CRITICAL ISSUES IN AGRICULTURAL LABOR MARKETS

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Hired farm and family workers, including owner-operators, are two distinct components of agricultural labor markets. Primary emphasis in this paper is given to the hired component, but some observations on the family component are also presented. The two major issues related to agricultural labor markets at this juncture are immigration and the forthcoming 1985 agriculture bill. The former impacts most directly on the hired component while the latter will exert the greatest influence on the family component. A third issue influencing each of the labor market components is international trade. Questions related to the structure of agriculture and labor markets are also briefly addressed.

Before considering the issues set forth, summary data on agricultural labor markets from the *1982 Census of Agriculture* (United States Department of Commerce) and *The Hired Farm Working Force of 1981* (United States Department of Agriculture, 1983) are presented in the following section. An important point to be made at the outset is the remarkable transformation in agricultural labor markets that has taken place over the past 30 years, dramatically reducing the number of farm workers. This has nowhere been more dramatic than in the South. It is now apparent that the combined forces of technology and nonfarm labor policy have been major stimuli for this transformation (Cogan). An even more fundamental component is the rising value of human time. And, it is this rising value of time which will continue to transform the labor market.

LABOR AS A PART OF AGRICULTURE

The *1982 Census of Agriculture* gives some information on the current role of labor in agriculture. The Census data reveal that 38 percent of farms in the South hired labor in 1982 as compared to 39 percent for the United States as a whole.[1] Seven percent of southern farms utilized contract labor as compared to 6 percent for the United States (United States Department of Commerce). Selected items are summarized in Table 1 for the South and the United States.[2] Although there is a disproportionate concentration of labor expenditures in fruits, vegetables, and specialty crops (27 percent) relative to the number of farms, the proportion is considerably less than for the United States (37 percent). An important difference between the South and the United States is the greater importance of field crops. These represent 20 percent of farms in the South as compared to 11 percent in the United States. The labor expenditure proportions are roughly the same in each case as the number of farms. Fruit, vegetable and specialty crops plus field crops represent 48 percent of the labor expenditure in the South and 24 percent of farms.

Table 2 summarizes the leading states in terms of labor expenditures. Three of the top six states are in the South: Florida, Texas, and North Carolina. The South with 40 percent of the farms represents 31 percent of total labor expenditures in agriculture (United States Department of Commerce). California clearly overshadows all other states with 23 percent of labor expenditures. Eliminating California from the data, the South

[1]Throughout this paper the South includes Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

[2]Comparisons for the United States in 1978 may be found in Coltrane.

TABLE 1. PERCENT DISTRIBUTION OF FARM SALES AND LABOR EXPENDITURES BY TYPE OF FARM, THE SOUTH AND UNITED STATES, 1982

| Item | SIC classification[a] | | | | | |
	(016,017,018)	(013)	(021)	(024)	All others	All farms
	.... *South*					
Farms	4.8	19.7	48.3	2.6	24.6	100.0
Farms with hired labor	5.0	27.0	37.6	4.5	25.9	100.0
Farms with contract labor	13.0	20.1	40.1	3.2	23.6	100.0
Value of farm sales	9.2	15.8	25.4	8.7	40.9	100.0
Labor expenditures	26.8	21.1	15.0	8.0	29.1	100.0
	.... *United States*					
Farms	6.4	11.3	40.5	7.3	34.5	100.0
Farms with hired labor	8.4	14.0	32.7	11.9	33.0	100.0
Farms with contract labor	22.1	13.7	31.5	5.1	27.6	100.0
Value of farm sales	10.3	8.0	30.3	13.8	37.6	100.0
Labor expenditures	36.5	12.8	14.2	11.7	24.8	100.0

[a] Codes are represented as follows: SIC 016, vegetable and melon; SIC 017, fruit and tree nut; SIC 018, horticultural specialty; SIC 013, field crop except cash grain; SIC 021, beef cattle, hog, sheep, and goat; and SIC 024, dairy.
Source: United States Department of Commerce.

represents 41.5 percent of farms in the remainder of the United States and 40 percent of labor expenditures, suggesting that southern agriculture is similar in labor concentration to the remainder of the United States.

TABLE 2. LABOR EXPENDITURES, SELECTED LEADING STATES, THE SOUTH AND UNITED STATES, 1982

State	Expenditures	Percent of United States
	($000)	
California	2,233,089	23.4
Florida	681,742	7.1
Texas	568,796	6.0
Washington	346,601	3.6
Wisconsin	289,142	3.0
North Carolina	266,111	2.8
South	2,948,210	30.9
United States	9,544,953	100.0

Source: United States Department of Commerce.

The Hired Farm Working Force of 1981 indicates that there were 1,004,000 persons in the South who did hired farm work at some time during the year, representing 40 percent of the nation's hired farm work force as estimated by USDA (1983). Their average annual combined farm and nonfarm earnings were $3,786, somewhat less than the average for all hired farm workers of $4,299. Southern farm workers appear to display the same degree of seasonality as farm workers for the nation as a whole: 40 percent had fewer than 25 days of farm work. By comparison, other federal regions deviated from the average considerably. The southern region also accounted for 37 percent of the migratory workers.

CRITICAL ISSUES

Immigration

Questions related to foreign workers in the United States have been prominent for the past few years, not only in agriculture, but in the entire labor force. Given that most foreign workers are in the United States without the sanction of the United States government, we have no reliable data on the number of people involved. It is acknowledged to be large; the estimate given by the Select Commission on Immigration and Refugee Policy was 3.5 to 6 million in 1978 (Coltrane, p. 4). The past two sessions of the 98th Congress have devoted considerable effort to the passage of an immigration bill. The Simpson-Mazzoli bill (Senate bill 529 and House bill 1510) was an effort seen by proponents to regain control of our borders. The primary provision through which this was to occur was through the placement of employer sanctions on the hiring of undocumented workers. Employers found to have hired undocumented workers without having checked the employee's documents would have been subject to fines. Continued violations could subject the employer to jail terms. With the reduced availability of jobs, the incentive for aliens to enter the country illegally was argued to be diminished. Although the bill passed the Senate in the first session, it did not pass the House until summer of the second session, and then only by a four vote margin. Nevertheless, the bill did not survive the conference committee.

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Legal Foreign Workers

The existing Immigration and Nationality Act contains provisions for the admission of foreign workers for temporary work when unemployed domestic persons cannot be found to do the work (sections 101 (a)(15)(H)(ii) and 214(c) of the 1952 Immigration and Nationality Act). This program, administered jointly by the Departments of Justice and Labor, is commonly referred to as the H-2 program. Although the program does not distinguish between agricultural and nonagricultural work, agricultural workers have been the primary occupational group in the program. Within agriculture, the largest user has been Florida sugarcane growers. Approximately 8 — 10,000 workers from Jamaica and a few other Caribbean islands have been brought to Florida annually to hand harvest the sugarcane. Other major agricultural employer groups that have utilized the program are apple growers in New York, the Virginias, and the Northeast, sheepherders in the mountain states, and more recently, tobacco growers in Virginia (United States Department of Labor). Table 3 summarizes the H-2 data for the South and the United States. Two-thirds of the H-2 workers in agriculture and logging are employed in the South.

The H-2 program is not large, involving 19,506 workers in 1983, particularly in comparison to the perceived number of illegal workers (United States Department of Labor). Nevertheless, it provides a useful window to observe a more extensive program as an alternative to the existing illegal problem. The existing regulations of the H-2 program require the petitioning employer to document through an extensive job search in conjunction with the United States Employment Service that there is an inadequate supply of domestic workers to fill their expected number of temporary jobs. (See McCoy for a more complete statement of the procedure for obtaining H-2 workers.) An adverse effect wage rate (AEWR) is determined for each state using H-2 workers. This is a minimum wage rate that can be paid to both the foreign and domestic workers, wherever foreign workers are employed. The AEWR is above the federal minimum wage; the highest rate is for Florida sugarcane which is $5.26 per hour for the 1984-85 season. The avowed purpose of the AEWR is to set a wage rate at which similarly employed domestic workers are not adversely affected. Employers of H-2 workers also provide housing, meals, and roundtrip transportation. Moreover, they are required to offer the same benefits to any domestic employees.

The role of the AEWR in the agricultural labor market is crucial in determining the effects of the program. There is considerable evidence that the supply of agricultural workers is responsive to changes in the wage rate. Tyrchniewicz and Schuh's work on the overall agricultural labor market suggested that the supply was responsive to wage rates. Wise found a supply elasticity specifically for seasonal harvest workers in California strawberries and melons of around 3. Emerson et al. found a supply elasticity of between 3 and 6 for citrus harvest workers in Florida. Morgan and Gardner also found labor supply elasticities greater than unity for seasonal agricultural workers in a study of the Bracero program. The presumption of the effort to determine an AEWR appears to be that there is a fixed number of workers available, i.e., an inelastic supply. Payment below the AEWR would result in domestic workers being worse off, presumably through depressed wage rates or displacement. And since H-2 employers are required to hire any qualified domestic workers at the AEWR, the implication is that the supply curve for domestic harvest workers is perfectly inelastic.

An alternative interpretation of the labor market and H-2 program more consistent with the empirical evidence on the supply and demand for harvest workers is that the AEWR is an administratively set wage rate which

TABLE 3. H-2 WORKERS IN AGRICULTURE, SELECTED STATES, THE SOUTH AND UNITED STATES, 1983

State	Apples	Peaches and apples	Sugar	Tobacco	Cabbage	Other	Total	Percent of United States
Florida			9,610				9,610	49.3
Maryland	329	130					459	2.4
Virginia	954			1,092	99		2,145	11.0
West Virginia	726						726	3.7
South	2,009	130	9,610	1,092	99		12,940	66.3
percent	15.5	1.0	74.3	8.4	0.7		100.0	
United States	6,225	130	9,610	1,092	99	2,350	19,506	
percent	31.9	0.7	49.3	5.6	0.5	12.0	100.0	

Source: United States Department of Labor.

prevents the labor market from obtaining a market clearing wage and employment level. Given an upward sloping supply curve, the excess demand for foreign workers at the given AEWR, W_1, implies that the AEWR was set too low, Figure 1. In the absence of the
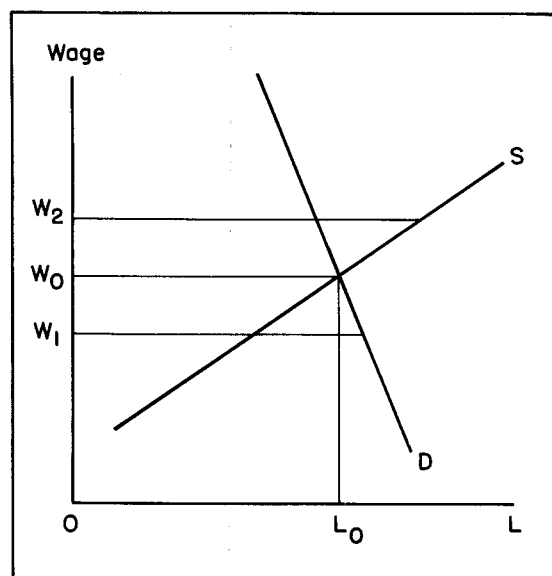

Figure 1. Farm Labor Market and AEWR.

AEWR, there is every reason to believe that the labor market would clear at an equilibrium wage rate of W_0 and employment level of L_0, consisting of only domestic workers. Whether the demand curve is perfectly inelastic or if the demand for labor is responsive to wage changes as drawn is not crucial to the argument. Obviously, if there is some responsiveness on the demand side, employers reallocate their factors of production in the short run or reduce their output in the longer term. Clearly, an administratively set AEWR such as W_2 above the market clearing wage of W_0 would be ineffective since there would be no excess demand for foreign workers.

At this point, the analysis is only qualitative and does not imply how high the market clearing rate would be. More specific supply and demand elasticities for the labor markets in question would be required to determine the market clearing wage. This might be feasible in some H-2 labor markets where both domestic and foreign workers are employed. But the largest of the H-2 labor markets, Florida sugarcane, has a history of not employing any domestic cane cutters. This pre-

sents a serious dilemma for establishing how high the wage rate would have to be to attract any domestic workers, let alone an adequate number for the harvest.

The important point for policy purposes is that if a positively sloped supply curve is assumed for harvest labor, the determination of an AEWR at an appropriate wage rate is misguided. Any AEWR which results in foreign workers entering has been set too low, and in principle, results in both domestic worker displacement and wage depression. If it is set sufficiently high to prevent displacement and wage depression, there is no need for it since the jobs would be filled by domestic workers. Much of the dispute concerning the H-2 program over the years has been on the appropriate means for setting an AEWR. Given the above discussion, this is a futile effort and asks the wrong question.

A more appropriate question is what are the gains and losses associated with foreign worker programs. Rivera-Batiz obtained qualitative results for a two sector general equilibrium model. He found that immigration turned the functional distribution of income against labor and toward nonlabor inputs. When distortions due to tariffs were present, income was redistributed from domestic labor to immigrant labor. Two empirical studies approach the welfare questions, although neither one is from a general equilibrium perspective. The Morgan and Gardner work is one such effort with respect to the Bracero program. A more recent effort was by Mehra on the H-2 program in Florida sugarcane.

The Morgan and Gardner study considered agricultural labor markets in the Bracero states during the Bracero years. Taking account of gains to consumers and losses to domestic workers, a gain to U.S. residents of $46 million per year was estimated to have been generated as a result of the Bracero program. They hazard a "guesstimate" of the gains to Mexico resulting from the increased earnings of Braceros to have been $136 million per year. Their estimated total welfare gain for both countries is $182 million per year. This is an estimate of economic gains resulting from labor migration after deducting losses to domestic workers (pp. 403-4).

Mehra's study of the H-2 program in Florida sugarcane differs in that it cannot determine the effects on the domestic labor market. Nevertheless, a number of important insights on the operation of an H-2 program are provided. The approach taken is a political-eco-

nomic model in which the effort is to combine the economic interests associated with the sugar commodity program in addition to the H-2 labor program. A particularly important contribution of the Mehra study is the analysis of the labor market. Under the H-2 program, the producer associations contract with the West Indian Regional Labor Board. Under the terms of the program, the labor employed under the contract can work only for producers in the association; they are not free to accept work from employers outside the agreement. Since these producers are for all practical purposes the only potential employers of the labor, the labor market is considered as a monopsonistic labor market. As uncommon as monopsonistic labor markets are, they have some important implications for H-2 programs. First, the marginal factor cost curve lies above the labor supply curve with the equilibrium occurring at the intersection of the value of marginal product curve and the marginal factor cost curve. For normally shaped supply and demand curves, this implies a quantity of labor less than would be obtained under competitive markets and a wage rate below the competitive wage. Superimposing on this monopsonistic structure an administratively determined AEWR which may in addition be influenced by interest groups presents a particularly interesting problem.

The location of the AEWR with reference to the intersection of the supply and demand curves has important implications for the effect of raising the AEWR. If the AEWR is above the intersection, an increase in the AEWR would result in a reduction in employment (moving up the demand curve) and most likely a redistribution of quasi-rents from producers to the foreign workers. But if the AEWR is originally below the intersection of the supply and demand curves, then increasing the AEWR increases returns to both foreign workers and employers (at least up to the point of intersection of the supply and demand curves). Although the intersection of the supply and demand curves is not observable in a monopsonistic market, Mehra argues on the basis of her estimated supply and demand curves that the intersection is above the AEWR. Thus, modest increases in the AEWR result in increased returns to both employers and workers. Her findings were that net quasi-rents accruing to producers as a result of the monopsonistic structure (due to the H-2 program) relative to a competitive

market were $18.8 million in 1981. This should be compared to worker earnings of $39.9 million in the same time period (p. 130).

While the sugarcane case demonstrates gains to both employers and workers, these must clearly result in large part from the product market distortion. There is no product price effect by which consumers can gain since the commodity price is supported above the market level. Additional work on the H-2 program in less protected commodities such as apples underway at Florida in cooperation with USDA should yield some additional insights into the program's welfare effects.

Illegal Foreign Workers

The common border between the United States and Mexico separates high and low income countries. The vast difference in wage rates between the two countries amounts to approximate equality of daily rates in Mexican agriculture with hourly rates in U.S. agriculture (Huffman, 1984). This divergence across a common border creates a considerable incentive to migrate to the United States for temporary work. One study has estimated that about half of the Mexicans working temporarily in the United States are employed in agriculture (Ranney and Kossoudji). Evidence of the current importance of illegal aliens in agriculture was the special provision in the Simpson-Mazzoli bill for a transitional foreign worker program. During the first year, growers were to have registered the number of aliens needed at the peak season. Work permits would be provided for that number of workers. In subsequent years, growers would be eligible for one-third fewer alien workers each year. By the fourth year, they would have to employ only domestic workers or apply for foreign workers through an expanded H-2 program. The purpose of the transitional program was to ease the reliance on illegal foreign workers and allow employers to adjust to a legal work force.

A significant provision added to the House Bill (and not a part of the Senate Bill) was a guest worker program for growers of perishable crops. This would have allowed around 500,000 alien workers into the country for up to 11 months each year to harvest perishable crops. A significant aspect was that the guest workers would have been free to move from one employer to another within a specified agricultural region. Moreover,

growers were to have been eligible to apply for workers under this program up to 72 hours in advance of their need. Although the bill was never reported out of conference, the guest worker program was eliminated in the conference committee.

In the absence of distortions in the United States and Mexican economies, the traditional gains from trade argument for both countries would apply to the mobility of labor. The distortions in and between the two economies are marked, however. Most significant among the distortions in this context is the minimum wage in the United States. This floor is so high relative to the Mexican labor market that totally uninhibited migration would undoubtedly result in even more extensive migration to the U.S. labor market. Distortions between the two countries abound in the product markets as well. There are both tariff and nontariff restrictions on selected fresh fruits and vegetables entering from Mexico. Likewise, there are restrictions on capital and manufactured goods imported to Mexico from the United States.

Huffman (1984) considers the illegal migration between the United States and Mexico in the context of a 3-factor, 2-commodity model of trade set forth by Jones. He concludes on the basis of this model that large scale migration of unskilled labor to the United States would result in large gains to U.S. owners of capital, small gains to U.S. skilled laborers, and losses to unskilled U.S. domestic laborers (p. 15). He adds that adding protection to U.S. producers of fresh winter fruits and vegetables from Mexico may improve the welfare of Mexican labor, particularly where Mexican immigrant labor is employed.

The question remains concerning what would happen if the border were to be effectively closed in the absence of a greatly expanded foreign worker program, or if certain existing temporary worker programs were to be reduced or terminated. The result of terminating the Bracero program offers some insights. The year following termination witnessed a substantial increase in the number of domestic migratory farm workers in the United States (USDA, 1977). At the same time there was an increase in the wage rate for hired farm work. One of the largest users of the Bracero program, California tomato growers, rapidly adopted mechanized tomato harvesters. Although there was a substantial increase in the migratory work force in the

year following termination of the Bracero program, the number of domestic migratory workers had fallen by more than one-half by 1970. This history clearly suggests the potential for labor market adjustments.

Estimates for migration response by domestic farm workers at the micro level offers further evidence that the farm worker population is highly responsive to wage differentials (Emerson, 1984). In particular, the decision to migrate for farm work is not at all a haphazard choice. Examination of micro level farm worker data within a self-selectivity model strongly suggests that those workers who have a comparative advantage in the types of work available in the migratory stream are, in fact, the ones who choose to participate in the migratory stream. The implication of this result for foreign worker questions is that a dramatic increase in domestic migration could be expected as a result of a sharp reduction in the number of foreign workers in agriculture. There is no reason to believe that they would not again respond to the expanded wage differentials resulting from an excess demand for labor. Whether or not the product markets could withstand the higher labor cost is another question.

International Product and Labor Markets

International agricultural product markets have received increased attention from agricultural economists over the last few years with the increased exposure to world markets. With the advent of floating exchange rates, individual governments have much less control over their domestic economies than in an era of fixed exchange rates. Different sectors of the economy expand or contract with their ability to compete in foreign markets. During the 1970s, U.S. agriculture expanded dramatically with its rising flow of exports. But as the value of the dollar has continually risen into the 1980s, the agricultural sector is having more difficulty entering the world market.

Recent reports indicate the fragility of our position in the mainstay of our agricultural exports: wheat. Processors are looking to the world market to obtain wheat when the United States is the world's major supplier (Wall). Obviously, this cannot all be "blamed" on the strength of the U.S. dollar. When a strong dollar is combined with effective commodity price supports, the result is a diminished

role in world markets in addition to increasing governmental cost to support the commodity price. As the dollar becomes sufficiently strong, the United States not only supports the price for domestic producers, but the price for producers around the world as well.

The variations in agricultural production due to the ebb and flow of exports impact directly on agricultural labor markets. As the demand for exports falls, the factor markets must adjust. Schuh has argued that labor markets associated with major export sectors bear the major adjustment cost of monetary policy. For most major export commodities, e.g. the grains, strain is placed on returns to the owner-operator since the hired component is less important. Consequently, inefficient operators would be expected to face increasing financial difficulty, as has happened. Adjustment to this changed economic environment requires fewer, or a different allocation of resources, including managerial labor to produce these commodities. The result is pressure on farm operators to leave the agricultural sector.

Other commodities such as fruits, vegetables, and livestock products, although not major export products, are also affected, becoming more susceptible to import competition. Nevertheless, the effect on the factor market is the same: a reduced demand for labor (as well as other production factors). Labor markets associated with fresh fruits and vegetables tend to have a higher proportion of hired to family labor, and thus are more easily adjusted. The adjustment problem for the affected individuals is no less severe, particularly when participants in this labor market often have the fewest alternative employment opportunities.

The pure theory of trade as set forth in the Stolper-Samuelson theorem on factor price equalization states that under appropriate conditions, trade in products can substitute for the mobility of factors (see Mundell, for example). The major applications of the theory of trade have been on product movement under the presumption that factors of production are not mobile between countries. Work in the late 1970s as developed and presented by Bhagwati and Brecher started to shift the emphasis to factor mobility, and particularly to the foreign ownership of capital and the mobility of labor. As noted in the previous section, applications of the approach in seasonal agricultural products have

been presented by Emerson (1982) and Huffman (1982, 1984).

The seasonal production of fresh fruits and vegetables remains highly labor intensive at harvest time, requiring large amounts of labor over a short period of time. The trade models, as indicated in the previous section, suggest that restrictions to trade in these products place pressure on the labor market. An excess supply of labor develops in countries such as Mexico; an excess demand for labor is created in the United States. As a result, there is an incentive for labor to migrate from Mexico to the United States for seasonal work.

Although the previous section addressed distributional questions of international migration and trade restrictions, there still remain a number of questions about the overall welfare effects. Sugar is a curious case with extensive product market protection and simultaneous use of legal foreign workers. Sugar is one of the most widely produced commodities around the world, including the Caribbean countries from which the workers migrate to Florida. Fresh winter fruits and vegetables, where many illegal foreign workers are believed to be employed, are also produced in the same countries from which the workers migrate. Further empirical studies of international product and labor markets are needed to better understand the welfare effects of this interchange.

Agricultural Policy

U.S. farm policy can be viewed as having two primary objectives. One is to protect the farmer against the price risk associated with the uncertainties of weather in conjunction with the recognition of generally inelastic product demand. The other is to improve farm income. Farm policy, implemented primarily as commodity policy, has had its primary impact on the well-being of farm families rather than the hired component of the labor force. In reviewing the relation between farm policy and agricultural labor markets, Gardner concluded that tobacco was one of the few commodities in which commodity policy had impacted on the hired agricultural labor market. Elimination of the tobacco program could be expected to result in quite sharp wage increases in the short run (p. 462). Most of the remaining major commodity programs are in products where the hired component is not a major element as it is in tobacco.

With the expansion of export markets in the 1970s and the rising value of land, there was a great deal of expansion in U.S. agricultural capacity. At the same time, there was reduced dependence on commodity programs. Following the efforts to stem inflation, the rising value of the dollar has diminished export markets and the era of continually rising land values has ended. The type of policy response required to address the current problems of agriculture depends on the nature of the "farm problem." Gardner suggests that the farm problem is best characterized as a cyclical adjustment problem rather than a chronic problem (pp. 454-6). The agricultural sector is greatly influenced by macroeconomic variables such as interest rates, inflationary expectations, and international exchange rates. As such, the unanticipated and abrupt changes in the economy in the 1980s have been a major shock to the agricultural sector. Moreover, due to the time lag in agricultural production, movement to a new equilibrium requires considerable time. The important point, however, is that viewing the problem as cyclical calls for different policies than if the problem were perceived to be a chronic one. In particular, temporary adjustment policies are in order rather than permanent commodity policies.

The evidence is clear that there has been a dramatic reduction in farm income. Net farm income for farm operator families in 1983 was $6,793, the lowest level since 1972. During the interim, it was in excess of $10,000 for 5 of those years (USDA, 1984, p.74). Basic price theory suggests the result of this change, namely exit from the industry by high cost firms. With 40 percent of the farms, Table 1, the southern region could bear a large part of the adjustment. The implication is an excess supply of operator and family labor in agriculture until the adjustment process has been completed. There is no question that this is a painful process for those involved; adjustment policies to ease the transition are called for here just as in any other sector of the economy. Past experience in agriculture suggests that measures to hold resources in agriculture only prolong the sectoral income problems.

If the 1985 farm bill is an effort to return to a more market oriented agriculture, even greater stress is likely to be placed on entrepreneurial resources devoted to commodities currently supported through price supports or deficiency payments. Given the high cost of commodity programs in recent years, it would appear that these programs will be modified to reduce their cost. Again, this will call for a transfer of entrepreneurial labor out of agriculture.

The hired component of the agricultural labor market is also likely to be affected by this shift as well. During the 1970s, one of the changes that took place in this market was an increase in hired farm labor employed in the grains (Fritsch). In the advent of a reduction in support of many of these commodities, a reduction in demand for hired farm labor in the grains could be expected.

Structure of Agriculture

Former Secretary Bergland's focus of attention on the structure of agriculture continues. The USDA summary report, *A Time to Choose,* offers the prediction that there will be an increase in the use of farm labor (p. 147). I have argued elsewhere that I see little basis for this conclusion (Emerson, 1983). The predicted increase appears to be based on the presumption that there will be a drastic reduction in the production of new knowledge for human resources to process and upon which to make decisions, i.e. a static environment. This is in conflict with reports of developments in novel applications of microprocessors, robotics, microbiology, and genetic engineering in agriculture. The theory of human capital suggests that an increase in knowledge and information increases the value of human time (Schultz). Increasing the value of human time implies a continued reduction in the quantity of labor demanded in agriculture rather than an increase as suggested in the structures report. Moreover, it implies a continuing trend toward higher skilled labor in agriculture.

An integral component of this argument is the relation of the agricultural and nonfarm labor markets. The two markets have moved closer together following the massive exodus from agriculture in the 1950s and 1960s. This is evidenced most convincingly by the high participation in nonfarm labor markets by people in agriculture. Off-farm income of farm operator families has been steadily rising; in only 2 years since 1966 has farm income exceeded the off-farm component of farm operator family income. For the most recent year, net farm income was only 28

percent of total farm operator family income (USDA, 1984, p. 73). The continued integration of the farm and nonfarm labor markets can be expected to maintain reasonably similar income earning possibilities for the two sectors.

CONCLUDING REMARKS

In summary, the most important issue affecting agricultural labor markets in the South as well as the United States over the near future is foreign workers. Restrictive changes in the current *de facto* immigration policy could have significant short term repercussions for agriculture. Over the longer term, the agricultural sector would be expected to adjust to the new set of conditions through a combination of new technology and a shift away from labor intensive crops. The advisability of expanding legal foreign worker programs should be evaluated within a broader context than in the past. The issue to be addressed is of a general equilibrium nature. As economists, we need to determine whether or not economic welfare is enhanced through the presence of foreign workers after the product and factor markets have adjusted across the economy.

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