influences lottery ticket sales. JLARC examined advertising expenditures in the 2009–11 biennium and concluded that advertising expenditures did not increase weekly ticket sales. However, JLARC did find that jackpot amounts and economic conditions influence ticket sales.

These findings demonstrate that capturing the effect of advertising on ticket sales is challenging. It does not suggest that a relationship between advertising and ticket sales does not exist. Both states conducted their analyses at a more granular level than is currently available with the NC Lottery's advertising data.

Further analysis of the effects of advertising on lottery sales would benefit from more precise data. If the NC Lottery wishes to explore the relationship between advertising expenditures and ticket sales, the advertising department (or an advertising consultant) needs to collect advertising expenditure data at the same level of granularity and precision that the NC Lottery tracks ticket sales. Presently, advertising expenditures are recorded at quarterly intervals, by media market, by media type, and by game or game suite. In contrast, ticket sales data are available at weekly and daily intervals, by store, by region, and by game. Therefore, raw advertising and sales data are incompatible for analytical review. Transforming ticket sales data to match advertising data (e.g., aggregating weekly data into quarters) attenuates or weakens the data. Because collection on this level of granularity would be costly for the advertising department, it could consider tracking detailed data for a sample of games.

In summary, the question of whether the NC Lottery is spending the optimal amount on advertising is unresolved. The relationship between expenditures on advertising and ticket sales needs to be measured at a more granular level over time in order for this expenditure to be properly managed.

Recommendations

While the Lottery has increased sales and transfers to the North Carolina Education Lottery Fund every year for 10 years, the following actions could further increase sales and efficiency and increase transfers to education.

Recommendation 1. The General Assembly should require the Lottery to establish targets for retailer growth and to annually report on its performance in meeting these targets.

As reported in Finding 2, expanding the retailer network could increase lottery revenue. Increasing the number of retailers that sell lottery tickets has the potential to increase revenue by making lottery products more readily available for purchase. The NC Lottery ranked 26th in retailer density among the 44 lottery states in Fiscal Year 2015.

All efforts to expand the retailer network should be included in the annual report to the General Assembly. The first report should be submitted to the Joint Legislative Oversight Committee on the North Carolina State Lottery by November 1, 2017.

Recommendation 2. The General Assembly should direct the Lottery to examine the retailer compensation structure for all games and develop alternatives for rewarding the performance of retailers.

As reported in Finding 3, reducing the compensation paid to NC Lottery retailers could yield additional revenue. North Carolina provides the 7th highest compensation rate paid to its lottery retailers among the 44 lottery states. By lowering the compensation paid to retailers, the NC Lottery could direct additional revenue to the North Carolina Education Lottery Fund.

The Lottery should hire an independent contractor to provide an analysis of whether a reduction in commission percentage might impact the number of retailers in both the short and long term. This report should include comments on why retailers participate in selling lottery tickets with particular attention paid to motivation derived from the commission compared to motivation derived from increased foot traffic in the store. As noted earlier, Georgia was able to transition to lower retailer compensation without a drop in retailers and without negatively affecting overall revenue. The results of this analysis should be provided to the Joint Legislative Oversight Committee on the North Carolina State Lottery by February 1, 2018.

Recommendation 3. The General Assembly should direct the Lottery to provide a detailed business case for options to increase the sale of lottery tickets.

As reported in Finding 4, additional options with the potential to increase sales revenue, and subsequently increase transfers to the NC Education Lottery Fund, include authorizing Video Lottery Terminals and offering iLottery games online. These actions would create more retailers, resulting in more opportunities for purchasing lottery tickets, and could potentially boost sales among younger generations of players.

The General Assembly should direct the NC Lottery to provide a detailed business case for options to increase the sale of lottery tickets to the Joint Legislative Oversight Committee on the North Carolina State Lottery by February 1, 2018. If interested in a particular option, the General Assembly could direct the Lottery to provide a detailed business case analysis that includes time frames for implementation and needed statutory changes, if any.

Recommendation 4. The General Assembly should require the Lottery to develop tools to measure the increase in sales resulting directly from advertising expenditures and to annually report on its efforts to measure the effectiveness of expenditures for advertising.

As reported in Finding 5, the NC Lottery needs to accurately measure the effectiveness of advertising on sales in order to manage this expenditure. Consideration should be given to the Program Evaluation Division's suggestion to collect advertising expenditure data at the same level of granularity and precision that the Lottery tracks ticket sales. Different methods and approaches exist to enable the NC Lottery to use more granularly-collected advertising data to assess the effect of advertising spending on ticket sales including commercially available off-the-shelf

software products. Better alignment of data would allow regression analysis models to measure the effectiveness of advertising and would provide justification for spending larger or smaller amounts on advertising. Alternatively, the Lottery could design targeted advertising interventions to observe what occurs when more funds or less funds are spent on specific advertising expenditures in an effort to assess the relationship between advertising expenditures and sales.
All efforts to measure the effectiveness of advertising should be included in the annual report to the General Assembly. The first report should be submitted to the Joint Legislative Oversight Committee on the North Carolina State Lottery by November 1, 2017. Annual reports would include the impact on sales of specific advertising campaign expenditures.
Appendix A: NC Lottery Revenues and Expenses, Fiscal Years 2007 through 2016 (in millions)
Appendix B: NC Lottery Ticket Sales by Game, Fiscal Years 2007 through 2016 (in millions)
Appendix C: Description of the Games Offered by the NC Lottery
Appendix D: Lottery Retailer Density in the United States, Fiscal Year 2015
Appendix E: Lottery Retailer Compensation in the United States, Fiscal Year 2015
A draft of this report was submitted to the North Carolina State Lottery to review. Its response is provided following the appendices.
For more information on this report, please contact the lead evaluator, Jim Horne at <u>Jim.Horne@ncleg.net</u> . Staff members who made key contributions to this report include Jeff Grimes and Emily McCartha. John W. Turcotte is the director of the Program Evaluation Division.