

# Do Consumers' Expenditures Follow Their Sentiment?

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- Do feelings/attitudes about the economy predict expenditures?
- Factors that may distort the relationship:
  - ▶ Lag effects
  - ▶ Differences in spending across product/service categories
  - ▶ Differences in spending across demographic groups



# Expenditure and Sentiment Data

## Consumer Expenditure Survey (CE)

- U.S. Bureau of Labor Statistics (“LabStat” tool)
- Annual aggregates (means) for 1984 – 2014
- Adjusted for inflation using CPI
- Various categories of expenditures

## Index of Consumer Sentiment (ICS)

- Surveys of Consumers by the University of Michigan
- Annual figures for 1984 - 2014 (mean of monthly figures)
- Published data describe sentiment about the economy as a whole



# Literature Review

- Consumer Confidence and Consumer Spending (Ludvigson, 2004)
  - ▶ Used ICS and the BEA's Personal Consumption Expenditure (PCE) data to measure the relationship between consumer sentiment and expenditures across categories.
  - ▶ Considered how well sentiment predicts other economic measures, e.g., income growth, stock wealth, etc.
  - ▶ Concluded that the relationship is unclear and proposes that it might be nonlinear.

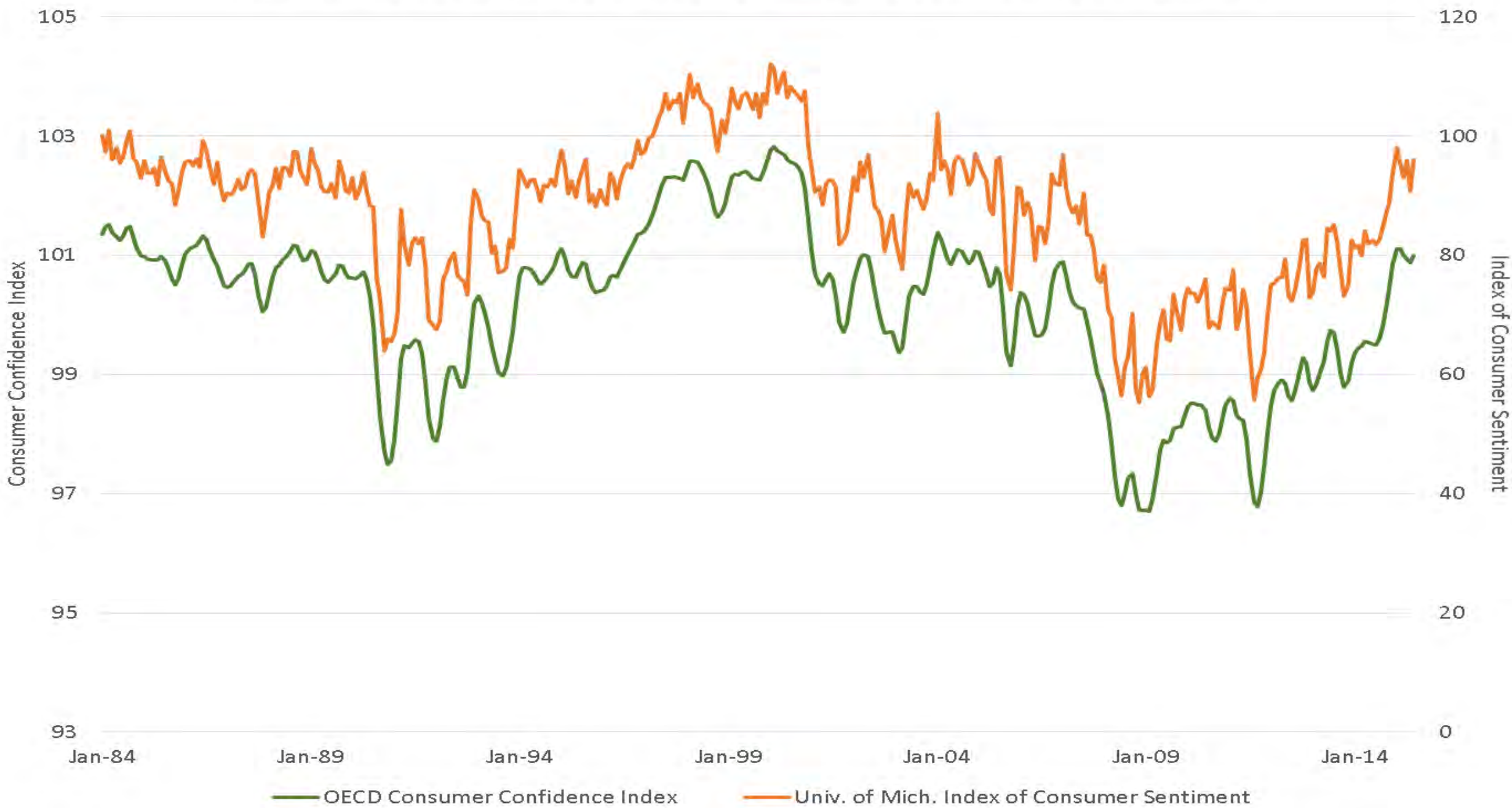


# Literature Review

- Evaluating Threshold Effects in Consumer Sentiment (Desroches & Gosselin, 2004)
  - ▶ Explored previous findings saying that consumer sentiment could be helpful during periods of economic shock.
  - ▶ Used inflation-adjusted PCE data and the Index of Consumer Sentiment.
  - ▶ Concluded that consumer sentiment affects aggregate expenditures most in periods of elevated economic uncertainty.



# Consumer Confidence Index vs. Index of Consumer Sentiment





# From the ICS Questionnaire

“Speaking now of the automobile market – do you think the next 12 months or so will be a good time or a bad time to buy a vehicle, such as a car, pickup, van, or sport utility vehicle?”

*Potential Responses:*

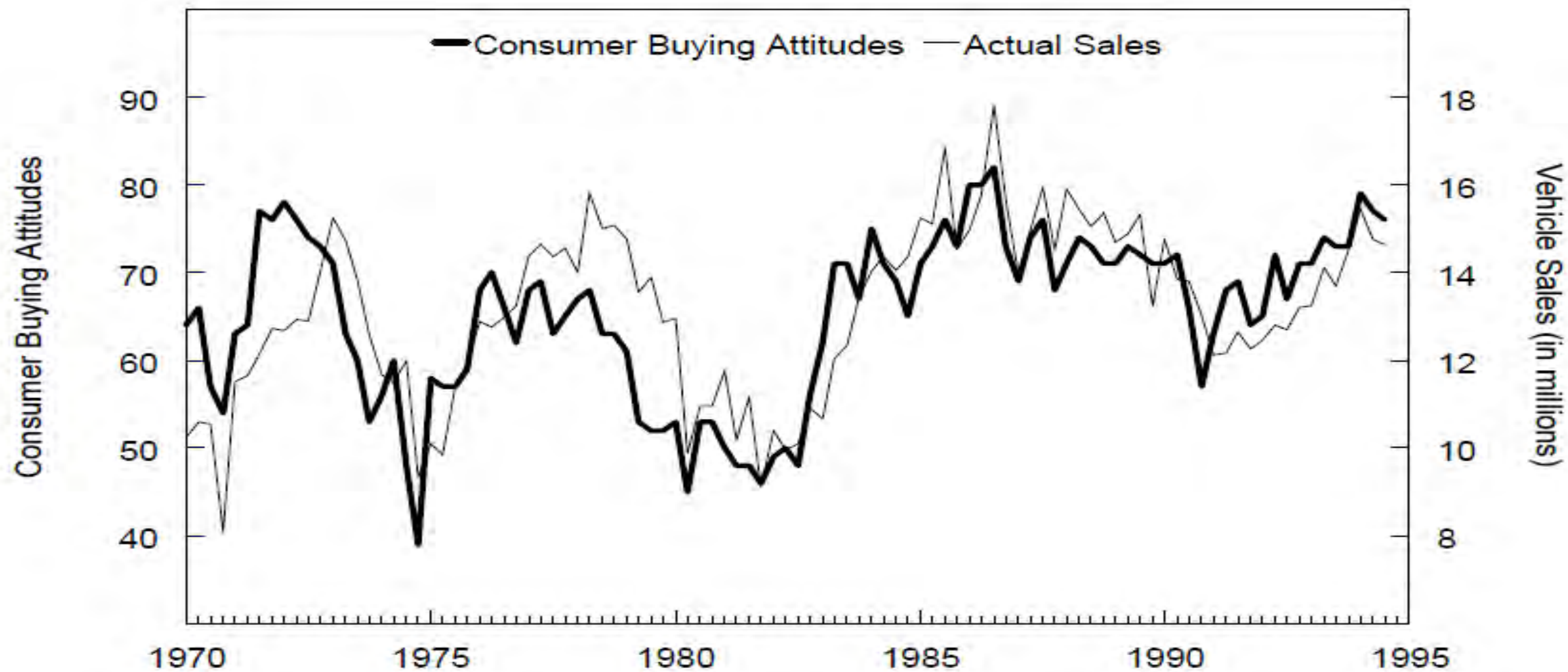
Good

Pro-Con

Bad

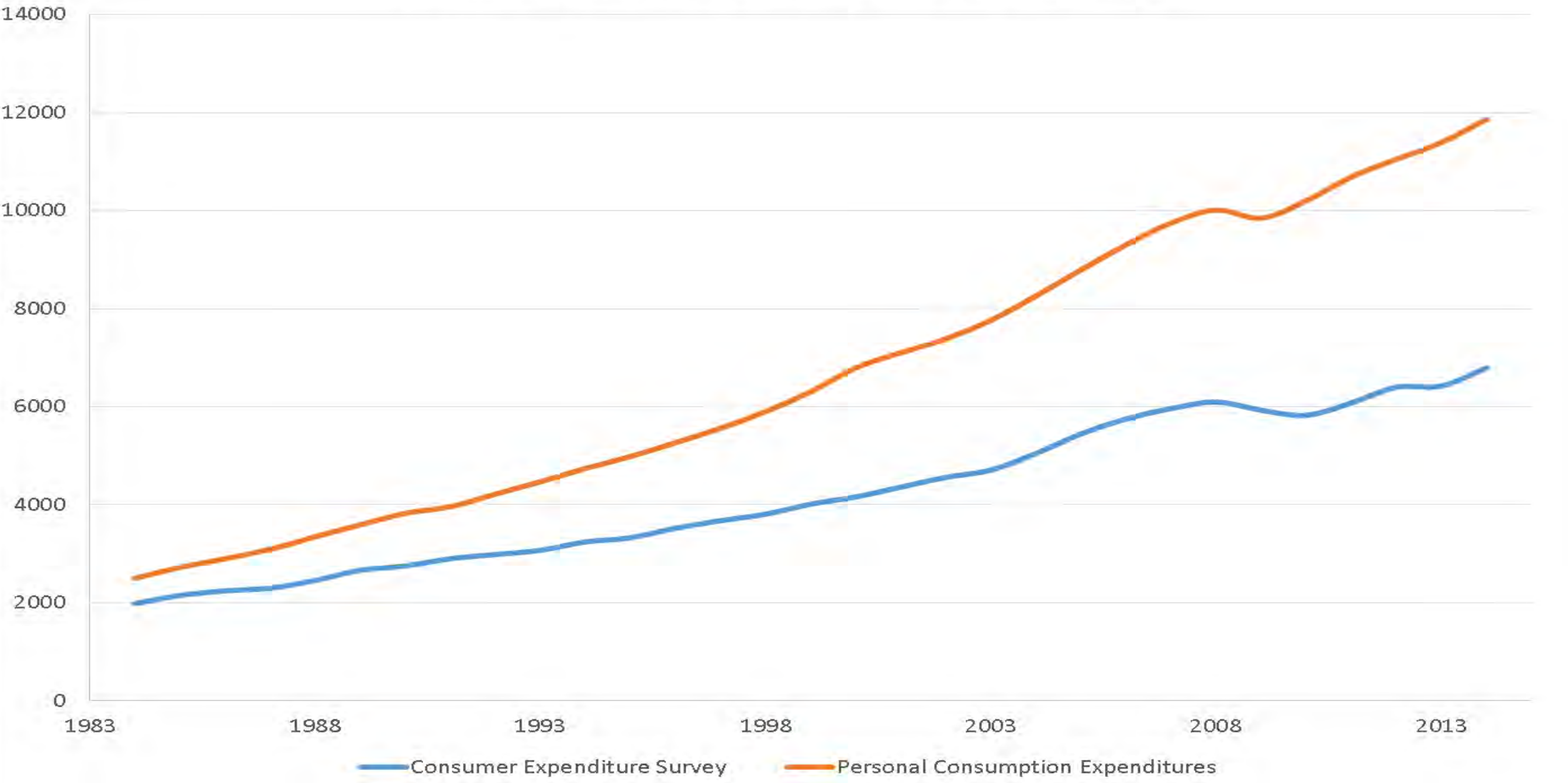
Don't Know

## Buying Conditions for Cars vs. Total Light Vehicle Sales





# Consumer Expenditure Survey vs. Personal Consumption Expenditures (Total U.S. Expenditures in Billions of Dollars)



# SENTIMENT AND EXPENDITURES



# Adjustment for Inflation

## Consumer Expenditure Survey

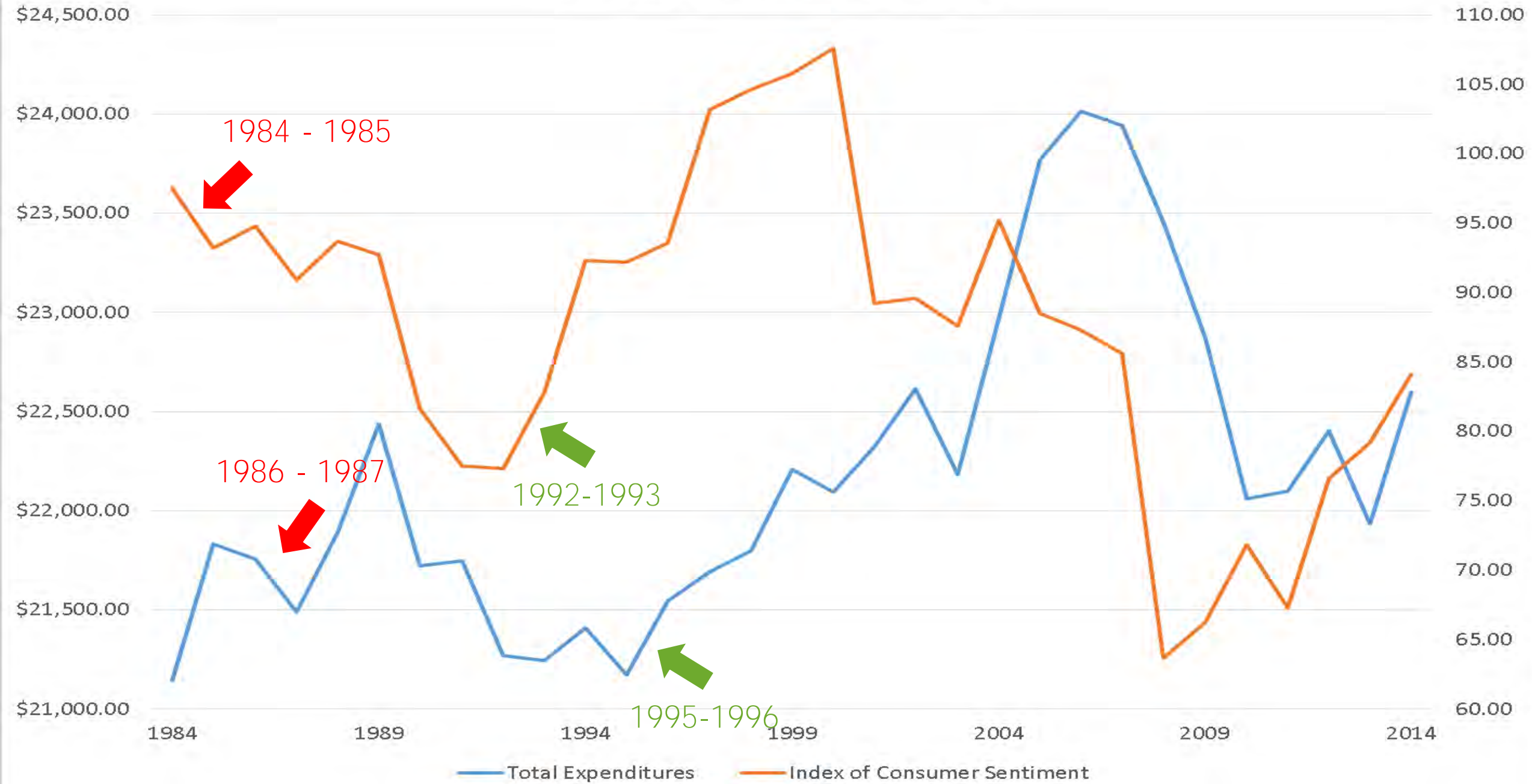
- Total expenditures
- Apparel and services
- Education
- Entertainment
- Food
- Food at home
- Food away from home
- Healthcare
- Housing
- Mortgage interest and charges
- New cars and trucks
- Public transportation
- Transportation

## Consumer Price Index (Urban)

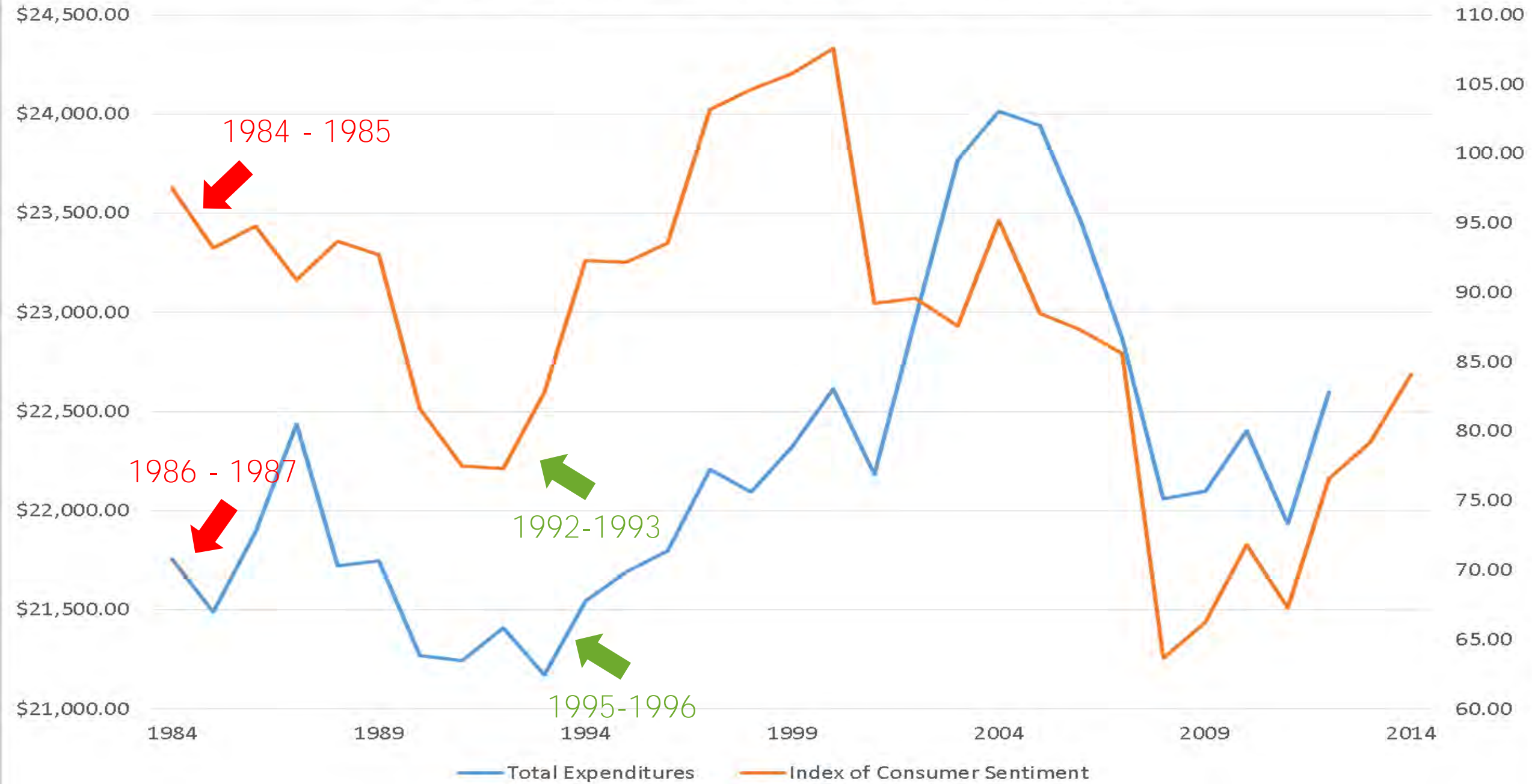
- All items
- Apparel
- Education
- Recreation
- Food
- Food at home
- Food away from home
- Medical care
- Housing
- Financial services
- New vehicles
- Public transportation
- Transportation



# Total expenditures vs. ICS



# Total expenditures vs. ICS (2-year Lag )

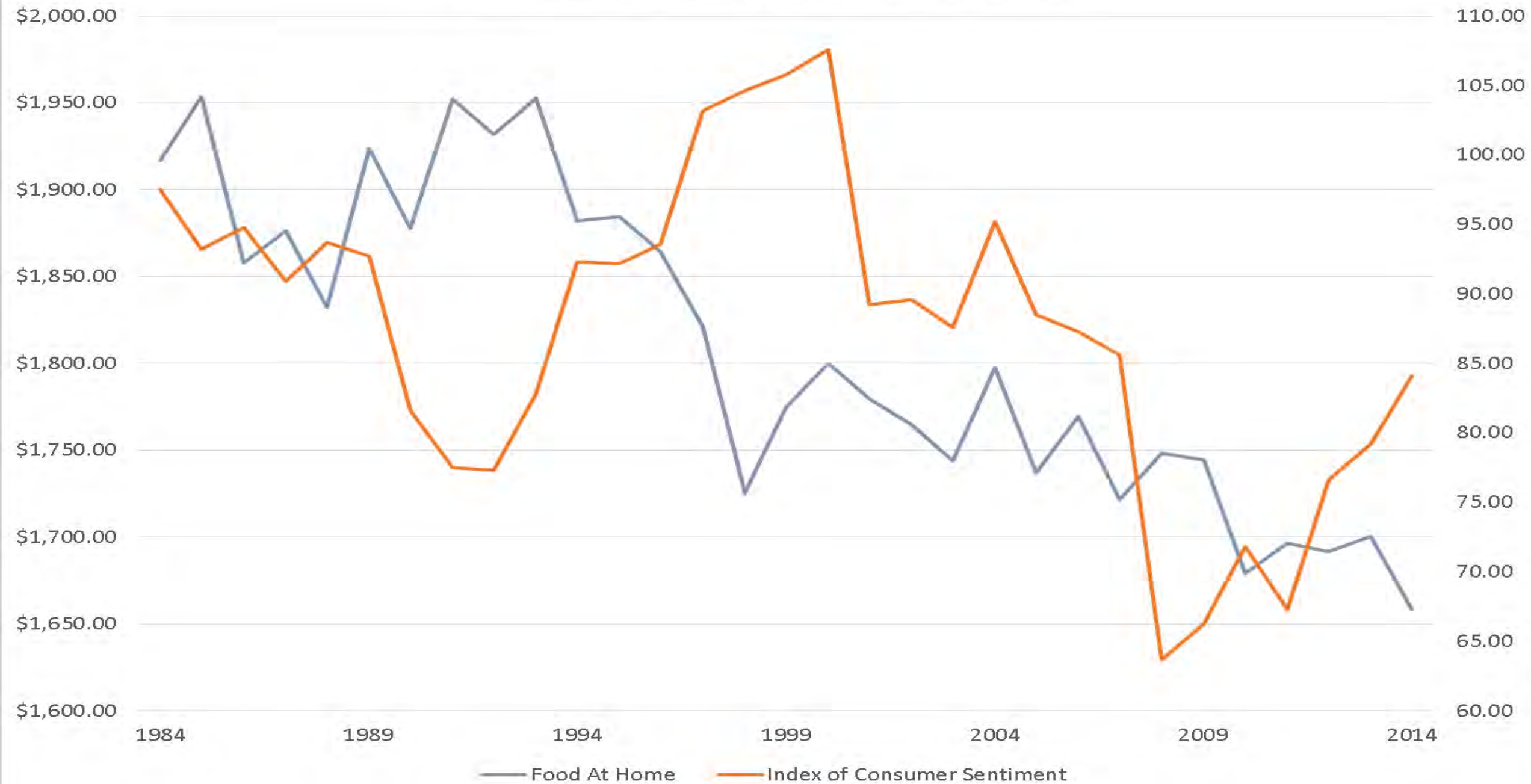


# Food expenditures vs. ICS

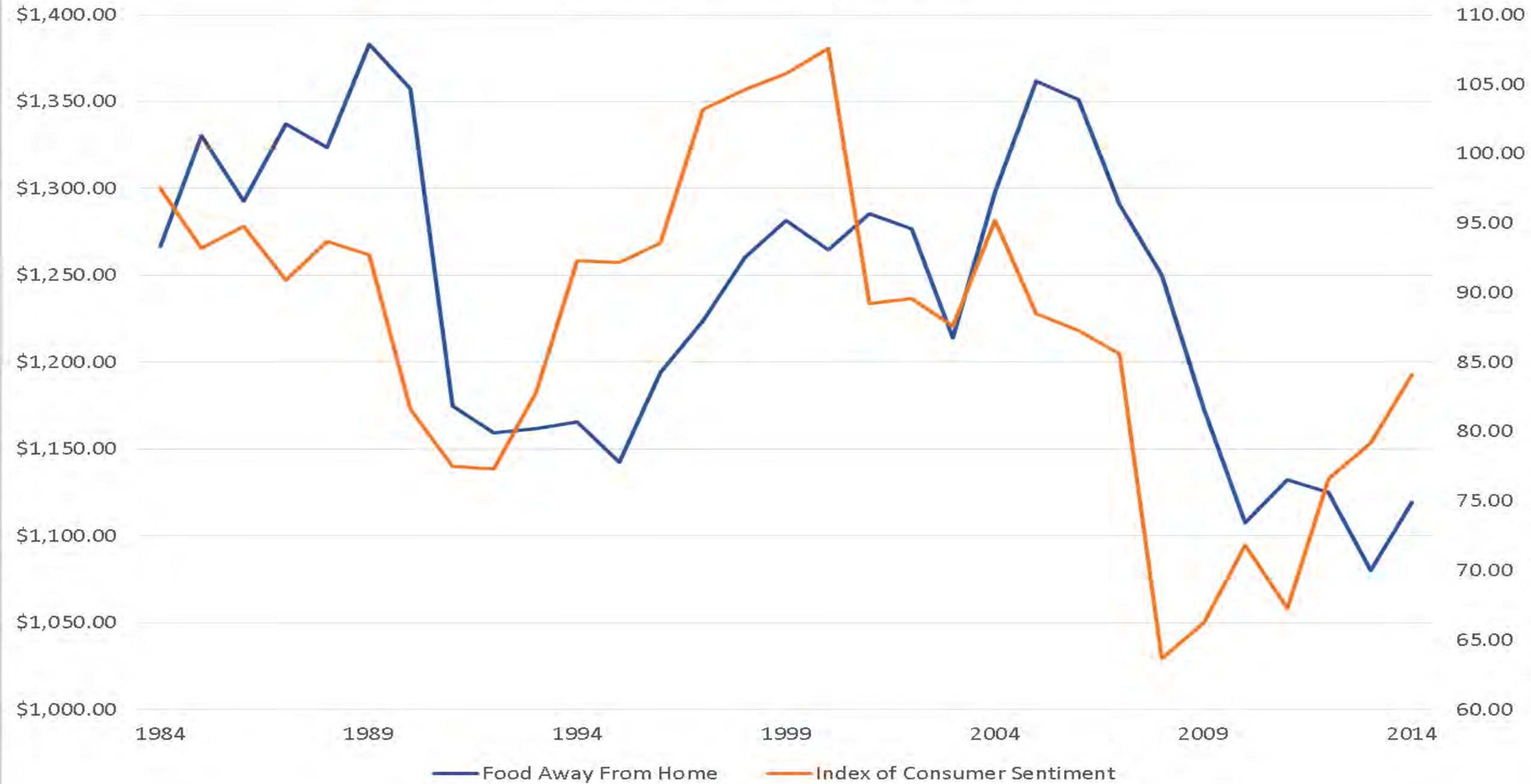




# Food at home expenditures vs. ICS



# Food away from home expenditures vs. ICS



# New vehicle expenditures vs. ICS



# Housing expenditures vs. ICS





# Apparel expenditures vs. ICS



# Education expenditures vs. ICS





# Entertainment expenditures vs. ICS



# Differences in Predictive Power

## Strong Predictive Power

- Total expenditures
- New vehicles
- Food away from home
- Apparel
- Education

## Weak Predictive Power

- Housing
- Food
- Food at home
- Entertainment

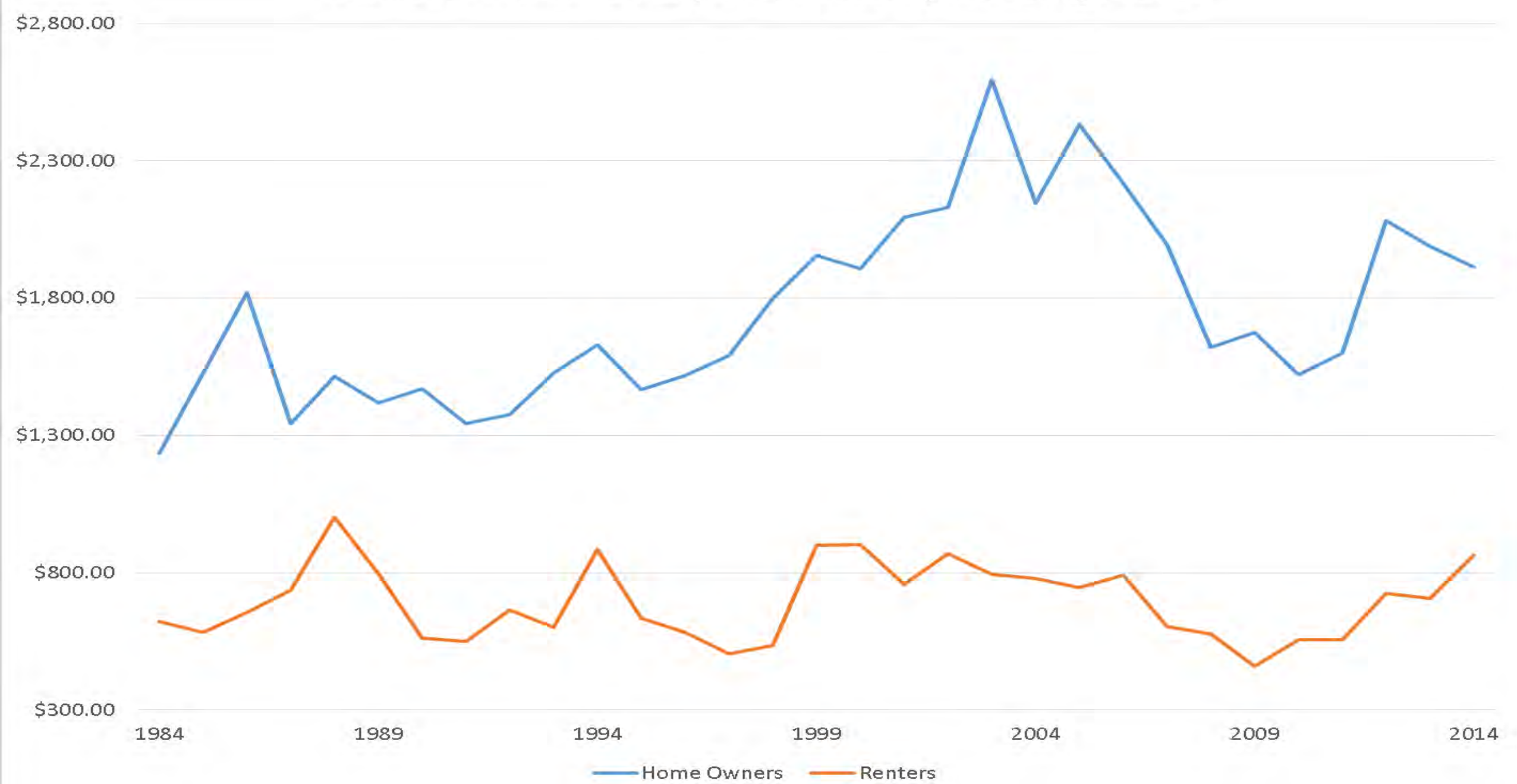


# Expenditures by Demographics

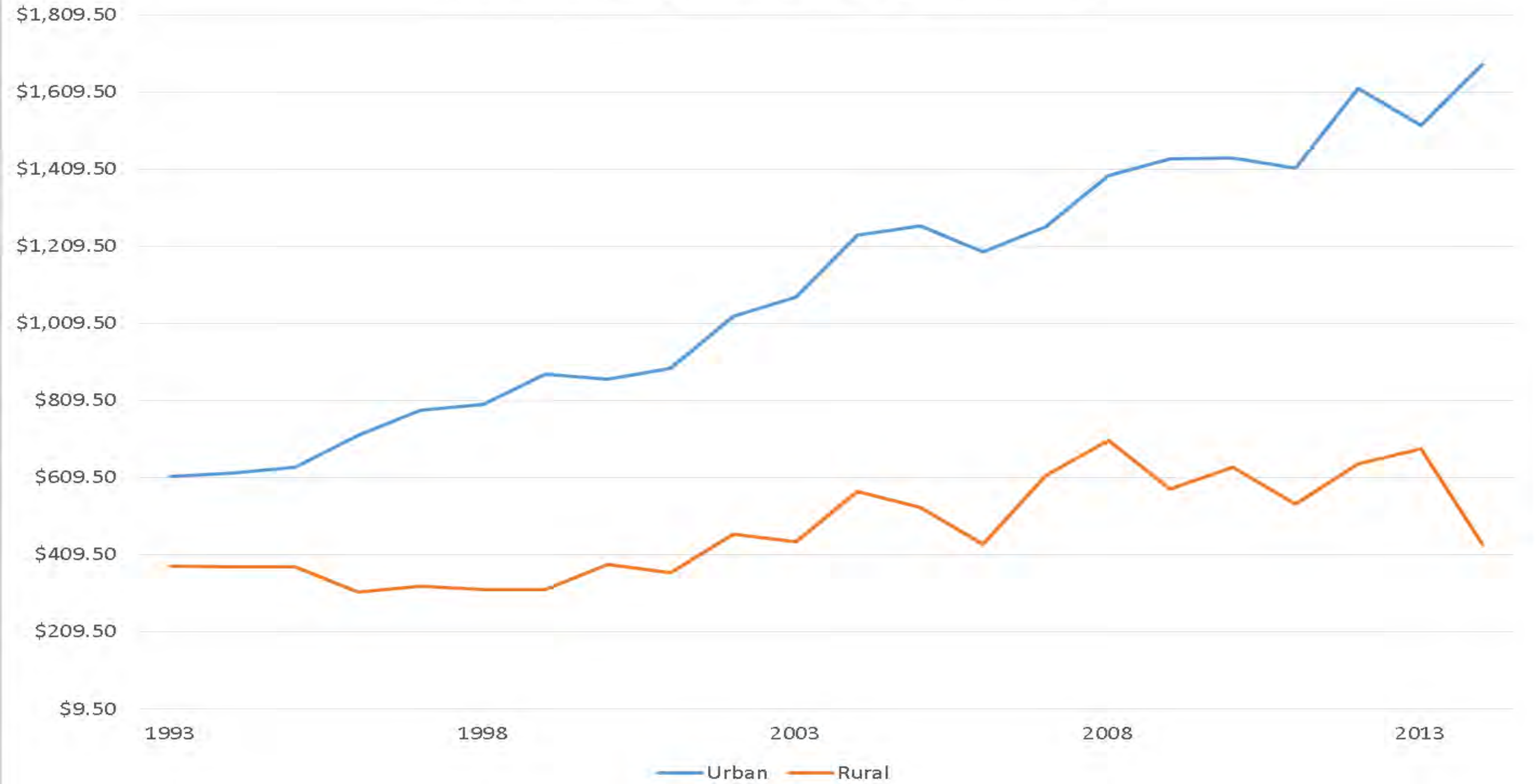
- The ICS comes from a random survey, but the differences in spending patterns among demographic groups across expenditure categories are neither consistent nor necessarily random.
- These differences distort the correlation between the ICS and consumer expenditures.



# New car and truck expenditures by housing status



# Education expenditures by urbanicity



# Conclusions

- The predictive power of consumer sentiment is different across expenditure categories.
- Demographic factors may distort the relationship between consumer sentiment and consumer spending.
- For the categories that consumer sentiment does predict expenditures well there do seem to be variable lags across categories.

