

Introduction

Mergers and acquisitions have been sources of controversy for many years, particularly during periods of major structural changes in the U.S. economy. Concern about economic changes occurring in meat and grain processing has led to criticism of the Grain Inspection, Packers and Stockyards Administration (GIPSA). Recent news reports discussed allegations of lax oversight by GIPSA (Martin, 2006). Additionally, Senator Tom Harkin (D-Iowa) supported the establishment of a special counsel at the U.S. Department of Agriculture to investigate price-fixing allegations (Brasher, 2006).

Consolidation was not much of an issue for most food industries until about 1977. At that time, the average four-firm concentration ratios for the eight food industries examined herein stood at about 31 percent. This marked the low point before industry consolidation, including a wave of mergers and acquisitions (M&As), led to a jump in average concentration to about 44 percent by 1992. Four-firm concentration ratios in some industries, such as meatpacking and poultry slaughter and processing, more than doubled (Ollinger et al., April 2005).

Firms in the meatpacking, meat processing, cheese making, fluid milk processing, flour milling, feed processing, and oilseed crushing (soybean, cottonseed, and corn) industries transferred about 20 percent of industry market share to other firms through M&As over each of three 5-year periods: 1977-82, 1982-87, and 1987-92 (Ollinger et al., April 2005). By contrast, M&As accounted for only about 7 percent of all output over 1972-77.

Output per worker improved dramatically during this period of rising concentration and M&A activity. The four major food industries identified in *Structural Change in the Meat, Poultry, Dairy, and Grain Processing Industries* (Ollinger et al., April 2005) doubled their output per worker, and three of the industries realized at least 50-percent increases in output per worker over 1972-92. Only two of nine industries failed to increase output per worker, and, one of them, poultry, experienced a vast increase in the processing of value-added products as plants switched from producing whole birds to producing poultry parts.

The M&As, combined with the rise in concentration of firms, particularly in beef packing, caused concern among policymakers. Congressional hearings in 1990 on company behavior in the purchase of live cattle, for example, led to a call for an examination of entry, exit, mergers, market shares, and other market factors affecting the industry. Charges of lax enforcement by GIPSA and a recent court case against Tyson's Beef alleging price fixing indicate that the interest in M&As, concentration, and structural change in food industries persists (MeatPoultry.com, accessed April 13, 2006).

This study's purpose is to evaluate the economic efficiency of M&As in eight meat and poultry, dairy, and grain processing industries over 1977-92. For consumers, greater efficiency in a competitive market can lead to lower prices because fewer resources are used to produce the same output. Labor productivity is used as a measure of economic efficiency (see later discussion) to evaluate the pre-acquisition plant performance and evaluate labor productivity growth over the subsequent 10-year period to determine if new

management improved performance. Food production plants that are acquired yield efficiencies if productivity improves and generate synergies if the plants were productive before the acquisitions and then raise labor productivity to an even higher level afterward.¹

M&As have been driven by slow growth in consumer demand for meat, dairy, and grain products and technological changes that have led to a sharp rise in output per worker and in plant sizes (Ollinger et al., April 2005). Over the past 5 years, high-profile M&As include the acquisitions of Iowa Beef Processors by Tyson and ConAgra by a private group in meat packing, Pillsbury by General Foods in flour milling, and parts of Dean Foods by Suiza in fluid milk processing.

The meatpacking, meat processing, poultry slaughtering and processing, cheese making, fluid milk processing, flour milling, feed processing, and oilseed crushing (wet corn milling and soybean and cottonseed processing) industries are examined for three reasons:

- 1) These industries are important buyers of farm products, providers of intermediate goods to other manufacturers, and suppliers of final food products to consumers.
- 2) Plants in these industries produce relatively homogeneous products, competing for customers based on price. This type of competition allows us to attribute labor productivity differences across plants to cost changes rather than product changes, such as new brands of cereal or ice cream.
- 3) Congress specifically called for studies of M&As in the food sector and competitiveness of the food processing industry remains an issue of public concern.

(Wet corn milling, soybean processing, and cottonseed crushing have been combined into one category because Census disclosure rules prevent publication of results from separate industries).

A unique feature of this analysis is the use of plant-level data from the Census of Manufacturers. The data provide a very detailed picture of plant outputs, inputs of labor and materials, costs of production, and plant assets. These data also allow researchers to trace plants across time and determine ownership status.

¹If a plant is efficient prior to an acquisition and improves its productivity after acquisition, then profits will rise until competitors make adjustments and prices drop to a level equal to costs.