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Neutral (Spoken Testimony)

SCR 1604

Chairwoman Tyson and members of the Committee:

Thank you for the opportunity to testify on SCR 1604. I would like to explain our work with the KC Healthy Kids organization on the economic effects of the taxation of food for at-home consumption (colloquially groceries) in Kansas. From 2015 to 2017, the Kansas Public Finance Center worked on a series of four working papers funded by KC Healthy Kids. I was the Principal Investigator on the project. My colleague Dr. Arwiphawee Srithongrung was the Co-Investigator and the primary author on one of the papers. We examined four main questions. First, we analyzed the effects of taxing groceries on rural locally owned grocery stores. Next, we estimated the “incidence” of taxing groceries in terms of who bears the burden of this aspect of the sales tax. Our third project, the one led by Dr. Srithongrung, examined the impact of grocery taxes on people crossing the border to purchase groceries, what is known as “border effects”. Finally, we modeled the economic effects of reducing or eliminating the tax on groceries.

### **Impact on Rural Grocery Stores**

For our first project, we estimated the economic impact of lower grocery store sales. Using data on food sales in ten randomly selected rural counties and published estimates of the responsiveness of food sales to price changes, we first estimated how much more sales the average grocery store in those counties would realize if the sales tax did not exist. Then we used an economic impact model called IMPLAN to estimate the total economic effect of the increased grocery store sales. Economic impact models are essentially large mathematical models of how the economy works, with businesses selling to consumers and other businesses. Besides the direct impact of increased sales, IMPLAN calculates the indirect effects of the increased sales as the stores will have to hire more labor and increase purchases of supplies and inventory. Finally, it estimates the “induced” effects as the increased number of workers at both the grocery stores and their suppliers use their income to make their own purchases. IMPLAN is the most widely used economic impact model in practice. We also adjusted for “balanced budget” effects, assuming that the revenue lost by repeal of the sales tax on groceries would be recouped by higher income taxes.

Based on the IMPLAN model, we found negative but generally small economic impacts in rural counties from the sales tax. As one example, we estimate that eight out of the ten counties have lower grocery “output” and labor income due to the taxation of food sales, but the magnitude of the effects is very small.

### **Incidence of Taxes on Grocery Sales**

For the second study we examined the incidence of the tax on food for at-home consumption. For this study we used data from the Consumer Expenditure Survey, a large survey of US households carried out by the US Census Bureau and US Bureau of Labor Statistics. The data we used was the Public Use Microdata Sample (PUMS). PUMS data is the individual responses to the surveys, with personal information removed from the responses. We then developed a statistical model of household purchases of food sales at all levels of income. We also included “control” variables to account for demand for food based on factors other than income. Based on this model we

developed a profile of household food consumption for families of different sizes living both in and out of cities (MSAs). We then calculated how much each household would pay in grocery taxes as a percentage of their household income. Figure 1 shows the results for a family of three living in an MSA. As you can see, the lowest income households (on the left of the graph) are expected to pay over 5% of their income in grocery taxes. Households with incomes of \$200,000 and more (on the far right of the graph) will pay less than a quarter of one percent of their income in grocery taxes. This makes the grocery tax one of the most regressive taxes that state and local governments can levy.

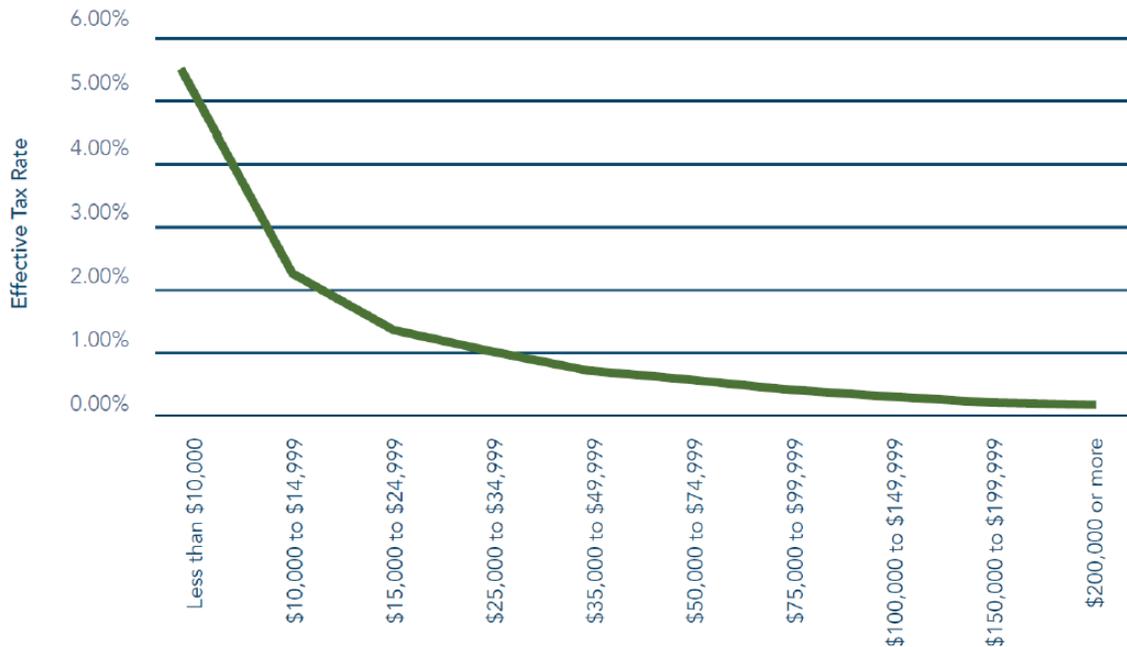


Figure 1. Estimated Incidence of Sales Tax on Groceries, Family of 3 Living in an MSA.

### Border Effects

Our third study examined the “border effects” created by Kansas’ taxing of food at a higher rate than in Nebraska, Colorado, and Missouri (the state tax rate is higher in Kansas than in Oklahoma, but combined state and local rates there are very similar to and in some cases higher than in Kansas). To accomplish this, Dr. Srithongrung gathered data on food sales in Kansas counties. She then calculated an index that measured the relative tax rate differentials in the counties compared to their neighbors. To explain the logic behind this measure, tax rate differentials in non-border counties are relatively low, influenced only by differences in local tax rates which are not large. However, border county tax rate differentials are very high, at least for those counties bordering Nebraska, Colorado, and Missouri. Dr. Srithongrung then ran a statistical model called a fixed-effects regression which allowed her to control for crucial differences between counties (things like personal income, unemployment rate, and percent of population over age 65).

Results from the statistical model indicated that a 1% increase in food price differences caused by sales taxes reduce food sales by 9.769% on average. Based on average per capita food sales of \$1,042, this implies that every 1% increase in food sales tax decreases food sales by \$101.

### Economic Effects of Reducing or Eliminating the Sales Tax on Groceries

Our final study estimated the economic effects of reducing or eliminating the sales tax on groceries. Like our first study on rural grocery stores we use the IMPLAN economic impact software to calculate the effects. We produce estimates for the effect of the sales tax on economic value added – the broadest measure of economic well-being, employment, and labor income (along with output). We use data from a variety of publicly available sources and estimates of the responsiveness of food sales to changes in prices used in the earlier study.

The estimates of the elimination itself are very impressive. Eliminating the sales tax on groceries is estimated to increase state employment by 2,830, producing increased labor income of \$106.9 million, and increased value added of \$194.4 million. However, as with the grocery store study, we must assume a balanced budget will be maintained, necessitating increases in other taxes or cuts in services. Without knowledge of a response, we create estimates for an income tax increase of an amount that would produce the same amount of estimated revenue lost from eliminating the sales tax on groceries. Once these effects are taken into account, the results are more modest with an increase of 241 net jobs, lower labor income and economic value added of \$2.8 million and \$10.4 million, respectively.

### **Summary**

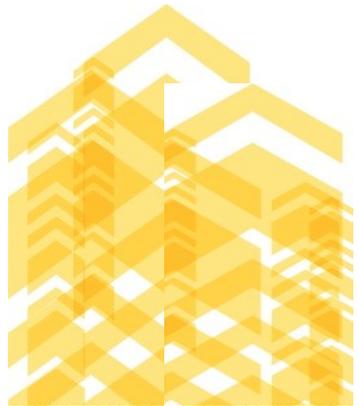
Our work with the KC Healthy Kids organization has illuminated several aspects of the questions surrounding the taxation of food for at-home consumption. We find that reducing or eliminating the tax and replacing it with increased income taxes will have good (if somewhat small) impacts on rural grocery stores, will make the overall revenue system more progressive, will reduce the necessity for households to cross state borders to buy groceries, and will have neutral or very small negative effects on economic growth.

I am glad to answer any questions.

# Projects on the Taxation of Food for at Home Consumption

Kenneth A. Kriz

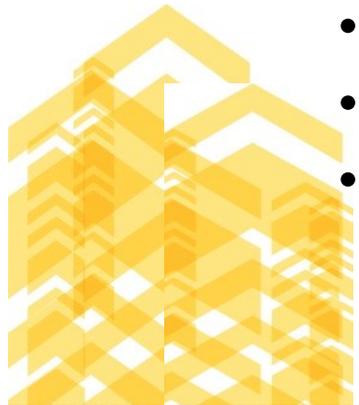
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# Work with KC Healthy Kids

- From 2015 to 2017, the Kansas Public Finance Center worked on a series of 4 working papers funded by KC Healthy Kids
  - Dr. Kriz was the Principal Investigator
  - Dr. Arwiphawee Srithongrung was the Co-Investigator on one of the projects
  - Topics included:
    - The effects of taxing groceries on rural locally owned grocery stores;
    - The “incidence” of the taxing groceries
    - “Border effects” created by taxation
    - Economic effects of reducing or eliminating the tax on groceries



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# Study 1: Effects on Rural Grocery Stores

- Analysis of increased grocery sales in 10 rural counties (randomly selected) based on elimination of the tax on groceries
- Adjusts for “balanced budget” effects (a higher income tax necessary to replace lost revenue)
- Uses economic impact modeling software (IMPLAN)
- Results
  - 8 out of 10 counties have lower grocery “output” and labor income due to the taxation of food sales
  - Effect size is modest

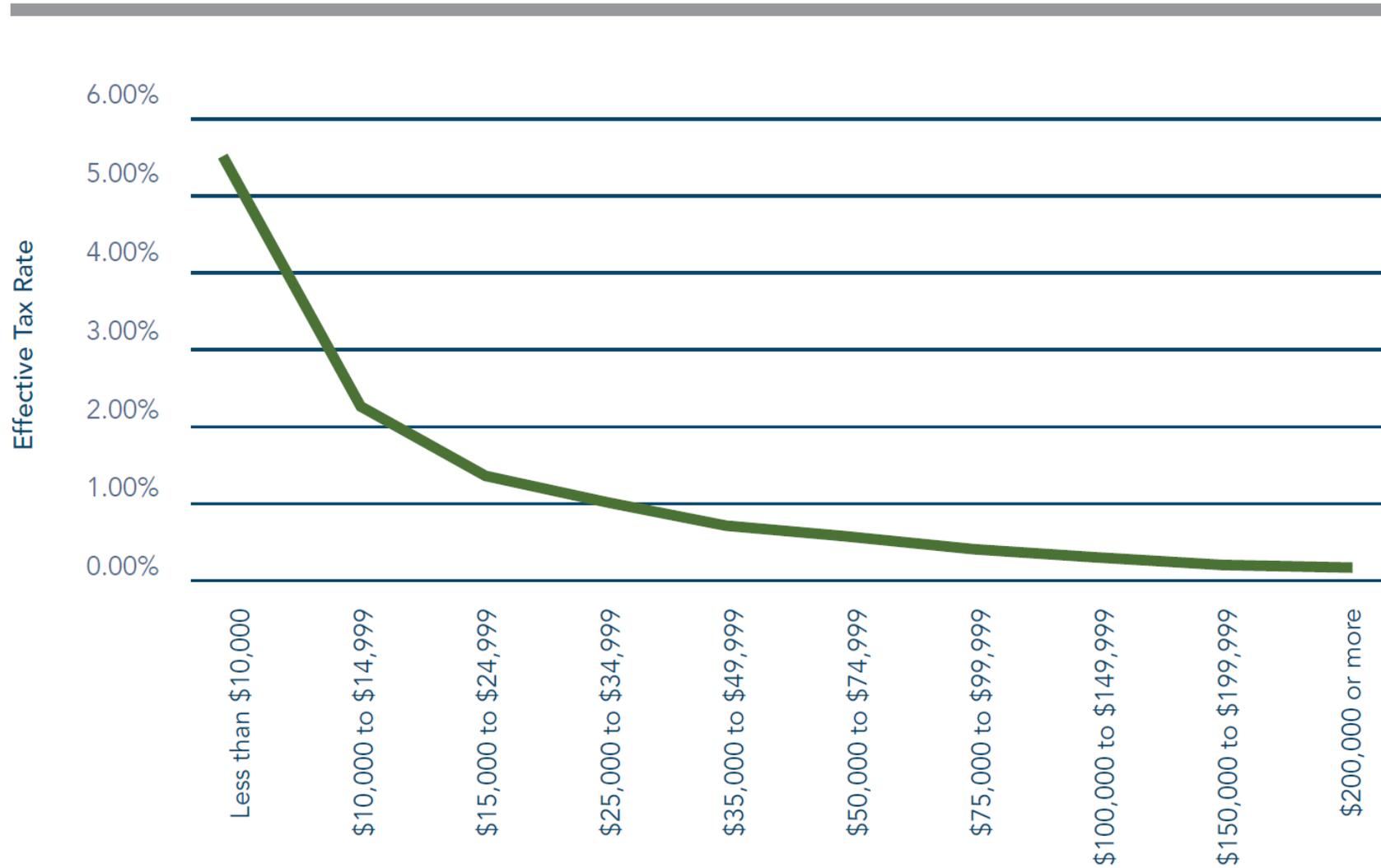


# Study 2: Grocery Tax Incidence

- Study of how the taxation of groceries affects overall sales tax incidence
- Data from the Consumer Expenditure Survey was used to develop model of household purchases of food for at-home consumption
  - Controls for many household factors such as age of head of household, education levels, race
- Examination of consumption and resulting taxation at different income levels



# Incidence Results



# Study 3: Border Effects

- Study of the effect of taxing groceries on causing households to relocate the location of purchase
- Uses data from KS Department of Revenue on food sales in counties
- Statistical model with tax differentials as variable of interest
  - Controls for income, unemployment rate, percent of population 65+, percent of male population, percent non-white population, unit and time effects



# Results of Border Effects Study

- Results indicate a 1% increase in food price differences caused by sales taxes reduce food sales by 9.769% on average
- Based on average per capita food sales of \$1,042, every 1% increase in food sales tax decreases food sales by \$101



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# Study 4: Economic Effects of Eliminating the Grocery Sales Tax

- Examination of the effects of tax elimination on economic “value added”, employment, labor income
- Balanced budget assumption
- Data from publicly available sources and earlier papers
- Uses economic impact modeling software (IMPLAN)



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# Economic Effects

- Cut alone looks impressive
  - Increase of 2,830 jobs
  - Increase in labor income of \$106.9 million
  - Increase in economic value added of \$194.4 million
- After adjusting for income tax increases, effects are mixed and fairly modest
  - Increase of 241 jobs
  - Decrease in labor income of \$2.8 million
  - Decrease in economic value added of \$10.4 million

