

## On the Economics of the Rhode Island Lottery

From 2003 through 2006, the Rhode Island lottery led the nation in per capita lottery sales, far outstripping any other state in this category. This makes Rhode Island an interesting case study for examining the economic effects of the lottery. This paper investigates the incidence of the lottery as an implicit tax, as well as the effect of interstate competition and jackpot sizes on sales and the tax burden of the lottery.

Using the lottery's yearly sales data for 2000 to 2005 and geography-specific demographic data, this paper first compares two popular regression models to determine the lottery's regressivity. Then, taking daily sales data for the first nine months of 2006 and the jackpot sizes for Rhode Island's multi-state lottery, Powerball, as well as those of neighboring Massachusetts', Megamillions, I examine the possibility of border effects on Powerball sales in Rhode Island. Finally, Powerball jackpots are compared to the incidence of the lottery over the same nine month period.

Results of this study show that the lottery is highly regressive, with an income elasticity of demand less than one, associating the lottery with inferior goods such as instant noodles and inner-city bus fares. In addition, the size of Powerball jackpots, not surprisingly, is shown to increase Powerball sales, while the size of Massachusetts' Megamillions is positively related with overall RILOT sales, suggesting a positive externality from attention on the lottery in Massachusetts. Finally, the results of this study show that in addition to the overall regressivity of the lottery, that an increase in the size of the Powerball jackpot is associated with an increase in the regressivity, or implicit tax burden of the poorer classes.

This study shows that the lottery is a source of government revenue that is disproportionately burdensome for the lower incomes. Furthermore, the effects of the Massachusetts' jackpot externality and Powerball jackpot size indicate that the lottery has become more regressive with the general proliferation of the lottery over the past 30 years, whether into new game-types or jackpot sizes.