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***Demand for Government-Provided Job-Training Programs:
Evidence from the Illinois Policy Survey Data****

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ABSTRACT

This paper examines the determinants of the demand for public job-training programs in Illinois. A first objective is to determine the personal characteristics that influence the support for a spending increase for publicly provided job-training programs for the unemployed across various income groups in Illinois. We test for a U-shaped relationship between income and the demand for publicly provided job training. A second objective is to examine the role of local economic conditions in influencing the demand for job-training programs in Illinois. We use data from the 1995 Illinois Policy Survey supplemented with regional-level data (including the unemployment rate, manufacturing employment, population density, and poverty rate). Our empirical results do not support the existence of a U-shaped relationship between income and the demand for job training. However, we show that regional economic conditions do influence the demand for job-training programs in Illinois.

KEY WORDS Demand for job training; U-shaped demand curve; Regional fixed effects

Government job-training programs benefit people in all areas of society. Whether people are working in lower-end jobs or just trying to feed their families, learning how to do a job well is the key to finding and keeping good employment. Government job-training programs are aimed at helping people to have the confidence and skills to find and keep good employment. Happily employed people create a smoothly functioning economy and a strong country, which is, after all, the goal of any good government.

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Publicly provided job-training programs are government spending programs designed mainly to help dislocated workers and the disadvantaged. As part of the 1996 welfare reform, the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) was introduced to promote individual responsibility by getting welfare recipients off of the welfare rolls within two years (Blank 1997). Job training might help former welfare recipients move from welfare to work and gain self-sufficiency (Gueron 1996). The Workforce Investment Act (WIA), enacted in 1998, also rests on the assumption that job training will reduce poverty.

Job training is also important for dislocated workers. Ongoing structural changes in the economy are causing a shift in the labor force from highly paid low-skilled manufacturing jobs into service industry jobs (insurance, real estate, fast food, etc.). Although unskilled workers typically earn low wages in the service sector, individuals with appropriate skills can aspire to better-paying positions.

Furthermore, within the manufacturing sector, there is evidence of increased demand for skilled workers as well. Technological change (such as increased reliance on computers) has caused firms to start using more nonproduction workers rather than production workers (Berman, Bound, and Griliches 1994). To the extent that nonproduction jobs (such as personnel, sales, and administration) require more skills than production jobs, displaced unskilled workers may find job training useful in moving to nonproduction jobs within the manufacturing sector.

In response to welfare-reform initiatives and structural changes in the economy, state governments are choosing to devote more resources to job training. The Illinois Department of Commerce and Economic Opportunity, through the Job Training and Economic Development (JTED) Grant program, assists low-wage, low-skilled workers to advance their careers and helps unemployed, disadvantaged people learn skills necessary to secure employment. This paper examines the determinants of public support for publicly provided job-training programs in Illinois. Survey data has been used in previous research to examine the willingness to pay for government spending on education, welfare, and the like. Personal income was rarely shown to be a significant predictor of willingness to pay for government programs (Citrin 1979; Fisher 1985); however, some researchers have uncovered a significant, non-monotonic relationship between income and willingness to pay for education and welfare programs (Husted 1989, 1990; Temple and Porter-Hudak 1995). In light of these findings, our first objective is to investigate the role of income in public support for state job-training programs. Aside from income, we also consider the role of demographic factors and local economic conditions in the demand for state job-training programs. At the same time, we control for the effects of unobserved regional and county characteristics in the estimation by including regional and county fixed effects.

LITERATURE REVIEW

This paper seeks to contribute to the public finance literature focusing on the determinants of demand for state and local government expenditures. Pioneering work by Bergstrom and Goodman (1973) examined various types of municipal spending including police expenditures, parks and recreation expenditures, and total municipal expenditures. Using aggregate data, Gramlich and Galper (1973) and Inman (1978) mainly focus on expenditures for education and other services such as public safety, social services, urban support, and general government. These researchers find that income is a significant (and usually positive) predictor of demand for government spending.

Other researchers use micro-based survey data (Citrin 1979; Fisher 1985) and show that income is insignificant in determining the demand for government spending, in contrast to the conclusions of studies based on aggregate data. Using public opinion surveys, Fisher (1985) found no evidence of a significant relationship between economic factors (such as income) and willingness to pay for government services. Citrin (1979) found that income has no significant predictive power in explaining the demand for police, schools, and health but has statistically significant predictive power in the case of the demand for welfare programs.

Some researchers point out that the lack of significance of income in micro-based studies may be due to the fact that demand for government programs is a nonlinear function of income. Following Bergstrom and Goodman (1973), many researchers have suggested that the median voter has the median income. This rationale is based on the assumption that demand for government expenditures is monotonic in income. If, in fact, demand for government expenditures is non-monotonic in income, the models that rely on the median voter-median income premise become invalid. In an effort to shed light on this issue, several researchers estimate demand equations that are quadratic in income.

Looking at the spending behavior of Michigan school districts for 1970 to 1971, Brown and Saks (1983) find a U-shaped relationship between school spending and income. Beck (1984) also shows that the demand for municipal services is non-monotonic; he concludes that when there is a systematic relationship between the tax price and income, the price effect in combination with the income effect may make the relationship between the demand for municipal services and income U-shaped.

Subsequent work by Husted (1989, 1990) and Temple and Porter-Hudak (1995) supports the conclusion of Brown and Saks (1983) and Beck (1984) that the demand for government services may not be monotonic in income. Husted (1989, 1990) finds the relationship is U-shaped (non-monotonic) for public aid. Husted argues that this U-shaped relationship is based on two factors: a social insurance demand for welfare benefits that falls as income rises and a demand for income distribution as a public good that increases with a rise in income. Temple and Porter-Hudak (1995) also find the relationship between income and the willingness to pay additional taxes for state expenditures on education to be non-monotonic (inverted U-shaped). They also find a U-shaped relationship between income and the demand for public aid. As a result of these findings, we clearly cannot simply assume that the demand for government programs is a monotonic function of income.

The literature on the demand for job training is scant. Michael Beenstock (1997) found that the demand for job training by the unemployed in Israel is positively related to replacement ratio (implying an inverse relationship with income). The author also finds an inverted U-shaped relationship between age and the demand for training (peaking at 33 years). In another study of the demand for publicly provided job training, Allen, McCormick, and O'Brien (1991) find an inverted U-shaped relationship between age and the demand for training or retraining among the British subsample population (in this case, age 27 was revealed to be the turning point).

Brief Overview of the History of the Job-Training Programs, Effectiveness of These Programs and Job-Training Services in Illinois

In 1962, Congress passed the Manpower Development and Training Act (MDTA) as federal expenditure programs for training the unemployed. During the Nixon administration, Congress replaced the MDTA with the Comprehensive Employment and Training Act (CETA).

Later, under Reagan administration, the Job Training Partnership Act (JTPA) replaced the CETA. More recently, under the Clinton administration, the Workforce Investment Act (WIA) has replaced the JTPA. Currently, most of the job training is financed through the Federal Work Investment Act. Under the current Obama administration, the new funding for job training is provided by the American Recovery and Reinvestment Act (ARRA).

In discussing the effectiveness of the job-training programs, Lalonde (1995) suggested that more expensive and intensive job-training programs will have better results. Friedlander, Greenberg, and Robins (1997) point out that the gains from job training have not been large. These authors feel this is because only modest resources have been spent on these programs. Heckman, Roselious, and Smith (1994) suggest that increasing the scale of investment of these training programs will enable low-income and dislocated workers to benefit from these programs significantly. Friedlander and Gueron (1990), however, contend that expensive programs like classroom training and on-the-job training may exhibit diminishing returns to scale. Worthen (2002) and Heckman (2003) point out that job training does not raise long-term income levels. Wirtz (2005) reports that Kletzer and Rosen conclude that “evidence on program effectiveness is mixed at best.”

Currently in Illinois, the federally funded WIA is administered by the Illinois Department of Employment Security (IDES). The job-training services in Illinois are provided through the state’s one-stop delivery system, the Illinois Employment and Training Center (IETC) network. The IETCs provide services to dislocated workers, the economically disadvantaged, and other unemployed workers. These services geared toward people who receive job training in Illinois have been in place for over 10 years. In Illinois, unemployment plays an important role in fund allocation for job-training programs.

THEORETICAL FRAMEWORK

We seek to study the determinants of taxpayer preferences for government-funded job-training programs. We address the issue of why these preferences may vary across people in Illinois. We test the hypothesis that the demand for government expenditure for job training is not monotonic in income.

We follow Husted’s (1989, 1990) theoretical model of demand for government-subsidized job-training programs. This model posits that taxpayers view such programs as providing both social insurance and a public good. A state preference approach to decision making under uncertainty is used to model the demand for increased spending for job-training programs. A two-probabilistic state of the world is assumed in which each individual is assigned to one of two groups. One group is made up of individuals who have low incomes and are assumed to have a large demand for increased spending for job-training programs. The remaining individuals make up the group of potentially eligible recipients (of benefits from the increased state spending for job-training programs). Everyone can be a potential recipient. Anyone could potentially lose their jobs and find themselves unemployed unless they acquire new skills.

The expected utility framework is adopted to incorporate the public good demand motive by including in each state-dependent utility the person’s mean income level after the job-training programs. As a result, each potential recipient is assumed to choose a program benefit level such that their expected utility,

$$EU = pU(\bar{y}_g, L) + (1-p)U(\bar{y}_b, L) \quad (1)$$

is maximized. The variables \bar{y}_g and \bar{y}_b are the survey respondent's good- and bad-state income levels; \bar{y}_g is the income that would be earned by the recipient if their income is good to the extent that they did not need job training; \bar{y}_b is the income that would be earned if the person needed job training; p represents the probability of being a taxpayer/non-recipient; $(1-p)$ is the probability of being a recipient (of the benefits from increased spending for job training); and L is the mean after-tax income level of the job-training enrollees after the job training. The state's balanced-budget requirement limits the individual's desired program benefit level.

The solution to this constrained optimization problem yields the following implicit demand function for each individual:

$$G = g(\bar{y}_g, \bar{y}_b, p, L, T) \quad (2)$$

where G is the benefit of training and T represents the individual's tax share/price for the program benefit. The signs of the above independent variables in Equation (2) summarize the model's comparative statics results.

As the above comparative statics results indicate, the effect of changes in good-state income \bar{y}_g and mean post-training earnings L on the demand for spending on job-training programs is uncertain. In strict public-good or social-insurance demand frameworks, a monotonic relationship (positive in public-good demand motive and negative in social-insurance demand motive) is usually observed. As the public-good and social-insurance demand motives are integrated, the effect of a change in income on the demand for increased spending for job-training programs becomes murky. When the income level of the individual is low, the individual faces low tax price and their demand for increased state spending for job-training programs as an insurance motive is high. As personal income and tax price increase, other sources of income such as unemployment insurance, bigger personal savings, and the like may be more readily available as a safety net against bad times. As a result, as income grows, the demand for increased government spending for job-training programs as insurance might fall. In the context of public-good demand motive, if it is assumed that that state spending for job-training programs is a "normal" public good, at higher levels of income, the individual's demand for these benefits (benefits from increased state spending for job-training programs) as a public good may actually rise. Overall, the relationship between income and demand for job-training programs might emerge to be U-shaped.

In the model, the relationship between the mean post-training earnings L and the maximum job-training benefit G is also uncertain. The increase in post-training income (L) of the poor (recipient) causes the taxpayer/non-recipient's utility to go to a higher level and the taxpayer/non-recipient's demand for government spending for job-training programs goes up. This increase in post-training income of the poor (L) also tends to increase taxpayer/non-recipients' tax burdens, however. This causes the taxpayer/non-recipient's demand for government spending for job-training programs to fall. Hence, the relationship between L and the demand for increased state spending for job-training programs may be little uncertain.

“Public Choice” Discussion of the Political Incentives and “Rational Ignorance” Discussion Regarding Job-Training Programs

Courty, Kim, and Marschke (2008) address whether enrollment incentives reduce cream-skimming of the enrollees in the delivery of public-sector services like job training. In evaluating the record of the job-training programs under the JTPA between 1982 and 2000, Courty et al. examine whether rewarding the semiautonomous sub-state agencies based on performance leads to cream-skimming on the part of the caseworkers. The training agency, in addition to having its own preferences over enrollment choices, allocates its budget across various demographic groups to maximize its award. The research by Courty et al. reveals two main results. By measuring the impact of changes in the relative shadow prices on changes in the relative fraction of different demographic subgroups, these researchers find that changes in the incentive for enrolling members of a subgroup significantly change the fraction of enrollees from this subgroup. These researchers also find heterogeneity within subgroups. Caseworkers increase the enrollees from a particular subgroup by enrolling at the margin applicants that perform worse on the measure.

Cragg (1995), in looking at the JTPA job-training programs, provides an explanation for the limited use of performance-based pay in government training programs. Cragg's study exploits the fact that the performance measures adopted are only partially correlated with performance objectives. Cragg finds that the negative selection effect is balanced by a positive incentive effect; however, the author contends that if the JTPA-eligible population has relatively few people to whom the value added (from job training) is lower even though their enrollment probability is higher, then the positive incentive effect will dominate.

Hugh Macaulay (1999) points out that the provision of goods can be done by the government or by the markets. Government agencies producing goods tend to be inefficient. Rational ignorance by the taxpayers argues for abandoning this inefficient system. Rational ignorance occurs because the taxpayers have their own lives to lead, families to care for, jobs to pursue, and so on. There is little time left over to be spent on external political issues (such as bills passed in the Congress about job training, welfare, education, etc.), many of which might not be of interest to them.

Bryan Caplan (1999) argues that there is prevalence of asymmetric information when public goods such as job training are provided by government agencies. The rational response to such asymmetric information is not to buy more but to buy less. Breton and Wintrobe (1982) point out that the rational taxpayer might be against government-provided programs if the benefits of the program are not obvious.

Having discussed some of the above-mentioned issues, it is important to keep in mind that training and education can give people the skills and confidence required to get them back on track and to help them prepare for, find, and keep jobs. The effectiveness of the investment in mainstream welfare to work programs has been rather dubious. Interventions for low-skilled adults have to be done in a more tailored way. With the current high unemployment rate in the United States, investing in learning and skills projects for both disadvantaged and dislocated workers can have multiple benefits for individuals, government policy, and public spending.

DATA AND EMPIRICAL ANALYSIS

In our study, we use data from the Illinois Policy Survey (IPS) of 1995, administered by telephone. Some of the questions were relevant to our analysis as we describe below. The main reason for choosing the 1995 data was that there was good information about job training and related issues. In light of the policy implications of our 1995 study for the services currently provided in Illinois by the IETCs and of sharp budgetary battles at the state and federal levels for all sorts of programs created for the benefit of the disadvantaged, it seems important to get our results in the open. An obvious conclusion of this paper will be to take advantage of the most currently available Illinois Policy Survey dataset that contains questions related to publicly funded job-training programs to assure ourselves that our empirical conclusions of 1995 remain valid. It is worth pointing out that such new data is hard to come by and that the construction of the variables we have used in our 1995 empirical model is a very time-consuming and therefore slow process. An additional point can be made here that job-training services have been in place in Illinois for over a decade; therefore, the 1995 IPS data may still be applicable to 2011.

Our paper is based on a disproportionately stratified sample of 800 adult Illinois residents interviewed by telephone as part of the 1995 Illinois Policy Survey. Questions relevant to our analysis are preference for job-training programs, income, education, gender, age, race, and political party affiliation. To investigate whether preferences for job-training expenditures depend on local economic conditions, we add data from other sources describing regional-level unemployment rate, manufacturing employment, population density, and the poverty rate. The particular question used to define our dependent variable is “Job-training program for the unemployed: Should state spending be increased, kept at the present level, or decreased?”

We employ a probit model with a dependent variable that indicates whether the respondent desires an increase ($JOB = 1$).¹ The answers “present level,” “decreased,” “ended altogether,” and “spend differently” are interpreted as not desiring an increase in spending for the job training for the unemployed ($JOB = 0$). The response “don’t know” is treated as missing.

In the sample, 63.45 percent of the respondents support an increase in the spending for job-training programs. About 15 percent of the respondents want the state spending for job-training programs to be kept at the present level, and about 8 percent of the respondents want a decrease in state spending for job-training programs. Thus, it is evident from the 1995 IPS data that the vast majority of the respondents want more training made available. The human capital model in labor economics literature emphasizes that job training and education are tools to improve one’s lifetime earnings. The survey respondents conform to this human capital model argument.

The independent variables in the probit analysis include income, income squared, gender, age, age squared, education, race, political affiliation, probability that the respondent participates in job training, and local economic conditions (unemployment rate, manufacturing employment, population density, and poverty rate).

The first independent variable is pre-tax household income (INCOME). As is common in surveys, the respondents indicated their household income according to categories: under \$14,000; \$14,000–\$21,000; \$21,000–\$28,000; \$28,000–\$35,000; \$35,000–\$42,000; \$42,000–

\$49,000; \$49,000–\$56,000; \$56,000–\$80,000; and above \$80,000. We assign individual respondents an income level equal to the midpoint of their stated income range and make an approximation about the midpoint of the highest range (Temple and Porter-Hudak 1995). We approximate the midpoint of the highest income category at \$112,477.

Explanatory variables reflecting tastes for government expenditures include the respondent's sex (FEMALE), the respondent's age (AGE), the respondent's race (WHITE), and measures of the respondent's level of education (LTHS). Political party affiliation (PARTAF) is included to find a proxy measure for any omitted socioeconomic characteristics as well as for taxpayer preferences that are not explicitly considered in the theoretical model.²

Next we create dummy variables to represent the probability that the respondent will participate in a job-training program. We use the following two survey questions: (1) "Would you say that at the present time people of Illinois are better off financially, just about the same, or worse off than they were four years ago?" and (2) "Do you think the standard of living of high school-age students in Illinois will eventually be better, about the same, or worse than of their parents?"

From the responses to these two questions, we created five dummy variables for each individual representing the following five situations: better now financially than in the past, expect better in the future (HH); better now financially than in the past, expect worse in the future (HL); worse now financially than in the past, expect better in the future (LH); worse now financially than in the past, expect worse in the future (LL); and same now financially compared to the past, expect to be same in the future (MED).

To examine the role of local economic conditions in influencing preferences for job-training programs, we included the following four variables: unemployment rate change from 1990 to 1995 in the region (REGUNEMPCH), change in manufacturing employment as a share of total employment from 1990 to 1995 in the region (REGMANSHCH), people living in regions (in 1989) where poverty rate is greater than 10 percent in the region (REGPOVERTY), and population density of the regions (in 1990) where the respondents live (REGPOPDEN). These regional-level variables were weighted by the population of the counties of the region.

Although the original sample contained observations for 800 individuals, missing values for several variables reduced the sample size to 711. Table 1 defines the variables and provides descriptive statistics of the variables.

In addition to the 1995 IPS data, to check if the U-shaped relationship between income and demand for job training holds for another year's data, we used data from the 1999 Illinois Policy Survey and recalculated the probit regression results. We were able to take some advantage of the 1999 IPS data, as this survey held some useful questions on job training. Because the results from the 1999 IPS data were not significantly different from the 1995 IPS data, we discuss the findings from the 1995 IPS data only.

Table 1. Descriptive Statistics

| Definition of Variables | |
|--|---------------------------|
| Variable | Means* (standard dev.) |
| INCOME Household income using midpoints of income categories | \$46,392 (31,330) |
| FEMALE Equal to 1 if respondent is female; 0 otherwise | 0.53 (0.49) |
| WHITE equal to 1 for whites; 0 for others | 0.79 (0.40) |
| LESS THAN HIGH SCHOOL (LTHS) Equal to 1 if respondent has less than high school , 0 otherwise | 0.35 (.48) |
| AGE in years | 42.62 (16.74) |
| HL Equal to 1 if respondent is better now and expects worse; 0 otherwise | 0.07 (0.26) |
| HH Equal to 1 if respondent is better now and expects better , 0 otherwise | 0.07 (0.26) |
| LH Equal to 1 if respondent is worse now and expect better, 0 otherwise | 0.08 (0.27) |
| LL Equal to 1 if respondent is worse now and expects worse; 0 otherwise | 0.21 (0.40) |
| MED Equal to 1 if respondent is same now and expects same; 0 otherwise | 0.55 (0.49) |
| POLITICAL PARTY AFFILIATION (PARTAF) equal to 1 if respondent is a Democrat; 0 otherwise | 0.49 (0.50) |
| REGUNEMPCH Regional-level unemployment rate change from 1990 to 1995 | -1.07 (0.56) |
| REGMANSHCH Regional-level change in manufacturing employment as a share of total employment from 1990 to 1995 | -0.03 (0.05) |
| REGPOVERTY People living in regions where poverty rate is greater than 10% poverty rate—percentage of people (all persons, including children under 18 and persons 65 and over) with income below poverty level | 0.79 (0.40) |
| 1990 POPULATION DENSITY OF THE REGION (REGPOPDEN) number of people living per square mile | 2627 (2420) |

RESULTS AND DISCUSSION

In discussing our empirical findings, we shall proceed progressively. First, we discuss the effect of regional variables in the fixed-effects model. Next, we examine the effect of income on the demand for job-training programs while controlling for demographic factors such as gender, age, race, education, and political affiliation. Finally, we consider the perception variables.

The probit estimates for income, demographic, and perception variables could be biased if local economic conditions are omitted. To control for unobserved regional characteristics in estimating the demand for job training, we include regional fixed effects in the probit (Table 2).³ We create five regional dummies (Cook, Collar, Northern, Central, and Southern). These regional dummies are necessary to pick up effects that economists would suspect are important (such as the value of job-training benefits, regions' job-training policies, and so on) but that can't be directly controlled for. All the regional dummies (with the exception of region three) are independently statistically significant. The likelihood ratio (LR) test for the joint significance of these regional dummies gives a p value of 0.04 (the value of LR test is 9.85 and the critical value being 9.48). The small p value (less than 0.10) shows that the regional dummies are jointly significant. Regional differences are therefore significant in explaining the demand for job-training programs.

The marginal effects of the categorical variables (FEMALE, LTHS, PARTAF, WHITE, REGION1, REGION2, REGION3, and REGION5) are evaluated at the mean of continuous variables (INCOME, INCSQ, AGE, and AGESQ). The marginal effects reported are for a person who is a white female Democrat with less than high school education who lives in region one (which is mainly Cook County).

In column 2 of Table 2, marginal effects of income and demographic factors are reported.⁴ Although income has a negative marginal effect and income squared has a positive marginal effect, describing a U-shaped curve, income is not a significant predictor of willingness to pay for job-training programs. The hypothesis that the demand for state spending increases for job-training programs is a non-monotonic function of income must be rejected.⁵

As we mentioned earlier, Worthen (2002) and Heckman (2003) point out that job training does not raise long-term income levels and that job training is a quick short-term fix. In the context of the results of our paper, it can be argued that if the economic return from programs like job training is low, it is no wonder that income is not a significant predictor of the demand for government-provided job-training programs.

According to the 1999 IPS data, income variable has a negative marginal effect and is statistically significant at the 10 percent level. Thus, the 1999 IPS data reveal the existence of a social-insurance motive for the demand for job-training programs, but the income-squared term is not statistically significant. Thus, there is no evidence of a U-shaped relationship between income and the demand for job-training programs from the 1995 nor the 1999 IPS data.

In column 4 of Table 2, regression results are based on income and other demographic factors (income squared has been dropped). Income shows a positive (but not significant) relationship with demand for job training, and we conclude that income has no predictive power on the demand for job training in Illinois.

In columns 3 and 5 of Table 2, we see the marginal effects of the categorical variables (FEMALE, LTHS, PARTAF, and WHITE). When looking at the marginal effect (significant at 0.8 percent) of the FEMALE variable (the female being a white Democrat with less than a high

school education and living in Cook County), the probit regression results tell us that women are more willing to support an increase in state spending for job-training programs.

Table 2. Probit Estimates of Demand for Job-training Programs (demographic factors, perception variable, and regional dummies)

| Variable | Marginal Effects (P values) | | | |
|------------------------|-----------------------------|--------------------|--------------------|--------------------|
| | Probit 1 Estimate | | Probit 2 Estimate | |
| CONSTANT | −0.01 (0.92) | −0.01 (0.92) | −0.03 (0.84) | −0.03 (0.84) |
| INCOME | −0.001 (0.64) | −0.001 (0.64) | 0.0001 (0.81) | 0.0001 (0.81) |
| INCOMESQ | 0.00001 (0.58) | 0.00001 (0.58) | — | — |
| FEMALE | 0.11 (0.006)* | 0.10 (0.008)* | 0.10 (0.006)* | 0.10 (0.008)* |
| AGE | 0.005 (0.38) | 0.005 (0.38) | 0.004 (0.45) | 0.004 (0.45) |
| AGESQ | −0.00005 (0.37) | −0.00005 (0.37) | −0.00005 (0.44) | −0.00005 (0.44) |
| LTHS | 0.03 (0.45) | 0.03 (0.46) | 0.03 (0.41) | 0.03 (0.40) |
| PARTAF | 0.06 (0.08)* | 0.07 (0.08)* | 0.06 (0.08)* | 0.07 (0.08)* |
| WHITE | −0.14 (0.006)* | −0.13 (0.01)* | −0.15 (0.005)* | −0.13 (0.01)* |
| REGION1 | 0.11 (0.03)* | 0.12 (0.03)* | 0.11 (0.03)* | 0.12 (0.03)* |
| REGION2 | 0.15 (0.01)* | 0.16 (0.01)* | 0.15 (0.01)* | 0.16 (0.01)* |
| REGION3 | 0.009 (0.90) | 0.01 (0.89) | 0.009 (0.90) | 0.01 (0.89) |
| REGION5 | 0.13 (0.05)* | 0.13 (0.06)* | 0.13 (0.05)* | 0.14 (0.05)* |
| Number of Observations | 711 | | 711 | |
| Log Likelihood | −447.21 | | −447.36 | |

* Significant at 10% level or less

Disappointingly, neither the AGE nor the AGESG variables are significant, even though the positive marginal effect of AGE and the negative marginal effect of AGESQ suggest that in their earlier years people prefer higher spending for the training programs but that as they get older, their demand decreases (probably representing a true scenario—people in their old age have a decreasing demand for job-training programs). Similarly, the education variable has no

explanatory power in our model. The PARTAF shows a positive but statistically insignificant marginal effect. The negative marginal effect of the WHITE variable (and the p value being significant at 0.01 percent) indicates that whites favor less spending for the job-training programs (marginal effect reported here is that of a white female Democrat with less than a high school education).⁶

The results in Table 2 indicate that there are significant unobserved regional effects. In Table 3, we examine the role of regional economic conditions on the demand for job-training programs (by replacing the regional dummies with the regional-level variables). It may be that the inclusion of these regional economic variables will explain regional variations unobserved in Table 2. If so, the model in Table 3 will have predictive power equal to that of the model in Table 2. As Table 3 shows, statistical significance of the marginal effects of the continuous variables (INCOME, INCSQ, AGE, and AGESQ) remain the same as in Table 2. Also in Table 3, the statistical significance of the marginal effects of the categorical variables such as FEMALE, LTHS, PARTAF, and WHITE remain the same as in Table 2.

Among the regional economic-condition variables, REGUNEMPCH (unemployment rate change from 1990 to 1995 in the region) is statistically important in determining increased demand for job-training programs. But the negative marginal effect shows that as the unemployment rate changed from 1990 to 1995, the demand for job-training programs fell in the region. Although this may appear puzzling, it is reasonable when we look at the analysis closely. We defined REGUNEMPCH as the unemployment rate in 1995 minus the unemployment rate in 1990. From Table 1, we see the mean of this REGUNEMPCH is -1.07 . This negative value means the unemployment rate was lower in 1995 than in 1990, so it makes sense that as the unemployment rate fell from 1990 to 1995, the demand for job training also fell. Perhaps this is why Illinois officials use unemployment criteria in allocating funds for job-training programs. The next regional economic condition variable, REGMANSHCH (change in manufacturing employment as a share of total employment in the region), is not important in explaining the demand for increased spending for the job-training programs.

The variable REGPOVERTY (people living in counties with a poverty rate over 10 percent) is significant at the 0.02 percent level. The negative marginal effect of REGPOVERTY (and its p value being significant) means that as the poverty rate in a region goes up by 1 percent, the demand for job training goes down by 0.39 percent in that region. This result is not expected. One explanation for the negative marginal effect of REGPOVERTY is that people living in regions where the poverty rate is high (over 10 percent) may fall into “discouraged worker syndrome” and feel that job training is not a solution to their poverty. The result would be a reduced demand for job-training programs.

Finally, the population density is significant in both probit estimates, and REGPOPDEN has a positive marginal effect on the demand for job-training programs. This shows that the more densely a region is populated, the higher the demand for job-training programs is going to be in that region. This is a plausible result simply because the larger the population size of a region, the larger will be the demand for job training in that region.

To see if the regional-level variables are jointly significant in explaining the demand for job-training programs, we do the LR test, which gives a p value of 0.01 (the value of LR test is 9.85 and the critical value being 7.81). This small p value (less than 0.10) reveals that the regional-level variables are important in explaining the demand for job-training programs in Illinois.

Table 3. Probit Estimates of Demand for Job-training Programs (demographic factors, perception variable, and regional-level variables)

| Variable | Marginal Effects (P values) | | | |
|------------------------|-----------------------------|--------------------|--------------------|--------------------|
| | Probit 1 Estimate | | Probit 2 Estimate | |
| CONSTANT | −0.05 (0.78) | −0.05 (0.78) | −0.06 (0.71) | −0.06 (0.71) |
| INCOME | −0.001 (0.64) | −0.001 (0.64) | 0.0001 (0.81) | 0.0001 (0.81) |
| INCOMESQ | 0.00001 (0.58) | 0.00001 (0.58) | — | — |
| FEMALE | 0.11 (0.006)* | 0.10 (0.008)* | 0.10 (0.006)* | 0.10 (0.008)* |
| AGE | 0.005 (0.38) | 0.005 (0.38) | 0.004 (0.44) | 0.006 (0.44) |
| AGESQ | −0.00005 (0.37) | −0.00005 (0.37) | −0.00005 (0.43) | −0.00005 (0.43) |
| LTHS | 0.03 (0.45) | 0.03 (0.46) | 0.03 (0.41) | 0.04 (0.41) |
| PARTAF | 0.06 (0.08)* | 0.07 (0.09)* | 0.06 (0.08)* | 0.07 (0.08)* |
| WHITE | −0.14 (0.006)* | −0.13 (0.01)* | −0.15 (0.005)* | −0.13 (0.01)* |
| REGUNEMPCH | −0.26 (0.06)* | −0.26 (0.06)* | −0.26 (0.06)* | −0.26 (0.06)* |
| REGMANSHCH | −0.02 (0.95) | −0.02 (0.95) | −0.25 (0.95) | −0.25 (0.95) |
| REGPOVERTY | −0.39 (0.02)* | −0.39 (0.02)* | −0.39 (0.03)* | −0.39 (0.03)* |
| REGPOPDEN | 0.00006 (0.03)* | 0.00006 (0.03)* | 0.00006 (0.03)* | 0.00006 (0.03)* |
| Number of Observations | 711 | | 711 | |
| Log Likelihood | −447.21 | | −447.36 | |

* Significant at 10% level or less

To compare the model with regional fixed effects to the model with regional economic variables, we compare the percentage of outcomes that each model correctly predicts. The column 2 regression results of Table 2 gives a percent correctly predicted value of 0.67, and the column 4 regression results of Table 2 (without the income-squared term) gives a percent correctly predicted value of 0.66. The percent correctly predicted values for Table 3 are identical. These results indicate that the regional economic variables included in Table 3 represent the same unobserved regional fixed effects captured in Table 2.

The results reported in this paper may be biased because most taxpayers do not vote (and the segment that votes may be older and is likely to be more educated). The inclusion of the regional dummies and regional economic variables has reduced some of that bias. It should be also noted that most taxpayers do not have the direct opportunity to vote on issues that impact spending on job-training programs. Additionally, there is probably some amount of rational ignorance on the part of the taxpayers regarding programs like job training.

CONCLUSION AND DISCUSSION

Our results show that income is not a significant predictor of willingness to pay for job-training programs. According to the 1995 IPS data, there is no support for the social-insurance and public-good argument for the demand for job-training programs. The results also indicate that regional economic conditions play an important role in the willingness to pay for state-funded job-training programs. Illinois state officials consider unemployment rates in allocating funds for job-training programs.

Given the current downturn in the U.S. economy, policy-makers need to pay more attention to job-training programs to uplift the economic conditions of disadvantaged and dislocated workers. Even though Worthen (2002) and Heckman (2003) argue that job training is a quick short-term fix, we would expect that appropriate allocation of federal dollars to state governments for job-training purposes would improve the economic standing of unemployed workers. It should be noted that some of the residential job-training programs like Job Corps have been incapable of providing the skills and training to bring about substantial increases in the wages of the participants.

The vast majority of the survey respondents from the 1995 IPS data favor more spending for job-training programs. More intense job-training activities, proper selection of the enrollees on the part of the caseworkers, followup regarding the benefit of job training, and making local businesses more aware of the participants of the job-training programs (and vice versa) are all essential in deriving more profound impact from job-training programs. In the case of the disadvantaged workers—in moving people from welfare to work—subsidized employments (e.g., wage subsidies and transitional jobs) are likely to be more effective. For dislocated workers, training and employment along the lines of their previous employment might be more satisfying than drastically changing and training for a new career path.

This study raises a number of questions that have not been addressed. First, is the attitude of the Illinois residents the same today as it was in 1995? The Illinois Policy Survey targets Illinois residents and interviews them over the phone. Questions addressed are not always the same from year to year, so subsequent-year data are not necessarily adequate to study the same issues as we did in this paper. It might be worth our while to seek funding and to conduct more targeted surveys of taxpayers or voters (not all taxpayers vote) and to distinguish between the attitudes of taxpayers and those voters in matter of support for publicly funded job-training programs. Second, one might wonder how successful the job-training programs have been in Illinois. We presented some of the results of the literature on the effectiveness of job training; such programs have not typically been shown to have a large effect. Could we possibly find a regional database to assess the very short-term effects of job training as opposed to the longer term of job training? Could we separate the job training that allows the disadvantaged to get a first job from the job training that allows a dislocated worker to change jobs from one occupation

to another? Given the private and public costs of unemployment, such inquiries would be well worthwhile.

ENDNOTES

1. Alternatively, to examine if ordered probit analysis would be more appropriate, that is, to see if “demand same” and “demand less” responses should be considered separately instead of merging them, we ran ordered probit regression. We used a dependent variable with three separate preference categories for job training: “demand more,” “demand same,” and “demand less.” The threshold between “same” and “less” categories is statistically significant (that is, ordered probit could have been used instead of probit); however, because the coefficient estimates for the independent variables in the ordered probit analyses are similar to those of the probit analyses, we are not reporting the ordered probit results.
2. Because the survey did not ask respondents to reveal their state tax liability, we were unable to include a measure of tax price. Using similar data from an earlier year, Temple and Porter-Hudak (1995) also do not include a tax price.
3. We also examined a model with county fixed effects but found that the null hypothesis of no fixed effects cannot be rejected. That is, the county fixed effects do not matter in explaining the demand for job-training programs. This finding is supported by the fact that only six county dummy variables (out of 52 county dummy variables) were found to be statistically significant.
4. Probit coefficients have been transformed into marginal effects using the partial derivative of the continuous mean function.
5. Although it is statistically insignificant, by looking at the marginal value of INCOME and INCOMESQ, we can interpret that initially when income goes up by 1 percent, the probability of the demand for job-training programs falls by 0.001 percent and at higher levels of income when income goes up by 1 percent, the probability of the demand for job-training program increases by 0.00001 percent. Thus, the U-shaped relationship between income and demand for job-training programs would hold if the p values were statistically significant.
6. We included the perception variables (HH, HL, LH, and LL) in our regression. None were statistically significant in explaining the demand for job-training programs. Because these variables are not the focus of our paper, we omitted them from the discussion.

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