

## Conclusions

Transaction costs affect decisions to contract or vertically integrate in the poultry, egg, and pork industries. Spot-market trading is less feasible in markets characterized by (i) new and specialized technology in thin markets with few producers and processors, (ii) close proximity of producers and processors, and (iii) important scheduling and timing factors related to raw product deliveries. These situations expose investors to hazards related to unscrupulous behavior by other parties. Furthermore, measuring quality attributes of raw product inputs is more costly if the attributes are difficult to observe or if a significant premium is placed on quality and consistency of inputs. These conditions provide incentives for contracts and vertical integration.

Relationship-specific investments, and market uncertainty from a number of sources, including (i) technological advances, (ii) price and quantity instability, and (iii) lack of communication between parties at different vertical stages of the production process, can influence the type of contract or the decision to vertically integrate. Uncertainty, coupled with relationship-specific assets, creates incentives for contracts that adjust automatically to changing market conditions. As the degree of uncertainty increases, contracts should be used that provide the contractor with greater control over production. When uncertainty or relationship-specific investments are especially severe, processing and production should be coordinated through vertical integration. Contracting practices and vertical integration in the poultry, egg, and pork industries support these assertions.

What are the implications for assessing rapid changes in coordinating arrangements currently underway in agricultural industries, such as the pork industry? Policymakers can indirectly influence pressures to enter production contracts and vertically integrate based on how policies are shaped, enacted, and enforced. Laws and regulations can affect firm strategies and the competitive environment in which firms operate. Uncertainties and inconsistencies related to enactment and enforcement of antitrust and environmental policies make it increasingly important that firms find ways to adapt to changing policy situations. Firms can adapt through vertical integration or contracts designed to reduce haggling and provide greater control over the vertical stages in production.

In the pork industry, most marketing contracts between “independent” producers and processors are directly related to a spot price, such as the Iowa/Southern Minnesota quote, which facilitates adaptations to the changing market. However, spot prices may become less reliable indicators of market conditions as less trading occurs on spot markets, which may lead to conflicts between producers and processors. Further-more, the ability of large buyers and sellers to manipulate spot prices is enhanced because spot prices will be based on fewer trades. Unless alternative base prices are found, producers and processors will seek greater control through production contracts or vertical integration. Prices from a thriving spot market, perhaps a wholesale price, that can serve as a base price in a marketing contract would enable producers to survive as separate entrepreneurial entities. This arrangement suggests a role for public programs that collect and distribute market information to ensure a vibrant spot market.

In addition to reducing transaction costs, contracts and vertical integration are also associated with gains in production efficiency and more value-added product offerings of consistent quality. These arrangements could facilitate important investments in cost-reducing technology and value-added production that may have been otherwise delayed. The effect of combined production efficiencies and tailored product offerings on demand and consumption are likely to vary across industries. However, continual progress in responding to consumer tastes and preferences can facilitate an industry’s competitiveness at home and abroad through cost savings and sustained demand. Policies designed to restrict business arrangements may, in fact, inhibit industry growth and hasten the exit of firms as fewer firms are able to compete.

Benefits derived from contracts and vertical integration also have implications for the framework used to evaluate these arrangements. Further research might extend the TCE paradigm to incorporate both transaction-cost economizing principles and benefits derived from new resource allocations. While empirical studies generally have supported the TCE theory (Williamson, 1999; Shelanski and Klein), such a combined framework may provide greater explanatory power regarding various types of vertical coordination in a variety of different industries.