

Do Lotteries Hurt the Poor? Well, Yes and No

A Summary of Testimony Given to the House Select Committee on a State Lottery,

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Harry Truman once remarked that he would like to have a one-armed economist, since the economists advising him often gave two-sided explanations beginning with, “On the one hand....” When I spoke to the House Select Committee on April 19, I felt I was giving the same kind of answer. Furthermore, I don’t think the two-sided aspect of my message got through to everyone, judging at least by the next day’s *News and Observer* headline (April 20, p. 4A): “Lottery aims at poor people, professor tells panel.” Therefore, I am happy to respond to the staff’s request that I provide a written version of my remarks. As I stated at the hearing, my views are based on years of research on state lotteries, most of that in collaboration with my Duke colleague Philip Cook. I begin by summarizing what is known about patterns of lottery spending.

Who Plays Lotteries?

As a result of many household surveys over the years, including the national survey completed by the National Opinion Research Organization (NORC) in 1999 for the National Gambling Impact Study Commission, we know several general facts about the pattern of lottery play in the United States. About 60 percent of adults in lottery states play at least once a year. In terms of amount of money bet, men play more than women, and those in middle age play more than the youngest or the oldest adults.¹ The bulk of attention in policy discussions has concerned the relationship between lottery purchases and income. Most of the studies that I have seen -- and Philip Cook and I reviewed a large number of them in our book, *Selling Hope: State Lotteries in America* (Harvard University Press, 1989) -- yield the following conclusion: average sales do not vary systematically by income. That is, taking averages over all adults, both players and nonplayers, those in lower income brackets tend to spend roughly the same number of dollars a year as those in middle and upper income brackets. Some studies show that the amount increases somewhat with income, while other studies indicate that the amount declines with income. But in

virtually every case we have examined, one conclusion is constant: *lower-income individuals spend a higher percentage of their income than those in middle and upper income brackets*. This fact does not by itself make lotteries a good thing or a bad thing. It only means that lotteries tend to have a particular pattern of consumption, which is unlike, for example, the pattern of expenditures for brie or Chablis, commodities the expenditures for which tend to increase as a percentage of income in upper income brackets. Instead, the relationship of lottery purchases to income looks more like those of chicken wings or barbeque, items for which lower income households tend to spend a larger share of their income than those who are more affluent.

It is important to stress that this observation about lottery purchases is drawn entirely from empirical observations of actual spending patterns. Therefore it is appropriate, as Ed Stanek, Director of the Iowa Lottery, did when he spoke to the Select Committee, to raise questions about the reliability of empirical studies examining these spending patterns. I base my conclusions about patterns of purchases on numerous studies, such as those summarized in our book, as well as three more recent studies that I mentioned in my presentation. One of these is our report to the National Gambling Impact Study Commission, which used data from the NORC survey. There are areas of uncertainty about how to interpret the results of that survey. We made judgements, which we spelled out in our report, so that those who might disagree would see exactly what we did and could redo things if they disagreed. That is fair game in the academic world, and we are happy to have such things questioned and debated. I take exception, however, to the reference in Mr. Stanek's remarks to our "own biases and beliefs." I think any fair reading of our published work and statements will show an evenhanded attempt to produce objective research with supportable conclusions.

That said, I should add that my remarks regarding spending patterns were based not just on the NORC study, but two other studies as well.² One of those studies was undertaken by the Virginia Lottery. I attach tables based on that report which spell out the details of my calculations. I also attach graphs that show the percentage of income spent on three types of games.. Each of the studies shows that the percentage of income spent on lotteries declines as income increases. Mr. Stanek, by the way, cited three studies that "show that increasing number of tickets are purchased by people with increasing incomes." I asked him if I could have copies of them. Unfortunately, he reported that one of the studies (for his state of Iowa) is proprietary and nothing but the results could be released. He sent me one study, for Minnesota, but, in contrast to our study for the National Gambling Impact Study Commission or the calculations I present here

based on the Virginia Lottery report, it contained no documentation to show how the numbers had been calculated.³ He has promised to send a third, for Texas, but I have not seen it. Despite their lack of documentation, I did rough calculations based on the two reports he sent me. The Iowa figures do not imply a smooth decline in percent of income spent, though the percentage does decline above \$25,000 and the income class spending the lowest percentage is the top income class. The Minnesota figures in fact imply a continual decline in percentage of income, exactly in line with the conclusion we have found in our research.

I remain quite open to the possibility that a different pattern of lottery consumption might exist, or exist under certain circumstances or in some areas. Anyone wishing to know what the distributional impact of lottery finance would want to know about this pattern because information of this sort is central to one's conclusion about that distributional impact. However, based on the information that is in the public realm, I see no reason as yet to doubt earlier studies on this question.

To repeat, therefore: *lower-income individuals spend a higher percentage of their income on lottery purchases than those in middle and upper income brackets.*

Do Lotteries “Prey” upon the Poor?

The original outline for the April 19 hearing posed the question, “Do lotteries ‘prey’ upon the poor?” Does the conclusion written above in italics imply this? Not if you take as your definition of “prey” what my *Webster’s* says, “to plunder, pillage, rob; to make profit from a victim by swindling.” Like those who sell other consumer products, state lotteries do engage in what is called “target marketing,” that is, pitching their message to likely players. So in one sense it is true that the poor are “the lottery’s targets,” in the words of the *News and Observer’s* editorial writer (April 23, 2000, p. 26A). But it would not be rational for them to go after the poor exclusively. The primary goal of state lotteries is to maximize their net revenues, so they are simply doing what any business wishing to sell, for example, more chicken wings or barbeque would do. This means aiming their advertising and other marketing differently than if they were trying to sell a product whose sales were more highly concentrated in middle or upper income brackets.

Six Propositions about a State Lottery

Given its pattern of consumption, what then can be said about lotteries as an activity of government? Let me suggest six propositions.

1. While some people will surely suffer, most of those who play a lottery will be made better off simply by its legalization. Most people who play lottery games do not win, but that does not make the activity of playing any more “wasteful” or irrational than, say, playing video games, eating candy bars, or attending a hockey game. They play because they evidently get something out of it. This could explain why most opinion polls show that a majority of citizens would like to have a state lottery.

2. Among those who would be worse off would be “problem gamblers,” some of whom will have serious financial problems as a result, and those who find the existence of a lottery and its advertising to be offensive. Make no mistake about it: there will be some social costs associated with a state lottery. This is the reason some states require funds to be set aside for programs dealing with gambling addiction, or why some states place limits on the amount or nature of advertising.

3. By taking a high profit rate from the sale of lottery tickets, the state would be placing a very high “implicit tax” on lottery purchases. For each dollar bet, the average state lottery pays 55 cents in prizes, spends 12 cents on retailer commissions and other operating costs, which leaves 33 cents for the state. Philip Cook and I call this an “implicit tax” because it has exactly the same effect as a tax on lottery expenditures. If it were an excise tax, it would amount to a 50 percent tax on the cost of operating the lottery (67 cents), making it much higher than the excise taxes we place on alcohol or tobacco products.

4. Since lower income people spend more in proportion to their incomes than those with middle and upper incomes, they will tend to benefit more from playing a North Carolina lottery. Although no one can be certain how large the benefits of playing are, economists are inclined to look at people’s own behavior and assume that those who play the most will get the most enjoyment out of it. To be sure, this approach applies to consumers who are not addicted and who have a pretty good idea of the odds and the prize structure.

5. The implicit tax contained in lottery finance is regressive. Just as a regressive tax is defined as one whose percentage of income is highest for those at low incomes levels, the implicit

tax in lotteries, no matter what the rate, is regressive. By placing a high implicit tax on lottery purchases, a state in effect makes its revenue structure more regressive than it would be if the implicit tax on lotteries were in line with other tax rates. Thus the same lower income people who benefit from the lottery's legalization could benefit even more if the implicit tax on the lottery were in line with taxes on other taxed products, such as alcohol and tobacco.

6. Through heavy marketing of lottery products, states compound this burden on lower income citizens and increase the social cost to problem gamblers and those who find state-sponsored gambling distasteful.

High Implicit Tax Rates and Heavy Marketing are Optional, Not Necessary

Although virtually every state lottery in the U.S. features both high implicit tax rates and heavy marketing of lottery products, a state-run lottery need not have either of them. But without both of them, the lottery is unlikely to generate the kinds of revenues that proponents are hoping for.

Table 1
Lottery Play, by Income Level, Virginia, 1997

Income Class	Average Income ^a	% of All Adults ^b	No. of Adults in VA (000s) ^d	% of all Scratch Expenditures ^b	Amount of Scratch Sales* (\$M) ^c	% of all Pick 3,4 Expenditures ^b	Amount of Pick 3,4 Sales* (\$M) ^c	% of All Lotto/Cash5** Expenditures ^b	Amount of Lotto/Cash5** Sales* (\$M) ^c
LT \$15,000	\$7,515	15.0	779	18.0	47.57	23.0	71.51	16.0	37.64
\$15-25,000	\$19,927	16.0	831	18.0	47.57	21.0	65.29	15.0	35.28
\$25-50,000	\$36,160	40.0	2,078	45.0	118.92	36.0	111.93	39.0	91.74
Over \$50,000	\$104,266	30.0	1,558	19.0	50.21	20.0	62.18	30.0	70.57

Notes: * Sales totals multiplied by .88 to account for estimated 12% out-of-state sales.

**Totals also include Big Game multi-state lotto.

a. Hollenbeck, Scott and Maureen Keenan Kahr. (1999). "Individual Income Tax Returns, 1997: Early Tax Estimates", *SOI Bulletin* Winter 1998-99, Table 2, p. 140; author's calculations.

b. Virginia Lottery. (1997) *Who Plays the Lottery*, Richmond, VA: Virginia Lottery, p. 3.

c. *International Gaming & Wagering Business*. (1998). "Worldwide Lottery Sales," June, 1998, p. 49.

d. U.S. Bureau of the Census (2000). 1990 to 1999 Annual Time Series of State Population Estimates By Single Year of Age and Sex. Downloaded from www.census.gov/population/www/estimates/st-99-10.html April 27, 2000.

Table 2
Percent of Average Income Used to Play Lottery-Virginia 1997

Income Class	Average Income ^a	Scratch Sales, as % of Average Income ^b	Pick 3,4 Sales, as % of Average Income ^b	Lotto/Cash5* Sales, as % of Average Income ^b
LT \$15,000	\$7,515	0.81	1.22	0.64
\$15-25,000	\$19,927	0.29	0.39	0.21
\$25-50,000	\$36,160	0.16	0.15	0.12
Over \$50,000	\$104,266	0.03	0.04	0.04

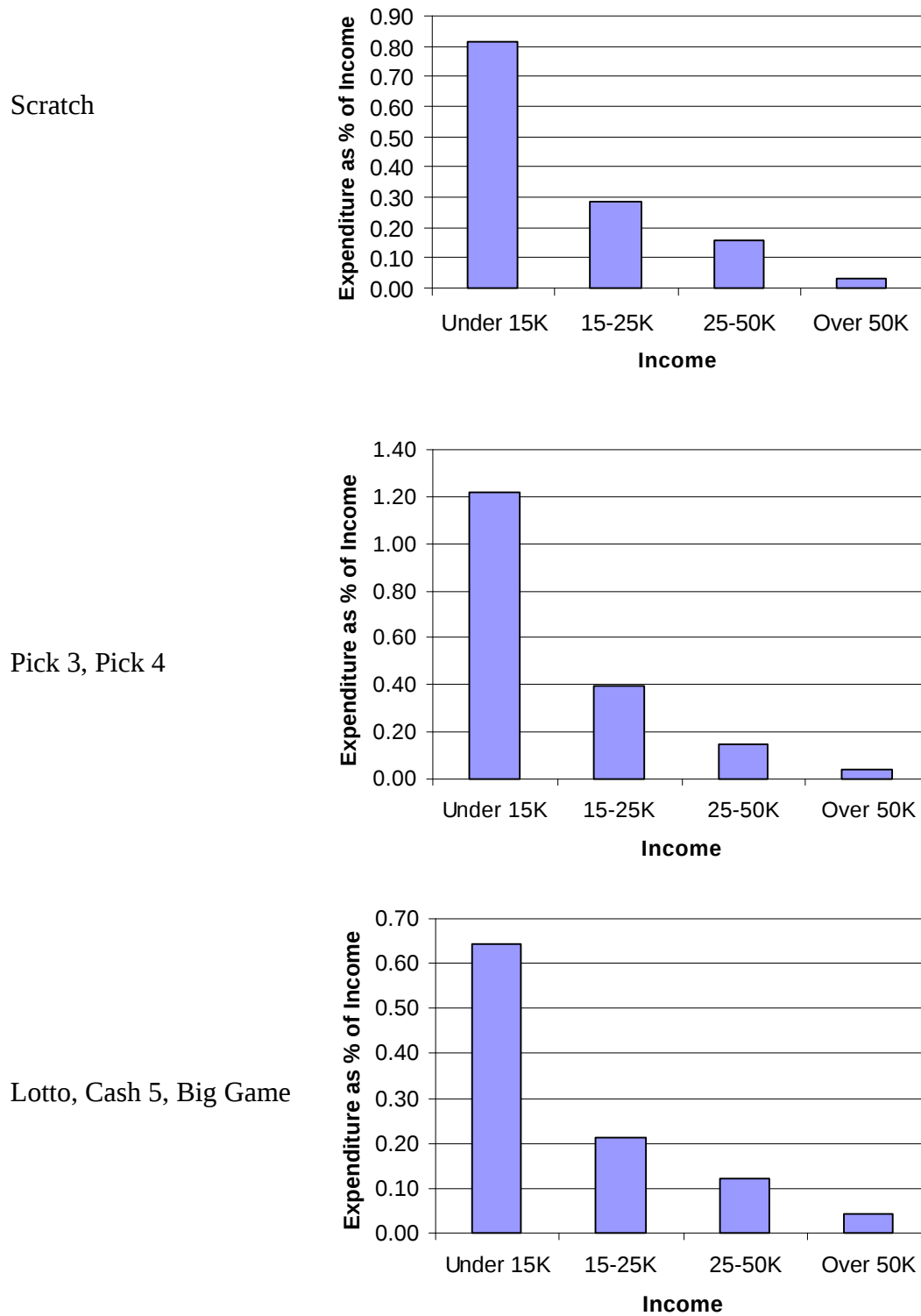
Notes:*Calculations also include Big Game multi-state lotto sales.

a. Hollenbeck, Scott and Maureen Keenan Kahr. (1999). "Individual Income Tax Returns, 1997: Early Tax Estimates", *SOI Bulletin* Winter 1998-99, Table 2, p. 140.

b. Calculations using sources a-d, Table 1. Amount of sales divided by number of adults, all as a percentage of average income.

Figure 1

Lottery Purchases as a Percentage of Income, Three Types of Games, Virginia, 1997



Notes

1. See Charles T. Clotfelter, Philip J. Cook, Julie A. Edell, and Marian Moore, "State Lotteries at the Turn of the Century: Report to the National Gambling Impact Study Commission," June 1999.
2. Christopher Cornwell and David B. Mustard, "The Distributional Impacts of Lottery-Funded Merit Based Aid," unpublished paper, University of Georgia, November 1999; and Virginia Lottery, *Who Plays the Lottery*, 1997 (Richmond, VA: Virginia Lottery), based on a consumer tracking survey conducted by Chilton Research Services, covering 9,600 Virginians, over the period September 2, 1996 and July 27, 1997.
3. Minnesota State Lottery, *Gambling in Minnesota: Who? What? Where?* February, 1994, Figure 14, p. 18.