contacts and the following characteristics of the

employer: Establishment size, firm size, skill requirements, probationary period, percent under 25 in 1980, previous use of subsidies, membership in a business organization and the existence of a personnel department at the firm.

The results of the 2SLS estimates of equation 3 are presented in column 2 and 4 of Exhibit IV-1. The coefficients on the instrument for 1981 participation in TJTC are positive and highly significant. The coefficients on 1980 participation are negative and also highly significant. The TJTC coefficients imply that participating in 1980 but not 1981 lowers growth by 14 percent, participating in both 1980 and 1981 raises growth by about 23 percent, and participating in 1981 and not in 1980 raises growth by more than 43 percent. The CETA/JTPA coefficients are negative and for the longer time period, significantly negative. These 2SLS coefficients are much too large to be believed. The instrument for the participation dummy is probably also picking up the effects of the magnitude of TJTC usage in a way that produces a positive bias on the coefficient. A great deal of effort went into developing and defining instruments for participation in the 2SLS models. These efforts have clearly failed to produce believable estimates of the structural impact of targeted subsidies on employment growth. Despite the probable biases, the OLS estimates of (2) probably provides better estimates of the impact of subsidy programs than the 2SLS results.

(5) Displacement of Other Young Workers

Since most subsidized workers are under the age of 25, and low and high income youth are probably good substitutes for each other, young workers might be more likely to be displaced by TJTC subsidized hires than older workers. This hypothesis can be tested by examining subsidized hiring's impact on the employment of youth.

The 1982 survey asked two questions about young workers: "Approximately what percentage of your work force is under 25 years of age?" and "Two years ago approximately what percentage of your work force was under 25 years of age?" These proportions were then modeled as a part of a recursive system in which employment growth over the time period was taken as predetermined:

$$(4)\quad PrLT25_{82} = c_1 PrLT25_{80} + c_2 DTJTC80 + c_3 DTJTC81 + c_4 DCETA + c_5 \frac{SUB79}{E} + c_6 \frac{E82-E80}{E} + c_7 X + u$$

where

$PrLT25_{82,\ 80}$ = the proportion of the establishment's work force that is under 25 years of age at the time of the interview (two years before the interview).

$\frac{E82-E80}{E}$ = the growth of establishment employment between July 1980 and the interview date divided by the average level of employment in the time period.

The specification has many similarities to the equation (2) model of employment growth. With only a few exceptions, the X vector is the same as that used to estimate (2) and (3). The most important difference is the use of knowledgeable TJTC hires rather than a dummy for participation as the key subsidy variable. This choice was made because knowing which job candidates are eligible for TJTC when the hiring decision is made seems to be essential if TJTC is to have a major impact on the character of a firm's work force. Such knowledge is also one of the ingredients of being an aggressive user of TJTC. As before, the hypothesis of diminishing returns is tested in this model by specifying that the marginal impact of subsidy use on the youth share of employment is a step function with a break at subsidized hires/employment = .5. The results of estimating equation (5) by ordinary least squares are presented in the third column of Exhibit IV-2. The second column presents the results obtained from estimating a corresponding 2SLS model in which the employment

EXHIBIT IV-2

Employment and Training Administration

IMPACT OF TJTC ON EMPLOYMENT GROWTH AND THE SHARE OF THE WORK FORCE UNDER THE AGE OF 25

Variables	New Hire Rate 1981 2SLS	Share Under Age 25 in 1982 2SLS	Share of Employees Under Age 25 in 1982
Program Variables			
TJTC certification in 1980	.111***	--	--
Level of knowledgeable TJTC hiring in 1980-82			
--up to 0.5	--	.144	.138**
--above 0.5	--	.001	.009
Subsidized employment in 1979	-.042	.019	--
--up to 0.5	--	--	-.065
--above 0.5	--	--	.016
Levels of CETA-OJT 80-82 (inst.)	-.320	.192	.047
--up to 0.5 (inst.)	1.089**	-.496	-.081
Changes in Demand			
Change in employment December 80 - June 82 (inst.)	-.080**	.120**	.067***
Change in employment if positive (inst.)	.479***	.020	-.014
Change in sales	--	--	.014
Change in sales if positive	--	--	.018
Planned increase in employment (100's)	--	--	-.010
Planned proportionate increase in employment	--	--	.005
Other Employer Characteristics			
Share under age 25 in 1979	.110***	.815***	.829***
Log estab. empl. in 1980	.020***	.017***	.013***
Log estab. empl. in 1980 > 50	-.021**	-.016*	.003
Log ratio firm/estab. empl.	.010***	.005**	-.052*
New hire rate - 1979	.223***	-.030	.009
Quit rate - 1979	.090*	.016	-.094
Induced quit rate - 1979	.042	-.180	-.013
Layoff on ability rate - 1979	-.133	-.013	.118
Dismissal rate - 1979	.275***	.059	.003
Proportion skilled	-.012	.004	.012
Proportion part-time	.018	.013	-.020**
Residual log wage	-.018	-.028***	-.002
Log cost of machinery	.0002*	-.004	-.006
Flexibility to fire	.020*	.008	-.004
Layoff based on seniority	-.018	-.013	-.012
No probationary period	.063**	-.007	-.006
Log length probationary period	-.026***	-.004	-.005
Union	-.026	-.016	--
Change in union	.058	.005	
Dummies for Industry	X	X	X
Dummies for Location	X	X	X
R-square	.207	.665	.7164
Standard Error of Estimate	.177	.150	.140

*Significant at the .10 level
**Significant at the .05 level
***Significant at the .01 level

--Variable not used in equation

X - Set of dummies enter into the equation

growth, TJTC 1980-82, and CETA 80-82 variables are treated as endogenous. In the OLS model the coefficients on knowledgeable TJTC usage up to .5 of employment are highly significant. Coefficients on the upper portion of the spline and on JTPA use are small and nonsignificant.

The results may be summarized as follows:

- TJTC has larger impacts on the youth share of employment than JTPA-OJT contracts
- The impact of TJTC on youth's share of employment diminishes almost to zero when the number of knowledgeable hires of eligibles exceeds half of the firm's employment

Knowledgeably hiring 10 extra TJTC eligibles when TJTC hires are responsible for less than half of the firm's employment has the following effects on youth employment:

- If the company's employment is constant, the shift of the youth share creates 1.38 additional jobs for youth
- Any growth of total employment induced by TJTC has additional impacts on the number of jobs available to youth. Let us assume that 10 TJTC hires raises total employment by 3. Since 27 percent of all employees in the sample firms are young, the expansion of the firm creates another .81 jobs for youth
- An additional effect of overall growth is that it tends to raise the share of all employees that are young. An increase in TJTC/E by .10 raises growth by .03 which in turn raises PrLT25 by .0021, so 10 TJTC hires in 1982 will create .21 youth jobs through this mechanism
- The total number of additional youth jobs is 2.4, about 80 percent of the assumed increase in total employment

3. SUMMARY

What can these results tell us about the size and composition of within firm displacement? Displacement rates are related

to the empirically estimated impacts of subsidized hiring on the employment of youth by the following implicit function.

$$(5)\quad \frac{d(\text{Empl Youth})}{d(\text{Sub Hires})} = \frac{dEY}{dSH} = \left(\frac{dSEY}{dSE} - \frac{dNEY}{dSE}\right) r_s$$

where

$\frac{dSEY}{dSE}$ = the proportion of subsidy eligibles at the firm who are young (assume unit elasticity, so we can use the share of all TJTC hires that are young which is .75)

$\frac{dNEY}{dSE}$ = the rate of displacement of noneligible youth

r_s = the proportion of subsidized hires during a period that are still retained by the firm at the end of the period. (Probably between .6 and .80.)

We now have estimates for three of the four terms in equation 5. Assuming that 75 percent of TJTC hires are still at the firm at the end of the year ($r_s = .75$) and taking account of impacts on the youth share that operate through the growth response, all we need to do is solve for $\frac{dNEY}{dSE}$. The resulting estimates of displacement are $\frac{dNEY}{dSE} = .43$ and $\frac{dNE}{dSE} = .6$ (assuming $a_1^t = .3$)

This implies that for every 10 TJTC subsidized employees at a firm, there will be:

- 4 extra jobs at the firm
- 6 fewer nonsubsidized employees being hired by the firm. (Most of the not hired nonsubsidized employees are probably not in TJTC target groups)
- 4.3 fewer nonsubsidized youth being hired by the firm
- 1.7 fewer nonsubsidized adults being hired by the firm

If the true a_1^t = .2, every 10 TJTC subsidized employees at a firm results in

- 2.67 extra jobs at the firm
- 7.33 fewer nonsubsidized employees being hired at the firm
- 4.77 fewer nonsubsidized youth being hired at the firm
- 2.56 fewer nonsubsidized adults being hired at the firm

These results imply that about 75 to 90 percent of the jobs filled by TJTC subsidized workers either would have been filled by TJTC eligibles anyway or displace other workers at the firm. This does not necessarily imply, however, that the general equilibrium effects of the program on aggregate employment are small. Targeted employment subsidies do not have to increase the employment of participating firms to increase total employment in the economy. Their primary purpose is to induce employers (a) to hire workers with less skill and experience than they would without the incentive and (b) to provide more intensive training. Even if the firm does not increase its employment, total employment in all firms may expand if the disadvantaged worker who is hired because of the subsidy would not have been able to get a job without its help (because of the minimum wage or some other imperfection in the market) and the less disadvantaged worker who is displaced does find another job because he/she is part of a labor market in which wage rates adjust up and down to equilibrium demand and supply (Johnson 1982). Calculating general equilibrium effects is beyond the scope of this report, however.

V. IMPACT OF TJTC ON RECRUITMENT PRACTICES AND HIRING STANDARDS

V. IMPACT OF TJTC ON RECRUITMENT PRACTICES AND HIRING STANDARDS

Even if a targeted employment subsidy does not induce firms to expand total employment, it can still achieve its objectives by causing changes in who is hired. Are these programs inducing firms to hire disadvantaged workers they would not otherwise have hired?

Respondents to the 1982 NCRVE employer survey were asked both whether they were trying "to identify and certify tax credit eligible employees that have already been hired" and whether they were trying "to select new employees that are tax credit eligible." Only 32 percent of the respondents who had heard of TJTC said they were trying to certify employees and only 15 percent said they were trying to select eligibles.[11] The firms who had used TJTC were considerably more likely to report they were trying to select TJTC eligibles. Twenty-four percent said they tried to select eligibles and 40 percent said they tried to certify employees. Conscious efforts to select and certify

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[11]These statistics and all other statistics reported in this chapter are estimates of population characteristics rather than sample characteristics. The data have been weighted by the inverse of the probability that the employer was included in the sample and interviewed. The frame from which the sample was taken was a list of all employer establishments in the records of the Unemployment Insurance Tax System in the first quarter of 1979 in about 100 rural and urban counties dispersed around the nation. The survey was originally designed to evaluate the Employment Opportunity Pilot Projects. Somewhat more than a third of the counties were participating in this demonstration program. The rest of the counties in the sample were the comparison sites selected for their similarity to the demonstration counties. The counties studied are consequently not geographically representative of the United States. The employer list was stratified into seven size groups. The largest establishments were certain to be included in the sample. Depending on the county the smallest establishments had probabilities of selection between .0043 and .10. The weighting factor also reflects nonresponse, so employers who wish to be interviewed are represented in the data by other employers in the same size class. For more on the sample, see Appendix A.

eligibles should also increase the number of TJTC eligibles hired. Thus when one calculates the proportion of TJTC certifications that are at firms which are consciously trying to certify or select eligibles, we should get considerably higher statistics. This is exactly what happens. Four-fifths of the TJTC certifications reported by firms in our sample (weighted by their probability of selection into the sample) were at firms that reported that they tried to select TJTC eligibles and 90 percent were at firms that reported they tried to certify employees.[12] Thus only 20 percent of the TJTC tax expenditures in our weighted sample were going to firms that say they are not making conscious efforts to select TJTC eligibles.

There are two ways a firm can change its hiring practices to increase its probability of selecting TJTC eligibles--

- adopting recruitment practices that increase the number of eligibles applying to the firm
- lowering hiring standards in order to select an eligible

1. WERE RECRUITMENT CHANNELS CHANGED?

There is considerable evidence that TJTC users have changed how they recruit job applicants. When answers were weighted by TJTC usage, 80 percent said they had initiated at least one

[12]Since this single statistic is probably the best summary characterization of the cost-effectiveness of the program, a discussion of its robustness is in order. The use of TJTC is highly skewed, so just a few employers in the sample account for half of all the TJTC certifications reported by our respondents. As a result, all statistics that are weighted by numbers of subsidized employees are subject to considerable sampling error. Weighting by the inverse of the probability of selection somewhat reduces the problem, because this weight is negatively correlated with numbers of subsidized worker. Table A.10 (Bishop 1985) reports an estimate of the population proportion of subsidized hires that were at firm's reporting selecting TJTC eligibles. The corresponding sample proportions (i.e., no weighting by selection probability) are .46 and .50.

contact at the employment service or other government agency to request the referral of a TJTC eligible. Ninety percent said they had either initiated a referral request or agreed to accept a referral when contacted by an agency. Ninety percent reported they were planning to ask for the referral of TJTC eligibles when they next had openings for unskilled workers.

A second kind of evidence on whether TJTC is influencing recruitment practices comes from employer responses to questions on how they identified which job applicants were eligible for TJTC. Data on this is presented in Exhibit V-1. The TJTC subsidized workers whose eligibility was discovered after being hired are excluded from the tabulations.[13]

Referrals. Referrals from a school or public agency accounted for at least 39 percent of TJTC hires prior to September 1981 and at least 49 percent after that date. These proportions are considerably greater than the proportions of all workers (approximately 8.1 percent of all workers and 13.1 percent of blacks) that report they got their current job through such a referral. Disadvantaged workers are more likely to use schools and public agencies to find a job so the comparison would be somewhat less dramatic if it were limited to the disadvantaged. The contrast would probably remain, however, and this suggests that the program may be inducing firms to increase their use of the agencies that can identify and refer eligibles.

Further evidence of this comes from the growth in use of public agencies resulting from the outlawing of retroactive certifications by the Economic Recovery and Tax Act of 1981. This change seems to have increased the share of all TJTC certifications that are employment service referrals. Employment

[13]Prior to September 1981, a firm could request TJTC certification of a new employee long afer they had been hired. As a result 36 percent of TJTC certified hires prior to September 1981 were not known or suspected to be eligible when they were hired.

EXHIBIT V-1

Employment and Training Administration

HOW TJTC ELIGIBLES ARE FOUND

Source	TJTC Hires Known to be Eligible When Hired	
	Prior to September 1981	After September 1981
Referral agency told company		
employment service	18.0	28.5
High schools	10.3	8.3
Other specified	1.3	4.7
Agency not specified	9.6	7.9
Subtotal	39.2	49.4
Employment service came and checked workers	.7	1.6
Applicant told company	36.0	24.4
Respondent or staff determined eligibility	11.7	14.7
Sent applicant to employment service to determine eligibility	11.9	8.3
A company we hired determined eligibility	.6	1.6
Total	100%	100%
Number of TJTC hires known to be eligible when hired	1801	1045
Number of known TJTC eligibles from unknown source	161	28

The table weighs the responses about the most, the second most, and third most important mechanisms of learning of a worker's eligibility by the number of TJTC hires. The data are not weighted by the firm's probability of selection.

service referrals had accounted for only 18 percent of the hires prior to September 1981 in which TJTC eligibility was known, but was accounting for 29 percent in the months after retroactivity was abolished. About 40 percent of all TJTC certifications in calendar 1980 and 1981 were high school coop students so it is not surprising that high school referrals accounted for 10 percent of the (knowing) TJTC hires prior to September 1981 and for 8 percent after that date.[14] Welfare offices did not account for many of the referrals reported by our sample of employers.

The job seeker. The targeted employment subsidies that preceded TJTC all required agency referrals of eligible job applicants. With TJTC there are two other ways of bringing subsidy, employer, and job seeker together. Job seekers may inform employers of their eligibility. This can occur either at the job seeker's initiative--placing the information in the comments section of the job application or by bringing the matter up during an initial phone call or the interview--or in response to direct question on the job application or in the interview.[15] Individuals who told the employer that they were TJTC eligible accounted for 36 percent of the hiring of known eligibles prior to September 1981 but only 24 percent after that date.

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[14]Referrals by high school did not diminish after September 1981 because high school co-op students who were not low-income remained eligible for TJTC until December 31, 1981. Many such referrals were made in the fall of 1981.

[15]Data on the source of eligibility information was obtained by coding an open-ended question. Interviewers were not asked to probe these answers, so we do not know whether the information about eligibility was volunteered by the applicant or whether it was a response to a direct question. It is also possible that the job applicants who volunteered that they were eligible were referred to the firm and that they were told that the firm requested TJTC eligibles. Consequently, the 36 and 24 percent figures are upper-bound estimates of the incidence of applicants volunteering that they were eligible.

Only a small proportion of all unemployed eligibles were volunteering information about their TJTC eligibility to potential employers. The primary reason is probably that most eligible workers were unaware of the programs and/or their eligibility for it. In fiscal 1982, the number of vouchers issued to disadvantaged youth was less than 10 percent of the number of new hires from this group during the year.[16] Since a third of all new hires have contacted the employment service during their job search (Rosenfeld 1975) and the disadvantaged are heavier users of the employment service than other groups, it is clear that in 1982 most eligibles who contacted the employment service were not vouchered. The proportion of disadvantaged youth who were vouchered in 1983 rose to 15 percent but the ratio remains low. The other barrier to applicants informing employers was the reluctance of many job applicants to share information which they fear is stigmatizing. This fear has caused placement counselors to recommend that TJTC eligibles seeking employment not mention TJTC in interviews unless directly asked by the employer. This issue is discussed in greater detail in chapter VII.

The employer. A third way in which eligibles can be identified is for employers to screen their job applications for eligible individuals and send applicants who are potentially eligible to the employment service for vouchering and certification before or after they are hired. Presumably, anticipating that candidate A may be eligible for subsidy and candidate B is not will increase the probability that A is offered the job. Only 11.7 percent of the TJTC hires who were known to be eligible prior to September 1981 (and 14.7 percent of TJTC hires after that date) were identified as eligible by the firm's staff. Having another company screen applicants for eligibility was reported to be responsible for less than 1 percent of knowing

[16]The Congressional Budget Office estimates that in fiscal 1983 there were 3.8 million new hires of youth who met TJTC's eligibility criteria. The number of vouchers issued to this group was 299,688 in fiscal 1982 and 581,795 in fiscal 1983.

TJTC hires prior to September 1981 and less than 2 percent of TJTC hires after that date.

It appears that the use of targeting criteria like family income and welfare program participation makes it difficult for employers to know who is eligible and thus prevents many employers from taking the tax credit into account. Only 6.5 percent of the firms reported that sending job applicants to the employment service prior to hiring was the primary mechanism of learning about eligibility and this mechanism accounted for only 12 percent of knowing TJTC hires prior to September 1981. After that date, only 8 percent of the TJTC hires were identified in this way. A disadvantage of this strategy is that it delays the hiring process and may result in losing the worker altogether. Identification of eligibles by the firm (or its agent) is apparently not as important a mechanism of identifying and certifying TJTC eligible workers as might have been anticipated. This may be changing however. Since the date of the survey, there has been a dramatic growth in the importance of consulting firms which help employers screen their job applicants for TJTC eligibility (see chapter VIII).

2. WERE HIRING STANDARDS LOWERED?

If final selections are to be influenced by TJTC, the hiring decisionmaker must know or at least suspect that the individual is eligible for TJTC. Before September 1981, employers could obtain certifications for employees who had been hired many months previously at a time when they were not known to be eligible for TJTC. Omitting cooperative education students (who were certified automatically), roughly two-thirds of the TJTC certifications were retroactive; that is, they were made after the eligible employee's first day at work. Obtaining a certification retroactively is not, however, conclusive evidence that the hiree was not known to be eligible when hired. The employer might have known the individual was eligible when the hiring

decision was made, but decided to postpone requesting a certification because it was a particularly busy period or because of a desire to see if the worker did okay during a tryout period. The only way to learn whether the employer was aware of the worker's eligibility at the time of the hiring decision is to ask the employer. Employers that hired TJTC eligibles between January 1980 and September 1981 were asked, "How many of the employees did you know or think might be eligible before you hired them?" Based on this question we estimate that the proportion of TJTC-certified hires prior to 1981 who were known to be eligible at the time of hire was 64 percent.

Employers who knew or thought that they were hiring TJTC eligibles were then asked, "How much did this possibility of eligibility increase the applicant's chance of being hired?" Again, influencing the hiring decision is one of the prime objectives of the TJTC program, yet relatively few firms reported being influenced. In unweighted data, only 17.9 percent of the participating firms reported that a candidate's eligibility influenced their hiring decisions "a great amount," and only 15 percent reported that it influenced their decision "a moderate amount." Yet 23 percent reported that their decision was "not very" influenced, and 46 percent reported not being influenced "at all." A scale was devised in which "a great amount" was assigned a value of 1, "a moderate amount" a value of 2/3, "not very much" a value of 1/3, and "not at all" a value of 0. The weighted and the unweighted averages of this scale for participating firms were both slightly more than 1/3. Thus, large users were no more likely to report allowing hiring selections to be influenced by a job candidate's eligibility than the group of all participants.

Should we believe these answers? Did respondents report they did not favor TJTC eligibles because they thought that admitting discriminating in favor of the disadvantaged just to get a tax credit would be viewed as socially inappropriate by the

interviewer? Or were they exaggerating the extent to which they were influenced? One way to address these questions is to compare subsidized and unsubsidized workers holding the same job (or controlling on the characteristics of the job and the firm). If TJTC is inducing firms to lower hiring standards when they hire an eligible, we would expect subsidized workers to have poorer credentials, to be less productive, and to require more than average training. Evidence on this issue is available for two surveys: the 1980 EOPP employer survey and the 1982 NCRVE employer survey.

(1) Evidence from the 1980 Employer Survey

Information from the 1980 employer survey on the characteristics of subsidized workers and their jobs and how they compare with unsubsidized occupants of similar jobs is presented in Exhibit V-2. Employers were asked to describe a randomly selected recent new hire for an unskilled or semi-skilled job. If they had also recently hired a subsidized worker, they were asked to give a similar description of that individual and his or her job. The other individual described did not have to be doing the same work.

Subsidized hires were generally younger, had less schooling, and had half as much useful experience as unsubsidized new hires. A comparison of the first and sixth columns of the exhibit reveals that unsubsidized new hires at firms that use subsidy programs were very similar to new hires at firms that do not use these programs. Thus, the difference between the qualifications of subsidized and unsubsidized new hires was not a consequence of employers who use the programs having lower hiring standards overall. The difference resulted from subsidized firms lowering the qualifications required for subsidized new hires and/or assigning them to the lower wage jobs. This latter interpretation is supported by the fact that in the study, subsidized new hires typically started at a lower wage rate (8 percent lower) than unsubsidized hires at the firm. Opportunities for increase

EXHIBIT V-2

Employment and Training Administration

CHARACTERISTICS OF THE MOST RECENT SUBSIDIZED AND UNSUBSIDIZED NEWLY HIRED WORKER

Worker and Job Characteristics	All Nonsubsidized Workers	Subsidized Worker			Workers in Firms Hiring Both	
		TJTC	WIN	CETA	Subsidized	Unsubsidized
Characterstics of the new hire						
% Male	49	44	35	64	52	46
Useful experience (months)	44.7	23.3	17.2	20.7	20.6	47.6
Age (years)	27.2	23.6	26.2	24.2	24.2	26.8
Schooling index[a]	4.15	3.6	3.8	3.8	3.7	4.2
The hiring decision						
Days vacancy open[b]	38	67	33	8	26	43
Number interviewed[c]	4.5	4.4	4.0	4.7	4.1	5.4
Number referred by ES, etc.[c]	.5	1.4	1.4	2.3	1.8	1.0
Staff time selecting new hire (hours)[c]	6.1	5.6	4.2	7.0	5.7	11.3
% Turning down job offer	20	4	9	12	7	11
Characteristics of the job						
Starting wage rate ($)	4.15	3.55	4.22	3.84	3.87	4.21
Top wage rate ($)	5.43	4.27	4.98	5.23	5.05	5.45
Current wage of those still with firm ($)	4.58	3.62	4.19	4.01	3.98	4.65
Experience with the worker						
% Still at firm	70	75	53	38	50	77
Training time by other employees (hours)	13	15	15	19	18	13
Training time of personnel & supervisors (hours)	19	14	12	23	20	18
Productivity index (second week)[d]	56	48	48	46	44	54
Productivity index (most recent)[d]	71	69	63	62	61	71

Source Tabulations of the 1980 EOPP Employer Survey

[a]Schooling index is coded: some high school = 3; high school graduate = 4; some college = 5; and college graduate = 7.

[b]Based on the question "How long was it between the time you started to recurit for the job and the time _____ started work?" The 28 percent of firms that said they did not recruit were coded zero, and the 2.5 percent that said they are always looking were coded 996 days.

[c]For firms that did recruit.

[d]Index runs from zero to 100.

in wage rates were similar: for both types of workers the top wage rate in that job averaged 30 percent more than the starting wage. Unsubsidized workers seemed to do better, however. Unsubsidized hires obtained real wage increases of 10 percent but CETA-OJT hires obtained increases of only 4 percent and TJTC hires obtained increases of only 2 percent. The wage rate differences between subsidized and unsubsidized new hires can be accounted for by differences in the worker's qualifications and productivity and the nature of the job occupied (Bishop and Stevenson 1982).

The hiring process for subsidized workers seems to have been distinctly different from the hiring process of the typical unsubsidized new worker. Firms that have hired a subsidized worker were considerably more likely to evaluate referrals from government agencies even when an unsubsidized worker was hired. And for openings that were eventually filled by a subsidized new hire the use of government referrals was even greater (an average of 1.8 interviews of government referrals compared to only 1 for the typical unsubsidized new hire). Nevertheless, less than half of the applicants interviewed were referred by a government agency. For tax credit programs this would be anticipated. Such a finding is somewhat of a surprise for CETA-OJT, however. It implies that the contracting process for CETA-OJT did not result in the firm setting aside specific job openings for which only CETA referrals competed. Apparently, what was happening was that an understanding was reached with a firm that was interested in a CETA-OJT contract and referrals were made to that firm. If a CETA referral was acceptable, he/she was hired, and a contract was signed. If not, someone not referred by CETA was hired.

Compared to unsubsidized workers at these same firms, CETA referrals were 15 percent less productive initially, 13 percent less productive at termination or the time of the interview, received 35 percent more training, and had a separation rate of 62 percent rather than 23 percent. Workers subsidized by WIN

were 14 percent less productive initially, 11 percent less productive at termination or time of the interview, received less training, and had a separation rate of 47 percent. TJTC-subsidized workers were 14 percent less productive initially, but only 3 percent less productive at termination of the interview, and their separation rate was 25 percent. This low turnover rate may be due to the fact that many TJTC eligibles were not known to be eligible when hired and were discovered to be eligible up to a year after being hired. Some TJTC eligibles probably quit or were fired before they were discovered to be eligible (Bishop 1982, chapter 2), so the true turnover rate of the TJTC eligibles that were hired was probably above 25 percent.

(3) 1982 Employer Survey Evidence on Hiring Standards

The impact of TJTC and OJT contracts was also examined in the 1982 employer survey, by estimating models that compared the productivity and turnover of 2 new hires at 530 of the sample firms.

Let us assume that the credentials (C_{ij}) and early job outcomes (Y_{ij}) of a new hire are random variables which depend on the firm's hiring standards for that job. Hiring standards of course depend primarily on the characteristics of the job and the firm (J_j) but may also depend on whether the firm has lowered its hiring standards in order to hire a worker who brings a subsidy to the firm. The qualifications of a new hire can, thus, be represented by the following equation:

$$(1) \quad (C_{ij}, Y_{ij}) = BS_{ij} + \theta H_{ij} + \phi J_j + v_j + u_{ij}$$

(C_{ij}, Y_{ij}) = vector of credential characteristics and early job outcomes for person "i" in job "j"

S_{ij} = a vector of dummy variables indicating whether person "i" is subsidized by TJTC or CETA/JTPA-OJT

H_{ij} = a vector of variables describing characteristics of the job such as hours worked and its temporary versus permanent character which vary across individuals hired

J_j = a vector of characteristics of the job and firm

v_j = a job specific error term

u_{ij} = a random error that is specific to the individual i in job j.

The characteristics of the job worker/match (H_{ij}) that might influence the outcome are hours worked per week and a dummy equal to one when the job was supposed to be temporary. The variables which capture the effect of subsidy programs on hiring standards are a dummy equal to one when the employee was eligible for TJTC and the employer knew this when the hire decision was made and a dummy equal to one when the employee was subsidized by a CETA/JTPA OJT contract.

A problem arises if we estimate equation 1. Because the hiring standards depend upon unmeasured characteristics of the job (v_j) that may be correlated with whether the firm hires a subsidized worker, the covariance of S_{ij} and v_j is probably nonzero, so biased estimates of coefficient vector B will be produced. This problem can be finessed by estimating a fixed effects model which predicts the differences in the outcomes experienced by two people in the same job at the same firm as a function of differences in S_{ij} and H_{ij}, as is shown in equation (2) and (3).

$$(2) \quad C_{1j} - C_{2j} = B(S_{1j}-S_{2j}) + \theta(H_{1j}-H_{2j}) + u_{1j} - u_{2j}$$

$$(3) \quad Y_{1j} - Y_{2j} = B(S_{1j}-S_{2j}) + \theta(H_{1j}-H_{2j}) + u_{1j} - u_{2j}$$

where person 1 and 2 both work in the same job "j". Estimating this model produces unbiased estimates of B if the S_{ij}'s are not correlated with the u_{ij}'s.

The sample of jobs for which paired data are available was generated in the following manner. A stratified random sample of 3,712 employers was interviewed. Three hundred of these did not have the time for a long interview, so shortened questionnaires were administered. Employers who received the full questionnaire were asked to select "the last new employee your company hired prior to August 1981 regardless of whether that person is still employed by your company." A total of 818 employers could not provide information for a recent new hire. Most of these firms were small organizations that had not hired anyone in recent memory. The employers that provided information on one new hire were asked to provide data on a second new hire in the same job but with contrasting amounts of vocational education. Of the 2,594 employers that provided data on one new hire, 1,511 had not hired anyone else in that job in the last two years, and 424 had not hired anyone with a different amount of vocational training for that positior in the last two years. As a result, data are available for 659 pairs of individuals who have the same job at the same establishment. Missing data on specific questions used in the model further reduced the sample used for estimation to 530 when credentials are the dependent variables and 471 when early job outcomes are being predicted. Most of the establishments from which paired data are available are small. Seventy percent have fewer than 50 employees and only 12 percent have more than 200.

The results of estimating (2) and (3) in this data are presented in Exhibit V-3. Only 33 of these firms had knowingly hired a TJTC eligible worker for only 1 of their jobs, so these tests of TJTC's impact are not very powerful. Nevertheless some

EXHIBIT V-3

Employment and Training Administration

IMPACT OF TARGETED SUBSIDIES ON HIRING STANDARDS

Dependent Variable	Known TJTC Eligible	CETA/ JTPA-OJT Contract	R^2
Years of education	-.88** (-2.06)	.32 (0.84)	.010
Relevant vocational education	.39** (2.47)	.13 (0.90)	.019
Relevant private vocational education	.05 (0.86)	-.08 (-1.39)	.008
Years of relevant experience	.72 (.66)	-.55 (.55)	.002
Years of total experience	-2.77 (-1.12)	-1.29 (-0.59)	.014
Female	-.003 (-0.04)	-.004 (-0.06)	.001
Productivity first 2 weeks	.08 (0.95)	-.01 (-0.12)	.051
Productivity weeks 3-12	.07 (1.13)	-.03 (-0.47)	.047
Training time	.08 (0.56)	.15 (1.12)	.014
Starting wage	-.08* (-1.78)	-.001 (-0.01)	.014

*10 percent on two tail test
** 5 percent on two tail test

Source: Based on model predicting the difference in credentials and early job outcomes between two new hires for the same job as a function of differences in TJTC certification, JTPA-OJT subsidy, hours worked per week and whether the job was temporary. Sample sizes were 530 for predicting credentials and 471 for predicting early job outcomes--productivity, training time, and starting wage. Education, relevant experience, and total experience are all measured in years. Relevant vocational education, relevant private vocational education, and female are zero-one dummy variables. Productivity reports were on a zero to 100 scale and modeled as a linear function of the subsidy dummy variables. The table reports proportionate impacts which were calculated by dividing raw coefficients by the means (50 and 66) of these two variables. Training time and starting wage were logarithmic variables before being differenced so the coefficients are measures of proportionate impacts as well. T statistics are reported in parenthesis under the coefficient.

interesting results have been obtained. The TJTC eligibles had significantly fewer years of schooling than nonsubsidized workers hired in the same job. They were significantly more likely to have had relevant vocational training. This result is probably a consequence of the fact that a good share of the tax credit seem to have been for hiring high school cooperative education students. They were paid a statistically significant 8 percent less than other workers doing the same job. They were younger and were reported to be more productive in the first few months of employment but these differences were not statistically significant. These results suggest that except for relevant vocational education the credentials of TJTC hires were as hypothesized less attractive than the credentials of unsubsidized new hires. There is no evidence, however, that they were less productive or required more training. In fact, our point estimates imply that they were 7 to 8 percent more productive. Since they were paid less as well, the TJTC hires seem to have been a very good deal for the firm. This pattern of results suggests that employers anticipate TJTC eligibles to be much worse employees than they turn out to be.

CETA/JTPA-OJT contracts in contrast seem to have no appreciable effect on hiring standards or early job outcomes. Here again the power of the test is not great because only about 40 firms had hired a CETA/JTPA subsidized worker for one job and not for another.

These results were explored further by estimating models which interacted the TJTC and JTPA dummy variables with size of establishment, industry, whether the firm consciously tries to select TJTC eligibles, and the number of TJTC certified hires at the firm. The results for size of establishment are presented in Exhibit V-4. No evidence was found that TJTC had a different impact on standards in large rather than small establishments. For CETA/JTPA-OJT, however, the size of the establishment does seem to matter. The CETA/JTPA referrals are much more likely to

EXHIBIT V-4

Employment and Training Administration

IMPACT OF TARGETED SUBSIDIES ON HIRING STANDARDS
BY SIZE OF ESTABLISHMENT

Dependent Variable	TJTC		CETA/JTPA-OJT		R^2
	TJTC Impact When 18 Employees	Size Interaction	Impact When 18 Employees	Size Interaction	
Years of education	-.78 (-1.63)	-.11 (-.046)	.31 (0.79)	-.03 (-0.09)	.011
Relevant vocational education	.28 (1.60)	.12 (1.21)	.20 (1.39)	.29** (2.59)	.030
Relevant private vocational education	.01 (0.18)	.04 (1.14)	-.06 (-1.00)	.08** (1.89)	.015
Years of relevant experience	.23 (.18)	.42 (.61)	-.62 (.61)	.06 (.07)	.012
Years of experien	-4.11 (-1.49)	1.39 (0.93)	-1.64 (-0.73)	-.76 (-0.44)	.013
Female	-.01 (-0.16)	.02 (-0.34)	-.01 (-0.17)	-.03 (-0.59)	.002
Productivity first 2 weeks	.07 (0.81)	.01 (0.28)	-.004 (-0.05)	.007 (0.12)	.049
Productivity weeks 3-12	.08 (0.80)	-.002 (-0.06)	-.18 (-0.28)	.03 (0.64)	.048
Training time	.06 (0.41)	-.008 (-0.09)	.11 (0.79)	-.09 (-0.85)	.005
Starting wage	-.09** (-2.02)	.03 (1.01)	.002 (0.04)	.005 (0.17)	.016
Temporary Employment	.10 (1.34)	-.01 (-0.28)	.08 (1.23)	.035 (0.73)	.019

*10 percent on two tail test
** 5 percent on two tail test

Source: Based on model predicting the difference in credentials and early job outcomes between two new hires for the same job as a function of differences in TJTC certification JTPA-OJT subsidy, hours worked per week and whether the job was temporary. Sample sizes were 530 for predicting credentials and 471 for predicting early job outcomes--productivity, training time, and starting wage. Education, relevant experience, and experience are all measured in years. Relevant vocational education, relevant private vocational education, and female are zero-one dummy variables. Productivity reports were on a zero to 100 scale and modeled as a linear function of the subsidy dummy variables. The table reports proportionate impacts which were calculated by dividing raw coefficients by the means (50 and 66) of these two variables. Training time and starting wage were logarithmic variables before being differenced so the coefficients are measures of proportionate impacts as well. T statistics are reported in parenthesis under the coefficient.

have previous relevant vocational training than other hires for the same job and this is especially true at large establishments. When the firm has fewer than 10 employees, no impact of CETA/JTPA on the probability of hiring someone with relevant vocational education is observed.

Estimates of how TJTC's impact on hiring standards of firms in the industrial sector are different from its impact in the retail/service sector are reported in Exhibit V-5. The industrial (construction, mining, manufacturing, transportation, communication and utilities) employers do not seem to change their hiring standards when they hire TJTC eligibles or CETA/JTPA-OJT contract referrals. Changes in hiring standards have occurred in the retail and service sector, however. Here TJTC hires typically had 1.1 years less education, were 43 percentage points more likely to have received relevant vocational training and received a 10 percent lower wage. They were reported to be 9 percent more productive, but this effect was not statistically significant. CETA/JTPA-OJT had no significant impact on hiring standards in either sector. It does seem to have increased training by about 30 percent in the retail and service sectors. No effect on the training given the new hire was observed in the industrial sector.

Some employers reported they tried to recruit and select TJTC eligibles and others reported they did not. Employers that are trying to select eligibles are probably more likely to lower hiring standards than those saying they make no efforts to recruit and select TJTC eligibles. This issue is examined in Exhibit V-6 where we report results of models which measure the impact of TJTC eligibility separately for companies that do and do not report they are trying to select TJTC eligibles.

Hiring standards seem to be influenced at both types of firms but in opposite directions. At the firms which try to select eligibles, TJTC eligibles have a significant 1.4 fewer

EXHIBIT V-5

Employment and Training Administration

IMPACT OF TARGETED SUBSIDIES ON HIRING STANDARDS BY INDUSTRY

Dependent Variable	TJTC		CETA/JTPA-OJT Contracts		R^2
	Industrial	Retail & Service	Industrial	Retail & Service	
Years of education	.51	-1.13**	-.64	.68	.019
Relevant vocational education	.16	.43**	-.01	.18	.020
Relevant private vocational education	.004	.06	-.14	-.05	.009
Years of relevant experience	N/A	N/A	N/A	N/A	N/A
Years of total experience	-3.53	-2.62	-5.94	.52	.017
Female	0.00	-.003	.14	-.06	.004
Productivity first 2 weeks	.04	.09	.13	-.08	.054
Productivity weeks 3-12	-.02	.09	.12	-.10	.054
Training time	-.19	.13	-.14	.30*	.021
Starting wage	.04	-.10**	.02	.005	.017

*10 percent on two tail test
** 5 percent on two tail test

Source: Based on model predicting the difference in credentials and early job outcomes between two new hires for the same job as a function of differences in TJTC certification JTPA-OJT subsidy, hours worked per week and whether the job was temporary. Sample sizes were 530 for predicting credentials and 471 for predicting early job outcomes--productivity, training time, and starting wage. Education, relevant experience, and experience are all measured in years. Relevant vocational education, relevant private vocational education, and female are zero-one dummy variables. Productivity reports were on a zero to 100 scale and modeled as a linear function of the subsidy dummy variables. The table reports proportionate impacts which were calculated by dividing raw coefficients by the means (50 and 66) of these two variables. Training time and starting wage were logarithmic variables before being differenced so the coefficients are measures of proportionate impacts as well.

EXHIBIT V-6

Employment and Training Administration

IMPACT OF TARGETED SUBSIDIES ON HIRING STANDARDS
BY WHETHER FIRM TRIES TO SELECT TJTC ELIGIBLES

Dependent Variable	Impact of Known Eligible at Firms Which Try to Select	Known Eligible at Firms Which Do Not Try to Select	R^2
Years of education	-1.40**	-.13	.012
Relevant vocational education	.38*	.36	.010
Relevant private vocational education	.04	.06	.001
Years of relevant experience	.75	.53	.016
Years of experience	-4.85	.38	.004
Female	.08	-.13	.003
Productivity first 2 weeks	.00	.25*	.006
Productivity weeks 3-12	.00	.20*	.007
Training time	.09	.00	.001
Starting wage	-.089	-.047	.007

*10 percent on two tail test
** 5 percent on two tail test

Source: Based on model predicting the difference in credentials and early job outcomes between two new hires for the same job as a function of differences in TJTC certification. Sample sizes were 530 for predicting credentials and 471 for predicting early job outcomes--productivity, training time, and starting wage. Education, relevant experience, and experience are all measured in years. Relevant vocational education, relevant private vocational education and female are zero-one dummy variables. Productivity reports were on a zero to 100 scale and modeled as a linear function of the subsidy dummy variables. The table reports proportionate impacts which were calculated by dividing raw coefficients by the means (50 and 66) of these two variables. Training time and starting wage were logarithmic variables before being differenced so the coefficients are measures of proportionate impacts as well.

years of schooling and an almost significant 5 fewer years of post-school work experience. While the credentials of the TJTC hires were weaker than those of nonsubsidized hires, their productivity was no different. The firms do not seem to have actually hired less productive workers.

Employers that make no effort to select TJTC eligibles do not change the credentials they expect of a new hire when they are known to be eligible for TJTC. In other respects, however, they seem to have raised their hiring standards for the TJTC eligibles they hire are 20 to 25 percent more productive than nonsubsidized new hires. Apparently, many of the firms that make no effort to select TJTC eligibles do so because they view eligibility to be a signal of low productivity. To compensate for their perceived low productivity, they are extra careful when hiring TJTC eligibles and end up hiring better employees than anticipated. These results are consistent with the hypothesis of pervasive stigmatization of TJTC eligibles.

A small number of firms that hire thousands of TJTC eligibles account for the bulk of all use of the TJTC program. These large users are not heavily represented in our sample. Consequently, it is important to know whether large users of TJTC are different. Have they lowered hiring standards more than the small users? Exhibit V-7 reports estimates of how the impact of TJTC on hiring standards depends on the number of TJTC eligibles hired by the firm. Firms that had hired more than 10 TJTC eligibles seem to have lowered their educational requirements more than other firms but the effects are neither large nor statistically significant.

EXHIBIT V-7

Employment and Training Administration

IMPACT OF TARGETED SUBSIDIES ON HIRING STANDARDS BY USE OF TJTC

Dependent Variable	Impact of TJTC at Firm with			R^2
	More than 10 TJTC Certif.	3-10 TJTC Certif.	1-2 TJTC Certif.	
Years of education	-2.10***	.76	-1.11	.023
Relevant vocational education	.46	.41	.27	.011
Relevant private vocational education	.16	.00	-.01	.005
Years of relevant experience	1.45	.61	.12	.003
Years of experience	-4.67	-3.60	-2.51	.004
Female	.16	.001	-.13	.005
Productivity first 2 weeks	.09	-.02	.16	.004
Productivity weeks 3-12	.06	.01	.13	.004
Training time	.13	.00	.04	.001
Starting wage	-.077	-.012	-.110*	.008

*10 percent on two tail test
** 5 percent on two tail test

Source: Based on model predicting the difference in credentials and early job outcomes between two new hires for the same job as a function of differences in TJTC certification. Sample sizes were 530 for predicting credentials and 471 for predicting early job outcomes--productivity, training time, and starting wage. Education, relevant experience, and experience are all measured in years. Relevant vocational education, relevant private vocational education and female are zero-one dummy variables. Productivity reports were on a zero to 100 scale and modeled as a linear function of the subsidy dummy variables. The table reports proportionate impacts which were calculated by dividing raw coefficients by the means (50 and 66) of these two variables. Training time and starting wage were logarithmic variables before being differenced so the coefficients are measures of proportionate impacts as well.

VI. IMPACT OF TJTC ON POST-HIRING OUTCOMES

VI. IMPACT OF TJTC ON POST-HIRING OUTCOMES

1. INTRODUCTION

In this chapter, we examine what happens to TJTC eligible workers after they have been at the firm awhile. Do they get special treatment? Does the fact that the employer will be eligible for 2 years of subsidy result in lower turnover than for nonsubsidized workers? Or does the stigma of being a TJTC eligible increase the probability of turnover? We have seen that TJTC employees are often reported to be more productive than their counterparts. Does this result in TJTC eligibles having higher rates of promotion?

One of the ways employers may respond to productivity differentials between workers is by promoting the most productive and firing the least productive. Many employment contacts (both explicit and implicit) greatly limit the firm's flexibility in setting wage rates but offer it great flexibility in releasing unproductive new hires during a probationary period that may last as long as 6 months. Why do firms offer labor contracts in which they fire less productive workers rather than offering them a lower wage? The contract literature has suggested a number of reasons why firms may choose to offer such contracts. As a worker gains tenure on the job, the specificity of the job match increases. Renegotiating wage rates after specific training is completed will be very costly because the gap between the threat points of each party can be quite large and the incentives for strategic behavior are strong (Hashimoto and Yu 1981).

A second reason for such contracts might be morale considerations. Retaining an unproductive worker who has been chastened by receiving a salary cut or demotion may be bad for morale. The bitterness that such an event causes may result in grievances being filed against the company, efforts to organize the firm's

employees, further declines in the worker's productivity, damage to the morale and cohesiveness of the work group, and sabotage (Akerlof 1982).

TJTC's impact on turnover must be evaluated in the context of a fully specified model of the individual's determinants of turnover. We, therefore, will also examine the impact of differentials in realized productivity and differentials in training investment on the differentials in turnover of people occupying the same job. How responsive is turnover to such differentials? At which types of firms is turnover most responsive to productivity and training differentials? These issues were addressed by studying a sample of workers who had been recruited for permanent jobs and who stayed at the firm at least 3 months. The effects of the firm's characteristics on the average level of turnover was cancelled out by examining differences in subsequent turnover between pairs of workers who had the same job and met the selection criteria noted above. Limiting the sample to those who stayed at the firm at least 3 months means that we have one measure of training investment and two measures of reported productivity that are not contaminated by turnover events. The models therefore characterize the effect of the training provided in the first 3 months and the productivity achieved during that period on subsequent turnover.

2. TURNOVER IMPACTS

Models were estimated predicting differences in the log of actual tenure and probabilities of voluntary and involuntary separations. The results of the analysis are presented in Exhibit VI-1. When measures of actual training and productivity were included in the models, almost none of the characteristics of the worker were statistically significant. In particular, TJTC eligibility had no effect on turnover. Clearly TJTC eligibles did not get special treatment. The sole exception to this was that women had lower quit rates and people who began their

EXHIBIT VI-1

Employment and Training Administration

DETERMINANTS OF TURNOVER AND PROMOTION

Variable	Log Tenure		Involuntary Separation		Quit		Promotion	
Subsidy Programs								
Known TJTC eligibility	-.068	(.4)	-.029	(.2)	-.023	(.2)	.148	(1.2)
CETA/JTPA	-.085	(.5)	.121	(1.2)	.006	(.9)	-.104	(.9)
Quality of Match								
Productivity 3-12 weeks	2.450***	(9.6)	-.777***	(4.5)	-.509**	(2.4)	1.12***	(5.8)
Productivity 1-2 weeks	-.840***	(3.4)	-.211	(1.4)	.335	(1.6)	-.490***	(2.5)
Log training 1-12 weeks	.072	(1.3)	-.140***	(3.6)	.060	(1.2)	.086*	(1.9)
Credentials of New Hire								
Years of school	-.019	(1.2)	.018*	(1.7)	-.005	(.4)	-.012	(1.0)
Coop student	.246*	(2.6)	-.038	(.6)	-.129*	(1.6)	.177**	(2.2)
Relevant vocational ed.	-.061	(1.3)	.018	(.5)	-.005	(.1)	.017	(.4)
Private vocational ed.	-.085	(.8)	-.003	(.0)	.027	(.3)	.054	(.6)
Relevant experience	007	(.5)	.0062	(1.2)	.0111	(1.0)	.0026	(.4)
Relevant experience^2	-.0002	(.4)	-.0001	(.7)	-.00049	(1.2)	-.00015	(.8)
Total experience	-.012	(1.5)	-.003	(0.4)	-.0037	(.6)	-.0011	(.1)
Total experience^2	.0034	(1.5)	.00027	(.8)	.000037	(.2)	.00031	(.8)
Female	.112	(1.3)	-.008	(0.1)	-.131*	(1.9)	.082	(1.2)
Conditioning Variables								
Log potential tenure	.588***	(2.7)	.184	(1.3)	.422***	(2.4)	.213	(1.2)
Log potential tenure^2	.041	(1.0)	-.025	(.9)	-.063*	(1.9)	-.016	(.5)
Temporary job	-.135	(1.4)	.014	(.2)	.239***	(3.1)	-.182**	(2.3)
Hours per week	.0078	(1.6)	.0003	(.1)	-.003	(.8)	.016***	(4.1)
R^2	.586		.164		.093		.211	
Number of Observations	477		477		477		477	

t-statistics in parenthesis

*significant at .10 level
**significant at .05 level
***significant at .01 level

work at the firm as a coop student were more likely to be promoted and had longer overall tenure. By far the most powerful determinant of turnover is reported productivity during the 3rd-12th week of employment. When the productivity scale is defined over a range from 0 to 1, workers' productivity in the 3rd-12th week has a mean of 0.65 and standard deviation of 0.14. A one standard deviation (0.14) rise in the productivity report raises expected tenure by 39 percent. It lowers the probability of being fired by 9 percentage points and the probability of quitting by 7 percentage points. If productivity is 0.14 higher both initially and during week 3-12, expected tenure is 27 percent greater, the probability of being fired is 14 percentage points lower and the probability of quitting is 4.5 percentage points lower. Less productive workers are more likely to quit, but it is in the probability of being fired or laid off where the really big differences show up.

The primary prediction of human capital theory about job turnover is that workers who have a great deal of specific training should have lower rates of turnover. This proposition applies to workers who have completed their training or whose training is well underway. If the employer has paid for most of the costs of specific training, a significant loss is suffered if a separation occurs, so we would expect the separations over which the employer has control (involuntary separation) to be negatively related to the amount of specific training. If the employee has paid for the specific training, one would expect voluntary separations but not involuntary separations to be negatively related to the amount of specific training provided.

Expected tenure is greater for workers who have received more than the normal amount of training. The elasticity of tenure with respect to training is apparently about 0.12. More intensive training raises expected tenure by lowering rates of involuntary termination. Holding productivity constant, a doubling of training investment during the first 3 months lowers the

probability of being fired in the subsequent period by nearly 10 percentage points. Variations across workers in the amount of training received seem to have no effect on quit rates. The fact that additional investments in training reduce involuntary turnover but not voluntary turnover supports other findings that most of the training provided in the first months of a job is specific to the firm (Bishop 1985). Apparently some new hires are recruited for their potential not their experience. The receipt of extra training may reflect a belief in a worker's potential. For these workers low productivity during the first few months is not as negative as it would be for someone with previous relevant experience, and very low rates of involuntary turnover result.

The results presented in Exhibit VI-1 suggest that known TJTC eligibles were not significantly different in their turnover experiences from other new hires of equivalent productivity. The impact of this knowledge on outcomes might be different at firms that were consciously trying to recruit and select eligibles. Firms that have changed their hiring policies in order to increase their use of TJTC might also be more likely to change their retention policies in order to retain the subsidized employees for the full two years. This hypotheses was tested by entering separate TJTC eligibility dummies for these two types of firms into the models presented in Exhibit VI-1. The results--the estimated impact of TJTC eligibility on turnover holding relative productivity and training constant--are presented in Exhibit VI-2. The results contradict our hypothesis. Firms that report changing hiring policies in order to participate do not reduce their propensity to dismiss TJTC subsidized workers. In fact, retention policies. Rates of dismissal were nonsignificantly higher suggesting that only hiring standards were lowered, not retention standards. To our surprise, the firms that report not trying to participate seem to have been so surprised by the high performance of the TJTC eligibles their retention policy seems to have overcompensated. Holding relative productivity and training constant, TJTC eligibles at these firms were less likely to be fired and were more likely to stay at the firm.

Since TJTC eligibles were often more productive than nonsubsidized employees, the finding that the new hires who were most productive in the first 3 months had much lower turnover suggests that TJTC eligibles probably had lower than average turnover. This hypothesis can be tested by estimating models of turnover differentials that do not include measures of initial productivity. Results of regressions estimated for the full sample of paired employees (not just those pairs where both new hires stayed at least 3 months) are presented in Exhibit VI-3. While the effects of TJTC eligibility on the probability of involuntary separation is in the expected direction, the coefficient is not statistically significant. TJTC effects on the quit rate and tenure are negligible. Limiting the sample to jobs which were believed to be permanent jobs when the hiring decision was made does not change this result (see bottom panel of VI-3). The job and worker characteristics that seem to have the greatest effect on turnover is whether the job is full- or part-time and whether the worker started at the firm as a coop student. Working 40 hours per week rather than 20 is associated with about 38 percent greater tenure and a 14 percentage point lower probability of being fired. Coop students stay at the firm 25 percent longer and were 12 percentage points less likely to quit.

In chapter V, we found that it was only at firms which did not try to select TJTC eligibles were TJTC eligibles more productive than other workers in those jobs. This suggests that the turnover of TJTC eligibles at these firms should be lower than at the firm that consciously try to select eligibles. This hypothesis was tested by estimating models with separate TJTC eligibility dummies for these two types of firms. Models using this specification are reported in Exhibit VI-4. The highly productive TJTC eligibles at firms that made no conscious effort to select did benefit from their greater productivity. They were 35

EXHIBIT VI-2

Employment and Training Administration

IMPACT OF TJTC ON TURNOVER BY WHETHER FIRM TRIES TO SELECT TJTC ELIGIBLES

Variable	Firm Tries to Select		Firm Does Not Try to Select		R^2
Probability of staying	-.182	(1.1)	.520**	(2.2)	.235
Probability of quitting	.049	(.3)	-.186	(.9)	.090
Probability of involuntary turnover	.133	(1.1)	-.351**	(2.0)	.169
Log tenure	-.176	(.9)	.149	(.6)	.569
Probability of promotion	.061	(.4)	.344	(1.6)	.194

Note: All models contain controls for background characteristics of the worker and productivity and training during the first 3 months. Except for the TJTC variable, they are identical to those in Exhibit VI-1.

*significant at .10 level
**significant at .05 level
***significant at .01 level

EXHIBIT VI-3

Employment and Training Administration

TURNOVER OF TJTC ELIGIBLES

Variables	Log Tenure		Involuntary Separation		Quit	
Includes Temporary Jobs						
Known TJTC Eligibility	.026	(.2)	-.095	(.9)	.015	(.1)
CETA/JTPA	-.074	(.5)	.109	(1.2)	.122	(1.1)
Years of Schooling	-.009	(.6)	.002	(.2)	-.002	(.2)
Coop Students	.218**	(2.1)	-.065	(1.1)	-.121*	(1.7)
Log Potential Tenure	.897***	(11.6)	.077*	(1.7)	.130**	(2.4)
Log Potential Tenure^2	-.013	(.7)	-.006	(.6)	-.012	(.9)
Hours Per Week	.016	(3.4)	-.007***	(2.7)	.0036	(1.1)
R^2	.621		.032		.039	
Number of Observations	613		613		613	
Excludes Temporary Jobs						
Known TJTC Eligibility	-.021	(.1)	.024	(.2)	-.033	(.2)
CETA/JTPA	-.001	(.0)	.118	(1.0)	.195	(1.4)
Number of Observations	511		511		511	

*significant at .10 level
**significant at .05 level
***significant at .01 level

percentage points less likely to be fired and had 28 percent greater longevity. While none of the results for TJTC eligibility at firms that try to select eligibles are statistically significant, all of the point estimates imply that these TJTC eligibles fared less well than their unsubsidized counterparts. These results are consistent with our Chapter V findings regarding initial productivity. Apparently, the firms that do not try to select eligibles believe target group members would be much less productive and so only hired target group members who were clearly highly qualified and ended up getting new employees who were much better than anticipated. Discovering their good fortune after the fact, they belatedly recognized the high productivity of these workers by being less likely to dismiss them and more likely to promote them.

3. PROMOTIONS

About one-third of our sample of new hires were promoted before the date of our interview. Consequently, an analysis of promotions was conducted which paralleled the analysis of turnover. The results of this analysis of differences in promotion likelihood of two recent new hires is presented in the right hand column of Exhibit VI-1. The coefficient on TJTC eligibility is positive and of respectable size but not statistically significant. As one might anticipate, productivity during the 3rd-12th weeks on the job was by far the single most important determinant of an individual's likelihood of promotion. Those who were 15 percent (0.10) more productive than other new hires in that job were 13 percentage points more likely to be promoted.

The coefficients on reported initial productivity are significantly negative. This implies that low productivity in the initial weeks on a job is not held against a new employee being considered for promotion if learning is rapid and very high levels of productivity are attained.

EXHIBIT VI-4

Employment and Training Administration

TURNOVER OF TJTC ELIGIBLES
BY WHETHER FIRM TRIED TO SELECT

Variables	Log Tenure		Involuntary Separation		Quit	
Known TJTC Eligibility						
At firm trying to select	-.127	(.6)	.078	(.6)	.078	(.5)
At firm not trying to select	.251	(.9)	-.348**	(2.2)	-.077	(.4)
CETA/JTPA	-.075	(.5)	.111	(1.2)	.123	(1.1)
Years of Schooling	-.010	(.7)	.003	(.3)	-.002	(.2)
Coop Student	.223***	(2.2)	-.070	(1.2)	-.123*	(1.7)
Log Potential Tenure	.904***	(11.7)	.069	(1.5)	.128**	(2.4)
Log Potential Tenure^2	-.014	(.8)	-.005	(.4)	-.011	(.9)
Hours Per Week	.016***	(3.4)	-.007***	(2.7)	-.004	(1.1)
R^2	.622		.039		.040	
Number of Observations	613		613		613	

*significant at .10 level
**significant at .05 level
***significant at .01 level

EXHIBIT VI-5

Employment and Training Administration

IMPACT OF TJTC ON PRODUCTIVITY OF NEW HIRE

Variables	TJTC Eligible		CETA/JTPA		Controls for Worker Characteristics	R^2	Number of Observations
Productivity First 2 Weeks	.07	(.66)	-.09	(1.04)	None	.052	575
Productivity Weeks 3-12	.06	(.80)	-.09	(1.18)	None	.054	575
Productivity at Interview or Separation	.03	(.43)	-.05	(.74)	None	.108	563
Productivity at Interview or Separation	-.02	(.24)	-.04	(.50)	Full	.151	570
Productivity at Interview for Stayers	-.07	(1.13)	-.09	(.97)	Total Experience	.098	253

t-statistics in parenthesis

*significant at .10 level
**significant at .05 level
***significant at .01 level

There is a clear tendency for those who receive more intensive training in the first 3 months on a job to have a higher probability of subsequently being awarded a promotion. A doubling of training intensity during the first 3 months is associated with a 6 percentage point higher probability of promotion.

4. PRODUCTIVITY

In Exhibit VI-5, we examine how the relationship between TJTC eligibility and productivity evolves as the worker's tenure increases. There are no statistically significant differences in productivity between unsubsidized workers, TJTC eligibles, or CETA/JTPA subsidized workers at any point in the workers tenure. The pattern of the coefficients is nevertheless quite interesting. The CETA/JTPA workers are 4 to 9 percent less productive than unsubsidized workers throughout the time period and for all specifications. The TJTC eligibles, however, start out more productive than unsubsidized new hires but their percentage advantage drops as time passes. If we limit our analysis to pairs of workers both of whom were retained, the typical TJTC eligible is somewhat less productive than nonsubsidized employees at the time of the interview. This pattern implies that firms are apparently trying to retain the TJTC eligibles and have as a result been willing to retain workers they would have fired in the past. This is consistent with the findings reported in Exhibit VI-2 where we found to our surprise that it was the firms that were not trying to select TJTC eligibles that had apparently lowered their propensity to fire TJTC eligibles.

VII. WHICH ELIGIBLES DOES TJTC HELP?

VII. WHICH ELIGIBLES DOES TJTC HELP?

The designers of TJTC expected eligible job seekers to use their eligibility as a selling point when they contacted employers. Job search counselors, however, have been reluctant to recommend that disadvantaged job seekers use TJTC as a part of their sales pitch to potential employers.

Two experiments (Burtless and Cheston 1981; Moran et al. 1982) were conducted in 1980 in which unemployed welfare recipients were taught to announce their eligibility for TJTC to employers when they applied for a job. In both experiments, the group that received this training had a lower placement rate then other eligible welfare recipients who did not receive this training. In the Dayton experiment (Burtless and Cheston 1981), random assignment was used to select the group to be trained and the reduction in placement was statistically significant.

The results of the Racine/Eau Clair, Wisconsin quasi-experiment (Moran et al. 1982) are particularly interesting. The study compared WIN clients who were served prior to the initiation of the experiment to clients who were served after the experiment began. Holding other characteristics constant, the WIN clients who were trained to tell employers about their TJTC eligibility were half as likely to obtain a job. A follow-up of some of the WIN clients in the experimental and control groups in Racine found that it was those WIN clients who followed instructions and brought up their eligibility when contacting employers who were least likely to find a job. Of the 32 reporting that they used TJTC as a marketing tool, only 2 (6 percent) found jobs eligible for TJTC certification. Of the 26 who did not initiate discussion of the TJTC eligibility, 22 percent found jobs eligible for TJTC certification.

The results of these experiments suggest that, for welfare recipients, announcing TJTC eligibility told most prospective employers something they did not know, that was stigmatizing, and that reduced the job seeker's chances of being hired. It seems that for most employers, signaling one's welfare recipiency has a powerful stigmatizing effect that is not outweighed by the possibility of the employer receiving a tax credit. Being a youth from a low-income family should not be equally stigmatizing, however. Furthermore, it is probable that experience with the TJTC program is changing employer views of TJTC eligibles. It may be that the stigma of being TJTC-eligible has declined with time.

This issue may be addressed in a more recent data set by examining how an employer's assessment of the desirability of hiring a job applicant is influenced by including "eligible for TJTC" in the comments section of a job application. The 1983 NIE/NCRVE Employer Hiring Decisions Survey obtained ratings from 850 employers around the country of 11 different completed job applications. The employers were given applications for entry-level jobs in clerical, sales, or machine trades occupations. One of the features of the job applicant that was varied randomly was eligibility for TJTC. By regressing the ratings assigned on the qualifications exhibited in the applications, and interactions between TJTC and such characteristics of the firm as size, amount of training offered, and industry, the net effect of TJTC eligibility and how it varies across firms can be determined.

1. THEORY

Bishop, Barron, and Hollenbeck (1983) suggest that, to a potential employer, the "true" present value of labor services offered by a new employee is a random variable. The theory and models developed here represent the behavior underlying the summary of information into a screening index that determines

whether a job applicant gets an opportunity to interview for a job. Each employer in the survey was presented with a job description and 11 applications and was asked to rate the applicants on a hiring priority scale ranging from 0 to 200. To standardize the ratings to the firm's hiring standards, the following directions were given:

> For a job similar to the one described above, assume--
>
> 50 points represents the worst applicant you ever hired (as perceived at the time of hiring, NOT what the new hire's performance actually turned out to be).
>
> 100 points represents the average applicant you hire.
>
> 150 points represent the best applicant you ever hired (as perceived at the time of hiring, NOT what the new hire's performance actually turned out to be).

The index is not intended in any way to measure an applicant's absolute productivity, but is a relative measure of hiring priority to be used to compare more than one applicant for the same job description. The instructions are framed so that 100 points equal the anticipated difference between the firm's best new hire and its worst.

Assume that employers believe the "i"th applicant's true productivity, V_{ij}, can be predicted by a set of attributes, some of which are observable (X_{Oi}) and some which are not (X_{Ni}). The following equation determines productivity at the "j"th job/firm:

$$(1) \quad V_{ij} = f_j(X_{Oi}, X_{Ni}) \qquad \text{for } j = 1 \ldots$$

Hiring decisionmakers try to evaluate the information provided by job applicants and predict their potential productivity. Lacking information on X_{Ni}, they must instead generate an estimate of expected productivity that depends upon observable characteristics only. Therefore--

$$(2) \quad S_{ij}(I) = E(V_{ij} | X_{Oi}) = g_j(X_{Oi})$$

Particular pieces of information enter the X_{Oi} vector, either because they have direct effects on productivity in the structural model in equation (1) or because they are believed to be correlated with the unobservable determinants of productivity, X_{Ni}. For example, neatness on the application form may be taken as a signal for having a good attitude. Reputation of one's school may be taken as a signal of self-discipline.

The g_j functions evolve through a trial-and-error process. Decisions to interview or to hire are made on the basis of the current g_j function. The success of the applicant in the interview or on the job serves as the criterion by which the g_j function is revised. If the job applicants referred by a particular agency fail to make it through the interview or do poorly on the job, being referred by that agency may become a negative rather than a positive.

It is assumed that the g_j functions are very different for different jobs, so the empirical work deals with each job separately. The relationships probably vary across firms, as well. Since, however, no single hiring decisionmaker evaluated more than 11 completed job applications, it is not possible to estimate separate g_j functions for each firm. Instead, data from hundreds of firms are included in one regression. Firm and rater characteristics are assumed to shift the S_{ij} function up and down but slope coefficients on the job applicant characteristics, X_i, are not allowed to vary across firms except for a few specified interactions between individual and firm characteristics.

2. THE INFLUENCE OF ELIGIBILITY FOR TJTC

The first step was to estimate the following simple linear model in which TJTC's impact on employer ratings does not vary across firms or across individuals:

$$(3) \quad S_{ij}(I) = b_o + b_1 TJTC_i + b_2 X_i + b_3 Z_j + e_{ij}$$

where

$S_{ij}(I)$ = hiring index scores for the "i"th individual

$TJTC_i$ = dummy variable that takes on the value of one when the individual is reported to be eligible for TJTC

X_i = characteristics of applicant i displayed on the job application

Z_j = vector of characteristics of the firm and the rater

e_{ij} = random error term

The parameters (b_i) represent the marginal influence of the characteristic on the hiring priority score. Equation (3) was estimated for all occupations jointly and for each occupation separately. Applicant characteristics, data about the job and firm, and rater characteristics were in the models together. Only the effect of TJTC is discussed here. The data and the effect of the other determinants of the ratings and a fuller description of the methodology of the survey is provided in Hollenbeck and Smith (1984) and in Bishop (1985). An analysis of a portion of the data set that is examined here is also reported in Bishop (1985.)

The average effect of TJTC eligibility on the hiring priority score was measured by entering a dummy for TJTC into the model. A positive and significant coefficient was obtained on this variable in the full sample and machine trade occupations. The average impact of TJTC was a change in percentile rank of about 1.9 points in the full sample (e.g., from the 70th percentile to the 71.9th percentile).[17] The average was 2.0

[17]For a normal distribution, a 1 standard deviation displacement from the mean is equivalent to a movement from the 50th and 84th percentile. Since the standard error of the regression was around 34 (approximately 1 standard deviation), the regression coefficients represent approximate percentile effects of the TJTC coefficient and the coefficients of the interaction variables evaluated at a prescribed level (e.g., its mean, values immediately above or below its mean).

points in clerical jobs, 2.9 points in retail jobs, and 2.7 points in machine trades. Consequently, the hypothesis that knowledge of an applicant's TJTC eligibility actually lowers most employers' desire to hire the person is rejected. The positive effect of TJTC was small, however.

TJTC eligiblity is probably a plus for some employers but a negative for others. It was hypothesized in chapter 3, for instance, that employers who provide specific training would tend to avoid TJTC eligibles, whereas employers who provide general training would be attracted to them. It is also quite probable that the effect of TJTC eligibility on the perceived attractiveness of a job candidate depends on other characteristics of that candidate. Specifically one might expect TJTC to have its most positive impacts on the employment prospects of the most disadvantaged job seekers. Workers who are visibly handicapped or who have poor education or a checkered employment history are already stigmatized. When the paper record already looks bad, learning that a candidate is from a low income family may have no further negative effects on the willingness to hire the individual and the availability of subsidy gains in salience. When, however, the applicant looks very good on paper, announcing one's TJTC eligibility may lead the employer to ask "what's wrong with this person? Why do they feel they need the help of a tax credit?" These hypotheses will be tested by including interactions between a variety of firm and job applicant characteristics and TJTC eligibility in the statistical model predicting hiring priority ratings. The specification used to test for interactions was:

$$(4)\quad S_{ij}(I) = b_o + b_1 TJTC_i + b_2 X_i + b_3 Z_j + b_4 TJTC_i{*}\cdot X_i{*} + b_5 TJTC_i{*} Z_j{*} + e_{ij}$$

where

X_i^* = characteristics of applicant hypothesized to interact with TJTC; and

Z_j^* = vector of firm characteristics hypothesized to interact with TJTC.

The firm characteristics of interest in constructing the interaction variables were the level of general and specific training, the firm's turnover rate, and the log the wage rate.[18] The applicant characteristics of interest were the number of quits in the applicant's job history, years of schooling, and the applicant's typing speed.[19] The coefficients and relevant statistics on these variables are presented in Exhibit VII-1. In order to help the readers assess the magnitude of TJTC's impact on a job candidates perceived attractiveness, we have translated the effect estimates into approximate changes in percentile rank in the distribution of job candidates.

Interactions with Training--The interactions with firm characteristics will be examined first. Employers perceive turnover rates of TJTC eligibles to be higher than those of other competing workers. If training is specific, higher turnover imposes significant costs on the firm and raises the marginal cost of participation. If training is general and workers pay for the training (viz., by reduced wages), higher turnover rates will not be particularly burdensome. Consequently, we hypothesize that firms which do a lot of general training will consider TJTC eligibility a plus while those that provide only firm specific training will consider it a negative.

---

[18]Other firm characteristics tried but dropped either for theoretical or empirical redundancy were: firm size, probation period of firm, percent of well-qualified applicants.

[19]Other applicant characteristics tried but dropped either for theoretical or empirical redundancy were: high school GPA, previous work experience, previous public employment, number of machines the individual could operate.

EXHIBIT VII 1
Employment and Training Administration
EFFECTS OF TJTC ELIGIBILITY ON HIRING PRIORITY RATINGS

Variable	Full Sample	Clerical Appl.	Retail Appl.	Machine Trade Appl.
TJTC Eligible	.34	.75	.56	.48
	(.28)	(.37)	(.14)	(.26)
Interactions with Firm Characteristics				
General training	7.80***	4.52	5.67	9.83***
	(3.61)	(1.43)	(.85)	(2.95)
Specific training	-1.60	-6.12	1.43	1.00
	(-.51)	(-1.05)	(.20)	(.22)
Turnover rate	3.35	4.82	5.63	5.02
	(1.22)	(.95)	(.65)	(1.31)
Wage rate (log)	-4.18*	1.57	-3.87	-7.15**
	(-1.79)	(.35)	(-.37)	(-2.12)
Interactions with Applicants Characteristics				
#Quits in Job History	2.69**	7.39**	.27	.95
	(1.97)	(2.49)	(-.03)	(.50)
Schooling	-2.75***	-1.40	-.53	-2.43**
	(3.58)	(-1.11)	(-.23)	(-2.01)
Typing WPM	-.34*	-.35*		
	(-1.91)	(-1.65)	N/A	N/A
Regressions Statistics				
Adjusted R^2	.221	.221	.177	.248
Standard Error of Regression	34.07	32.68	34.79	34.34
Sample Size	8,016	3,246	1,198	3,572

*10% on two-tail test
** 5% on two-tail test
*** 1% on two-tail test

Since the job being filled was the same at every firm studied, the primary reason for variation in the amount of training customarily provided is the experience and skill of the typical new hire. Consequently, the firms which offered the greatest amount of training probably did so because their new recruits arrived essentially untrained. The marginal cost of participation in TJTC will be lower in these circumstances because the firm will already be accustomed to providing the additional training that TJTC eligibles would probably require. Consequently, our second hypothesis is that TJTC will have a more positive effect on firms doing a lot of training than on firms doing little training.

The firms were asked what percent of a new hire's time during the first two years is typically spent in four different types of training:

- formal training by specialized training personnel
- receiving instructions from a supervisor or co-worker
- reading manuals or self-paced learning program
- learning the job by watching coworkers do the job at their work stations

The first two of these activities require the time of both the trainee and a supervisor or trainer and was therefore assumed to be more costly. These activities were therefore given a weight of two in defining the training variable. The measure of total training that results has a mean of 72.5 percent of available time, a standard deviation of 48.5 percent and a range from 0 to 184 percent.

The employers were also asked "How many of these skills learned by new employees in this job are useful outside of your company?" The resulting variable, the proportion of training that is reported to be general, has a mean of .669 and a standard deviation of .266. Estimates of time spent in general training

were constructed by multiplying total training by this proportion. The estimated percent of a new employee's time spent in general training has a mean of 48.5 percent and a standard deviation of 36 percent. The corresponding estimate of the time spent in specific training has a mean of 23.9 percent and standard deviation of 24.3 percent. The general and specific training variables were interacted with TJTC to test our hypothesis concerning the type and amount of training.

As presented in Exhibit VII-1, the interaction of general training with TJTC is positive in all three occupations and the full sample and significant at the 1 percent level for the full sample and machine trade occupations. The specific training interaction variable is negative in the full sample and clerical occupations but insignificant in all cases. These results support our hypothesis concerning the effect of the generality of training on the firm's reaction to TJTC. Specific examples of how the type and amount of training influences whether TJTC eligibility is considered a plus or a minus are provided in Figure 7.1. In the full sample, when 72 percent of a new employee's time is spent in general training, and no time is spent in specific training, TJTC increases the applicant's percentile rank by 4.8 percentage points whereas when .72 percent of time is spent in specific training and no time is spent in general training, TJTC reduces the applicants rank by 1.9 percentage points.

Turning now to our hypothesis concerning the overall amount of training, our findings are that TJTC reduces the applicant's rating by .8 percentage points when training is zero whereas it increases their rating by 6.0 percentage points when training is at double the mean.

Interactions with Turnover and Wage Rates--Firms which have relatively high turnover rates typically cannot afford to have demanding hiring standards and generally must hire less qualified

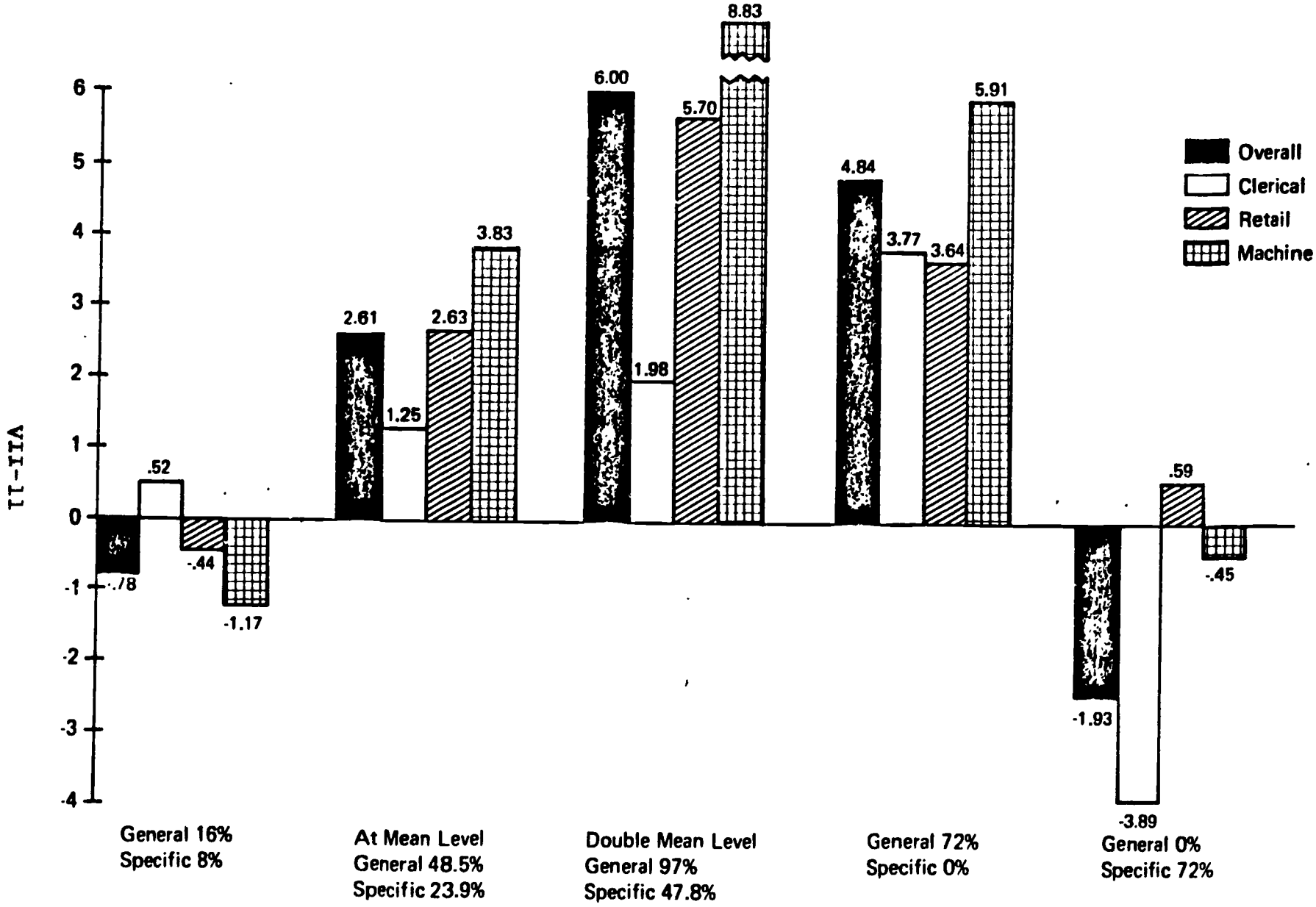

FIGURE 7.1

Effects of TJTC on hiring priority by training

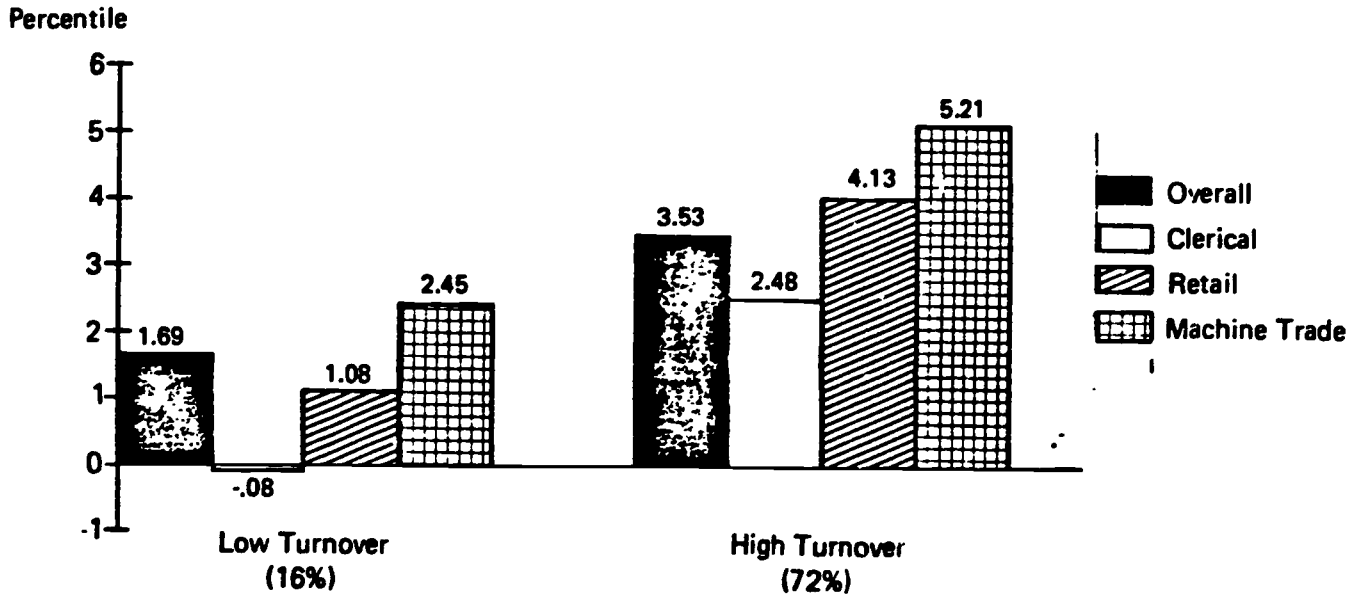

FIGURE 7.2

Effects of TJTC on hiring priority
by turnover rate

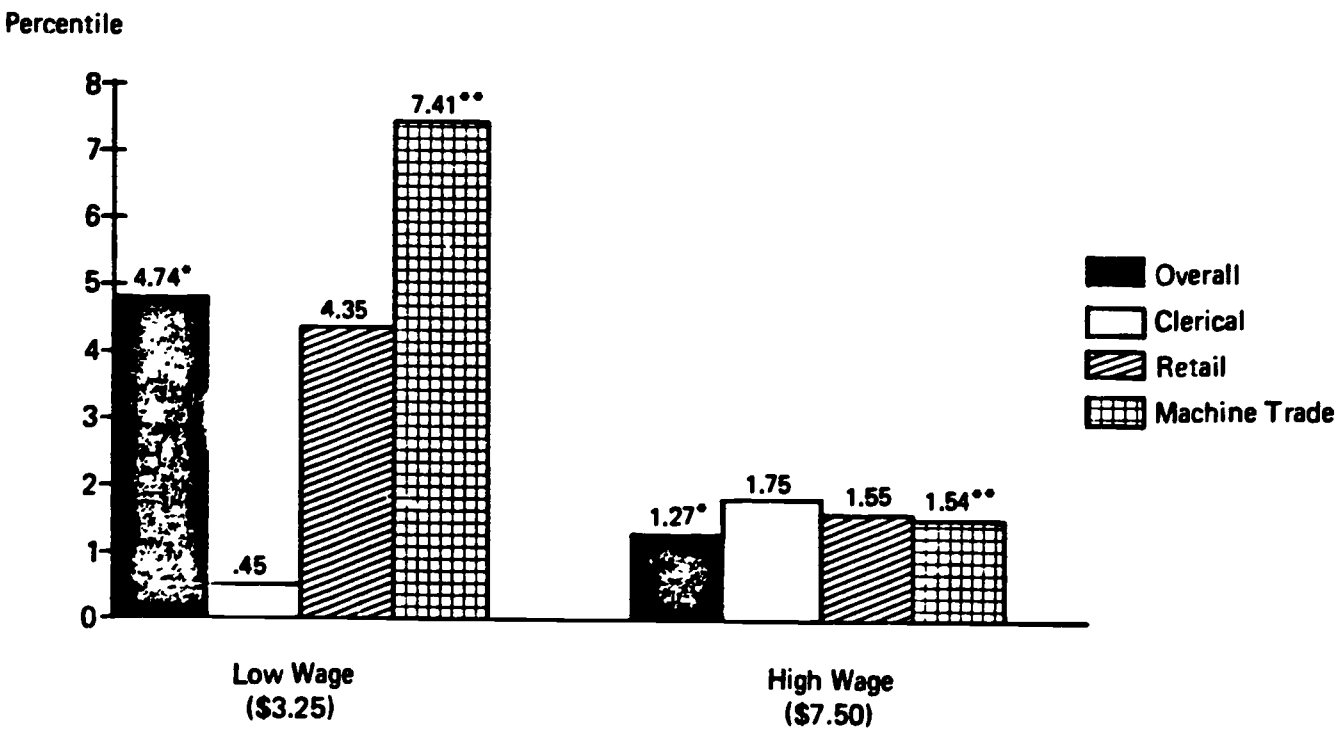

FIGURE 7.3

Effects of TJTC on hiring priority by wage
rate

workers. Since TJTC eligibles are perceived as being less qualified, we hypothesize that the effect of TJTC will be positive for firms with relatively high turnover rates and low wage rates and possibly negative for firms with very low turnover and high wage rates.

The firm's turnover rate was determined by asking what the percentage of new employees between the ages of 16 to 25 had typically left the firm before the end of their first two years at the firm. The mean of this variable was 43.5 percent with a standard deviation of 27.5 percent. This turnover rate was interacted with TJTC to test the hypothesis that the effect of TJTC will be positive for firms with relatively high turnover rates. Examining Exhibit VII-1, we see that the coefficient of this interaction term is positive in the full sample and across occupations thereby supporting our hypothesis. In figure 7.2 we can see the effects of turnover on the firm's reaction to information that a candidate is eligible for TJTC. At a low turnover rate of 16 percent (viz. one standard deviation below the mean) TJTC increases the applicant's rank by 1.7 percentage points whereas at a high turnover rate of 72 percent (viz. one standard deviation above the mean) TJTC increases their rank by 3.5 percentage points.

The starting wage of a new employee in the job for which applicants were being evaluated had a mean of $5.44, a standard deviation of $1.74 and ranged from $3.25 to $14.37. The log of the wage rate was interacted with TJTC to test the hypothesis that TJTC eligibility will have a larger effect when the job has a low starting wage. The coefficient on the interacted wage variable was significantly negative in the full sample and machine trade occupations and nonsignificantly negative in the retail occupation. As we see in Figure 7.3, TJTC is a big plus in low wage ($3.25) jobs but has almost no effect on hiring priority in high wage jobs. This pattern of results supports our hypothesis.

The pattern that emerges is that TJTC has a more positive impact at firms that were already hiring the least qualified workers and giving them the additional training they required. Holding the job description constant, TJTC's impact was less favorable at firms which paid high wages, had low turnover rates, offered little general training, and concentrated their training on specific rather than general skills.

Interaction with Applicant Characteristics--The applicant characteristics hypothesized to influence how a firm reacts to TJTC eligibility were, (1) the number of quits in the applicant's job history, (2) years of schooling, and (3) typing speed. Since employers typically perceive TJTC eligibles as being less qualified than other competing workers, they expect high quit rates, minimal schooling, and lower typing speeds. What they are unlikely to expect are highly qualified applicants being TJTC eligible. This we argue will generate uncertainty which may stigmatize the highly qualified applicant. Therefore we hypothesize that the effect of TJTC will be positive and large for applicants with high quit rates, minimal schooling, and lower typing speeds.

The typing variable had a range of 40-59 wpm with a mean of 49.5 wpm and a standard deviation of 4.4 wpm. The coefficient on the interaction between typing speed and TJTC was negative and significant for the full sample and clerical occupations.[20] At a typing speed of 45 wpm (one standard deviation below mean) the effect of TJTC was to increase the applicant's percentile rank by 4.2 percentage points whereas at 55 wpm, TJTC increased rating by only .8 percentage points (see Figure 7.4).

[20]This variable was not included in the regressions for retail and machine trade occupations since it was deemed theoretically irrelevant.

The number of quits ranged from 0 to 3 with a mean of .25 and a standard deviation of .62. Approximately 82.6 percent of applicants had no quits, 11.5 percent had 1 quit, 3.8 percent had 2 quits and 2.0 percent had 3 quits in their job history. The coefficient on the interaction between quits and TJTC was positive and significant in the full sample and clerical occupations. TJTC increased the rating of those with 2 quits by 8 percentage points but increased the rank of those with no quits by only 2.6 points (see Figure 7.5).

The schooling variable was created by assigning a -1 to high school dropouts, a 0 to high school graduates, a 1 to applicants with some postsecondary education and a 2 to applicants with an associate degree. Approximately 9.1 percent had dropped out of high school, 73.1 percent had a high school diploma, 4.9 percent had some postsecondary education, and 12.8 percent had an associate degree. The coefficients for the interacted variable were negative in all occupations and significant for the full sample and machine trade occupations. TJTC increased the rank of high school dropouts by 5.4 percentage points but reduced the rank of those associate degrees by 2.9 percentage points. This pattern held across occupations supporting our hypothesis (see Figure 7.6).

The results suggest that TJTC eligibility helped compensate for characteristics that were generally viewed as negative (e.g., low typing speed, high propensity to quit, and poor schooling). Highly qualified applicants were generally hurt by the information that they were eligible for TJTC. This may be construed as good news, for it means that TJTC helps most those who need help the most. This result may also help explain why participation rates are low. For some people and some jobs, the belief that announcing one's TJTC eligibility hurt one's job prospects is, in fact, correct.

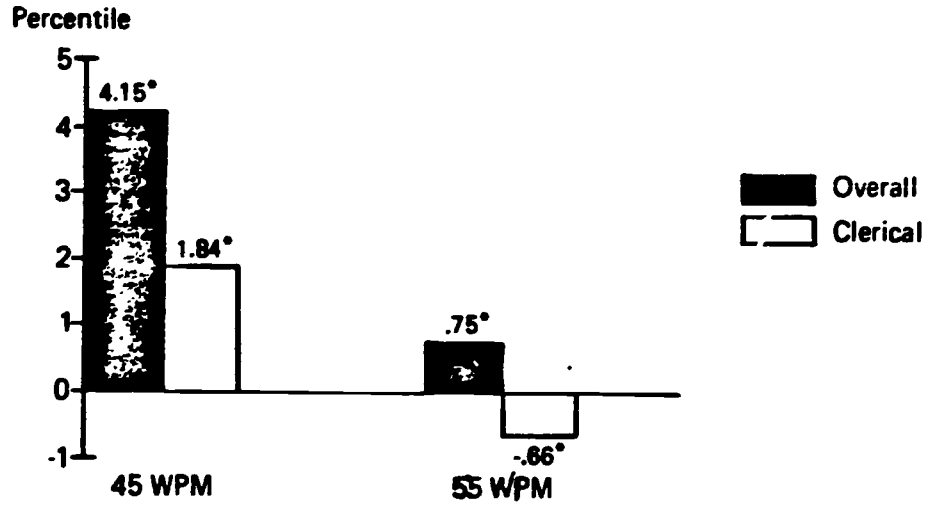

FIGURE 7.4

Effects of TJTC on hiring priority
by typing speed

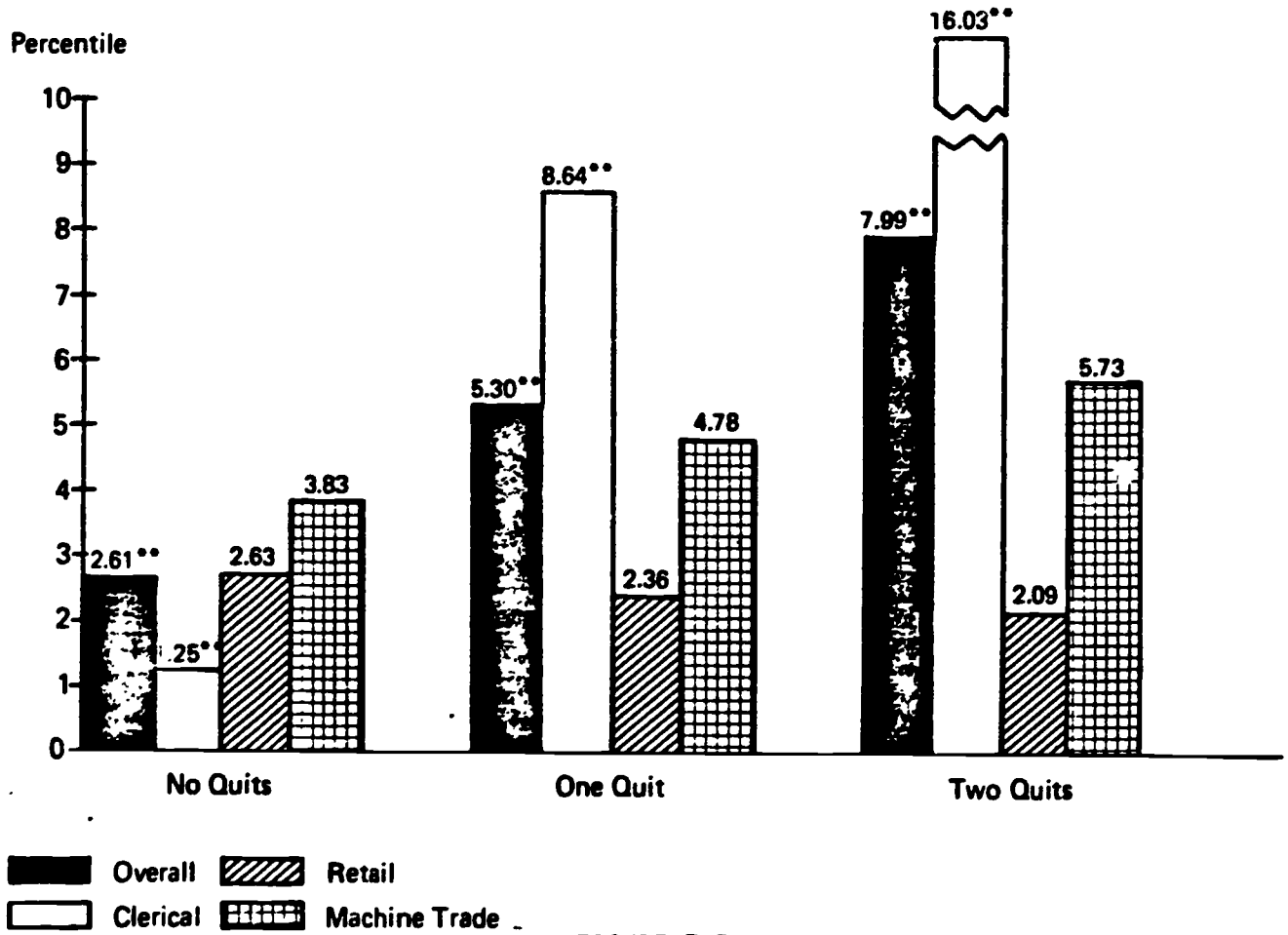

FIGURE 7.5

Effects of TJTC on hiring priority
by number of quits

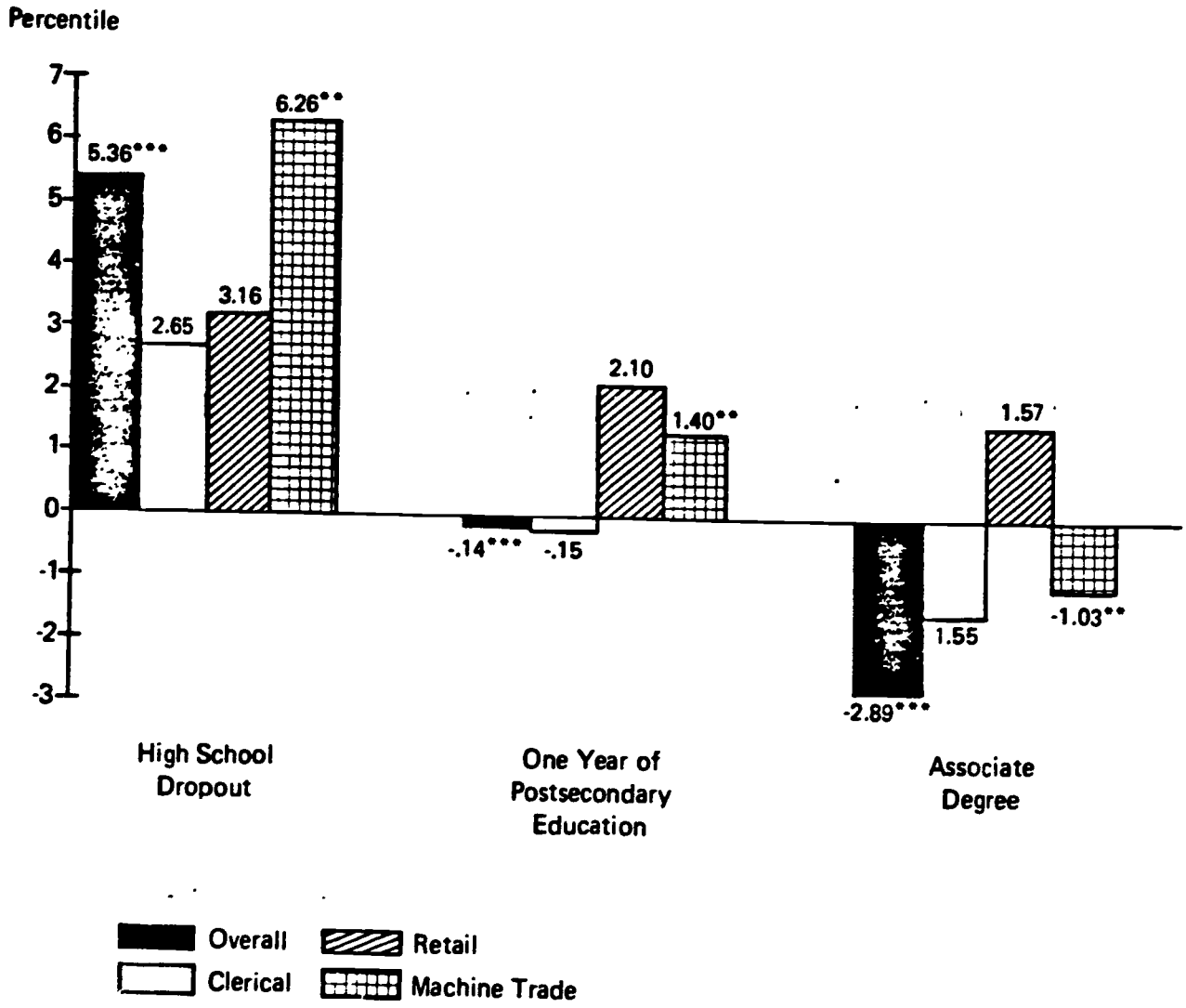

FIGURE 7.6

Effects of TJTC on hiring priority by school

VIII. EMPLOYER EXPERIENCE WITH TJTC: RESULTS FROM DIRECT CASE STUDIES

VIII. EMPLOYER EXPERIENCE WITH TJTC: RESULTS FROM DIRECT CASE STUDIES

The evidence and results reported in the prior sections of this report have for the most part been inferred from data collected by means of general surveys of employers. To gain an understanding of how TJTC influences employers to expand their levels of hiring or to alter their hiring choices, we tested hypotheses using data on the number and composition of new hires from the Employer Survey. We theorized how TJTC might affect corporate behavior and undertook statistical confirmation of our theory. To supplement such analyses and to address other issues which couldn't be addressed with survey data, we undertook case studies of a number of firms that were believed to be large users of TJTC. Analyses of employer behavior from these case studies are thus based on self-reported data and are not of an inferential nature. The validity of our analyses depends on the propensity of the respondents to perceive and report correctly both their behavior and the reasons for their behavior.

The chapter first introduces the major issues that the case studies were intended to address. It then describes procedures used to conduct the case studies. Next it addresses the questions of how TJTC influences recruitment and hiring procedures, how employees who are certified for TJTC compare to other employees at a firm, what processes firms use to encourage TJTC usage, and finally, what employers think about the program.

1. ISSUES ADDRESSED BY CASE STUDIES

- Has TJTC influenced employers' recruitment and hiring practices? In particular, has it influenced who gets hired?

Hiring is a sorting and matching process in which employers publicize their intention to hire, recruit job applicants, "sort"

through and evaluate job applications, conduct interviews, and make selections. Job applicants develop resumes, search for and "sort" through suitable job openings, file applications, and undertake job interviews. The process attempts to match the best suited applicants to the best jobs suitable to the applicants' qualifications. The purpose of TJTC is to assist unemployed individuals in (disadvantaged) target groups find employment in the private, for profit, sector. To accomplish this purpose, the program must influence some or all of the steps in the recruitment and hiring process. The primary concern of policymakers is whether TJTC is influencing hiring decisions or merely subsidizing employers for hiring individuals who would have been hired in the absence of the program.

- Has TJTC influenced employers' use of or perceptions of the U.S. Employment Service?

Since the state employment security agency (SESA) is the only certifying agent for TJTC, employers necessarily encounter a SESA in the process of obtaining tax credits. If these encounters are not smooth, they may impede employers' future use of the program. Alternatively, there may be an opportunity for the Employment Service (ES) to establish good working relationships with employers and to expand its programs.

- How do consultant or third party companies influence employer utilization of TJTC?

Consultants offer assistance to employers in screening job applicants for TJTC eligibility, making requests to and appointments with the SESA for eligibility determinations and certifications, following up on requests, and providing documentation. Consultants process a large share of all TJTC certifications. At issue is whether these consultants increase usage of TJTC and why

employers use consultants to participate in a program that has minimal administrative paperwork.

- How do workers hired with a TJTC certification compare to other workers in terms of job performance? Have employers changed or adjusted their workplaces to accommodate TJTC workers?

It has been claimed that TJTC eligible employees are stigmatized and perceived to be less productive and less stable workers than other workers. The case studies addressed the issue directly by asking employers about the productivity and turnover of TJTC workers vis-a-vis non-TJTC workers. Employer perceptions, of course, are instrumental in determining future usage of the program. Word of mouth is one of the primary ways that employers learn of the program. Furthermore, employers will be more likely to favor TJTC eligible job applicants in the future if their current employees are productive.

If TJTC workers are perceived to be less productive or less stable, then it is important to know how employers have adjusted their training, compensation, evaluation, or other corporate policies.

- Why did companies begin to use TJTC? Were there individuals in the company who were a TJTC "champions?" What procedures have companies implemented to train managers about TJTC? Have companies established incentives to encourage use of the program?

If administrators of TJTC are to market effectively the program, they must learn why companies opted to use the program. One hypothesis is that a certain individual(s) learned of the program and encouraged (mandated) its usage. If this hypothesis holds, then effective marketing of the program would target its efforts on potential TJTC "champions."

Given a decision to use TJTC, how are policies and procedures changed to implement it? What kind of training has been necessary? In multiestablishment corporations, the decisions must be communicated to the managers of individual esatablishments where the hiring is done. Some companies encourage TJTC usage through incentive systems. How widespread and how influential are they?

- Why is the number of certifications claimed on tax returns significantly less than the number of certifications issued?

A final issue of interest is why employers seem to be foregoing significant tax reductions by not claiming credits where certifications have been issued. We know that this occurs from aggregate data on certifications issued and credits claimed, but the reasons have not been documented.

These issues are addressed in the discussion below which is organized around how TJTC has influenced recruitment and hiring, experience with TJTC certified workers, and how employers have adapted their policies and procedures to TJTC. First, however, we will describe the case study methodology.

2. METHODOLOGY

The first step was to select industries that were major users of TJTC programs. By consulting IRS data on certifications by industry, we selected the following six industries to be the focus of the case studies:

- Hotels and motels (SIC 7011)
- Eating and drinking places (SIC 5812)

- General merchandise stores (SIC 5311)
- Food stores (SIC 5411)
- Textiles (SIC 2211, 2221)
- Hospitals and nursing care facilities (SIC 8051, 8052, 8059)

Within each industry, up to nine corporations were selected based primarily on employment size. In a few instances, companies were included because we knew that they were large users of the program or because they had contacted us to volunteer as a participant.

In developing a data collection instrument for the case studies, we needed to resolve the issue of how much structure to impose on the questions--the greater the structure, the better the comparability across firms. But less structure would facilitate greater depth and would improve the likelihood of identifying unique employer behavior/practices. It took several iterations of question development, review, and revision before we agreed upon the form which is attached as Appendix D. This questionnaire compromises the extremes of the structure dimension and is intended to get quite specific information on some issues as well as to allow the case studies to delve more deeply into other subject matter. Because intracompany communication and policies were key subjects of the investigation, versions of the questionnaire were developed for respondents at a corporation's headquarters, regional, district, and local establishments. In all cases, we asked the respondents to supply training materials, memos, bulletins, or other written material that might pertain to TJTC.

The case studies were conducted between June and August, 1985. A call was made to each company's corporate headquarters to identify the individual who was thought to be the most knowledgeable about the company's use of TJTC. Then a letter introducing the study and soliciting participation was sent to that individual. A call was made to schedule a phone interview. This

was successful in most cases, but occasionally we were referred to another person in the corporation who was more familiar with TJTC or were asked to forward the questionnaire so that it could be reviewed or completed at the respondent's leisure. Only 13 of the companies contacted refused to participate.

We administered the corporate headquarter's interview first. For companies known to have regional offices, we had preselected randomly a regional office that we wanted to study. We asked the respondent at corporate headquarters for the name of the appropriate individual to contact for the particular region we had selected and for permission to contact that individual. In some cases, the corporate headquarter's respondent asked us to interview somebody else in a different region (usually because that region was effective in utilizing TJTC). We generally tried to interview both in these cases. For corporations where we were unable to identify and select a regional respondent prior to the call to corporate headquarters, we asked for a "typical regional office."

For district-level respondents and local establishments, we followed the procedure of asking the regional (district) respondent to provide us with the name of a respondent at the next level down. This nonrandom procedure doubtlessly led us to study district and local offices that tended to be relatively heavy users of TJTC and that tended to have relatively positive attitudes toward the program.

Exhibit VIII-1 presents the number of interviews conducted, by industry. Responses were obtained from 35 different corporations (no regional, district, or local establishment interviews were conducted unless an interview with someone in the corporate headquarters had been completed.) Among the 35 corporations, a total of 38 subcorporate responses were obtained; almost half of those in the Eating and drinking places industry.

EXHIBIT VIII-1

Employment and Training Administration

CASE STUDY RESPONSES, BY INDUSTRY

Industry	Corporate Headquarters	Regional or Divisional Office	District Office	Local Establishment	Refusals
Eating and drinking places (Fast Service Food)	8	5	6	6	1
Hospitals and nursing care facilities	7	2	0	5	2
General merchandise	4	1	1	1	2
Textiles	5	0	0	1	1
Food stores	4	2	3	1	5
Hotels and Motels	7	0	0	4	2
TOTAL	35	10	10	18	13

The corporations in our sample reported a total employment of about 1,900,000 workers in 1984 (which accounts for slightly less than 2 percent of the entire U.S. work force). These firms reported claiming 65,283 TJTC certifications in 1984 (approximately 15 percent of total certifications). The employment sizes of the firms ranged from a motel chain with 2,600 employees (770 certifications!) to a chain of stores with over 300,000 employees (7,000 certifications).

The 8 fast food chains accounted for almost half of the reported certifications (30,500 out of the total of about 65,300). On average, each of these corporations reported an employment level of 44,000 and certification level of 2,700, which implies an average ratio of certifications to employment of 8.5 percent. Of course, fast food restaurants are well known for their high turnover, which partially explains the high levels of certifications.

3. RECRUITMENT, HIRING, AND CERTIFICATION REQUESTS

Firms use a variety of methods for attracting, selecting, and screening job applicants. In addition, we found variation in hiring practices across regions and divisions within a single corporation. The first question addressed was how the firm determined whether or not job seekers were eligible for a tax credit. Generalizing from the responses, we derived three models that encompass the most common procedures followed by companies. These models are depicted in Figures 8-1 and 8-2.

In model 1, the employer is aware of the TJTC program and has called the Employment Service to request referrals who are TJTC eligible. The ES screens applicants (or selects previous applicants from its files) and refers eligible individuals to the employer.

In model 2, the firm recruits and solicits applicants from sources other than (or in addition to) the Employment Service. At some point during the application process, the firm has all applicants[21] undergo an eligibility determination. In some cases, this process is completed by supplemental questions on the application form. In some cases, a company interview (on site at the hiring location or off site at a headquarters location) administers a short questionnaire (see Appendix E.) Finally, in some cases, the employer has all applicants call an outside consultant who administers a short questionnaire. In all cases, the employer (theoretically) has the information that the applicant is or is not eligible for TJTC prior to making the hiring decision. If the applicant is eligible and a positive decision

[21]At least all potentially eligible (according to someone's judgement) applicants.

MODEL 1

MODEL 2

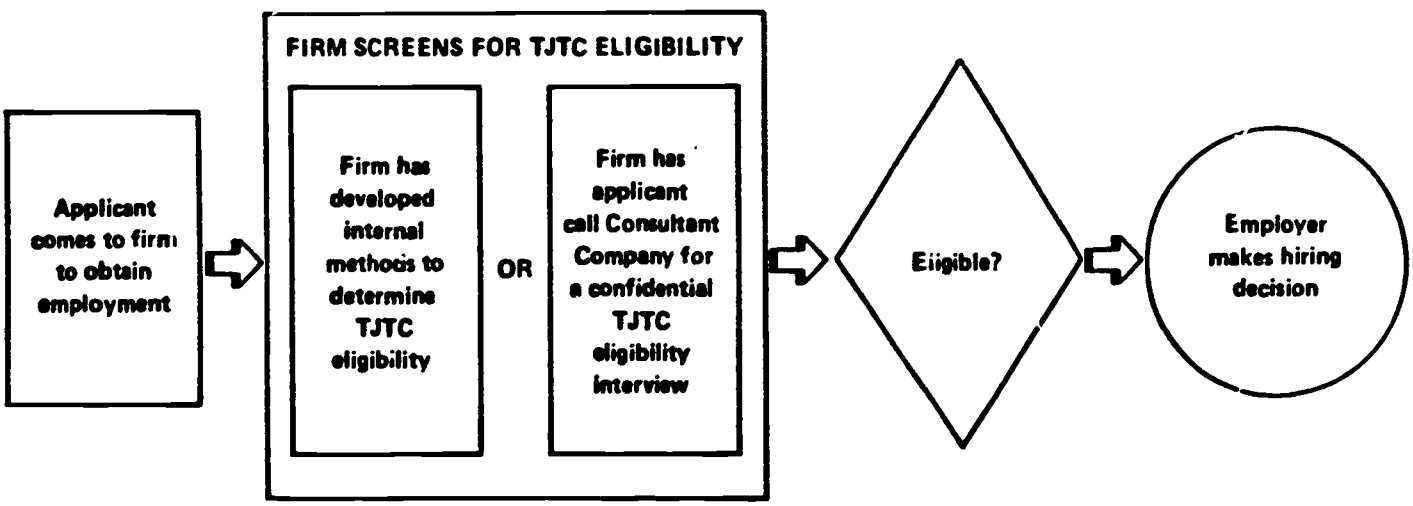

FIGURE 8.1 MODELS OF HIRING PROCEDURES WHERE ELIGIBILITY DETERMINATIONS ARE PRIOR TO HIRING DECISION

MODEL 3

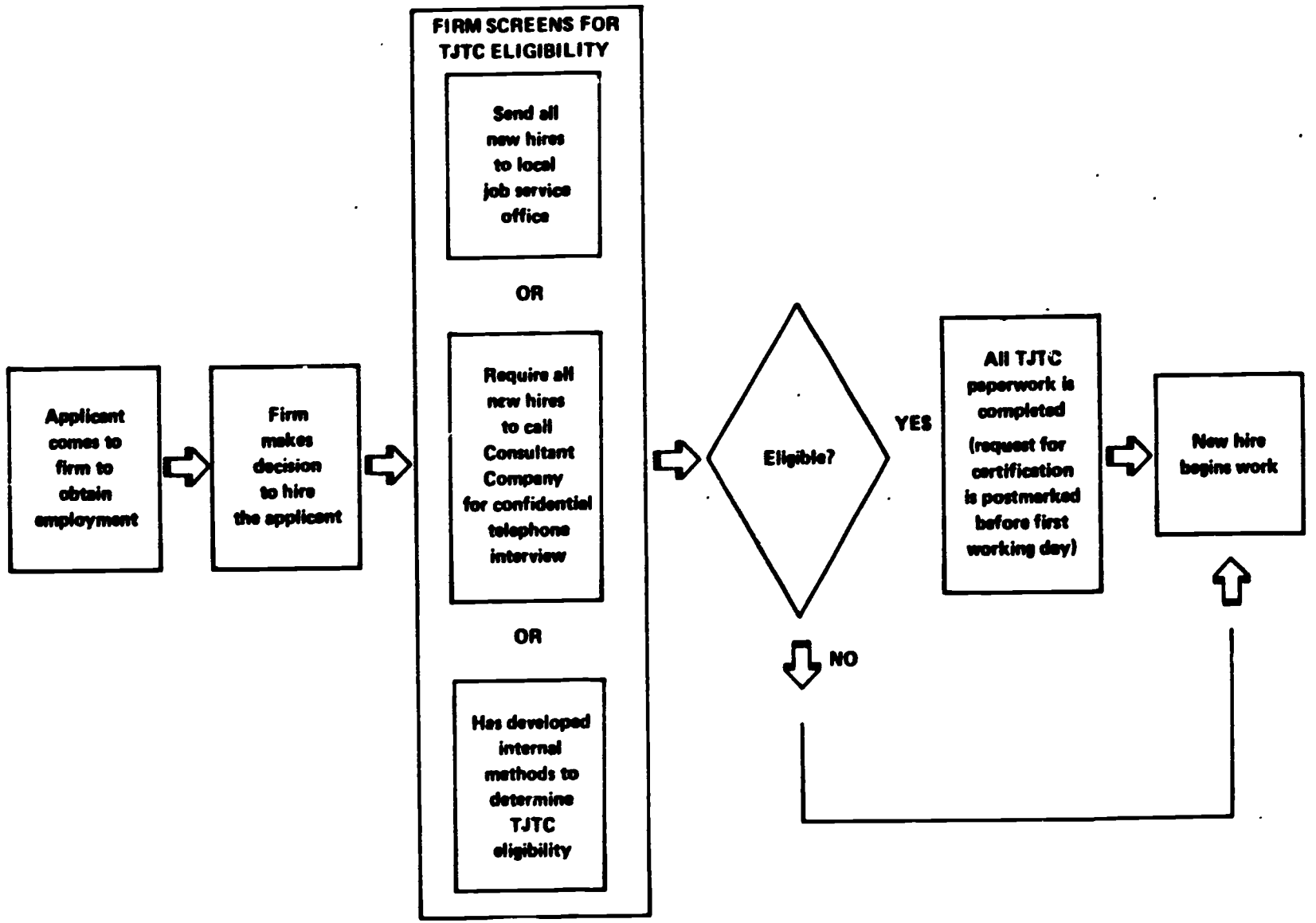

FIGURE 8.2 MODEL OF HIRING PROCEDURE WHERE ELIGIBILITY DETERMINATION IS AFTER HIRING DECISION

is made, then the employer will send the individual to the Employment Service along with an intent to hire notification to request a certification.

Far more typical in our sample than either models 1 or 2 was model 3, in which the eligibility determination is made after the hiring decision. Between the time of the employment acceptance and the first day of work, the new hires (in some companies, all new hires) answer a brief questionnaire (again administered on site or off site by corporate personnel staff or administered by a consultant) and, if deemed eligible, are directed to the SESA for vouchering and certification. In one or two cases, only newly hired individuals who were "suspected" of being eligible were directed to the SESA, where an eligibility determination was made. The most common situation was that all new hires for certain positions were given a TJTC eligibility questionnaire along with their W-4 forms (see Appendix E) or all new hires for certain positions were instructed to call a consultant.

In any of the three models, a job applicant may arrive at the firm with a voucher in hand. Prior studies have suggested that coming to a firm with a voucher is disadvantageous.[22] In any case, employers reported that this situation occurred rarely. As one employer put it,

> Not many come off the street already certified [sic].

Another said,

> Not too many individuals are already certified [sic] when they apply for a job

[22]See Burtless and Cheston (1981) and Moran (1982). For counterevidence see Hollenbeck and Smith (1984).

Aside from the few cases where the applicant is already vouchered, models 1 and 2 represent the practices where eligibility is determined prior to the actual hiring decision; in model 3, it is determined after. Exhibit VIII-2 presents the percentage of firms by industry and for the total sample where eligibility determination seems to occur predominantly prior to hiring. It was not straightforward to calculate these percentages since regions, districts, or localities reported practices that differed from what the corporation reported or because some respondents indicated that sometimes they used one model and at other times used another model. For example, a respondent indicated that for mass hirings when they open a new store, they use the Employment Service and ask for TJTC eligible workers. But when they hire for an already existing store they make the hiring decision prior to determining eligibility. Exhibit VIII-3 presents summary data on the intensity of TJTC usage (ratio of certifications to employment), incentives, consultants and timing of screening. There seems to be a relationship in which screening before the hire is associated with more intensive usage.

EXHIBIT VIII-2

Employment and Training Administration

PERCENTAGE OF FIRMS THAT HAVE ELIGIBILITY DETERMINED PRIOR TO THE HIRING DECISION, BY INDUSTRY

Industry	Percentage
Eating and drinking places	38%
Hospitals and nursing care facilities	14
General merchandise stores	0
Textiles	20
Food stores	25
Hotels and motels	29
TOTAL	23%

Considering the hiring process in its constituent phases of (i) recruiting applicants, (ii) having application forms completed, (iii) conducting interviews, (iv) gathering additional

EXHIBIT VIII-3

Employment and Training Administration

INTENSITY OF TJTC USE, INCENTIVES, CONSULTANTS, AND THE TIMING OF SCREENING

Industry	Ratio of 1984 Certification to Employment	Type of Incentive	Use Consultant	Timing of Screening
Hotel and motels	29.3	other	N	After
Eating and drinking places	27.4	$/cert	N	After
Eating and drinking places	17.6	P-L	N	Before
Eating and drinking places	13.3	$/cert	N	Before
Eating and drinking places	12.3	P-L	Y	After
Food stores	10.2	other	N	Before
Hospital and nursing care facilities	6.7	$/cert	N	After
Eating and drinking places	6.1	$/cert	Y	Before
Hotel and motels	5.9	no	Y	Before
Eating and drinking places	5.7	$/cert	Y	After
Hotel and motels	5.1	DK	Y	After
General merchandise stores	5.0	no	Y	After
Food stores	4.3	no	Y	After
Eating and drinking places	4.0	other	Y	After
Food stores	3.0	P-L	Y	After
Hospital and nursing care facilities	2.7	$/cert	N	After
General merchandise stores	2.1	no	Y	After
General merchandise stores	1.5	no	Y	After
Textiles	1.4	no	Y	After
Textiles	1.3	no	N	Before
Textiles	1.0	no	Y	After
Hospital and nursing care facilities	.9	other	Y	Before
Textiles	.8	no	Y	After
Hospital and nursing care facilities	.7	no	Y	After
General merchandise stores	.7	no	Y	After
Hotels and motels	.7	no	Y	After
Hospital and nursing care facilities	.6	no	Y	After
Food stores	.5	no	Y	After
Hotels and motels	.4	P-L	Y	After
Hospital and nursing care facilities	.2	$/cert	Y	After
Textiles	.1	no	Y	After

information through reference checks or retrieving prior employment or school records, and (v) deciding upon which applicant to hire, only the first and last phase have been affected by TJTC. Aside from one or two companies having modified their application forms (to incorporate TJTC eligibility questions), we uncovered no evidence that firms had changed their hiring standards, that firms had taken more or less applications per opening, that firms had conducted fewer or more interviews per opening, or that firms had undertaken additional reference checks over and above their normal procedures. A significant change in hiring practices, however, was an increased usage of the Employment Service, community-based organizations, or vocational rehabilitation agencies for employment referrals by some firms.

Employment Service and Community-Based Organizations. Overall, respondents to the case studies held generally favorable attitudes toward the Employment Service. Following is an excerpt from one company's Policy and Procedures Manual for personnel managers:

> Consider using the local Job Service or State Rehabilitation Agency to fill your staff vacancies. If you use either, you do not need to alter your hiring criteria, and in fact, you should emphasize the specific skills required for the position. The Job Service and the Rehabilitation Offices will usually bend over backwards to send only qualified individuals. Besides saving you time and advertising dollars, using these offices to fill your vacancies will improve your TJTC rapport with the Job Service, in fact, you should express your interest in TJTC-qualified candidates. If you would like assistance in establishing a hiring relationship with your local Job Service, or Rehabilitation Office, call anyone at _____. Alternately, ask your local Job Service representative to join you for lunch at your unit to discuss your hiring needs.

In response to a question concerning relationships with the ES, 43 percent of the respondents indicated good relationships and that TJTC increased usage of the ES, 46 percent indicated that they were already using the ES and TJTC had little additional

impact, while 8 percent indicated displeasure or had no opinion or knowledge about the subject.

Macro Systems, Inc. (1985) reported an innovative vouchering practice in one state--telephone vouchering. Some of the respondents in our case studies were located in that state and they all expressed satisfaction with this procedure. Said one,

> The telephone service is by far the best part of the program in terms of its ability to make it work with the least amount of bureaucratic interference.

TJTC seems to be a positive factor for the ES. As one employer put it,

> A lot of our facilities didn't know what the Job Service was. They thought we had to pay a fee to them.

Some respondents indicated that problems exist in attempting to use the ES. Said one manager,

> We've had a battle in our company because of the image and perception of the type of individuals they would receive from the Job Service. But because of more recent experiences with the Job Service and initiatives from our corporate office, we've managed to turn this thing around.

Yet the battle still exists in some places. Some respondents reported that the Job Service offices were hard to deal with--not very well organized as witnessed by them having to do some things twice because of poor filing systems and not very well trained in specialized areas like TJTC summer employment. An employer stated,

> We can see where the federal government has tried to make it less bureaucratic, but when you get down to the state and local ES offices, they don't see it. In some states it's very hard to get certifications at all--the rules they want to play by.

One employer noted that some offices were four or five months behind on certifications and that sometimes employees had quit by the time the certification was received.

Hiring Decisions. Besides an increased use of the Employment Service or community-based organizations for soliciting applicants in a large percentage of firms, the other phase of the hiring process affected by TJTC was the actual hiring decision--i.e. when a hiring official has a surplus of applicants for an opening, how particular applicants are chosen to receive an offer. To gauge whether this decisionmaking process had been affected by TJTC, we asked all respondents whether they could recall any instances in which hiring preference was given to an applicant who was eligible for TJTC over an equally qualified applicant who did not happen to be in a target group. Twenty-two percent said yes. We probed the respondents who had indicated a yes for how often this had occurred. Most would not hazard a guess; but we did receive answers that ranged from less than 10 percent of the time to 25 percent of the times a TJTC credit eligible was hired.

Consultants. In the 1982 survey, respondents told us that they seldom used consultants or management assistance companies (MACs) to screen applicants for eligibility. They were reported to be responsible for less than 1 percent of known TJTC hires prior to September 1981 and less than 2 percent of TJTC hires after that date. This is changing, however. In 5 of 12 states visited by the Macro Systems process analysis team in 1985, Employment Service officials estimated "that 50 percent of their TJTC vouchering workload is generated by referrals and requests for certification from consulting firms" (Crosslin et. al. 1985).

Approximately 75 percent of the corporations in our sample use consultants for TJTC, although we learned that in most of these cases, the use of consultants was not universal across all

divisions, regions, or localities of the firm.[23] In some cases, the corporation mandated use of consultants throughout the firm. But in other cases, use of consultants was a decision that was made at the regional or district level. In one large corporation, there was nc corporate policy on the issue and indeed, the corporate headquarters insisted that we speak to a consulting firm because it could best represent the corporation's policies and procedures regarding TJTC. That consulting firm had been chosen to handle TJTC by 30 of the corporation's 31 regional offices.

In general, the consultants screen applicants for TJTC eligibility, make appointments with the ES to get individuals vouchered and to file certification requests, follow up on all requests, and provide employers with reports. A common procedure is for the employer, after making the hiring selection, to initiate a telephone call to the MAC in the presence of the new employee. The phone is then turned over to the worker. The worker is promised confidentiality and a short interview is conducted. (In some cases, the employer is able to overhear the worker's side of the phone conversation.) The employer then receives the phone back from the new hire and is told by the MAC whether the individual is probably eligible for TJTC. If the individual is eligible, the MAC immediately sends a letter to the Employment Service requesting certification. Though the majority of employers were reluctant to discuss their financial arrangements with consulting firms, we learned that compensation was either a percentage the actual tax credit earned by the employer or a dollar amount per certificate issued to the employer. Exhibit VIII-4 shows the financial arrangements that were reported to us.

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[23]We estimated that these consultants were responsible for about 75 percent of the certifications reported by respondents. However using the ratio of certifications to employment as a measure of program intensity, it is the case that only one of the 7 most intensive users rely on consultants.

EXHIBIT VIII-4

Employment and Training Administration

CONSULTANT COMPENSATION ARRANGEMENTS

Percentage of credit
- 27% of credit
- 8% to 15% of credit - average of 10.5%
- 10% of credit
- 13½% of credit
- 18% of credit
Payment/certification
- $150/certification for first 3,000; $135/certification after 3,000
- $200/certification
- $40/certification per month employee stays with firm up to maximum of $320. No payment if employee stays less than 3 months.

We found that regional, district, or local managers did not always agree with the corporate policy of using consultants. Following are two statements along those lines:

> (District-level respondent). We have some disagreement regarding corporate policy--it really is not necessary to use consultants. The paperwork is minimal and there was no reason to pay consultant fees for something which could be handled internally.

> (Regional-level). As a regional manager, not sure why a consultant is used. I had much resistance from my Field Managers because they felt consultants were rude to new hires. . . . Corporate has been notified about the problem . . . no complaints recently.

Of those using consultants, most felt that the consultants will secure more certifications for them and ultimately more tax savings. When questioned why their company uses the consultant firm, one tax director reported,

> "Consultants have a direct monetary incentive (they get paid based upon the number of certifications), that personnel managers may not take seriously. If a personnel manager does not call in a new hire, our consultant sends me a nasty letter each month: 'We're here to try to do business and help you, you've got to call us.' It's sort of a checks and balances system."

Some other responses were:

- Believes consultant is used because they can ask certain questions the company feels legally they can't ask.
- Our company did not feel we had the capability in-house.
- Felt managers refused to take the time to get fully involved with the program. One of their priorities, but probably 14th on a list of 20 priorities.
- We felt we were losing certifications and the consultants provide a uniform system for all of our facilities.
- Use firm for ease of compliance; ease of paperwork flow. It's a convenient and less time-consuming way of handling this program.

There were several companies who had originally used a consulting firm and after evaluating their services versus costs, had decided to set up internal systems similar to that of the consulting firm. This occurred in 11 percent of the companies surveyed. These companies reported that additional savings had resulted for their company. Other employers wanted to develop a system in-house, but were hesitant because they did not want to undertake fixed costs unless the TJTC program were extended for a longer period of time than a year. These employers therefore contracted with a consultant on an annual basis.

While many managers believed that the MACs increased their use of TJTC, Exhibit VIII-3 demonstrates that this is not the case. The eight firms which did not rely on consultants were in all cases but one the most intensive users of TJTC in their industry. In the Textiles industry, the company that didn't rely on consultants missed being the top user by only a hair. The eight firms not using consultants accounted for 29 percent of the certifications obtained by case study firms but only 7.7 percent of the employment. In other words, the firms in our sample that employed management assistance companies to do their screening

certify only one-fifth as many TJTC eligibles relative to their employment as the firms that do not employ MACS. If the industry is held constant, the contrast is almost as dramatic.

Management consultants have probably stimulated some firms to participate in TJTC or to expand their usage of TJTC. But, their contribution to the marketing of the program comes at a cost. In most cases, they market a system for claiming tax credits for new hires who are not known to be eligible when hiring decisions are made. Ten of the 13 MACs interviewed in March 1986 reported that over 95 percent of their clients screen for TJTC eligibility after the hiring decision is made. One very large MAC "thought" a significant share of its clients were prescreening but could not estimate how many. Another encouraged its clients to conduct the telephone screening earlier in the hiring process and reported that 75 percent of its clients were screening for TJTC eligibility prior to the hiring decision. A third MAC had developed a proprietary screening procedure that was apparently being administered by the firm's own staff prior to the hiring decision. Three MACs reported encouraging their clients to ask the Employment Service for referrals, the other MACs reported that very few of their clients were requesting TJTC referrals from the Employment Service. The very existence of their screening system makes referrals unnecessary.

Since consultants are seldom able to influence recruitment efforts and hiring selections, they concentrate on getting tax credits for people already hired; and not on increasing the number of eligibles hired. This indeed may be one of the reasons why firms choose to use consultants. Most employers say they do not want their hiring selections influenced by the prospect of a tax credit. Employing consultants to manage TJTC is a way of achieving that objective. It is hard to escape the conclusion that using consultants to screen for eligibility maximizes the windfall element of the program and reduce the achievement of the program's social objectives.

4. EXPERIENCE WITH TJTC WORKERS

It may be claimed that a wide perception of TJTC workers are that they are not as capable or reliable as their non-TJTC eligible counterparts. This was not the case for the employers in our case studies. A clear modal response was that there was no difference between TJTC and non-TJTC workers in similar jobs as long as both had the same level of job experience (65 percent provided this response). These employers claimed adamantly that they have not lowered hiring standards in order to hire TJTC eligible applicants. One company executive stated,

> No one is asking you to hire anyone who doesn't meet our employment standards. You have the final say on who works for you. As mentioned earlier, we want to maintain high standards. But give these people a fair break. There are literally millions of target group individuals and a lot of them will make excellent workers. It is foolish to disregard this important opportunity.

On the other hand, some employers did report differences between TJTC and non-TJTC workers in terms of productivity and/or turnover. Occasionally it was the case that TJTC workers outperformed non-TJTC eligibles in these dimensions, but typically it was the other way around.

Question II-1 of the case study questionnaire asked respondents whether, on average, TJTC workers have been reliable workers. The case study interviewers probed further and asked respondents to compare TJTC eligible workers to other workers. Exhibit VIII-5 shows a tabulation of the responses that were received--65 percent indicated that there was no noticeable difference between TJTC and non-TJTC workers, 7 percent felt TJTC workers outperformed their counterparts, 13 percent indicated that TJTC workers were not as productive or reliable, and 15 percent provided no response.

In question II-2, we asked specifically about the productivity of TJTC workers vis-a-vis non-TJTC workers. In Exhibit VIII-6, we provide a summary of the responses to this question. As would be expected, the responses correspond closely to the prior question. About 65 percent indicated no difference in productivity, 11 percent felt the productivity of TJTC workers was lower than non-TJTC, about 4 percent felt that the productivity was higher, and 20 percent did not respond.

EXHIBIT VIII-5

Employment and Training Administration

RESPONSES TO QUESTION COMPARING TJTC ELIGIBLE AND NON-TJTC ELIGIBLE WORKERS IN SIMILAR JOBS

	Number	
Response	Responding	Percentage
No difference	48	65%
TJTC outperforms	5	7
TJTC less productive	10	13
No answer/DK	11	15

EXHIBIT VIII-6

Employment and Training Administration

PRODUCTIVITY COMPARISONS BETWEEN TJTC AND NON-TJTC ELIGIBLE WORKERS HOLDING SIMILAR JOBS

No Difference in Productivity	65%
TJTC Less Productive	11%
TJTC More Productive	4%
NA/DK	20%

For those employers who indicated that there was a systematic difference in productivity, we asked for an estimate of the differential. Six employers who said that TJTC workers were less productive could provide estimates of the differential; their responses were 10 percent, 25 percent, 30 percent (twice) 35 percent, and 50 percent. Three employers who indicated that TJTC workers were more productive gave estimates of 5 percent, 10

percent, and 30 percent differentials. Bishop (1984) reported results when this same question was posed to a sample of employers (from smaller firms). In that study TJTC workers were about 7 percent less productive, when averaged across the entire sample. In our case studies, the sample average was about 2.5 percent less productive.

Finally, we asked about employers' experiences with the turnover of TJTC workers. A large share of the employers did not have this information or did not answer for other reasons--46 percent. In the remainder of the responses, 39 percent of the sample reported no turnover difference, 8 percent reported TJTC workers had higher turnover, and 7 percent reported TJTC workers had lower turnover.

Occupations. Most of the responses in the cases studied confirmed the sterotypical notion that the jobs that TJTC eligible people were filling were entry-level, low skill jobs. However, in the fast food and in the health care industries, respondents indicated that managerial personnel were being hired and certified as tax credit eligible employees. Said one employer,

> **Most TJTC workers are hired at waiter or waitress level, but we have hired a few Managers also!**

5. CORPORATE MANAGEMENT PROCEDURES

An objective of the case studies was to learn of any managerial procedures such as specialized training or recordkeeping that have arisen because of TJTC. In addition, we asked the corporation how the company had come to know of the program and whether any particular person within the firm had been instrumental in promoting its usage. These issues are discussed in this section.

Corporate impetus. Since the program was over 5 years old at the time of the interviews, we encountered a number of respondents who were unsure of how the corporation learned of TJTC or whether an individual or a department was the major impetus within the firm. However, over 50 percent of the respondents could identify a corporate source. Following is a rank ordering of their responses:

1) Corporate tax department
2) Corporate executive (CEO, VP of Personnel, etc.)
3) Consulting firm
4) Employment service
5) Community-based organization or school
6) National association; Corporate legal department

These data are difficult to interpret because some respondents focused their answers on who in the organization first learned of TJTC, while others were knowledgeable about the source of the information--e.g. the Employment Service or a national industry association. In either case, there were a number of firms in which one particular individual was instrumental in getting the corporation heavily involved in using the program. Note the following comments:

> _____ _____, Executive Vice President attended a seminar in December 1979 where the program was introduced. He came back and worked on methods to implement the program.
>
> I (Vice President of Taxes) read about the program in a publication from U.S. Government. I presented it to top Management and urged them to get behind it, which they did.

Management training. Approximately 80 percent of the respondents reported that some type of training or information was provided to corporate staff, particularly local hiring managers,

about TJTC. The types of training varied widely from formal seminars devoted solely to TJTC to occasional memoranda or newsletters. Exhibit VIII-7 lists the types of training or information provision in which the employers engaged.

EXHIBIT VIII-7

Employment and Training Administration

TJTC TRAINING OR INFORMATION PROVISION ACTIVITIES

Activity	Percentage of Responses
Informational Memoranda/Manuals/Training Packets	26%
Corporate (or Regional or Divisional) Meeting/ or Seminar	20
Consultant Provides Training	12
TJTC Covered in Manager Orientation/Training	12
Trainer Travels to Field Sites	5
No Training	16
NA/DK/Unsure	9

Incentives. One of the important differences between TJTC and CETA-OJT contracts is that in TJTC it is the corporation that benefits initially (through reduced taxes) rather than the subunit of the corporation where hiring decisions are made. However, TJTC is trying to change decisions--who is recruited and hired--that are made at the plant and store level rather than the corporate level. If hiring a particular TJTC eligible turns out to be a mistake, it is the first line supervisor and local manager that have extra work to do, not corporate management. Local staff are not likely to make risky hiring decisions to generate greater tax credits unless a reward is provided. They will probably also be reluctant to do the paperwork necessary to get eligible workers certified. Foreseeing this problem many of the corporations hiring large numbers of unskilled workers have established TJTC incentive schemes for their local managers. Approximately 55 percent of the corporations had incentive schemes in place, although the incidence of such schemes varied widely by industry. No respondents in the General merchandise

store, or Textile industries had an incentive system, but 8 of the 9 fast food firms and 5 of the 7 health care firms had established such schemes.[21]

The incentives which employers offered could, for the most part, be categorized into two schemes. Some corporations provided direct remuneration to local managers or to district managers on a per certification basis. In most cases, these payments were rather modest ($50-$100 per certification as long as the worker remained employed for a particular length of time). In one case, however, a district manager reportedly earned around $600/month in bonuses. The second major type of financial incentive could be classified as an indirect incentive. Local or district managers receive bonuses based on the profit of their operation and TJTC credits are figured into that profit figure. Thus the local managers are aware of the fact that they can earn larger bonuses if they hire TJTC workers.[22]

Other types of incentives that were reported included a point system for managers in which points were earned for hiring TJTC eligibles (as well as for other non-TJTC related activities) and then prizes were awarded based on points earned. In another

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[21]An examination of Exhibit VIII-3 indicates that these incentive schemes appear to have a major impact on TJTC utilization. All eight of the heaviest users of TJTC (defined by their ratio of certifications to employment) had such incentive schemes in operation. Of the next eight most intensive users, 4 or 5 had incentive schemes. Of the 15 least intensive users only 3 employed such a scheme. The corporations with incentives schemes accounted for about 80 percent of the TJTC certifications in the study. Clearly the local managers at these firms have a personal interest in both certifying the TJTC eligibles that are hired and increasing the number of TJTC eligibles hired. The incentive is there; however, the magnitude of the hiring response is unknown.

[22]We interpreted an employer's response as facing this type of incentive only (i) if the respondent indicated that TJTC credits were calculated into the P&L statement, (ii) the respondent indicated that they received bonus (or regular) compensation based on profit, and (iii) the respondent called this arrangement a TJTC incentive system.

corporation, a quota system was used and managers were evaluated partially on whether they reached their quota.

Aside from the incentives for corporations, two of the companies gave new hires a $20 honorarium (or reimbursement) for going to the Employment Service and being vouchered.

Reasons for not claiming credits. Because of the discrepancy between total credits claimed on tax returns and certifications issued, we asked corporations if they could recall any cases when a credit was not taken and, if so, why. Exhibit VIII-8 provides a summary of the responses. As can be seen, just under 50 percent of the firms indicated that as far as they knew, they took a credit for every certification. Among the corporations that affirmed that there were instances when credits were not taken, the most common response was that the tax department felt that the certification might be disqualified because of timeliness of issue relative to start date. Also mentioned were cases where the employee had previously worked for the firm (in another location or at the same location, but for a previous manager), cases where the employee quit after a very short period of employment (less than 1 day, for instance) and the firm felt that the potential costs in terms of verification/audit possibility were greater than the tax benefit, and cases where the Employment Service was so late in sending the certification that a fiscal year had lapsed.

EXHIBIT VIII-8

Employment and Training Administration

REASONS GIVEN FOR NOT CLAIMING TAX CREDIT

Reason	Number	Percentage
Credits always claimed	16	43%
Tax department questioned validity because of timeliness	9	24
Employee previously worked for corporation	3	8
Employee only worked for short period of time	2	5
Administrative delay in receiving Certification	2	5
NA/DK	5	14

6. EMPLOYER OPINIONS AND RECOMMENDATIONS

The final part of the case study instrument asked employers for their opinions about TJTC and to provide any recommendations that they might offer to program administrators. About 84 percent of the respondents expressed a general opinion about the program, of which almost a 3 to 1 majority seemed favorably disposed toward it. Interestingly, negative comments were received by some of the most intensive as well as least intensive users of TJTC. A sampling of some of the pros and cons follows:

(1) Opinions

"As an American citizen, I think it should be eliminated. As an employee of _____, we've taken advantage of the tax credit, but still in all as a total statement, I don't think the program is meeting its objective." (Low intensive use of TJTC--Health care)

"I think it's a rip-off, the disadvantaged are still disadvantaged." (Medium intensive use--Grocery stores)

"I think the program is good because we do hire a lot of minority people that would not be able to get jobs. I believe that the company should get tax credit for it (a reward)." (Low intensive use--Textiles)

"Company is already employing this type of individual, and would even without the program. Government should ease up on taxes of total revenue." (High intensive use--Fast foods)

"Provides an opportunity t. start at the bottom and work up the ladder. Allows managers to be more flexible about total number of employees. It has also taken people off welfare." (High intensive use--Fast foods)

"We now have many people who are working and paying taxes because of TJTC." (High intensive use--Fast foods)

"Program has created good employment connections that would have been otherwise been overlooked." (Medium intensive use--Fast foods)

"Has allowed a labor-tight corporation to add workers occasionally." (Medium intensive use--Fast foods)

"Good program, as opposed to welfare programs. This supports people who are willing to work." (Low intensive use--Health care)

"Program has good structure, provides a very meaningful incentive and motivation to reach out in community and hire people you wouldn't ordinarily hire." (Medium intensive use--Grocery stores)

"The vouchering process is a difficult one. Having to send someone to the employment service, pull them off the job for two hours-four hours. They have no commitment on their part for the tax credit." (Low intensive use--Hotels)

"Basically one of the best programs that has come forth as far as taking certain hard to employ groups and getting them jobs." (Medium intensive use--Hotels)

"We use the program fairly extensively. If the program wasn't in place, we would still be hiring these individuals." (High intensive use--Hotels)

"Needs to be worked out because it's been misused. It's a good program and opens jobs in certain areas and pockets. Smart business people didn't need it. It allows business to raise profits." (High intensive use--Fast foods)

Recommendations. Employers had numerous recommendations to suggest for program administrators. One type of recommendation was to include additional populations as target groups:

"Extend age bracket to allow older people to work, such as unwed mothers."

"Extend disadvantaged youth beyond age 24--possibly to age 29. Also include single mothers."

"All coop students for year round employment"

Other recommendations dealt with administrative procedures,

"Simplify administration and handling of the program."

"Need to consolidate federal programs; hard to deal with 42 different people."

"All the complexity of the program is forcing companies to use outside consultants to administer."

"Program needs to be extended for more than one year at a time--simply because in most corporations it takes a lot of energy and money to set up procedures and policies for a program."

7. SUMMARY

The following points summarize the case study findings:

- Most companies undertake eligibility determinations after the hiring decisions are made.
- Some companies, particularly in the fast service food industry, report that tax credits allowed the firm to expand employment.
- Although most TJTC workers are hired into entry-level low skill jobs, some firms have begun to get credits for workers hired into managerial positions.
- TJTC has increased usage of the Employment Service and/or improved relationships with the ES for about 40 percent of the firms; another 40 percent reported that they used and were happy with the service for the ES irrespective of TJTC; the remaining 20 percent reported some problems with their relationships with the ES.
- Consultants are used extensively. Most companies feel that they get larger tax savings or at least save enough administrative costs to warrant their usage.
- About half the companies use financial incentives to spur TJTC usage.
- Employers reported very little productivity or turnover differences between TJTC and non-TJTC workers.
- A number of firms do not claim all their credits because (i) some certifications may not have been requested in a timely fashion, (ii) some certified workers previously worked for the corporation, and (iii) some workers quit after a very short period of time (less than 1 day).

These findings need to be interpreted with care. In almost all cases, we felt that the employers were candid and tried to be helpful, but the data are self-reported, and are thus subject to the veracity of the respondents' perceptions. Furthermore, it should be recognized that employers have a direct stake in TJTC, and thus, are presumably not unbiased.

IX. SUMMARY AND OPTIONS FOR REFORM OF TJTC

IX. SUMMARY AND OPTIONS FOR REFORM OF TJTC

This chapter reviews the evidence detailed in the prior chapters on the two major problems faced by the Targeted Jobs Tax Credit--low employer participation and uncertain cost effectiveness--and then discusses ways in which TJTC can be improved and/or reformed to make it more effective. Both incremental and structural reforms are considered.

1. THE PROBLEM OF LOW PARTICIPATION

Most employers report they have heard of TJTC but only a small number of firms are participating. In the locations studied, 77 percent of employers responsible for 90 percent of all employment had heard of TJTC by the spring of 1982. Only 7 percent (representing 18 percent of employment), however, had been personally contacted about the program by a government official and only 6.7 percent (representing 20 percent of employment) had initiated a personal contact to learn more about it. Under 5 percent of employers (accounting for less than 25 percent of employment) typically participate in the program in any given year. And only 2.87 percent of the employers (accounting for 15 percent of employment) reported that they "make an effort to select new employees that are tax-credit eligible."

Among the participating firms, utilization is highly uneven. A small number of firms account for a large share of certifications, with certain retail (eating and drinking establishments) and service (hotels and motels) sector corporations predominant. Interest in certifying tax credit eligible workers is so keen in some of these firms that they provide monetary incentives to the hiring managers of local establishments and/or engage management consultants to increase usage of the program. Obviously, these firms are benefitting (or they wouldn't be trying so hard to participate), but what about the target population?

In fiscal 1985, the ratio of TJTC certified new hires to total private sector employment was only about 0.7 percent while unemployment was averaging 7 percent. Since many more people are unemployed at some point during the year than are unemployed at a point in time, the program helped considerably fewer than 5 percent of the people who were unemployed during the year. As pointed out in chapter I, the Congressional Budget Office has calculated that in the largest target group, disadvantaged youth, only about 10 percent of eligibles are having their employment subsidized by the program. Relative to the problem it is addressing, TJTC is of quite modest scale. At such a scale it clearly cannot end welfare dependency and structural unemployment. Limitations on eligibility and small budgets do not account since the modest scale of the program for it is an entitlement and the pool of potential eligibles is quite large.

There are four primary causes for TJTC's low participation rate:

- In its initial months, most employers were not aware or were only vaguely aware of the program. A spring 1980 survey of employers found that only 17 percent of all employers representing establishments responsible for 33 percent of all employment reported being "familiar" with TJTC (EOPP Employer Survey). Firms that reported being familiar with the program often knew very little about it.
- Many firms are not able to benefit from the TJTC because either they do not have tax liabilities which the tax credit may reduce, they are not hiring, they are required to rehire laid off employees first, or they do not hire unskilled and untrained entry level workers.
- There is a stigma attached to being a member of most of the TJTC's target groups. Employers perceive the program to be subsidizing people who do not make good workers. This reduces the likelihood that employers will ask the employment service to refer TJTC-eligible workers to their firm. Furthermore, many applicants feel that telling prospective employers of their eligibility for TJTC may hurt their chances of getting the job.

- The complicated rules of eligibility mean that most employers are unable to identify who is eligible independently and that government certification of employee eligibility is necessary. This lowers participation because: (a) it often forces the firm out of its traditional recruitment channels; (b) employers fear that it will introduce red tape into the hiring process or bring about unwelcome government interference (the costs of identifying and certifying who is eligible are thus major deterrents to participation); and (c) the program's success depends upon cooperation between private business and government.

These problems are not solved easily. Some are probably inherent in a targeted employment subsidy. The very rationale of the program rests on its being targeted on hard to employ workers. Targeting, however, means that eligibility certification must be done by government agencies and that employers are likely to perceive those eligible for subsidy as less productive than other job applicants. This reduces participation. If less stigmatizing criteria were used to define target groups, eligibility would have to be broadened and the program's cost effectiveness would be reduced.

A low participation rate does not imply that TJTC is low in cost-effectiveness. The low rates of employer participation in an entitlement like TJTC result from high nonpecuniary costs of participation. Some of these costs (e.g., learning enough about the program to use it, making arrangements for the referral of eligible workers, establishing a system to identify which job applicants are eligible, and risking scrutiny from the Equal Employment Opportunity Commission or the Internal Revenue Service) are fixed (i.e., do not rise with the number of eligibles hired). These costs discourage participation, but for those who do participate, they should have no systematic effect on the impact of the subsidy on employment.

Other nonpecuniary costs depend on the number of workers hired through the program. These variable costs are the incremental costs of searching for, identifying, and certifying eligible workers and the risk of hiring workers who may be less productive than the typical unsubsidized new hire. These costs lower the net benefit of hiring extra subsidized workers and therefore reduce the impact of the subsidy on participating firms.

Our examination of participation in chapter II suggests that fixed costs are an important deterrent to participation in TJTC. Many of the firms that choose to participate seem to participate heavily. Even though less than 1 percent of all workers are subsidized, the typical subsidized worker was working in an establishment at which 14.6 percent of the firm's employees were subsidized. This suggests that, in some of the participating firms, the marginal costs of hiring subsidized workers are and remain low as the employer expands employment of subsidized workers. Thus the fact that participation rates of firms are low cannot be taken as evidence that a program has zero or only small effects on those firms that choose to participate. In fact, a reasonable argument can be made that the partial equilibrium response (extra employment) per dollar of expenditure will be bigger in a small program than a large program.

When there are important fixed costs to participation, firms with high elasticities of demand for the subsidized class of workers and low marginal costs of certifying extra workers are more likely to participate than firms with low elasticities of demand and high marginal costs of participation. As a result, one might expect that the first firms to volunteer to participate will be more responsive than the firms that are convinced to participate at a later date. There are, however, other reasons for being concerned about the present cost-effectiveness of TJTC and it is to this issue that we now turn.

2. THE PROBLEM OF UNCERTAIN COST EFFECTIVENESS

The purpose of the TJTC program is to induce firms to increase their hiring and training of disadvantaged workers. The program can be considered cost-effective only if (1) a reasonable proportion of TJTC certifications represent an increase in hiring of targeted workers and (2) this hiring does not result in other similarly disadvantaged workers not being able to find a job. These objectives cannot be accomplished unless participating firms change who is hired or how many are hired.

(1) TJTC's Effect on Who is Hired

Four types of evidence are available on whether TJTC is changing who is hired:

- Survey responses by employers about how they were influenced
- Econometric estimates of TJTC's impact on the share of the workers at participating firms that are under the age of 25
- Experiments in which eligible job seekers were taught to announce their eligibility to prospective employers
- Data on the relative productivity of TJTC eligibles

Survey responses regarding hiring policies. Four surveys of employers have asked what impact TJTC had on hiring. The 1982 survey found that 50 to 80 percent (depending on whether sampling weights are used to construct the estimate) of TJTC certifications were at companies that said they tried to select eligibles. A 1985 survey of large corporations and industries that are heavy users of TJTC found that 55 percent of these companies had implemented financial incentives for their own staff to encourage the certification of TJTC eligibles. Most participating firms, however, try to prevent eligibility for TJTC from influencing who is hired from the pool of applicants considered. In the 1982

survey, only 33 percent of the users said that TJTC had either a great or moderate influence on who was selected. In 1985, three-quarters of the large corporations surveyed reported that screening for TJTC eligibility occurs after the hiring decision is made and therefore does not influence hiring selections.

The primary response to TJTC seems to have been to add TJTC eligibles to the pool of applicants considered for the job. In 1982, about half of the eligibles hired were referrals from agencies probably in response to a specific requests for TJTC eligibles. In chapter VIII, we reported that almost 90 percent of the corporations in the case studies either used the Employment Service extensively for referrals prior to the advent of TJTC or TJTC resulted in increased usage of the Employment Service. The case studies uncovered little dissatisfaction with the ES contrary to common allegations of employer unhappiness. In some instances, TJTC has resulted in the ES receiving exclusive referral arrangements (Crosslin et al, 1985).

Since 1982, however, referrals have been accounting for a declining share of all TJTC certifications and new hires identified as eligible by management assistance companies (MACs) have grown dramatically. Management assistance companies typically screen only the new hires, so the growth in use of TJTC generated by these companies has not resulted in a parallel growth in the impact of the program. Most of this growth has been windfall for the employers and the MACs.

Econometric estimates of TJTC's impact on the youth share of employment at participating firms. Historical data are not available on the number of disadvantaged workers at participating firms, so econometric studies of TJTC's impact on the share of the firm's jobs going to members of TJTC's target group are not feasible. Historical data on the youth share are available, however, and was analyzed in Chapter IV. The major findings were

that the use of TJTC had a small but statistically significant positive effect on the youth share. The effect of TJTC on the youth share diminishes as TJTC use increases. When TJTC use exceeds half of employment, further increases in TJTC use have no further effect on the youth share. The effect of TJTC is also temporary. The response of the youth share did not persist beyond the end of the two year subsidy period.

Experiments where job seekers announce their eligibility. There have been two experiments where welfare recipients who were seeking employment were taught to announce their eligibility for a TJTC to employers when they applied for a job. In both experiments, the group that received this training had a lower placement rate than other eligible welfare recipients who did not receive this training. (Burtless and Cheston, 1981; Moran et al., 1982.) These studies are based on very small samples but they nevertheless suggest that for most employers, signaling one's welfare recipiency may have powerful stigmatizing effects.

Being a youth from a low income family is probably not as stigmatizing as being a welfare recipient and this presumption receives support in Hollenbeck's (1984) analysis of hiring priority ratings assigned by over 700 employers. In this data, TJTC eligibility had a small statistically significant positive effect on the hiring priority ratings given. The effect of TJTC eligibility on the hiring priorities ratings varied across firms and job applicants. Job applicants whose credentials looked good on paper were hurt by an announcement of their TJTC eligibility. These findings support the hypothesis that TJTC is causing employers to alter their hiring choices since it suggests a tendency to favor individuals who are generally viewed negatively and thus would be least likely to be hired absent the program.

Relative productivity of the TJTC eligibles hired. The purpose of targeted employment subsidy programs is to induce firms (1) to hire disadvantaged workers for jobs that would otherwise have been filled by better qualified workers, and (2) to provide the extra training that these workers require to reach the productivity standard of the other workers in the firm. If the program is achieving this purpose, comparisons of subsidized and unsubsidized workers holding the same job (or controlling on the characteristics of the job and the firm) would show that subsidized workers have poorer credentials, are less productive, and require greater than average amounts of training.

The evidence on the relative productivity of TJTC eligibles is mixed. When a random sample of firms is asked about specific individuals and the firm's TJTC hires are compared to other hires, TJTC eligibles are reported to be less productive than the firm's typical new hires and are generally assigned to the lower skilled and lower wage jobs. When, however, comparisons are made with other workers filling the same job, the TJTC eligibles hired are reported to be roughly equal in productivity.

The analysis of the 1982 wave of the Employer Survey found that at firms that try to select TJTC eligible workers, TJTC eligibles hired had significantly less schooling but were no less productive and did not require more training than unsubsidized workers doing the same job.

At firms which do not try to select new employees that are tax credit eligible, the eligibles had the same qualifications on paper and got the same training but were significantly more productive (20-25 percent) and had significantly lower turnover rates than ineligible new hires. Apparently the knowledge that particular job applicants were members of a TJTC target group caused the firms to become particularly cautious when hiring

those individuals. Not wanting to lower hiring standards and believing that most TJTC eligibles would make poor employees, these firms only hired TJTC eligibles who in other respects looked particularly good, and indeed these workers turned out to be quite productive.

In the 1984 NCRVE survey of about 100 firms that hired a single TJTC eligible during 1980 and 1981, employers reported that TJTC workers were on average about 7 percent less productive and were considerably less likely to be retained than non-TJTC workers (Hollenbeck 1984). The sample of firms comprising this survey (made up solely of small users of TJTC) was not representative of all TJTC users, and so this productivity differential is most likely not generalizable to all TJTC workers.

In the sample of large firms and large TJTC users interviewed in 1985, 65 percent of employers felt that there was no productivity difference between TJTC eligible and ineligible workers, 11 percent felt the productivity was higher. An overall sample average was that TJTC eligible employees were reported to be about 2.5 percent less productive. Turnover rates were reported to be no different. All in all, evidence from the three data sources indicates that TJTC eligible workers who are hired are not significantly less nor more productive than non-eligible new hires for the same job.

When asked directly most employers deny they are lowering hiring standards in order to hire more TJTC eligibles. The validity of these denials is supported by the data on the reported productivity and turnover of TJTC eligibles. This implies, however, that TJTC is failing in one of its most central objectives--the substitution of less skilled, less productive workers who are unable to get and hold a job without the assistance of a tax credit for better skilled workers who can find another job without assistance. The finding that TJTC eligibles

are not less productive than the unsubsidized workers who normally fill these jobs implies:

- that TJTC does not change who is hired (this is probably what happens in 70-90 percent of the cases),
- that only exceptionally qualified TJTC eligibles are knowingly hired and claimed,
- that the individuals displaced by TJTC eligibles are also poorly qualified and unskilled and are likely to have a difficult time finding another job, or
- that employers systematically underestimate the expected productivity of TJTC eligibles and thus often incorrectly believe they are lowering hiring standards when they hire TJTC eligibles. They are then surprised by how well TJTC eligibles do but do not revise their opinion about the average productivity of eligibles.

None of the first three of these outcomes can be considered positive. Only the fourth alternative implies that TJTC is causing beneficial changes in who is hired. In this fourth scenario, employers incorrectly stigmatize TJTC eligibles as less productive, and maintain this belief in the face of contradictory experience. The tax credit is thus necessary to induce these employers to hire TJTC eligibles even though those hired turn out to be equally productive. Supporting this scenario is the fact that some employers do report lowering hiring standards and that TJTC eligibles do have fewer years of schooling than ineligibles who take the same jobs. If, however, we accept employer descriptions of their hiring standards at face value, we must also accept their statements that reductions in hiring standards for TJTC eligibles are quite rare.

(2) TJTC's Impact on How Many are Hired

While the primary objective of TJTC is to change who is hired, inducing participating firms to expand employment is an important subsidiary objective. To date, there have been three attempts at an econometric evaluation of the impact of TJTC on

the employment levels of participating firms. The first study (Bishop and Montgomery, 1985) estimated models separately for different size establishments predicting employment growth from July 1979 through December 1979. TJTC had no impact on establishments with twenty-one to one hundred employees and an important, though not statistically significant impact on establishments with more than a hundred employees. Since most employment is in large establishments, the average (using employment shares as weights) increase in employment per subsidized worker was .3.

A study of employment growth in 1981 conducted by staff at the Congressional Budget Office (Christensen, 1984) found no impact on participating firm's employment levels.

The study of these same data presented in Chapter IV found that the estimated effect of TJTC usage depended upon the specification. When TJTC usage is captured by a dummy variable for participation, the coefficient on the dummy implies that TJTC has increased the company's employment by 2 to 4 percent. When the TJTC usage variable is the ratio of TJTC certifications to employment and effects are allowed to shift when this variable reaches .5, TJTC utilization is found to have a significant impact on growth (10 certifications increase employment by about 2) up to the point where the utilization ratio reaches .5 and no effect beyond that. When the TJTC usage variable is the ratio of TJTC certifications to new hires, estimated impacts of TJTC are essentially zero.

3. MAKING TJTC MORE EFFECTIVE THROUGH BETTER ADMINISTRATION

(1) Increasing the Effectiveness of TJTC Referral Services

The primary goal of TJTC's marketing strategy should be increased cost effectiveness, not increased usage. The cost

effectiveness of TJTC is increased if labor market intermediaries are the primary mechanism by which employers find TJTC eligibles. When a firm initiates a request or agrees to an offer of TJTC eligible referrals and later hires some of these referrals, the firm's hiring selections are almost certainly being influenced. When employers screen for TJTC eligibility themselves or have a consulting firm do it for them, they tend to do the screening after the hiring decision is made. Most of the employers who use consulting firms to screen and identify eligibles report that this knowledge does not influence hiring selections. Consequently, the energies of program administrators should focus on making referrals by client-centered labor market intermediaries the primary mechanism by which employers identify TJTC eligible job candidates.

Participation in TJTC could be considerably increased if it were promoted more vigorously. If firms are approached in person, it should be possible to persuade a significant share to participate. Personal outreach is most effective when it simultaneously informs the firms about the program and offers eligible referrals that meet the firm's minimum requirements. Personal outreach must therefore be done by someone with access to a pool of eligibles who may be screened and referred to firms.

Promotional efforts designed to induce nonparticipants to give the program a try should simultaneously sell:

- the tax credit (e.g., "The paperwork is small; we will make the certification process convenient; it can have a big effect on the bottom line.")
- the TJTC eligibles (e.g., "They make much better workers than you might anticipate.")
- the screening and referral service of the agency (e.g., "We will send you someone promptly; we will inform you if the person has a criminal record; we will send you candidates who are qualified for your job.")

Outreach should be increased and targeted on firms which might hire large numbers of TJTC eligibles. Administering agencies should also target firms that provide training to entry level workers and offer career ladder opportunities.

Agency staff with contacts at firms that already participate in the program should try to persuade the firm to accept additional referrals of TJTC eligibles and to give them hiring preference.

The agency's goal should be to develop long term referral arrangements with specific employers. This means the agency must develop a reputation for referring qualified workers and being honest about any blemishes in the background of the workers that are referred. Follow-up interviews of employers who had certified only one TJTC eligible in a 21 month period found that some of the employers had stopped participating because they felt they had not been dealt with honestly (Hollenbeck, 1984). One employer, for instance, complained that he had not been told about a referral's criminal record and ended up being robbed by his TJTC eligible employee. Ex-convicts make up only five percent of the TJTC vouchered population. It is important that people in other eligibility categories be free of the stigma of being perceived to be an ex-convict. The way to avoid this is for agencies to warn employers if their client has a criminal record.

It is not clear whether volunteering that one is a TJTC eligible increases or decreases one's chance of being hired. The two experiments imply that there was and probably still is a large group of employers for whom TJTC eligibility is a negative rather than a positive. There will probably always be some employers with this view, for many cannot benefit because they lack a tax liability and others have such a negative view of the

target groups they will never give preference to target group members. As a result, the best strategy is for referring agencies to make the initial approach to all the large and medium-sized employers in the area. Agency staff should explain the program and offer to make referrals of eligibles who have been screened to meet the firm's needs. If the firm's response to the explanation of the tax credit and the offer of eligible referrals is positive, referrals can be made. Disadvantaged workers who are referred need not even mention the tax credit and can concentrate on selling themselves. Expecting the job seeker to promote or explain the program is probably unwise. Local agencies should be discouraged form vouchering when a referral has not been arranged. Instead they should focus on selling the program to firms and offering to refer TJTC eligibles to them.

The disadvantaged worker's job search should not be limited to firms contacted by the labor market intermediary. Direct application should be made to other firms. Job-seeking TJTC eligibles should be discouraged from initiating a discussion of their eligibility for TJTC or welfare recipient status with prospective employers. EEO guidelines prevent employers from asking whether a job applicant is on welfare so many recipients will be able to obtain jobs without their employer knowing they have been on welfare. If the employer asks whether the applicant is eligible for TJTC, an affirmative answer should be given, but if the subject is not brought up by the employer, applicants should not mention their eligibility.

(2) Tighten Up Eligibility Determination

Another important administrative recommendation relates to the eligibility determination process. The whole rationale of this program rests on its being targeted on needy individuals. Public support for the program rests on this as well. It is therefore essential that the integrity of the eligibility determination process be maintained.

The procedures used to determine eligibility for TJTC are less rigorous and more subject to abuse than the procedures used by other income conditioned programs--(e.g., Pell Grants, Guaranteed Student Loans, Food Stamps, and Aid to Families with Dependent Children. Where requisite documentation on family income is not readily available, SESA's are allowed to accept the applicant's signed certification of family income levels (Employment and Training Administration, 1984). This was the policy in more than half of the states visited in the process study, implying that more than half of all TJTC determinations of income eligibility are based solely on the word of the applicant. Whether an individual is a dependent of his or her parents or independent of them is determined in a similar manner. In one state, eligibility determinations are generally handled over the phone. Almost everywhere, the eligibility determination process typically takes less than 10 minutes. While the SESA's are required to conduct quality reviews and audits of a randomly selected 10 percent of these determinations, these reviews are in most cases limited to a check of the documentation contained in the person's file. Independent checks of the individual's marital status, family status, and income generally would not occur unless an inconsistency appeared in written record (Crosslin, et al., 1985).

While the job applicant's incentive to falsify a TJTC voucher application is weaker than for programs which make payments directly to the individual, there is a danger that community based organizations, firms and/or management assistance companies may induce ineligible job seekers to falsify their application. Consequently eligibility determination needs to be tightened up. When audits are conducted, vouchered workers should be required to provide complete documentation of income, family status, and financial independence of parents. Vouchering should not be allowed unless documents attesting to eligibility are signed by the worker and firm and sent to the Employment Service. Other mechanisms of tightening up eligibility determination should be

explored as well. The definition of whether the individual is supported by parents should be tightened and made similar to the rules determining eligibility for Pell Grants in 1985.

(3) Increased Funding for Administration

There needs to be a recognition that while TJTC is simpler to administer than other programs targeted on the disadvantaged such as JTPA training, job clubs, and public service employment, it is not self-administering. If the program is passively administered--public officials focusing only on eligibility determination and auditing--the windfall element of the program will continue to grow. Management assistance companies are not motivated by a desire to aid the disadvantaged when they market TJTC, so they tend to promote a form of participation which maximizes the windfall element. Having TJTC eligibles market the program is apparently counterproductive. Only public officials working for client-centered agencies are motivated to market the program in ways that maximize its potential to aid the disadvantaged.

Implementation of many of the proposed administrative changes will require increases in the staff devoted to TJTC marketing and administration. Funding for these activities will have to be increased. In addition, local offices need to be given incentives to focus their TJTC efforts in the right direction. The extra work involved in additional marketing and in audits that obtain complete documentation of family income or family status needs to be recognized. Current practice of evaluating local employment service personnel and offices on the basis of the number of placements should continue, for the objective is increased placements not increased TJTC certifications. Local employment service offices should not receive placement credits or other types of recognition for TJTC certifications initiated by MACs or by employers.

At present, application for TJTC must be made on or before the day the new hire begins work if the worker is not already vouchered. This feature of the program increases the probability that the selection of the new hire was positively influenced by TJTC. This feature increases cost effectiveness and should be retained.

4. IMPROVING TJTC THROUGH LEGISLATIVE ACTION

The administrative reforms just discussed will improve the TJTC program but real improvements in the cost effectiveness of TJTC require legislative action. The purpose of the tax credit is to increase job opportunities for the disadvantaged, not to enrich employers who were already hiring the disadvantaged. Yet, most of the tax credits are going to employers who claim that TJTC eligibility does not influence who is selected out of the pool of applicants and who screen for TJTC eligibility after the hiring decision is made. Management assistance companies have helped firms claim windfall tax credits and probably have done very little to stimulate increased hiring of the disadvantaged.

Major reductions in the windfall component of the program are feasible but require significant changes in the structure of TJTC. One or more of the following reforms are recommended:

- eligibility needs to be limited to job applicants who were vouchered and referred by a client centered public or nonprofit agency
- the firm's eligibility needs to be conditioned on anaudit-able statement that most job applicants are screened for TJTC eligibility prior to the hiring decision, that hiring decision makers have this information and weigh it favorably in their selections, that the local staff of multi-establishment corporations are rewarded for increased TJTC hiring, and that MACs are not employed to do screening by large firms
- tax credits need to be available only for growth of TJTC certifications over 1985 use of the program

(1) Limiting Eligibility to Referrals by Client Centered Agencies

TJTC was deliberately structured so that referrals of eligibles by labor market intermediaries were not essential to its operation. Some of the designers of TJTC expected other mechanisms of matching eligibles to jobs--specifically job seeker announcements of their eligibility to prospective employers and employer screening of pools of job applicants for eligibles--to predominate. The option of bypassing labor market intermediaries has not produced the hoped for high participation rates, however, and the cost effectiveness of the program has suffered.

It is time to reassess this decision. If only referrals from client-centered public or nonprofit agencies were eligible, the agencies could be given the mission of minimizing windfalls through administrative action. Placement counselors could be told to offer tax credits only when the firm increases its hiring of the disadvantaged or raises the quality of the jobs it offers to clients. Giving them discretion and making them the exclusive source of tax credit eligibles would greatly increase the bargaining power of client-centered agencies. One could anticipate that it would help these agencies develop long term referral arrangements with employers that would benefit the agency's clients.

There are some disadvantages to this approach, however. First, agencies would not face a budget constraint and would come under strong local pressure to set lenient standards for employers. Client-centered agencies such as JTPA and the employment service have been accused of creaming in the past and might not be willing or able to maximize the benefits of the tax credit program for their client group. If this strategy were adopted, it would probably be best to make it a hiring subsidy administered by JTPA, welfare offices, and rehabilitation offices rather than a tax credit.

A second disadvantage of making labor market intermediaries the only mechanism of brining eligibles and employers together is that participation rates would suffer. Many employers are reluctant to accept referrals from government agencies such as the Employment Service. In the 1982 NCRVE employer survey, 70 percent of the employers with vacancies did not list the job opening with the Employment Service (Bishop, Barron and Hollenbeck 1983). As a result, even though 34 percent of all workers had checked with the employment service during their last period of job search, only 5.1 percent had gotten their jobs through an Employment Service referral (Rosenfeld 1975). Informal recruitment mechanisms are much more popular. About 35 percent of all jobs were found by applying to the firm without suggestions or referrals and another 26 percent were obtained by applying directly to the firms at the suggestion of a friend or relative (Rosenfeld 1975). Most firms prefer to hire people who are recommended by current employees or another employer or who have shown their desire for the job by applying for it in person. Employers prefer these informal recruitment channels because (a) such channels are faster, (b) employers do not become inundated with job applicants who must be interviewed, (c) they can avoid dealing with government, and (d) they believe that job candidates obtained from informal sources will probably be more productive and less likely to quit or be dismissed. This preference acts to limit the market penetration of any program for finding jobs for the disadvantaged that depends upon a labor market intermediary--the employment service, a school's placement office, WIN office or a JTPA subcontractor such as the Urban league. The reduced utilization, however, is the price one pays for a cost effective program.

(2) Condition Eligibility on Hiring Policies which Minimize Windfalls

In industries that are heavy users of TJTC, 75 percent of the companies report that they schedule screening for TJTC eligibility after the hiring decision is made (Chapter VIII). The MACs were asked why most of their clients did not screen for TJTC early in the hiring process so that hiring decisions could be influenced by the job applicant's eligibility. A common response to this question was an expression of concern about the fairness and legality of making the receipt of a job offer depend upon their telephone interview. There is a clear need for Congress to clarify its intent in this areas:

- The legislation needs to state unambiguously that employers are expected to give hiring preference to target group eligibles and that eligibility for the tax credit is conditioned on giving such preference and on creating additional jobs for target group members.
- Language should be added that protects firms that are giving hiring preference to TJTC eligibles from civil suit by job applicants who do not get a job offer as a result. The fear of bad publicity or such a suit may have discouraged many firms from taking TJTC eligibility into account when they select from a pool of eligibles.

Management consulting firms have become the predominant source of TJTC certifications in many states. These trends have increased the windfall component of the program and diminished its impact on the disadvantaged. The case studies described in VIII found that the ratio of TJTC certifications to employment is 5 times greater at the firms that do their own TJTC screening or recruit TJTC eligibles through public agencies than at the firms that employ consulting firms for screening. One of the primary thrusts of any effort to increase the cost effectiveness of TJTC must be to greatly reduce the role of management assistance companies in the screening of eligibles and force firms to screen for TJTC eligibility prior to making hiring decisions.

This can be accomplished by the following legislative changes:

- Participating firms should be required to either obtain their TJTC eligibles from a referring agency or to conduct their own screening for eligibility prior to making hiring selections.
- At least one of the person's participating in the hiring decision should be required to sign a statement on the request for certification that they were aware of this individual's eligibility when the hiring decision was made and that the information was given positive weight.
- Large multi-establishment firms with decentralized hiring should be required to have some mechanism of tracking the number of TJTC eligibles hired by each establishment and of recognizing and rewarding members of their staff who hire more than average. The reward would not have to be financial, a letter of commendation might be sufficient to meet this requirement.
- Large firms should be prohibited from using management assistance companies for screening. This would force these firms to train in house staff to conduct screening. This is likely to result in someone taking on the role of champion for TJTC within the company. MACs would be allowed to do screening for small firms but the screening would have to be done prior to the hiring decision. The MACs would be required to submit a description of their services to IRS or DOL.

(3) Make TJTC a Marginal Tax Credit

There is now a basis for setting firm-specific minimum thresholds for TJTC claims that did not exist when the program began. TJTC claims in 1984 and 1985 could be the basis for setting thresholds which a firm would have to exceed before getting a tax credit. Cost effectiveness would dramatically increase if the threshold for 1986, 1987, etc. were set equal to 80 or 90 percent of the firm's average TJTC claims in 1984 and 1985. The cost of the program would decline but the incentive to increase TJTC hiring would remain. The fixed costs of participation decline with time and are not large for firms that have been using the program for many years so there is little danger

that employers will completely withdraw from participating in the program. To avoid being considered unfair to firms that do their own screening and have already become big users of TJTC, an industry specific upper limit might be placed on how high this threshold can be relative to employment. Fairness can also be enhanced by allowing the threshold to grow with the firm (e.g., by defining the threshold as a given percentage of the firm's wage bill).

This percentage of wage bill threshold should be fixed for the life of the program. It should not be updated yearly to reflect the firm's most recent use of the program because updating rules dramatically lower the incentive effects of the program. When there is updating of the threshold, the firm will take into account the fact that hiring extra TJTC eligibles this year raises the threshold for following years and thus reduces the tax credits that can be obtained in the future. Under these circumstances the real benefit of hiring a TJTC eligible this year is no longer the full $4500 tax credit but rather getting the tax credit now rather than later. Assuming an internal rate of return of 20 percent, the incentive effect of a program which updates the threshold yearly is only one-fifth of the incentive effect created by a program with a fixed threshold. Basing the threshold on the previous 3 years of TJTC use lowers the incentive effect to about 39 percent of that created by a fixed threshold program (Bishop and Wilson, 1982).

(4) Other Reforms Intended to Increase Cost Effectiveness

Another way to increase the cost effectiveness of the credit is to lower rates of subsidy. Lowering the rate of subsidy lowers costs and since the proportion of all certifications that represents a net addition to the number of jobs is not likely to decline proportionately with the decline in the subsidy, the cost effectiveness of the program will increase.

- The rate of the subsidy in the first year should be reduced to 25 percent. The rate of subsidy in the 2nd year should be maintained at 25 percent to encourage retention of TJTC eligibles. A large subsidy is not required because the administrative costs are small and the TJTC eligibles hired are either no less productive or only slightly less productive. Evidence that administrative costs are low is provided by the fact that the companies that do this work now charge on average only 16 percent of tax credit claimed. The 1980 and 1982 surveys found no or extremely small differences between the productivity and turnover of new hires who were known to be eligible for TJTC when hired and other workers hired for the same job. The costs of recruiting and selecting the worker were only slightly higher when a TJTC eligible was selected. Lowering the rate of subsidy lowers costs and because the proportion of all certifications that represent a net addition to the number of jobs is not likely to decline proportionately with the decline in the subsidy, the cost-effectiveness of the program will increase.
- The summer student tax credit should be eliminated. The 85 percent subsidy rate has failed to produce respectable participation rates in the summer youth tax credit (Macro Systems, 1984). Surely less than a third of the 26,923 summer youth certifications in FY1985 resulted in a net addition of jobs for youth. If so each extra dollar of earnings being generated by the program is costing the treasury two or more dollars of lost revenue. The Summer Neighborhood Youth Corp is almost certainly more cost effective than an 85 percent tax credit for hiring disadvantaged youth during the summer.

Legislative recommendations that focus on maintaining and increasing the long term positive employment and earnings outcomes of the program are the following:

- Use the credit schedule to induce longer retention. Firms that are heavy users of TJTC typically have high turnover rates. Turnover is not desirable, so incentives to retain TJTC workers should be considered. A credit that pays as much or more in the second year as in the first would accomplish this. Another possibility woiuld be a requirement that the employee stay at least 30 days on the job before the subsidy of wages begins.

Proposals have been made to increase the earnings limit on which credits are received--e.g., Lorenz (1985) suggests a $10,000 base instead of the $6,000 existing base. Such a change increases the subsidy of higher wage jobs while leaving the subsidy of low wage jobs fixed. This would lower the programs costs effectiveness.

- Additional credit for training. Consideration should be given to including up to $3,000 of training costs other than the time of the TJTC eligible in the subsidy base. To obtain the extra subsidy the firm would have to give new hires a description of the planned training program at the time of hire and a certificate describing the competencies achieved (and staff time expended) when training is completed. These certifications would encourage employer and employee to take the training more seriously, make the TJTC eligible more attractive to other employers and serve as an audit trail that insures that the reported time and resources were indeed devoted to training. A more radical reform of TJTC would turn it into a training subsidy by limiting eligibility to jobs that offer some minimum amount of training and making the wages that are subsidized depend on the time actually spent in training activities.

(5) Reforms Intended to Increase Participation

If increases in coverage and participation are desired, there are two changes in how eligibility is defined which should be considered.

- Consideration should be given to substituting a low income unemployed senior citizen (over age 60 or 65) eligibility category for the SSI eligibility category. Older people are particularly sensitive to the stigma of being on welfare. This is part of the reason why only 2,307 certifications were issued in the SSI category in FY1985. Having a low income is not nearly as stigmatizing so such a change might increase utilization among the current SSI populations as well as extending coverage to other deserving individuals. This change would, of course, raise the government's costs of administering the program.

- Consideration should be given to substituting a low income unemployed adult (over age 25) eligibility category for the AFDC, General Assistance, SSI, Ex-convict and Vietnam Veteran eligibility categories. The stigma attached to being from a low income family is less than that of being on welfare so the programs popularity with employers might increase. This change might produce a significant increase in utilization and therefore in costs.

5. SUMMARY

TJTC is not as cost effective as one might like. A TJTC certification apparently represents a change in who is hired only 10 to 25 percent of the time and an increase in employment at the subsidized firm only 5--20 percent of the time. The program's cost effectiveness could be greatly improved by increasing the investment in the administration and promotion of the program and by one or more of the following legislated reforms:

- limit eligibility to the referrals of client centered agencies
- require that firms do their own screening for TJTC eligibility and that it be done prior to making a hiring decision
- make it into a marginal tax credit (subsidize increases in TJTC use over the firm's claims for 1984 and 85)

The low rates of participation in TJTC are a consequence of the complicated eligibility rules and the stigma attached to its clientele. Effective targeting thus makes a low participation rate almost inevitable. The changes recommended to improve cost effectiveness would no doubt further lower the participation rate. While the program is small relative to the problem it is addressing, a small cost effective program is preferable to a large ineffective program.

APPENDIX A

A BRIEF DESCRIPTION OF THE FIRST WAVE OF THE EMPLOYER SURVEY

A BRIEF DESCRIPTION OF THE FIRST WAVE THE EMPLOYER SURVEY

WESTAT, Inc. of Rockville, Maryland was the survey contractor. They obtained completed interviews with 5,859 employers. Of these, about 486 were with private employers who had a CETA-OJT contract during 1978 or 1979, 33 with taxi companies and 5,340 with employers selected randomly from ES202 or Dun and Bradstreet Market Identifier Files (DMI) lists. Interview time ranged from less than 20 minutes for firms with very few employees to 2 hours or more for firms with multiple establishments and several hundred employees. A screener and a main questionnaire were used for all interviews. If the employer requested more information on the survey, a questionnaire explanation and worksheet were mailed to the employer. The interview was then conducted over the telephone after receipt of the materials. For large and medium-sized firms, there were normally two or three respondents per firm. Small firms generally had one respondent.

Table A-1 lists the sites and response rates obtained in each site. Overall, refusal rates were very low for this type of study. However, the sites located in Ohio and Louisiana stand out as exceptions to the rule. The refusal rates for these sites range from 2 percent to over 11 percent above the average for all sites. Also, the number of max-call cases is somewhat higher in these sites. We suspect that some of these cases may have been "avoidance" cases--that is, cases in which the respondents had no intention of completing the interview but felt that if they put the interview off long enough, the interviewer would stop calling and they would not be forced to refuse outright.

Sample Design of the Employer Survey

The Probability Sample

The primary sample frames for the employers survey consisted of lists of business units that, in compliance with the requirements of state unemployment insurance laws, file quarterly reports on employment with state employment security agencies--the ES202 lists. These reports were expected to provide a virtual census of the workers of private nonagricultural employers, and are the benchmark upon which National Income Account estimates of employment and compensation are based. Since the law requires that newly formed businesses file for an employer identification number before the end of the quarter in which they hire their first employee, the lists were expected to be quite up-to-date. The ES202 listings of employers contain the four-digit SIC code and a count of the number of employees in the first quarter of 1979 for each reporting unit.

State laws regarding the confidentiality of the ES202 list in Kentucky, Alabama, and Ohio necessitated using alternative sampling frames in these states--the (DMI). Although not quite as comprehensive nor as up-to-date as the ES202 list, the DMI does provide the information necessary to replicate the sample selection procedures based on employment and SIC code planned for

TABLE A-1

Site[1]	Number Completes	Completion[2] Rate	Refusal[3] Rate	Response[4] Rate
Alabama				
Mobile	358	58.7	21.1	75.4
Birmingham	220	56.8	20.0	73.3
Pensacola, FL	142	52.8	19.8	75.5
Kentucky				
Pike	232	59.2	11.1	86.6
Buchanan/Dickenson, VA	121	56.3	9.0	89.0
Harlan	103	61.3	7.2	86.5
Louisiana				
Baton Rouge	337	48.1	26.7	67.8
Beaumont/Port Arthur, TX	178	49.?	21.6	72.3
Lake Ch[illegible]s/Lafayette	157	55.9	20.3	75.8
Missouri				
Central Missouri	279	58.7	13.3	83.5
Southeast Missouri	150	59.8	9.6	87.7
Northwest Missouri	132	66.3	10.8	88.0
Ohio				
Columbus	420	52.9	25.1	69.4
Toledo	205	55.7	25.2	70.7
Cincinnati	235	49.3	26.1	67.3
Texas				
Corpus Christi	343	52.4	20.2	73.8
San Antonio	227	51.8	19.8	73.0
New Orleans, LA	176	39.7	29.6	63.1
Washington				
Southwest Washington	294	54.8	1.20	82.8
Skagit/Watcom	155	63.5	12.4	83.8
Olympia Peninsula	114	49.1	23.5	73.1
Colorado[5]				
Weld	112	36.0	1.8	97.4
Alamosa	58	37.9	—	100.0
Logan/El Paso	60	36.1	6.2	93.7
Wisconsin[5]				
Marathon	142	45.9	4.0	95.9
Outagamie	61	31.8	4.7	95.3
Winnebago	57	33.1	8.1	91.9
TOTALS	5,068	51.7	18.5	76.5

[1]Under heading, site listed first is Pilot; site listed second is Household Control; site listed third is Employer Control.

[2]Completion Rate = (# of Completes + # Partial Completes) Total # of Finalizations.

[3]Refusal Rate = # of Refusals (# of Complete + # of Partial Completes + # of Refusals).

[4]Response Rate = (# of Completes + # of Partial Completes) (# of Completes + # of Partial Completes + # of Refusals + (Max-Calls x 67%)).

[5]For budgetary reasons these regions were eliminated from the sample midway through the interviewing period.

the ES202 frame and, therefore, fills the gaps in our ES202 listings quite well.

The industrial universe represented by the employer survey included all nonagricultural for-profit employers that have unemployment insurance accounts. Agriculture, forestry, and fisheries (SIC Code 00-09) were excluded because of the poor coverage of these industries in the ES202 files. Also excluded were government and government enterprises (SIC Codes 43, 90-99) and nonprofit organizations (SIC Codes 821, 822, 823, 84, and 86). Since government and nonprofit organizations are not limited to these SIC codes, an initial screening determined whether the organization contacted was nonprofit or governmental, and the interview was terminated if it was. The ES202 and DMI lists of employers were also checked against other employer lists—membership lists of the local chamber of commerce, lists of local manufacturers--and with the local CETA prime sponsor to ensure that no really large local employers were inadvertently left out of the sample frame.

The Supplementary Sample of Employers with CETA OJT Contracts

Only a tiny proportion of the employers in a labor market negotiate and sign OJT contracts with CETA. Consequently, a random sample of 6,000 employers was expected to yield only about 200 who had OJT contracts with CETA. An analysis of employers' decisions requires many more observations than that. Therefore, a supplementary sample of approximately 490 employers who had CETA OJT contracts in 1978 or 1979 was drawn to provide additional observations on this class of employers. The program records of the CETA prime sponsors in pilot and control sites were the source of the list of OJT contractors from which this sample was drawn.

Geographic Coverage of the Employer Survey

The employer survey was conducted in 28 sites dispersed around the nation. Ten of the sites were selected because the U.S. Department of Labor was running a major social experiment, the Employment Opportunity Pilot Projects (EOPP), in these labor markets. Eighteen other locations were selected to form a control group for planned studies of the impact of EOPP. Both rural and urban, Northern and Southern employers are represented. Although the sites were not randomly selected, the local economies that were included seem to represent the nation. They range from an Appalachian coal community to a Pacific Northwest logging area, and from a Midwestern industrial center (Columbus) to Corpus Christi, a center of the oil and petrochemical industries. Table A-2 lists the counties that were included in each site and the total private nonagricultural employment of each site.

Selection of the sample

Stratified random samples of unemployment insurance tax filing units were drawn from the ES202 lists. Where the ES202 lists were unavailable (i.e.,

Kentucky, Alabama, and Ohio), stratified random samples of establishments were drawn from the Dun and Bradstreet Market Identifier File. The sampling procedure for selecting the employers involved the following steps:

1. A sampling measure of size was assigned to each employer in the frame, based upon the estimated number of low-wage workers. These measures of size, Z_j, were computed from the following formula:

   $$Z_j = [w_i (1 + \text{employment}_j)]^{0.8}$$

   where w_i is an estimate of the proportion of "low-wage" employees in the "i"th industry, based upon tabulations of the 1970 Census Public Use Tapes for the 10 initially defined pilot sites. In order to ensure enough observations for a study of the impact of EOPP on out-contracting to low-wage employers, the Z_j for four industries was tripled (SIC 7349, 7362, 7393, 5963).

2. Multiunit employers within the same site who had the same identification (account) number were consolidated into a single record, which was then assigned the measure of size.

3. The certainty class, employers for which $P_j \geq 1$, was determined in accordance with the assumption that the dropout rate in this class would be approximately one-half. (The errors of this assumption will have little effect. They will shift only a few employers, who in any case would have large probabilities of selection into or out of the certainty class.)

4. The noncertainty sample was selected by arranging the balance of the frame in order of size, assigning all employers who reported zero employment to a single stratum, dividing the remaining employers in the array into six strata (each having about the same aggregate size), and choosing (with equal probability) about four times the desired number of completed interviews. The order of the selected establishments was then randomized across all strata.

   In conducting the canvass, the selected employers who were out of business or who were inaccessible because of bad addresses were deleted by an advance screening operation. Interviews were then attempted for all the remaining certainty employers. For the noncertainty sample, however, interviews were attempted for the first n_h employers in the randomly sorted list, where n_h is the desired number of completed interviews for the site.

5. Because the units listed in NS202 were not expected always to correspond to single-location establishments, all selected unit were asked whether they operated at more than one location within the target area. Those that did were requested to submit a single report covering all of their locations in the site, if feasible. However, where only separate reports would be obtained, a subsample of establishments was selected and the sampling weights adjusted accordingly to reflect the correct probabilities of selection.

TABLE A-2

GEOGRAPHIC COVERAGE OF EMPLOYER SURVEY

Site	Pilot/ Control	Total Private Employment In Site	Counties
Alabama			
Mobile	P	115,738	Baldwin, Escambia, Mobile Co.
Birmingham	C	271,202	Jefferson, Shelby, Walker Co.
Pensacola	C	77,684	Escambia, Okaloosa, Santa Rosa Co.
Colorado			
Weld County	P	25,207	Weld County
Alamosa County	C	20,000	Alamosa County
Logan, El Paso County	C	37,348	Logan, El Paso Co.
Kentucky			
Pike County	P	15,645	Pike County
Buchanan, Dickenson Co.	C	14,861	Buchanan, Dickenson Co.
Harlan County	C	8,382	Harlan County
Louisiana			
Baton Rouge	P	104,299	East Baton Rouge Parish
Beaumont-Port Arthur	C	114,064	Hardin, Jefferson, Orange Co.
Lake Charles	C	87,457	Calcasieu Parish, Lafayette Parish
Missouri			
Central Missouri	P	30,067	Carroll, Charlton, Johnson, Lafayette, Pettis, Saline Co.
Southeast Missouri	C	38,165	Bollinger, Cape Girardeau, Iron, Perry, St. Francois, Ste. Genevieve Co.
Northwest Missouri	C	39,847	Buchanan, Caldwell, Clinton, Daviess, Grundy, Livingston Co.
Ohio			
Columbus	P	303,325	Franklin County
Cincinnati	P	402,091	Hamilton County
Toledo	C	171,451	Lucas County
Dayton	C	250,000	Montgomery County
Texas			
Corpus Christi	P	103,532	Aransas, Bee, Brooks, Duval, Jim Wells, Kenedy, Kleberg, Live Oak, McMullen, Nueces, San Patricio Co.
San Antonio	C	288,855	Bexar, Comal, DeWitt, Gonzalez, Guadalupe, Karnes, Victoria, Wilson Co.
New Orleans	C	211,892	Orleans Parish
Washington			
Southwest Washington	P	43,216	Cowlitz, Grays Harbor, Pacific, Wahkiakum Co.
Skagit, Whatcom County	C	36,959	Skagit, Whatcom Co.
Olympia Peninsula	C	20,453	Jefferson, Lewis, Mason, Skamania Co.
Wisconsin			
Marathon County	P	30,978	Marathon County
Outagamie County	C	43,113	Outagamie County
Winnebago County	C	45,313	Winnebago County

APPENDIX B

EMPLOYER SURVEY QUESTIONNAIRE

PART C: GOVERNMENT PROGRAMS

301. Have you heard that federal tax credits are available to employers who hire certain types of workers. These programs are usually called Targeted Job Tax Credits or TJTC, and Work Incentive tax credit or WIN.

Yes..... (ASK 302)..... 1
No.....(GO TO 340).. 2
DK.....(ASK 302)..... 8
NA.....(ASK 302)..... 9
(Q.340 IS ON PAGE 50)

21

302. Have you or any of your staff spoken to a representative of government, a trade association, or a local business organization about these tax credits?

Yes..... (ASK 303).... 1
No.....(GO TO 305). 2
DK.....(GO TO 305). 8
NA.....(GO TO 305). 9

22

303. In what month and year was your initial contact about tax credits? (IF DK PROBE: What is your best guess.)

__ __ 1 9 __ __
MONTH YEAR
DK.....989998
NA.....999999

23-28

304. Was the initial conversation about tax credits initiated by (READ LIST) (ALLOW ONLY ONE RESPONSE, IF MORE THAN ONE PROBE FOR FIRST CONVERSATION.)

You?..... 1
Your staff or company?.2
By Government?..... 3
A Trade association?.... 4
A local business organization?..... 5
Or something else..... 6
DK..... 8
NA..... 9

29

305. Do you think tax-credit-eligible people would usually make better or poorer new employees than people who are not tax-credit-eligible?

Better..... 1
Poorer..... 2
NO DIFFERENCE..... 3
DK..... 8
NA..... 9

30

306A. Does your company try to identify and certify tax-credit-eligible employees that have already been hired?

Yes...(ASK 306B)..... 1
No...(GO TO 307)..... 2
DK...(ASK 306B)..... 8
NA...(ASK 306B)..... 9

31

306B. Does your company make an effort to select new employees that are tax-credit eligible?

Yes...(GO TO 308)..... 1
No...(ASK 307)..... 2
DK...(GO TO 308)..... 8
NA...(GO TO 308)..... 9

32

IF "NO" TO 306A AND 306B ASK Q. 307.
ALL OTHERS GO TO 308.

307. In other words, your company has never hired any tax credit eligible employees. Is that correct?

Never hired...(GO TO 333)...1
Have hired...(ASK 308)...2
DK...(GO TO 333)...8
NA...(GO TO 333)...9

33

34-38-61

308. What has your company done in the past 3 years to determine if any new employees were eligible for tax credits. (DO NOT READ LIST, WRITE VERBATIM, CODE IF CLEAR, PROBE: What other reasons? Can you be more specific?)

_____ 39-40

_____ 41-42

_____ 43-44

_____

	First Mention	Second Mention	Third Mention
Tried to get more information on tax credit programs (general).....	10	10	10
Called employment service for information.....	11	11	11
Called another government agency for information.....	12	12	12
Efforts made prior to hiring (general)..	20	20	20
Checked job application for eligibility.....	21	21	21
Made assessment of eligibility during the interview.....	22	22	22
Revised job application to obtain necessary information.....	23	23	23
Sent applicant to employment service before hiring.....	24	24	24
Asked applicants if they had characteristics that made them eligible.....	25	25	25
Job applicant told company he or she was eligible.....	26	26	26
Asked employment service to refer eligibles	27	27	27
Asked other agencies to refer eligibles.....	28	28	28
Other efforts prior to hiring _____	29	29	29
Efforts made after hiring (general).....	40	40	40
Company made assessment after hiring..	41	41	41
Company sent new employee to job service after hiring.....	42	42	42
Employment service came and checked employees.....	43	43	43
Company hired a firm to check employees.....	44	44	44
Other _____	96	96	96
Nothing.....	97	97	97
DK.....	98	98	98
NA.....	99	99	99

309. Recently the law was changed. Under current law, companies are able to obtain a tax credit for hiring eligible individuals only if the company applies for certification of the employee before that person starts work. In what month and year did you learn of this change in the law?

__ __ 1 9 __ __ 45-50
MONTH YEAR
Now/Didn't know...999997
DK..... 989998
NA..... 999999

309A. READ STATEMENT: This change in the rules became effective in September 1981. The following two sections ask separate questions about your experiences with the programs before and after September 1981.

310. Between January 1980 and September 1981, how many new employees did your company hire that were eligible for a Targeted Job Tax Credits, TJTC, or Work Incentive, WIN, tax credit?

One..... (ASK 311)... 0001 51-54
(GO TO 317) __ __ __ __
RECORD NUMBER
Some, DK#
(GO TO 317)..... 9996
None (GO TO 324). 9997
DK (GO TO 324).9998
NA (GO TO 324).9999

311. In which year did you hire this worker: in 1980 or during the first 9 months of 1981?

1980.....1 55
1981.....2
DK..... 8
NA..... 9

312. Did you apply for the tax credit by obtaining certification of the new employee's eligibility?

Yes..... (GO TO 314)... 1 56
No.....(ASK 313).... 2
DK.....(GO TO 314).. 8
NA.....(GO TO 314).. 9

313. Why didn't you apply for the tax credit? (DO NOT READ LIST, RECORD VERBATIM, CODE IF CLEAR, PROBE: What other reasons? Can you be more specific?)

_____ 57-58

_____ 59-60

_____ 61-62

_____

	First Mention	Second Mention	Third Mention
Administrative/Structural Reasons (General)	10	10	10
Deadline for applying past	11	11	11
Employee left before being certified	12	12	12
Employee did not stay with firm for required length of time to be certified	13	13	13
Lack of knowledge/Don't know how	14	14	14
Not eligible for other reasons	15	15	15
Other Administration _____	16	16	16
Benefits did not outweigh costs (General)	20	20	20
Tax benefit too small	21	21	21
Paperwork too great	22	22	22
Other_____	23	23	23
Worker ability (General)	30	30	30
Worker is so good tax credits not needed	31	31	31
Other_____	32	32	32
Don't need tax credit (General)	40	40	40
Not needed because company has no tax liability	41	41	41
Other_____	42	42	42
Don't want to get involved with government (General)	50	50	50
Might result in interference by government	51	51	51
Other_____	52	52	52
Don't believe it is right to take government/tax money	60	60	60
Other (General)_____	80	80	80
DK	98	98	98
NA	99	99	99

314. When you hired this eligible employee did you know or think he or she might be eligible for a tax credit program?

Yes (ASK 315)..... 1 63
No (GO TO 316)..... 2
DK (GO TO 316)..... 8
NA (GO TO 316)..... 9

315. How much did this possibility of eligibiltiy increase the the applicant's chance of being hired (READ LIST)..

A great amount..... 1 64
A moderate amount..... 2
Not very much, or..... 3
Not at all..... 4
DK..... 8
NA..... 9

316. How did you learn the worker was eligible? (DON'T READ LIST, RECORD VERBATIM, CODE IF CLEAR, PROBE: What other reasons?/ Can you be more specific?)

_____ 65-66

_____ 67-68

_____ 69-70

_____

	First Mention	Second Mention	Third Mention
Applicant told company	10	10	10
Referral agency told told company (general)	20	20	20
Employment service that referred worker	21	21	21
High school that referred worker	22	22	22
Welfare office	23	23	23
CETA agency that referred worker	24	24	24
Other referral _____ _____	25	25	25
Sent applicant to employment service to determine eligibility	30	30	30
A company we hired determined eligibility	40	40	40
Respondent or staff determined eligibility	50	50	50
Employment service came and checked workers	60	60	60
Other _____	80	80	80
DK	98	98	98
NA	99	99	99
	GO TO Q.327	GO TO Q.327	GO TO Q.327 (PAGE 46)

71-78 b1

79 = 1

80 = 3

C.14
1 = b1
New I.D.:2-5

317. How many of these eligible employees were hired in the first 9 months of 1981?

(ASK 318) ___,___ ___ ___ 6-9
RECORD NUMBER

Some, DK# (ASK 318). 9996
None (GO TO 324).... 9997
DK (ASK 318)..... 9998
NA (ASK 318)..... 9999
(Q.324 IS ON P.44)

318. How many of the tax credit eligible employees hired between January 1980 and September 1981 were not or will not be claimed for a tax credit?

(ASK 319) ___ ___ ___ ___ 10-13
RECORD NUMBER

Some, DK# (ASK 319). 9996
None (GO TO 320).... 9997
DK (GO TO 320)..... 9998
NA (GO TO 320)... 9999

319. Why didn't you apply for the tax credit for these eligible employees? (DO NOT READ LIST, RECORD VERBATIM; CODE IF CLEAR; PROBE: What other reasons?/Can you be more specific?)

_____ 14-15

_____ 16-17

_____ 18-19

_____

_____

	First Mention	Second Mention	Third Mention
Administrative/Structural Reasons (General)	10	10	10
Deadline for applying past	11	11	11
Employee left before being certified	12	12	12
Employee did not stay with firm for required length of time to be certified	13	13	13
Lack of knowledge/Don't know how	14	14	14
Not eligible for other reasons	15	15	15
Other Administration _____	16	16	16
Benefits did not outweigh costs (General)	20	20	20
Tax benefit too small	21	21	21
Paperwork too great	22	22	22
Other_____	23	23	23
Worker ability (General)	30	30	30
Worker is so good tax credits not needed	31	31	31
Other_____	32	32	32
Don't need tax credit (General)	40	40	40
Not needed because company has no tax liability	41	41	41
Other_____	42	42	42
Don't want to get involved with govern't (General)	50	50	50
Might result in interference by government	51	51	51
Other_____	52	52	52
Don't beleive it is right to take government/tax money	60	60	60
Other (General)_____	80	80	80
DK	98	98	98
NA	99	99	99

320. How many of these employees did you know or think might be eligible before you hired them?

(ASK 321) ___ ___ ___ ___ 20-23
RECORD NUMBER

Some, DK#
(ASK 321)..... 9995

All of them
(GO TO 322)..... 9996

None
(ASK 321)..... 9997

DK (GO TO 322).. 9998

NA (GO TO 322).. 9999

321. Of those you did not know were eligible when you hired them, how did you later learn they were eligible? (DO NOT READ LIST, RECORD VERBATIM, CODE IF CLEAR, PROBE: What other reasons? / Can you be more specific?)

_____ 24-25

_____ 26-27

_____ 28-29

_____

	First Mention	Second Mention	Third Mention
Applicant told company	10	10	10
Referral agency told company (general)	20	20	20
Employment service that referred worker	21	21	21
High school that referred worker	22	22	22
Welfare office	23	23	23
CETA agency that referred worker	24	24	24
Other referral _____ _____	25	25	25
Sent applicant to employment service to determine eligibility	30	30	30
A company we hired determined eligibility	40	40	40
Respondent or staff determined eligibility	50	50	50
Employment service came and checked workers	60	60	60
Other _____	70	70	70
DK	98	98	98
NA	99	99	99

IF NONE IN 320, GO TO 324.

322. Of those you knew or thought were eligible when you hired them, how did you learn of their eligiblity (DO NOT READ LIST. RECORD VERBATIM. CODE IF CLEAR. PROBE: What other reasons?/Can you be more specific?)

_____ *30-31*

_____ *32-33*

_____ *34-35*

_____

	First Mention	Second Mention	Third Mention
Applicant told company	10	10	10
Referral agency told company (general)	20	20	20
Employment service that referred worker	21	21	21
High school that referred worker	22	22	22
Welfare office	23	23	23
CETA agency that referred worker	24	24	24
Other referral _____ _____	25	25	25
Sent applicant to employment service To determine eligibility	30	30	30
A company we hired determined eligibility	40	40	40
Respondent or staff determined eligibility	50	50	50
Employment service came and checked workers	60	60	60
Other _____	80	80	80
DK	98	98	98
NA	99	99	99

323. How much did this possibility of eligibility increase the applicants' chance of being hired (READ LIST)...

A great amount..... 1
A moderate amount..... 2
Not very much, or..... 3
Not at all..... 4
DK..... 8
NA..... 9

36

324. Next I am going to ask you a series of questions about the period between October 1981 and today. During this period, how many of your new hires were <u>certified</u> as eligible for Targeted Job Tax Credit, TJTC, or Work Incentive, WIN, tax credit?

(ASK 325) ___ ___ ___
RECORD NUMBER
Some, DK#
(ASK 325)..... 996
None..(GO TO 326)..... 997
DK..(GO TO 326)..... 998
NA..(GO TO 326)..... 999

37-39

325. How did you learn that these new employees might be eligible for tax credits? (DO NOT READ LIST; RECORD VERBATIM. CODE IF CLEAR. PROBE: What other reasons?/ Can you be more specific?)

_____ 40-41

_____ 42-43

_____ 44-45

_____

	First Mention	Second Mention	Third Mention
Applicant told company	10	10	10
Referral agency told told company (general)	20	20	20
Employment service that referred worker	21	21	21
High school that referred worker	22	22	22
Welfare office	23	23	23
CETA agency that referred worker	24	24	24
Other referral _____ _____	25	25	25
Sent applicant to employment service to determine eligibility	30	30	30
A company we hired determined eligibility	40	40	40
Respondent or staff determined eligibility	50	50	50
Employment service came and checked workers	60	60	60
Other _____	80	80	80
DK	98	98	98
NA	99	99	99

326. How many requests for tax credit certifications do you have pending?

___ ___ ___ 46-48
RECORD NUMBER
Some, DK#..... 996
None..... 997
DK..... 998
NA..... 999

327. Since September 1981 has the requirement that an application for certification be made simultaneously with hiring the worker prevented you from obtaining certification of an otherwise eligible new hire?

Yes.... (ASK 328)..... 1 49
No..... (GO TO 332A)... 2
DK. (GO TO 332A).. 8
NA. GO TO 332A)... 9

328. For how many new hires has this happened?

___ ___ ___ 50-52
RECORD NUMBER
Some, DK#..... 996
DK..... 998
NA..... 999

329. How many of these did you know or suspect were eligible when you hired them?

___ ___ ___ 53-55
RECORD NUMBER
Some, DK#..... 996
DK..... 998
NA..... 999

NO QUESTIONS 330 - 332

332A. The next series of questions are for the entire time period from January 1980 through today.

333. Have you been asked by the Employment Service or any other agencies to accept referrals of job applicants who are eligible for Targeted Job tax credits, or Work Incentive tax credits?

(THIS IS NOT CETA ON THE JOB TRAINING.)

56

Yes_(ASK 334)..... 1
No_(GO TO 335)..... 2
DK_(GO TO 335)..... 8
NA_(GO TO 335)..... 9

334. Did you agree to accept referral of tax credit eligibles?

57

Yes_(ASK 335)..... 1
No_(GO TO 338)..... 2
DK_(GO TO 338)..... 8
NA_GO TO 338)..... 9

335. Have you asked the employment service or any other agencies to refer people to your company who are eligible for a tax credit?

58

Yes_(ASK 335A)..... 1
No_(GO TO 338)..... 2
DK_(GO TO 338)..... 8
NA_(GO TO 338)..... 9

335A. Since January of 1980 how many of these tax credit eligible referrals were hired?

59-61

— — —
RECORD NUMBER
Some, DK#.....996
None.....997
DK.....998
NA.....999

335B. How many tax credit eligibles you were told had been referred never showed up for an interview?

62-64

— — —
RECORD NUMBER
Some, DK#.....996
None.....997
DK.....998
NA.....999

336. Since the beginning of 1980 how many tax-credit-eligible workers were referred to you as eligible for TJTC OR WIN, were interviewed but not hired? (IF DK PROBE: Just your best guess.)

(ASK 337) ___ ___ ___ 65-67
RECORD NUMBER

Some, DK# (ASK 337)... 996
None (GO TO 338)..... 997
DK (GO TO 338)..... 998
NA (GO TO 338)..... 999

337. What were the primary reasons why you did not hire these applicants? (DO NOT READ LIST)...RECORD VERBATIM, PROBE: What other reasons? / Can you be more specific?

_____

_____

_____

	First Mention	Second Mention	Third Mention
Poor qualifications (general).....	01	01	01
Person had wrong skills.....	02	02	02
Insufficient skills.....	03	03	03
Reading and writing poor.....	04	04	04
Lack of job knowledge.....	05	05	05
Lack of experience.....	06	06	06
Overqualified.....	07	07	07
Poor school record.....	08	08	08
Insufficient schooling or training....	09	09	09
Got poor recommendation from previous employer.....	10	10	10
Poor previous work record.....	11	11	11
Application incomplete.....	12	12	12
Misstatement on application.....	13	13	13
Poor interview.....	14	14	14
Applicant didn't show interest in job.	15	15	15
Language problem.....	16	16	16
Person doesn't seem to fit into company.....	17	17	17
Handicapped.....	18	18	18
No openings.....	19	19	19
Employment service was slow in sending people.....	20	20	20
Other_____	96	96	96
DK.....	98	98	98
NA.....	99	99	99

338. In the future, do you plan to ask for referrals of tax-credit-eligible employees when you need to hire unskilled workers?

74

Yes (GO TO 340)..... 1
No (ASK 339)..... 2
DK (ASK 339)..... 8
NA (GO TO 340)..... 9

76-78 = 61
79 = 1
" 4

C.16

1 = b1

339. Can you tell us why you do not plan to ask for referrals? (DON'T READ LIST. RECORD VERBATIM. CODE IF CLEAR. PROBE: What other reasons?/ Can you be more specific?) New I.D.: 2-5

_____ 6-7

_____ 8-9

_____ 10-11

_____

	First Mention	Second Mention	Third Mention
a. Didn't think of it	01	01	01
b. Don't expect to be hiring	02	02	02
c. Will not be needing types of workers who might be eligible	03	03	03
d. Employment service or other agency is too slow	04	04	04
e. Don't use the employment service	05	05	05
f. Dissatisfied with employment service referrals	06	06	06
g. Too much paper work	07	07	07
h. Eligible workers not skilled enough	08	08	08
i. Eligible workers not reliable enough	09	09	09
j. Applicants should be judged by qualifications not by whether tax credit available	10	10	10
k. Would not benefit because we have no tax liability	11	11	11
l. We are not eligible	12	12	12
m. Tax benefit not big enough	13	13	13
n. Might result in govern't interference. Specify type _____	14	14	14
o. Other (SPECIFY) _____	15	15	15
DK	98	98	98
NA	99	99	99

340. Have you heard of a government On-the-Job Training Program or OJT whereby the government pays a share of a private employer's cost of hiring and training certain eligible workers? In your area this program is administered by the employment service, CETA, and (READ FROM CARD A.)

12

Yes....(ASK 341)..... 1
No..... (GO TO 359)..... 2
DK (ASK 341)..... 8
NA (ASK 341)..... 9

(Q. 359 IS ON PAGE 56)

341. Have you or any of your staff spoken to a representative of government or a local business organization about the OJT program?

13

Yes (ASK 342)..... 1
No (GO TO 343)..... 2
DK (GO TO 343)..... 8
NA (GO TO 343)..... 9

342. Was the initial conversation about this program initiated by (READ LIST)...

14

You..... 1
Your staff or company.. 2
The Government..... 3
A trade association,or.. 4
A local business organization..... 5
Or something else..... 6
DK..... 8
NA..... 9

343. Since January 1980 how many potential OJT employees did you hire for which you were promised reimbursement by this program?

(ASK 344) ___ ___ 15-16
RECORD NUMBER
Some, DK# (ASK 344) 96
None (GO TO 350) 97
DK (ASK 344) 98
NA (ASK 344) 99

17-b1

344. How many such employees did you hire since January 1981?

___ ___ 18-19
RECORD NUMBER
Some, DK# 96
None 97
DK 98
NA 99

345. Since January 1980 have you ever hired a worker referred by the OJT program for which you were supposed to receive reimbursement but did not?

Yes (ASK 346) 1 20
No (GO TO 348) 2
DK (GO TO 348) 8
NA (GO TO 348) 9

21-b1

346. How many of the OJT contract workers hired did you not receive reimbursement for?

___ ___ 22-23
RECORD NUMBER
Some, DK# 96
None 97
DK 98
NA 99

347. Why was reimbursement not received? (DO NOT READ LIST. RECORD VERBATIM. CODE IF CLEAR. PROBE: What other reasons?)

_____ 24-25

_____ 26-27

_____ 28-29

	First Mention	Second Mention	Third Mention
a. Employee did not stay with firm long enough	01	01	01
b. Benefit too small	02	02	02
c. Paperwork too great	03	03	03
d. Don't believe it's right to take government money	04	04	04
e. I have as little to do with government as possible	05	05	05
f. Might result in interference by government: SPECIFY type _____	06	06	06
g. Worker is so good I don't need reimbursement to justify hiring	07	07	07
h. The agency reneged on agreement	08	08	08
i. Other (SPECIFY)_____	09	09	09
No Response/DK	98	98	98
NA	99	99	99

348. Since January 1980, have any of the employees for whom you have obtained some OJT reimbursement been people you originally recruited and then sent to the appropriate government agency to obtain certification?

30

Yes (ASK 349)..... 1
No (GO TO 350)..... 2
DK (GO TO 350)..... 8
NA (GO TO 350)..... 9

349. Since January 1980 how many workers did you recruit and obtain partial reimbursement for in this way?

31-33

— — —
RECORD NUMBER
Some, DK#..... 996
None..... 997
DK..... 998
NA..... 999

350. Have you been asked by the Employment Service, CETA or other agency to accept referrals of job applicants for which you would receive OJT reimbursement?

34

Yes (ASK 351)..... 1
No (GO TO 352)..... 2
DK (GO TO 352)..... 8
NA (GO TO 352)..... 9

351. Did you agree to accept applicants?

35

Yes (GO TO 353)..... 1
No (GO TO 357)..... 2
DK (GO TO 353)..... 8
NA (GO TO 353)..... 9

352. Have you asked any of these agencies to refer to your c[illegible]ny people for whom OJT reimbursement would be available?

Yes (ASK 353)..... 1 *36*
No (GO TO 357)..... 2
DK (ASK 353)..... 8
NA (ASK 353)..... 9

353. Have you knowledge of any people being referred to you by this program since January 1980 who did not come in for an interview?

Yes.... (ASK 354)..... 1 *37*
No.... (GO TO 355)..... 2
DK (GO TO 355)..... 8
NA (GO TO 355)..... 9

354. How many? (IF DK PROBE: Just your best guess.)

— — — *38-40*
RECORD NUMBER
Some. DK#.....996
None.....997
DK.....998
NA.....999

355. Since January 1980, how many job applicants who were referred by this program came to your establishment to apply for the job but were <u>not</u> hired?

— — — *41-43*
RECORD NUMBER
Some, DK#(ASK 356) 996
None (GO TO 357).. 997
DK (GO TO 357)... 998
NA (GO TO 357)... 999

348. Since January 1980, have any of the employees for whom you have obtained some OJT reimbursement been people you originally recruited and then sent to the appropriate government agency to obtain certification?

30

Yes (ASK 349)..... 1
No (GO TO 350)..... 2
DK (GO TO 350)..... 8
NA (GO TO 350)..... 9

349. Since January 1980 how many workers did you recruit and obtain partial reimbursement for in this way?

31-33

— — —
RECORD NUMBER
Some, DK#..... 996
None..... 997
DK..... 998
NA..... 999

350. Have you been asked by the Employment Service, CETA or other agency to accept referrals of job applicants for which you would receive OJT reimbursement?

34

Yes (ASK 351)..... 1
No (GO TO 352)..... 2
DK (GO TO 352)..... 8
NA (GO TO 352)..... 9

351. Did you agree to accept applicants?

35

Yes (GO TO 353)..... 1
No (GO TO 357)..... 2
DK (GO TO 353)..... 8
NA (GO TO 353)..... 9

352. Have you asked any of these agencies to refer to your company people for whom OJT reimbursement [illegible] be available?

Yes (ASK 353)..... 1 *36*
No (GO TO 357)..... 2
DK (ASK 353)..... 8
NA (ASK 353)..... 9

353. Have you knowledge of any people being referred to you by this program since January 1980 who did not come in for an interview?

Yes.... (ASK 354)..... 1 *37*
No.... (GO TO 355)..... 2
DK (GO TO 355)..... 8
NA (GO TO 355)..... 9

354. How many? (IF DK PROBE: Just your best guess.)

— — — *38-40*
RECORD NUMBER
Some. DK#..... 996
None..... 997
DK..... 998
NA..... 999

355. Since January 1980, how many job applicants who were referred by this program came to your establishment to apply for the job but were <u>not</u> hired?

— — — *41-43*
RECORD NUMBER
Some, DK#(ASK 356) 996
None (GO TO 357).. 997
DK (GO TO 357)... 998
NA (GO TO 357)... 999

356. What was the primary reason you did not hire these applicants? (DO NOT READ LIST, RECORD VERBATIM, CODE IF CLEAR; PROBE: What other reasons? / Can you be more specific?)

_____ 44-45

_____ 46-47

_____ 48-49

_____

	First Mention	Second Mention	Third Mention
Poor qualifications (general).....	01	01	01
Person had wrong skills.....	02	02	02
Insufficient skills.....	03	03	03
Reading and writing poor.....	04	04	04
Lack of job knowledge.....	05	05	05
Lack of experience.....	06	06	06
Overqualified.....	07	07	07
Poor school record.....	08	08	08
Insufficient schooling or training....	09	09	09
Got poor recommendation from previous employer.....	10	10	10
Poor previous work record.....	11	11	11
Application incomplete.....	12	12	12
Misstatement on application.....	13	13	13
Poor interview.....	14	14	14
Applicant didn't show interest in job.	15	15	15
Language problem.....	16	16	16
Person doesn't seem to fit into company.....	17	17	17
Handicapped.....	18	18	18
No openings.....	19	19	19
Employment service was slow in sending people.....	20	20	20
Other_____	96	96	96
DK.....	98	98	98
NA.....	99	99	99

357. Are you planning to ask for referrals from this program in the future when you need to hire unskilled workers?

Yes...(GO TO 359)..... 1 50
No... (ASK 358)..... 2
DK (ASK 358)..... 8
NA (GO TO 359)..... 9

358. Can you tell me why you do not plan to ask for any referrals? (DO NOT READ LIST, RECORD VERBATIM, CODE IF CLEAR, PROBE: What other reasons?/Can you be more specific?)

_____ 51-52

_____ 53-54

_____ 55-56

_____

	First Mention	Second Mention	Third Mention
a. Didn't think of it	01	01	01
b. Don't expect to be hiring	02	02	02
c. Will not be needing types of workers who might be eligible	03	03	03
d. Employment service or other agency is too slow	04	04	04
e. Don't use the employment service	05	05	05
f. Dissatisfied with employment service referrals	06	06	06
g. Too much paper work	07	07	07
h. Eligible workers not skilled enough	08	08	08
i. Eligible workers not reliable enough	09	09	09
j. Applicants should be judged by qualifications not by whether tax credit available	10	10	10
k. Would not benefit because we have not tax liability	11	11	11
l. Were not eligible	12	12	12
m. Tax benefit not big enough	13	13	13
n. Might result in government interference. Specify type _____	14	14	14
o. Other (SPECIFY) _____	15	15	15
DK	98	98	98
NA	99	99	99

359. From a profit point of view, was 1981 a very good year, a pretty good year, not a good year, or a year of losses?

very good 1 57
pretty good 2
not good. 3
losses. 4
DK 8
NA 9

APPENDIX C

THE POISSON MODEL OF TJTC PARTICIPATION

APPENDIX C

THE POISSON MODEL OF TJTC PARTICIPATION

In the sample of more than 3,000 firms, about 90 percent of them did not hire any TJTC certified workers, 5 percent hired 1 to 5, and the remaining 5 percent hired more than 6. Considering the highly skewed and discrete nature of the distribution, we employed a Poisson model specification as proposed by Hausman, Hall, and Griliches (1984).

The model is specified in terms of the firm's probability to hire zero, one, two, . . . workers. The Poisson distribution gives the probability of nonnegative integer outcomes. The probability function is given by the following formula:

$$Pr(N_i) = \exp(-\alpha_i)\,\alpha_i^{N_i} / N_i!,\ \alpha_i>0,\ N_i = 0,1,2\ldots$$

For instance the probabilities of hiring zero, one, and two TJTC workers are given by:

$$Pr(0) = \exp(-\alpha_i)$$
$$Pr(1) = \exp(-\alpha_i)\,\alpha_i$$
$$Pr(2) = \exp(-\alpha_i)\,\alpha_i^2/2$$

The parameter α_i is assumed to be specific to the 'i'th firm and is determined by the firm characteristics. Specifically it is assumed that α_i is determined by the following formula:

$$\log \alpha_i = X_i\beta$$

X_i is a vector of the variables that represent the 'i'th firm's characteristics. Estimates of β are obtained by maximizing the log likelihood function which is written as,

$$L(\beta) = \sum_{i=1}^{N} (-\log N_i! - \exp(X_i\beta) + N_i X_i\beta).$$

The first derivative of the log likelihood is given by

$$\frac{\partial L}{\partial \beta} = \sum_{i=1}^{N} (-X_i \exp(X_i\beta) + N_i X_i),$$

and the Hessian is

$$\partial^2 L/\partial\beta\partial\beta' = -\sum_{i=1}^{N} X_i X_i' \exp(X_i\beta).$$

The log likelihood is globally concave in ß and so standard nonlinear maximization routines yield the MLE of β. Under the Poisson specification, the expected value of the variance are given by α_i. Therefore, a unit increase in the explanatory variable will influence both the expected values and the variance of the outcomes. The partial derivative of α_i with respect to the 'j'th explanatory variable, x_{ij}, is

$$\partial\alpha i/\partial x_{ij} = E(N_i)/\delta x_{ij} = \beta_j \exp(X_i\beta) = \ _j E(N_i)$$

So β_j represents relative increase in the mean and the variance of the outcome in response to the unit change in the right hand side variable x_{ij}.

Another measure of the impact of the change in firm characteristics is the change in the probability of participation. In particular, since 90 percent of the firms do not hire any TJTC workers, it is useful to obtain the change in the probability of hiring TJTC eligibles. The change in probability is obtained by differentiating the probability of not hiring any TJTC worker

(Pr(0)) by X and then taking its negative value. The formula is given by the following:

$$\frac{dPr\ (Participation)}{dx_j} = Pr(0)\ \alpha_i\beta_j = \Delta P_i\beta_j$$

where $\Delta P_i = Pr(0)\alpha_i = \alpha_i/\exp(\alpha_i)$

Since ΔP_i is a function of α_i only, for each value of the probability of no participation, the corresponding value of ΔP_i can be obtained. Exhibit A-1 shows the values of ΔP_i corresponding to various levels of Pr(0):

EXHIBIT C-1

Employment and Training Administartion

CHANGE IN THE PROBABILITY OF PARTICIPATION

P_r(no participation)	P_i
0.95	0.049
0.90	0.095
0.80	0.179
0.70	0.250
0.60	0.306
0.50	0.347

The marginal effect of the 'j'th characteristic on the probability of participation is obtained by multiplying ΔP_i by β_j.

APPENDIX D

CASE STUDY INTERVIEW FORM

CORPORATE - TJTC INTERVIEW

Introduction

Hello, my name is _____. I'm with the Ohio State University. We are conducting a research study on employer usage of the Targeted Jobs Tax Credit (TJTC). I would like to ask you a few questions about that subject. Specifically, I have some questions about your corporation's recruitment and hiring experience with TJTC workers, how your corporation came to be familiar with and to use the tax credits, your opinions about the program, and finally some general statistics about corporate employment and revenue.

Let me remind you that your voluntary participation in this study is most appreciated and all information you provide will be kept confidential. The responses you give will be used to prepare statistical totals and will not be identified with you or your organization.

I. RECRUITMENT AND HIRING PRACTICES

I-1. What are the procedures which your corporation follows to secure tax credits for new hires?

[INTERVIEWER: IF RESPONDENT ISN'T KNOWLEDGEABLE ABOUT TJTC, ASK FOR NAME AND NUMBER OF INDIVIDUAL WHO MIGHT BE KNOWLEDGEABLE. SKIP TO EMPLOYMENT AND REVENUE QUESTIONS. IF RESPONDENT DOES PROVIDE INFORMATION, BE SURE TO DISTINGUISH BETWEEN ACTIVITIES FOR CORPORATION AS A WHOLE, OR AT CORPORATE HEADQUARTERS, REGIONAL, DISTRICT, OR LOCAL LEVEL AND TIMING BEFORE OR AFTER THE HIRING DECISION IS MADE. IF RESPONDENT INDICATES THAT THE CORPORATION DELIBERATELY AVOIDS TJTC, THEN SKIP TO SECTION III.]

[INTERVIEWER: IF RESPONDENT IS HAVING DIFFICULTY, START BY ASKING, "WHEN PERSON X WALKS THROUGH YOUR DOOR TO APPLY FOR A JOB, TRACE FOR ME THE PROCESS OF HOW THE CORPORATION DETERMINES WHETHER THEY CAN GET A TAX CREDIT."]

I-2. How have your recruitment or hiring procedures been changed by TJTC?

[INTERVIEWER: PROBE ABOUT TJTC REFERRALS, TYPES OF POSITIONS, HIRING STANDARDS, APPLICATION MODIFICATION.]

I-3. To what extent does your company use the U.S. employment service? Did TJTC change this? If so, how?

[INTERVIEWER: PROBE ABOUT WHETHER THIS IS THEIR FIRST TIME USING THE ES; HAS ATTITUDE CHANGED; JOB ORDERS; EXCLUSIVE HIRING ARRANGEMENTS?]

I-4. [IF APPLICABLE] Does your company have an arrangement with another company, which may be called a Management Assistance or Management Consultant Company, to handle TJ;C paperwork? If so, please describe the nature of the arrangement. Why did you decide to use this service? if not, have you ever been contacted to do this? Why didn't you?

[INTERVIEWER: PROBE FOR LEGAL CONCERNS, WHO MADE DECISIONS; WHAT SERVICES ARE PROVIDED; FINANCIAL TERMS OF ARRANGEMENT; ETC.]

I-5. Can you remember any instances when you have not claimed on your tax statement any certifications that may have been issued to you? If so, what was the reason for this?

II. EXPERIENCE WITH TJTC HIRES

II-1. On average, have individuals hired with a tax credit been good employees? Have there been any changes in this over time?

[INTERVIEWER: PROBE FOR PUNCTUALITY, ABSENTEEISM, ATTITUDE.]

II-2. How does the typical, or average, TJTC worker compare to other workers in the same or similar jobs in terms of productivity?

_____ More Productive ----------> Could you give me an
_____ Less Productive ----------> estimate of how much
_____ About Same more (less) productive?

_____ 10%	_____ 60%
_____ 20%	_____ 70%
_____ 30%	_____ 80%
_____ 40%	_____ 90%
_____ 50%	_____ 100%

II-3(a). You said that TJTC workers typically are in _____ (occupation) positions. What is turnover like in those positions in your corporation for non-TJTC workers? If 100 workers started today, in two years--

(a) Non-TJTC	(b) TJTC	
_____	_____	(i) What percent would still be with the firm?
_____	_____	(ii) What percent would have quit voluntarily?
_____	_____	(iii) What percent would have been terminated or laid off?
100%	100%	

(b). How about for TJTC workers?

II-4. Has your corporation adjusted procedures or rules for TJTC workers, e.g. training procedures, rules of conduct, evaluation procedures? If so, how?

II-5. Was there ever an instance in your recollection when a tax-credit certified eligible individual was given hiring preference because of the tax credit over another individual who was approximately as well qualified or more highly qualified?

Yes 1
No (Skip to II-6). 2
Don't know (Skip to II-6). 8
No answer (Skip to II-6). 9

For about what percentage of your tax credit hires did this happen?

(IF UNCERTAIN, TELL RESPONDENT TO APPROXIMATE)

0-100% . . . . . ___%
Don't know 998
No answer 999

II-6. Can you think of an instance when your firm decided to make an opening in the firm to take advantage of a tax credit?

Yes 1
No (Skip to II-7). 2
Don't know (Skip to II-7). 8
No answer (Skip to II-7). 9

For about what percentage of your tax credit hires did this happen?

(IF RESPONDENT IS UNCERTAIN, TELL HIM/HER TO APPROXIMATE)

0-100% . . . . . ___%
Don't know 998
No answer 999

II-7 [IF APPLICABLE] We understand you have both company-owned stores and franchises. Which category of store has been more responsive to TJTC utilization? For company-owned stores, how is information about TJTC monitored? Are labor costs calculated with TJTC netted out?

[INTERVIEWER PROBE: SITE SELECTION? NUMBER OF STORES? NUMBER OF EMPLOYEES PER LOCATION? NUMBER OF EMPLOYEE HOURS WORKED? HOW DOES FRANCHISE AGREEMENT WORK WITH REGARD TO TJTC?]

III. CORPORATE POLICY

III-1. Tell me any background history, from your perspective of how your company heard of and began to use [or avoid use of] TJTC?

[INTERVIEWER: PROBE FOR WHO, WHEN, DECISION PROCESS.]

III-2. [IF NOT A TJTC USER, SKIP TO IV.] Does the corporation provide training of any sort for managers about using TJTC? If yes, please describe. Are there incentives in place to encourage use?

[INTERVIEWER: PROBE FOR EXACT FORMULAS]

III-3. Has the corporate attitude toward TJTC changed over time? How?

[INTERVIEWER: PROBE ABOUT ELIMINATION OF RETROACTIVE CERTIFICATION.]

IV. EMPLOYMENT, CERTIFICATIONS, AND REVENUE

IV-1. What was corporate employment at the end of each of the following calendar years?

1979 _____
1980 _____
1981 _____
1982 _____
1983 _____
1984 _____
Current _____

[INTERVIEWER: NOTE ANY SPECIAL CIRCUMSTANCES REGARDING EMPLOYMENT FIGURE, I.E. SUBSIDIARIES, MERGERS, ESTIMATES, CORPORATE OFFICE ONLY, ETC.]

IV-2. How many TJTC certifications did the corporation obtain in those calendar years?

1979 _____
1980 _____
1981 _____
1982 _____
1983 _____
1984 _____
Year to date _____

IV-3. What was corporate total revenue in those calendar years?

[INTERVIEWER: NOTE SPECIAL CIRCUMSTANCES ABOUT REVENUE DATA]

1979 $_____
1980 _____
1981 _____
1982 _____
1983 _____
1984 _____

V. OPINIONS

V-1. What is your opinion of TJTC? Does it need to be changed? What changes should be made? Do you have any other comments that would be of interest to the Department of Labor?

[INTERVIEWER: PROBE ABOUT TARGET GROUP CHANGES]

V-2. Who else in your firm is knowledgeable about TJTC?

_____ Phone # _____

_____ Phone # _____

Do you have corporate materials pertaining to TJTC that you would be able to send to us so that we have a better understanding of how your corporation deals with the program?

Thank you for your time and patience.

APPENDIX E

TJTC QUESTIONNAIRE ADMINISTERED BY PERSONNEL INTERVIEWER AND A TJTC/W-4 FORM

TARGETED JOBS TAX CREDIT
TJTC QUESTIONNAIRE

Result of Eligibility Review:

Certification:
_____ Requested by Letter
_____ Rejected--
Reason _____
_____
_____ Already Vouchered

ity _____
oyee Name _____
Social Security # _____
Date Hired _____
Date to Start Work _____

THE EMPLOYEE ABOVE:

1. Is a re-hire. If yes, mark box at right. Omit remainder of questionnaire. ☐ Re-hire Not eligible

2. Is between 18 through 24 years old _____ Yes _____ No

3. Is a summer youth (16 or 17 years old) _____ Yes _____ No

4. Is a Vietnam Era Veteran (1964-1975) _____ Yes _____ No

5. Has been convicted of a felony _____ Yes _____ No

6. Is a high school Co-operative Education student _____ Yes _____ No

7. Is receiving Aid to Families with Dependent Children (ADC) or General Assistance. _____ Yes _____ No

8. Is registered in the Work Incentive Program (WIN) _____ Yes _____ No

9. Has received handicap services from Vocational Rehabilitation or the Veteran's Administration _____ Yes _____ No

10. Is receiving Supplemental Security Income Benefits (SSI) as a blind, aged or disabled person _____ Yes _____ No

If any questions above answered Yes, complete the following:

11. How many family members live in the same household? _____

12. What was the family's earned income for the last six month period? $_____

13. Does the amount fall within low-income levels? _____ Yes _____ No

After completing questionnaire, mark the result of eligibility review in box above and take appropriate action.

_____ Interviewer

_____ Date

Distribution:
Original-Facility TJTC File
Copies-(1) Central Office - Attn: TJTC
(2) Job Service with Request for Certification (P-25)

NOTE: The information on this form is used only to determine the employer's eligibility to claim the Targeted Jobs Tax Credit.

P-ERIC ev. 4-83)

EXHIBIT A

TARGETED JOBS TAX CREDIT (TJTC)/W-4 FORM

Voluntary and Confidential Questionnaire

Corporation is making an effort to cooperate with the Targeted Jobs Tax Credit (TJTC) program sponsored by the Federal government.
The Company supports the program because it helps provide opportunities for individuals in various "targeted" groups who might otherwise have difficulty in gaining employment.
Because of this, we ask you to complete the following questionnaire along with your W-4 Form.
Completion of the questionnaire is entirely voluntary. All information will be kept in strict confidence and used solely for the purpose of participation in the TJTC program.
Thank you for your cooperation.

INSTRUCTIONS If you can answer "yes" to any of the following questions you may qualify under the Targeted Jobs Tax Credit program. Please return the questionnaire, along with your W-4 Form to the Restaurant Manager or other designated person.

YES	NO	
☐	☐	Are you age 16 thru 19 and participating in a cooperative or vocational education program in high school and the total income of people living in your household in the past 6 months was under $10,000?
☐	☐	Are you receiving vocational rehabilitation from the State Division of Vocational Rehabilitation or a program carried out under Chapter 31 of Title 38, United States Code?
☐	☐	Are you 18 thru 24 and the total income of people living in your household in the past 6 months was under $10,000?
☐	☐	Are you receiving Supplemental Security Income (SSI) from Social Security Administration?
☐	☐	Are you receiving money payment under a general assistance program (Welfare)?
☐	☐	Have you been released from custody following a felony conviction during the past 5 years, and the total income of people living in your household during the past 6 months was under $10,000?
☐	☐	Are you a Vietnam Veteran and served active duty for 180 or more days between 8/6/64 and 5/7/75 and the total income of people living in your household during the past 6 months was under $10,000?
☐	☐	Are you receiving Aid to Dependent Children?
☐	☐	Are you 16 to 17 years old and applying for employment between 4/30 and 9/15 of the same year and the total income of people living in your household in the past 6 months was under $10,000?
☐	☐	I have read all the questions above and feel none are applicable

NAME (PLEASE PRINT)			
ADDRESS	CITY	STATE	ZIP CODE
TELEPHONE	SIGNATURE		

Yes ☐ No ☐ I have previously worked for Corporation

Form **W-4** (Rev. January 1982)

Department of the Treasury—Internal Revenue Service

Employee's Withholding Allowance Certificate

OMB No. 1545-0010
Expires 1-30-83

1 Type or print your full name

2 Your social security number

Home address (number and street or rural route)

City or town, State, and ZIP code

3 Marital Status: ☐ Single ☐ Married ☐ Married, but withhold at higher Single rate
Note: If married, but legally separated, or spouse is a nonresident alien, check the Single box

4 Total number of allowances you are claiming (from line F of the worksheet on page 2) $

5 Additional amount, if any, you want deducted from each pay

6 I claim exemption from withholding because (see instructions and check boxes below that apply):
a ☐ Last year I did not owe any Federal income tax and had a right to a full refund of ALL income tax withheld, AND
b ☐ This year I do not expect to owe any Federal income tax and expect to have a right to a full refund of ALL income tax withheld. If both a and b apply, enter "EXEMPT" here ▶
c If you entered "EXEMPT" on line 6b, are you a full-time student? Yes ☐ No ☐

Under the penalties of perjury, I certify that I am entitled to the number of withholding allowances claimed on this certificate or I am claiming exemption from withholding that I am entitled to claim the exempt status.

Employee's signature ▶ Date ▶ 19

7 Employer's name and address (including ZIP code) (FOR EMPLOYER'S USE ONLY) 8 Office code 9 Employer identification number