

## Summary

The U.S. poultry, egg, and pork industries each have experienced increases in contracting and vertical integration. Changes occurred decades ago in the poultry and egg industries and have occurred more recently in the pork industry. Production contracting grew quickly in the broiler industry, and nearly all broilers now are produced under production contracts between processors and growers. While production contracts also became more prevalent in the turkey and egg industries, vertical integration also became more common. In the pork industry, marketing contracts became more popular, although packer ownership of hogs also has risen in more recent years.

In each of the industries, spot markets apparently became a less efficient means of coordinating production and processing. This effect may be explained by higher transaction costs from a variety of sources. First, several developments in each of the industries led to higher costs associated with safeguarding investments. Each of the industries underwent periods in which they adopted new specialized technologies and experienced associated scale economies. These developments led to investments with few alternative uses and few alternative users, or relationship-specific investments, particularly in regions of expanding production. Such investments leave trading partners vulnerable to opportunistic behavior by other parties seeking a more favorable position in the relationship.

Other factors also created value in continuing relationships between specific trading partners. For example, in the poultry and egg industries, farms and processing units located close to each other. Short distances between trading partners resulted in more relationship-specific transactions—trading partners separated by longer distances would result in higher transportation costs. Also, poultry and eggs are perishable products that require timely delivery from the farm to the processing plant. This factor makes producers highly vulnerable to tactics used by processors to delay acceptance of products to obtain a more favorable deal, as it may be difficult for producers to find alternative processors before the products perish.

Contracting and vertical integration provided a means for reducing transaction costs associated with relationship-specific transactions, especially in regions of expanding production. Contracts could provide some safeguards to protect against opportunistic behavior, and vertical integration eliminated the exchange relationship altogether.

Contracts and vertical integration also may facilitate reductions in product measuring and sorting costs, leaving more gains from trade to be distributed among producers and consumers. For product attributes that are difficult to measure, gaining additional control over related production inputs may reduce measuring costs by reducing the need to measure quality. Similarly, by controlling inputs that result in more uniform product attributes, measuring and sorting costs may be reduced because there is no need to measure every product. Controlling production inputs facilitates branding programs that transfer measuring and sorting costs from consumers to the food supply system. The poultry industry has been especially successful with branding programs, and the pork industry is increasing its use of branding strategies.

Relationship-specific transactions and uncertain market conditions also may explain differences in methods of vertical coordination found in the poultry, egg, and pork markets. As transactions become more relationship-specific, vertical integration will become more prevalent. Greater uncertainty related to consumer preferences, production, or income make it more important for firms to find ways to adapt. Consequently, vertical integration and contracts that give the contractor more control over the producer or that respond automatically to changing conditions will become more common.

In addition to reducing transaction costs, contracts and vertical integration may influence production decisions that result in more efficient resource allocations. This effect is demonstrated by substantial gains in production efficiency in each of the three industries and development of high-quality, consistent consumer products. Considering both reductions in transaction costs and benefit effects would provide a more complete framework for analyzing the organization of agricultural markets.