

HOW BAD SPORTS BETTING RESEARCH CAN LEAD TO BAD SPORTS BETTING REGULATIONS

*Douglas M. Walker**,
Professor of Economics, College of
Charleston, Charleston, SC, USA

Brent A. Evans,
Assistant Professor of Finance,
Georgia College and State University,
Milledgeville, GA, USA

ABSTRACT

Academic research can provide important evidence to inform policy debates. Such has been the case with the “gambling studies” academic field, which has largely developed since 1990, when the casino industry began expanding outside of Nevada and Atlantic City, NJ. Recently, sports betting legalization across the United States has been controversial. Despite a significant body of published research analyzing the socioeconomic effects of expanded gambling opportunities, much of the recent public discussion has focused on just three working papers circulated in 2024. These papers have been cited as authoritative in media reports and have been presented before policymakers at the state and federal level. We highlight serious methodological problems in these papers to suggest that flawed research can lead to bad policy, and that the current sports betting debate has parallels to the 1990s debate over the “social costs of gambling.”

Keywords: Sports betting, Online gambling, Socioeconomic impacts of gambling, Gambling legalization

JEL Codes: L83, M31

INTRODUCTION

Legalized gambling in the United States has been controversial since the U.S. Supreme Court’s 1988 *California v. Cabazon Band of Mission Indians* decision and the 1989 Indian Gaming Regulatory Act (IGRA). These legal events opened the door for tribal and commercial casino development in the United States. In 1989, South Dakota became the first state outside of Nevada and New Jersey (Atlantic City) to begin offering commercial casinos. By 1994, five

*Corresponding author: e-mail: dougwalker2@gmail.com

states bordering the Mississippi River had legalized casinos.¹ Throughout the late 1990s and early 2010s many more states followed suit. This expansion of legal gambling was very controversial; while policymakers were interested in casinos for the potential employment and tax revenues, there was great concern about how the increasing availability of casino gambling would affect culture, other businesses, and the prevalence and impacts of pathological gambling. This culminated with the federally-mandated National Gambling Impact Study Commission (1999). Nevertheless, casino gambling was becoming more acceptable and popular in society. By the end of 2024 there were 492 commercial and 537 tribal casinos operating in 42 of the United States.² Total U.S. commercial casino revenues topped \$72 billion in 2024, with \$16 billion in taxes paid to state governments (American Gaming Association, 2025b, p. 8). Tribal casino revenues were estimated to be about \$44 billion for fiscal year 2024 (National Indian Gaming Commission, 2025).

As the result of technological advances in the 2010s – particularly in computing speed, the internet, and smart phones – and the increasing availability of illegal and offshore sports and casino betting, much of the recent U.S. gambling industry expansion has been in the online sector. For example, many states now offer online lottery sales, and eight states permit online casino gambling.³ However, as other forms of legal gambling rapidly proliferated in the 1990s and 2000s, traditional sports gambling remained illegal in all states other than Nevada largely due to the 1992 Professional and Amateur Sports Protection Act (PASPA).⁴ This began to change in October 2014 when New Jersey challenged PASPA by permitting sports gambling within race tracks and casinos (Purdum, 2014). A month later, NBA Commissioner Adam Silver called for the legalization of U.S. sports betting (Silver, 2014). The New Jersey bill ended up in the federal court system and eventually was resolved with the Supreme Court’s 2018 decision in *Murphy v National Collegiate Athletic Association*.⁵ The 1992 Professional and Amateur Sports Protection Act (PASPA) was deemed to be unconstitutional, thereby enabling individual states to legalize and regulate sports betting. By the end of 2017, forty states hosted casinos,⁶ making it relatively

¹ The states and first casino opening years are Illinois (1991), Iowa (1991), Louisiana (1993), Mississippi (1992), and Missouri (1994) (Walker, 2013, p. 3).

² American Gaming Association (2025b, p. 14). Tribal casinos include only those with casino-style games. Commercial casinos include land-based, riverboat, and racetrack casinos.

³ American Gaming Association (2025b, pp. 12–13). The states with online casino gambling are Connecticut, Delaware, Michigan, Nevada, New Jersey, Pennsylvania, Rhode Island, and West Virginia.

⁴ Nevada, which was the only state with fully legal sports gambling when PASPA was passed, was given special authority to continue its operations.

⁵ https://www.supremecourt.gov/opinions/17pdf/16-476_dbfi.pdf, accessed 7 July 2025.

⁶ See American Gaming Association (2018, pp. 12–13).

HOW BAD SPORTS BETTING RESEARCH CAN LEAD TO BAD SPORTS BETTING REGULATIONS

simple for them to introduce sports betting after the Supreme Court’s *Murphy* decision.

As of early 2025, sports betting is legal in 38 states, 30 of which allow bets placed using smartphones.⁷ U.S. sports betting revenue was estimated at \$21 billion in 2024, with \$16 billion from regulated (legal) providers and \$5 billion from illegal/offshore providers (American Gaming Association, 2025a, p. 7; 2025b, pp. 9–10). Despite a growing body of state-level economic data on sports betting since the 2018 *Murphy* decision, surprisingly little is understood about how sports betting legalization affects other sectors in the gambling industry, state government budgets, the prevalence of gambling disorders and the impacts of related behaviors.

Among the academic work on sports betting expansion since 2018, three 2024 working papers have received disproportionate attention in media outlets and among politicians. We believe these papers contain implicit anti-gambling biases, flawed research methodologies, and unsubstantiated conclusions. These problems are likely to distort the public’s understanding of the sports betting industry and its effects on society. Left unchallenged, such research is counterproductive to developing effective government regulation of sports betting. Our purpose, therefore, is to provide examples of specific problems in the current research and draw a parallel to the staying power of bad ideas from the 1990s debate over the “social costs of gambling.” We believe this paper provides valuable information which can inform voters, future research, and public policy debates on the legalization of sports betting in the United States.

Our analysis begins in section 2, with a review of three working papers. Section 3 discusses how these flawed papers have been influential among media outlets and policymakers. Section 4 provides a brief overview of the gambling studies field and describes how flawed ideas in a new research area can have long-running effects on subsequent research and even policy. In section 5 we offer suggestions for future gambling research and conclude.

REVIEW OF RECENT SPORTS BETTING RESEARCH

Among the growing body of papers on the expansion of legal U.S. sports betting, three 2024 working papers have been regularly cited in other academic papers, discussed in media outlets, and presented to policymakers. Two of these papers are currently in “revise and resubmit” status at top-tier academic journals.⁸ For each paper, we provide a concise summary of findings along

⁷ National Conference of State Legislatures, <https://www.ncsl.org/fiscal/seven-years-of-sports-betting-did-states-get-it-right>, accessed 19 June 2025.

⁸ As of this writing, the Baker et al. paper is under review at the *Journal of Financial Economics* (<https://marriott.byu.edu/directory/details/vita?id=30947>, p. 1; accessed 1 Sept. 2025), and the Matsuzawa and Arnesen paper is under review at the *Review of Economics and Statistics* (<https://qmatsuzawa.com/papers/#wp>; accessed 1 Sept. 2025).

with a more detailed analysis. Our analysis focuses on the most critical issues, which we believe undermine the credibility of the research findings and authors' conclusions.

A. MATSUZAWA AND ARNESEN (2024), "SPORTS BETTING LEGALIZATION AMPLIFIES EMOTIONAL CUES & INTIMATE PARTNER VIOLENCE"

(1) Summary: These authors (MA) conclude that in counties with legal sports gambling, intimate partner violence (IPV) increased in and around an NFL team's host city when the team was heavily favored by sports books and unexpectedly lost; or lost a game in which sports books viewed the game outcome as a near coinflip. These results remain consistent during robustness checks.

(2) Analysis: MA build upon an important paper by Card and Dahl (2011), which showed that family violence – what MA call “intimate partner violence” (IPV) – increased following an unexpected loss of a city's home team. As an illustration, imagine the Chicago Bears are a six-point favorite in a home bout against the Green Bay Packers. Card and Dahl predicted that if the Bears lose, IPV in the general Chicago vicinity will increase around 10% near the end of the game and shortly thereafter.

MA study whether this effect is different if online sports gambling is legalized. Specifically, they ask whether the legalization of sports gambling exhibits a unique secondary effect on IPV. The logic is reasonable: if the pain of a home team loss can lead to increased IPV, perhaps the agony of a simultaneous home team loss and a losing bet can amplify the adverse emotional impact and lead to even more IPV. MA largely focus on games in which a home team was favored, or expected to win by four or more points, but loses outright – an “upset loss.”

Figure 1 is reproduced from MA. It indicates the interaction of online sports gambling legalization and game outcomes on IPV. The purple curve illustrates the IPV rate in states without legal sports betting; the curve shows the IPV rate increases only slightly if the home team loses. In contrast, in states with legal sports betting (orange curve), the IPV rate increases much more when the home team is upset. The authors report, “Strikingly, [the graph] shows that these differences in mean IPV rates across upset loss days vs. non-upset loss days are higher when sports betting is legal (19% vs. 3.6% increase)” (p. 7). This result appears to be valid and useful.

However, MA's result is not evidence that online sports betting leads to an overall increase in IPV. Indeed, the authors' findings indicate that sports gambling legalization leads to a *reduction* in localized IPV following a home team *winning a game in which it was expected to be victorious*. Strikingly, according to MA's graph, when a favored home team wins, IPV is 16% *lower*

HOW BAD SPORTS BETTING RESEARCH CAN LEAD TO BAD SPORTS BETTING REGULATIONS

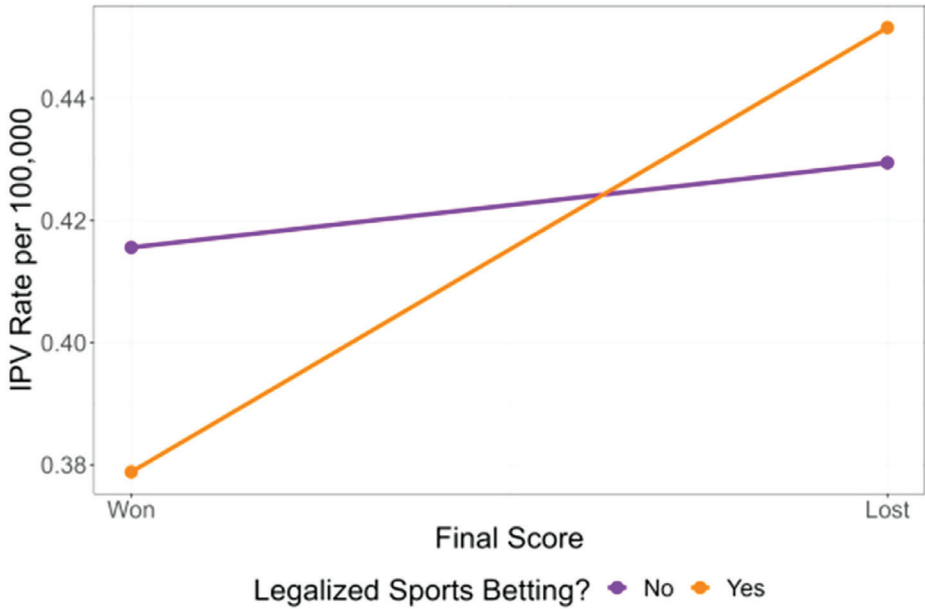


Figure 1. The relationship between final score and IPV, and whether sports betting is legal or not

Source: Matsuzawa and Arnesen (2024, p. 25).

than when a favored home team loses in jurisdictions in which sports gambling is legal.⁹ The authors chose to focus their paper on the increase in one scenario instead of the decrease in another; the choice of framing clearly matters (Tversky and Kahneman, 1981).

This framing consideration is a mere quibble compared to our concern over other modelling choices made in the MA paper. In Figure 1 MA show that when a home team is favored by more than four points and wins, the IPV rate is 9.3% lower if sports betting is legal, relative to illegal.¹⁰ Comparatively, when the favored home team loses, IPV is 2.1% higher in areas with legal online sports gambling. Given that teams win most games for which they are favored, this points to a substantial *net benefit* for sports betting legalization. For example, during the 2024 NFL season, there were 97 games in which the home team was favored by more than four points. The home team won 76 (78.4%) of these games and lost only 21 (21.6%).

In Table 1 we explore this further with data from the 2024 NFL season. Since cities with legal sports gambling have lower IPV rates following wins of

⁹ Due to the nature percentages, a 19% increase is equivalent to a 16% decrease.

¹⁰ MA do not provide exact values for Figure 1, so we used ChatGPT to estimate the coordinates within this graph.

Table 1. Weighted IPV rates based on NFL game outcomes, 2024 NFL season

Legal sports betting in game location	# of games favored home team won	IPV rate (per 100,000 people) if favored team wins	# of games favored home team lost	IPV if favored team loses	Average IPV per 100,000 people following these losses
YES	45	0.382	13	0.445	0.396
NO	31	0.421	8	0.436	0.424

Source: Authors' calculations using data from <http://www.pro-football-reference.com>.

their favored home team, and because such outcomes are more common than favored home team losses, cities with legal sports gambling have substantially *lower* IPV rates over the course of a football season in the hours following such games. During the 2024 season, MA's results suggest that the average IPV in locations with legal online sports gambling was 6.6% lower following a game in which its home NFL team was favored by more than four points compared to locations without legal sports gambling.

MA ignore this likely positive effect on sports betting legalization. Instead, they conduct rigorous econometric models focusing solely on game outcomes that align with the narrative that online sports gambling legalization causes harm. They hone their attention primarily on home "upset losses," which for the average NFL team occurred only *0.65 times* during the 2024 season. Given that MA monitor a 12-hour window during and following games, their key result was only relevant for about *7.8 hours for the entirety of 2024* for the average NFL team. They conduct no econometric analysis that considers how IPV rates are affected by legalization when a favored (by any amount) home team wins – even though this outcome is far more common (3.7 times per team during the 2024 NFL season).

MA provide no evidence that sports betting legalization causes an *overall* increase in IPV, yet they claim to be "the first to investigate the causal relationship between legalized sports gambling and IPV" (p. 18). The authors don't even *mention* IPV rates during the NFL offseason. Yet, they imply that legalization of sports gambling leads to more general cases in IPV, labeling sports gambling legalization as an activity that causes a "negative externality" (p. 18) and conject that states choosing to legalize may need to "invest their tax revenues in domestic violence shelters or hotlines to assist the victims or in counseling services to offer support for potential offenders" (p. 19).

Regardless of MA's intent, their paper has the potential to impart undeserved damage to the regulated sports gambling industry. For their paper to be meaningful and useful, they should begin by acknowledging, and econometrically investigating, the possibility that legalized sports betting may reduce cases of IPV following the typical NFL game.

*B. BAKER ET AL. (2024), "GAMBLING AWAY STABILITY: SPORTS
BETTING'S IMPACT ON VULNERABLE HOUSEHOLDS"*

(1) Summary: Using household-level data, Baker et al. report key figures on the frequency and magnitude of sports gambling following legalization. They conclude that the legalization of sports gambling results in reduced savings and investments among gamblers' households.

(2) Analysis: Baker et al. examine the financial impacts of legalized online sports gambling. They argue that legalization of sports gambling results in increased sports gambling activity at the expense of "more productive" activities like saving and stock-investing (p. 1). They report that this crowding-out of savings is most significant among financially strained households. While their key findings are plausible, we believe that the data collection methods and associated results are inadequate for drawing such conclusions.

Perhaps the most glaring issue in the Baker et al. study involves the approximation of online sports gambling expenditures. We identify substantial problems with their analysis that result in an overestimate of online sports gambling expenditures. First, the authors ignore the fact that deposits made into sports betting accounts are not necessarily spent. For example, at the end of 2024, \$525.4 million was held in DraftKings customers' accounts (DraftKings, 2025, p. 2). These holdings could eventually be withdrawn which would mitigate the purported adverse impacts of gambling legalization on saving and investing activities.

Furthermore, the authors are unable to track unresolved bets – for example, a bet on a team to win a future championship. A person wishing to place such a bet must have made a deposit. However, by only counting deposits and withdrawals, the authors are, by default, assuming that unresolved bets are losses. That is a distinct possibility. However, it is also possible that unresolved bets could eventually lead to a withdrawal. This is important; if a player deposits \$100 into an online sportsbook account instead of a bank, the authors assume the gambler must be \$100 worse off. In reality, some of these funds may *eventually* return to the player, mitigating the alleged adverse financial impacts of the player's choice to gamble.

Second, the authors apparently have no way to account for the popularity of other gaming sites that were legal for U.S. consumers prior to the legalization of traditional online sports gambling.¹¹ Most notably, daily fantasy sports (DFS) was popular before (and after) the legalization of sports gambling. With short and long-duration contests and a huge variety of buy-in options, DFS gameplay is, effectively, a skill-based legal variant of sports gaming. During the period studied in the Baker et al. paper, 37 states legalized sports gambling;

¹¹ The authors also have no way to measure many other forms of gambling activity. For example, the authors cannot measure casino gambling at brick-and-mortar casinos.

DFS was permitted prior to sports gambling legalization in all but two of these states (Montana and Washington). At present, it appears Baker et al. earmark all deposits to websites like DraftKings as funds dedicated to sports gambling, while undoubtedly, some share is reserved for DFS. The fact that Baker et al. fail to even *mention* the role of DFS in their manuscript is an egregious oversight. Similarly, the authors ignore other forms of online gambling that are routinely available (e.g., online slot machines and table games). Connecticut, Delaware, Michigan, New Jersey, Pennsylvania, and West Virginia all permitted online casino gameplay during at least a portion of the Baker et al.'s sample period. If, for example, a West Virginia resident deposited funds into their DraftKings account with the goal of playing online roulette, it appears that Baker et al. erroneously labeled it as a sports gambling deposit.

More importantly, the authors exhibit shocking ignorance regarding the immense unregulated sports gambling market. The American Gaming Association (2025a) estimates that in 2024 alone, U.S. gamblers sports-wagered more than \$64 billion with unregulated and illegal sports betting operators, resulting in almost \$4 billion in annual revenues for offshore operators like Bovada, BetOnline, and BetUS, and with illegal and unregulated sports betting operators.¹² While legalization caused some sports gamblers to move their accounts to regulated sports books, unregulated sports books remain popular. The Attorney General of Massachusetts recently sent cease and desist letters to two unregulated online sports books for engaging customers after the state legalized sports gambling in 2023.¹³ This highlights the continued relevance of illegally operating sports gambling websites even after legalization.¹⁴

Nevertheless, Baker et al. base their entire empirical methodology on the obviously false and naïve assumption that online sports gambling was “virtually impossible” prior to legalization (p. 16). They state, “Because there is negligible gambling activity in the quarters preceding legalization, there is no difference in betting across households in treated and control states during the pre-period” (pp. 18–19). They further explain,

¹² This exact figure is difficult to verify, but it is undeniable that the unregulated market is relevant to Baker et al.'s study.

¹³ See <https://www.mass.gov/news/ag-campbell-leads-bipartisan-effort-urging-us-department-of-justice-to-help-address-illegal-offshore-gaming>, accessed 10 Aug. 2025.

¹⁴ Transactions involving offshore websites like Bovada are often completed with the use of cryptocurrency (which might explain why Baker et al. found that sports gamblers in their dataset were also frequent cryptocurrency traders). For credit card transactions, unregulated sports books will often create fictional transactional details to hide the true recipient. For example, Bovada provides a patron deposit example on its website displaying the phony descriptor “TestWebsites” (<https://www.bovada.lv/help/financial-faq/credit-card-statement?searchTerm=whatwillappear>; accessed 1 Sept. 2025). Baker et al. cannot (and do not) identify such transactions.

HOW BAD SPORTS BETTING RESEARCH CAN LEAD TO BAD SPORTS BETTING REGULATIONS

The identifying assumption is that pre-legalization trends in outcomes for households in states that are about to legalize sports betting are similar to the trends for households in states that have not yet legalized sports betting. Accessing online betting sites from illegal jurisdictions is virtually impossible given the resources devoted to identifying this behavior, so this assumption is likely trivially satisfied for money spent on online sports betting; households are likely to spend very little money betting absent legalization (p. 16).

Although making the “parallel trends” assumption enables Baker et al. to perform a difference-in-differences analysis (“diff in diff”) of the impact of sports betting legalization, the adoption of an obviously false assumption undermines the entire analysis, reducing it to a trivial empirical matter. Indeed, for their analysis to be valid, Baker et al. must show that changes in sports gambling magnitudes in treatment states (legalized gambling) and control states (not legalized) match prior to legalization. Since the volume of illegal gambling is impossible to measure, the authors cannot verify parallel trends. As a result, their empirical analysis and conclusions should be ignored. To be clear, we do not refute the *possibility* that legalized sports gambling leads to reduced investment or financial uncertainty. Rather, we are arguing that the Baker et al. analysis does not provide evidence for or against these possible legalization effects.

Flaws in the analysis are also evidenced by key differences between gamblers and non-gamblers. For example, the authors write “Bettors are also more likely to have received child tax credits during the post-COVID stimulus (25% vs. 14%), suggesting that a relatively large fraction of the bettors in our sample have dependent children” (p. 12). This clearly indicates that gamblers and non-gamblers are categorically different. While the authors do attempt to mitigate these differences by controlling for COVID-19-related government stimulus funds received, there are likely important differences between gamblers and non-gamblers that significantly correlate with financial decision-making yet are unobserved by the researchers.

Notably, households may be changing during the period studied. With gambling households including children nearly twice as often as non-gambling families, it is reasonable to assume that these families were also more likely to welcome new babies to the world during the data collection period. Household fixed effects cannot account for such changes. It is also well documented that families with children experienced unique and significant economic hardships that enhanced the adverse effects of COVID-19 (Garcia and Cowan, 2022; Heggeness, 2020; Patrick et al., 2020). Since (a) gamblers are more likely than non-gamblers to have children, (b) Baker et al. have no reliable method of determining changes in family size, and (c) COVID-19 negatively affected families with children more than those without, it is feasible that the ill-effects Baker et al. attribute to gambling legalization are merely artefacts of the

adverse financial impacts from COVID-19, which struck during the chronological middle of their sample period.

C. HOLLENBECK ET AL. (2024), "THE FINANCIAL CONSEQUENCES OF LEGALIZED SPORTS GAMBLING"

(1) Summary: The legalization of sports gambling leads to adverse financial outcomes, including lower credit scores, increased bankruptcy rates, and auto loan delinquencies. These effects are generally observed in states that legalize sports betting in-person, but states with legal online gambling exhibit more significant impacts.

(2) Analysis: The manuscript by Hollenbeck et al. (HLP, 2024) is the third working paper that has received recent media attention. HLP point to serious effects of legalization on a myriad of household finance indicators. For example, they find that average credit scores fall by 0.3% in states that legalize any form of sports gambling, relative to states that do not permit legal sports gambling (p. 11). The effect is larger (1.0%) within states that allow online sports gambling (p. 11). Similar results are provided for other key household finance indicators, including excessive debt, bankruptcy rates, and auto loan delinquencies.

However, HLP's work includes flaws in the analysis that warrant skepticism. We first explore their analytical methods. The authors use a panel dataset of individual-level financial data for U.S. residents. After cleaning unusable data, they are left with about 7 million individuals with data provided in quarterly increments from March 2016 to June 2023 (p. 6). For "computational efficiency," the authors aggregate all data to the county-level (p. 10). Using a diff in diff analysis that includes county-level and quarter-year fixed effects, the authors estimate the impact of their key variables (legalization of sports betting in general and online) on various household financial data.

At present, the methodology employed in HLP hinges on the implausible assumption that *all* variation in outcomes that are not captured by county-level or quarter-year fixed effects are driven by the decision to legalize sports gambling. If the states, and therefore the counties within the states, that chose to legalize sports gambling were also the same states that suffered economically during the period analyzed – as research has shown to be the case for state lottery and casino legalization¹⁵ – then HLP wrongly attribute the adverse macroeconomic effects endured by the states to sports betting legalization. It is likely that the HLP results suffer from bias. Given the immense impacts of COVID-19 and a U.S. presidential change, it is difficult to imagine there were

¹⁵ For examples, see Alm et al. (1993), Jackson et al. (1994), and Calcagno et al. (2010).

HOW BAD SPORTS BETTING RESEARCH CAN LEAD TO BAD SPORTS BETTING REGULATIONS

no shocks to economic activity that were non-randomly distributed to U.S. states and counties.

This impact may be exacerbated by the cutoff point in the data. The authors consider the period after legalization and alleged impacts on credit scores, stating, “after about four years, the average credit score declines by about 0.3%” (p. 11). However, due to short period of study and dearth of states legalizing sports gambling, there are only seven states for which four full years of post-legalization data are available. Effectively, the authors are only comparing household financial outcomes between the seven states that legalized very early on against the 17 control states that did not legalize sports gambling during the data collection period.¹⁶ From 2016 to 2023, the state-average median real income (in 2023 dollars) rose from \$68,119 to \$73,723 (\$5,604 increase or 8.2%) in the seven early adopting states. In the 17 control states that did not legalize, the state-average median real income increased from \$72,925 to \$80,119 (\$7,194 increase or 9.9%).¹⁷ Thus, relative to states that did not legalize sports gambling, incomes have increased \$1,590 *less* in the first seven states to legalize.¹⁸ Raw data from the Baker et al. working paper show that the average household deposits an additional \$100/year after legalization (p. 2).¹⁹ Thus, the HLP analysis ignores changes in income and attributes all adverse financial outcomes on the additional \$100/year in gambling account deposits by the average household.²⁰ Unless HLP can show legalization is *causing* reduced income growth in states with legal sports gambling,²¹ per capita real income and *many* other macroeconomic variables should be included in their models as exogenous shocks that impact financial

¹⁶ The seven early adopting states were Delaware, Mississippi, New Jersey, New Mexico, Pennsylvania, Rhode Island, and West Virginia. Furthermore, because these seven states all legalized sports gambling in 2019, the four-year point of data reference occurs in 2023. Thus, many key purported findings in the paper are based on the financial performance of individuals in just these seven states and only in 2023.

¹⁷ The state-average median real income data are from the Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/>.

¹⁸ These seven states are the only states that receive the treatment (legalized sports gambling) for the entire sample period. States like Massachusetts and Ohio – the two states that legalized latest within the sample period – are only included in the post-legalization analysis for two quarters, a time duration that shows little to no effects in the HLP study.

¹⁹ Although it might seem hypocritical to cite a working paper in a paper criticizing working papers, we are specifically citing raw data, not a research finding.

²⁰ Keep in mind that this value is at the household-level. Thusly, this figure represents the upper-bound for individual spending given that households could have more than one gambler.

²¹ We view this as unlikely, since previous research has found that the introduction of a new industry – such as casinos – has a positive impact on county-level employment (Cotti, 2008) and state-level per capita income (Walker and Jackson, 1998).

outcomes. Without these necessary controls, the HLP results are spurious and should be ignored.

Nevertheless, the authors appear to have some appreciation for concerns about confounding variables. One method for addressing this concern is to analyze the data trends prior to legalization. Indeed, the authors show that prior to the legalization decision, there appears to be no difference between states with illegal gambling and those that eventually legalize. However, these pre-trends are tested for the entire sample, while the key results are necessarily (due to a short time period studied) focused on a subset of states. As noted above, the period four years after legalization only allows for a comparison of the seven states that legalized in 2019 and the 17 states that never legalized. The authors should validate pre-trends between these two groups. This is a necessary, but far from sufficient, change needed in their analysis.

The authors take a second measure to guard against the possibility of confounding factors in the appendix. They write, “Of particular concern would be if states that choose to legalize sports betting to generate revenue do so because they have budgetary problems and, consequently, when economic shocks such as the COVID pandemic arise, are less able to provide social assistance” (p. 25). This is certainly a useful and worthwhile exercise. However, these methods are not sufficient as they focus narrowly on specific phenomena that, while plausible, are far from exhaustive.

It is critical to understand that HLP do not have any data regarding the frequency and magnitude of gambling within the dataset. Rather, the authors are estimating the impacts of legalization on household finances across all individuals in their dataset, many of whom do not gamble, regardless of its legal status.²² Raw data from the Baker et al. working paper indicates that only 13.9% of households engage in sports gambling (p. 19). Overall, the HLP paper claims that credit scores fell about 0.3%, or 7 points per individual because of sports gambling legalization. Assuming their estimated adverse legalization effects are only realized by the 13.9% of individuals that engage in sports betting, HLP’s findings suggest that the average gambler’s credit score drops by 50 points four years after legalization. If verified, this would be a meaningful result. However, we believe these purported effects are most likely a direct result of omitted variable bias.

In short, the HLP study attributes negative financial outcomes to sports betting legalization when the results are due, at least in part, to their failure to include shocks (such as COVID-19 and a new presidential administration) and adequate state-level macroeconomic control variables (such as real per capita income) in their model. As a result, the HLP results should be viewed with skepticism.

²² This is well understood and documented by the authors.

MISUSE OF SPORTS BETTING RESEARCH

When academic work relates to a new, important, or controversial public policy issue such as legal sports betting, papers can attract significant attention. This has been the case with the three papers we reviewed in the previous section, which were originally posted on the Social Science Research Network (SSRN) during 2024.²³ Unfortunately, these are *working papers* that have not completed the peer review process that academic journals require before publication.²⁴ Dozens of media outlets have quoted these three flawed and unpublished working papers, which were written by authors that ignored *published* work that offers different approaches or conclusions on sports betting.

For example, published studies have found that customer demographics and degree of gambling engagement matter more than legalization in explaining harms associated with problematic sports betting (Etuk et al., 2022; Garzola, 2024; Grubbs and Kraus, 2023; Valenciano-Mendoza et al., 2023; Xu et al., 2025). Couture et al. (2024) found that sports betting can have a positive impact on the mental health of 18–23 year olds, and Humphreys et al. (2021) found that recreational gambling can have a positive impact on life satisfaction, help reduce stress, and help reduce the likelihood of getting a stress-related chronic disease. They suggest that “...recreational gambling can be thought of as ‘healthy gambling’” (p. 45). It is difficult to find these papers being cited in media debate over legal sports betting.

Published studies have found that expanded legal sports betting complements other sectors in the gambling industry (Philander et al., 2015). Betting data can be used to analyze potential cases of “match fixing,” in which an athlete adjusts playing style in a conspired attempt to create predictable gambling outcomes in sporting contests (Forrest, 2024; McHale, 2024). And with the relationships being developed among sports betting providers, technology firms, professional sports leagues, and network television,²⁵ there

²³ Researchers commonly post working papers on research cites such as the Social Science Research Network (SSRN) and Research Papers in Economics (RePEc). By posting working papers publicly, researchers can get valuable feedback from other researchers. See <https://www.ssrn.com/index.cfm/en/> and <http://repec.org/>.

²⁴ Typically, social science research undergoes a peer-review process in which the journal’s editor and two or three other experts in the field assess the paper. The referees analyze the working paper’s methodology, empirical work, and conclusions, and offer suggestions for improving the paper. Referees may ask for minor or major revisions, or they may recommend outright rejection. If the editor does request a revised draft (a “revise and resubmit”), the author is expected to address all the editor’s and referees’ concerns and explain how the manuscript has been changed. The resulting paper and its findings may be dramatically different than the original working paper. Only after this peer-review process is the paper accepted for publication in the journal.

²⁵ Lopez-Gonzalez and Griffiths (2018) provide an interesting discussion of the “convergence” of online sports betting with different markets.

are a large variety of potential economic benefits from legal sports betting that go beyond the tax revenue benefits that are prioritized by policymakers.²⁶

While these benefits need not be evaluated in every manuscript on sports betting, they are important and should be acknowledged in the more general public debate. *Unpublished* academic research being prioritized over *published* research in public and policy debates underscores the importance of scrutinizing such work as early as possible in the publication process. In this section we discuss how over-reliance on unpublished, flawed research and ignoring the gambling studies literature can lead to misinformation, unproductive and inappropriate media coverage, and potentially misguided government regulation.²⁷ We begin in section (A), focusing on recent popular articles on sports betting.

(A) UNPUBLISHED RESEARCH CITED IN THE POPULAR PRESS

One of the earliest citations of the three working papers can be found in an opinion piece by C. Lehman in the September 2024 issue of *The Atlantic* magazine, titled, “Legalizing sports gambling was a huge mistake. The evidence is convincing: the betting industry is ruining lives” (Lehman, 2024). Based largely on references made to the working papers, Lehman boldly concludes,

The rise of sports gambling has caused a wave of financial and familial misery, one that falls disproportionately on the most economically precarious households. Six years into the experiment, the evidence is convincing: Legalized sports gambling was a huge mistake.

This is a strong (and unreasonable) conclusion to draw from *working papers*, particularly since Lehman ignores studies offering different conclusions. Nevertheless, Lehman goes on to recommend a federal ban on sports betting.

²⁶ We were unable to find any studies in academic journals, but a report from Massachusetts finds a “slightly positive” net effect from legal sports betting, though most of the measured benefits were due to tax revenues. However, the study ignores the benefits from consumers switching their expenditures from one type of gambling to another, and the study did not consider potential negative social impacts from sports betting (Peake et al., 2025). However, previous research on the socioeconomic impacts of legalized casinos suggests that the net effect is positive (Walker, 2013).

²⁷ Petrotta (2025) is an interesting analysis of how sports betting framing matters. He argues that policymakers “used access to newspaper reporting to assert tremendous influence over policy by shifting the narrative from prohibition to promotion of legalized sports betting” (p. 374).

HOW BAD SPORTS BETTING RESEARCH CAN LEAD TO BAD SPORTS BETTING REGULATIONS

Lehman, like many members of the media, seems to be particularly enamored with the purported conclusions of MA. Lehman writes that MA “estimate that legal sports betting leads to a roughly 9 percent increase in intimate-partner violence.” He continues, “Because of the studies’ design, these results reveal what sports gambling *causes*, not merely what it correlates with.” Yet, MA do not find this alleged evidence; they also chose not to explore their results that could have shone positive light on sports betting legalization. The Minnesota Alliance on Problem Gambling, which is partially funded by state tax dollars and gambling related entities like DraftKings and the Minnesota Lottery, echoes this incorrect conclusion, writing, MA “estimated that sports betting legalization increased incidents of intimate partner violence by around 9%” (Minnesota Alliance on Problem Gambling, 2025).

These are not isolated events; many media outlets have incorrectly taken the MA working paper as clear evidence that legalization of sports gambling *causes* an overall increase in IPV. In another glaring misuse of the MA paper, a Minnesota Reformer journalist (incorrectly) extrapolates, “If Minnesota legalizes sports betting, and the state follows the same 10% increase in IPV detected elsewhere, that’s another 5,300 Minnesotans who’ll be harmed (Drafts-Johnson, 2025).

Four months after Lehman’s article in *The Atlantic*, *Time* magazine published an article in January 2025 about Richard Daynard, a lawyer who worked on the landmark tobacco lawsuits during the 1980s and 90s and is now plotting similar legal action against the sports betting industry (Gregory, 2025). Gregory cites the same three articles as Lehman as his evidence that sports betting in the United States has caused serious socioeconomic harms. For example, he writes, “Emerging research suggests that sports betting depletes investment accounts of already financially vulnerable households, increases bankruptcy risk, and even contributes to upticks in intimate-partner violence.” The same three papers were again the major evidence cited in a newly published book titled, *Losing big: America’s reckless bet on sports gambling* (Cohen, 2025, pp. 17–18), which is favorably reviewed in the *Wall Street Journal* (Swaim, 2025). When faulty or unproven results are widely disseminated, there is a risk that these alleged findings will be treated as facts.

(B) HOW A SPECIFIC ERROR CAN BECOME COLLECTIVE KNOWLEDGE

To better understand the potential damage that can result from erroneous research claims, consider an example from Baker et al. (2024). The authors present important raw data regarding the magnitude of gambling for typical U.S. households. However, there are discrepancies in their reporting. On page 3, they write, “Conditional on ever placing a bet after a state legalizes online sports betting, households deposit on average \$180 per quarter.” Later, they report a different figure: “On average, bettors deposit about \$102 per quarter”

(p. 12). They also state that all households (*not* conditional on ever making a bet) deposit \$25 per quarter more after legalization (p. 3). If only 7.7% of households gamble (p. 12), then a \$100 overall annual increase in average household gambling necessitates that gambling households deposit almost \$1,300 more per quarter.²⁸ Thus, there are three different answers to the important question: “How much do households deposit to sports gambling websites?”

Amazingly, the working paper from HLP cites this working paper from Baker et al, quoting a *fourth* figure. Referencing Baker et al, HLP write, “In their sample of 230,000 households, they find that about 8% use sports betting apps, and that conditional on doing so, lose an average of \$1,100 per year” (p. 7). This \$1,100 value does not align with any of the three previously mentioned figures within Baker et al.²⁹ This (presumably) erroneous \$1,100 figure is then stated in various online articles from outlets like Kellogg Insight, Fortune, Yahoo! Finance, and *many* more.³⁰ Additionally, these articles, along with HLP mistake key terminology. In one case it was reported that \$1,100 was *bet* (not *deposited*) by the average household household (Rogelberg, 2024). HLP incorrectly report that this figure indicates *losses*, which effectively overstates an already exaggerated figure.

One possible explanation for the latter series of errors is that an early version of the Baker et al. working paper was picked up by Hollenbeck et al. and various news outlets prior to a significant revision by Baker et al. But, if this is indeed the case, these revisions did not result in changes to the online news articles.

(C) THE POTENTIAL EFFECT OF UNPUBLISHED RESEARCH ON PUBLIC POLICY

The ubiquity of the Baker et al., HLP, and MA working papers has led to their results being used in policy debates. For example, in late 2024, John Marty, Chair of the Minnesota Senate Committee on Finance, along with fellow senators Erin Maye Quade and Scott Dibble, issued the following written statement:

As the Legislature has considered legalizing sports gambling in Minnesota, virtually all the discussion has been focused on the benefits to those who

²⁸ If 92.3% of households deposit \$0, then the remaining 7.7% of households must deposit \$1,298.70 for the average overall household-level deposits to equal \$25 per quarter.

²⁹ The Baker et al. and Hollenbeck et al. paper cite each other’s work; thus, Baker et al. cite a paper that mis-cites their own paper!

³⁰ Here are links to just a few articles citing the erroneous \$1,100 claim: <https://insight.kellogg.northwestern.edu/article/online-sports-betting-is-draining-household-savings>, <https://commonwealthbeacon.org/by-the-numbers/sports-betting-is-soaking-financially-constrained-households/>, <https://www.investopedia.com/americans-sports-betting-losing-8768618>, <https://fortune.com/2024/08/27/sports-betting-gambling-investment-stock-bankruptcy-gen-z-men/>; all accessed 15 Aug. 2025.

HOW BAD SPORTS BETTING RESEARCH CAN LEAD TO BAD SPORTS BETTING REGULATIONS

would profit from bookmaking. Unfortunately, there has been little to no discussion of the health impacts or the economic harm from that legalization. The addictive nature of online sports betting is already well-documented, with known links to financial hardship, mental health struggles and suicide. Now, this study on domestic violence and sports betting shows that after losses in certain sporting events, there is a 10 percent increase in intimate partner violence in states that legalized sports betting compared to those that have not. Legislative debate over sports betting must include a recognition that this legislation will make the horrific problem of family violence even more common... We must prioritize the health and safety of Minnesotans over the profits of a predatory industry (Senate DFL Media, 2024).

As we have explained previously, the MA paper provides evidence suggesting that there is an overall *decrease* in IPV rates after sports gambling legalization. Regardless, the MA framing appeals to anti-gambling lawmakers.

While the MA work is often emphasized, the working papers have served as key evidence for Minnesota policymakers. In fact, authors from all three papers presented their research findings before the Minnesota Senate Finance Committee in January 2025 (Minnesota Senate, 2025). Before these academics took the (virtual) stage, Les Bernal, National Director of *Stop Predatory Gambling*, made a presentation to the committee. His discussion was decidedly biased (anti-gambling), and unscientific, as Figures 2 and 3, from Bernal's presentation demonstrate. As the Committee's discussion of legalizing sports betting continues, perhaps different views will be heard.

While Baker and Hollenbeck's presentations closely matched the reported findings in their working papers, Arnesen's did not. During her presentation, Arneson reported that legalization led to "approximately 16 to 31 additional instances of IPV during the 2022 season" at the national level (Committee on Finance, 2025, at 1:06.45). It is unclear how Arnesen, whose paper did not investigate the overall impact of legalized sports gambling on IPV, arrived at such numbers.

The Baker et al. and HLP papers have even reached the federal government platform. Both are referenced in a research summary provided by the Congressional Research Service (Schneider, 2024), a fully taxpayer funded entity that serves Congress "...by providing comprehensive and reliable legislative research and analysis that are timely, objective, authoritative, and confidential, thereby contributing to an informed national legislature."³¹ As the only two academic manuscripts cited in the Congressional Research Service report, it is plausible that these two working papers will be used to shape future policy for the nation.

³¹ See <https://www.congress.gov/crs-products>, accessed 3 Sept. 2025.

WHAT PREDATORY GAMBLING IS



Predatory gambling is when powerful corporate gambling interests partner with state governments to use commercialized gambling to exploit and defraud citizens and their communities. When gambling is being run as a business, it creates a predatory and adversarial relationship between the gambling operator and the gambler. They are trying to take you down!

Figure 2. Presentation slide from Les Bernal, *Stop Predatory Gambling*
Source: Committee on Finance (2025), at 5:32.

Why Predatory Gambling Is “The Big Con” A Known Dangerous and Addictive Product + a Fraudulent and Manipulative Financial Scheme



Figure 3. Presentation slide from Les Bernal, *Stop Predatory Gambling*
Source: Committee on Finance (2025), at 6:23.

DÉJÀ VU: THE SOCIAL COSTS OF BAD RESEARCH

When flawed or biased research gains undue legitimacy, the result can be detrimental to gamblers and other citizens, the gambling studies field, and the gambling industry. Although it is possible that the problems discussed in

HOW BAD SPORTS BETTING RESEARCH CAN LEAD TO BAD SPORTS
BETTING REGULATIONS

section 2 will be corrected as the papers make their way through the peer review process, we are not optimistic. Our pessimism is perhaps a result of past examples from the gambling studies field.

During the 1990s, as casinos were permitted to open in states that had previously outlawed gambling, there was immense academic and political debate over (i) the prevalence, diagnosis, and treatment of pathological gambling (now called “gambling disorder”),³² and (ii) the socioeconomic effects of legalized casinos. Indeed, these two areas comprised much of the gambling research at the time. By the turn of the century, it was apparent that there were fundamental problems hindering quality research and the understanding and evaluation of problematic gambling behaviors.³³ Shaffer (1997) highlighted these problems, explaining how pathological gambling and addiction science was in a state of “conceptual chaos.” Similarly, Walker and Barnett (1999) argued that the 1990s “social cost of gambling” research was in such disarray because researchers used *ad hoc* methodologies for classifying and measuring “social costs.”

Some of the public claims of the time were downright ludicrous. In a 1994 hearing of the U.S. House of Representatives Small Business Committee hearing, Rep. John LaFalce claimed, “the American Insurance Institute estimates as much as 40% of all white collar crime is committed by individuals who have serious gambling problems” (Kelly, 1995). Sen. Paul Simon repeated the same statistic in the *Congressional Record* in both 1994 and 1995. Kelly (1997) explains how this statistic had been repeatedly cited in newspaper and magazine articles, research reports, by various state and federal politicians, and in testimony before the U.S. House Judiciary and House Resource Committees. Yet, as Kelly explains, the 40% white collar crime was a hoax; there is no “American Insurance Institute.” It is indeed amazing how this made-up statistic became part of the “collective knowledge.”

More damaging to the gambling research field and policy, however, was the misapplication of economics concepts in social cost studies, which resulted in wildly high estimates of the social costs of gambling during the 1990s. We list four key examples:

³² The terminology used has changed over time. “Pathological gambling” first appeared in the *Diagnostic and Statistical Manual* in 1980 (American Psychiatric Association, 1980). Other common terms in the past literature are “problem gambling,” “gambling addiction” and “compulsive gambling.” In 2013, the *American Psychiatric Association* renamed it “gambling disorder,” in part to reduce the stigma to those affected (American Psychiatric Association, 2022). We use “gambling disorder” and “pathological gambling” interchangeably because we refer to both recent and older research.

³³ By the late 1990s and early 2000s, several government studies were published on the relationships among legalized casino expansion, pathological gambling, and related social costs. For examples, see the Australian Productivity Commission (1999), Budd et al. (2001), National Gambling Impact Study Commission (1999), National Opinion Research Center (1999), and National Research Council (1999), and Zorn (1998).

- Failure to understand or acknowledge the critical distinction between pecuniary and technological externalities, and including private wealth transfers in measures of “social cost.”³⁴
- Claiming that gambling may be considered “directly unproductive profit-seeking” (DUP) or socially wasteful activity,³⁵ despite its popularity among the public.
- Assuming away “consumer’s surplus,” a measure of the benefits a consumer receives in excess of the price they pay for it, thereby underestimating the potential benefits from legal casino gambling.³⁶
- Adoption of “abused dollars” as a category of social cost, despite it including *any money bet* as a potential social cost of gambling.³⁷

Despite several conference debates and published critiques of these problematic issues, anti-gambling advocates ignored them in an apparent effort to stifle the spread of legal casinos.

In other academic work (published in law journals), it has been claimed that legalized gambling destabilizes the economy and even creates a *national security risk* in the United States (Kindt, 1995; Kindt and Brynn, 2005). More recently, the same author claimed that banning sports betting and lotteries would have “pump-primed” the U.S. economy during its COVID-19 slump (Kindt, 2021).

In 2024, Kindt published a two-page article within a booklet published by the *Georgia Baptist Mission Board*, which discusses the potential ill-effects the state of Georgia would experience if it legalized casino gambling. In his article, Kindt makes dozens of unsubstantiated and ridiculous claims (Kindt, 2024). For example, he states that the following outcomes should be expected if Georgia legalizes casinos and online gambling:

- “Within 50 miles of gambling facilities, crime increases 9% every year” (p. 50).
- “Every casino averages about 700–1,000 video gambling machines (VGMs). Each gambling machine cannibalizes approximately \$45,000 per year out of the consumer economy which results in \$150,000 in ‘lost consumer spending’ or one lost job in the consumer economy per year per video gambling machine” (p. 50).

³⁴ An introductory discussion to the distinction is provided by Baumol and Oates (1988). Examples of problematic application of “externalities” include Grinols and Omorov (1996) and Grinols and Mustard (2001a, 2001b).

³⁵ See Bhagwati et al. (1984). DUP activities are akin to “rent seeking.” Misapplications of DUP activities include Grinols and Mustard (2000) and Grinols and Omorov (1996).

³⁶ See Grinols and Omorov (1996), Grinols and Mustard (2001a), and Grinols (2004).

³⁷ The term was coined by Politzer et al. (1981), and adopted despite it being an obviously flawed concept. For example, see Grinols and Mustard (2001a) and Grinols (2004).

HOW BAD SPORTS BETTING RESEARCH CAN LEAD TO BAD SPORTS BETTING REGULATIONS

- “Georgia’s current prostitution problems could be expected to increase by 35% to 75%” (p. 51).
- “People would rather gamble than feed their children” (p. 52).

Despite having an obvious anti-gambling bias and numerous published criticism of his flawed work, Kindt still repeats many of his discredited claims from the 1990s.

In a 2001 editorial piece, titled, “Considering the ethics of public claims: an appeal for scientific maturity,” Howard Shaffer and colleagues summarized the state of gambling research at the time. They wrote,

Compared with the more mature scientific areas of inquiry, the study of gambling related phenomena is a relatively young field. Consequently, scientists and clinicians have countless opportunities to develop new areas of research and treatment approaches. Immature fields like gambling studies also provide the opportunities for quasi-scientists, and even charlatans to influence the public, policy makers, and perhaps themselves to thinking that their “evidence” supports a particular treatment, causal relationship, or public policy. On occasion, opinion has been passed on as scientific evidence. Unpublished evidence that has not been subject to peer review has been presented as definitive. Preliminary evidence has been summarized in public testimony or press releases without the necessary documentation, including methodological details that must be available for scrutiny. In each instance, this public behavior violates professional standards of conduct and tarnishes the work of legitimate scientists. It is time for gambling studies to be held to the standards of the more mature physical and social sciences. (Shaffer et al., 2001, pp. 1–4).

While we certainly do not label the authors of the key sports betting working papers as “quasi-scientists” or “charlatans,” there are startling parallels with problematic gambling research in the 1990s and sports betting research today. The authors of the three key working papers highlighted in section 2 purport “causal relationships,” despite clear design flaws. Their work has been “summarized in public testimony,” and their work is influential even though it “has not been subject to peer review.”

DISCUSSION AND CONCLUSION

The biased and flawed gambling research discussed in section 4 was propagated by a small group of academics. Nevertheless, a few researchers managed to steer the gambling research community off course during the 1990s. Despite their assumptions, methodologies, and conclusions being repeatedly challenged in the literature, these authors simply ignored sincere research efforts made by

social scientists in the gambling studies field. As Eadington (2004, p. 194) explained, a small group of anti-gambling researchers

...are trying to establish an “alternative reality” of the economic and social consequences of gambling, by getting their questionably valid research published in a number of respected outlets, and then continue to cite one another’s articles until the “alternative reality” becomes accepted.

Eadington was referring to Grinols, Kindt, and others who generally do not present their work at gambling conferences, do not publish in the field journals, and do not acknowledge research that disagrees with their own anti-gambling views. Such authors might be described as what Paul Krugman calls “policy entrepreneurs” (Krugman, 1996, p. 11), or researchers whose purpose is to affect policy by offering “unambiguous diagnoses even when the evidence is uncertain.”

When gambling research ignores the relevant literature, it raises a red flag. None of the three papers we reviewed in section 2 acknowledge relevant, previous papers that should inform their analyses; nor do they explain how their work relates to the existing knowledge in the field. Collectively, these three papers include 10 Ph.D. authors in economics or finance, all at reputable institutions. However, their expertise is not in gambling research. Among the ten authors of the three papers, we find *zero* publications about gambling, casinos, fantasy sports, etc.³⁸ Nonetheless, their *unpublished* research papers have the potential to shape public policy and shift the research scope in this nascent sub-field.

While we focus primarily on these three specific working papers, there are other troubling working papers circulating on the sports betting industry. For example, in their examination of potential negative impacts of legalized sports betting, Taylor et al. (2025) coin the term “irresponsible gambling” to refer to “monthly gambling expenditures exceeding 1% of income” (p. 2). Although they cite research that supports a 1% spending threshold for concern (Hodgins et al., 2022), it is unclear why these authors introduce new, pejorative terminology to the literature after so much effort has been made to eliminate it (Blaszczynski et al., 2020; Hing et al., 2016; Petry et al., 2014).³⁹ Like the three working papers, Taylor et al. has received media attention; it was also presented at a conference organized by the Federal Trade Commission.⁴⁰

³⁸ This is based on a search at <http://scholar.google.com>, accessed 20 Aug. 2025.

³⁹ The terms “pathological gambling” and “gambling disorder” are fundamentally different from “irresponsible,” which suggests a character flaw. Taylor et al. (p. 2) explain they do not intend the term “irresponsible” to imply moral failing, but as noted above, the terminology used in the literature is carefully chosen.

⁴⁰ For example, the Taylor et al. paper is discussed at [Bloomberg.com](https://www.bloomberg.com/news/articles/2024-09-27/sports-betting-apps-are-even-more-toxic-than-you-imagined); see <https://www.bloomberg.com/news/articles/2024-09-27/sports-betting-apps-are-even-more-toxic-than-you-imagined>. The FTC conference page is at <https://www.ftc.gov/about->

HOW BAD SPORTS BETTING RESEARCH CAN LEAD TO BAD SPORTS BETTING REGULATIONS

As with the works of Matsuzawa and Arnesen, Baker et al., and Hollenbeck et al., Taylor et al.'s working paper appears to be a genuine attempt to answer important questions related to the potential social costs of sports gambling legalization. However, these manuscripts contain serious analytical flaws that result in unsupported conclusions.

During the 1990s, low quality and biased gambling research was disrupting the gambling research field, just as state legislators were making crucial decisions regarding the fate of casino gambling. Today, policymakers are again turning to gambling research as they weigh the benefits and costs of sports gambling legalization. We fear that the articles currently highlighted by the media may mislead the politicians, resulting in misguided and ineffective legislation.

Recently, the Editor-in-Chief of the *Journal of Gambling Studies* urged researchers to “strive for evidence to help formulate the most critical questions and prioritize them to best understand sports gambling and its associated harms” (Whelan et al., 2024, p. 2028). Indeed, *valid* research indicating adverse impacts of legalization deserves a wide audience. The working papers discussed in this paper are critically flawed and should not be the key evidence informing policy.

ACKNOWLEDGEMENT

Funding for this study was provided by Quackenbos FTW, which suggested the topic, but otherwise had no input to our research. We are responsible for any errors.

REFERENCES

- Alm, J. M., McKee, M., and Skidmore, M. (1993). Fiscal pressure, tax competition, and the introduction of state lotteries. *National Tax Journal*, 46, 463–476.
- American Gaming Association. (2018). *State of the States 2018: The AGA Survey of the Commercial Casino Industry*. Author.
- American Gaming Association. (2025a). *Sizing the illegal and unregulated gaming markets in the United States*. Author.
- American Gaming Association. (2025b). *State of the States 2025: The AGA Survey of the Commercial Casino Industry*. Author.
- American Psychiatric Association. (1980). *Diagnostic and statistical manual of mental disorders, 3e*. Author.

ftc/bureaus-offices/bureau-economics/call-for-papers-conference-on-marketing-public-policy; the conference program is at https://www.ftc.gov/system/files/ftc_gov/pdf/bios-ftc-conference-marketing-public-policy.pdf. All accessed 10 Sept 2025.

- American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders, 5e*. Author.
- Australian Productivity Commission. (1999). *Australia's Gambling Industries* <http://www.pc.gov.au/inquiries/completed/gambling/report>
- Baker, S. R., Balthrop, J., Johnson, M. J., Kotter, J., and Pisciotta, K. (2024). *Gambling Away Stability: Sports Betting's Impact on Vulnerable Households*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4881086
- Baumol, W. J., and Oates, W. E. (1988). *The Theory of Environmental Policy* (2 ed.). Cambridge University Press.
- Bhagwati, J. N., Brecher, R. A., and Srinivasan, T. N. (1984). DUP activities and economic theory. *European Economic Review*, 24, 291–307.
- Blaszczynski, A., Swanton, T. B., and Gainsbury, S. M. (2020). Avoiding use of stigmatising descriptors in gambling studies. *International Gambling Studies*, 20(3), 369–372. <https://doi.org/10.1080/14459795.2020.1808774>
- Budd, A., Bishop, D., and Bose, M., et al. (2001). *Gambling Review Report*.
- Calcagno, P. T., Walker, D. M., and Jackson, J. D. (2010). Determinants of the probability and timing of commercial casino legalization in the United States. *Public Choice*, 142, 69–90.
- Card, D., and Dahl, G. B. (2011). Family violence and football: The effect of unexpected emotional cues on violent behavior. *The Quarterly Journal of Economics*, 126(1), 103–143. <https://doi.org/10.1093/qje/qjr001>
- Cohen, J. (2025). Losing big: America's reckless bet on sports gambling. Columbia Global Reports.
- Committee on Finance. (2025). *Informational Hearing on the Economic, Health, and Social Harms Resulting From Online Sports Betting* St. Paul, MN, Minnesota Senate. <https://mnsenate.granicus.com/player/clip/12662>
- Cotti, C. D. (2008). The effect of casinos on local labor markets: A county level analysis. *Journal of Gambling Business and Economics*, 2(2), 17–41.
- Couture, C., Cross, J., and Wu, S. (2024). Impact of sports gambling on mental health. *Economics Letters*, 243, 1–6, Article 111922. <https://doi.org/https://doi.org/10.1016/j.econlet.2024.111922>
- DraftKings. (2025). *DraftKings Reports Fourth Quarter and Fiscal Year 2024 Results*.
- Drafts-Johnson, L. (2025). Minnesota legislators: With more sports gambling, expect more domestic violence. *Minnesota Reformer* (20 Feb.), <https://minnesotareformer.com/2025/02/20/minnesota-legislators-with-more-sports-gambling-expect-more-domestic-violence/>, accessed 22 July 2025.
- Eadington, W. R. (2004). Comment on Kindt's paper. *Managerial and Decision Economics*, 25, 191–196.
- Etuk, R., Xu, T., and Abarbanel, B., et al. (2022). Sports betting around the world: a systematic review. *Journal of Behavioral Addictions*, 11(3), 689–715.

HOW BAD SPORTS BETTING RESEARCH CAN LEAD TO BAD SPORTS
BETTING REGULATIONS

- Forrest, D. (2024). Match-fixing. In M. Breuer and D. Forrest (Eds.), *The Palgrave Handbook on the Economics of Manipulation in Sport* (pp. 85–112). Springer Nature.
- Garcia, K. S. D., and Cowan, B. W. (2022). *The Impact of U.S. School Closures on Labor Market Outcomes During the COVID-19 Pandemic* (29641). NBER Working Papers. <https://www.nber.org/papers/w29641>
- Garzola, G. C. Q. (2024). The relevance of marketing in sports betting perceptions and behaviors across different age groups. *Journal of Gambling Studies*, 40(3), 1171–1188. <https://doi.org/10.1007/s10899-024-10295-6>
- Gregory, S. (2025). The man who took on big tobacco has a new target: sports betting. *Time* (27 Jan.), <https://time.com/7209769/sports-betting-gambling-addiction-richard-daynard-lawsuit/>, accessed on 10 July 2025.
- Grinols, E. L. (2004). *Gambling in America: Costs and benefits*. Cambridge University Press.
- Grinols, E. L., and Mustard, D. B. (2000). Correspondence: Casino gambling. *Journal of Economic Perspectives*, 14, 223–225.
- Grinols, E. L., and Mustard, D. B. (2001a). Business profitability versus social profitability: Evaluating industries with externalities, the case of casinos. *Managerial and Decision Economics*, 22, 143–162.
- Grinols, E. L., and Mustard, D. B. (2001b). Management and information issues for industries with externalities: The case of casino gambling. *Managerial and Decision Economics*, 21(1-3), 1–3.
- Grinols, E. L., and Omorov, J. D. (1996). Development or dreamfield delusions? Assessing casino gambling's costs and benefits. *Journal of Law and Commerce*, 16, 49–87.
- Grubbs, J. B., and Kraus, S. W. (2023). The relative risks of different forms of sports betting in a U.S. sample: A brief report. *Comprehensive Psychiatry*, 127, 152420. <https://doi.org/10.1016/j.comppsy.2023.152420>
- Heggeness, M. L. (2020). Estimating the immediate impact of the COVID-19 shock on parental attachment to the labor market and the double bind of mothers. *Review of Economics of the Household*, 18(4), 1053–1078. <https://doi.org/10.1007/s11150-020-09514-x>
- Hing, N., Nuske, E., Gainsbury, S. M., and Russell, A. M. T. (2016). Perceived stigma and self-stigma of problem gambling: perspectives of people with gambling problems. *International Gambling Studies*, 16(1), 31–48. <https://doi.org/10.1080/14459795.2015.1092566>
- Hodgins, D. C., Young, M. M., and Currie, S. R., et al. (2022). Lower-risk gambling limits: Linked analyses across eight countries. *International Gambling Studies*, 1–17. <https://doi.org/10.1080/14459795.2022.2143546>
- Hollenbeck, B., Larsen, P., and Proserpio, D. (2024). *The Financial Consequences of Legalized Sports Gambling*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4903302

- Humphreys, B. R., Nyman, J. A., and Ruseski, J. E. (2021). The effect of recreational gambling on health and well-being. *Eastern Economic Journal*, 47(1), 29–75. <https://doi.org/10.1057/s41302-020-00181-5>
- Jackson, J. D., Saurman, D. S., and Shughart, W. F. (1994). Instant winners: Legal change in transition and the diffusion of state lotteries. *Public Choice*, 80, 245–263.
- Kelly, J. (1995). New light on old casino ghosts. *International gaming and wagering business* (1 May), 24–25.
- Kelly, J. M. (1997). The American Insurance Institute, like THAT bunny, keeps going and going and going. *Gaming Law Review*, 1(2), 209–212. <https://doi.org/10.1089/glr.1997.1.209>
- Kindt, J. W. (1995). U.S. national security and the strategic economic base: The business/economic impacts of the legalization of gambling activities. *Saint Louis University Law Journal*, 39, 567–584.
- Kindt, J. W. (2021). Bans on sports gambling and lotteries would pump-prime the U.S. economic system in the new age of COVID. *University of Illinois Law Review*, 2021(5), 1771–1794.
- Kindt, J. W. (2024). Economic, business, and legal studies at Emory, Mercer, U.Ga. and U.S. universities conclude: Georgia casinos and online gambling would increase gamblings' [sic] ABCS: Addictions, bankruptcies, sex-trafficking and suicides. *Resource booklet*, 2023–2024, 50–51.
- Kindt, J. W., and Brynn, A. (2005). *Destructive Economic Policies in the Age of Terrorism: Government-Sanctioned Gambling as Encouraging Transboundary Economic Raiding and Destabilizing National and International Economies*. University of Illinois.
- Krugman, P. R. (1996). *Pop Internationalism*. MIT Press.
- Lehman, C. (2024). Legalizing sports gambling was a huge mistake. The evidence is convincing: the betting industry is ruining lives. *The Atlantic* (23 Sept.). <https://www.theatlantic.com/ideas/archive/2024/09/legal-sports-gambling-was-mistake/679925/>, accessed on 15 June 2025.
- Lopez-Gonzalez, H., and Griffiths, M. D. (2018). Understanding the convergence of markets in online sports betting. *International Review for the Sociology of Sport*, 53(7), 807–823.
- Matsuzawa, K., and Arnesen, E. (2024). *Sports Betting Legalization Amplifies Emotional Cues and Intimate Partner Violence*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4938642
- McHale, I. (2024). Analysing betting markets to detect potential cases of manipulation. In M. Breuer and D. Forrest (Eds.), *The Palgrave Handbook on the Economics of Manipulation in Sport* (2nd ed., pp. 179–189). Springer Nature.
- Minnesota Alliance on Problem Gambling. (2025). *Minnesota Senate Finance Hearing Highlights Socioeconomic Impacts of Online Sports Gambling*. Author.

HOW BAD SPORTS BETTING RESEARCH CAN LEAD TO BAD SPORTS
BETTING REGULATIONS

- Minnesota Senate (2025). Committee on Finance, Informational hearing on economic, health, and social harms resulting from online sports betting (18 Jan.). St. Paul, MN. <https://mnsenate.granicus.com/player/clip/12662>, accessed on 5 Aug. 2025.
- National Gambling Impact Study Commission. (1999). *Final Report*. Washington, DC: Author. Retrieved from <http://govinfo.library.unt.edu/ngisc/>
- National Indian Gaming Commission. (2025). *NIGC FY 2024 Gross Gaming Revenue Report*. Author. <http://www.nigc.gov/>
- National Opinion Research Center. (1999). *Gambling Impact and Behavior Study*.
- National Research Council. (1999). *Pathological Gambling*. National Academy Press.
- Patrick, S. W., Henkhaus, L. E., and Zickafoose, J. S., et al. (2020). Well-being of Parents and Children During the COVID-19 Pandemic: A National Survey. *Pediatrics*, 146(4). <https://doi.org/10.1542/peds.2020-016824>
- Peake, T., Loveland, R., and Breest, K., et al. (2025). *Sports Betting in Massachusetts: 2023 Economic Impacts Report*.
- Petrotta, B. A. (2025). From Prohibition to Promotion: Framing and Sourcing the Legalization of Sports Betting in the U.S. *Communication and Sport*, 13(3), 374–397. <https://doi.org/10.1177/21674795231193132>
- Petry, N. M., Blanco, C., and Auriacombe, M., et al. (2014). An Overview of and Rationale for Changes Proposed for Pathological Gambling in DSM-5. *Journal of Gambling Studies*, 30(2), 493–502. <https://doi.org/10.1007/s10899-013-9370-0>
- Philander, K. S., Abarbanel, B. L. L., and Repetti, T. (2015). Consumer spending in the gaming industry: evidence of complementary demand in casino and online venues. *International Gambling Studies*, 15(2), 256–272. <https://doi.org/10.1080/14459795.2015.1042002>
- Politzer, R. M., Morrow, J. S., and Leavey, S. B. (1981). *Report on the Societal Cost of Pathological Gambling and the Cost-Benefit Effectiveness of Treatment*. FIFTH INTERNATIONAL CONFERENCE ON GAMBLING AND RISK TAKING, Lake Tahoe, NV.
- Purdum, D. (2014). Governor signs NJ sports betting bill. ESPN.com (17 Oct.). https://www.espn.com/espn/chalk/story/_/id/11718151/governor-christie-signs-new-jersey-sports-betting-bill-law, accessed on 27 June 2025.
- Rogelberg, S. (2024). Americans are draining stock portfolios to shovel more money into sports betting. Yahoo! Finance (27 Aug.). <https://finance.yahoo.com/news/americans-draining-stock-portfolios-shovel-090000853.html>, accessed on 10 July 2025.
- Schneider, K. E. (2024). *Sports Gambling and Consumer Finance*. Congressional Research Service. <https://crsreports.congress.gov>

- Senate DFL Media (2024). Senators comment on study linking sports gambling to violence, abuse. St. Paul, MN (18 Nov.). <https://senatedfl.mn/senators-comment-on-study-linking-sports-gambling-to-violence-abuse/>, accessed on 5 Aug. 2025.
- Shaffer, H. J. (1997). The most important unresolved issue in the addictions: conceptual chaos. *Substance Use and Misuse*, 32(11), 1573–1580.
- Shaffer, H. J., Dickerson, M., and Derevensky, J., et al. (2001). Considering the ethics of public claims: An appeal for scientific maturity. *Journal of Gambling Studies*, 17(1), 1–4.
- Silver, A. (2014). Legalize and regulate sports betting. New York Times (14 Nov.), <https://www.nytimes.com/2014/11/14/opinion/nba-commissioner-adam-silver-legalize-sports-betting.html>, accessed on 10 May 2025.
- Swaim, B. (2025). “Losing big” review: gambling it all away. Wall Street Journal (12 May). <https://www.wsj.com/arts-culture/books/losing-big-review-gambling-it-all-away-c8167a4d>, accessed 31 May 2025.
- Taylor, W. J., McCarthy, D. M., and Wilbur, K. C. (2025). *The Effects of Sports Betting Legalization on Consumer Behavior, State Finances, and Public Health*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4856684
- Tversky, A., and Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science*, 211(4481), 453–458.
- Valenciano-Mendoza, E., Mora-Maltas, B., and Mestre-Bach, G., et al. (2023). Clinical Correlates of Sports Betting: A Systematic Review. *Journal of Gambling Studies*, 39(2), 579–624. <https://doi.org/10.1007/s10899-023-10196-0>
- Walker, D. M. (2013). *Casinonomics: The Socioeconomic Impacts of the Casino Industry*. Springer.
- Walker, D. M., and Barnett, A. H. (1999). The social costs of gambling: An economic perspective. *Journal of Gambling Studies*, 15(3), 181–212.
- Walker, D. M., and Jackson, J. D. (1998). New goods and economic growth: Evidence from legalized gambling. *Review of Regional Studies*, 28(2), 47–69.
- Whelan, J. P., Pfund, R. A., and Ginley, M. K. (2024). We might have a sports gambling problem and it is not what you think: A Commentary. *Journal of Gambling Studies*, 40(4), 2027–2030. <https://doi.org/10.1007/s10899-024-10315-5>
- Xu, T., Grubbs, J. B., and Kraus, S. W. (2025). Beyond sports betting legalization: Comparing problem gambling risk patterns in legal and illegal states. *Journal of Gambling Studies*. <https://doi.org/10.1007/s10899-025-10390-2>
- Zorn, K. (1998). The economic impact of pathological gambling: A review of the literature. *National Research Council*.