SENATE MEMBERS

Robert Stivers
President, LRC Co-Chair
David Givens
President Pro Tempore
Max Wise
Majority Floor Leader
Gerald A. Neal
Minority Floor Leader
Robby Mills
Majority Caucus Chair
Reginald Thomas
Minority Caucus Chair
Mike Wilson
Majority Whip
Cassie Chambers Armstrong
Minority Whip

LEGISLATIVE RESEARCH COMMISSION
State Capitol 700 Capital Avenue Frankfort KY 40601
502-564-8100
Capitol Fax 502-564-2922
Annex Fax 502-564-6543
legislature.ky.gov

Jay D. Hartz
Director

HOUSE MEMBERS

David W. Osborne
Speaker, LRC Co-Chair
David Meade
Speaker Pro Tempore
Steven Rudy
Majority Floor Leader
Pamela Stevenson
Minority Floor Leader
Suzanne Miles
Majority Caucus Chair
Lindsey Burke
Minority Caucus Chair
Jason Nemes
Majority Whip
Joshua Watkins
Minority Whip

To: Jim Bondurant
LRC Senate Majority Leadership Staff

Jennifer Rowe
LRC Senate Majority Leadership Staff

Matthew Williams
LRC Senate Majority Leadership Staff

Luke Finison
LRC Senate Majority Leadership Staff

From: Phillip Combes
LRC Staff Economist

Subject: Market Substitution between Online Gambling and State Lotteries

Date: July 23, 2026

Per your request, this memo summarizes the relevant economic and gaming literature regarding the potential substitution effects between state lotteries and online casino gaming and sports wagering. There is consensus in the literature on the existence of a substitution effect between the two, but the magnitude of this effect is debated. The review is intended to provide a high-level overview of the existing research and key findings rather than an exhaustive survey of the literature. Instead, it highlights several studies that are particularly relevant to understanding the potential interactions among these forms of gaming.

Since the early 2010's, states have increasingly legalized forms of online gambling including Online Sports Gambling (OSG) and online casino gambling (iGaming). Online Casino Gambling replicates casino-style games in an online environment. OSG involves wagering on the outcome or component parts of sporting events at the college or professional level, and since the legalization of the practice following a 2018 Supreme Court decision, it has experienced the most growth among these forms of online gambling. iGaming is currently not legal in Kentucky, while OSG was legalized in Kentucky in 2023.

One resulting question is whether, and to what degree, the legalization of various forms of online gambling will impact state lottery revenues through substitution away from lotteries, which occurs when a consumer spends money on online gambling that they would have otherwise spent on the lottery.

This question has been considered in the economics and gaming literature regarding brick-and-mortar casino gambling and state lottery substitution effects, which generally finds that casino expansion reduces lottery sales, although the effect is relatively small.[1] Of the various online gambling products, OSG has drawn the most attention from researchers because of its rapid expansion and popularity among young men, with survey data finding that nearly 50 percent of men in the US between 18-49 have at least one OSG account.[2]

Though research has not fully addressed the question of the impact of iGaming and OSG on state lottery revenues, these must be considered separately from the effect of brick-and-mortar casinos for several reasons. First, both iGaming and OSG are available on mobile devices and not tied to a physical location. Second, OSG may draw a substantially different audience of bettors to the extent that their customer base, advertising, and products are different from that of casino gaming establishments. Because the legalization of online gambling is recent, the research that has been done to evaluate its impact on state lottery revenues is not definitive, but several papers have been published evaluating this question.

Research investigating the potential substitution effect between iGaming and state lotteries is lacking. In 2011, Philander et al. found that iGaming had a large substitution effect with brick-and-mortar casinos specifically.[3] It is important to note that this

---

[1] Walker, D.M. and Jackson, J.D. (2011). "The Effect of Legalized Gambling on State Government Revenue" Contemporary Economic Policy, 29: 101-114

[2] Larsen, Poet and Vijayaraghavan, Sriniketh and Ananthakrishnan, U. M., (2025). "Gambling Spillovers: Evidence from Online Sports Gambling and State Lotteries"

[3] Philander, K. S. (2011). The Effect of Online Gaming on Commercial Casino Revenue. *UNLV Gaming Research & Review Journal, 15*(2)

relationship may reflect that iGaming attempts to closely replicate the type of games offered at brick-and-mortar casinos, and therefore the same relationship may not exist between iGaming and state lotteries.

Currently, the most comprehensive study on the effect of OSG on state lottery revenues is Larsen et al. (2025).[1] This study found that the impact of OSG on state lottery revenues was negative, but that lottery revenues declined by a relatively small amount. Their study, which had access to consumer-level purchasing data between 2019-2023, found that most of the substitution away from lottery products was because some existing heavy lottery spenders chose to shift part of their gambling budget to OSG, not because lottery customers stopped buying lottery tickets entirely.

Studies differ in their estimation of the size of the substitution effect. Coombs et al.,[4] a recent IZA discussion paper which has yet to undergo peer review, found a larger decline in state lottery revenues than the Larsen study, while Nedved et al.[5] did not find evidence of consistent substitution. These differing estimates of magnitude seem to result from differences in data and methodology. While all three studies used aggregate lottery revenue data, Larsen et al. used several supplemental datasets, including consumer-level purchasing data, to add context and robustness to their model.

Because OSG has only been legal for a few years in most states, additional research will be needed to improve estimates of the magnitude and persistence of the substitution effect between OSG and state lottery revenues. Although the magnitude of the substitution is not known, the literature that currently exists generally suggests that there is, at least in some cases, some degree of negative impact on state lottery revenues resulting from legalization of OSG. Among the available studies, Larsen et al. provide particularly strong evidence of this because they use consumer-level purchasing data in addition to aggregate lottery sales.

If you have any questions, please feel free to contact me at ext. 59223.

---

[4] Coombs, K., Madonia, G., Nencka, P., & Smith, A. C. (2026). Gambling with State Budgets: Legalized Sports Betting and Lost Lottery Revenue. IZA Discussion Paper, 18724.

[5] Nedved, J., Nason, D., and Hoffer, A. J., Borges F.N., Amir, & Humphreys, B. R., (2026). "Sports Betting, Lotteries, and State Revenues in the Post-PASPA Era"