ENTREPRENEURSHIP, SANCTIONS, AND LABOR CONTRACTING

Leo C. Polopolus and Robert D. Emerson

Abstract

Entrepreneurs innovate their individual business organizations not only to deal with production and price risks, but also to cope with the risk of sanctions or penalties imposed by society's laws and regulations. More specifically, labor-intensive agricultural firms, faced with potentially large fines for violation of immigration and labor laws, increasingly modify the organization of their firms by shifting the management of routine seasonal labor jobs to independent farm labor contractors. The use of labor contracting is further intensified because of the effectiveness of labor contractors in the recruitment of illegal aliens.

Key words: entrepreneurship, sanctions, labor contracting, farm labor, harvest labor

INTRODUCTION

While economists have developed sophisticated theories and methodologies related to price risk and production risk, there has been scant attention paid by economists to the effect of sanctions or penalties imposed from laws and/or regulations upon firm organization and management. Perhaps more surprisingly, economists have tended to assume certain attributes or aspirations of entrepreneurs, but entrepreneurial behavior is seldom explicitly incorporated into our theory of the firm.

This paper attempts to present an introductory statement on the innovative role of entrepreneurs with intensive and seasonal labor activities when faced with potentially large sanctions for employment of illegal aliens.

Our hypothesis or proposition is as follows: entrepreneurs of labor-intensive agricultural enterprises modify their business organizations to minimize the risk of sanctions (penalties and fines) imposed by labor and/or immigration laws and regulations. These changes in business organization are likely to involve the increase in the use of "independent" labor contractors and the concomitant decrease in the proportion of seasonal agricultural workers hired directly.

An important corollary to our proposition is the following: labor contracting is further intensified when there is a lack of enforcement of the laws and regulations imposing the sanctions. In this situation, labor contractors are more adept at recruiting illegal aliens into seasonal farmwork, have bilingual skills, and understand the migrant labor supply network better than farm entrepreneurs do.

ENTREPRENEURSHIP

From Schumpeter we learn that entrepreneurs obtain profit as a return to their business innovation or entrepreneurship. And Knight informs us that all true profit is linked with risk and uncertainty (Samuelson, pp. 594-595). Schultz further refines the relationship of risk and uncertainty to entrepreneurs, and argues that while risk and uncertainty characterize decisions that entrepreneurs make, risk and uncertainty are present when there is little entrepreneurial activity as well. The important prerequisite for entrepreneurial activity is a dynamic economy (Schultz 1980).

While there are several definitions of profit, a generic definition useful for this discussion is that profit is the return to the entrepreneur for the use of his entrepreneurial ability (Ferguson and Kreps, pp. 674-675). Agricultural firms with labor-intensive enterprises are no different from other businesses in their desire for seeking profit from their entrepreneurial efforts.

Entrepreneurs make non-routine decisions regarding the use of productive resources, including the decision of whether or not to continue production, the amount and type of production, and the production techniques to be employed. Entrepreneurs can be true innovators as they search for and place into action new forms of business organizations, new marketing techniques, and new methods of production. In the context of sanctions and labor contracting, many agricultural firms are creating innovative business organizations in response to a changing economic and legal environment.

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As important as the entrepreneur is to market economics, the concept of the entrepreneur rarely appears in the theoretical core of economics. When entrepreneurs appear in economic analysis, the role attributed to them as businessmen is confined to dealing with risk and uncertainty. The rewards, however, for performing this role are not allowed in general equilibrium theory, for it implies a "zero profit" for this role (Schultz 1975, p. 832).

While the entrepreneur is a stranger in general equilibrium theory, he has been a part of our economic literature for a long time. The entrepreneur appears in the writings of early French and English economists. Schumpeter's theory of economic development confines the entrepreneur's role to activities motivated by profits in the market sector. Schultz reported the work of other economists who attempted to distinguish between the managerial and entrepreneurial functions (1975, p. 833). Recent work by Holmes and Schmitz has carried further the distinction between managerial and entrepreneurial functions in the context of business transfers.

This distinction between managerial and entrepreneurial functions is crucial in the context of labor contracting by agricultural firms with labor-intensive enterprises. The farm entrepreneurs increasingly seek to "contract" out the management chores of routine and seasonal jobs such as harvesting or picking fruit and vegetables. From the writings of Knight, we learn that factor prices, such as wage rates of workers, are more amenable to "contracts" when compared with output prices (Schultz 1980, p. 440).

At issue is the determination of the firm's boundary. The entrepreneur must determine what activities are to be carried out within the firm and which are to be facilitated via contracts or market transactions. In the context of fruit and vegetable production, two extremes may be envisioned. One extreme would be a single firm growing the product, harvesting the product, performing necessary processing for the retail market, and hiring all employees necessary for the activities. This corresponds to the familiar vertically-integrated firm. At the other extreme, separate firms may carry out each of the activities from growing to processing for the retail market, and in particular, a separate firm may be utilized for the harvesting activity. In the former case, the entrepreneur can "fire" workers individually, and in the latter case, the entire crew would be "fired" when the entrepreneur "fires" the labor contractor (Hart and Moore, p. 1119).

The seminal paper by Coase and the reactivation by Alchian and Demsetz focuses on the concept of transaction costs as a determinant of activities conducted within the firm, as opposed to being performed by different firms. Current treatments of this literature may be found in Holmstrom and Tirole, Perry, Tirole, and Williamson. The transactions cost approach argues that the firm exists as an efficient means of conducting transactions, i.e., it is less costly to carry out its transactions internally than through the marketplace. Information plays a prominent role in the transactions cost approach. The balance of information between economic agents is important as is the uniqueness of information pertaining to the transaction. The more unique the information, the more likely it is that the transaction would be internalized to the firm. An example of such unique information would be any type of proprietary trade secret inherent in the transaction.

A related body of work is the principal-agent literature which focuses on the incentive problem for the manager in the context of firm organization. The primary problem for the principal is the design of proper incentives for the agent, or manager, which will achieve the principal's objective. Again, the focus is on information possessed by the different parties to the transaction. The more one-sided the information advantage in favor of the manager, the more likely it is that there will be shirking on the part of the manager, or a tendency to separate this activity from the existing firm.

Much harvesting activity is highly routine work that has little specificity to the firm that owns the commodity, other than the location. Harvesting oranges for one firm requires the same skills as harvesting for another. Likewise, there are likely to be few proprietary secrets involved in the harvesting activity relative to the producing firm or the receiving firm. Similarly, negotiating a contract for a labor contractor involves few additional features over necessary contracts in the absence of a labor contractor. In many cases, utilizing a labor contractor would be expected to result in significantly lower transaction costs pertaining to the harvest than would be the case with direct employment of the harvesting crews. An obvious example is the owner of smaller fruit acreage requiring only a few days of harvesting services. It would be relatively costly for this firm to maintain all of the information to implement efficient transactions. Restated, there are likely to be economies of scale in the harvesting operation. Prominent among the sources of economies of scale is the cost of information. The employer of harvest workers can afford to specialize in information unique to the harvest labor market. Examples are knowledge of the sources of workers, language, and techniques that lead to optimal efficiency, all of which have little bearing on other activities in agricultural production.

Most importantly, the cost of this knowledge can be spread over several different agricultural producers rather than borne by the individual producer in the case of an integrated producer and harvester.

Large firms are able to spread these information costs over a larger volume of product and time. As a result, large firms are more likely to hire harvest workers directly. Note, however, that the large firm need not be a grower. Processing plants and packing houses often integrate the harvesting activity into their operations. Their scale is sufficiently large to accommodate this, and in addition, they are also able to maintain direct control of scheduling of the commodity into the processing plant.

The method of payment for seasonal harvest labor services is also related to the economics of internal organization of the firm. Roumasset and Uy have shown that piece rates tend to be chosen over hourly rates of pay for tasks where shirking is easy to monitor by *ex post* inspection. The incidence of piece rates is also higher where the work force is more heterogeneous, where high opportunity wages prevail, and where some agricultural operations are done by specialized teams. Thus, piece rate payment schemes minimize enforcement of harvesting rules and information costs of worker productivity (Roumasset and Uy, p. 343). Piece rate payment systems also permit lower costs of recruitment and information gathering on prospective workers, as workers select themselves for piece rate work on the basis of their expected performance. In terms of our economic concepts, the piece rate method of payment provides a device for paying workers according to the marginal product of their intermediate products produced (Roumasset and Uy, p. 358). Both farm entrepreneurs and labor contractors utilize piece rate payment systems for the same reasons as discussed above.

Thus, entrepreneurs of labor intensive agricultural operations tend to behave in true Schumpeterian fashion by innovating their business organizations to carry out routine harvest labor functions via contracts, oral or written, with intermediaries known as independent farm labor contractors. Even if entrepreneurs do not go this far, they most likely reorganize their firm internally to coordinate seasonal labor-intensive functions with a harvest labor supervisor and designated crew leaders. Whether the firm reorganizes by hiring independent labor contractors or by developing internal crew leaders, entrepreneurial actions for these types of resource allocations are entitled to a reward or rent for their entrepreneurial performance. This reward or profit is earned (Schultz 1980, p. 443).

SANCTIONS

Laws and regulations can have a direct effect upon entrepreneurial behavior. In a recent *JPE* article, Baumol develops the argument that a society's policies influence the allocation of entrepreneurship among productive, unproductive, and destructive types. The bias of private enterprise is not solely towards innovation, but towards profit (Baumol, p. 893).

With this in mind, entrepreneurs of labor-intensive agricultural operations must take notice of the new set of civil and criminal sanctions imposed by the Immigration Reform and Control Act (IRCA) of 1986. IRCA has imposed the following rules, among others:

— Imposes civil and criminal sanctions (penalties) for hiring illegal aliens;
— Mandates employers to examine documentation of all prospective employees and to keep appropriate records; and
— Makes it unlawful to discriminate in the hiring or recruiting of individuals on the basis of nationality or citizenship.

Civil money penalties may be levied against employers and others who:

— Hire or continue to hire unauthorized aliens;
— Fail to comply with the record-keeping requirements of IRCA;
— Require indemnification from prospective employees; and
— Recruit unauthorized seasonal agricultural workers from outside the United States.

Civil fines for first offenders range between $250 and $2,000 for *each* unauthorized alien employed. After more than two previous violations, civil fines increase to a minimum of $3,000 and a maximum of $10,000 for *each unauthorized alien employed* (Polopolus, p. 1).

Criminal and/or civil money penalties may be levied against employers and others who engage in a pattern or practice of knowingly hiring or continuing to employ unauthorized aliens. Criminal penalties are also imposed for fraud or false statements or misuse otherwise of visas, immigration permits, and identity documents (Covey, p. 33).

Our contention is that these civil/criminal sanctions under IRCA are so substantial that farm entrepreneurs with labor-intensive operations will tend to modify their business operations in the direction of independent labor contractors so as to minimize the risk of sanctions in this legal environment. The independent labor contractor becomes a specialist in the efficient operation of a business. Information is again a major factor in this type of organization.

Viewed in the Knight sense of the firm, a part of the risk that the independent labor contractor as entrepreneur is assuming is the risk of sanctions. Moreover, the labor contractor is restoring equilibrium to the system following the changes due to sanctions.

The separation of the harvest function into a separate business is one way that the fruit and vegetable industry has innovated. As noted earlier, however, one can easily argue that the harvesting activity could be efficiently organized into the processing or packing function, and there are numerous examples of this structure. An innovation currently taking place is an effort to legally isolate the harvesting activity from the principal business activity. The harvesting activity is readily separable and can be set up as a subsidiary. The parent corporation may still, however, maintain assurance of a smooth flow of the commodity into the processing plant. Moreover, by this means, the liability of sanctions will have been shifted to a separate entity that is able to specialize in those activities.

Moreover, if enforcement of IRCA's sanctions becomes lax and illegal aliens become common in seasonal agricultural occupations, farm entrepreneurs will still increase their use of independent labor contractors because of the labor contractors' superior effectiveness in recruitment, supervision, and bilingual communications.

LABOR CONTRACTING

Labor Contractors Defined

Labor contractors are independent intermediaries who, for a fee, recruit, hire, and supervise seasonal farm workers (Vandeman, Sadoulet, and de Janvry 1990, p. 1). Contractors may also provide housing, transportation, and other services for workers. The larger contractors may also provide roadsiding, packing, and hauling services for the owners of the agricultural commodities requiring agricultural labor services.

In addition to handling laborer registration requirements under state and federal labor contractor laws, farm labor contractors negotiate verbal or written contracts with owners of the agricultural products being harvested. While traditionally these owners of agricultural crops have been growers, harvest labor contracts are increasingly made with such "owners" as processors, packers, independent buyers, cooperatives, or other labor contractors.

The Contract

Because potentially large penalties can arise from willful negligence, dishonesty, and/or ineptness in carrying out agricultural labor functions, the contractual agreement between the owner of the agricultural resource (grower) and the contractor has become quite technical and explicit on matters beyond the contract price and the timeliness of payment to the labor contractor.

In effect, the owner (grower) of the agricultural product being harvested seeks to shift liability of "bad" performance to the labor contractor. For example, the labor contractor is responsible for performing harvest work in a "good workmanlike" manner in accordance with practices generally accepted in the industry. In addition, the contractor is required to see that, in the case of citrus harvests, "all trees are harvested cleanly" and that "all trees, buildings, grove equipment, and irrigation equipment are not abused in the harvesting process and that the grove is not littered or vandalized in any manner" (Anonymous, p. 1).

The labor contractor is further required to certify that all employees involved in the harvesting are eligible to work in the United States and that they are employed and paid in compliance with the Minimum Wage and Child Labor requirements of the Fair Labor Standards Act, the Immigration Reform and Control Act (IRCA) of 1986, and the Migrant and Seasonal Worker Protection Act, plus the other conditions of the contract (Anonymous, p. 1).

It is also possible that the contract requires the labor contractor to have read and understood the provisions of IRCA, the federal laws identified above, as well as the Federal Occupational Safety and Health Act (OSHA) and other applicable state laws regulating labor contractors.

Labor contractors may also be required to certify to the owners (growers) that they are insured under state Worker's Compensation laws and that they are insured for general liability for bodily injury and property damage. They may also be required to prove that they carry automobile liability insurance.

The development of fairly sophisticated "contracts" for farm labor contractors has evolved, in part, from the public attention given to negligent or fraudulent farm labor contractors. The attempt by growers to minimize the risk of sanctions from government laws, particularly IRCA, has also been extremely significant in the turn toward more formal and detailed contracts.

Functions and Roles of Labor Contractors

The primary function and role of the farm labor contractor is to coordinate seasonal labor supply and demand in an otherwise casual and disorderly farm labor market. Labor contractors have been persistently engaged in these roles for over 100 years in

California agriculture and almost that long in the other major farm labor states of Florida and Texas.

Growers look to labor contractors to deliver a supply of labor sufficient to meet their highly seasonal labor needs. Growers also depend upon labor contractors to manage the work performed by seasonal farm employees (Vandeman, p. 2). Labor contractors also permit growers to disengage from the details of field labor management, and to avoid hassles and problems associated with recruitment, retention, productivity, payroll, transportation, meals, and housing. This permits the grower to treat labor like any other purchased input (Vandeman, p. 8).

The persistence of labor contracting in agriculture strongly suggests the existence of economic benefits or incentives accruing to their continued use. Vandeman's Ph.D. dissertation demonstrates, for example, that labor contractors are more efficient at recruiting workers with a lower average opportunity wage. Her econometric analysis further shows that labor contracting is most feasible for short season tasks, except for citrus harvesting. Labor contracting is also more likely when the jobs are simple and repetitive (Vandeman, p. 1). Since citrus has a long harvest season, Vandeman implies that this result is in conflict with the higher likelihood for short season tasks. She turns to events related to unionization to explain the apparent anomaly. An alternative explanation is the structure of the industry. Although the citrus harvest season is long, the harvest for an individual grower may be only a few days. The harvest season that is relevant for the importance of labor contractors is that of the individual firm, not the industry.

Labor contractors are particularly advantageous where workers are likely to be foreign-born, migrant, illegal, unskilled, uneducated, and unorganized. Workers with these characteristics face difficulties in finding jobs and consequently rely upon informal networks of friends, relatives, and contractors for employment information.

Labor contractors have become indispensable to seasonal labor markets because of their extensive contacts with farm worker communities and migration networks. They also have bilingual skills that serve to bring non-English speaking workers into seasonal agricultural job markets. Their networks also provide entry possibilities for undocumented workers and workers with little or no previous farmwork experience in the United States (Vandeman, p. 38). Also, sanctions for hiring illegal workers have not been effectively enforced against labor contractors (Vandeman, p. 62). The relationship of labor contractors to undocumented workers relates directly to Baumol's hypothesis "...that it is the set of rules and not the supply of entrepreneurs or the nature of their objectives that undergoes significant changes from one period to another and helps to dictate the ultimate effect on the economy via the allocation of entrepreneurial resources" (p. 894).

In addition to their more efficient recruitment abilities, seasonal labor contractors are able to reduce recruitment costs per unit of labor time by spreading these costs over several contracts (Vandeman, Sadoulet, and de Janvry, p. 6). That is, farm labor contractors are free to negotiate several separate contracts with X number of growers for a given time period or Y number of contracts over a given harvesting season. As their total labor force enlarges, labor contractors can simply increase the number of crews, with each crew provided with crew supervisors or leaders responsible to the labor contractor. Thus, despite highly seasonal labor demands of individual farms, labor contractors can so organize their operations as to provide almost year-round employment for their workers, thereby lowering the unit costs of labor recruitment. To meet this target, however, the labor contractor must be geographically mobile.

Martin and Thompson argue that the "triangle of expansion of intermediaries (contractors), more illegal workers, and fewer union contracts" has stabilized farm labor costs and has actually encouraged labor intensive agriculture to expand (Martin and Thompson, p. 219). For California agriculture, it has also been argued that the increased use of the contracting system has reduced the threat of unionization (Vandeman, Sadoulet, and de Janvry, p. 22). This situation has tended to reduce the real cost of seasonal farm labor services. As related to sanctions, continued lax enforcement of immigration and labor laws is expected to strengthen the dual combination of farm labor contractors and illegal immigrant farm workers in the 1990s (Martin and Thompson, p. 220).

RECENT HISTORICAL DATA ON CONTRACT LABOR EXPENSES

Data depicting the intricacies of the harvest labor market pertaining to contracting versus direct employment are not readily available. The Census of Agriculture gives some pertinent information. Starting in 1969, a separate category was included for contract labor expenditures reported by farms classified by industry. In addition, the 1969, 1974, and 1978 census years included a special enumeration of agricultural service firms (U.S. Bureau of the Census, Vol. 3). The latter would appear to be an ideal source for employment information on labor con-

tractors. However, checks between the services volume and the farms volume show the work to be woefully inconsistent. For example, in 1969 the Agricultural Services census reported U.S. gross receipts of $90.5 million by firms in the SIC categories 07190 (crew leaders and farm labor contractors), 07192, 07193, and 07194, (picking for others the following crops: edible tree nuts, fruits and berries, and vegetables, respectively). By contrast, U.S. farms for the same census year reported contract labor expenses of $462.5 million. By the 1978 census, the discrepancy fell to just over 50 percent: $441 million in gross receipts reported by farm labor contractors and crew leaders (SIC 0761[1]) in the Agricultural Services volume as compared to $899 million of contract labor expenditures reported by farms in the agriculture census.

Clearly the Agricultural Services census is not very helpful in shedding additional light on labor contracting. An obvious difficulty in conducting such a census is that farm labor contractors tend to be rather elusive, and might not receive mail surveys because they move on to different locations.

The information reported by farms, however, is not subject to this problem. Although we will raise other concerns about the completeness of this information on the extent of contracting, it appears to be one available benchmark. The following summarizes the available census information as reported by farms on labor contracting relative to direct employment of labor by farms.

Census of Agriculture reports since 1969 indicate that money expenditures for contract labor services in agriculture have increased from $463 million in 1969 to $1.8 billion in 1987, a 300 percent increase. The major farm labor states of California, Florida, and Texas had similar increases in money expenditures for contract labor. Fruits and vegetables account for the majority of contract labor payroll for California and Florida, but not Texas (Table 1).

Although the aggregate money expenditures for contract labor in U.S. agriculture have risen dramatically since 1969, contract labor still accounts for a relatively small portion of total labor expenditures on U.S. farms. From the 1987 Census of Agriculture, we learn that contract labor represented 15 percent of total direct hired and contract labor for that year. This, however, represents an increase from the 12 percent figure for 1969 (Table 2).

The level or intensity of contract labor usage is much higher for Florida than for the United States as a whole or even California and Texas (Figure 1). Since the 1978 Census of Agriculture, roughly 30 percent of all farm labor expenditures in Florida were paid to labor contractors, compared with 20 percent or less for the United States, California, and Texas. Labor contractors are particularly evident on Florida's fruit farms (Table 2).

Clearly labor contracting is an important phenomenon in fruits and vegetables in the states of California, Florida, and Texas. There is reason to believe, however, that growing portions of the labor force and activity are missed by the existing data system. As noted earlier in the paper, the harvest activity in fruits and vegetables is often performed by economic agents other than the grower. The labor contractors noted above are the most obvious of these agents. As will be developed in the following section, there are a number of other types of businesses which are also significant employers of harvest workers. Processing, packing, or otherwise dealing in the commodity may be the primary activity of these businesses. The harvesting activity is merely a sideline activity. In such cases, harvesting employment would not be included in either the

Table 1. Contract Labor Expenses, United States, Florida, California, and Texas, 1969-1978

Year	Contract Labor Expenses			
	Florida	Texas	California	USA
	million $			
	All Farms			
1969	97	37	153	463
1974	80	45	185	505
1978	173	86	291	899
1982	201	88	414	1,104
1987	280	143	613	1,843
	Fruits and Nuts			
1969	58	2	81	167
1974	51	3	89	163
1978	115	6	164	340
1982	110	4	238	340
1987	131	4	348	589
	Vegetables and Melons			
1969	29	5	36	99
1974	21	6	41	91
1978	35	14	61	157
1982	41	20	96	224
1987	69	17	133	306

Source: U.S. Census of Agriculture, various issues.

[1]The SIC classification changed between 1969 and 1978 so that the 0761 catagory includes the 1969 picking for other groups.

Table 2. Contract Labor Expenses as a Percent of Total Labor Expenses (Hired and Contract), United States, Florida., California, and Texas, 1969-1987

Year	Contract Labor as a Percent Total Labor Expenses			
	Florida	Texas	California	USA
	percent			
	All Farms			
1969	36	14	20	12
1974	23	13	15	10
1978	31	17	17	12
1982	30	16	19	12
1987	28	19	20	15
	Fruits and Nuts			
1969	57	42	29	29
1974	42	38	23	21
1978	55	39	28	28
1982	50	26	28	27
1987	47	32	30	28
	Vegetables and Melons			
1969	48	38	24	27
1974	32	32	15	18
1978	28	39	17	21
1982	31	45	22	25
1987	31	34	23	25

Source: U.S. Census of Agriculture, various issues.

farm's portion of the Census of Agriculture or in the Agricultural Services section. Nevertheless, the economic nature of the activity is the same: harvesting for others. Furthermore, some intermediaries which are primarily nonfarm businesses may also utilize an independent labor contractor for harvest. Whereas nonfarm businesses contracting with growers should be included in contract labor expenses in the Census of Agriculture, independent labor contractors contracting with nonfarm businesses as owners of the commodity would not.

CASE STUDY: FLORIDA VALENCIA ORANGES

An illustration of the important role of labor contractors in seasonal farm labor markets can be taken from the Florida citrus industry. This information was drawn from a study of Prevailing Wages and Practices conducted by the authors for the Florida Department of Labor and Employment Security in 1990 as pertaining to the harvest of Valencia oranges for processing.

Employment Relationships

Unlike much of traditional American agriculture, the primary employer of citrus harvesting labor is *not* the farmer. The employer of harvesting workers is typically a third party that either harvests fruit only or engages in other citrus non-production activities. These third party employers include labor contractors, processing firms, packing houses, and independent buyers of fruit (Emerson et al. 1991, p. 3).

What is even more interesting is that each potential employer of harvest workers has the option of hiring workers directly or contracting with labor contractors, sometimes called "subs" for labor intermediaries or subcontractors. As shown in Figure 2, the citrus processor may employ his own harvest workers directly, i.e., with "own" company crews, or the processor may "contract" with Subcontractor 1, who in turn hires workers directly. A second example would find a grower delivering fruit to the same processor, but with fruit picked by workers employed by Subcontractor 2. Thirdly, an independent buyer A, a "birddog", may deliver fruit to Processor 1, but from fruit picked by Subcontractor 3. Subcontractors 3 and 4 may be simultaneously harvesting fruit for the same birddog, Buyer B. In this example, Subcontractor 3 is simultaneously harvesting fruit for Buyers A and B. While Figure 2 appears to be complicated, it is merely a simplified snapshot of the real and intertwined employment relationships which pertain in the Florida citrus industry. The important point here is that independent labor contractors are viable alternatives for all types of owners of fruit in need of harvesting, i.e., growers, processors, packing houses, and independent buyers.

As labor contractors increase their size of operations, they also behave like other entrepreneurs in terms of labor organization and management. Contractors allocate routine management chores to crew leaders for supervision of teams (crews) of pickers usually numbering between 20 and 25 pickers per crew (Figure 3). Crew leaders or crew supervisors are responsible for managing the individual crews, but these crew leaders are not the *employers* of the crews. The exception, of course, is in cases where a labor contractor has only a single crew; in this case the labor contractor also assumes the routine duties of crew leaders.

Labor contractors receive payment from the fruit owners (grower, processor, packer, birddog) in excess of the piece rate that the workers receive. The excess payment or residual over the piece rate represents the contractor's compensation for his entrepreneurial activities, crew supervision, administration of taxes and payroll, goat loading

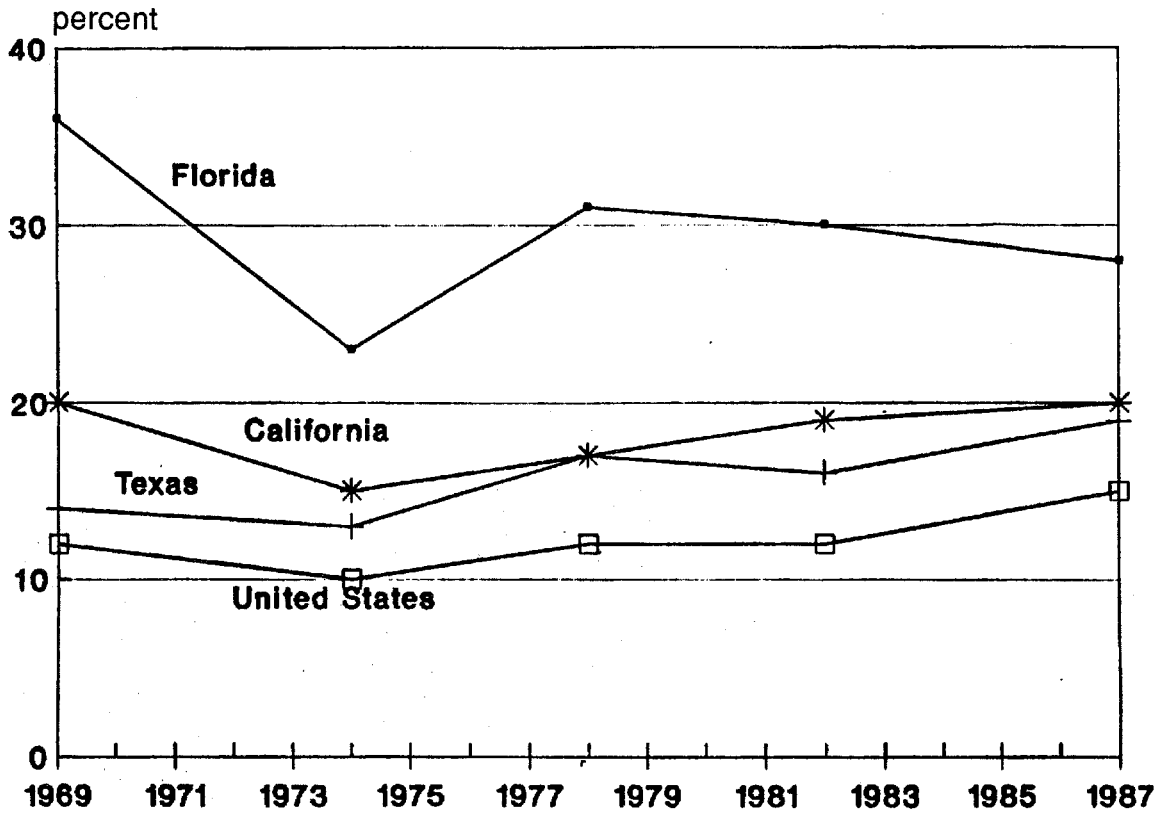

Figure 1. Contract labor expenses as percent of total labor expenses: United States, Florida, Texas, California, 1969-1987

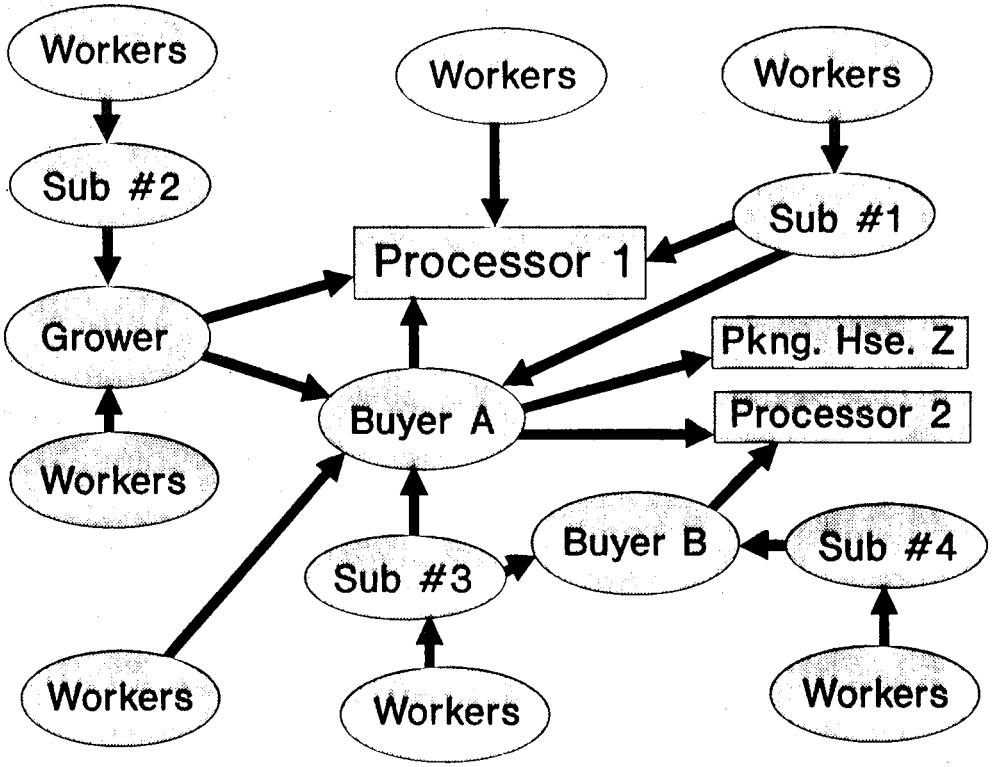

Figure 2. Citrus harvesting employment arrangements

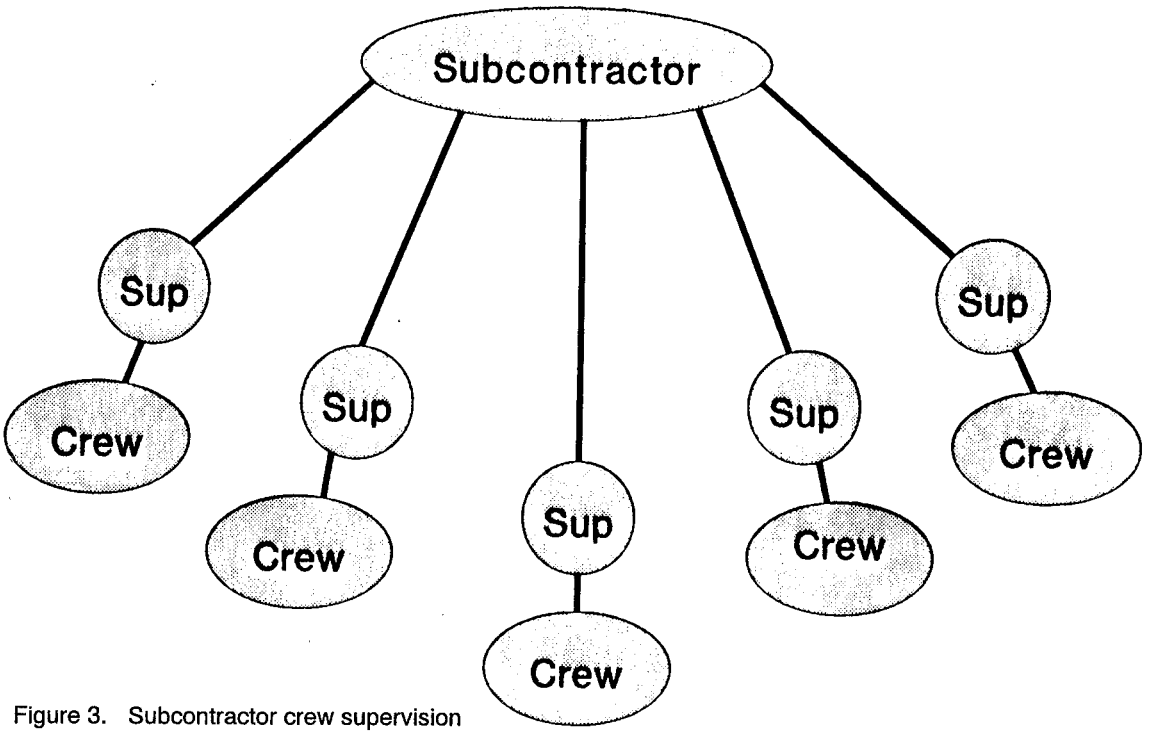

Figure 3. Subcontractor crew supervision

(field assembly functions), machinery and equipment ownership, and/or hauling of fruit from grove to the processing plant.

In the 1990 Florida Valencia orange survey, 42 of the 55 responding employers, or 76 percent, were farm labor contractors. All of these labor contractors harvested the fruit, provided the goat loader, paid workers' compensation, unemployment insurance, social security, and withholding tax, and maintained the payroll (Table 3). All of the labor contractors reported that they had federal and state crew registration cards. Only two of the crews of labor contractors did not do the roadsiding of the fruit. Those contractors that hauled fruit to the processor also provided their trucks for doing so. Auto insurance and liability insurance were provided for 87 percent and 96 percent of the crews, respectively (Table 3).

There was a wide range of compensation provided to labor contractors for harvesting Florida Valencia oranges on March 28, 1990, the reference day for the prevailing wage survey. The distribution of payment rates to contractors is somewhat bimodal. There is a large amount of harvesting done where contractors were compensated in the 45-69 cents per box range, with another major cluster of compensation at the $1.10-$1.19 per box range (Figure 4).

The obvious question is why does this bimodal distribution in contractor payment rates exist? This question was answered by use of hedonic regression analysis. Contractor compensation (COMP) was defined to be a function of hauling (HAUL), roadsiding (ROAD), providing liability insurance (LIAB), and providing automobile insurance (AUTO). The weighted least squares regression based on 49 obser-

Table 3. Activities Performed by Labor Contractors, Florida Valencia Orange Harvest, Spring 1990

Activity	Number of crews	Percent of Crew
Harvest the fruit	94	100
Roadsiding	92	98
Provide goat loader	94	100
Haul the Fruit	42	45
Provide trucks for hauling	42	45
Auto insurance	82	87
Liability insurance	90	96
Workers' compensation	94	100
Unemployment insurance	94	100
Pay workers' social security	94	100
Withholding tax	94	100
Maintain payroll	94	100
Federal/state crew leader registration cards	94	100

Source: Emerson, Chunkasut, Moon, and Polopolus, 1990.

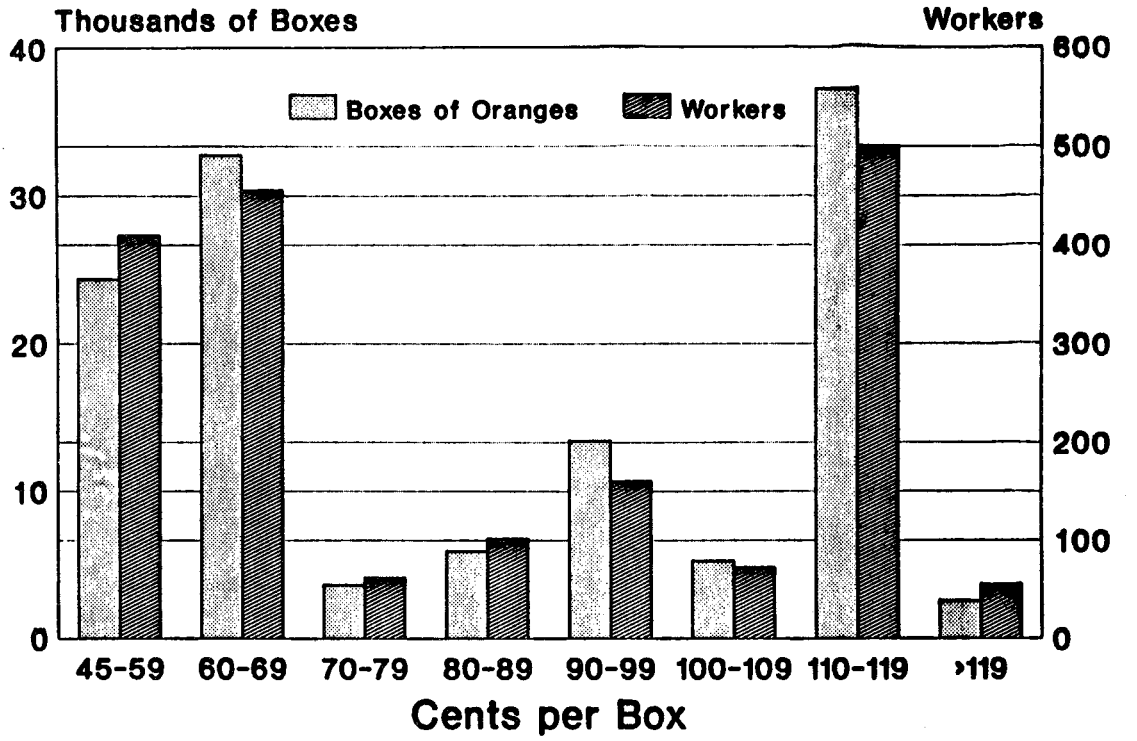

Figure 4. Contractor compensation: Florida Valencia orange harvesting, March 28, 1990

vations, with t-statistics in parentheses, is shown as Equation 1 below:

$$\begin{aligned} COMP = {} & 0.58 + 0.35\,HAUL + 0.04\,ROAD \\ & (2.21)\quad (7.03)\qquad\quad (0.17) \\ & -0.03\,LIAB + 0.08\,AUTO \\ & (-0.17)\qquad\quad (0.86) \end{aligned} \tag{1}$$

The empirical results above suggest that only the hauling activity has any statistically significant effect on the variation in the compensation rate paid to independent labor contractors. The interpretation is that hauling the fruit and providing the trucks to do so increases the compensation rate by an average of 35 cents per box. None of the other three activities included are meaningful in explaining the compensation rate.

The intercept coefficient of 0.58 is interpreted to mean that on the average, labor contractors are compensated 58 cents per box for the provision of the following set of services provided by all of the contractors sampled in the survey: managing the fruit harvest, providing the goat loader, paying the workers' compensation, unemployment insurance, social security, withholding tax, and maintaining the payroll (Emerson et al. 1990, p. 8).

This illustration clearly indicates that the labor contracting activity in citrus is providing a value added service to the fruit owner. Not only is the fruit being harvested, but the harvest work is being coordinated, and in nearly half of the cases, the fruit is hauled to the processing plant as a part of the labor contracting activity. Moreover, the dominant employer type was the labor contractor rather than the owner of the fruit. Of the 3,270 pickers employed by respondents in the survey, 1,853 were employed by labor contractors and 1,417 were employed by the owners of the fruit. The labor contractor as entrepreneur is doing exactly as he is expected to do in a dynamic economy: exploit opportunities to provide a service as the occasion arises. It is argued that the existing situation, characterized by the presence of undocumented workers and employer sanctions, is likely to lead to further specialization in the harvesting activity.

CONCLUDING REMARKS

Agricultural entrepreneurs innovate their individual business organizations not only to deal with production and price risks, but also to cope with the risk of sanctions or penalties imposed by society's laws and regulations. More specifically, labor intensive agricultural firms, faced with potentially large fines for violation of immigration and labor laws, increasingly modify the organization of their firms by shifting the management of routine seasonal labor jobs to independent farm labor contractors. The

long-term profit motive is central to this type of entrepreneurial behavior.

As evidenced by the Florida Valencia orange study, labor contractors provide harvest labor options not only for growers, but also for other owners (processors, packing houses, independent fruit buyers) of fruit in need of harvesting. And as these contractors increase the size of their operations, they behave like other entrepreneurs in terms of labor organization and management. That is, they hire crew leaders for the supervision and management of two or more crews, they handle payroll, tax, and insurance matters, and labor contractors increasingly perform assembly (goat loading) and transportation (hauling) functions. Compensation rates paid to labor contractors reflect the functions performed by them. Somewhat surprisingly, the compensation rate paid for labor contracting services in the Valencia orange harvest is roughly twice the piece rate paid directly to pickers. Labor recruitment, field management of harvesting, and field assembly of fruit harvested are valuable services performed by labor contractors. Entrepreneurial activity is prospering by responding to the changes brought about in part by the presence of undocumented workers and the imposition of employer sanctions.

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