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Incentives for Food Safety and the Public Disclosure Food Safety Performance in Chicken Slaughter

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Based on ERS report, ERR-231, <https://www.ers.usda.gov/publications/pub-details/?pubid=83660>.

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The Safety of Chicken

- Chicken is a major source of *Salmonella*, the second leading cause of foodborne illness in the U.S.
- Market Failure
 - Buyers cannot evaluate food safety, giving business an incentive to under-provide food safety





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Incentives for Food Safety

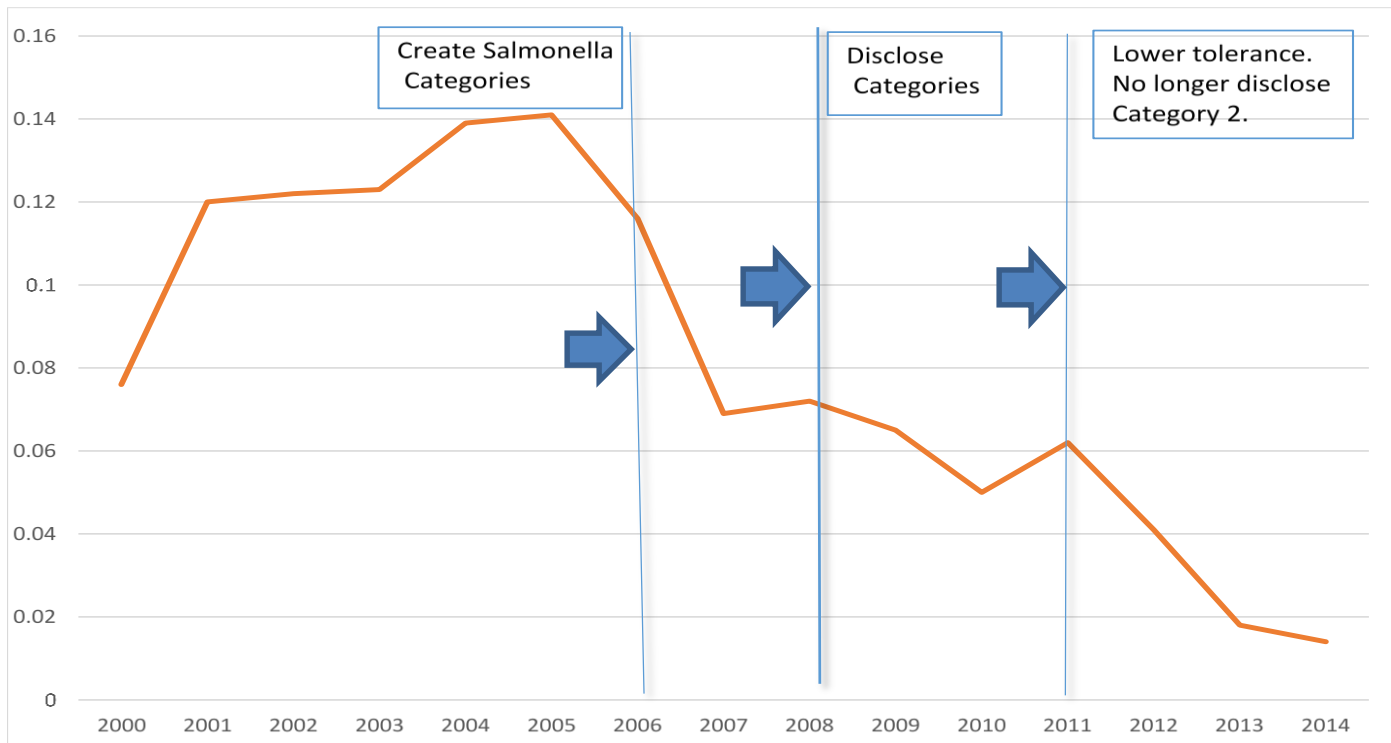
- Businesses incur costs if determined to be a source of foodborne illness, i.,e. reputation matters
- FSIS inspects plants; enacts Pathogen Reduction /Hazard Analysis Critical Control Point rule (PR/HACCP) in 1996





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Share of young chickens testing positive for *Salmonella* over 2000-14.



Source: Author's estimates using FSIS data.





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Variables for Empirical Tests

- Food Safety Performance
- Plant size
- Plant further processing
- Performance of sanitation tasks
- Additional plant controls
- Food safety market environment





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Possible Data

- FSIS Administrative Data
- Census Microdata
- Industry-level public data





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The Limits of FSIS Administrative Data

- Has food safety process control information
- No cost or revenue information.
- No product information.
- Little information on plant characteristics.
 - FSIS contracts with Research Triangle Institute (RTI) and Dunn and Bradstreet for some data, but most data is imprecise.





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Linking FSIS Data to Establishment-Level Economic Data from Census

- Data set would have extensive food safety, cost, and production information.

BUT

- There would be many data leakages:
 - Poor matches of FSIS data with Census data
 - FSIS does not collect some key information each year.





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The Data I Used

- Administrative Data
 - Three regulatory areas: *Salmonella* test results; sanitation and process controls; inspection of animals.
 - Plant economic data: multi-plant firm and number of employees obtained under contract with Dunn and Bradstreet
- Food Safety Environment
 - Number of plants suffering recalls, controls for aggregate changes in *Salmonella* levels.





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Effect of Regulatory Periods on Performance on *Salmonella* tests.

- The percent of samples testing positive for *Salmonella* dropped by about 10.5 percent.
- By 2011, about 80 percent of all young chicken slaughter establishments had *Salmonella* levels equal to one-sixth the tolerance that had existed in 2005.





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Thank You !

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