

The Performance of Food Manufacturing Industries in Kansas



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Outline

- Introduction
- Methods and Data
- Results and Discussion
- Future Projections
- Conclusion
- Discussion Questions

Food Manufacturing in Kansas

A pivotal component of the Kansas' economy

Largest sector of the Kansas' manufacturing employment

- 21% of the State total manufacturing employment.
- More than 32,000 employees, paid about \$1.9 billion wages in 2021 (U.S. Census Bureau).

State economy

- About 300 firms with a value-added of about \$10.3 billion in 2021 (U.S. Census Bureau).
- Provides a revenue of about \$5.2 billion annually (Kansas Department of Commerce, 2024).



[Source: Lab1](#)

Rural leaders and state and national policymakers perceive food processing as a contributor to employment and economic development (Salin et. al 2002).

Food Manufacturing in Kansas

Kansas as an *agriculturally dominated state*:

- An incentive for food manufacturing companies to establish operations in the state.

Amid the importance of food manufacturing in the state,

- Structural and performance changes can have significant upstream and downstream effects on the agriculture sector as well as across the Kansas economy

Objectives

- To analyze the trends in food manufacturing performances in Kansas and the United States.
- Implication of the trends for farmers.

Methods and Data

Data

Source: Annual Survey of Manufacturers (ASM) by the U.S. Census Bureau

Period: U.S. – ASM (1980 – 2021)

Kansas – ASM (1998 – 2021)

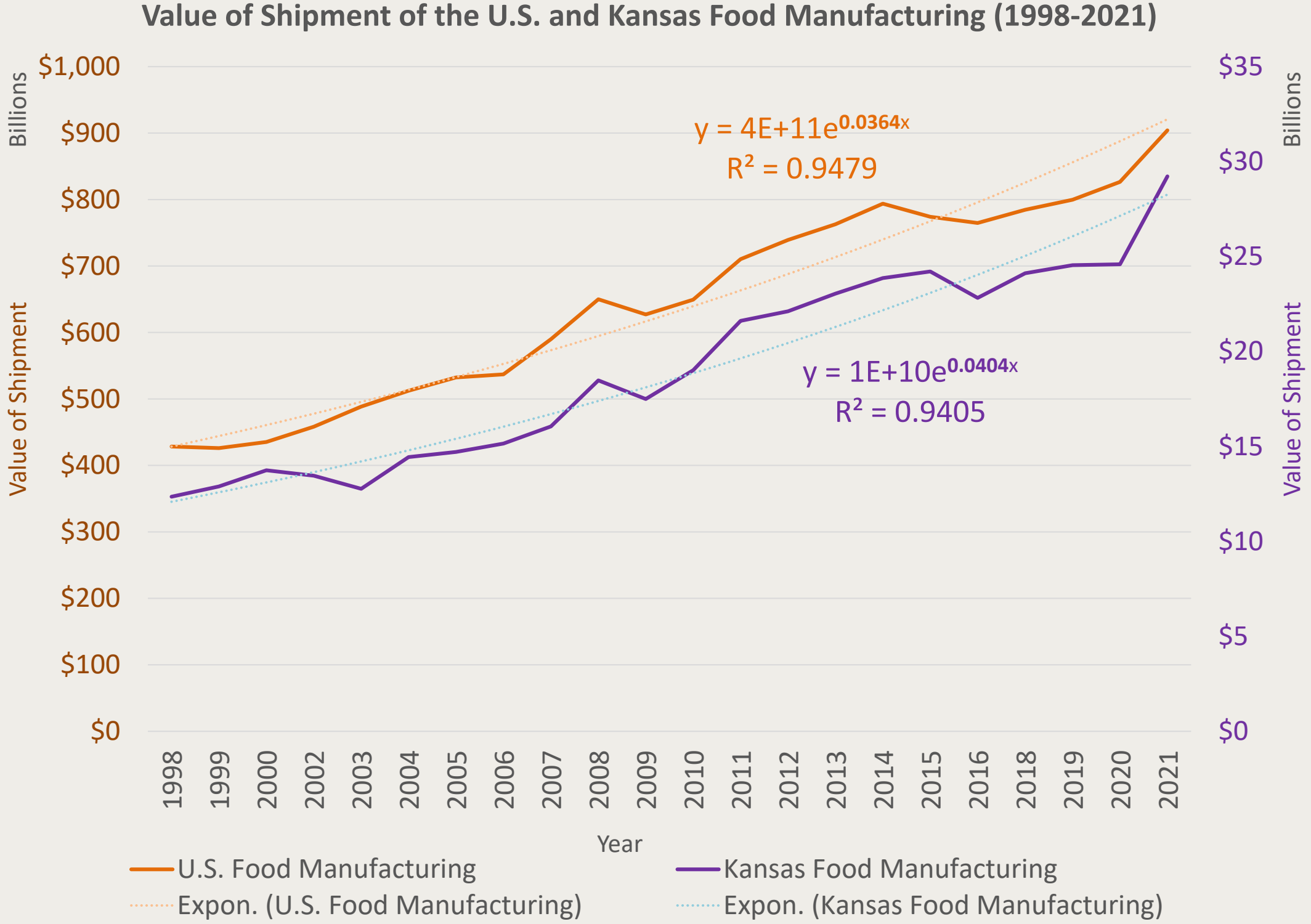
Performance measures

Gross Margin was used as the performance measure. It is calculated as:

Gross Margin = (Revenue - Variable Cost)/Revenue



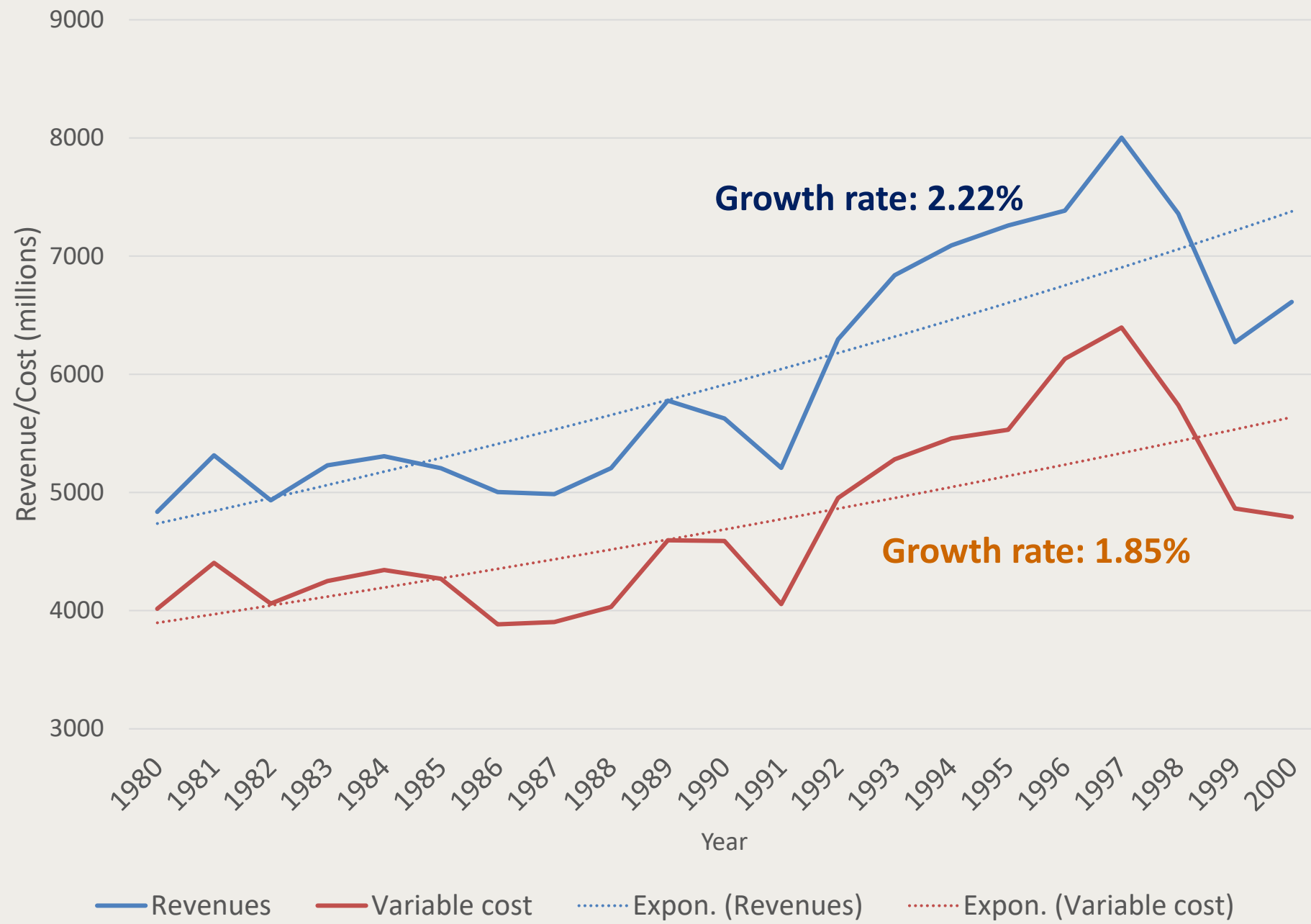
Results and Discussion



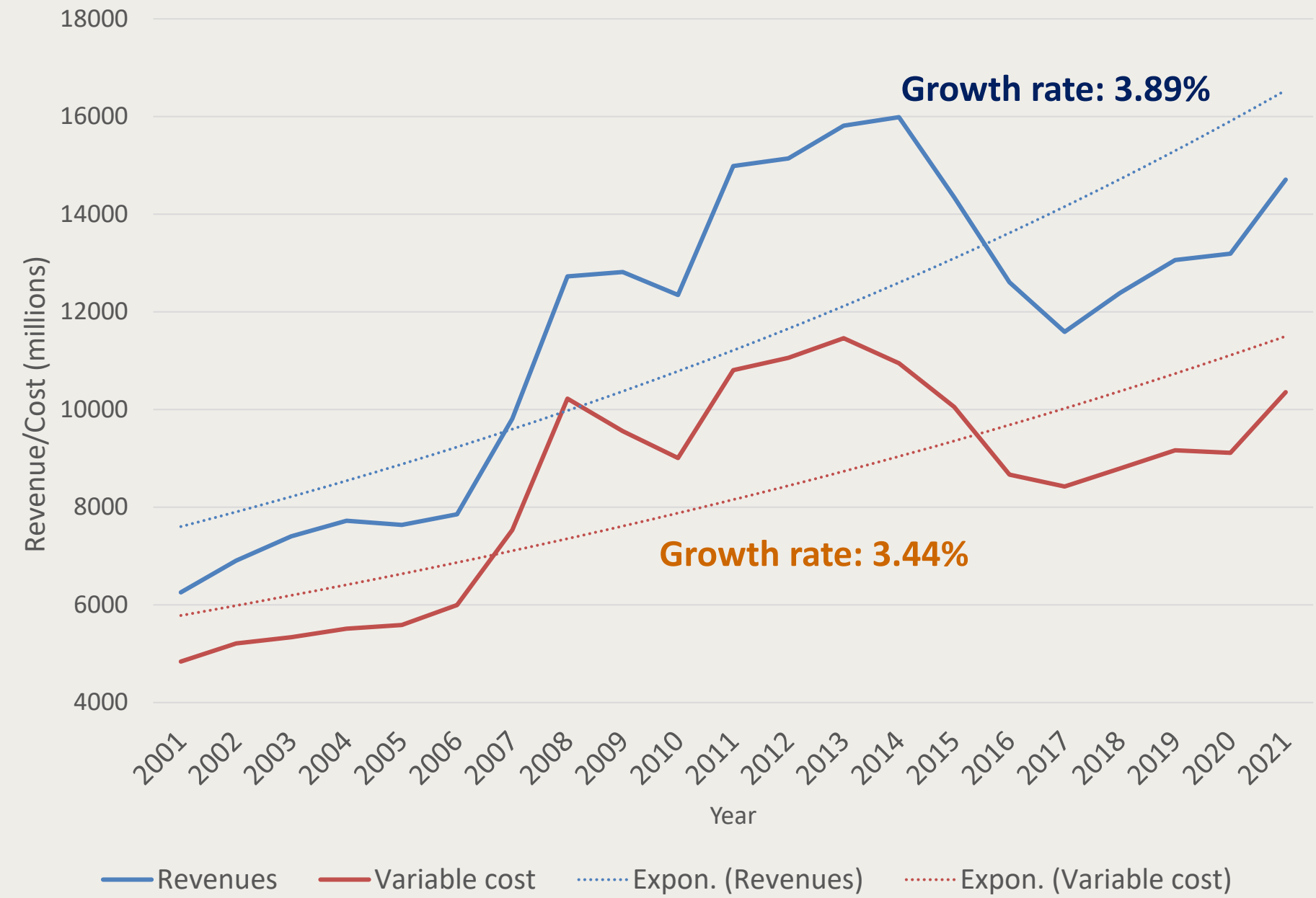
- Revenue has doubled in both U.S. and Kansas.
- Revenue Growth in the U.S. is 3.6%
- Revenue Growth in Kansas is about 4%

The Performance of the U.S. Flour Milling Sector

U.S. Flour Milling Revenue and Variable Cost (1980-2000)

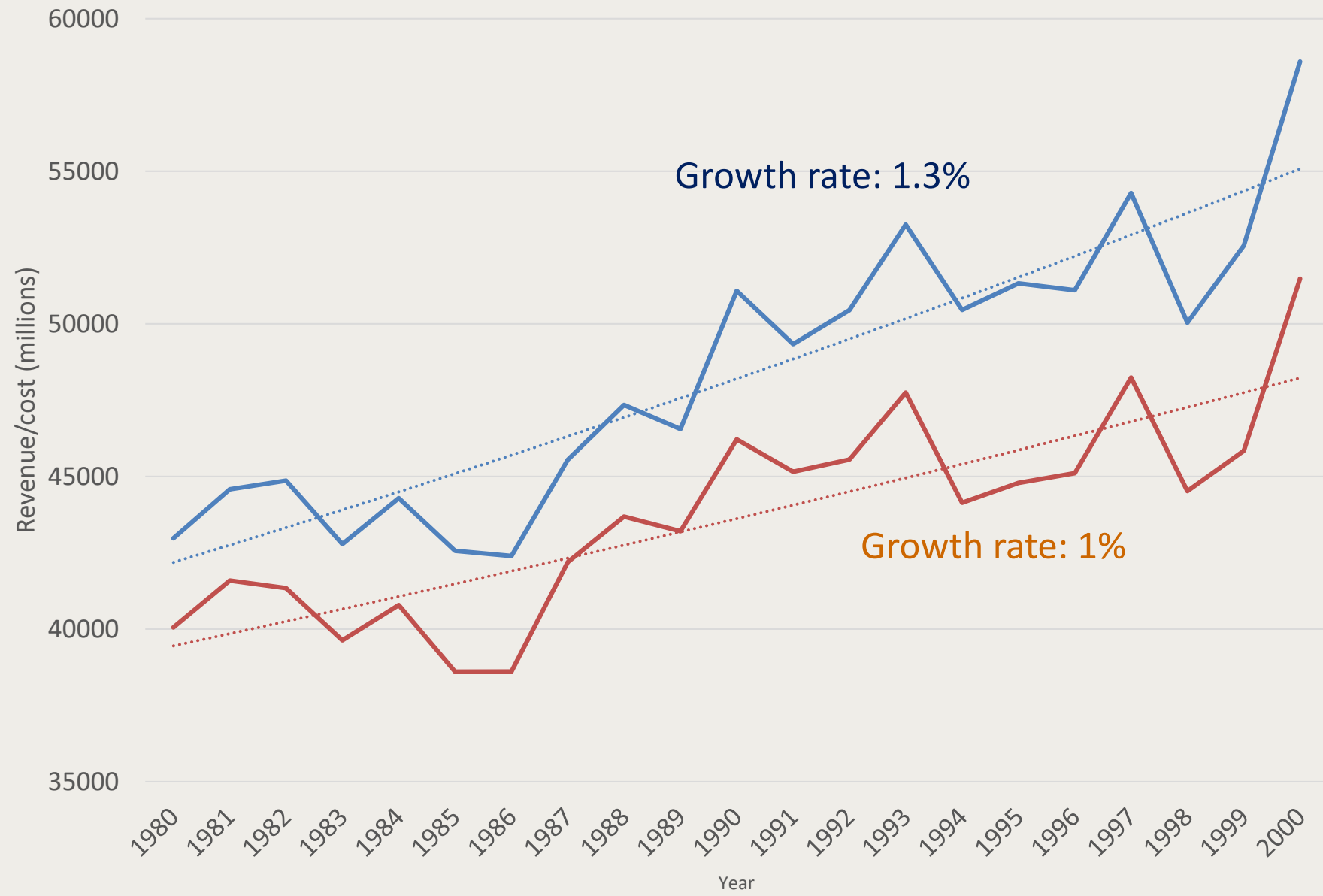


U.S. Flour Milling Revenue and Variable Cost (2000-2021)

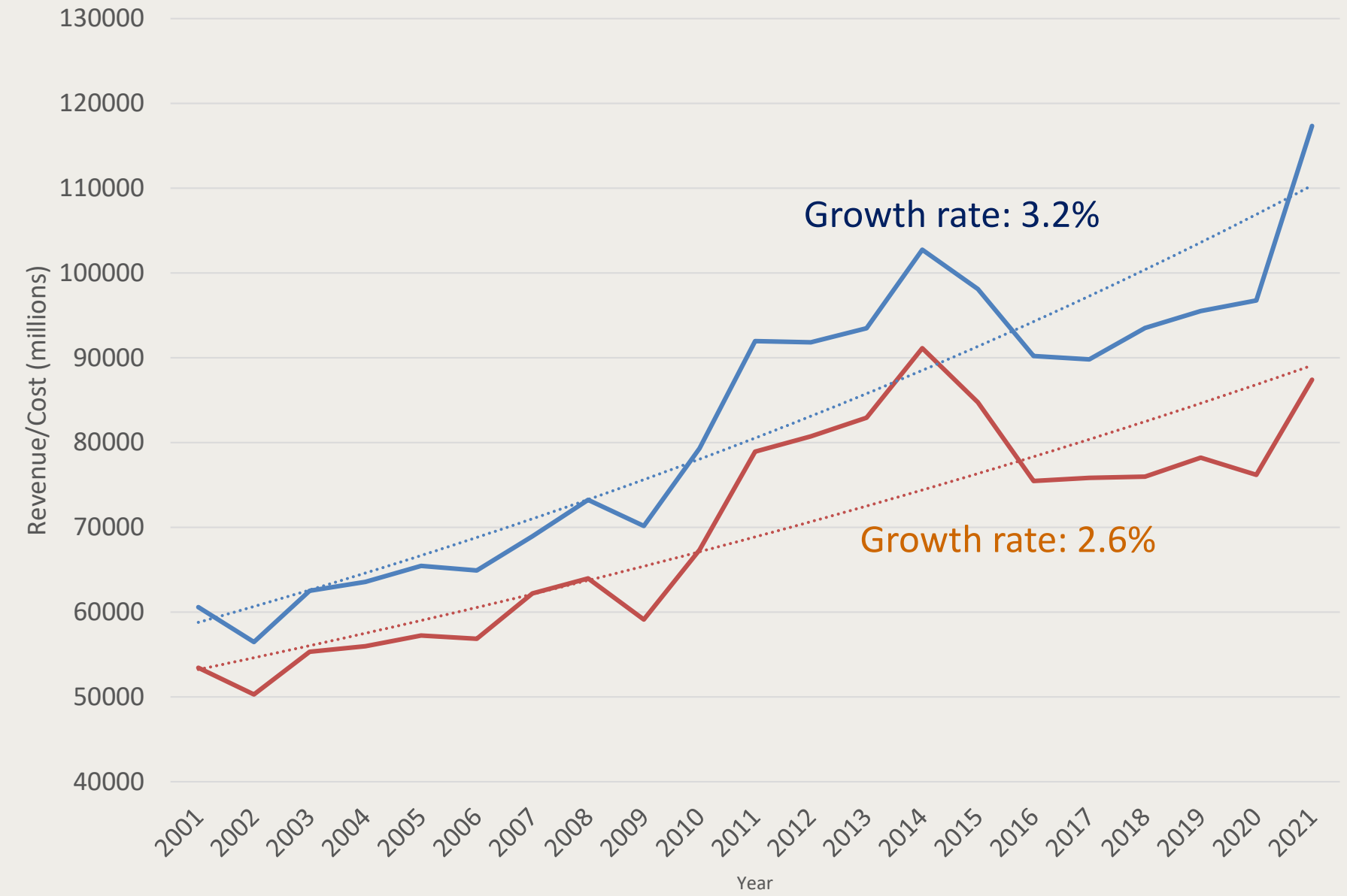


The Performance of the U.S. Meat Slaughtering (except poultry) Sector

U.S. Meat Slaughtering Revenue and Variable Cost (1980-2000)



U.S. Meat Slaughtering Revenue and Variable Cost (2001-2021)

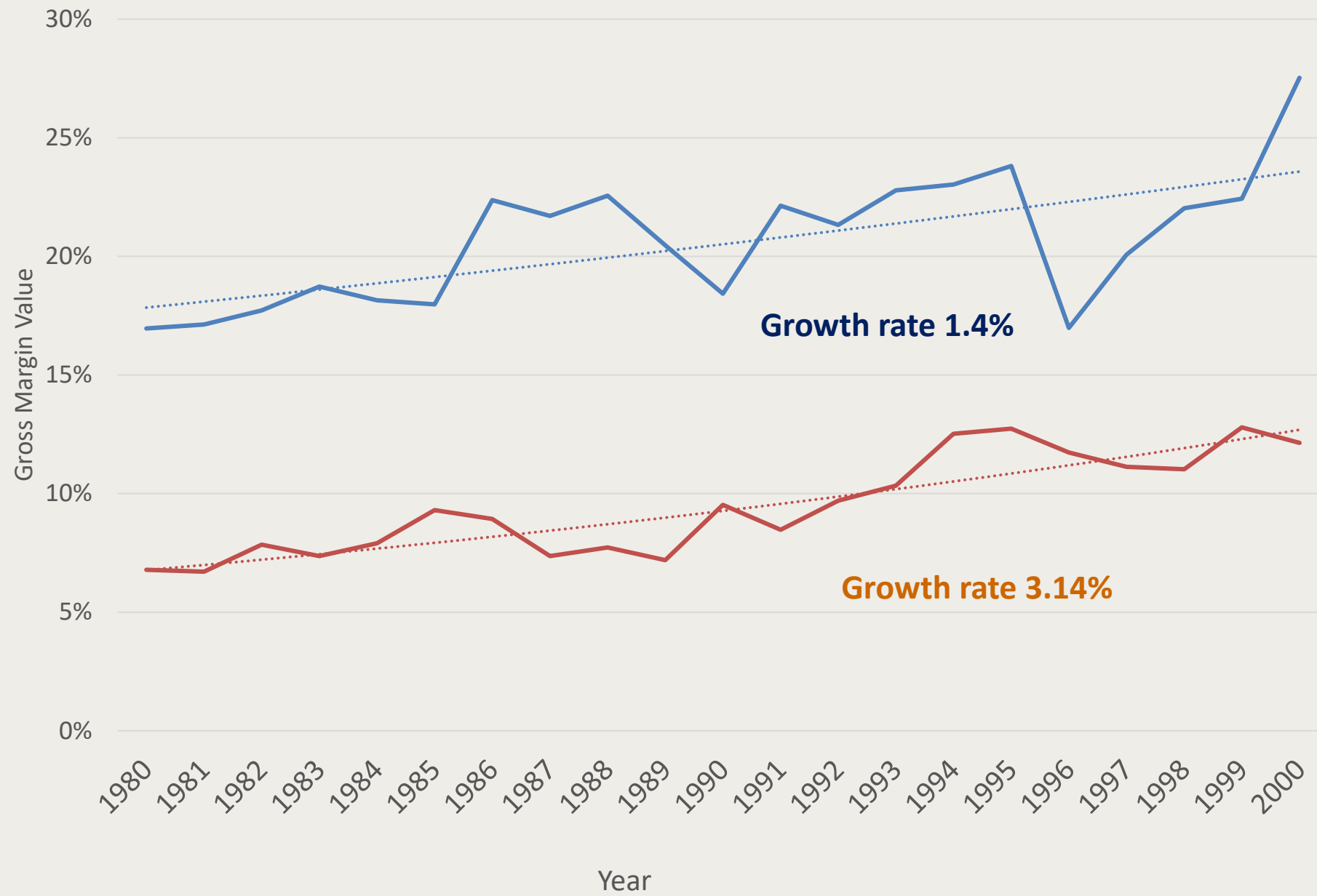


— Revenues — Variable Costs — Expon. (Revenues) — Expon. (Variable Costs)

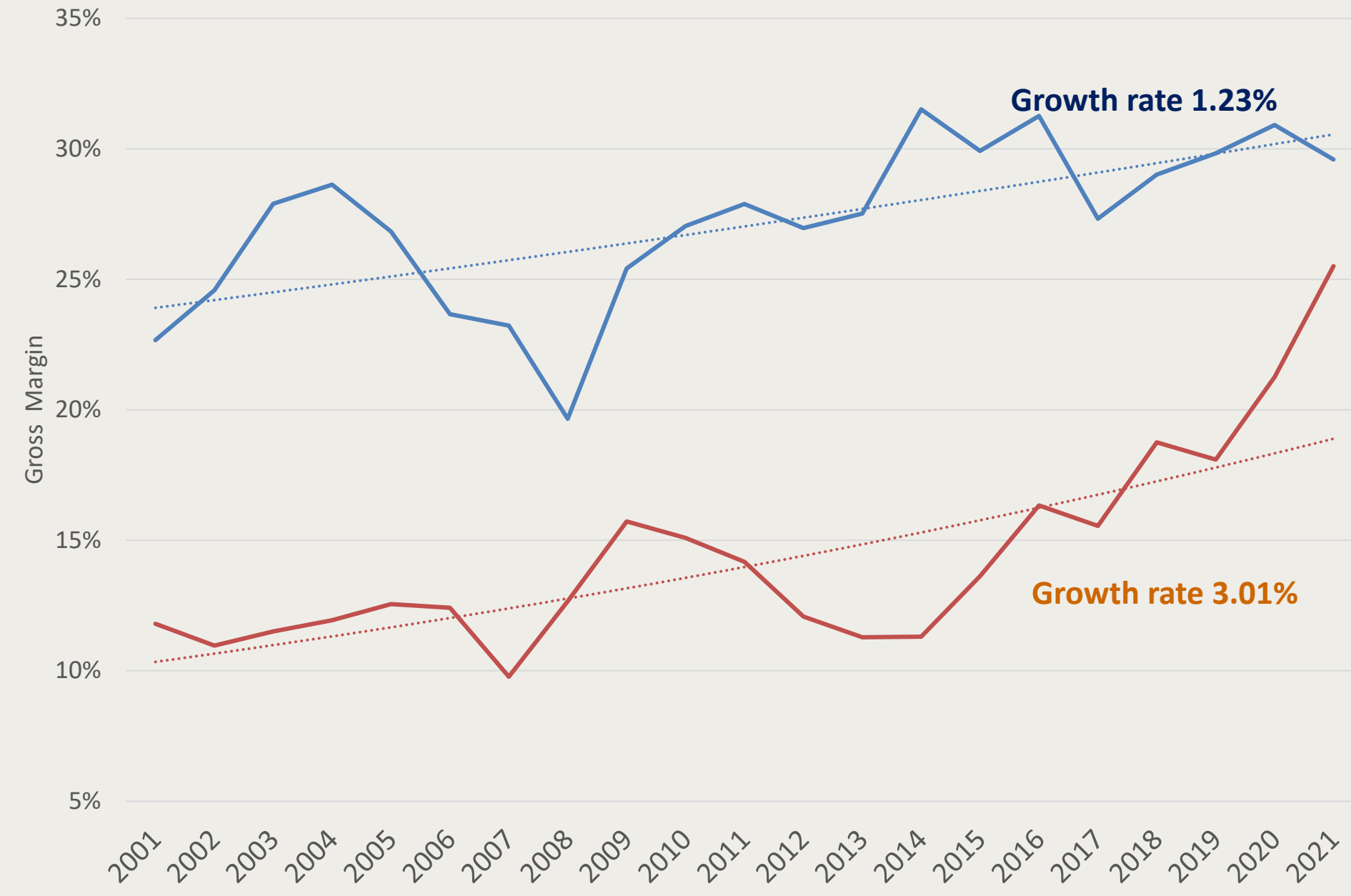
— Revenues — Variable Costs — Expon. (Revenues) — Expon. (Variable Costs)

The Performance of the U.S. Flour and Meat Slaughtering Sector

U.S. Flour and Meat Slaughtering Gross Margin (1980-2000)



U.S. Flour and Meat Slaughtering Gross Margin (2001-2021)

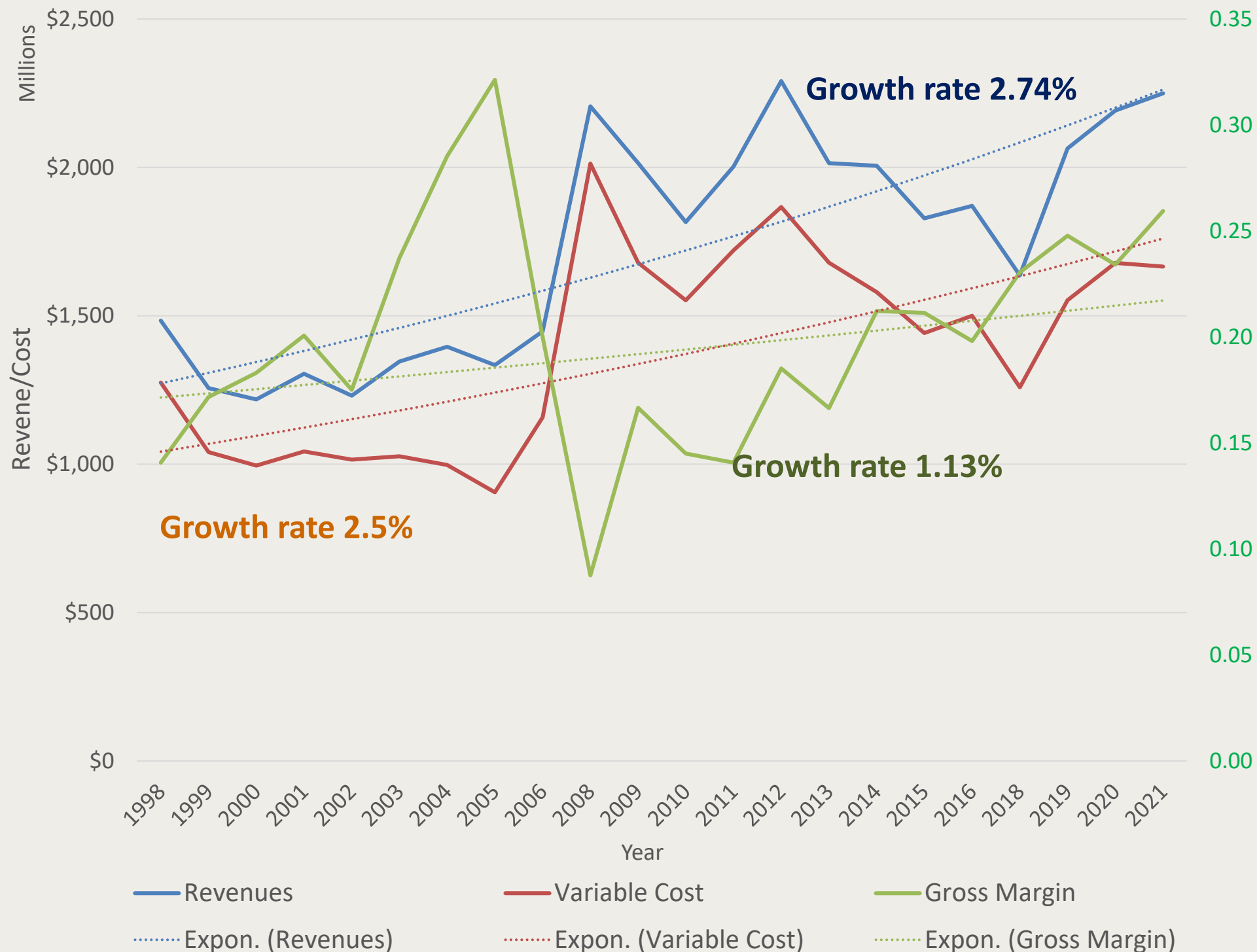


— GM_Flour Milling
— GM_Meat Slaughtering (except poultry)
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— GM_Flour Milling
— GM_Meat Slaughtering (except poultry)
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⋯ Expon. (GM_Meat Slaughtering (except poultry))

The Performance of the Kansas' Grains and Oilseed Milling Sector

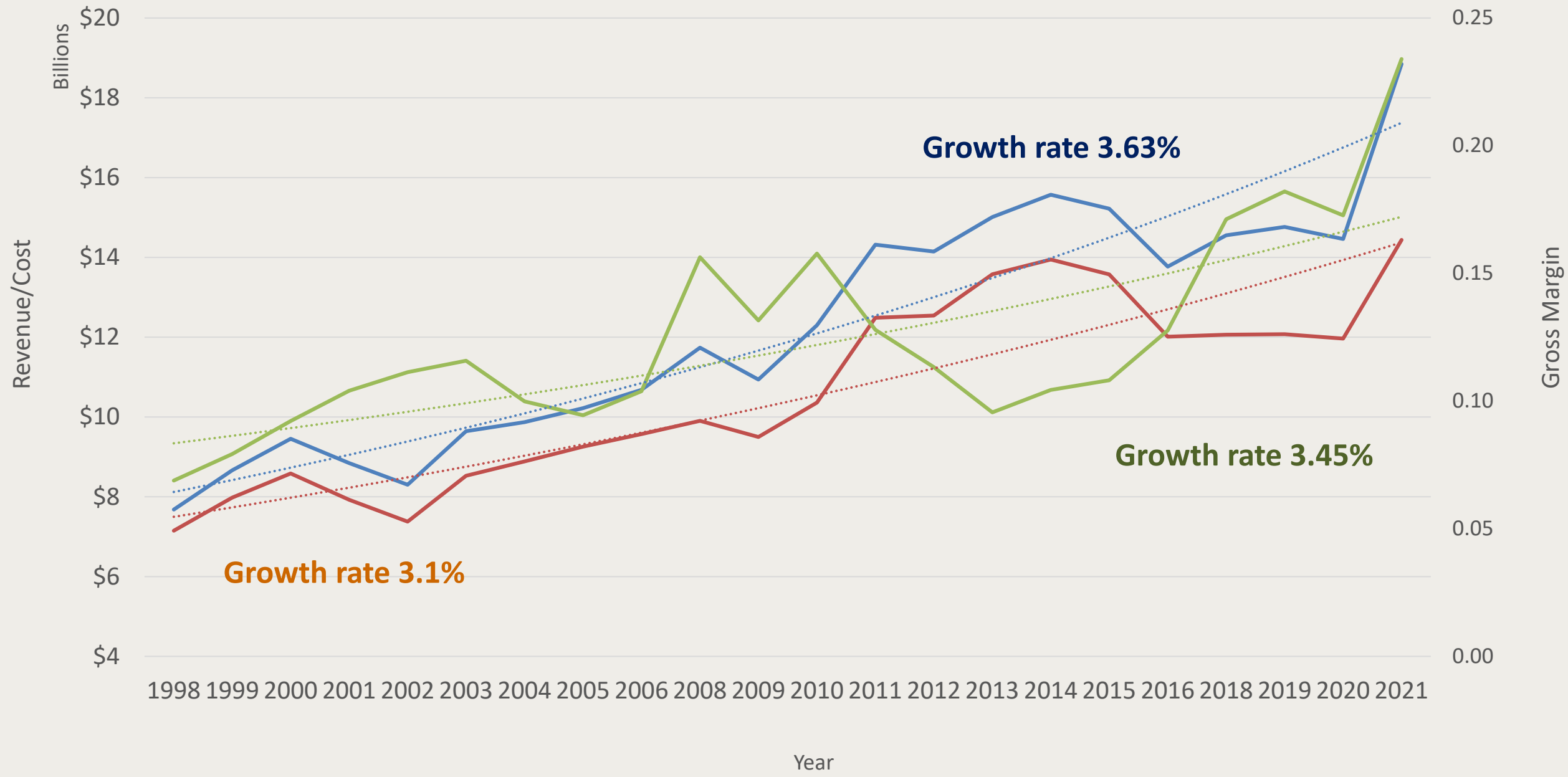
Kansas' Grains and Oilseed Milling Revenue, Cost and Gross Margin



- High volatility in the grains and oilseed milling sector.
- Relatively similar growth rates in revenue (2.7%) and variable cost (2.5%) but a slower growth rate in the gross margin (1.1%).

The Performance of the Animal Processing Sector in Kansas

Kansas' Animal Slaughtering and Processing Revenue, Variable Cost and Gross Margin

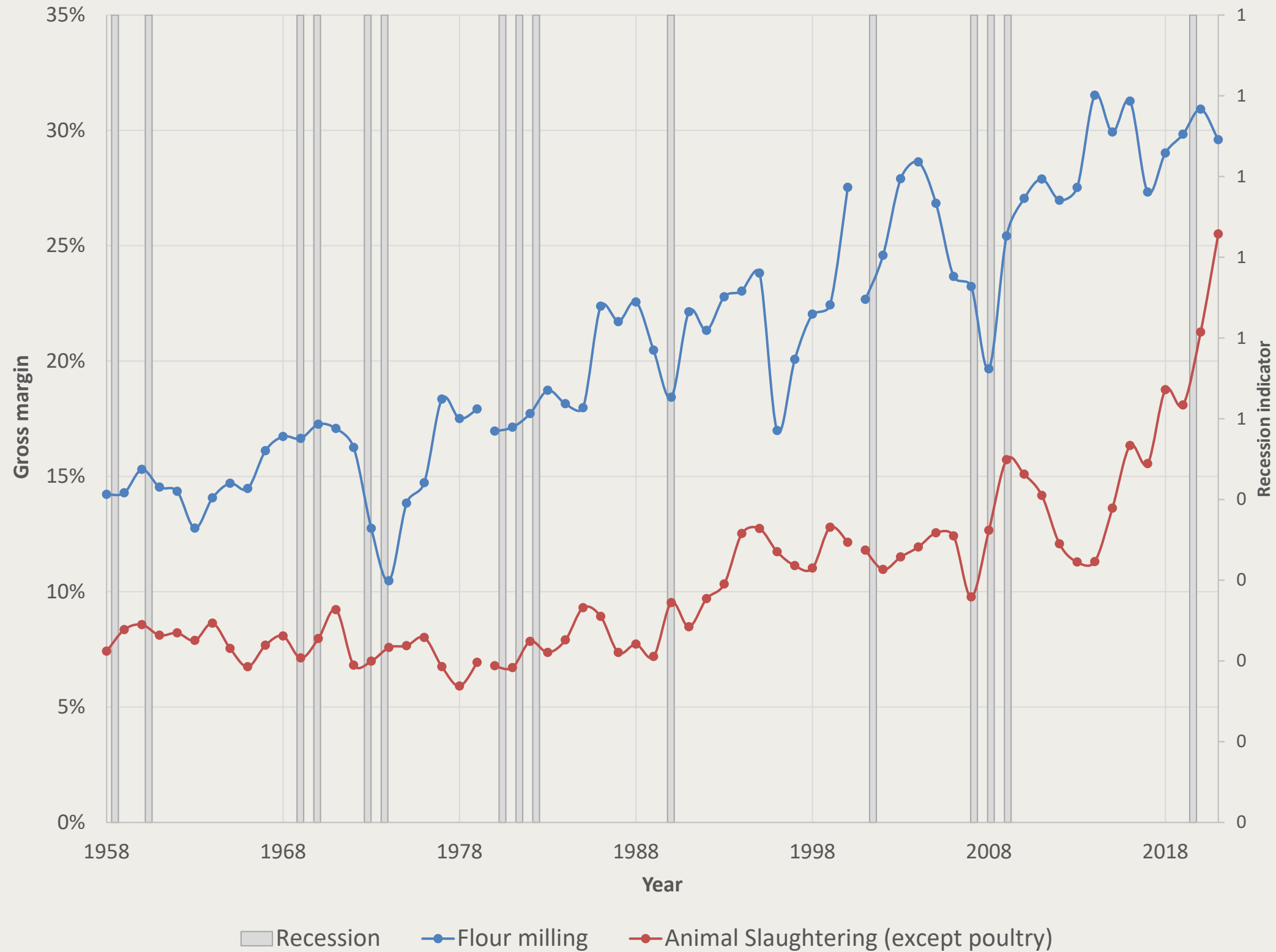


- Revenue is growing at a 3.6%
- Variable cost growth rate is 3.1%
- Gross margin growth rate is 3.45%

— Revenues — Variable Costs — Gross Margin
⋯ Expon. (Revenues) ⋯ Expon. (Variable Costs) ⋯ Expon. (Gross Margin)

The Performance of the U.S. Food Processing and Recession Periods

U.S. Food Manufacturing Gross Margin with Recession indicator

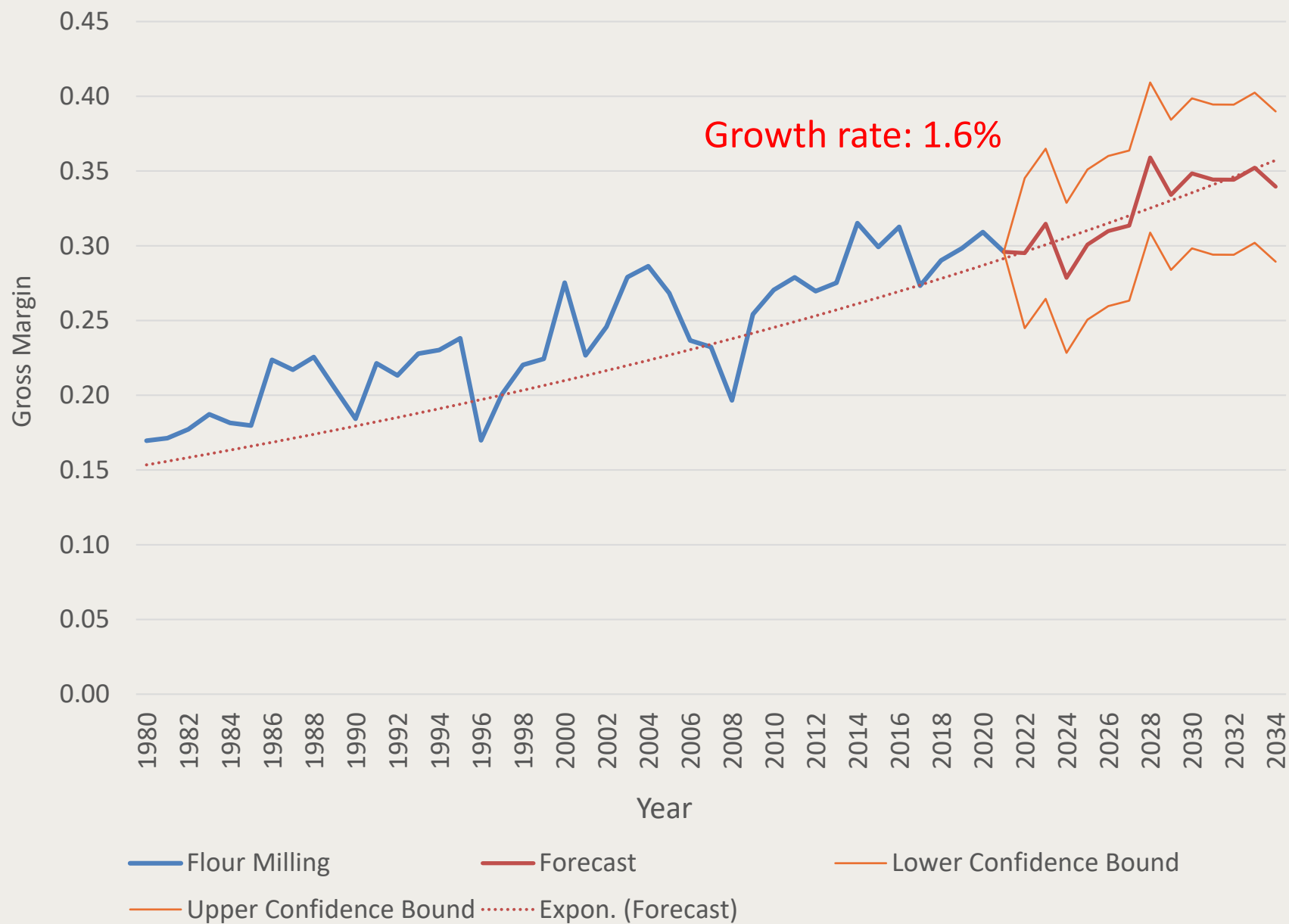


- Response to economic recession
 - More pronounced in the flour milling sector than the animal slaughtering sector.
 - The animal slaughtering sector is resilient during the recessions (less sensitive to economic shifts).

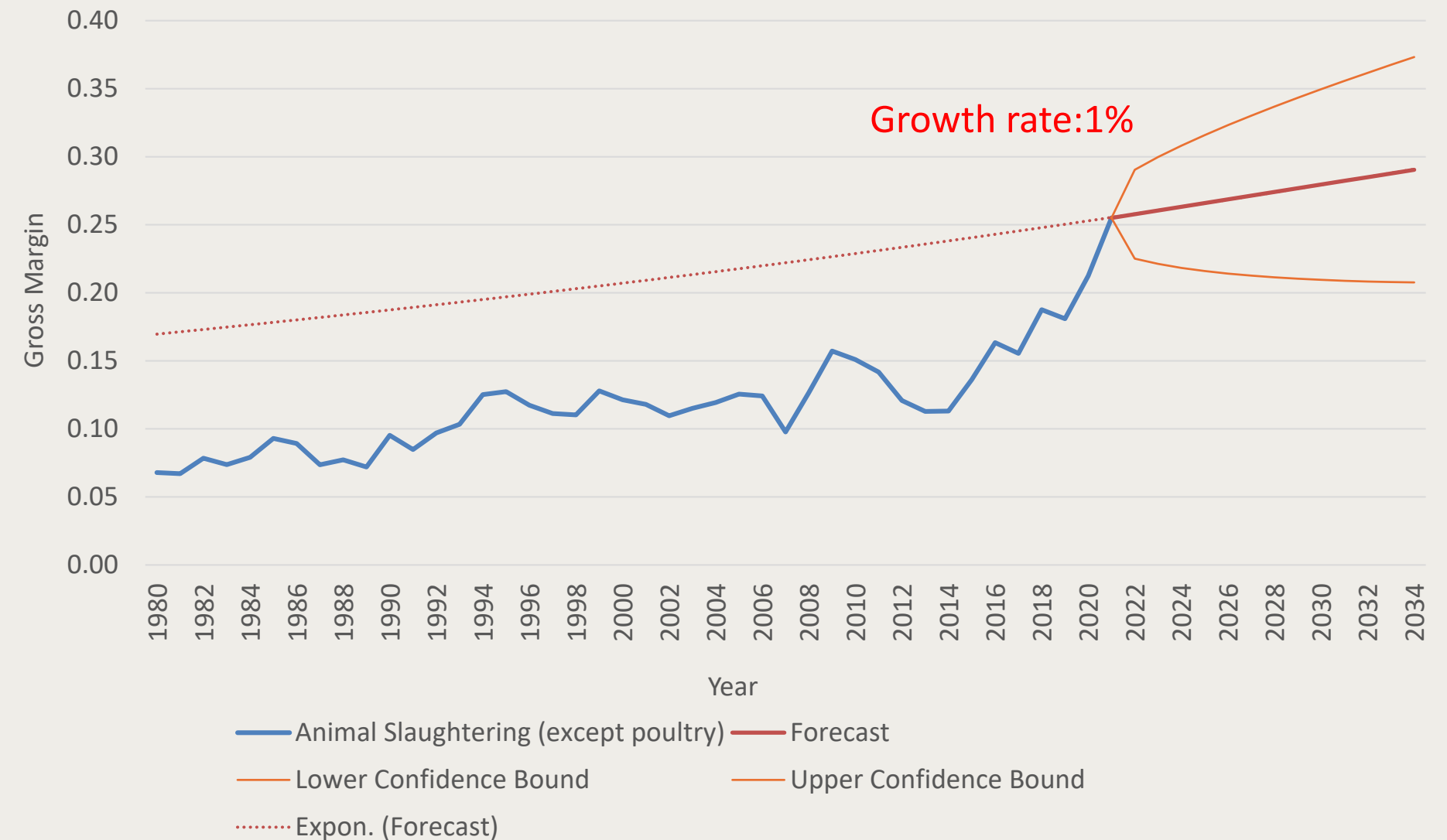
Future Projections

What could the projections be for the sectors?

U.S. Flour Milling Gross Margin Forecast

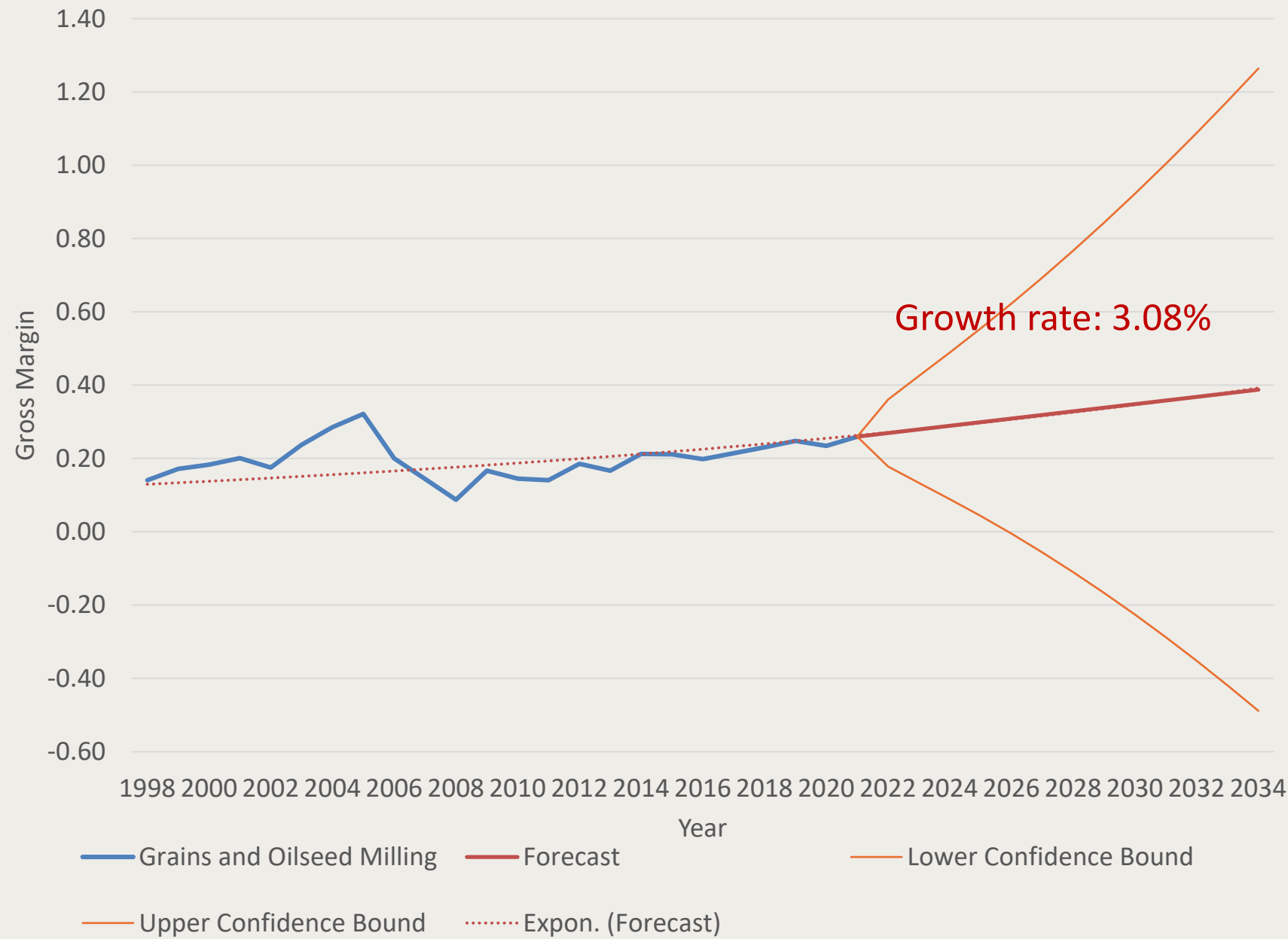


U.S. Meat Slaughtering Gross Margin Forecast

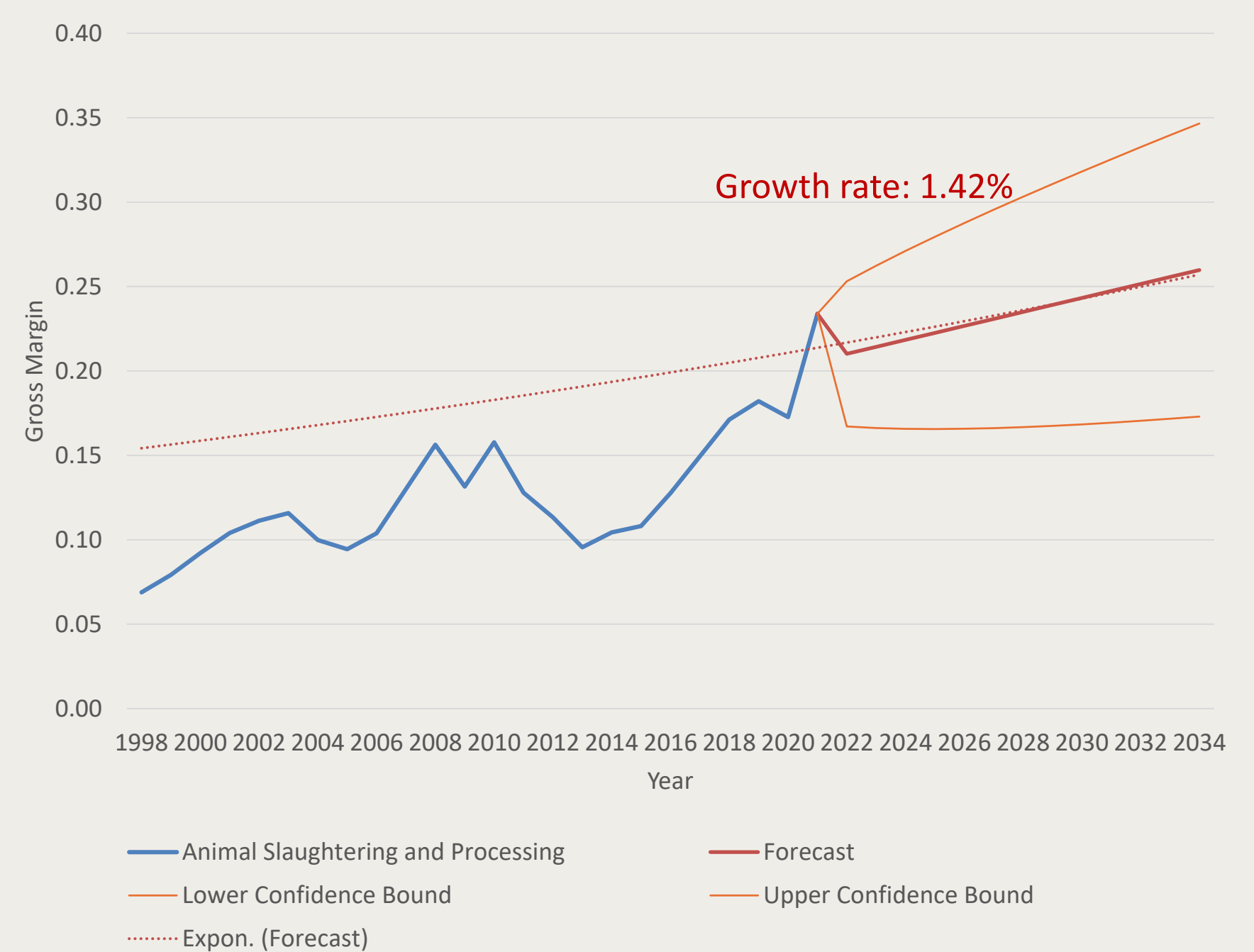


Future Projections

Kansas' Grains and Oilseed Milling Gross Margin Forecast



Kansas' Animal Processing Gross Margin Forecast



Conclusion

- Food manufacturing in Kansas experienced a higher growth of **0.4% more** than the national average.
- There was a higher growth rate in revenues and variable costs between 2001 - 2021 than between 1980 – 2000 in both U.S. flour milling and meat slaughtering sectors.
- **Positive trends in the gross margin of all the sectors**
 - Higher gross margin in the U.S. flour milling industries than in the meat slaughtering sector.
 - Similarly, animal slaughtering and processing in Kansas has a lower gross margin than Kansas's grains and oilseed milling sector.
- The U.S. meat processing sector is resilient to economic shifts.
- Though revenues have increased over the years for the animal processing and grain milling sector, variable costs have also increased.
 - Increase in gross margin is from consumers, and not farmers' margin.

Discussion Questions

1. What are some challenges farmers face with food manufacturing industries?
2. How do you manage your relationships with processors and other key players in the supply chain?
3. How do changes in consumer demand, as suggested by the performance trends in food processing, influence your production decisions?
4. How have past recessions impacted your farming operations, and what strategies have you found most effective in managing these impacts?
5. Given the historical trends and future projections in the food manufacturing industry, how are you planning to adapt your farming strategies over the next decade?

Thank you!