A Riff from RaFF

@RaFFfinance
@RaFFfinance
Rural and Farm Finance Policy Analysis Center

Different Factors Are Associated with Small and Large Meat Processor Survival

RaFF.missouri.edu

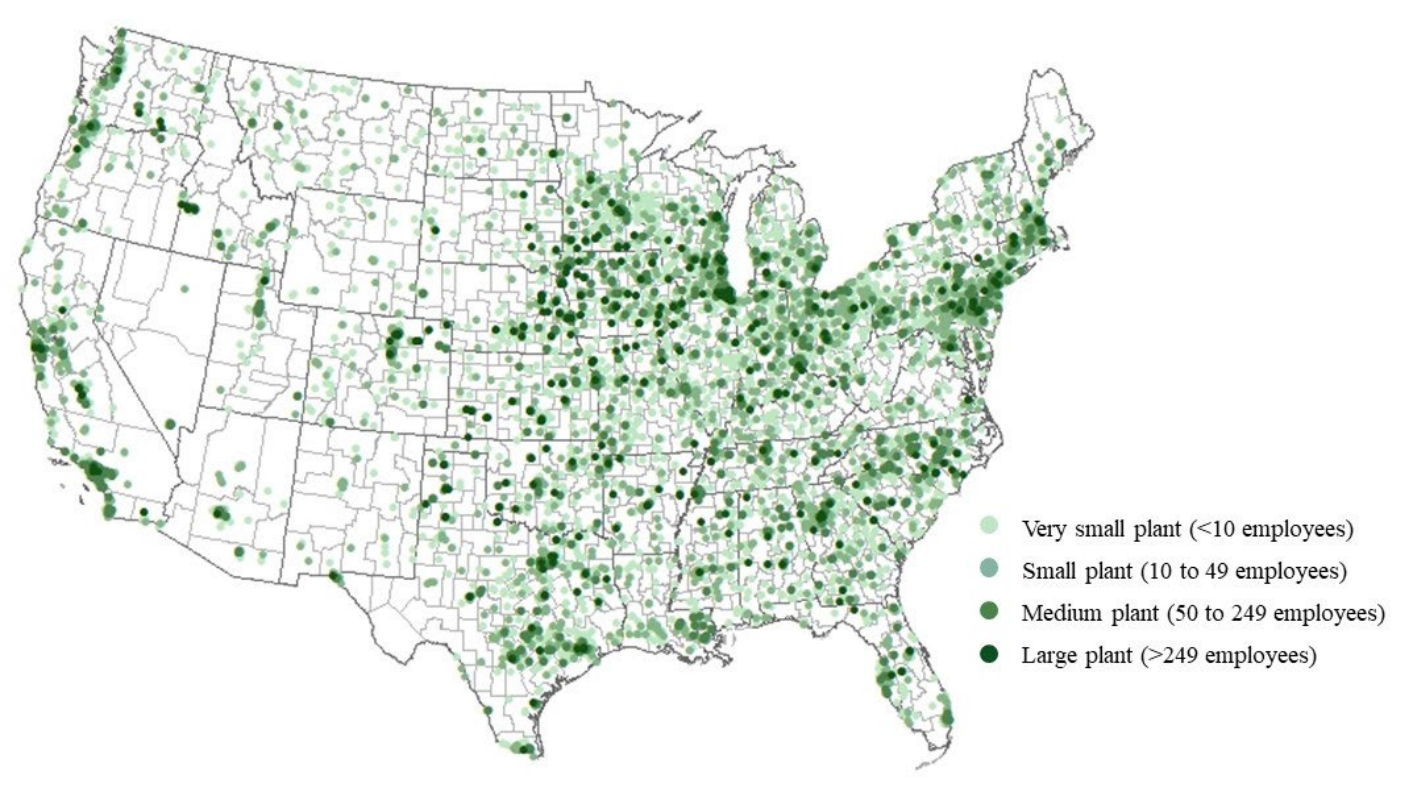
VOL. 1, ISSUE 5, AUGUST 2022

Beef and pork processing output dropped substantially during the initial months of the COVID-19 pandemic. Additionally, both producer-facing animal prices and consumer-facing meat prices experienced large fluctuations. Output and price concerns have led to increased interest among policymakers in the meat processing industry and its resilience. Large amounts of funding – over $1 billion at the federal level and millions more at the state level – have been set aside to help improve industry resilience. To ensure this investment is effectively utilized, it is important to understand what factors are related to meat processing plant resilience (or survival). A new study from University of Missouri researchers finds plant characteristics, local workforce characteristics, and industry concentration may impact meat processing plant survival. This Riff highlights some of the key findings.

Where Are Meat Processing Plants Located?

Overall, plants appear concentrated in the eastern half of the United States, where most of the population is located. Additionally, we see clusters of plants in and around metropolitan areas – cities such as Chicago, Seattle, Dallas, and Philadelphia are easily identifiable on the map due to their many plants. Very small and small plants appear more uniformly dispersed throughout the U.S. than medium and large plants. Large plants are concentrated in areas of the country where there are large numbers of cattle and hogs, like Iowa and the surrounding states.

All Meat Processing Plant Locations (Except Poultry), 1997-2020



Source: Rural and Farm Finance Policy Analysis Center graphic using data from Data Axle.
Notes: Each point represents one plant during the study period (1997 to 2020) and color indicates plant size. Alaska and Hawaii were excluded from the study due to data availability.

What Factors May Increase Meat Processing Plant Survival?

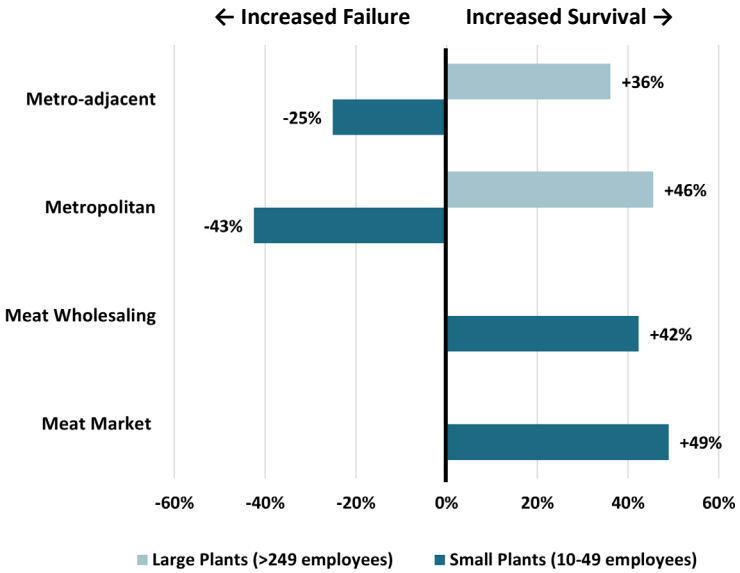
The study showed that for smaller plants, diversification and vertical integration was strongly linked to survival. Small plants (plants with 10 to 49 employees) that offer a wholesale meat business are 42% more likely to survive than plants that do not. Small plants with a retail meat market are 49% more likely to survive than plants without one. These results also hold for very small plants (5 to 10 employees) and suggest that encouraging diversification among smaller plants may increase industry resilience.

For large processing plants (over 250 employees), proximity to labor was strongly related to plant survival. Compared to plants located in rural, non-metro-adjacent counties, large plants in metropolitan counties are 45% more likely to survive, and those in metro-adjacent counties are 36% more likely to survive. Including additional factors in the analysis – such as consumer income, local food sales, transportation infrastructure, and size of the labor force – showed that availability of labor is driving this urban-proximity finding. This suggests that actions aimed at increasing the pool of meat processing workers, such as investing in workforce development or increasing the number of visas available for food processing workers, may increase industry resilience.

Turning to industry concentration, results of the analysis were mixed, but generally showed little relationship between industry concentration and plant survival. However, for large plants, results suggest that higher industry concentration is related to increased survival. Given these findings, it appears that efforts to reduce concentration in beef and pork processing may not increase plant resilience.

Selected Factors Related to Plant Resilience

Resilience factors are sensitive to plant size



Source: Authors' analysis.

Key Takeaways

- Diversification is associated with increased survival for smaller plants; encouraging diversification may increase industry resilience.
- Proximity to labor is associated with increased survival for large plants; increasing the pool of meat processing workers may increase industry resilience.
- Industry concentration appears to have little relationship with smaller plant survival and a positive relationship with large plant survival; measures to reduce concentration in the meat processing industry may not increase industry resilience.

All Riffs from RaFF are available at raff.missouri.edu/publications

Authors: Catherine Isley, (former graduate research assistant) catherine.isley@mail.missouri.edu, and Dr. Sarah A. Low lowsa@missouri.edu

Rural & Farm Finance Policy Analysis Center
University of Missouri

The Rural and Farm Finance Policy Analysis Center (RaFF) at the University of Missouri aims to help policymakers and stakeholders understand rural economic and financial conditions and trends and explore how existing and proposed policies affect rural and farm finances.