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Economic Assessment of Online Gambling in Great Britain

Prepared for the Campaign for Fairer Gambling

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Project Team

Soren Christian
Duncan Broadie

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In 2005, the Gambling Act allowed a broad array of commercial gambling operations in Great Britain and established the Gambling Commission to oversee and regulate them. Since then, Great Britain's gambling industry has grown, particularly online and particularly since 2014, when the Gambling Licencing and Advertising Act was updated to more directly incorporate online gambling in the British gambling landscape.

Annual online gross gambling yield (GGY) has grown from £4.2 billion in financial year 2015/16 to £6.5 billion in 2022/23 (April-March). At the same time, land-based gambling has declined from £5.4 billion to £4.5 billion.

We have been commissioned by the Campaign for Fairer Gambling to evaluate the effects of online gambling on the British economy, based on a model that captures the direct and indirect effects of money spent in online gambling. We find that the online gambling industry has been detrimental to the British economy, for several reasons:

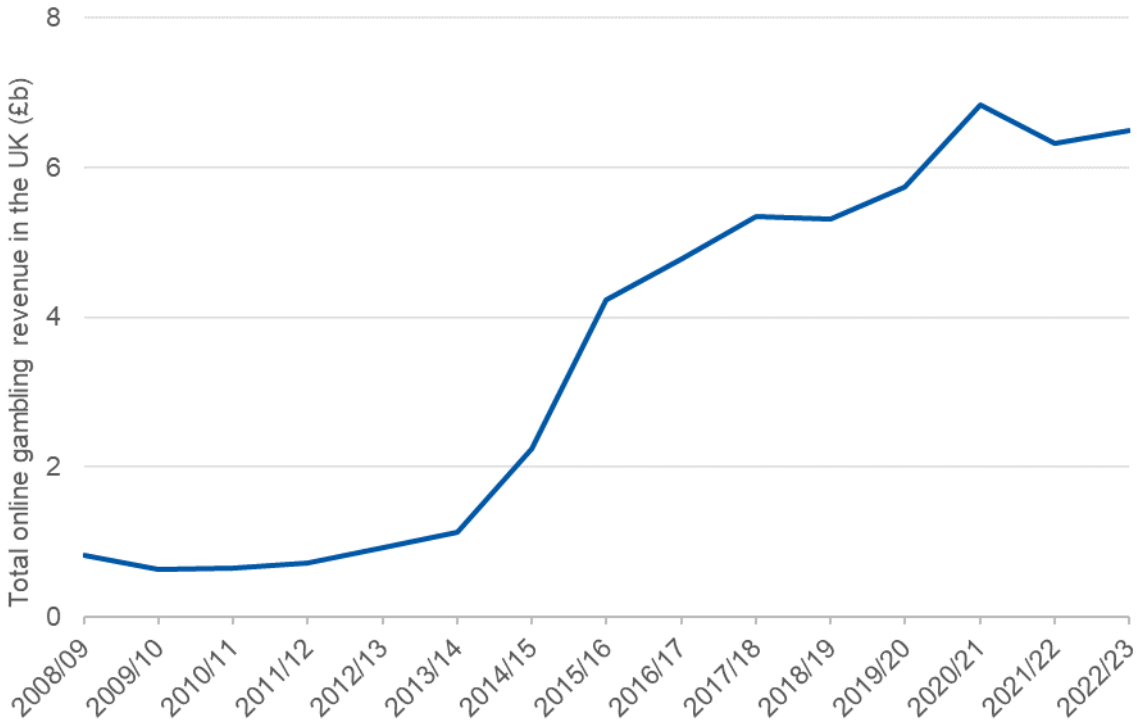
- Online gambling is a very high margin, low-cost activity for gambling operators, and few people are employed specifically in this industry. Other industries where would-be gamblers might spend their money instead ('discretionary alternatives') are much more labour-intensive than gambling. Therefore when customers spend money on these discretionary alternatives it creates more value in terms of overall economic activity, jobs created and wages paid out.
- Online gambling provides similar tax revenue to its discretionary alternatives. Since the duty on remote gaming was increased in 2018, online gambling has led to greater tax revenues than the discretionary alternatives would have each year. This is principally because Great Britain applies specific duties to remote gaming and betting. Additionally, the online gambling industry is more profitable than the discretionary alternatives, so it pays more in corporate tax. On the other hand, the discretionary alternatives create more knock-on economic activity which itself produces tax revenue.
- The rapid growth of online gambling has been supported by advertising expenditure far greater than in other sectors. This indicates both the importance of advertising to reach new gamblers as well as the extent to which revenues earned by online gambling companies is directed towards advertising rather than other avenues which may provide more social value. In other words, gambling operators view each new customer or pound spent as sufficiently high margin (from their perspective) that they are willing to spend considerable sums to acquire them.
- We do not directly measure the social costs of online gambling, though we understand that these are substantial.

We conclude that on an economic basis, online gambling is detrimental to the British economy, because it diverts money away from other sectors which employ more people and are more directly integrated into the economy.

Current Trends

The UK Gambling Commission provides annual statistics on the revenues of Great Britain's online and land-based gambling industries. The Commission began fully accounting online gambling revenues in 2015/16 due to changes in the Gambling Act. In Figure 1, we show how online gambling has grown over the years.

Figure 1: Annual GGY of Online Gambling Industries



Source: Gambling Commission

Online gambling revenues have increased since 2008/09, and the Commission's ability to fully record these revenues is visible in 2014-2016, when the recorded amount jumped. By contrast, land-based gambling revenues stayed steadily between £4.5-5.5 billion with the exception of a dramatic falloff in 2020/21 due to the pandemic. Land-based gambling revenues remained fairly constant throughout the rise of online gambling, indicating that the online market is not cannibalising the land-based market.

Modelling the Value of Gambling to the British Economy

To measure the net effect of online gambling on the British economy, we construct a model which accounts for the dynamics of what happens to each incremental £100 spent and how that diverts from other discretionary spending categories. In particular, we compare the effects of online gambling to the effects of spending money on a set of unrelated, discretionary activities: retail, food and beverage services, the arts, and amusement, scaled in proportion to their size as industries.

We construct the model such that £100 spent gambling online would otherwise be spent on these discretionary alternatives. This is based on our assumption that customers decide on a balance of spending and saving money, and that some of the money they spend will be spent on recreation. There are forms of spending that are fixed and out of the control of customers, such as rent payments. Therefore, if customers choose to gamble, then they reduce forms of spending like other forms of recreation.

We use national statistics about the flow of money in different industries, and how £100 of revenue is split between (a) taxes (including duties), (b) non-wage expenses, (c) profit and (d) labour. We find how the online gambling industry distributes its revenue from the financial records of online gambling companies in the period 2015-2023. We show the splits in Table 1 below.

Table 1: Distribution of £100 in Revenue by Online Gambling Companies and Alternatives

	Taxes	Non-wage expenses	Profit	Wages
Online gambling	£23	£47	£27	£2.54
Discretionary alternatives	£13	£42	£7	£38

Our model assumes that, depending on which category money is spent, a certain proportion of it is paid out in wages, of which those employees spend 50 per cent on discretionary expenditure, in line with the national average "marginal propensity to consume".

The money that they spend goes to new firms, and we likewise assume that their incremental wage money goes to discretionary categories. In turn, these businesses distribute the money between taxes, non-wage expenses, profit, and wages, so the cycle repeats. We find that when customers spend money on the discretionary alternatives, a greater portion of their spending goes to wages than it would if they spent their money gambling online. In Table 2 below we show the overall economic outcomes of each type of spending, as well as the net effect of gambling online rather than spending money on discretionary alternatives.

Table 2: Cumulative Economic Effects of Spending £100 on Different Types of Recreation (£)

	New Spending Generated	Employees receive as wages
Online gambling	1.57	3.15
Discretionary alternatives	24	48
Delta	-22	-44

The discretionary alternatives are more labour-intensive than gambling industries, so when customers spend their money on discretionary alternatives, more of it is paid out in wages, which then gets spent again in the economy. By contrast, online gambling companies hire fewer employees than other kinds of businesses, especially for online businesses. As a result, online gambling does not yield the types of positive knock-on economic outcomes that other discretionary industries do.

Between 2015/16 and 2022/23, British customers spent an average of £5.6 billion annually on online gambling. As we estimate in Table 3 below, that had the effect of reducing economic activity by £1.3 billion per year and wages by £2.6 billion. This is because online gambling is a low labour, high margin business, and so it generally extracts rather than contributes value to the British economy. There is little effect on tax revenue because online gambling is subject to specific duties that would not apply to discretionary alternatives.

Table 3: Cumulative Economic Effects of £5.6 Billion in Online Gambling (£m)

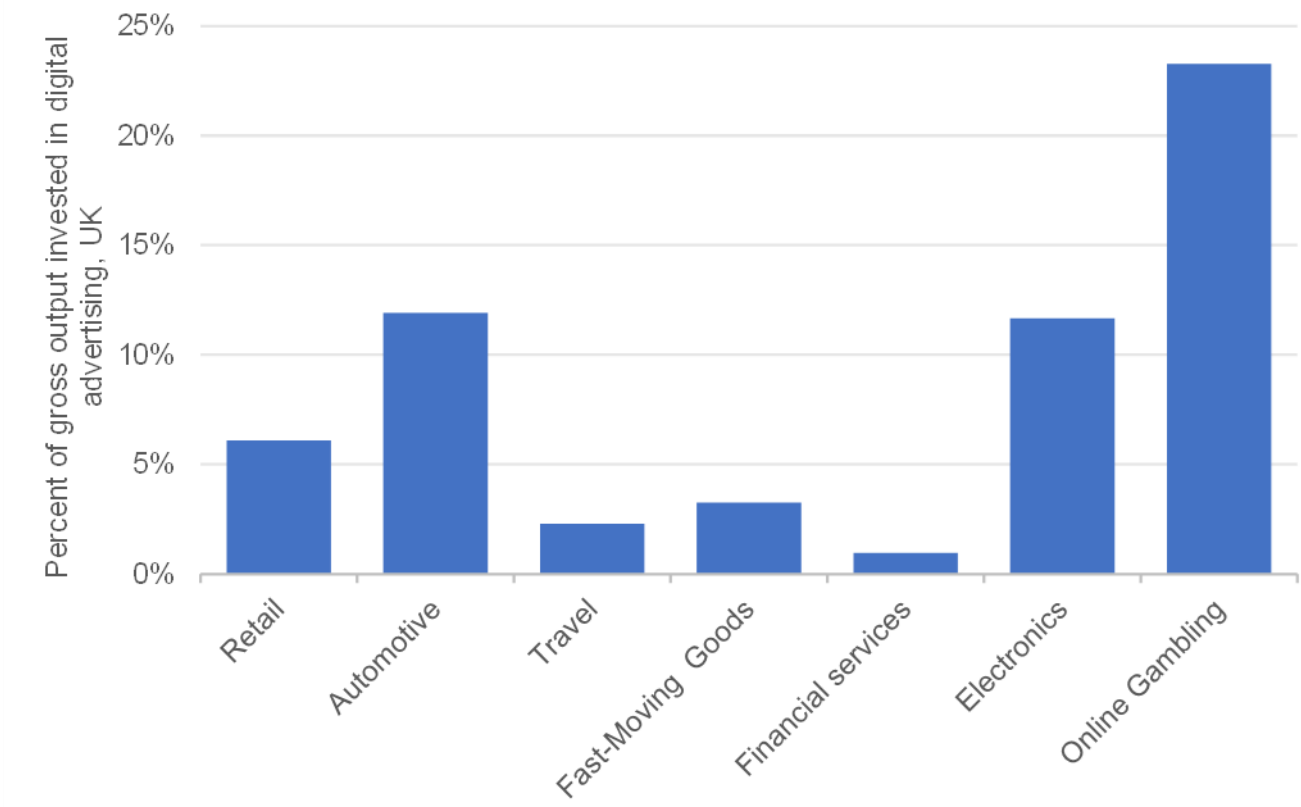
	Gambling			Discretionary Alternatives			Difference		
	New Spend	Total Wages	Tax Revenue	New Spend	Total Wages	Tax Revenue	New Spend	Total Wages	Tax Revenue
2015/16	67	133	948	1,006	2,014	998	-939	-1,881	-50
2016/17	75	150	1,065	1,135	2,273	1,121	-1,060	-2,123	-56
2017/18	84	168	1,169	1,271	2,546	1,226	-1,187	-2,377	-57
2018/19	83	167	1,158	1,262	2,526	1,215	-1,178	-2,359	-57
2019/20	90	181	1,417	1,364	2,730	1,278	-1,274	-2,550	139
2020/21	108	216	1,727	1,627	3,258	1,553	-1,519	-3,042	173
2021/22	99	199	1,593	1,504	3,011	1,423	-1,404	-2,812	170
2022/23	102	205	1,641	1,546	3,094	1,462	-1,443	-2,890	179
Average	89	177	1,325	1,339	2,682	1,282	-1,251	-2,504	43
Total	709	1,419	10,717	10,715	21,453	10,277	-10,006	-20,034	440

Advertising Expenditure

Online gambling in Britain has grown rapidly, either drawing in new players or encouraging existing players to gamble more. The online gambling industry requires marketing expenditure to achieve this.

We find that the gambling industry spends more of its revenues on marketing than other industries do. We show our estimates of online marketing spend by sector in Figure 2 below.

Figure 2: Digital Advertising by Sector of British Economy



The online gambling industry spends 23 per cent of its revenue on marketing, while other sectors spend 12 per cent or less. Marketing helps to keep the non-wage expenditures of online gambling (47 per cent) above those of the discretionary alternatives (42 per cent).

This suggests that heavy advertising is a standard part of online gambling companies' business plans, because each new customer is highly profitable from the perspective of the operator, especially if they develop a habit of gambling and hence lose more money over the long term. By requiring little labour, online gambling companies can afford this advertising and still earn a large profit. This business model differs in significantly from the labour-intensive model of the discretionary alternatives.

1. Introduction

Since the passage of the Gambling Act in 2005, legal gambling has become an increasingly large part of British society and the economy. As more and more of society in general has moved online, online gambling itself has become the dominant form of gambling in Great Britain. This has been especially true and apparent since 2015, when the Gambling Act was amended to require the licensing of operators which serve UK customers and pay taxes on a point-of-consumption bases, rather than a point-of-supply basis. As a result, some companies that previously operated primarily offshore moved to providing those services onshore.

While the industry has certainly been lucrative for the operators themselves, it has not provided overall economic value to the British economy. This is because, aside from some ongoing IT costs, it is not a very labour-intensive industry. Instead, most revenues earned in online gambling go towards profits and marketing (which in turn creates new players which create new profits and marketing). If these gamblers instead spent their discretionary income on other alternatives (such as retail, dining, the arts, and amusement), these industries would support more labour and generally keep more money usefully employed in the British economy.

At the request of Derek Webb of the Campaign for Fairer Gambling, we have developed a model which captures the economic effects of spending money in online gambling as opposed to discretionary alternatives. This model is designed to focus on the economics only and therefore does not consider the socio-economic cost of gambling related harm.

We find the following:

- In 2015-2023, British gamblers spent £45 billion in online gambling in total (£5.6 billion per year on average), defined as all of their stakes minus the prizes they received.
- We find that that expenditure produced £709 million in total (£89 million per year on average) in knock-on activity, as opposed to £10.7 billion (£1.3 billion per year on average) that would have been produced in the discretionary alternatives.
- We find that that expenditure produced £1.4 billion in total (£177 million per year on average) in wages, as opposed to £21 billion in total (£2.7 billion per year on average) that would have been produced in the discretionary alternatives.
- We find that that expenditure produced £10.7 billion in total (£1.3 billion per year on average) in taxes, as opposed to £10.3 billion in total (also £1.3 billion per year on average) that would have been produced in the discretionary alternatives.

  These tax figures are similar because (a) gambling operators pay a 15-21 per cent duty on gambling revenues, which is higher than the amount of VAT paid in the discretionary alternatives; and (b) the discretionary alternatives pay out more in wages, and that money produces knock-on tax revenue as it is spent elsewhere.
- Much of the revenues earned by online gambling operators have gone into marketing (c. 23 per cent of revenues), which has served to produce new gambling activity rather than productive economic activity.

- In this report, we do not estimate the social costs of gambling addiction (e.g. mental health costs, incarceration, bad debt, etc), though others have estimated that these may be substantial.

This report proceeds as follows:

- In Chapter 2, we present a background and history of online gambling in Great Britain;
- In Chapter 3, we present our approach for estimating how different types of firms (gambling vs other) distribute the money they receive;
- In Chapter 4, we model how revenue earned by the online gambling industry would feed through the economy if it were spent in other industries; and
- In Chapter 5, we conclude.

2. Background

2.1. History of Online Gambling in Great Britain

Great Britain greatly expanded legal gambling with the Gambling Act 2005.[1] The Gambling Act was a hallmark piece of legislation that created the Gambling Commission to regulate and oversee a tolerant set of policies that broadly permitted gambling.[2] The Gambling Commission was charged to ensure that gambling:

- did not become a source of crime or disorder;
- would be conducted in a fair and open way; and
- did not allow the vulnerable, including children, to be harmed.

The Act allowed gambling companies to operate with flexibility. In particular, gambling operators were subject to regulation and taxation that depended on where they operated, rather than to whom they provided service. Gambling companies were free to base their operations outside of Great Britain ("offshore"), including in UK dependencies like Gibraltar and the Isle of Man, and to offer online gambling services to British gamblers without being regulated by the Gambling Commission or paying the standard tax on revenues. Taxes in these territories could be as low as one per cent of revenue.

The 2014 Gambling Licencing and Advertising Act was another major reform, and it defines British regulation of gambling to the present day. This Act tightened the Gambling Commission's regulations on gambling companies that offered services to British customers. With the Act passed into law, the Commission could require all gambling companies to receive licensure from the Commission before offering services to British customers, and all companies that offered these services were subject to regulation by the Commission. Additionally, the tax on revenues was adjusted from a 'point of supply' tax to a 'point of consumption' tax. This meant that companies could no longer avoid taxation by basing their operations offshore, and we understand that some operations were moved into Britain after the reform passed.

2.2. Revenue Statistics of Online Operators

Overall, the amount of online gambling in Great Britain has increased since 2008. The Gambling Commission collects data on the total revenue received by the online gambling industry each year.[3] After the Gambling Licencing and Advertising Act became law in the 2014, offshore gambling operators were brought under the purview of the Gambling Commission, and the Commission began including the revenues of historically offshore companies in the total recorded revenue. As a result, the amount of recognised gambling revenue increased after 2014, as we

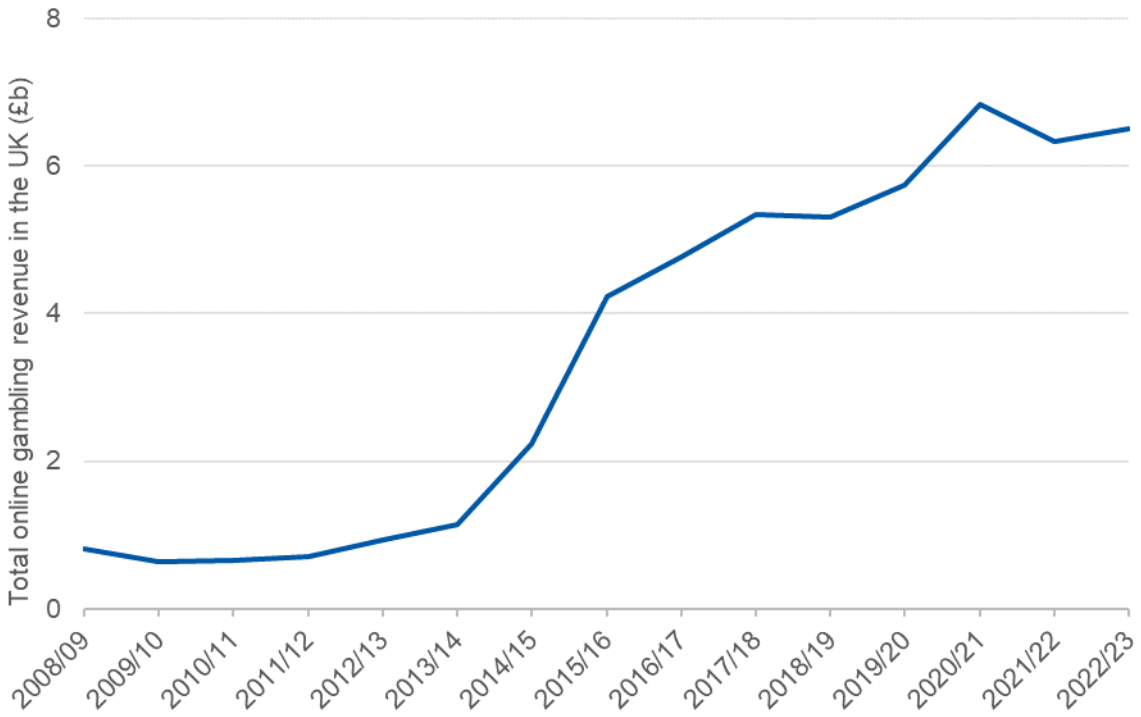
[1] Evolution of UK Gambling Laws and their History, the infoLaw partner. (15 March 2021). https://www.infolaw.co.uk/partners/evolution-of-uk-gambling-laws-and-their-history/

[2] UK gambling law explained: what's all the fuss about? RightCasino. (30 September 2014). www.rightcasino.com/news/new-uk-gambling-law-explained/

[3] UK Gambling Commission, Industry Statistics. (30 November 2023). www.gamblingcommission.gov.uk/statistics-and-research/publication/industry-statistics-november-2023

show in Figure 2.1 below. Online gambling continued to grow afterwards, and the Commission reports that online gambling revenue began to exceed that of land-based gambling in 2019/20.

Figure 2.1: Total Revenue of Britain's Online Gambling Industry



Source: Gambling Commission

We do not have an estimate for the size of offshore gambling prior to 2015/16. We only apply our model to find the economic effects of online gambling revenues since 2015/16, i.e., in those years after the Act passed.

We also collect the revenues and costs of distinct online gambling companies in Great Britain, which we use to further develop a breakdown of how online gambling companies operate. In particular, we refer to the annual financial reports of gambling companies Bet365,[4] Flutter, [5] and William Hill. [6]

We do not include the major online gambling company Ladbrokes Coral in our analysis. Although Ladbrokes Coral does provide publicly available annual financial reports, Ladbrokes has not specifically published its revenues from its online gambling operations since Entain bought Ladbrokes Coral in 2018.[7] We do not extrapolate such revenues for all the years from 2018/19 to 2022/23 (the most recent year we consider), so for consistency we exclude Ladbrokes Coral from

[4] UK Government, Bet365 Group Limited records. find-and-update.company-information.service.gov.uk/company/04241161/filing-history

[5] Flutter, Results reports and presentations. www.flutter.com/investors/results-reports-and-presentations/year/2024/

[6] Evoke, Historical William Hill. www.evokeplc.com/investors/results-reports-and-presentations/historical-william-hill/

[7] UK Government, Ladbrokes Coral Group Limited records. find-and-update.company-information.service.gov.uk/company/00566221/filing-history

our calculations of the breakdown of online gambling costs, although they are embedded in data presented by the Gambling Commission.

2.3. Marketing Spend in the Online Gambling Sector

As we derive in Chapter 3, online gambling companies spend an average of 51 per cent of their revenue on non-wage expenses, in contrast to the discretionary alternatives which spend 42 per cent of their revenue on non-wage expenses. Unlike retail stores, restaurants, theatres, sports stadiums, and other recreation outlets, online gambling does not require companies to provide customers with physical goods or even access to seating in brick-and-mortar establishments. Instead, online gambling companies may incur higher non-wage expenses than other forms of recreation due to spending greater amounts of their revenue on marketing.

Online gambling companies spend a significant portion of their revenues on advertising. The gambling industry's annual online advertising spend rose to £1.2 billion by 2018.[8] This was 23 per cent of the online gambling industry's revenue in 2018/19, which was £5.3 billion.[9]

Online gambling companies spend a significantly greater portion of their revenues on marketing than other sectors of the economy do, as a percentage of total revenue. The £1.2 billion in online advertising was 80 per cent of the £1.5 billion that gambling companies spent across all categories of advertising that year.[10] Because such a large amount of gambling advertising takes place online, we directly compare other sectors' online gambling spend to gambling companies' spend of 23 per cent of their revenue.

We collect data regarding the revenues and digital marketing expenditures of other sectors.[11] We apply these to find the digital marketing spend as a portion of revenue for each sector, displayed in Figure 2.2 below.

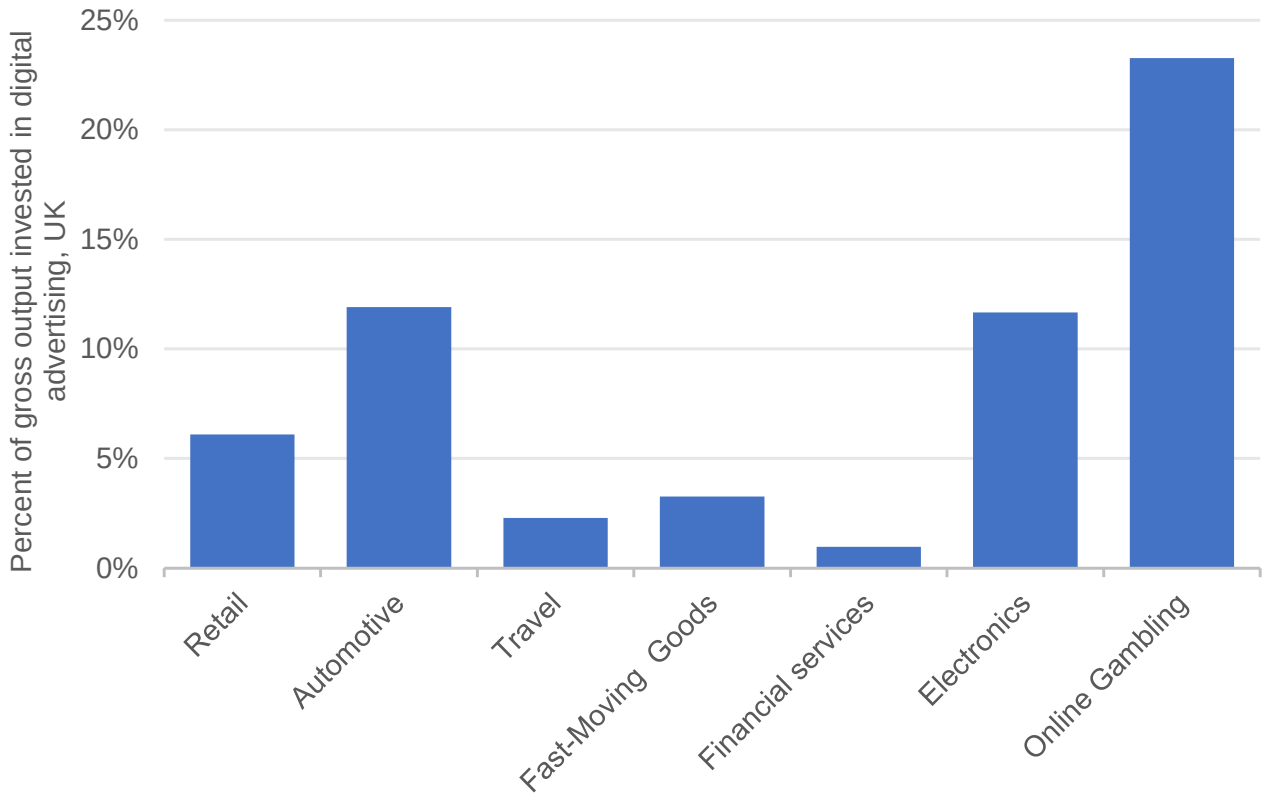
[8] GambleAware, Gambling companies spend £1.2 marketing online, five times more than on television ads. (24 November 2024). www.gambleaware.org/sites/default/files/2020-12/2018-11-24-gambling-marketing-online-five-times-tv-ad-spend.pdf

[9] UK Gambling Commission, Industry Statistics. (30 November 2023). www.gamblingcommission.gov.uk/statistics-and-research/publication/industry-statistics-november-2023

[10] GambleAware, Gambling companies spend £1.2 marketing online, five times more than on television ads. (24 November 2024). www.gambleaware.org/sites/default/files/2020-12/2018-11-24-gambling-marketing-online-five-times-tv-ad-spend.pdf

[11] We used a wide variety of sources, including Insider Intelligence, the UK Office of National Statistics, other UK government sources, and Statista

Figure 2.2: Marketing Spend as a Percent of Revenue by Sector of Economy



Source: Office of National Statistics, Insider Intelligence, Statista

Online gambling companies spend significantly more on marketing than any other sector. This may explain why online gambling companies incur greater non-wage costs than the discretionary alternatives that provide physical goods or in-house seating.

As we describe in Chapter 3, online gambling companies are more profitable than the discretionary alternatives, collecting 27 per cent of revenue as net profit in contrast to the 7 per cent that the alternatives collect. In other words, it is highly profitable to advertise online gambling to the public. Online gambling companies spend almost half their revenues on non-wage expenses, and yet by requiring little labour, they can earn a large profit. This business model differs significantly from the labour-intensive model of the discretionary alternatives.

2.4. Industry Research on the Economic Value of Online Gambling

On behalf of the gambling industry, the Betting & Gambling Council (BGC) has promoted the economic benefits of online gambling to Great Britain. The Levelling Up Impact Report, published by the BGC in 2022, states that BCG members directly employed over 61,000 people, with 15,000 jobs specifically in tech planned over the five years following the report's publication. The report states that Bet365 has 4,000 employees in Stoke-on-Trent and that Flutter has 2,800 employees in Leeds.[12] The BGC cites Leeds and Stoke-on-Trent as underprivileged areas that particularly benefit

[12] Betting & Gambling Council, Levelling Up Impact Report. (6 June 2022). bettingandgamingcouncil.com/news/levelling-up-the-united-kingdom

from what the BGC refers to as "knock-on economic benefits to those cities in terms of employees spending money and supporting smaller businesses."

While the report seeks to highlight the economic benefits of the online operations of these companies, it instead demonstrates how insignificant the remote sector is in terms of employment, relative to land-based gambling. According to this report, there are 50,105 people employed in the land-based sector, primarily at Licenced Betting Offices (LBOs), and excluding those which work at Adult Gaming Centres (AGCs) and bingo halls. Thus, allowing for differences in when those data are from, no more than 11,000 people are employed in AGCs, bingo halls and remote gambling, with most of these in land-based AGCs and bingo halls.

In short, there is only a small amount of British employment directly tied to the online gambling, some of which we understand exists to service other markets. Other industry sources refer to knock-on benefits in supply chains, but the industry does not demonstrate exactly how that works. Instead, as we describe below, much of the revenue earned through online gambling goes towards marketing and increasing firm profits, and it is not clear how these two avenues would contribute to the British economy.

3. Modelling How Firms Distribute their Revenues

To measure the net effect of online gambling on the economy, we construct a model which describes how online gambling companies and other firms distribute their revenue between (a) taxes, (b) non-wage expenses, (c) profit, and (d) wages to employees. We model the distribution of an incremental £100 spent either on gambling or on discretionary alternatives. In particular, we compare the effects of online gambling to the effects of spending money on retail goods, restaurants, the arts, and amusement, scaled in proportion to the size of each of these categories in the recreation sector of the economy.

3.1. Model Overview

We construct the model such that £100 spent gambling online would otherwise be spent on alternate forms of discretionary spending ("discretionary alternatives"). This is based on our assumption that customers decide on a balance of spending and saving money, and that some of the money they spend will be spent on recreation. There are forms of spending that are fixed and out of the control of customers, such as rent payments. Therefore, if customers choose to gamble, then they must reduce forms of spending like other forms of recreation.

Alternatively, gamblers may be spending their savings rather than available and disposable income, and would instead save their money if gambling was not an option. We do not model this possibility, but note the following:

- If gamblers are gambling money they should be saving, there are likely to be wider social costs of gambling that we do not capture; and
- If gamblers save less than they would in the absence of gambling, there will be less money saved in the banking system, raising interest rates and making borrowing and spending more expensive for other participants in the economy.

Thus, our assumption that all gambling money is disposable does not obviously bias our findings in one direction or the other.

We find that when customers spend money on discretionary alternatives, they cause more economic activity and a greater proportion of total wages to be paid to employees than to they do gambling online. This is because these industries are more labour intensive, so when customers' money goes to these other industries, more of it is paid out in wages, which then gets spent again in the economy. By contrast, online gambling operators hire fewer employees than the alternative businesses. As a result, online gambling does not yield the types of knock-on economic outcomes that other discretionary industries do.

3.2. Data Description

We apply economic data regarding the non-gambling recreational sector of the economy to determine the average amount of revenue that is allocated to taxes, non-wage expenses, profit, and wages. We use financial data from online gambling companies in order to make the same determination of the gambling sector. These conclusions are the basis of our model.

3.2.1. Model philosophy

We construct our model with the assumption that all money that a gambler does not spend gambling is spent elsewhere instead, specifically on (a) retail goods, (b) restaurants, (c) the arts, and (d) amusement. We make this assumption because gambling is "discretionary" spending, meaning that it generally occurs after the gambler has met their costs of living and chooses to spend their remaining money for recreation, and these are the other major categories of discretionary spending. Collectively we refer to these activities as the "discretionary alternatives". We also assume that in the absence of online gambling, customers would not spend their money on land-based gambling, i.e., brick-and-mortar casinos.

We assume that when gamblers do not gamble online, they spend the money they would have spent online on the discretionary alternatives. This is because employed people can generally meet their living expenses, and any new inflow of money (for example, when a new gambler decides to gamble at their casino) can be spent on their own discretionary activities.

In reality, some gamblers may spend money that they would have otherwise saved or used on necessities, or they may take out credit to do so. In this case, the direct negative effects of online gambling on the economy would be lower, since that money would not have been spent were it not for the gambling activity. However, there are many larger indirect effects that result from gamblers spending money they cannot easily spare, such as increased lending rates for all borrowers and higher social costs associated with problem gambling.

3.2.2. Economic characteristics of discretionary alternatives

To determine the net effects of gambling on the economy, we first consider where customers' money goes when they spend it on discretionary alternatives. We evaluate four large sectors of the recreation industry: retail, dining, the arts, and amusement. We use national macroeconomic data from the ONS to determine how much revenue to these discretionary alternatives goes to non-wage expenses, to taxes, to profits, and to wages, all in percent terms. These four destinations account for one hundred per cent of all revenue.

We first consider the size of each category. We use two economic measures to do so:

- Gross output (GO) measures the amount of revenue that each sector collects before it pays any of its expenses. This total revenue is ultimately paid to taxes, non-wage expenses, profits, and wages. We use the UK Office for National Statistics (ONS) to find the GO for each category.[13]
- Gross value added (GVA) measures the amount of money that each sector makes after it pays for all the goods it uses. GVA specifies the amount of money that a firm has available to pay out to employees as wages and to accrue as gross profit to the firm's owners (the gross profit is still taxed). We use the ONS to find the GVA for each sector.

The ONS publishes statistics regarding the GO, the GVA, and other measures for many sectors in the economy.[14] In Table 3.1 below we present the size of each sector of the recreation industry in

[13] Office for National Statistics, Input-output supply and use tables. (31 October 2023). ons.gov.uk/economy/nationalaccounts/supplyandusetables/datasets/inputoutputsupplyandusetables

[14] Office for National Statistics, Input-output supply and use tables. (31 October 2023). www.ons.gov.uk/economy/nationalaccounts/supplyandusetables/datasets/inputoutputsupplyandusetables

GO and GVA terms, as well as the portion of the total each sector represents (based on each category's GO).

Table 3.1: Comparator Industry Size (£m)

	Retail	Dining	The Arts	Amusement	Total
Portion of total	63%	25%	4%	8%	100%
GVA	105,616	37,637	7,430	11,703	162,386
GO	174,210	69,897	12,245	21,245	277,597
GVA/GO	61%	54%	61%	55%	58%

The GVA/GO ratio is 58 per cent, so that is the portion of total revenue that goes to wages and gross profits, which includes the amount owed in taxes and the net profits that owners collect. The remaining 42 per cent is the amount of revenue that these firms had to spend on expenses that did not include wages, i.e., non-wage expenses.

Next, we consider the Value-Added Tax (VAT), currently set at 20 per cent of GVA. We present VAT as a percent of overall revenue in Table 3.2 below.

Table 3.2: Effective Value-Added Tax Rate on Firms that Offer Discretionary Alternatives

	Retail	Dining	The Arts	Amusement	Total
GVA/GO ratio	61%	54%	61%	55%	
VAT	20%	20%	20%	20%	
VAT/GO ratio	12%	11%	12%	11%	**12%**

We find the total VAT/GO ratio as the average ratio of the four sectors, weighted by each sector's GO.

Next, we find the percent of total revenue that businesses pay to their employees as wages. The ONS publishes the total compensation that each sector pays to its employees alongside the GO and GVA. We display our results in Table 3.3 below.

Table 3.3: Wage Spend as a Percent of Revenue (£m)

	Retail	Dining	The Arts	Amusement	Total
GO	174,210	69,897	12,245	21,245	277,597
Employee Total Wages	62,030	32,079	3,315	9,351	106,775
Wages/GO	36%	46%	27%	44%	**38%**

We apply our results to find the percentage of revenue that business distribute to non-wage expenses, to wages, to the VAT, and to gross profit. Gross profit is the amount of GO remaining after firms pay their non-wage expenses, pay their VAT, and pay wages to employees. We weigh

each sector by its GO to find an average that reflects the total recreation industry. Our results are in Table 3.4 below.

Table 3.4: Distribution of Revenue in Discretionary Alternatives

	Formula	Retail	Dining	The Arts	Amusement	Total
Amount subject to VAT	GVA/GO	61%	54%	61%	55%	
VAT	$20\% * GVA/GO$	12%	11%	12%	11%	**12%**
Wage Spend	$Wages/GO$	36%	46%	27%	44%	**38%**
Gross Profit	$\frac{GO - GVA - VAT - Wages}{GO}$	13%	-3%	21%	0%	**8%**
Non-wage expenses	$GO - GVA$	39%	46%	39%	45%	**42%**
	Total					**100%**

We know that about 12 per cent of firms' revenue goes to VAT (based on VAT times the GVA/GO ratio). To find the total percentage of revenue that firms pay in tax, we sum the 12 per cent with the percent that firms pay in corporate income tax. As we estimate above, firms collect 8 per cent of their revenue as gross profit and we split this percentage between the amount that firms pay in corporate income tax and the amount that accrues to the firms' owners as net profit. This division depends on the standard corporate tax rate, which differs by year and has declined historically.[15] Each year, we apply the tax rate to the assumed 8 per cent to find the amount of revenue that goes to tax, and the rest of the 8 per cent goes to net profit. We display the breakdown Table 3.5 below.

[15] FigureWizard, Historical UK Corporation Tax Rates. www.figurewizard.com/list-uk-corporation-tax-rates.html

Table 3.5: Tax Rate and Net Profit for Recreational Firms by Year

	Tax Rate	% of Revenue to Tax	% of Revenue to Net Profit
2008	28%	2.3%	6.0%
2009	28%	2.3%	6.0%
2010	28%	2.3%	6.0%
2011	26%	2.2%	6.2%
2012	24%	2.0%	6.3%
2013	23%	1.9%	6.4%
2014	21%	1.8%	6.6%
2015	20%	1.7%	6.7%
2016	20%	1.7%	6.7%
2017	19%	1.6%	6.8%
2018	19%	1.6%	6.8%
2019	19%	1.6%	6.8%
2020	19%	1.6%	6.8%
2021	19%	1.6%	6.8%
2022	19%	1.6%	6.8%

Source: NERA analysis

We use the breakdown of corporate tax and net profit from the year 2022, at 1.6 per cent and 6.8 per cent respectively. We sum the effective VAT rate on revenue (almost 12 per cent) and the 1.6 per cent effective corporate tax rate on revenue to find that a total of 13 per cent of revenue is paid in tax. We display the final breakdown of revenue to recreational firms in Table 3.6 below.

Table 3.6: Final Distribution of Recreational Firms' Revenue

Taxes	Non-wage expenses	Profit	Wages	Total
13%	42%	7%	38%	100%

We take these values as the distribution of all revenue to the discretionary alternatives. For every £100 that customers spend on these alternatives to gambling, firms receive the £100 and distribute it. We assume they pay £13 in taxes, spend £42 on non-wage expenses, collect £7 as net profit, and spend £38 on wages. The firms' employees receive the £38 and spend a portion of it.

There is a standard concept in economics called the marginal propensity to consume (MPC). When a person (or firm) receives new income, the MPC is the percent of that money the person will choose to spend rather than save. We apply a MPC of 50 per cent, meaning that in the UK, workers who receive these wages will increase their spending by about half the amount they received.[16]

[16] A survey of British households by the Bank of England in 2019 finds that consumers estimate they would respond to a loss of income by cutting back their spending £0.50 for every pound lost. This provides our MPC estimate of 50 per cent.

3.2.3. Breakdown of spending by online gambling companies

We next evaluate online gambling companies ('companies') that have a major presence in Britain to find they distribute the revenue they receive. The companies Bet365, Flutter, and William Hill publish annual financial reports regarding their revenue and spending, and we use this data to find the average percent of its revenue that the online gambling industry spends on duties and taxes, non-wage expenses, wages, and the percent that the industry collects as profit.

- In subsection 3.2.3.1 we display the revenues of the companies;
- In subsection 3.2.3.2 we discuss the duties on the companies' revenues;
- In subsection 3.2.3.3 we estimate the companies' total operating expenditure (opex); and
- In subsection 3.2.3.4 we evaluate how much opex goes to wages and find final taxes and profits.

We assume for simplicity that all online gambling in Great Britain is conducted by companies that operate within the country. We assume that all taxes go to the British government and that all wages are paid to British workers. We consider all years in the period 2015-2023.

3.2.3.1. Revenues of online gambling companies

We include Bet365,[17] Flutter, [18] and William Hill in this analysis.[19] We exclude Ladbrokes Coral because it did not publish enough financial information relevant to our research after it was bought by Entain in 2018. [20] William Hill has a similar problem, because it was bought by Caesars Entertainment after 2020. [21] We exclude William Hill from consideration in the years 2021/22 and 2022/23.

We also make assumptions to estimate Flutter's revenue each year.[22] We draw Flutter's annual revenues in 2020-2023 from their reports in these years.[23] In 2016-2020, Flutter's reports only include overall revenue from the region rather than revenue specifically from Flutter's online operations. We assume that 89 per cent of their revenue in those years was from their online operations, which was the percentage in 2021-2024. Due to lack of records in 2015/16, we estimate revenue in that year by assuming that revenue grew from 2015/16 to 2016/17 by £169 million, the same amount it grew on average from 2016/17 to 2022/2023.

Harry Rigg et al. The financial position of British households: evidence from the 2019 NMG Consulting survey. Bank of England Quarterly Bulletin 2019 Q4. (2019). www.bankofengland.co.uk/quarterly-bulletin/2019/2019-q4/the-financial-position- of-british-households

[17] UK Government, Bet365 Group Limited records. find-and-update.company-information.service.gov.uk/company/04241161/filing-history

[18] Evoke, Historical William Hill. www.evokeplc.com/investors/results-reports-and-presentations/historical-william-hill/

[19] Flutter, Results reports and presentations. www.flutter.com/investors/results-reports-and-presentations/year/2024/

[20] UK Government, Ladbrokes Coral Group Limited records. find-and-update.company-information.service.gov.uk/company/00566221/filing-history

[21] Caesars Entertainment, Caesars Entertainment to Acquire William Hill for £2.6 Billion. investor.caesars.com/news-releases/news-release-details/caesars-entertainment-acquire-william-hill-ps29-billion

[22] Flutter's revenues and costs reflect their operations in Ireland as well as those in the United Kingdom.

[23] We make a currency conversion from USD to GBP in 2022.

We display our results in Table 3.7 below.

Table 3.7: Revenues of Online Gambling Companies (£m)

Year	Bet365	Flutter	William Hill
2015/16	1,547	701	551
2016/17	2,154	870	545
2017/18	2,719	952	617
2018/19	2,982	985	634
2019/20	2,757	961	738
2020/21	2,789	1,829	801
2021/22	3,413	1,899	-
2022/23	3,391	1,885	-
Average	2,719	1,260	486

Bet365 does not distinguish where its revenues come from. While it is based in the UK and a large portion of its operations are in the UK, it also has significant operations in the USA, Australia, and potentially elsewhere in Europe. Our revenue figures in the table above include all of these revenues, as do our costs reported further down. Because of this uncertainty in allocating revenues and costs between different operators, we use Gambling Commission Industry Statistics to measure the overall size of the industry in Great Britain, and company-specific reporting to break down those revenues into profit and cost shares. In the case of Bet365, for instance, we must therefore assume that its British operations have a similar cost structure to its global operations, even if it is only a subset of total revenues.

3.2.3.2. Duties that apply to online gambling companies

The government applies a General Betting Duty (GBD) of 15 per cent of gross revenue of sports betting, and a Remote Gaming Duty (RGD) of 21 per cent for online gaming revenue (the RGD was 15 per cent prior to April 2019). In Table 3.8 below, we show the breakdown of online revenue by sports betting and online gaming in percent terms each year and determine the average amount of revenue the online gambling companies therefore pay in duties.[24]

[24] Derived from: UK Gambling Commission, Industry Statistics. (30 November 2023). www.gamblingcommission.gov.uk/statistics-and-research/publication/industry-statistics-november-2023

Table 3.8: Gambling Duties and the Effective Average Rate

Year	Sports Betting	Other Gaming	GBD	RGD	Average
2015/16	42%	58%	15%	15%	15%
2016/17	42%	58%	15%	15%	15%
2017/18	43%	57%	15%	15%	15%
2018/19	39%	61%	15%	15%	15%
2019/20	42%	58%	15%	21%	18%
2020/21	40%	60%	15%	21%	19%
2021/22	37%	63%	15%	21%	19%
2022/23	36%	64%	15%	21%	19%
Average					**17%**

We conclude that 17 percent of overall revenue goes to duties. That leaves £3,713 million in post-duty (net) revenue for online gambling companies.

3.2.3.3. The operating expenses of online gambling companies

Next, we consider the opex of these companies. The largest company that we consider, Bet365, incurred losses in 2021/22 and 2022/23, and this is an unusual circumstance given the low direct costs associated with online gambling. We understand that operators may have been booking international losses as GB losses in order to reduce tax liability.

To correct for this, we draw on companies' financial records and find the percent of each company's revenue that went to its opex in each year. We assume that the lowest annual percent for each company is the true percent of its revenue that the company distributes to opex in each year. Flutter only publishes opex in 2020/21 and 2021/22, so we compare Flutter's revenues and opex in Table 3.9 below.

Table 3.9: Flutter Operating Expenses as a Percent of Revenue (£m)

Year	Opex	Revenue	Percent
2020/21	667	1,829	36%
2021/22	682	1,899	36%

We assume that Flutter spends 36 per cent of its revenue on opex each year.

We compare the revenues and opex of Bet365 and William Hill next. Because William Hill lacks complete records in 2021/22 and 2022/23, we do not consider its opex in those years.

Table 3.10: Operating Expenses of Bet365 and William Hill as a Percent of Revenue

Year	Bet365			William Hill		
	Opex	Revenue	Opex %	Opex	Revenue	Opex %
2015/16	876	1,547	57%	264	551	48%
2016/17	1,350	2,154	63%	287	545	53%
2017/18	1,630	2,719	60%	305	617	49%
2018/19	1,855	2,982	62%	311	634	49%
2019/20	2,072	2,757	75%	372	738	50%
2020/21	1,957	2,789	70%	401	801	50%
2021/22	2,933	3,413	86%	-	-	-
2022/23	2,899	3,391	85%	-	-	-
Opex			57%			48%

We find that Bet365 spent the lowest percent of its revenue on opex in 2015/16, at 57 per cent. We find that William Hill spent its lowest percent in that same year, at 48 per cent. We assume that Bet365 and William Hill spent these respective percentages of their revenue on opex in every year over the 2015-2023 period. We show our estimates of the companies' opex each year in Table 3.11 below.

Table 3.11: Expenses of Gambling Companies (£m)

Year	Bet365	Flutter	William Hill
2015/16	876	254	264
2016/17	1,220	315	261
2017/18	1,540	345	296
2018/19	1,689	356	304
2019/20	1,562	348	354
2020/21	1,580	662	384
2021/22	1,933	687	-
2022/23	1,921	682	-
Average	1,540	456	233

We take £2,229 million as a reasonable estimate for annual expenses incurred by these three companies. Next, we compare this amount to the pre-duty revenue of £4,465 million to find that 50 per cent of revenues go to operating expenses.

3.2.3.4. The wage payouts of online gambling companies

Next we determine how much of the opex goes to non-wage expenses and how much goes to wages, though we lack data from the online gambling companies regarding how much they pay in total compensation.

To make a realistic assumption, we draw data from Bet365's annual report in 2022 and the annual report of gambling company Flutter in 2023. According to the Levelling Up Impact Report, commissioned by the Betting and Gaming Council, Bet365 has 4,000 employees and that Flutter has 2,280 employees.[25] According to ONS statistics, the average gambling sector employee earns £30,581 annually.[26] In Table 3.12 below we estimate the percent of opex that goes to employee compensation in Bet365 and Flutter, and we take the weighted average of these results by opex to find an overall assumption. This may be an overestimate as we understand that many of those employees based in the UK are actually serving markets that are abroad.

Table 3.12: Compensation as a Percent of Opex in Gambling Sector

	Number of Employees	Wages per Employee	Total Compensation	Opex	Compensation/Opex
Bet365	4,000	£30,581	£122m	£2,902m	4.2%
Flutter	2,280	£30,581	£70m	£866m	8.0%
Total					**5.1%**

We find that 5.1 per cent of opex goes to employee compensation, and we apply this to our estimate that 50 per cent of gambling companies' revenues went to opex in the 2015-2023 period. We find that 2.5 per cent of total revenues goes to wages, leaving 33 per cent of revenues as gross profit. We display these results in Table 3.13 below.

Table 3.13: Distribution of Revenue in Online Gambling Companies

Duties	Total Opex	% of Opex to Wages	Wages	Gross Profit
17%	50%	5.1%	2.5%	33%

Finally, we consider how gross profit is distributed between taxes and net profit that accrues to the owners of online gambling companies. The corporate tax rate was 19 per cent on average over the period 2015-2023, so we use that rate and split gross profit between 6 per cent taxes and 27 per cent net profit. We combine duties and taxes into one category and show our final results Table 3.14 below.

Table 3.14: Comprehensive Distribution of Revenue in Online Gambling

Duties & Taxes	Non-wage expenses	Profits	Wages	Total
23%	47%	27%	2.5%	100%

[25] Betting & Gambling Council, Levelling Up Impact Report. (6 June 2022). bettingandgamingcouncil.com/news/levelling-up-the-united-kingdom

[26] Office for National Statistics, Input-output supply and use tables. (31 October 2023). www.ons.gov.uk/economy/nationalaccounts/supplyandusetables/datasets/inputoutputsupplyandusetables

The above figures represent the distribution of all revenues to online gambling companies. For every £100 that customers spend gambling online, firms receive the £100 and distribute it. We assume they spend £23 on duties and taxes, spend £47 on non-wage expenses, collect £27 as net profit, and spend £2.54 on wages. The £2.54 is in contrast to the £38 that the discretionary alternatives pay to their employees.

4. Modelling the Economic Impact of Online Gambling

We use our model to find the economic effects of online gambling.

We develop the model by following the portion of their revenue that online gambling companies sink into duties and taxes, non-wage expenses, and their own profits. We also follow the portion of their revenue that online gambling companies spend on wages and explore the effects of workers receiving this new income.

Next, we find the economic effects of customers spending their money on discretionary alternatives rather than online gambling. Like with the online gambling companies, we follow the portion of their revenue that these alternatives spend on taxes, non-wage expenses, how much they receive as profit, and how much they spend on wages. We explore the effects of discretionary alternatives providing this new income to their employees.

First we construct the model, then we feed into the model the millions of pounds that customers spend gambling online. In Figure 4.1 below, we display the destinations of revenue to online gambling. We find the economic effects if that same quantity of money was spent on discretionary alternatives. We compare these outcomes to find the overall economic effects of online gambling.

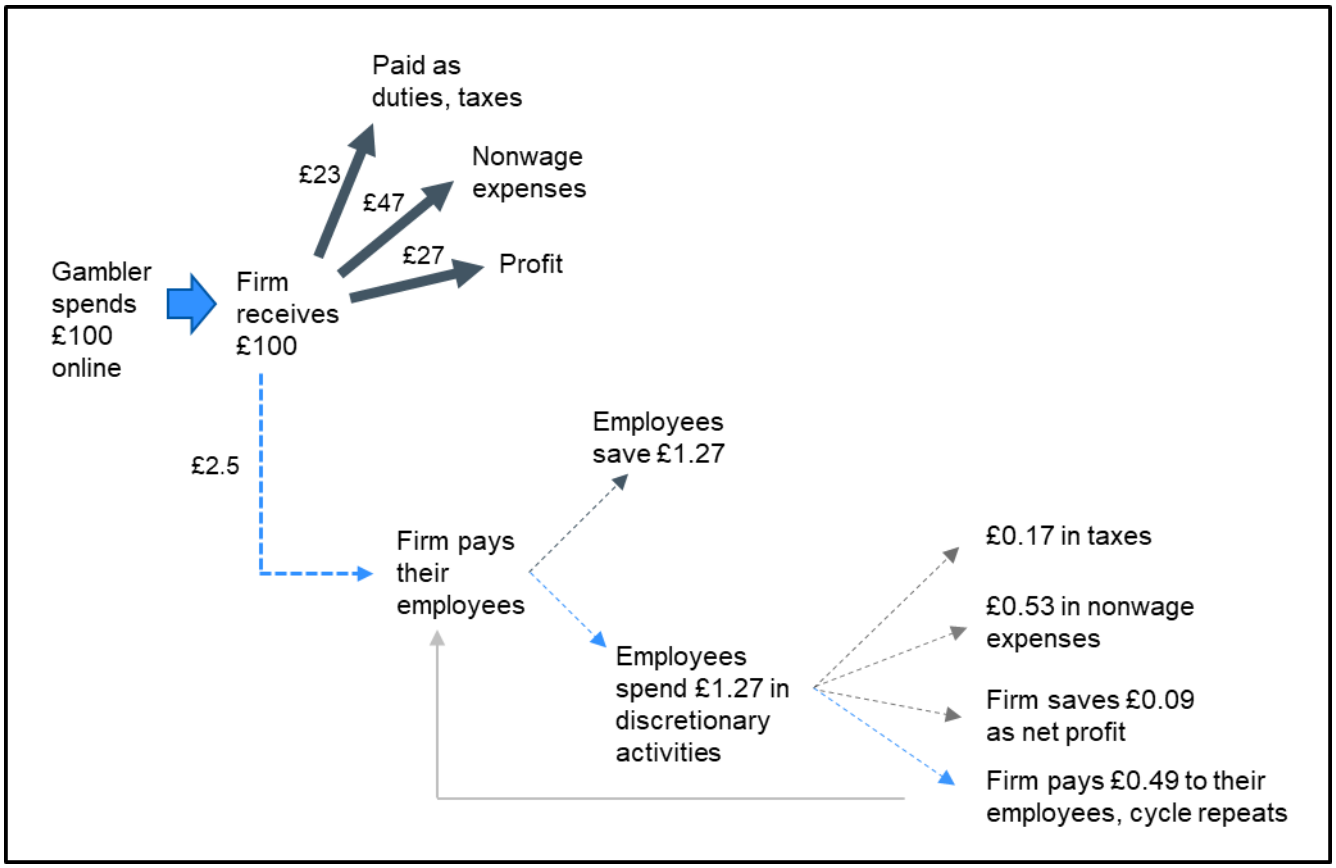
4.1. Constructing the Model

We construct a model that demonstrates what happens if a customer spends an incremental £100 to a hypothetical online gambling company ('the company'). We apply our findings from Chapter 3 about how online gambling companies and the discretionary alternatives distribute the revenue they receive.

4.1.1. Modelling the knock-on effects of online gambling

First, we consider the economic effects of a customer spending £100 gambling online without yet considering the discretionary alternatives. We display our model in Figure 4.1 below. In the model, the company receives £100 and pays £2.54 of the money to its employees. The company distributes the remaining £97 between duties & taxes, non-wage expenses, and its own net profits.

Figure 4.1: Economic Effects of £100 in Online Gambling Spend



The employees of the company receive the £2.54 in wages. We apply our assumed MPC of 50 per cent, so employees who receive an income increase will increase their spending by about half the amount they received.[27] Therefore, the company's employees save £1.27 and spend the remaining £1.27 on the discretionary alternatives. These firms distribute their revenue in different proportions than the company does, as determined in Chapter 3. Therefore, £0.49 of the £1.27 goes to the employees of the discretionary alternatives. These employees then spend part of this new income on discretionary alternatives, and the cycle repeats.

4.1.2. Modelling the knock-on effects of discretionary alternatives

Next, we consider the economic effects of customers spending their money on discretionary alternatives, in order to determine the net effects of online gambling. We assume that when customers do not gamble online, they spend money on the discretionary alternatives and spend as much on that recreation as they would have on gambling. Therefore, we compare the effects of £100 in online gambling with £100 in discretionary alternatives.

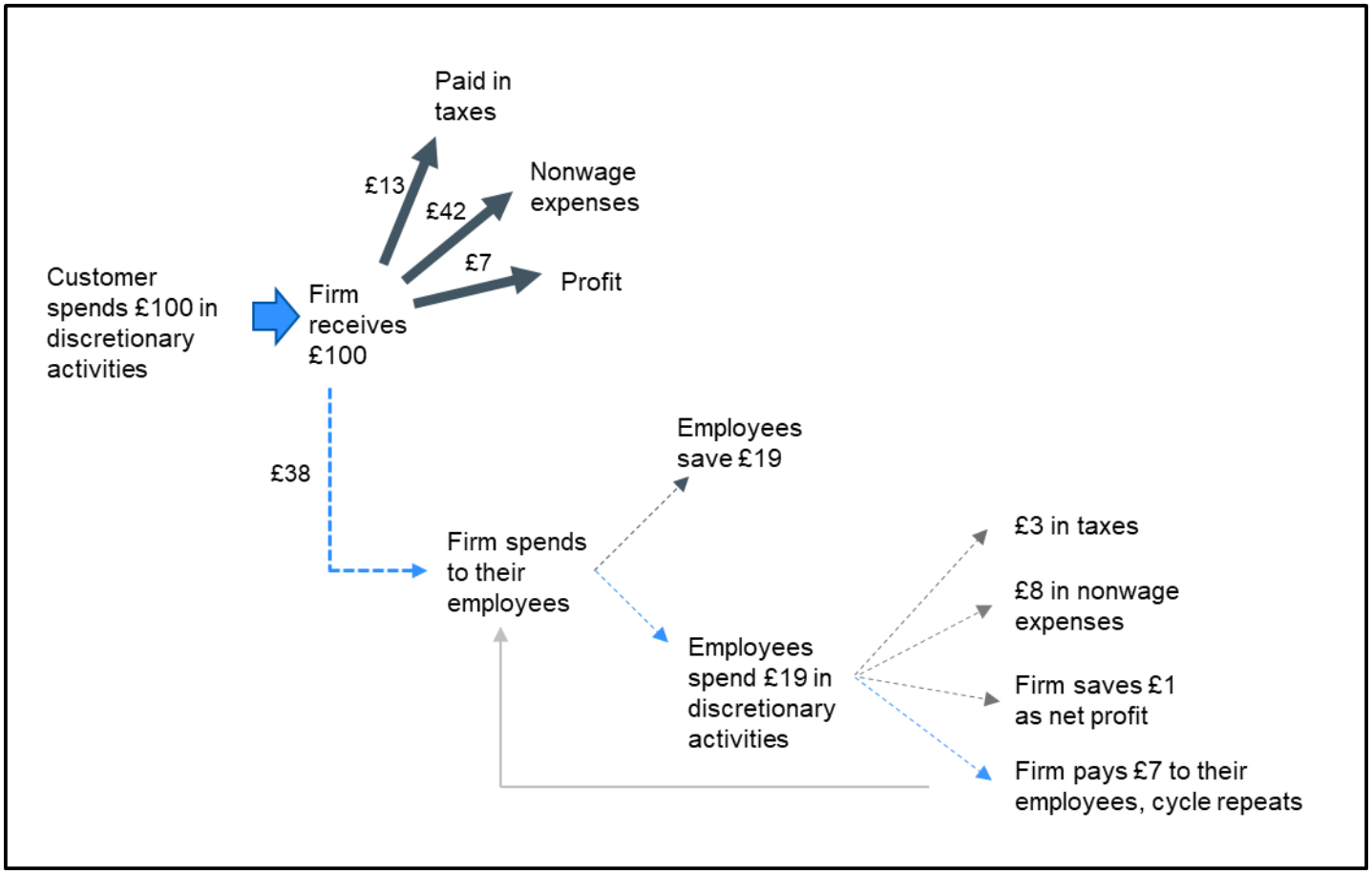
We display the model of the discretionary alternatives in Figure 4.2 below. We begin with a customer spending £100 on discretionary alternatives, where it is received by firms that offer retail goods, dining, access to the arts, and amusement. These discretionary alternatives distribute a

[27] Harry Rigg et al. The financial position of British households: evidence from the 2019 NMG Consulting survey. Bank of England Quarterly Bulletin 2019 Q4. (2019). https://www.bankofengland.co.uk/quarterly-bulletin/2019/2019-q4/the-financial-position-of-british-households

greater share of their revenues to employees than the online gambling company does, with £38 going to employee compensation in contrast to £2.54. The discretionary alternatives distribute the remaining £62 between taxes, non-wage expenses, and net profit for their owners.

We assume the same MPC of 50 per cent, so the firms' employees spend £19 on discretionary spending of their own, and these new discretionary alternatives collect the £19. Of this, they pay £7 to their own employees, and the cycle continues.

Figure 4.2: Economic Effects of £100 in Discretionary Alternatives



As the above figures show, the discretionary alternatives spend more than a third of their revenue on employees' wages. Their employees spend that money again in turn. As a result, when customers spend their money on discretionary alternatives there are knock-on effects in the economy, including greater overall economic activity and a greater amount of money being paid to workers as wages. There is a cycle of wage spending and spending those wages at firms, and more activity is created at each step when the initial customer chooses to gamble online.

We contrast the first few rounds of spending in Table 4.1 below.

Table 4.1: Knock-On Effects of the Decision to Gamble or Not

	Customer spends	Gambling company (or alternative) pays to employees	Employees spend to new firms	New firms pay their employees	These employees spend to new firms	These firms pay their employees
Gambling online	£100	£2.54	£1.27	£0.49	£0.24	£0.09
Discretionary alternatives	£100	£38	£19	£7	£4	£1.4

After iterating the above calculations until the effects decay away, we find the overall economic effects of gambling by adding all the spending that results from spending each dollar. In Table 4.2 below, we capture:

- The customer expenditure prompted by the initial decision to gamble or not. We do not include the initial £100 spend in this total because it is spent regardless of the decision to gamble or spend money elsewhere. We only count the spend by employees of the online gambling company and the employees of the recreational firms;
- Total wages earned, including by the employees of the online gambling company or other firm first approached by the customer, plus the employees who work in discretionary industries further down in the cycle; and
- We do not count the nonwage expenses of the online gambling company or discretionary alternative firms as spending, because they are overhead costs and are not immediately related to a customer's choice to gamble or not.

Table 4.2: Spend and Wage Impacts of £100 Initial Spend

Effects	£100 to Online Gambling	£100 to Discretionary Alternatives
Total customer spend	£1.57	£24
Total wages earned	£3.15	£48

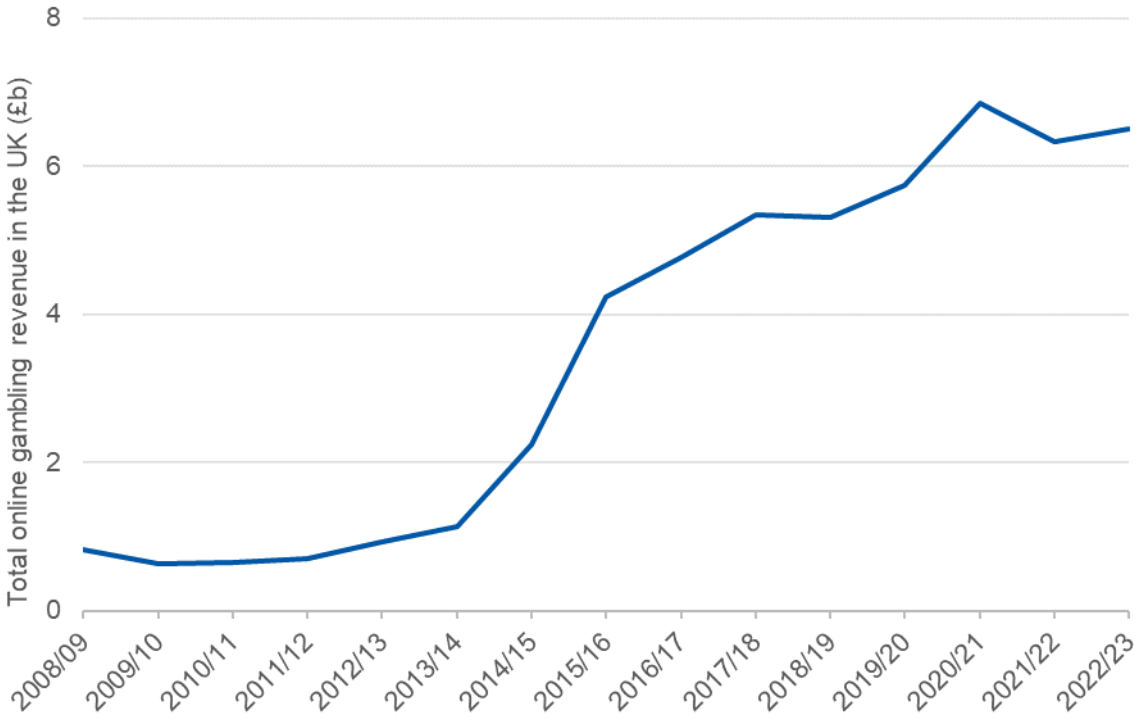
The discretionary alternatives lead to more economic activity and greater total wages paid than gambling does. In both cases, the amount of customer spending is half of the total wages paid, because the MPC is 50 per cent and customers spend half of the wages they receive.

4.2. Modelling Results

The model mechanics work on the basis of a £100 spend on online gambling or on discretionary alternatives. To measure the economic net impact of gambling, we apply the model to total amount that customers spend gambling online according to the Gambling Commission. In this section we consider the impact of online gambling over that entire period.

We display the total amount of online gambling revenue in Figure 4.3 below.

Figure 4.3: Total Online Gambling Revenue



Source: Gambling Commission

The Commission's annual statistics from 2015-2023 show an average of £5,632 million in online gambling revenue per year. We display the net effects of this level of gambling in Table 4.3 below.

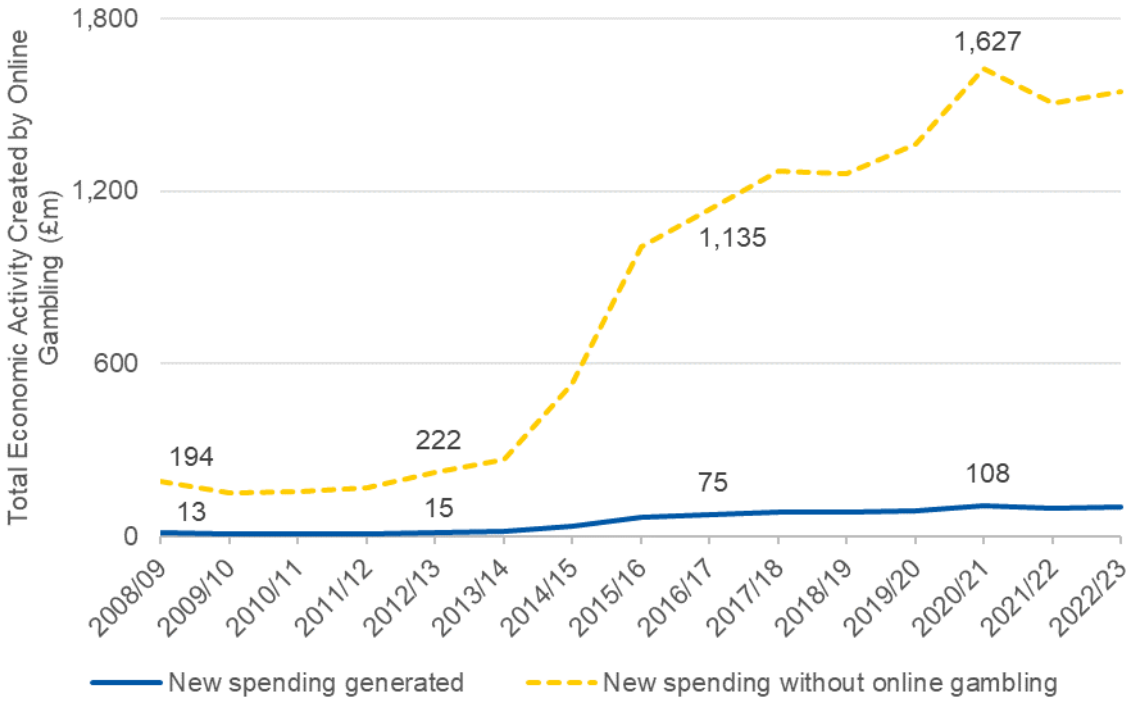
Table 4.3: Economic Effects of Online Gambling from Annual Average (£m)

	Average Revenue	Customer spend	Total Wages
Online Gambling	5,632	89	177
Discretionary Alternatives	5,632	1,339	2,682
Net Effect	-	-1,251	-2,504

We conclude that online gambling has had negative results for the economy. We apply the effects of £100 of online gambling and discretionary alternatives to the online gambling industry's total revenues to determine the effects of online gambling on the amount of economic activity and total

wage payments to workers in past years. We display our results regarding economic activity in Figure 4.4 below.

Figure 4.4: Total Economic Activity Created by Online Gambling



Online gambling has reduced consumer spending each year. As online gambling has grown, the amount of economic activity lost has increased.

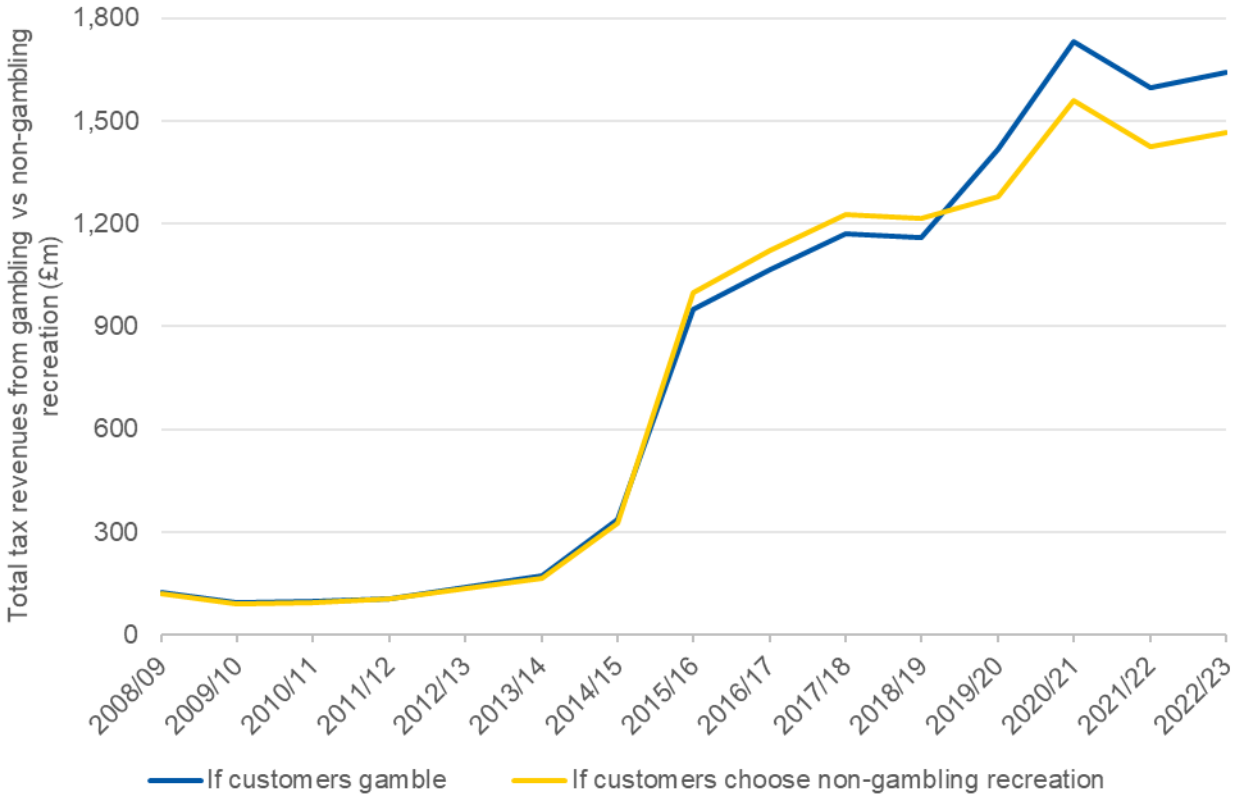
In Figure 4.5 below we display our results regarding the effects of online gambling on total wage spend.

Figure 4.5: Total Wages Created by Online Gambling

In each year, online gambling has likewise had a negative net effect on the amount of wages paid out to workers. As is the case with economic activity, the negative effect has increased as the amount of online gambling has increased.

Finally, we find that the availability of online gambling has little effect on overall tax revenue to the government. To find the total tax revenue that results from online gambling, we find the average gambling duties paid on all online gambling and we add all the corporate taxes paid by the online gambling companies. We consider the wages these companies pay to their employees and all the taxes paid by the discretionary alternatives at which the employees spend money, and we add those taxes to the total. At every stage of employees becoming customers, we add the taxes paid by the businesses they visit. We apply the same method to find the total taxes the government would collect in the absence of online gambling. We display the results in Figure 4.6 below.

Figure 4.6: Tax Revenues Depending on the Decision to Gamble



The availability of online gambling to customers has little effect on the government's total tax revenue overall.

The difference between tax revenues with and without online gambling is small because in the absence of online gambling, customers spend their money to discretionary alternatives which pay a significant part of it in wages, causing a cycle of spending where the discretionary alternatives pay taxes on their profits every time the cycle repeats. This means that the discretionary alternatives lead to higher overall corporate tax revenues which can compete with the special duties that online gambling companies have to pay.

The Remote Gaming Duty rose from 15 per cent to 21 per cent in 2018. This increase causes gambling to replace the discretionary alternatives as the condition that results in the most tax revenue.

We combine all of our results for the years 2015-2023 and display them in Table 4.4 below. We also find the economic effects of customers spending the average amount they did annually in the 2015-2023 period (£5,632 million) on gambling or discretionary alternatives respectively.

Table 4.4: Overall Economic Effects of Online Gambling vs Discretionary Alternatives (£m)

	Gambling			Discretionary Alternatives			Difference		
	New Spend	Total Wages	Tax Revenue	New Spend	Total Wages	Tax Revenue	New Spend	Total Wages	Tax Revenue
2015/16	67	133	948	1,006	2,014	998	-939	-1,881	-50
2016/17	75	150	1,065	1,135	2,273	1,121	-1,060	-2,123	-56
2017/18	84	168	1,169	1,271	2,546	1,226	-1,187	-2,377	-57
2018/19	83	167	1,158	1,262	2,526	1,215	-1,178	-2,359	-57
2019/20	90	181	1,417	1,364	2,730	1,278	-1,274	-2,550	139
2020/21	108	216	1,727	1,627	3,258	1,553	-1,519	-3,042	173
2021/22	99	199	1,593	1,504	3,011	1,423	-1,404	-2,812	170
2022/23	102	205	1,641	1,546	3,094	1,462	-1,443	-2,890	179
Average	89	177	1,325	1,339	2,682	1,282	-1,251	-2,504	43
Total	709	1,419	10,717	10,715	21,453	10,277	-10,006	-20,034	440

Online gambling companies spend so little of their revenues on labour that online gambling causes minimal knock-on effects either in the amount of new spending or the amount of wages that employees ultimately receive. In contrast, in the absence of online gambling, firms that offer other forms of recreation would have generated billions of pounds annually in new spending and wages. Online gambling results in slightly more tax revenue for the government than would otherwise be available, because since the 2018 increase the duties on gambling have been high enough to offset the loss of knock-on economic activity and the accompanying tax revenue.

5. Conclusions

The large and growing revenues to the online gambling industry have been detrimental to the economy, to the extent that this spending took revenue away from other, more labour-intensive discretionary industries. In contrast to retail stores, restaurants, the arts, and amusement, the online gambling industry spends an insignificant portion of its revenue (<5%) on employees. For that reason, when consumers spend their money gambling online instead of on other forms of recreation, we estimate that they cause little new spending, at £1.57 per £100. This stands in contrast to the £24 of new spending we estimate that customers generate when they spend their money on discretionary alternatives.

The rise of online gambling since about 2010 has diverted significant amounts of consumer spending away from discretionary alternatives. In the period 2015-2023, customers spent on average £5.6 billion gambling online per year, according to data from the Gambling Commission. The discretionary alternatives may have created £1.3 billion in new spending from this revenue annually, but we find that online gambling only led to £89 million in new spending annually. This amounts to a net loss of £10 billion in spending over the entire 2015-2023 period.

Online gambling has similarly decreased the total wages that consumers' recreational spending would generate. We estimate that online gambling creates £3.15 of total wages per £100 of spending, in contrast to £48 for the discretionary alternatives. In the 2015-2023 period, we estimate that online gambling created an annual average of £177 million in total wages, but the same revenue may have created £2.7 billion in wages annually if customers had spent their money on discretionary alternatives. This amounts to a net loss of £20 billion in wages over the entire 2015-2023 period.

While we do not consider other induced and indirect expenditures relating to online gambling, it is primarily a solitary activity without much associated activity outside of the gambling itself. In short, we conclude that online gambling takes away money that may have been spent to more effect in other segments of the economy.

The availability of online gambling has little effect on tax revenues. Online gambling is a net positive for tax revenues only after 2018/2019, and across the 2015-2023 period online gambling resulted in an average of £1,325 million in tax revenues annually, rather than the £1,282 million that the discretionary alternatives would have generated. Online gambling provided a net annual average gain of £43 million in tax revenue. This amounts to a total of £440 million over the entire 2015-2023 period.

Finally, although online gambling companies do not sell physical goods to consumers or even provide a brick-and-mortar location, they spend 47 per cent of their revenue on non-wage expenses in contrast to the 42 per cent that the discretionary alternatives spend, largely on advertising. Additionally, online gambling companies collect 27 per cent of their revenues as net profit, while the discretionary alternatives only collect 7 per cent. Online gambling companies spend their revenues on marketing in order to attract new customers and generate new profits, rather than on activities that provide useful knock-on economic benefits, like hiring local workers.

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