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*The Well-Being of U.S. Farm Workers: Employee Benefits, Public Assistance, and Long-Term Effects**

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Nonstandard work relationships between workers and employers have developed in the United States and many other industrialized countries, resulting in a movement away from traditional long-term relationships. Increasingly common nonstandard work relationships include temporary, leased, and outsourced self-employment (Dorman 1998). For many, these jobs represent a form of "precarious employment" (Dorman 2000) which can result in low economic returns to workers and high individual and social costs, such as poor health and the costs of providing public services. Not only do jobs at the bottom of the employment ladder lack employee benefits but the work-related costs not borne by the employer are shifted to the employee or potentially to the public.

Hired farmworkers in the United States have a long history of "precarious" nonstandard employment. Farmworker jobs have short- and long-term positive and negative attributes that can influence worker well-being. The short-run perspective accounts for the farmworker's immediate well-being—a balance of the positive economic attributes of work, the nonmonetary conditions of

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employment (e.g., access to drinking water, water for hand washing, and lavatories), the negative attributes, and the ability of social networks and social or public services to provide what work does not. Short-term positive job attributes include wages, possible monetary bonuses, employer-provided health insurance or health care (solely work related, or both work and nonwork related), worker's compensation, paid and unpaid time off, and unemployment insurance coverage (Larson et al.). Negative attributes include work conditions leading to a higher frequency of traumatic injuries (Myers; McDermott and Lee; Mines, Mullenax, and Saca), the short-term effects of chemical exposure (respiratory problems, eye problems, dermatitis) (Garcia, Dresser, and Zerr; Mines, Mullanax, and Saca; Seiz and Downey, among many others), and musculoskeletal injuries (Mines, Mullenax, and Saca; Villarejo and Baron).

Current employment decisions also may be associated with positive or negative long-term outcomes. Zahniser and Greenwood, for example, suggest that farmworkers with experience in the United States earn higher economic returns when they return to work in the Mexican labor market. Similarly, farmworkers may have the opportunity to acquire additional education in the United States. Alternatively, negative long-run outcomes include permanent disability from musculoskeletal injuries or cancer. These conditions can directly result from farmwork, but also may be attributable to lack of appropriate care when affected.

This paper analyzes the well-being of farmworkers in the United States using measures reflecting short-term and long-term perspectives. Since it is likely that impacts vary within the U.S. farmworker population, three subgroups are differentiated: settled farmworkers who live and work locally within the United States; "international shuttlers" who work in the United States but maintain permanent residence in the origin country; and migrant workers who are not international shuttlers. Increasingly, the U.S. farm workforce has become an immigrant (and very often an unauthorized) workforce (Gabbard, Fernandez-Mott, and Carroll), an issue for workers and employers. The U.S. farm workforce is also composed more of young, solo males connected to the origin country, primarily Mexico (Mines, Mullenax, and Saca). This contrasts to the family-dominated or settled patterns of immigration observed prior to the last decade. The analysis has implications for policy relative to immigrant workers, particularly given recent debate over guestworker legislation (AgJobs).

Data and Estimation Strategy

The National Agricultural Workers Survey (NAWS) data are used for 1993–2000. While the NAWS, commissioned by the U.S. Department of Labor in response to the Immigration Reform and Control Act of 1986 (IRCA), is among the most comprehensive of the surveys that cover U.S. farmworkers, it is not without its limitations. A major drawback of the NAWS is the coverage of only crop workers. In an era when more livestock/dairy farms are hiring workers and particularly immigrants, this is important. However, most of the alternatives to the NAWS data, including the March Current Population Survey (CPS) Demographic File and the monthly CPS microdata file, undercount

migrant and unauthorized workers (Larson et al.). As a result the farmworker sample is less likely to be of Hispanic origin, is older, and is more likely to be settled. The workers represented in the CPS are also more likely to have access to public assistance programs.

Since 1989, more than 2,500 randomly selected crop workers have been interviewed each year as part of the NAWS. In 1999, the sample increased to 3,600 to gather additional data on occupational health, an effort done in conjunction with the National Institute for Occupational Safety and Health (NIOSH). Two advantages of the NAWS data for this paper are that they provide detailed data on (a) employer-provided benefits received and (b) public services accessed over a time period before and after the 1996 welfare reform legislation (Personal Responsibility and Work Opportunity Reconciliation Act of 1996). Data are also available on some long-term positive and negative factors affecting well-being, such as attendance in adult education classes or health conditions that are left untreated.

In the following section, descriptive statistics are provided on selected employer-provided benefits received by farmworkers and participation in major pubic assistance programs over the last two years. The estimation strategy involves three parts. First, models are estimated for farmworker receipt of employer-provided benefits (dichotomous 0,1), including health insurance or paid-for health care in the case of a farm injury, worker's compensation, access to health care for problems unrelated to farming, and unemployment insurance. Because wages and benefits are likely to be endogenous, an instrumental variable approach is used. The AGLS estimator was used in STATA to estimate probit models with the ln(wage) considered endogenous (see Wooldridge; Newey). The IV ln(wage) is based on crop specialization, field occupation, and region. It is posited that employers may offer benefits to attract potential workers while reducing the offered wage. Alternatively, the ln(wage) and benefits received from an employer may be complementary. The estimated models include demographic variables (age, age-squared, education, female, married, Hispanic, and family variables), work experience with same employer, presence of a farm labor contractor (FLC), time period (pre-PRWORA versus post-PRWORA), and both migrant (not international shuttler) and international shuttler status. The estimated models provide an assessment of those factors influencing the likelihood that a worker will receive benefits from an employer who has internalized these costs to enhance worker well-being.

Second, the likelihood that a farmworker's household has received major public program support in the past two years is estimated, using probit models. Gabbard, Fernandez-Mott, and Carroll estimated that 57% of U.S. farmworkers earn incomes below the U.S. poverty line, with higher percentages of migrant workers eligible for support than settled workers. International shuttlers are least likely to be eligible for support. Food Stamps, Medicaid, Aid to Families with Dependent Children/Temporary Assistance for Needy Families (AFDC/TANF), and the special supplemental food program for women, infants, and children (WIC) are considered in the analysis because these programs have the highest levels of participation among U.S. farmworkers, according to the NAWS. Individual (age, education, Hispanic, gender) and family (marital status and number of children under eighteen) also are included in the models.

Finally, the question of long-term effects is explored. Participation in adult education is a possible positive outcome of migration, with greater access to education being used to enhance long-run well-being. The question is whether farmworkers in the United States avail themselves of opportunities to improve future well-being, including education. At the same time, the negative effects of current farmwork on *future* health status and lack of health care are potentially major reasons for long-run declines in well-being. These issues were explored using existing NAWS data.

Results

Table 1 shows that 66% of farmworkers in the NAWS reported that they have access to either health insurance or employer-provided health care. However, workers are unlikely to receive health care coverage for illness or injury incurred away from the workplace. Further, less than half of all workers are covered by worker's compensation (40.41%) or unemployment insurance (46.51%). Table 1 also shows that very few farmworkers in the United States received major public assistance in the form of AFDC/TANF, Food Stamps, Medicaid, or WIC.

Table 2 explores who receives employer-provided benefits that enhance short-term well-being. International shuttlers are more likely to receive employer-provided work-related health insurance or health care, and the presence of an FLC is associated with health insurance/health care receipt. The models generally are consistent with the observation that young, Hispanic workers with fewer years of experience with the employer and very low levels of education are being provided health insurance or health care, either as a signal to attract them to an employer, or to ensure that they have the ability to work productively (i.e., they do not have impaired health status).

Table 1. Farmworker receipt of employer-provided benefits and public program benefits[a]

Employer-Provided Benefit	Annual Average (%)
Work-related health insurance or employer-paid health care	66.14
Nonwork-related health insurance	9.49
Workers' compensation	40.41
Unemployment insurance	46.51
Public program benefits (last 2 years)[b]	
AFDC	1.99
TANF	0.32
Food Stamps	12.69
Medicaid	14.97
WIC	11.21

[a] *Data source*: 1993–2000 National Agricultural Workers Survey (NAWS).
[b] The exact wording of the NAWS question is: Within the last 2 years has anyone in your household received benefits for or used the services of any of the following social programs?

Table 2. Access to employer-provided benefits, NAWS 1993–2000

Variables	Work Health Care	Worker's Comp.	Nonwork Health Care	Unemployment Insurance
Constant	−12.60***	−1.55**	−6.17***	−12.93***
Age	−0.09***	0.02***	0.01	0.04***
Age-squared	0.01***	0.01*	0.01	0.01
Education				
4–7 years	−0.15**	0.11***	−0.01	−0.14***
8–11 years	−0.18**	0.21***	−0.01	0.04
12 or more	−0.57***	0.27***	−0.04	−0.02
Reference: less than 4 years				
Gender	0.48***	−0.01	0.02	0.29***
Marital status	0.01	0.04	−0.02	0.01
Children less than 18 years	−0.11***	0.01	−0.01	0.06***
Hispanic	0.14*	−0.30***	−0.24***	0.03
Years (post-1996)	−1.14***	−0.16***	−0.63***	−1.21***
Years with employer	−0.04***	0.02***	0.01*	−0.01
FLC	0.21***	−0.39***	−0.27***	0.09*
Ln(wage)[a]	8.78***	0.76	3.04***	6.98***
International shuttlers	0.18***	−0.35***	−0.27***	−0.21***
Migrants (not inter.)	0.01	0.01	−0.29***	0.07

*** significant at 0.01; ** at 0.05; and * at 0.10.
[a]Instrumental variables used. Ln(wage) a function of type of job variables (pre-harvest, harvest, semi-skilled, and supervisor), crop (fruits and nuts, vegetables, horticultural crops, and field crops), and regions (East, Southeast, Midwest, Northwest, Southwest and California).

The likelihood that international shuttlers will receive any kind of public assistance is lower than for other types of farmworkers (table 3). But Hispanics who are married and have children are more likely to access these programs, enhancing their well-being in the short run and likely in the long run as well. Further, more education contributes to a greater likelihood of receipt or use of public assistance programs, a frequent finding. The likelihood of receipt of Food Stamps is found to increase with age, while Medicaid is more likely to be used by farmworkers at the ends of the age spectrum and WIC is generally used by the young, an expected result.

Finally, being an international shuttler does not enhance the likelihood of long-term well-being (table 4), based on the exploratory measures used here. Both participation in adult education programs and medical treatment for injury or illness are less likely among international shuttlers. The analysis also shows that participation in adult education is less likely among Hispanic farmworkers, and those who have worked more years with the same employer. The likelihood of medical treatment is greater among those farmworkers who are older, those with at least a high school education, and among those who are married with children. These are the characteristics of the settled farmworker population in the United States. More years with an employer contribute to a greater likelihood of medical treatment for injury or illness.

Table 3. Receipt or use of public assistance by farmworker households, NAWS

Variables	Food Stamps	Medicaid	WIC
Constant	−2.29***	−1.54***	−2.15***
Age	0.02**	−0.06***	−0.04***
Age-squared	0.01	0.01***	0.01
Education			
4–7 years	0.02	0.02	−0.02
8–11 years	0.21***	0.18***	0.11***
12 or more	0.10**	0.10**	0.06
Reference: less than 4 years			
Gender	0.30***	0.24***	0.11***
Marital status	0.14***	0.41***	0.62***
Children less than 18 years	0.30***	0.41***	0.42***
Hispanic	0.31***	0.52***	0.60***
Years (post-1996)	−0.39***	0.04	0.19***
International shuttlers	−0.19***	−0.53***	−0.54***
Migrants (not inter.)	0.53***	−0.03	−0.10***

*** significant at 0.01; ** at 0.05; and * at 0.10.

Table 4. Upward or downward movement in well-being status, NAWS

Variables	Adult Education	Medical Treatment
Constant	−5.51***	−1.12*
Age	−0.05***	0.01*
Age-squared	0.01***	0.01***
Education		
4–7 years	–	0.01
8–11 years	–	0.03
12 or more	–	0.09*
Reference: less than 4 years		
Gender	0.36***	0.53***
Marital status	−0.08***	0.04***
Children less than 18 years	0.02***	0.08***
Hispanic	−0.46**	−0.15***
Years (post-1996)	−0.53***	–
Years with employer	−0.02***	0.01**
International shuttlers	−0.52***	−0.30***
Migrants (not inter.)	0.09**	−0.05

*** significant at 0.01; ** at 0.05; and * at 0.10.

Conclusion

A short-term perspective shows a clear differentiation between those who engage in international shuttling and those who do not. Employers appear to use work-related health insurance and health care provision to ensure worker productivity or attract immigrant workers. With the exception of the provision of work-related health insurance or care, international shuttlers generally do not receive other benefits—from their employers, through public services, or through long-term opportunities for betterment—to enhance their well-being. Further, an exploration of their actual use of health care when injured or ill shows that even in this aspect, they are more likely to be among those who suffer the long-term consequences that the lack of health care implies. In comparison, settled farmworkers are more likely to receive employer-provided benefits as well as public assistance, although even this population is less likely to participate in public assistance programs than is possible. Finally, the results show that during the late 1990s, a period of prosperity for the United States, the likelihood of receipt of employer-provided benefits by farmworkers declined across all forms of benefits. Further assessment of this effect is needed.

Economic research to date on the "precarious" employment of farmworkers in the United States has largely focused on farmworker wages, income, and other similar outcomes. This research has also largely focused on short-run effects. Further exploration of both the short- and longer-term effects of farm work on the well-being of farmworkers is clearly warranted.

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