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## ESTIMATING THE REVENUE LOSS FROM FOOD-FOR-HOME CONSUMPTION

### Introduction

Currently, Georgia exempts food-for-home consumption from the state sales tax, but consideration has been given to removing that exemption. This policy brief discusses the estimation of the revenue effect from eliminating the state sales tax exemption of food-for-home consumption.

There are actually two exemptions for food-for-home consumption. The first, passed in 1986, is O.C.G.A Secs. 48-8-3(53), which exempts “Sales transactions for which food stamps or WIC coupons are used as the medium of exchange.” This was passed in order to be in compliance with Federal law that prohibited taxing purchases by food stamps and WIC coupons.

The second food exemption, which was passed in 1996, is O.C.G.A Secs. 48-8-3(57). This exemption applies to “the sale of off-premises human consumption or use of eligible food and beverages...” The code goes on to define “eligible food and beverages” to mean food that can be purchased by food stamps, except that it does not include “seeds and plants to grow food” nor “food or drink dispensed by or through vending machines”. The Department of Revenue has published rules and regulations for the food exemption (Rule 560-12-2-.104). These rules specify in detail which food items are exempt and which are not. Hot foods, food marketed to be heated on the premises, and pet food

are not exempt. Food purchased at stores that do not accept food stamps are not exempt, unless the store can demonstrate that at least 50 percent of its sales are from food and beverage that are eligible for the exemption. Thus, food purchases at many convenience stores are not exempt.

In general, this exemption does not apply to local sales taxes. However, the exemption does apply to Local Option Sales Taxes (LOST) adopted after October 1, 1996 and to the Homestead Option Sales Tax (HOST).

The Fiscal Research Center has previously reported the revenue effect of the food exemption. Those estimates included all food purchased for home consumption, that is, the revenue estimated included food purchased by food stamps and WIC coupons. The revenue estimates presented in this brief consider the elimination of only the second exemption; it is assumed that the exemption for purchases using food stamps and WIC coupons would remain in place.

We estimate the revenue effect of eliminating exemption 48-8-3(57) using several different data sources. We explain the estimation procedures and discuss the limitations of each estimate. If nothing else, this exercise illustrates the difficulties of estimating revenue effects of tax changes. In the end,

one must select the estimate for which one has the most confidence. Due to the range of estimates produced, it is appropriate to be cautious in incorporating the estimate into budget plans.

## **Estimation Procedures**

### *Bureau of Economic Analysis Data*

As stated earlier, the Fiscal Research Center has previously reported the revenue effect of the food exemption. The first three of these estimates were based on Bureau of Economic Analysis (BEA) data.

As part of the National Income and Product Accounts, BEA develops an annual national estimate of the value of food and nonalcoholic beverages purchased for off-premises consumption.<sup>1</sup> The most recent data are for 2009. To develop an estimate for Georgia, the national estimate is allocated to Georgia based on Georgia's share of U.S. personal income.<sup>2</sup> (An alternative allocation might be to use Georgia's share of Gross Domestic Product; this yields a similar estimate.) Multiplying Georgia's share by the state sales tax rate of 4 percent yields \$729.2 million, which is the estimated revenue that would be generated by removing both of the exemptions for all food-for-home consumption.

In order to isolate the revenue effects of the non-food/non-WIC purchases, those purchases have to be deducted from the above estimate. The U.S. Department of Agriculture reports the total food stamps and WIC benefits allocated to Georgia residents by Federal fiscal year.<sup>3</sup> Converting these benefits to CY 2009 and multiplying the benefits by 4 percent sales tax yields \$91.5 million. Subtracting this from \$729.2 million yields a revenue estimate of \$637.7 million for eliminating the exemption associated with the non-food stamp/non-WIC food purchases of food-for-home consumption.

There are several concerns with this estimate. First, consider the process by which BEA generates its estimate of food and beverage for off-premise consumption. To develop its estimate BEA starts with the reported value of shipments of food products by domestic food producers. BEA then makes several adjustments, adding imports and deducting exports, subtracting inventory changes, and subtracting government purchases to arrive at domestic supply of food products. Then the BEA allocates the domestic supply among domestic purchasers such as eating and drinking establishments, grocery stores, etc. Finally, BEA converts producer prices to purchaser prices by adding estimates of domestic transportation costs and trade margins. Certainly there is a lot of room for error given the number of steps that have to be taken.

Using personal income to allocate a percentage of the national BEA value to Georgia does not account for the lower cost of living in Georgia or that Georgia may have different food consumption patterns than the national average. The allocation procedure accounts for the lower average income for Georgia but does not account for differences in the distribution of income; since a family's share of income spent on food-for-home consumption differs by family income, it matters whether Georgia's lower average income is the result of a larger concentration of very low income families or fewer high income families. Nor does the allocation account for the fact that children comprise a larger share of Georgia's population than the national average. Accounting for these factors is likely to reduce the estimated revenue from eliminating the exemption.

The BEA value of food for off premise consumption includes items that are not exempt from the sales tax. First, BEA's measure of food includes pet food. Data from the Census of manufacturing suggests that pet food is 6.2 percent of food shipments. Second, some of the food would be sold as hot food, which is not exempt.

Third, food is shipped to outlets that do not accept food stamps; as noted above food purchases from many of these stores would not be exempt. A convenience store that sells gas and alcoholic beverages would not likely reach the Department of Revenue's requirement that 50 percent of the sales be qualified food and beverages. The Census of Retail Trade reports sales by grocery stores, convenience stores, and gas stations with convenience stores (see next section for a discussion of the limitation of these data). Although we have no basis for these assumptions, suppose we assume that 20 percent of the sales of gas stations with convenience stores and 80 percent of grocery store sales are food items. Based on these assumptions, it follows that food sold at gas stations with convenience stores amounts to 21.6 percent of food sales. This would be food sales that may be already subject to the state sales tax.

It seems reasonable that the estimated revenue effect of \$637.7 overstates the actual revenue effect. This overstatement could easily be 10 to 20 percent.

### *Census of Retail Trade, Industry Data*

A second approach is to use data from the Economic Census. The Census Bureau conducts an Economic Census every five years; the most recent survey was conducted in 2007. The Census reports receipts of grocery stores for each state. For 2007, grocery store and specialty food store sales in Georgia were reported to be \$14,217.9 million.<sup>4</sup> Four percent of this is \$568.7 million. Adjusting for population growth and the increase in food prices between 2007 and 2009, we get an estimate of the

sales tax revenue on food for 2009 of \$620.4 million. Subtracting food that was purchased by food stamp and WIC coupons reduces this to \$528.9 million.

There are two main problems with this estimate. First, grocery store sales do not include food sales at retail stores that are not classified as food stores. For example, WalMart and Target sell groceries, but they are not classified as a grocery store. Second, sales by grocery stores include much more than just food-for-home consumption. For example, grocery stores sell alcoholic beverages, pet food, cleaning supplies, drugs, hot foods, and food eaten on the premises. We are unable to adjust for these factors.

#### *Census of Retail Trade, Commodity Data*

A third approach employs data from the Census of Retail Sales. The Census of Retail Sales also reports sales of groceries and beverages for off-premise consumption regardless of the nature of the retail outlet. For 2007, such sales for Georgia were reported to be \$16,741.2 million.<sup>5</sup> Four percent of this is \$669.6 million. Adjusting for population growth and the increase in food prices between 2007 and 2009, and subtracting for food purchased using food stamps and WIC coupons, yields a revenue estimate of \$639.0 million.

This is very close to the estimate using BEA data. It is also subject to the same over estimate of exempt food as with the BEA data.

#### *Local Option Sales Taxes*

A fourth alternative makes use of local option sales tax data. There are two counties, DeKalb and Rockdale, that have both an Education Special Purpose Local Option Sales Tax (ESPLOST) and a HOST. Food-for-home consumption is exempt from the HOST but not the ESPLOST. The difference in the revenue from these two local taxes should reflect the tax revenue on food-for-home consumption. For 2009, the difference is 10.7 percent of ESPLOST revenue for the two counties. If this percentage holds for the rest of the state, we can use it to estimate food-for-home consumption revenue for the state sales tax for CY 2009.<sup>6</sup> The resulting estimate is \$586.3 million.

Using the equivalent data for 2004, 2005, and 2006 we find that the difference between the two taxes ranged between 7 to 8 percent of ESLOST revenue. Using 8 percent yields a revenue estimate of food-for-home consumption of \$425.5 million. Starting in 2007, food as a share of sales tax revenue increased. This is likely the result of a shift from eating out to eating at home as a result of the recent recession, and perhaps cut backs in other purchases so that food became a larger percentage of

the consumption. This suggests that food as a share of sales tax revenue will fall from its 2009 level in the near future as the economy recovers.

There are three counties that adopted a LOST after the food exemption went into effect and thus the food exemption applies to the LOST for these three counties. Comparing LOST revenues to the revenues for the counties' other local sales taxes, we find that food-for-home consumption amounts to 2.9 percent of the sales tax revenue of the non-LOST taxes. If we apply this percentage to state sales tax revenue for 2009, it implies that the food-for-home consumption exemption amounts to a revenue loss of \$146.1 million.

It is hard to explain the large difference in the percentage of food purchases between the large HOST counties and the three small LOST counties. One possibility is that food purchases are relatively larger in the larger counties because of shoppers from border counties. But one would expect that there would be more cross border shopping of non-food purchases in larger counties. Another possibility is that in the three small counties a sizable amount of food is obtained directly from farms and thus not included in the LOST tax base.

It is not unexpected that food-for-home consumption as a percentage of sales tax revenue would differ across counties. Using 10.7 percent for larger counties, i.e., those with local sales tax revenue greater than \$20 million, and 2.9 percent for the other counties, we get a weighted average of 7.9 percent as the estimated percentage of sales tax revenue due to food-for-home consumption. Using this percentage, the implied revenue estimate for the elimination of the food-for-home consumption exemption is \$421.0 million.

#### *State Sales Tax Revenue and Local Option Sales Tax Revenue*

Another possible approach to estimating the revenue implications of the food-for-home consumption exemption is to simply compare the sales tax revenue for the state sales tax revenue, which would not include revenue from food-for-home consumption, to the revenue from the local option sales taxes, which do include sales tax revenue from food.

We started with the total statewide revenue for ESPLOST for CY 2008. Some counties did not have an ESLOST in CY 2008 or did have one for the entire year. For these counties we used their SPLOST revenue. Comparing the total local sales tax revenue times 4 (in order to make it equivalent to the 4 percent state tax) to the state sales tax revenue for CY 2008, we find that sales tax revenue from food was 12.9 percent of the local sales tax revenue. This implies that eliminating the food exemption would increase state sales tax revenue by \$722.3 million.

We used the same procedure for CY 2005, and found that sales tax revenue from food was 4.9 percent of local sales tax revenue. Applying this percentage to CY 2009 state sales tax revenue implies that eliminating the food exemption would increase state sales tax revenue by \$250.6 million.

It is inconceivable that food consumption as a share of other consumption could have increased from 4.9 percent to 12.9 percent in the space of three years. There are several other factors that could explain the change in the disparity between the state and local revenue between CY 2005 and 2009 other than changes in the food purchases. These factors primarily reduced the state revenue and had little or no effect on local revenue, and include the following: 1) a statutory increase in the state estimated tax threshold which allowed taxpayers to take state credits or refunds during fiscal years 2006 and 2007; 2) a statutory exemption from state sales tax on qualifying jet fuel at certain airports effective July 2007; and 3) a partial statutory exemption from the state sales tax on energy sources used to produce tangible personal property sold at retail effective July 2008. In addition there is the likely recessionary effect of increasing food consumption at home versus eating in restaurants.

In discussions with individuals knowledgeable with the Department of Revenue's procedures for collecting and allocating sales tax revenue to local government, it was stated that one should not rely on these data to estimate the revenue that might be generated from eliminating the food-for-home consumption.

#### *Survey of Consumer Expenditures*

Lastly, the Bureau of Labor Statistics conducts an annual Survey of Consumer Expenditures (CES) in which households are asked to maintain a diary of all of their purchases. The Diary file of the CES provides a detailed weekly expenditure record of various consumption items, including an extensive array of food items purchased for home consumption. The latest data available from the survey is based on 2009 household consumption patterns. They are national data. But of all the data available, they seem to be the most germane and reliable to the task of estimating the revenue from eliminating the food-for-home consumption exemption.

From these data, we computed the average annual value of food items purchased for home consumption at the national level. Because the CES data are provided at a national level, it was necessary to adjust the food consumption per family to reflect the lower cost of living in the South. Furthermore, we adjusted the CES data to reflect the larger family sizes that are found in the South compared to that reported nationally in the

CES data. Since expenditures were inclusive of sales taxes, we backed out local sales taxes. Lastly, we reduced the estimated sales tax base to account for food purchased by food stamps and WIC coupons. The result of these calculations is a revenue estimate for the elimination of the food-for-home consumption of \$440.0 million for CY 2009.

The CES data are self-reported purchases and are subject to reporting errors of unknown magnitude and direction. Reported food purchases could include purchases of food from stores that are not required to collect sales taxes on food; this would mean the estimate is too high. The CES also misses purchases of food-for-home consumption by non-residents, but includes purchases of food from out of state. The CES data imply that a family of four would spend approximately \$105 a week on food-for-home consumption; this does not include non-food items purchased when grocery shopping.

#### **Conclusion**

The six alternative methods for estimating the revenue that would be generated from eliminating the food-for-home consumption exemption yield widely varying estimates. Table I summarizes the estimates.

There are serious difficulties with the underlying data for several of these procedures. Given the procedures used to construct the BEA data and the fact that it includes food that is not exempt from the sales tax, we are certain that the BEA estimate overstates by a substantial amount the revenue that would be generated from eliminating the exemption for food-for-home consumption.

The Census of Retail Trade, Industry data most certainly overstates the grocery sales on tax exempt food. But it also underestimates sales of groceries because stores like WalMart are not included.

The Census of Retail Trade, Product data, for the same reason as with the BEA data, overstates the revenue that would be generated from eliminating the exemption for food-for-home consumption.

The use of differences in actual sales tax revenue between local sales taxes results in revenue estimates that vary widely depending on what year and counties are used. Factors that affect state but not local sales tax revenue raise concerns over the use of comparisons between local and state tax revenue.

While there are potential issues with the CES data, we believe that it produces the most reliable estimate of the revenue effect of eliminating the food-for-home consumption exemption. The implied food consumption per family seems more reasonable than that implied by the larger estimates.

**TABLE 1. FOOD FOR HOME CONSUMPTION: REVENUE ESTIMATES, CY 2009 (IN MILLIONS)**

Estimation Procedure	Revenue Estimate	Reliability of Estimate
BEA	\$637.7	Over estimates since it includes items that are not covered by the exemption.
Census of Retail Trade, Industry Data	\$528.9	Could be an over or under estimate since it does not include all stores that sell groceries but includes items that are not included in the exemption.
Census of Retail Trade, Product Data	\$639.0	Over estimates since it includes items that are not covered by the exemption.
Comparison of Local Option Taxes	\$146.1 to \$586.3; weighted average of the estimates is \$421	Based on data from only 5 counties.
Comparison of State and Local Revenue	\$250.6 to \$722.3	Larger of the estimate overstates the revenue effect.
Consumer Expenditure Survey	\$440.0	Uses the most germane data, but is subject to reporting errors of unknown magnitude.

Based on the various estimates and the problems with each, we believe that eliminating the exemption of food-for-home consumption would have likely increased sales tax revenue in FY 2009 by between \$440 million and \$500 million. Even if one believes that the actual revenue would be higher than this, there is a large likelihood that the lower estimates are realistic. And, thus fiscal conservatism suggests that a lower number be used in any budget decision.

It should be noted that these estimates include no adjustment for changes in food purchases due to the increase in the sales tax on food-for-home consumption.

Notes:

1. BEA Table 2.4.5 available at <http://www.bea.gov/national/nipaweb/TableView.asp?SelectedTable=70&Freq=Year&FirstYear=2008&LastYear=2009>.
2. Personal income is available at <http://www.bea.gov/regional/spi/>.
3. Food stamp benefits are available at <http://www.fns.usda.gov/pd/snapmain.htm>, and WIC coupons are available at [http://www.fns.usda.gov/pd/24wicfood\\$.htm](http://www.fns.usda.gov/pd/24wicfood$.htm).
4. Available at [http://factfinder.census.gov/servlet/GQRTTable?\\_bm=y&-qr\\_name=ECN\\_2007\\_GQRT3&-geo\\_id=04000US13&ds\\_name=EC0700A1](http://factfinder.census.gov/servlet/GQRTTable?_bm=y&-qr_name=ECN_2007_GQRT3&-geo_id=04000US13&ds_name=EC0700A1).
5. Available at [http://factfinder.census.gov/servlet/IBQTable?\\_bm=y&-geo\\_id=04000US13&-ds\\_name=EC0744\\_SLLS1&-\\_lang=en](http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=04000US13&-ds_name=EC0744_SLLS1&-_lang=en).
6. All of these data come from the Georgia Department of Revenue.

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**ABOUT THE AUTHORS**

**David L. Sjoquist** is Professor of Economics, holder of the Dan E. Sweat Distinguished Scholar Chair in Educational and Community Policy, and Director of the Fiscal Research Center of the Andrew Young School of Policy Studies at Georgia State University. He has published widely on topics related to state and local public finance and urban economics. He holds a Ph.D from the University of Minnesota.

**Laura Wheeler** is a Senior Researcher at the Fiscal Research Center with the Andrew Young School of Policy Studies. She received her Ph.D. in economics from the Maxwell School at Syracuse University. Prior to coming to FRC, Laura worked for several years with the Joint Committee on Taxation for Congress and as an independent consultant on issues of tax policy. Her research interests include state and local taxation, corporate taxation, and welfare policy.

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