

State of Washington
Joint Legislative Audit & Review Committee (JLARC)



**Lottery Marketing & Incentive Pay:
Jackpot and Economy, Not Advertising
or Beneficiary Change, Appeared to
Impact Ticket Sales**

Report 12-4

May 17, 2012

*Upon request, this document is available in
alternative formats for persons with disabilities.*

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JLARC's non-partisan staff auditors, under the direction of the Legislative Auditor, conduct performance audits, program evaluations, sunset reviews, and other analyses assigned by the Legislature and the Committee.

The statutory authority for JLARC, established in Chapter 44.28 RCW, requires the Legislative Auditor to ensure that JLARC studies are conducted in accordance with Generally Accepted Government Auditing Standards, as applicable to the scope of the audit. This study was conducted in accordance with those applicable standards. Those standards require auditors to plan and perform audits to obtain sufficient, appropriate evidence to provide a reasonable basis for findings and conclusions based on the audit objectives. The evidence obtained for this JLARC report provides a reasonable basis for the enclosed findings and conclusions, and any exceptions to the application of audit standards have been explicitly disclosed in the body of this report.

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Committee Approval

On May 17, 2012, this report was approved for distribution by the Joint Legislative Audit and Review Committee.

Lottery Marketing & Incentive Pay

Report 12-4

May 17, 2012



STATE OF WASHINGTON
JOINT LEGISLATIVE AUDIT AND
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REPORT SUMMARY

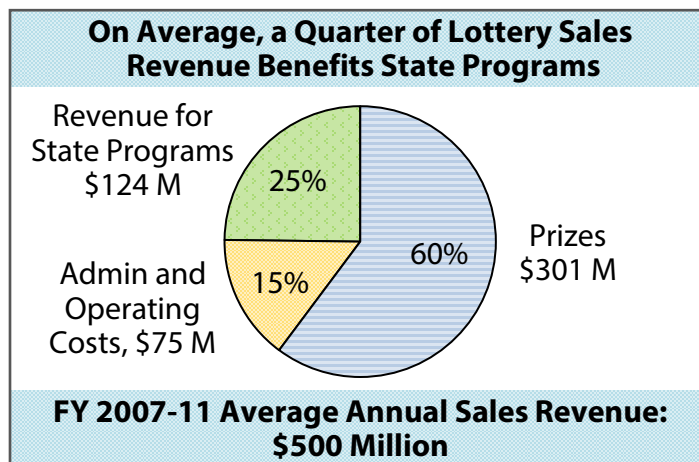
Lottery Offers Several Games to Generate \$500 Million in Revenue Each Year

Washington's Lottery is a state agency created by the Legislature in 1982. The Legislature authorized the creation of the Lottery in order to "produce the maximum amount of net revenues for the state consonant with the dignity of the state and the general welfare of the people" (RCW 67.70.040(1)).

Lottery generates revenue by selling tickets for a variety of games, each of which offers players a chance to win monetary prizes. Depending on the game, ticket prices range from \$1 to \$20 per play, and potential prizes range from \$1 to hundreds of millions of dollars.

While Lottery sells some tickets directly, the large majority of ticket sales come from licensed retailers such as grocery and convenience stores. Over the past five fiscal years, Lottery has generated ticket sales of \$500 million per year on average. Sixty percent of this revenue has returned to players as prizes, and 15 percent has gone to operating and administrative expenses.

The remaining 25 percent funds a variety of state programs, which are called the "beneficiaries" of lottery revenue. Beginning in Fiscal Year (FY) 2011, the Legislature changed the primary beneficiary from school construction to the Washington Opportunity Pathways Account (WOPA), which funds higher education scholarships and early childhood education. WOPA received \$112 million in FY 2011.



Legislature Mandated Review of Lottery Marketing and Incentive Pay

In the 2011-13 Biennial Operating Budget (2011 2ESHB 1087), the Legislature directed the Joint Legislative Audit and Review Committee (JLARC) to analyze the Lottery's marketing activities, as well as the impact of the recent change in the primary beneficiary of lottery revenue. Additionally, the Legislature directed JLARC to describe incentive payment programs available to Lottery's employees.

The remainder of this report addresses this directive by answering the following three questions:

1. To What Extent Has Advertising Impacted Lottery Ticket Sales?

JLARC found that jackpot amounts and economic conditions are the strongest predictors of Lottery ticket sales. In contrast, **Lottery's advertising expenditures in the 2009-11 Biennium did not appear to increase weekly ticket sales.** To determine this, JLARC used statistical techniques to evaluate the impact advertising expenditures had on ticket sales during the 2009-11 Biennium.

Lottery contracts with a private vendor for advertising services, which include producing television, radio, print, and online advertisements. The current contract is for \$12 million per year. Lottery complied with statute and OFM policies by securing this contract through competitive solicitation.

2. To What Extent Has the Change In Beneficiaries Impacted Lottery Ticket Sales?

In 2010, the Legislature changed the primary beneficiary of Lottery revenue from school construction to higher education scholarships and early learning. **While sales increased in FY 2011 compared to FY 2010, it does not appear that the beneficiary change was responsible for the increase.** This increase is consistent with what sales would have been *without* the beneficiary change, according to JLARC's prediction models using jackpot amount and economic conditions. In addition, there was no statistically significant relationship between Lottery's new beneficiary advertising campaign and ticket sales.

3. What Is Lottery's Employee Incentive Payment Program, and How Do Other State Lotteries Compare?

Lottery's current incentive pay program is **limited to 35 district sales representatives (DSRs)** who work directly with retailers selling lottery tickets. When actual sales exceed quarterly sales goals, DSRs are eligible to earn quarterly bonuses. **Lottery paid a total of \$233,000 in incentive awards in FY 2011**, which was equivalent to 3 percent of total Lottery salaries for that year. Fifteen other state lotteries responding to a JLARC survey indicated they provide incentive pay, and, like Washington, many of those states award incentives to their lottery sales employees.

Recommendation

Washington's Lottery should report to the Lottery Commission with a plan on how to evaluate and improve the effectiveness of its advertising budget in generating ticket sales.

1. TO WHAT EXTENT HAS ADVERTISING IMPACTED LOTTERY TICKET SALES?

Lottery Spends \$17.5 Million per Year on Marketing, Including a \$12 Million Contract for Advertising Services

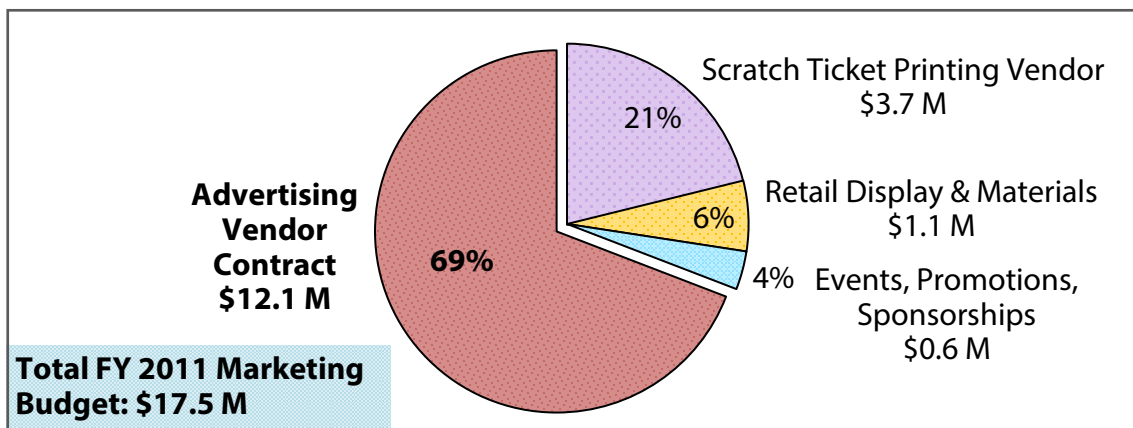
Revenue from ticket sales funds operating and administrative costs at Washington’s Lottery. Out of this revenue, the Legislature appropriates an amount to pay for administrative expenses, such as the salaries and benefits of lottery employees. The Governor appoints five members to a Lottery Commission that oversees Lottery’s other operating budgets, including the marketing budget.

The marketing budget is approximately \$17.5 million per year, not including personnel costs for the marketing department’s in-house staff of 11 full-time equivalent employees.

Marketing services cover a broad range of activities designed to improve the public’s perception of and participation in lottery games, from printing attractive tickets to television advertising. For example, the marketing budget for Fiscal Year (FY) 2011 includes \$3.7 million for Lottery’s scratch ticket printing vendor, \$1.1 million for signage and materials at the point of sale, and another \$600,000 for special events, promotions, and sponsorships. These costs involve activities and products used at the point of sale that are a mixture of marketing and basic operating costs.

To isolate the impact of marketing expenses, JLARC focused its analysis on marketing activities conducted away from the point of sale, which are clearly distinguishable from operating costs. For the purpose of this report, these will be referred to as “advertising activities” and include television, radio, print, online, and billboard advertising. Lottery contracts with a private marketing vendor for its advertising activities. As shown in Exhibit 1, this contract comprises over two-thirds of the \$17.5 million marketing budget in FY 2011.

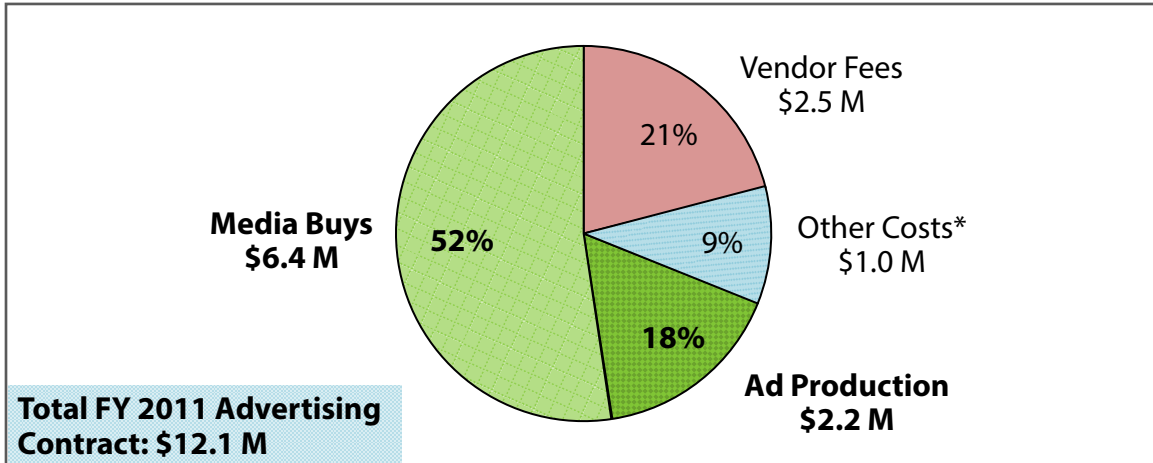
Exhibit 1 – Majority of \$17.5 M Marketing Budget Funds Advertising Contract with Vendor



Source: JLARC analysis of Lottery data.

The contract for advertising services is normally for a maximum of \$12 million per year. As Exhibit 2 shows, the contract contains \$2.5 million for vendor fees. The remainder of the contract is the maximum amount the vendor may spend on pass-through costs, such as media buys and ad production. All pass-through expenditures must first be approved by Lottery before the vendor makes any commitments. In FY 2011, Lottery authorized the vendor to spend \$9.6 million on these pass-through expenditures.

Exhibit 2 – Majority of Advertising Contract Funds Direct Advertising Costs (Media Buys and Ad Production)



Source: JLARC analysis of Lottery data.

*Other costs include website management, research, and public relations.

Lottery Complied With Statute and OFM Policies When Contracting for Advertising Services

In 2008, Lottery entered a contract with its current vendor, Cole & Weber United. The original contract length was for three years, ending in November 2011. The Lottery has decided to extend the contract for an additional year.

The procedure Lottery used to contract for marketing services was consistent with statute, the policies established by the Office of Financial Management (OFM), and the practices of other states.

As required by Chapter 39.29 RCW and OFM policies, Lottery used competitive solicitation to award the marketing contract and filed this contract with OFM. Although not required by rule or statute, Lottery selected the lowest-priced bid of the three qualified finalists. Like Washington, 29 out of 32 respondents in a JLARC survey of other state lotteries use competitive solicitation when contracting for marketing services.

JLARC Used Statistical Techniques to Evaluate the Impact of Advertising on Lottery Ticket Sales in the 2009-11 Biennium

To evaluate the impact of advertising activities on lottery ticket sales, it is necessary to isolate the impact of advertising from any other factors which may influence ticket sales. To do this, JLARC used a statistical technique called multivariate linear regression. This technique attempts to

measure the average impact that a factor, like advertising expenditures, has on ticket sales while holding all other factors constant. A factor is “significant” if there is statistical confidence in its relationship to ticket sales. See Appendix 3 for more information on regression analysis and JLARC’s methodology.

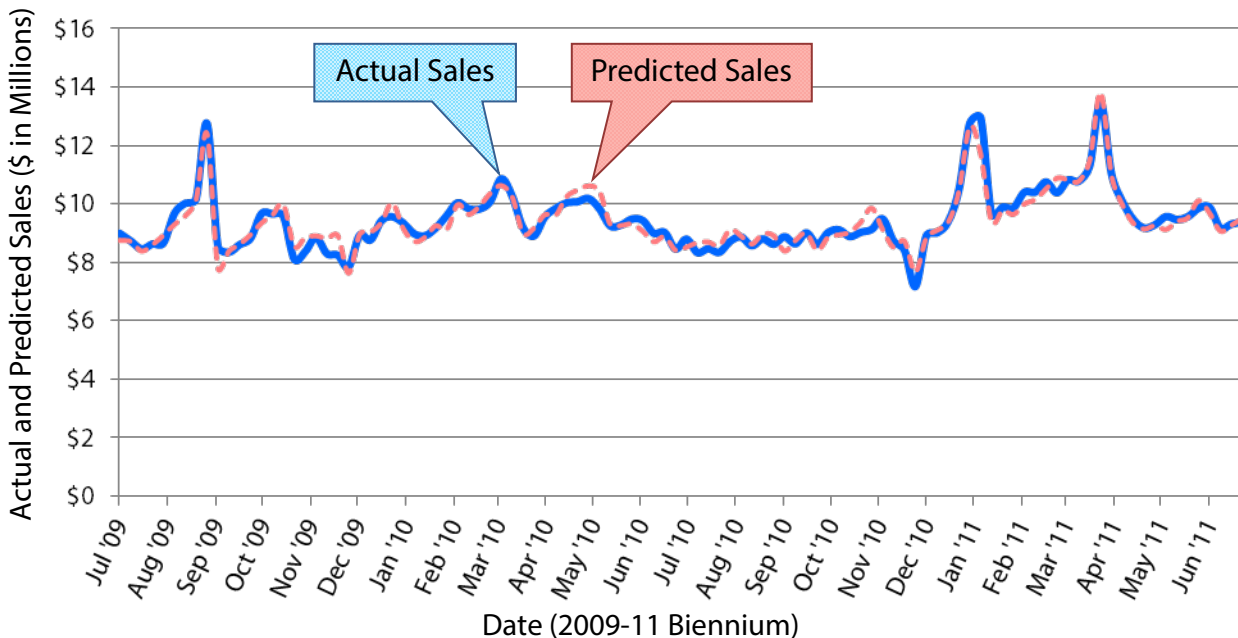
JLARC analyzed the variation in weekly Lottery advertising expenditures during the two years of the 2009-11 Biennium. It is important to note that JLARC based its analysis on the amount of money spent on media buys each week. Since the price of a media buy is based on the number of people it is expected to reach, the amount of money can be used as a proxy for the *quantity* of advertising. However, since the price of media buys does not reflect the content of the advertising, this analysis does not provide any information as to the *quality* of that advertising.

Jackpot Amount and Economic Conditions Are the Strongest Predictors of Lottery Ticket Sales

Based on several regression analyses, JLARC found that jackpot amounts and economic conditions were significant and the most influential predictors of ticket sales.

Lottery has four games with a rolling jackpot amount that increases when there is no winner. For these four games, the jackpot amount was strongly correlated with ticket sales; when the jackpot went up, sales went up. Economic conditions, such as the number of people unemployed, were also predictive of ticket sales for Lottery games. Additionally, the date of purchase was often a significant factor; for example, ticket sales either increased or decreased based on holidays or on the first day of the month. Based on these factors alone, JLARC’s predictions closely approximated actual ticket sales. See Exhibit 3 and Appendix 3 more for information about JLARC’s predictions.

Exhibit 3 – Predictions Based on Jackpot Amount, Economic Conditions, and Date of Purchase Closely Approximate Actual Sales



Source: JLARC analysis of Lottery data.

JLARC spoke with the Lottery's Research Department, the state's Economic & Revenue Forecast Council, and researchers from other states that have conducted similar analyses. All confirmed that jackpot amount and economic conditions would likely be significant and highly influential predictors of lottery ticket sales. Both the Lottery and the Forecast Council maintain ongoing, independent prediction models of Lottery revenues which include jackpot amount and economic conditions.

Lottery's Advertising Expenditures Did Not Appear to Increase Ticket Sales in the 2009-11 Biennium

JLARC included weekly advertising expenditures in its regression analyses and used several different approaches to identify any impact on ticket sales. These approaches included looking for effects in the weeks following the advertising expenditure as well as breaking down the expenditures by media type and ad campaign.

JLARC found almost no statistically significant relationships between advertising expenditures and ticket sales. The only exception was a slightly positive impact on *Powerball* ticket sales from a targeted ad campaign during that game's introduction in 2010. However, the analysis indicates that the return for each dollar spent on this *Powerball* advertising was likely less than one dollar in ticket sales.

It is not possible to conclude from this analysis whether advertising for Lottery games under different circumstances would have a different impact. The scope of JLARC's analysis is limited to the actual advertising during the 2009-11 Biennium and does not identify *why* this advertising campaign had no discernible effect on ticket sales. Hypothetical reasons may include too much advertising, too little advertising, ineffective advertising, or a public that does not respond to advertising for lottery products in general. Without further analysis and controlled experiments, it is not possible to determine what changes to Lottery's advertising, if any, could increase ticket sales.

Recommendation

Washington's Lottery should report to the Lottery Commission with a plan on how to evaluate and improve the effectiveness of its advertising budget in generating ticket sales.

| | |
|------------------------------|---|
| Legislation Required: | None |
| Fiscal Impact: | JLARC assumes that this can be completed within existing resources. |
| Implementation Date: | For the FY 2013 marketing budget cycle |

2. TO WHAT EXTENT HAS THE CHANGE IN BENEFICIARIES IMPACTED LOTTERY TICKET SALES?

Primary Beneficiary of Lottery Revenue Changed From School Construction to Scholarships and Early Learning in July 2010

After expenses for prizes and administration are paid, Lottery's net revenue from ticket sales funds state programs. These state programs are called the "beneficiaries" of Lottery contributions. The amount of net revenue varies from year to year, but has averaged \$124 million in the past five fiscal years. However, during this same period, total Lottery contributions to state programs have averaged \$132 million each year. The money for these additional contributions comes from unclaimed prize money and Lottery investments.

The Legislature determines which state programs will be the beneficiaries of Lottery revenue. Around 20 percent of contributions go to the State General Fund, stadium bonds, economic development, and a problem gambling program, while the remaining 80 percent goes to the primary beneficiary. Between Fiscal Years (FY) 2005 and 2010, the primary beneficiary was school construction, which received approximately \$102 million per year.¹

Starting in FY 2011, the Washington Opportunity Pathways Account (WOPA) replaced school construction as the primary beneficiary of Lottery revenue. Since then, the Legislature has appropriated approximately \$73 million per year from the WOPA for higher education scholarships and need based grants, and \$40 million per year for the Early Childhood Education and Assistance Program (ECEAP).

The fiscal note accompanying the legislation creating the WOPA (2010 E2SSB 6409) projected that this change in beneficiaries would generate an additional \$31 million in lottery ticket sales in FY 2011. The fiscal note assumed that the new beneficiary would entice current and potential players to purchase more tickets. The fiscal note also projected increases in sales by an additional \$125 million in the 2011-13 Biennium and \$230 million in the 2013-15 Biennium. While future biennia are outside the scope of this report, the Legislature has directed the Economic and Revenue Forecast Council to include lottery revenue in its quarterly revenue forecasts.

Change in Beneficiaries Did Not Appear to Increase Ticket Sales

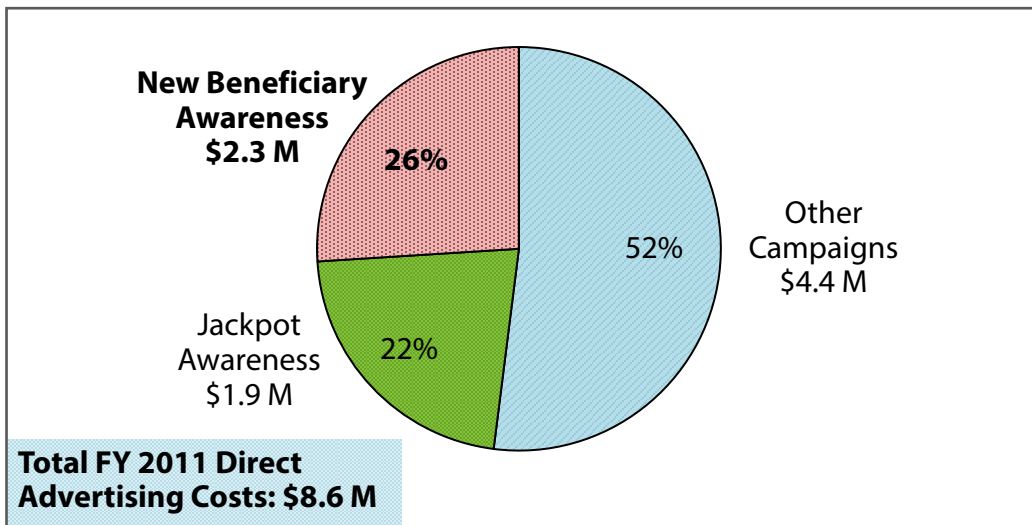
Lottery ticket sales increased by over \$19 million in FY 2011 compared to the previous year. However, it does not appear that the change in beneficiary was responsible for this increase. JLARC found this increase is consistent with what sales would have been *without* the beneficiary change. This finding is based on statistical models that reliably predict sales using jackpot amounts and economic conditions. See Appendix 3 for more information about JLARC's methodology.

¹ In FY 2010, the Legislature transferred \$105.2 million from the construction account to the State General Fund.

Lottery’s new beneficiary ad campaign had no significant relationship to ticket sales

As directed by statute, Lottery developed a new advertising campaign to inform the public that the new beneficiary was higher education scholarships funded by WOPA. This new ad campaign began in October 2010 and, as shown in Exhibit 4, comprised 26 percent of Lottery’s overall direct advertising costs (media buys and ad production) in FY 2011. JLARC analyzed weekly expenditures for this new ad campaign and found no statistically significant relationship with ticket sales.

Exhibit 4 – New Beneficiary Ad Campaign Comprised 26% of Direct Advertising Costs in FY 2011



Source: JLARC analysis of Lottery data.

Public opinion surveys show few players likely to buy more tickets based on new beneficiary

Each month, Lottery conducts a public opinion survey to gauge the public’s attitudes towards the Lottery. In FY 2011, these surveys showed that 6 percent of players specified higher education scholarships as a beneficiary. The surveys also showed that less than one-third of these players claimed that the identity of the beneficiary might impact their decision to purchase a lottery ticket.

This means that in FY 2011 only 2 percent of all players both identified the new beneficiary and also claimed that the beneficiary might impact their purchasing decision. It is unknown what portion of these players actually changed their behavior based on the new beneficiary.

3. WHAT IS LOTTERY'S EMPLOYEE INCENTIVE PAYMENT PROGRAM, AND HOW DO OTHER STATE LOTTERIES COMPARE?

Lottery Offers Incentive Pay to Some of Its Sales Employees

Since 1985, Lottery has offered incentive pay to some of its sales employees. These employees work closely with almost 4,000 retailers across the state who sell lottery tickets.

Incentive pay for sales staff has been primarily based on the ticket sales of the retailers they service. When actual sales exceed quarterly sales goals, certain sales staff are eligible to earn quarterly bonuses. Lottery reports that incentive pay is intended to motivate and reward sales employees for exceeding performance goals, as well as to help with the recruitment of new sales employees. Lottery management determines the specific terms of the incentive pay program for each fiscal quarter of the year.

There is a current legislative moratorium on incentives and other monetary awards for state employees. However, according to the Office of the State Human Resources Director (formerly the Department of Personnel), Lottery's sales employees who are covered by a collective bargaining agreement are not subject to the current moratorium because the incentive program is included in that agreement.

Lottery's Current Incentive Pay Program Is Limited

District sales representatives are the only employees currently eligible for incentive pay

Currently, only Lottery's district sales representatives (DSRs) are eligible for incentive awards. DSRs are the only employees at the agency covered by a collective bargaining agreement. Lottery has 35 DSR positions out of 71 sales staff, and a total agency staff of 134 full-time equivalents.

District sales representatives work directly with retailers who sell lottery tickets to maximize ticket sales. DSRs educate retailers about Lottery's games and promotions, distribute Lottery's point of sale marketing products, and monitor sales patterns in order to assist retailers in stocking the best mix of games for their customer base. Each DSR is responsible for servicing approximately 110 retailers within his or her geographic region.

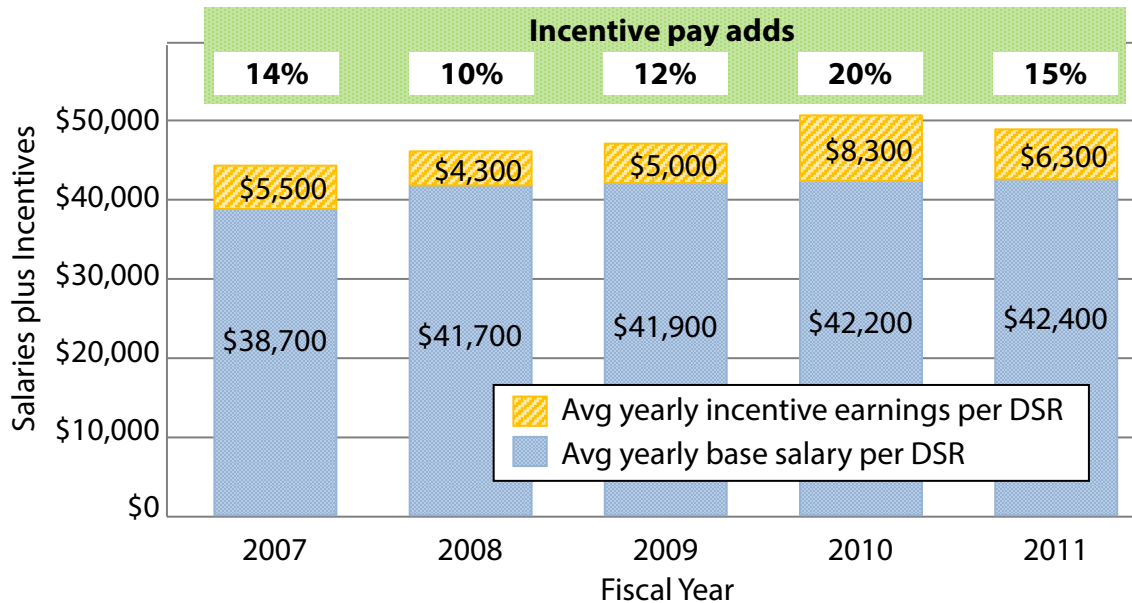
Incentive payments were equivalent to 3% of total Lottery salaries in FY 2011

In Fiscal Year (FY) 2011, Lottery paid a total of \$233,000 in incentive awards to 37 district sales representatives. This amount was equivalent to 3 percent of total salaries at Lottery, and 0.05 percent of ticket sale revenue that year. Over the past five fiscal years, Lottery's total annual incentive payments to all DSRs ranged from a low of \$164,000 to a high of \$305,000.

There is a maximum limit on incentive earnings for each DSR

The average annual salary for a DSR was \$42,400 in FY 2011. DSRs can earn up to 28 percent of their base salary in incentive payments; in FY 2011, they earned an average of \$6,300 per year in incentive pay, which equates to a 15 percent increase in their average yearly earnings. Annual payments ranged from \$2,500 to \$10,700 per employee. Exhibit 5 shows the average earning increase due to incentives over the past five fiscal years.

Exhibit 5 – Over Time, Incentive Pay Added Between 10-20% in Average Yearly Earnings per Sales Representative (DSR)



Source: JLARC analysis of Lottery data.

The Legislature suspended other monetary awards, including those offered by Lottery

In the recent past, Lottery offered incentive pay, cash recognition awards, and other performance-based awards to a broader spectrum of its employees. These awards included:

- Incentive pay for Lottery’s telemarketing representatives. Seven telemarketing representatives earned a total of \$19,400 in incentive pay in FY 2010.
- Cash recognition awards to both sales and non-sales staff totaled \$12,500 in FY 2010.
- Performance-based awards, recognizing outstanding achievements beyond performance expectations, were offered by Lottery in Calendar Year 2008. Awards totaled \$82,200. Lottery is one of seven state agencies that received authorization from the Office of the State Human Resources Director to have a performance management confirmation program, which allows for monetary awards in addition to base salary.²

² The other six state agencies are: Department of Veterans Affairs, Department of Commerce, State Investment Board, Attorney General’s Office, Department of Financial Institutions, and the Housing Finance Commission.

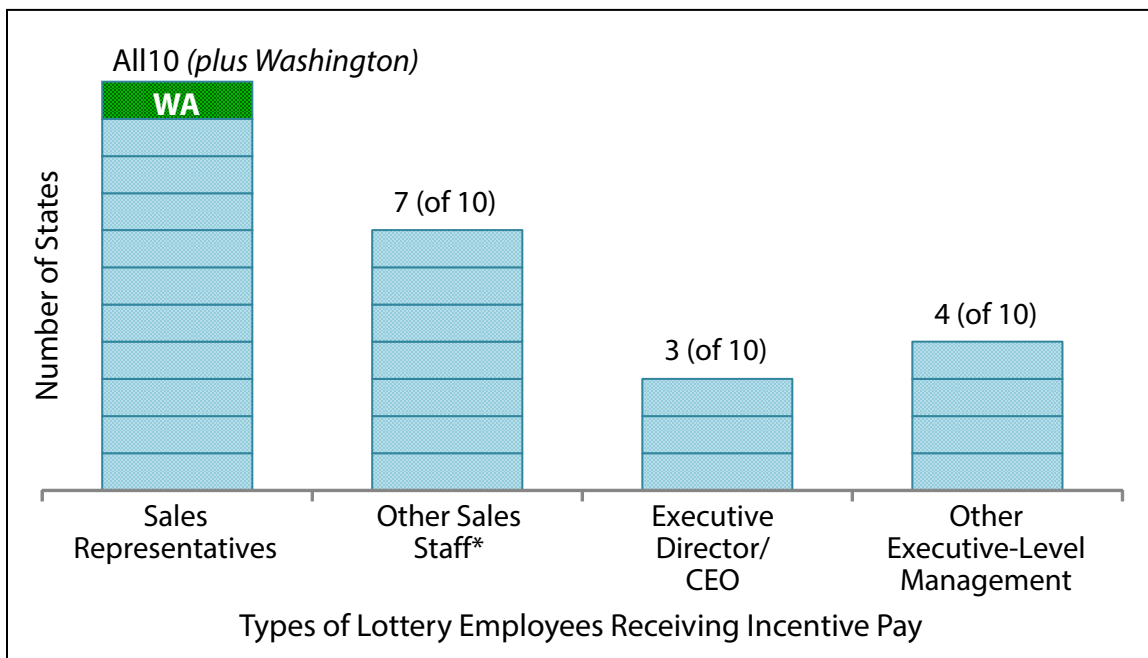
These awards are not currently available due to a legislative moratorium on incentives and monetary awards, which began on February 15, 2010, and has been extended through June 30, 2013 (2011 ESSB 5860, Secs. 5 & 9). Once the moratorium ends, these practices could be resumed.

Fifteen States Responding to JLARC's Survey Have an Incentive Pay Program, and Washington's Program Shares Some Similar Characteristics with Others

JLARC surveyed the 43 other states with lotteries to determine how common incentive pay programs are among Washington's peers.³ Fifteen of 36 (42 percent) responding states indicated that they provide incentive pay to their employees.

Like Washington, all ten states that responded to follow-up questions indicated they offer incentive awards to lottery sales staff, but some states reward other employees as well. Exhibit 6 illustrates the types of lottery employees awarded incentive pay in other states.

Exhibit 6 – Incentive Pay at Other State Lotteries Is Most Commonly Awarded to Sales Employees

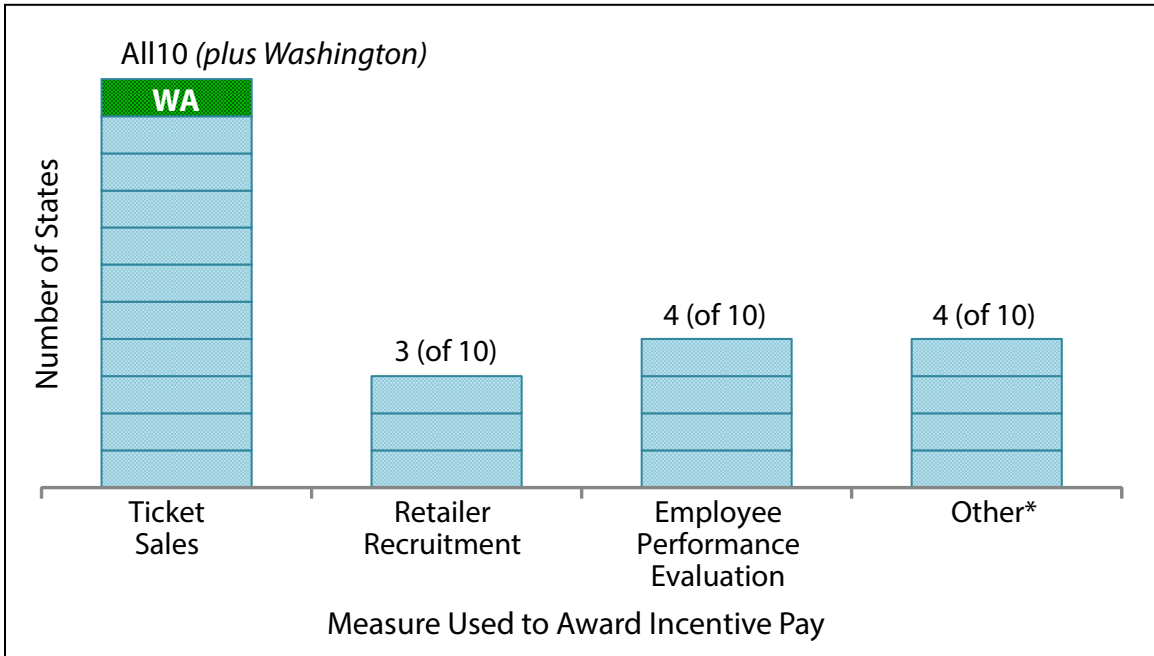


*E.g., sales supervisors, managers and directors; corporate account managers; telephone sales staff.

Source: JLARC analysis of survey responses.

³ JLARC surveyed the 42 other states with lotteries and the District of Columbia. The term "other states" refers to both the District of Columbia Lottery and other state lotteries.

Exhibit 7 – Ticket Sales Are the Primary Measure Used to Award Incentive Pay at Other State Lotteries



* E.g., completion of job class certifications; programs designed to support initiatives.

Source: JLARC analysis of survey responses.

Also similar to Washington, all ten states responding to follow-up questions indicated they use lottery ticket sales to award incentives, though some states use other measures in addition to ticket sales. Exhibit 7 highlights the types of measures used by other states.

APPENDIX 1 – SCOPE AND OBJECTIVES

LOTTERY MARKETING & INCENTIVE PAY

SCOPE AND OBJECTIVES

JULY 20, 2011



STATE OF WASHINGTON
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AND REVIEW COMMITTEE

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Why a JLARC Study of Lottery Marketing & Incentive Pay?

The 2011-13 Biennial Operating Budget (ESHB 1087) directs JLARC to review the marketing efforts and employee incentive programs at Washington's Lottery. This study follows a recent change in Lottery's primary beneficiary, which changed from school construction to higher education scholarships.

From 2001 to 2009, Lottery Contributions Primarily Went to School Construction

The Legislature created Washington's Lottery in 1982 (Chapter 67.70 RCW). Initially, revenue that did not go towards prize payouts or administrative costs primarily went to the State General Fund. Beginning in July 2001, Initiative 728 redirected this revenue towards K-12 education, including school construction. While the Education Construction Fund has been Lottery's largest beneficiary, some revenue has also gone towards stadium construction debt reduction, economic development programs, and problem gambling prevention. In Fiscal Year 2009, total sales equaled \$488 million, which generated \$102 million for the Education Construction Fund. Starting in July 2009, however, the Legislature redirected revenues in the Education Construction Fund to the State General Fund.

Now Contributions Primarily Go to Higher Education Scholarships

In 2010, the Legislature enacted E2SSB 6409, which designates the Washington Opportunity Pathways Account (WOPA) as the primary beneficiary of lottery revenue. The WOPA is largely dedicated to providing scholarships and financial aid for higher education, as well as contributing to the Early Childhood Education and Assistance Program. The fiscal note accompanying the bill anticipated that the change in primary beneficiaries would increase lottery sales over time.

Lottery Contracts With Vendor for Advertising

Washington's Lottery contracts with a private marketing vendor for advertising production and media buys. In general, these contracts are in place for three years. Lottery's current vendor contract is for approximately \$12 million per year.

Lottery Sales Employees Receive Incentive Pay

The Lottery employs approximately 35 district sales representatives who work with retailers to promote and sell lottery tickets. District sales representatives are eligible for a quarterly bonus based on the degree to which sales exceed a target quota for their respective districts. The sales incentive program is part of the collective bargaining agreement between the state and the Washington Federation of State Employees.

Study Scope

As directed by statute, JLARC will review the marketing and the incentive payment program at Washington’s Lottery. JLARC will focus its analysis on the period surrounding the change in beneficiaries from school construction to higher education scholarships. Additionally, JLARC will perform a comparative analysis of the vendor contracting and employee incentive programs of other states.

Study Objectives

This study will address the following four questions:

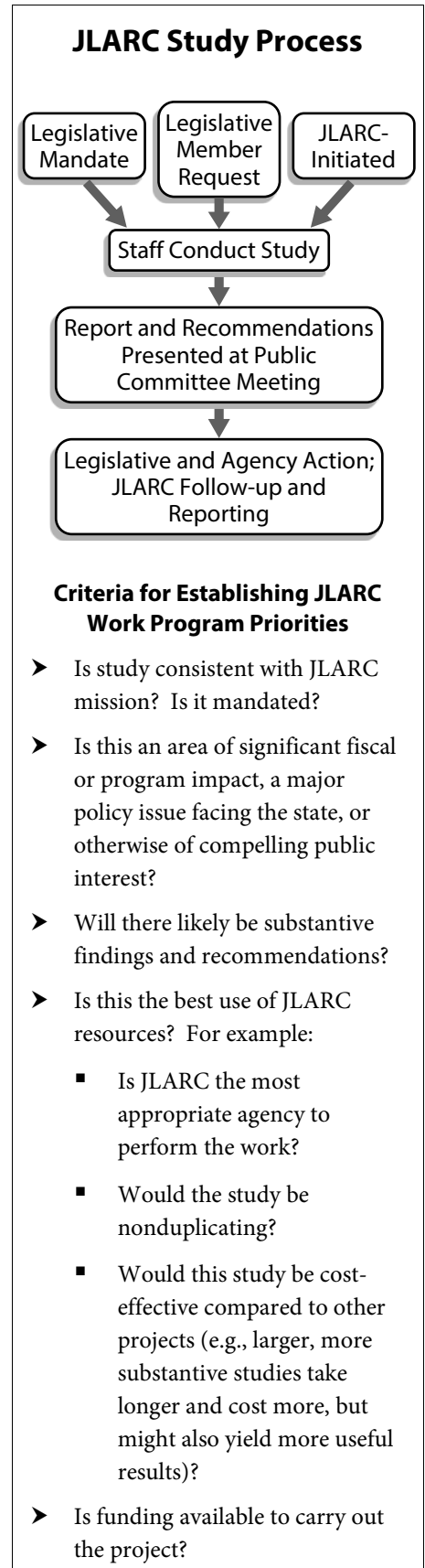
- 1) To what extent does advertising impact lottery ticket sales?
- 2) To what extent has the change in beneficiaries impacted lottery ticket sales?
- 3) How does Washington’s Lottery contract for marketing services, and how do other state lotteries compare?
- 4) What is Lottery’s employee incentive payment program, and how do other state lotteries compare?

Timeframe for the Study

Staff will present the preliminary report at the January 2012 JLARC meeting and the final report at the May 2012 meeting.

JLARC Staff Contact for the Study

Peter Heineccius (360) 786-5123 Peter.Heineccius@leg.wa.gov
 Stephanie Hoffman (360) 786-5297 Stephanie.Hoffman@leg.wa.gov



APPENDIX 2 – AGENCY RESPONSES

- Washington's Lottery
- Office of Financial Management

Appendix 2 – Agency Responses



it's good to play

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March 30, 2012

Keenan Konopaski
Legislative Auditor
P.O. Box 40910
Olympia, Washington 98504-0910

Dear Mr. Konopaski:

Here is Washington's Lottery recommendation for the recent JLARC audit that was conducted at our agency on Lottery Marketing & Incentive Pay.

| <u>Recommendations</u> | <u>Agency Position</u> | <u>Comments</u> |
|--|--|--|
| Rec. 1 Washington's Lottery should report to the Lottery Commission with a plan on how to evaluate and improve the effectiveness of its advertising budget in generating ticket sales. | Rec. 1 Washington's Lottery concurs with the JLARC recommendation. | Rec.1 The lottery believes in the value of their marketing and promotional programs to support top-line sales and contributions. |

- The lottery is currently developing their 2013 sales and marketing plans.
- The lottery will be presenting their 2013 sales and marketing plans to their commission on April 18 & 19. Included in this plan will be our 2013 advertising plan.
- The plan will include KPI's (Key Performance Indicators) and be part of the discussion with the commissioners.

Sincerely,

Bill Hanson, Director
Washington's Lottery



STATE OF WASHINGTON
OFFICE OF FINANCIAL MANAGEMENT

Insurance Building, PO Box 43113 • Olympia, Washington 98504-3113 • (360) 902-0555

January 23, 2012

TO: Keenan Konopaski, Legislative Auditor
Joint Legislative Audit and Review Committee

FROM: Marty Brown *MJB*
Director

SUBJECT: LOTTERY MARKETING & INCENTIVE PAY: JACKPOT AND ECONOMY, NOT ADVERTISING OR BENEFICIARY CHANGE, APPEAR TO IMPACT TICKET SALES – PRELIMINARY REPORT

Thank you for the opportunity to respond to your preliminary report titled: “Lottery marketing & Incentive Pay: Jackpot and Economy, Not Advertising or Beneficiary Change, Appear to Impact Ticket Sales” and the recommendation contained in the report:

| Recommendation | Agency Position | Comments |
|--|-----------------|----------|
| 1. Washington’s Lottery should report to the Lottery Commission with a plan on how to evaluate and improve the effectiveness of its advertising budget in generating ticket sales. | Concur | |

Again, thank you for the opportunity to comment. Please don’t hesitate to contact Diamatris Winston of my staff at 902-7657 with any questions.

cc: Stan Marshburn, Deputy Director, OFM
Diamatris Winston, OFM

APPENDIX 3 – ANALYSIS METHODOLOGY

To isolate the impact of advertising on ticket sales, JLARC used a statistical method called multivariate linear regression. This method used the correlation between the timing of media buys and the timing of ticket sales in order to approximate the impact of advertising on player behavior. JLARC used media buys as a proxy for the public's exposure to advertising, since media buys are priced based on expected viewership. Therefore, JLARC measured the correlation between ticket sales and the quantity of advertising each week, but not the quality of the specific ads.

Washington's Lottery provided daily sales and jackpot data for each game from January 2007 through June 2011 (four and a half years, 234 weekly observations). Lottery's advertising vendor, Cole & Weber United, provided the amount spent each week on media buys for each ad campaign from July 2009 through June 2011 (two fiscal years, 104 weekly observations). With this data, JLARC was able to distinguish media buys for the new beneficiary ad campaign from other ad campaigns.

JLARC also obtained economic data (employment figures, unemployment insurance claims, consumer price indices, average gas prices, and the Dow Jones Industrial Average) from a variety of sources for the period between January 2007 and June 2011 (234 weekly observations).

Regression Analysis

JLARC used multivariate linear regression to construct two predictive models of ticket sales. Both models predict the sales of individual games based on variables representing jackpot amount, economic conditions, holidays, other dates, the month of the year, and advertising expenditures (including advertising related to the beneficiary change). For each game, JLARC ran several different iterations of regression analyses in order to identify the variables that were consistently significant regardless of which other variables were included in the analysis.

Model 1

The first model used data from Fiscal Year 2010 & 2011 (104 observations), which corresponded with the period for which JLARC had advertising expenditure data. JLARC tried several combinations of advertising expenditure variables that represented different campaigns, media types, and time lags. However, JLARC was unable to find any reliably significant relationship between advertising expenditures and ticket sales. While some relationships were occasionally (but inconsistently) significant, these relationships had very low and often negative coefficients.

The following table shows the adjusted r-square (the percent of weekly variation that is explained by the model) for each game. The model for Scratch games had the lowest predictive value (73 percent of variation explained), but the models for all individual games combined were able to explain 91.2 percent of the weekly variation in total ticket sales.

| Game | Adj. R ² |
|--------------------|---------------------|
| Scratch Games | 0.732 |
| Powerball | 0.927 |
| Mega Millions | 0.937 |
| Lotto | 0.957 |
| Hit Five | 0.971 |
| Daily/Keno/Match 4 | 0.872 |
| All Games Combined | 0.912 |

Model 2

The second model used data from January 2007 through June 2010 (178 observations) and excluded advertising data from the regression analysis. This model provided JLARC with a baseline prediction of ticket sales without regard to advertising or the beneficiary change. When this model was applied to data from Fiscal Year 2011, JLARC was able to compare actual sales to what it would have projected based on only jackpot amount, economic conditions, and the date of purchase.

While scratch games continued to be the hardest to predict, actual sales were in line with the model’s predictions. This means that JLARC was able to reliably predict sales of games in Fiscal Year 2011 without reference to either advertising expenditures or the change in beneficiary. The table below shows the adjusted r-square for scratch and draw games in FYs 2008-2010 and 2011.

| Game | Adj. R ² (FY08-10) | Adj. R ² (FY11) |
|--------------------|----------------------------------|-------------------------------|
| Scratch Games | 0.839 | 0.776 |
| Draw Games | 0.906 | 0.920 |
| All Games Combined | 0.865 | 0.912 |

Advertising Hiatus

To supplement its regression analysis, JLARC also analyzed a natural experiment: in the summer of 2010, Lottery stopped all advertising other than jackpot awareness billboards for nearly three months. During this hiatus, average ticket sales were slightly lower than JLARC’s model predicted. However, the minor drop in sales during this period does not seem to be related to the hiatus in advertising. The drop in sales occurs entirely within the first half of the hiatus, while sales during the second half are consistent with or higher than JLARC predictions. Thus, even if the hiatus in advertising caused a temporary decline in sales, it appears that sales returned to “normal” a month before advertising resumed.

Additional methodology detail is available from JLARC on request.

