Worker Attitudes Toward Skills Training in the Rural South

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INTRODUCTION

For most people, career advancement only comes if new skills or technologies are learned. In addition, many people view learning new skills as an important element in a complete life. Some workers seek further training to enhance existing skills or develop new ones, with the expectation that this will lead to better jobs and a higher standard of living. Training gives employees an opportunity to increase their productivity in the workforce, open new opportunities for career development, and potentially increase their earnings. Public policy makers see training as contributing to the larger goal of improving the quality of workforce and national competitiveness. Improved productivity of the local labor market is indispensable to new businesses and thence, to economic development.

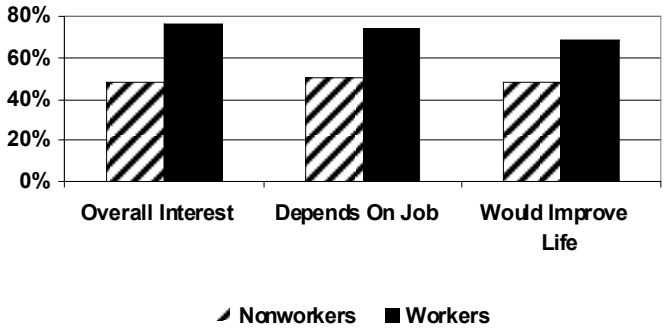
One explanation for high poverty rates in parts of rural America is that a high percentage of rural workers lack the necessary education or skills to compete in the workplace, at least relative to their metropolitan counterparts. While efforts to increase levels of educational attainment in these places may be the best long-term solution, a more immediate approach is to enhance worker skills through training programs.

This paper looks at survey data concerning rural resident's opinions on training opportunities, including perceived barriers to obtaining training. Insights into the factors that affect individual demand for training are important in that they might suggest changes to policies that promote training, to increase their appeal to potential users, or to increase the effectiveness of existing programs by addressing criticisms of program structures and methods. The data come from a survey of residents of the rural South conducted in February 1996 by Roper Starch Worldwide. In total, 1,200 people were interviewed in rural areas of Alabama, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Virginia. The rural South survey was sponsored by the TVA Rural Studies Program at the University of Kentucky. Each person was asked about: their personal beliefs and values, their perspective on the community where they live, their quality of life, the roles government should play, and their attitudes about economic development. Supplemental U.S. data used for comparisons come from other Roper Starch Surveys. In addition, Roper Starch conducted twenty in-depth interviews with business leaders in the rural South to better understand their perceptions of doing business in the region.

INTEREST IN LEARNING NEW SKILLS

It is becoming increasingly important for individuals in virtually all occupations to learn new skills as production processes change and the nature of work evolves. Historically, the economy of the rural South was not fully exposed to this pressure because the main forms of economic activity were relatively stable and they demanded only limited skills from most workers. Now most employees recognize that even if they do not change jobs, they are likely to have to accept changes in the type of work they perform. As a result, almost two thirds of the individuals surveyed expressed at least some interest in learning new skills (combination of *Very Interested* and *Somewhat Interested;* see Figure 1). Slightly more than one-third indicated they were *Very Interested* in skills training (37%). If the sample is reduced to only those who are currently employed, the percentage of people interested in new skills training increased to 75 percent, with 45 percent indicating *Very Interested.*

Figure 1: Rural Residents' Interest in Skills Training



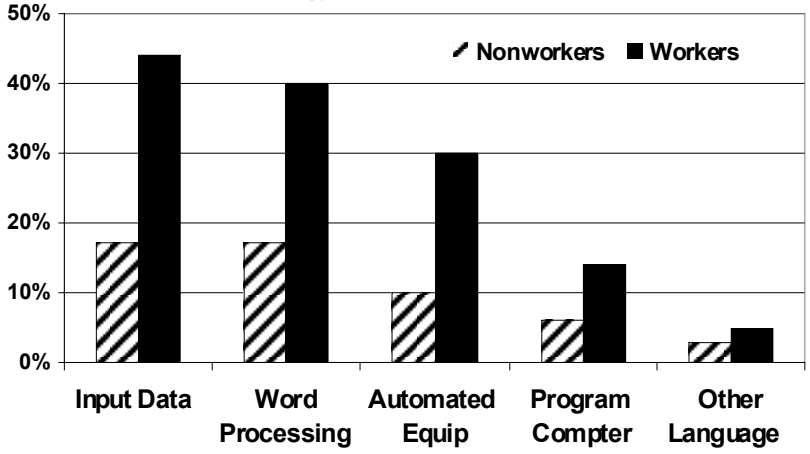
Two follow-up questions attempted to better determine the motives for an interest in skill development or job training. The first asked if their interest would depend upon opportunities for a job, speaking to the issue of whether people required some expectation of benefit through employment. Overall, 63 percent answered positively (a combination of *Definitely* and *Somewhat*). For those employed, the figures jump to 74 percent, compared to 50 percent of those not currently employed. The second question asked if the respondent believed that learning new skills would improve their current standard of living. Nearly 60 percent of the individuals surveyed responded positively. Once again, when the sample is restricted to only those currently employed, the percentages increase to 68 percent.

Even though there is an interest in developing new skills, most rural southerners in the survey believe that there are currently employment opportunities for people with skills similar to theirs in the immediate region (county of residence plus contiguous counties). Almost 60 percent of the 1,200 respondents believe there are local employment opportunities, while two thirds believe there are opportunities within the state. Current workers have even higher agreement with these statements, with 73 and 79 percent in agreement, respectively.

Current Skills

Rural residents in the South have a somewhat limited set of formal skills when they are defined in terms of emerging trends in the national and global economy. For example, in 1996, no more than one-third of the people in the survey were able to use a computer to input data (33%), use a computer to write a letter or a report (30%), use any form of automated manufacturing equipment (21%), or program a computer (11%). Similarly, less than 5 percent of rural southerners surveyed speak a language other than English fluently. The figures for workers were higher than for nonworkers, but the ability to use a computer was still under 50 percent (see Figure 2). While we might expect these figures to have increased since 1996, the perception that rural areas of the South are not on the cutting edge of new ideas and technologies is reinforced by the survey.

Figure 2: Rural Residents' Skills Level on Selected Technology Tasks



Job Satisfaction

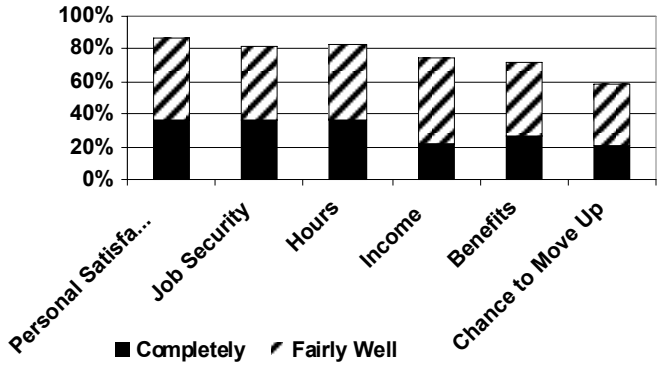
Overall, workers in the rural South survey expressed high levels of satisfaction with their current job. Of the 693 persons in the sample that were employed (57.8%), most were satisfied with their current employment. The combined categories of *Completely Satisfied* and *Fairly Well Satisfied* were over 80 percent for personal satisfaction, job security, and hours of work. Slightly lower levels of satisfaction, but still over 60 percent, were indicated for income, opportunities, and benefits. The lowest level of satisfaction was for the ability to move up (see Table 1 and Figure 3). However, if we only look at *Completely Satisfied*, only one-quarter to one-third of the respondents were completely satisfied with the major factors of work. The highest levels of complete satisfaction were for personal satisfaction (35.9%), job security (36.1%), and hours (35.8%). The lowest levels of complete satisfaction were for income (21.5%) and ability to move up (21.1%).

Similar results were also found in a series of questions regarding descriptions of the worker's personal work situation. High marks were given for aspects such as, reasonable employer expectations, reasonable hours, respect from superiors, recognition, and a feeling of producing something important (all 70% or better for excellent and good responses). The lowest responses were for, having a say in decisions, opportunities for creativity, and opportunities for promotions.

Table 1: Worker Satisfaction with Various Aspects of Their Current Employment

ASPECT OF JOB	COMPLETELY SATISFIED	FAIRLY WELL SATISFIED	COMPLETELY & FAIRLY WELL SATISFIED
The personal satisfaction you get from the kind of work you do	36%	50%	86%
The number of hours you work	36%	47%	83%
Your job security	36%	46%	82%
The income it provides	22%	53%	75%
The opportunities you have to influence decisions at work	27%	45%	72%
The benefits it provides	28%	40%	68%
The chance it offers to move up	21%	37%	58%

Figure 3: Rural Residents' Satisfaction with Current Employment

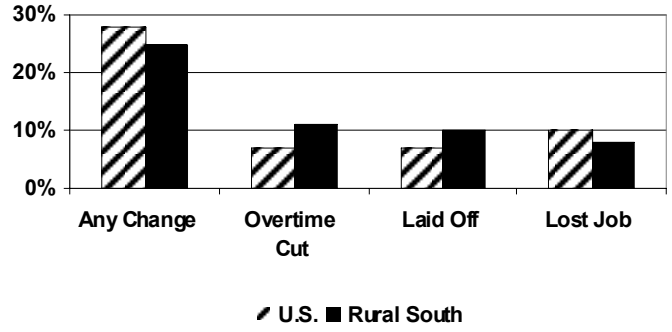


The finding that a lack opportunity for promotion is seen as a negative aspect of work, is made more important when we consider that the same sample of people identified opportunity for advancement as a critical factor when considering a job. Furthermore, 32% of those with a job in the rural South sample indicated that they considered changing jobs in the past year. Thus, we might expect considerable interest in skills training from at least a portion of those in the work force, especially those who perceive it as an important means for career advancement.

Negative Job Changes

Another rationale for training relates to negative job experiences, particularly, fears of layoffs or loss of hours. The respondents were asked if any of the following negative job experiences happened to them or anyone in their household in the last six months. The list included issues about losing a job, being laid off, having overtime cut, or lost benefits. The percentage answering *yes* for each question was relatively low, with none more than 11 percent of the respondents' household (see Figure 4). However, across all the possible changes, one-quarter of the households in the rural South have experienced a job related loss. This figure is similar to that from a national sample obtained from Roper Starch.

Figure 4: Rural Residents' Experience with Negative Job Changes



Awareness and Interest in Skills Training

Most of the respondents were not aware of *skills training programs in their area that have been successful in placing participants.* Only 24 percent indicated they were aware of such programs, and another 18 percent indicated they didn't know. When asked directly if they were interested in learning new skills or technologies, 37 percent indicated they were very interested, while another 27 percent indicated they were somewhat interested (see Figure 3). Those that were employed were more likely to be very interested (45%) or somewhat interested in learning new skills (32%), than those who were not currently employed.

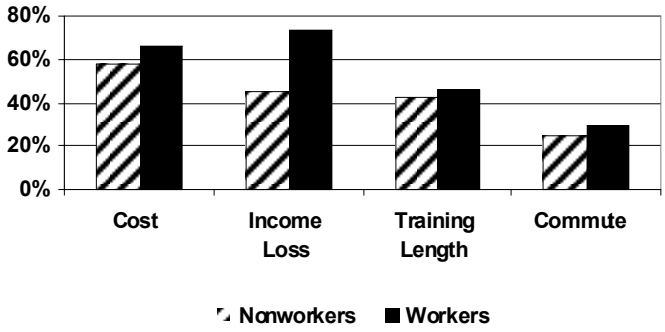
Barriers to Skills Training

Given the high level of interest in skills training and in learning new technologies, we might expect far greater involvement in training programs. However, there are barriers to adult education that can prevent a person from seeking training. Individuals' willingness to learn new skills can be impeded by practical obstacles such as, the length of training time, the cost of the training, the loss of income while training, the time and expense of commuting, and the availability of daycare. The survey asked all respondents a series of questions about potential obstacles and how important they were in their decision-making process. The obstacles identified were: the length of the training, the cost of the training, loss of income while retraining, commuting time to training locations, and the availability of daycare. Table 2 contains the summary of responses to these questions. The most serious obstacles are the cost of the training, the length of training, and the loss of income while training. For all of these obstacles, 79 percent or more of the respondents felt that these were very important, to somewhat important, obstacles. Commuting time was also a consideration, although most expressed this as a somewhat important obstacle. Very few felt that lack of daycare was an obstacle for training. All of these barriers were higher for those who were employed. In particular, loss of income was a very important obstacle for 74% of working respondents (see Figure 5).

Table 2: Importance of Potential Obstacles to Training

ASPECT OF TRAINING	VERY IMPORTANT	SOMEWHAT IMPORTANT	VERY & SOMEWHAT IMPORTANT
The cost of the training	63%	23%	86%
The length of the training	44%	37%	81%
Loss of income while training	62%	17%	79%
Commuting time	27%	42%	69%
Availability of daycare	15%	13%	28%

Figure 5: Rural Residents' Perceptions on Very Important Barriers to Skills Training



A MULTIVARIATE MODEL OF INTEREST IN SKILLS TRAINING

The next section examines interest in skills training as a function of a set of independent variables. This enables us to examine the factors that influence worker interest in skills training. Only workers will be examined for this analysis. A more detailed multivariate analysis was presented at the Southern Rural Labor Force Conference in New Orleans in 1998. Only a final reduced model of significant variables is presented here.

A measure of individuals' willingness to undertake training can be formulated from the following question in the survey (the response percentages are also given):

Many people in business and government think that in the future workers will need to retrain to keep up with changes in the workplace. How interested are you in learning new skills or technologies?

Very interested	1	44.7%
Somewhat interested	2	31.6%
Not interested	3	22.5%
Don't know	4	1.2%

A new dichotomous variable was created by taking those who are *Very Interested* (coded as 1) versus all others (coded as zero). This variable represents the strongest interest in skills training, and nearly 45 percent of the sample

indicated they were very interested in skills training. Given the use of a dichotomous dependent, we use a logistic regression model that is estimated by a maximum likelihood method.

The logistic regression model allows the estimation of a continuous dependent variable of theoretical importance that is unobserved (each individual's willingness to participate in training) through the use of an observed proxy variable (the responses to the survey question on interest in skills training) that takes on one of two discrete values. A logistic regression model has the inherent advantage that the estimated probability value for individual interest will lie between 0 and 1, which has the obvious bounds of absolutely no interest and certain participation. The coefficients for the predictive or independent variables generated from the model are expressed in terms of log odds and thus, easily transformed to odds ratios or probabilities. The model also allows the use of both discrete and continuous independent variables.

Explanatory Variables

Explanatory variables to be used in the analysis were selected by examination of previous research.[1] Variables were taken from four general categories of variables:

1. Socioeconomic and demographic factors
2. Job characteristics
3. Community factors
4. Perception of skills training

Within these major categories, specific variables were developed as described below.

1. Socioeconomic and Demographic Factors.

AGE (coded as the midpoint of 12 age categories). The expectation is that demand for skills training will be highest for the youngest workers and decline linearly as the worker approaches retirement.

BLACK (coded as 1, if African American). No prior expectations, although interest may be lower than that for whites because of past discrimination and an expectation that the return on the investment will be lower.

EDUCATION (coded as a dummy variable, where 1 = post high school education and 0= all others). Interest in skills training is expected to be higher for higher education levels.

2. Job Characteristics.

LABORER (coded as 1, if the respondent indicated he/she was a skilled or unskilled laborer). It is expected that those in labor positions would be less interested in skills training than those in professions or management type positions.

3. Community Factors.

PROX1 (coded as 1, if the respondent lived within a half hour drive of a 2-year technical school or junior college). Given driving time was seen as an impediment to skills training for two-thirds of the respondents, it is expected that proximity to a 2-year technical school or junior college would be positively related to interest in skills training.

AFFECTED (coded as 1, if the respondent knew someone negatively affected by the economy). Each respondent was asked seven questions relating to whether each item happened to someone in their household in the last six months. The items ranged from losing a job, to having hours cut, to being retired earlier than expected (the total list is reported earlier in this chapter). The percentage answering *yes* for each question was relatively low, with none more than 11 percent. However, across all the possible changes, one-quarter of the households in the rural South have experienced a job related loss. It is expected that a respondent who lives in a household where another member has been negatively affected by the economy would be more likely to be interested in skills training.

4. Perception of the Benefits from Skills Training.

Two variables reflected important perceptions of skills training. The first reflects the linkage in the respondent's mind of skills training to a new job. The second perception is whether the respondent felt that skills training would improve his/her standard of living. Both questions were asked after the question on interest in skills training.

STANDARD (coded 1, if the respondent indicated that training in a new skill would definitely increase his/her standard of living). It is expected that those who feel they would benefit from skills would be more likely to be interested in skills training.

NEWJOB (coded as 1, if the respondent indicated that interest in skills training would depend upon having opportunities for a new job). The exact wording of this question is, "*Would your interest in retraining depend upon having opportunities for a new job?*" This variable reflects optimism in skills training leading toward a new job. It is expected that if the respondent ties skills training to a new job, he/she would be more likely to be interested in skills training.

A summary table listing univariate statistics and the correlation of each variable with the dependent variable is listed in Table 3. Most of the correlation signs are in the expected direction. However, the correlation for BLACK is positive, contrary to expectations. The largest correlation with INTEREST is for the two perception variables, STANDARD and NEWJOB. Interest in skill training is positively correlated with the perception that *skills training would increase quality of life* (r=.528) and *interest in skills training is tied to job opportunities* (r=.463).

Table 3: Univariate Statistics of Variables in the Model and their Correlations with the Dependent Variable

VARIABLE	DESCRIPTION	MEAN	STD DEV	MIN	MAX	CORR WITH INTEREST
INTEREST	Interest in skills training	.447	.499	0	1	
BLACK	Coded 1, if African American	.157	.365	0	1	.121
EDUC	Post High School	.363	.482	0	1	.047
AGE	Age in years	38.809	12.599	19	74	-.243
LABORER	Skilled/unskilled laborer	.479	.501	0	1	-.027
PROX1	Close to 2-year school	.685	.466	0	1	.157
AFFECTED	Know someone affected by economy	.301	.460	0	1	.226
STANDARD	Training would increase standard of living	.356	.480	0	1	.528
NEWJOB	Training interest depends on job	.422	.496	0	1	.463

Estimation and Results

The logistic regression model was estimated using PROC LOGIST in the SAS software package. The model was fitted to 676 observations. The data was checked for the presence of multicollinearity using a simple correlation matrix of independent variables. Several models were run using an additive approach. A reduced model was run for only the variables that were significant in order to allow the construction of odds ratios and a probability table. A chi-square test was performed to test the overall significance of the set of independent variables, based on the null hypothesis that all coefficients except the intercept are zero. Chi-square tests were also used for the individual coefficients in the model. A pseudo- R-Square was calculated as an indicator of the overall fit of the model.

The following table provides the coefficients for the reduced logistic regression model. The parameters estimate the log odds of interest in skills training. Coefficients that are negative indicate that the presence of this indicator or an increase in the variable is associated with a decrease in the odds of interest in skills training.

Table 4: Parameter Estimates for the Logistic Regression Model

Variable	REDUCED MODEL	STANDARD ERROR	Probability
Intercept	-1.2385	.4473	.01
BLACK	.8057	.2770	.00
AGE	-.0209	.0086	.02
EDUC3	.4962	.2267	.03
LABORER	-.8606	.2352	.00
PROX1	.6884	.2195	.00
AFFECTED	.7692	.2170	.00
STANDARD	2.0597	.2488	.00
NEWJOB	1.1126	.2239	.00
Model -2 LOG L	290.4 w 8 d.f.		
R-Square	.3493		

The reduced model includes only the significant variables from a previously estimated full model (data not shown). These are: BLACK, AGE, EDUC (post high school), LABORER, PROX (proximity to technical school), AFFECTED (know a householder affected by the economy), STANDARD (training would improve standard of living) and NEWJOB (interest in training depends upon a new job). The overall fit of this model is similar to the full model. A Chi-squared test indicated that the elimination of other variables does not appreciably affect the overall fit of the model (reduction in chi-square is 3.90 with 8 degrees of freedom, which is not significant). The signs or size of the coefficients do not change from those in the full model, which gives us confidence that the reduced model is reasonable.

The reduced model allows for a simpler look at the key variables that influence interest in skills training. Table 5 is a prediction table based on the coefficients in the model. It includes various combinations of the independent variables that predict the logit, the odds ratio, and a probability level associated with those combinations. The first combination reflects a high probability for interest in skills training. This would be a worker in the rural South, African American, age 25, with a post high school degree, not a laborer, who lives close to a technical school, knows someone who has been negatively affected by the economy, feels that skills training would improve his/her life, and feels that his/her interest in skills training would depend upon a job. The predicted odds ratio for this person is nearly 65, with an associated probability of .985. The model predicts that this person would be highly likely to seek skills training. In contrast, a white person, age 50, with no post high school degree, a laborer, who doesn't live close to a technical school, has not been adversely affected by the economy, and does not have positive perceptions of the value of skills training, would have a probability level of seeking skills training of .041, or nearly zero.

Another contrast shows the importance of the perception variables in the model. The values for the other variables are held at the modal categories (or the mean for age), and if the perceptions are positive, the predicted probability of interest in training is .909. If the worker doesn't feel as if skills training would be valuable, or doesn't see any benefit unless training is tied to a job, the probability drops to .295. The odds ratio for these two contrasts show that those holding positive perceptions of benefits are nearly 24 times as likely to express interest in skills training. The final contrast in Table 5 shows the effect of education and profession (skilled or unskilled laborer or not). For this contrast, the perception variable that interest is tied to a new job was held at *Yes*. Then, those who have a higher level of education and are not a laborer have a predicted probability of .561, while lower educated laborers have a predicted probability of .247. The odds ratio for this contrast is nearly 4 times more likely for educated nonlaborers.

Table 5: Prediction Table from the Logistic Regression Model

VARIABLE	HIGH PROBABILITY	LOW PROBABILITY	IMPACT OF PERCEPTION VARIABLES		IMPACT OF EDUCATION AND PROFESSION	
African American	Yes	No	No	No	No	No
Age	25	50	39	39	39	39
Post High School Degree	Yes	No	Yes	Yes	Yes	No
Skilled or unskilled laborer	No	Yes	No	No	No	Yes
Close to technical school	Yes	No	Yes	Yes	Yes	Yes
Affected by economy	Yes	No	No	No	No	No
Would improve standard of living	Yes	No	Yes	No	No	No
Interest tied to new job	Yes	No	Yes	No	Yes	Yes
Logit	4.171	-3.144	2.303	-.869	.244	-1.113
Odds	64.767	.043	10.007	.419	1.276	.329
Probability	0.985	0.041	.909	.295	.561	.247

CONCLUSIONS

Increasingly, workers will be required to acquire new skills to remain competitive in the workplace. New technologies and employers searching for increased workforce productivity demand new skills. For all workers, the acquisition of new skills requires an investment in time and often money, but workers in rural areas face additional obstacles in terms of the availability of useful training sites. This research has focused on helping to understand the demographics, motivations, and community factors that lead to interest in skills training by workers in the rural South.

Data from a regional survey of the rural South show considerable interest in new skills training by those already employed. Nearly 45 percent of workers expressed strong interest in new skills training, while interest was far lower for nonworkers (27%). Results from the survey also indicated that workers recognize barriers to acquiring new training in terms of cost of the training, loss of income, time commitment, and travel time. Not surprisingly the importance of these barriers was higher for those already working versus those not currently employed.

The second part of the paper explored interest in skills training in a multivariate framework. Results from a logistic regression show that interest in skills training by the employed is highest for, African Americans, those with higher education levels, workers that are not laborers, and younger workers. These findings were generally expected (with the exception of African Americans). However, factors such as sex, income, and satisfaction with present job opportunities were not significantly related to skills training interest.

At the community level, we found that proximity to a technical school increases the probability of interest in acquiring skills training, while proximity to other schools such as community colleges and universities had less of an impact. Those living within a half hour of a technical school or junior college were twice as likely to express interest in skills training. Surprisingly, knowledge of successful training programs in the region was not significantly associated with interest, nor was the

respondent's perception of an existing need for their skills within their region of residence.

The two most important factors influencing interest in skills training measure perceptions of the value of this training in terms of quality of life and in finding a new job. Workers who felt skills training would improve their quality of life were eight times more likely to be interested. Similarly, workers whose interests were tied to a new job were three times more likely to be interested in skills training. Perceptions of the value of skills training do matter and will influence the demand and participation in this type of training. Most of the rural workforce did not view skills training as leading to a better quality of life, nor as a means of obtaining a new job. This research suggests that increasing the recognition of personal benefits while paying attention to such issues as distance to training would help to further increase the level of interest in skills training in the rural South.

Given the considerable degree of interest by residents of the rural South in training programs, two significant questions for firms are how training might be carried out and what type of partners might a firm develop in designing and implementing a training program. Virtually all states in the South now provide support to larger companies that are relocating to the state for new worker training, but smaller firms may have a difficult time in gaining access to direct state support. At the local level, many of the community colleges and secondary schools are now engaged in providing training support to firms. Most of these institutions are willing to develop courses in conjunction with firms, if the firm will provide employment for graduates. In addition, both secondary and post-secondary institutions will support internship programs. These provide a way for both employer and potential employees to determine if there is the potential for a long-term relationship. In a telephone interview of twenty establishment owners or managers, conducted by Roper Starch, business leaders reported that there was a strong interest in their community in improving school-employer linkages, and that the quality of the training provided by the institutions improved when firms became more involved in the relationship.

Typically, firms are somewhat reluctant to engage in work force training activities because they worry that they will be unable to recover their investment in the worker if the person leaves after being trained for a better job. However, in the rural South, company-sponsored training may be necessary for a number of reasons. The first is that there are major skill shortfalls in much of the labor force, and while most rural southerners are willing to improve their skills they are most likely to do so in an environment where their employer is a participant, because it increases their belief that the training is likely to lead to an improvement in their situation. A second reason is that one of the ways that rural communities evaluate the contribution a firm is making to the community is by the willingness of the firm to make commitments to improve conditions in the community. Workforce training efforts rank highly in this regard. Finally, there may be less potential for workers in the rural South to leave a firm after receiving training because they have such a strong sense of attachment to their family and community. This last factor reduces the potential cost to the firms of undertaking training activities.

Endnotes

[1]Variables included in the original analysis, but were found not to be significantly related to interest in skills training include income, sex, full-time status, job satisfaction, whether the respondent felt his/her skills were needed in the region, and whether they were aware of successful training programs. Models including these variables are not included in this analysis for the sake of parsimony.