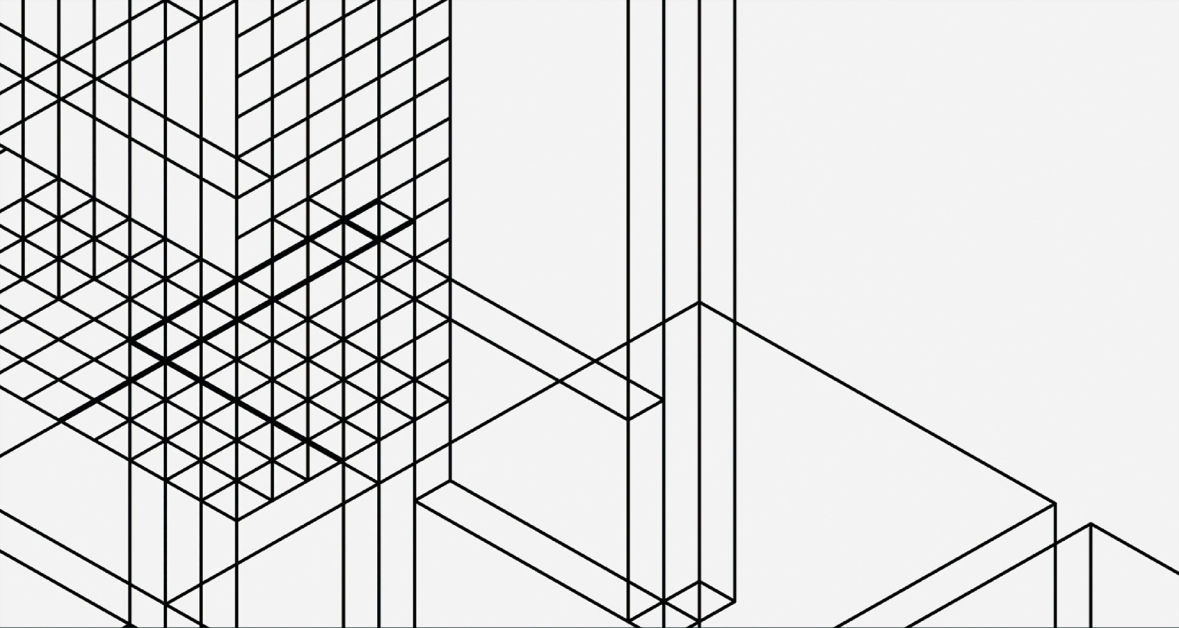




GAMBLING IN AN ONLINE WORLD

Virve Marionneau



Gambling in an Online World

This book takes a close look at online gambling, a rapidly growing industry with the potential for significant social harm.

Exploring multiple-perspectives – including the experience of consumers, the industry itself, the challenges of research and the importance of regulation – the book draws on sociological methods to give a more nuanced account of how the industry really works and the effect it is having on our social world. The book argues that online gambling is an important example of digital production of an addictive commodity with unique commercial determinants, including high profits, high availability, harmful product characteristics and a digital-first business model that is networked with other addictive industries. It explores key themes in online gambling research, including online gambling products and online gambling production, the importance of data or surveillance capitalism, the possibilities and limits of regulating online markets and the future of online gambling markets, and highlights the asymmetry between the industry and regulation in terms of access to, and ability to analyse, data.

Examining the existing evidence and offering new empirical analyses, and containing examples, stories and research data in every chapter, this book is important reading for anybody with an interest in gambling, digital business, the sociology of leisure and consumption, addiction, data capitalism, social harm, governance, public policy or regulation.

Virve Marianneau is an associate professor at the University of Helsinki, Finland. She is also the director of the University of Helsinki Centre for Research on Addiction, Control and Governance, a commissioner on the Lancet Public Health Commission on Gambling and a member of the Gambling Harms Evaluation Committee of the Finnish Ministry of Social Affairs and Health. Her research focuses particularly on gambling regulations, the commercial and legal determinants of gambling and gambling harms.



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Virve Marionneau



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For Alexander and for Oscar



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Data Availability Statement

This book is based on different data sources. Some of these are openly accessible and described as such in text. Industry statistics derived from the Vixio Gambling Compliance Database are available under license from Vixio. Any interview material is available from the authors, upon reasonable request and within the limits of confidentiality agreements with participants.

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Thanks to my family and friends, particularly Ludovic, Alexander and Oscar.

Introduction

What is online gambling and why is it special?

Gambling is a fascinating research topic. It has been over fifteen years now that I have been studying gambling-related issues, and it seems that there are always new phenomena, new perspectives and new ideas. Over these fifteen years, I have seen the landscape of the gambling industry change drastically. In Finland, my home, gambling offers of early 2010s were mainly characterised by land-based lotteries and electronic gambling machines (EGMs) that only operated single products and were not connected via a central network. Today, gambling has moved largely online. EGMs have become digital terminals with online access and a large choice of products. The development has not been specific to Finland only – similar shifts to online environments have taken place globally.

Online gambling occurs in digital and networked interfaces. Sometimes, online gambling is also called e-gambling, internet gambling or remote gambling (Orford, 2010). Most online gambling takes place via connected devices such as smartphones and computers. In many jurisdictions, online products can also be accessed via digital terminals in land-based gambling venues and outlets. Jim Orford (2010) defines online gambling as the act of (i) using the internet to communicate with an operator to place a bet or to purchase a lottery ticket, and (ii) gambling on virtual products such as virtual poker or virtual EGMs.

As a concept, online gambling comes close to digital gambling. Albarran-Torres (2018) defines digital gambling as any gambling format that is based on random number generators or RNGs. This definition encompasses a variety of digitally enhanced gambling products in addition to online gambling, such as EGMs, electronic table gambling, terminal-based virtual racing and so on. Online gambling incorporates digitalised versions of many traditional gambling formats. In addition, online gambling includes novel products that may not have a land-based counterpart.

However, online gambling has two critical differences in comparison to digital gambling. First, online gambling is constantly available. Second,

online gambling is always networked, leaving a digital trace that can be connected to a specific user. The networked nature has not been fully apparent in existing definitions of online gambling. Yet, online gambling takes place in an environment that accumulates extraordinary amounts of data on how consumers interact with gambling products and interfaces. This networked and data-driven nature sets online gambling apart from other, non-networked gambling formats and environments.

We know from other fields that online industries generate and utilise vast amounts of data. Data-driven commercial practices can be harmful to consumers. So-called ‘dark patterns’ – digital design features that manipulate people to act against their best interest – mobilise user data and online architecture to nudge or even manipulate users into making potentially harmful decisions by, for example, emphasising time constraints or limited availability of products. Dark patterns can also be directed to nudge consumers to disclose and share their data (Chagnon et al., 2021; Mulligan et al., 2020). Dark patterns increase impulsive behaviour in online environments (Sin et al., 2022). These types of practices are common on any online website.

Aided by dark patterns, all our online activity leaves behind traces and digital footprints. Digital footprints are composed of information that we deliberately share online, but also of tracking data that is collected on us in digital spaces. These data are used by online corporations to train algorithms for commercial purposes. Algorithms can predict behaviours, help target advertisement where it is most effective, and nudge us towards further consumption (Berg et al., 2020; West, 2019; Zuboff, 2019). Data have become the key to monetisation and value production in digital capitalism (Mazzucato et al., 2023; Zuboff, 2019). Sociologist Manuel Castells (1996) has argued that the ability to apply, create and share information gives digital market actors highly sophisticated commercial power. Sociologist Shoshana Zuboff (2019) has called this type of data-driven and digital capitalism *surveillance capitalism*.

Gambling industries also utilise data-driven commercial techniques in the networked online space. The increasingly online-first business model of gambling industries produces enormous amounts of data on consumers. We already know that these data can be used to target marketing efforts to encourage consumption (Guillou-Landreat et al., 2021; Marionneau et al., 2023a). User data can also be utilised to shape digital content to be more appealing (Marionneau et al., 2023a; Newall, 2019). The Lancet Public Health Commission on Gambling (Wardle et al., 2024: e950) recently argued that ‘leveraging online digital infrastructures and surveillance data, gambling companies now have unparalleled capabilities to target consumers.’

Gambling is big business

Gambling is major global business. Statistics on the size of the global gambling industry suggest that the full market was worth 492 billion Euros (570 billion USD) in 2024, rising to around 533 billion Euros (618 billion USD) in

2025 (H2 Gambling Capital, 2024; Research & Markets, 2025). These kinds of figures may be difficult to put into perspective. By way of comparison, the global gambling industry is worth more than the global video gaming industry (around 393 billion Euros in 2024) and equals the global confectionery market (534 billion Euros in 2025) (Statista, 2025b, c).

Gambling is becoming an online-first business. In 2023, gambling intelligence provider H2 Gambling Capital estimated that 23.8% of the global gambling market consisted of online gambling, up from only 14.5% in 2020 (H2 Gambling Capital, 2024). In 2024, the online gambling industry was worth approximately 65 billion Euros. In 2029, the online gambling market is projected to reach around 104 billion Euros (Statista, 2025a).

In some countries and in some product verticals, the majority of gambling is already conducted online. Industry association The European Gaming and Betting Association (EGBA, 2025) reports that in Europe, 39% of gambling took place online in 2024. In countries such as Sweden, Denmark and Finland, almost 70% of all gambling already takes place online (EGBA, 2025, see also Chapter 1). In terms of products, EGBA (2025) reports that approximately 68 percent of sports betting revenue and 72 percent of casino gambling revenue in Europe is derived from online channels.

The intersection between the online world and an addictive industry such as gambling can cause significant harm to consumers and to societies. The provision of online gambling is connected to many commercial determinants, including high profits, high availability, harmful product characteristics, and a digital-first business model that is networked with other digital industries, such as financial institutions (Marionneau et al., 2023a; Nicoll, 2013; Swanton et al., 2019; Wardle et al., 2024). Online gambling products are highly immersive, fast, and encourage excessive consumption (Marionneau et al., 2024; Wardle et al., 2024). Sales interfaces of online gambling products are designed to encourage excessive consumption (see Chapter 3).

Consumer data are likely to accelerate the harm potential of these already harmful products. Research has already shown how gambling companies use consumer data for targeted marketing, nudges, and push notifications (Guillou-Landreat et al., 2021; Newall, 2025). Dark nudges and dark patterns further shape behavioural patterns (Newall, 2019; 2025). Addictive and harmful products, such as gambling, can therefore become even more harmful by targeting users with even more addictive content.

Online gambling causes significant harm

Gambling can cause a range of harmful consequences for individuals who gamble, as well as to their family members and other concerned significant others (CSOs). The addictive business model of the gambling industry has resulted in highly concentrated consumption patterns of gambling. Some spend much more than would be within their means, generating so-called ‘addiction surplus’ (Adams & Livingstone, 2015). Harms caused by gambling products

span far beyond individual addictive behaviour. Gambling is connected to a range of harms, from psychological, relationship, and productivity-related issues to suicides and severe health harms (Langham et al., 2015; Wardle et al., 2024; WHO, 2024). Gambling can lead to important financial losses and heavy indebtedness (Marionneau et al., 2023a; Muggleton et al., 2021). Many of these harms accrue to people whose gambling is not identified as ‘problem gambling’ (Browne et al., 2020).

Gambling harms and problems may be even more severe in online and digital environments. A meta-analysis of risk factors for gambling problems (Allami et al., 2021) found that the most important risk factor for gambling problems, within a set of 57 potential correlates, was internet gambling. The second most important risk factor was EGM-type gambling. A review by Raybould et al. (2021) found that online gambling is related to a risk of alcohol and drug-related problems, financial hardship as well as physical and mental ailments. Online formats are also causing an increasing share of harms recorded by help services (Marionneau et al., 2024). Research from Sweden (Wall et al., 2025) shows that as gambling has become increasingly online-driven, harms reported by help-seekers have become more severe. Notably, issues such as suicidality and severe indebtedness have become more common amongst help-seekers in Sweden in 2023, compared to 2019. The same study found that various harms were more severe amongst those who gambled with online EGMs, in comparison to those who did not.

Beyond its negative effects on the individual, gambling is also a societal and public health issue. Gambling can harm societies in many ways. Gambling is strongly linked with inequalities, social disadvantages and societal injustice (Sulkunen et al., 2019). All gambling harms do not stem from individual consumption patterns. The provision of gambling has been linked to issues such as corruption and criminal involvement, economic substitution effects, environmental damage related to tourism, and animal suffering related to horse racing (Marionneau et al., 2023a).

Gambling generates significant social costs. Recently, we published a scoping study into societal cost calculations of gambling (Hautamäki et al., 2025). Although societal costs of gambling are frustratingly complex to calculate, with varying methodological choices, cost categories and inclusion criteria, we were able to estimate that the median annual social cost of gambling was 449 international dollars (346 euros) for every over-15-year-old citizen in a population. In Finland, this would mean approximately 1.6 billion euros. Comparing the figure to the revenue that gambling generates to the state treasury in Finland (approximately 500 million euros in 2024), shows that gambling is unlikely to be financially profitable for societies.

Bearing these negative consequences in mind, it becomes imperative to understand online gambling. Gambling harm is avoidable, and it is possible to improve regulations, even in the online world. However, harm prevention and harm reduction require a more systematic understanding of the online business model and the commercial determinants that drive harm.

This book

This book provides an overview of what online gambling is about, what the online gambling ecosystem looks like, how the online gambling industry functions, and how data-driven commercial practices are utilised in online environments. Understanding the online world is crucial if we want to regulate it and protect populations.

The book looks at online gambling and its landscape from a variety of perspectives, but the main focus is on the industry and its practices. I look at the structures of the industry that produces online gambling, what online products and interfaces look like, what kind of advertising practices are prevalent in the online world, how the online gambling ecosystem is underpinned by data, and how regulations can address the online gambling market.

The first two chapters draw an outline of what the online gambling industry is. [Chapter 1](#) gives an overview of the development of online gambling by looking at the history of online gambling since the 1990s, as well as the more recent market boost after COVID-19. The chapter also traces the current online gambling markets in the regulated as well as the offshore segments. [Chapter 2](#) expands the perspective on what the gambling industry is. The chapter focuses on the wider ecosystem of online gambling by describing the broad network of suppliers, services and third parties that contribute to the production of online gambling.

[Chapters 3](#) and [4](#) focus on the commercial practices of online gambling industries. [Chapter 3](#) looks at online gambling products and platforms in terms of their characteristics, design elements, online choice architecture and nudges. Understanding how online products and environments are designed is important to appreciate how people experience them, and how addiction can be created ‘by design’ (Schüll, 2012). [Chapter 4](#) focuses on marketing and advertising in the online world. Online environments provide a unique opportunity for advertisers to target their promotions in ways that make them as effective as possible. Targeting and profiling are the cornerstones of online advertising, and these practices are widely used in customer acquisition and customer retention for online gambling websites.

[Chapter 5](#) looks at online gambling from the perspective of surveillance capitalism (Zuboff, 2019). Surveillance capitalism refers to the economic model that has emerged from the potential of data. Data-driven online business allows targeting, profiling and surveying individuals across the online space. The chapter looks at how user data are collected on gambling websites, how these data are used, and what kind of impacts the data-driven business model can have on individuals.

To conclude, [Chapter 6](#) looks at the possibilities and limits of regulating online gambling. The chapter focuses on the potential to regulate the licensed as well as the offshore industry. Although effective regulatory tools are increasingly well-known, few regulations globally target data-driven practices. Furthermore, regulators face several barriers to implementing effective

regulations, including strong industry opposition. The chapter argues that we need to step up regulations of gambling in online environments.

Finally, a few small disclosures.

First, this book draws on available evidence on business practices that exist within the online gambling industry. I try to look at online gambling from the industry's perspective, with the aim to understand in what kind of reality online gambling operators exist, how they are structured, and how they conduct their business. I have used industry sources when academic literature has not been available, and I also use terms that are commonplace in the industry. The aim is not to endorse or promote these practices, but to understand them. Understanding how the industry works is necessary to effectively regulate the industry – more so than ever in the constantly evolving online world.

Second, the book focuses largely on the negative side of gambling. I am not claiming that gambling cannot provide entertainment value for some people. At the same time, the positive side of gambling is already highly emphasised in societies, not least by prevalent gambling advertising. Beyond this entertainment-focused framing, many people experience severe harm from gambling. In the online space, fuelled by data and personalisation, harms are likely to further aggravate.

Third, the evidence and arguments presented in this book are based on practices and issues that exist within the online gambling industry broadly. I do not claim that all gambling companies operate in the same way. Not all companies offer the most harmful gambling products. Gambling websites differ in terms of their design, and gambling operators also vary in terms of their marketing practices. I also do not claim that all gambling operations are underpinned by a surveillance capitalist operation logic. However, I do draw on available evidence on situations in which this does happen. I believe this is necessary. Only by recognising what kind of harmful and potentially harmful business models can exist, is it possible to regulate them proactively.

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From Early Online Products to a Global Industry

Origins of online gambling

The beginning of the internet traces back to 1969 when researchers in the United States developed Advanced Research Projects Agency NET (ARPANET). ARPANET was initially designed for military communication by the US Department of Defence to prevent Soviets from destroying American communications in the event of a nuclear war. ARPANET eventually became the acclaimed ancestor of modern mainstream networked internet ([Castells, 1996](#); [Lukasik, 2010](#)). Sociologist Manuel [Castells \(1996, p. 7\)](#) writes that ARPANET became ‘the foundation of a global, horizontal communication network of thousands of computer networks’ that quickly expanded to purposes far beyond military use.

By the 1980s, the early internet had expanded into a global system. Commercial networks began to emerge, and the Domain Name System (DNS) was introduced in 1983 to keep up with the growing number of internet host names ([Mockapetris & Dunlap, 1988](#)). During the early years of the internet, the US National Science Foundation maintained a policy on the use purposes of the internet: The aim was to limit internet resources for official and academic uses, only. However, in a series of reforms throughout 1991 and 1995, the Foundation removed restrictions on the commercial use of the internet ([Pesce, 2023](#)). This paved the way for commercial websites – including the first gambling websites.

The internet of gambling started in 1994–1995. In 1994, a company called Microgaming started producing the first online casino software. Microgaming is still a significant company in the gambling software market (see [Chapter 2](#)). The creation of gambling software coincided with the development of the first encrypted communication logics, allowing secure monetary transactions online ([Williams et al., 2012](#)). The first online gambling website, the International Lottery in Liechtenstein Foundation, was the first to officially accept money wagered online in October 1995 ([Häberling, 2012](#); [Williams et al., 2012](#)).

The first virtual casino (and the first offshore casino) became available around the same time. In 1995, Internet Casinos, Inc. was established, operating out of the British overseas territory of the Turks and Caicos Islands in the Caribbean. The casino offered 16 different virtual gambling products and the Indian National Lottery ([Britannica, n.d.](#); [Turks & Caicos Islands, n.d.](#)), targeted at American customers ([Cassidy, 2020](#)). InterCasino, based in Antigua, began operation in 1996 and was, according to [Williams et al. \(2012\)](#), the first online casino to accept an online wager. Outside of the Caribbean Islands, online gambling also spread into Western jurisdictions. During 1996–1997, online gambling became available at least in the UK (Eurobet), Australia (Centrebet) and Finland (Veikkaus national lottery) ([Williams et al., 2012](#)).

The history of remote gambling is of course much longer than that of online gambling. The Louisiana Lottery Company offered lotteries across state borders in the US in the 1800s ([Sulkunen et al., 2019](#)). In the UK, William Hill founded his betting company in 1934 as a telephone and postal service, despite this being illegal at the time ([Davies, 2022](#)). The small island nation of Vanuatu in the Pacific started a Great World Lottery in 1989, aimed at Americans and Australians ([van Fossen, 2003](#)), while the free-trade zone of Antigua & Barbuda enabled offering telephone bets to US-based customers in the 1990s ([Wood & Williams, 2007](#)). Digital forms of gambling have also been available since the 1960s, with the introduction of the first electromechanical gambling machines. The first electronic gambling machine (EGM) terminals were developed in the 1970s, allowing to integrate EGM gambling with computerised information and communication systems ([Liu et al., 2021](#); [Schüll, 2012](#)).

The advent of online gambling profoundly changed the industry and enabled a global perspective on provision. In many countries, online gambling was initially not legalised, to protect national land-based gambling schemes against international operations ([Sulkunen et al., 2019](#)). Most land-based operators were also initially reluctant to enter the online market, with the exception of some European gambling monopolies such as Veikkaus and PAF in Finland (also [Williams et al., 2012](#)). [Pilling and Bartlett \(2012\)](#) have noted that during the early years of online gambling, there was a strong correlation between broadband internet access and the prevalence of online gambling. This also explains why online gambling first emerged in markets with high internet usage, such as the Nordics. Other jurisdictions, particularly in the Caribbean, Gibraltar and Kahnawake (Canada), established themselves as offshore gambling hubs ([Pilling & Bartlett, 2012](#)). Malta was the first European country to start providing online gambling licenses in 2004 ([Norman, 2025](#)). These locations offered minimal regulation and favourable taxation regimes, making them attractive to operators ([Casey, 2024](#)).

The UK opened licensed and competitive online gambling markets in 2007, enabled by the 2005 Gambling Act ([Casey, 2024](#)). France and Italy licensed competitive online gambling markets in 2010 and 2011, respectively, to channel online gambling and revenue to the regulated market ([Regulus](#)

Partners, 2021; Marionneau et al., forthcoming). Digitalisation of gambling was therefore strongly linked to commercialisation, and even more broadly to market liberalisation (Sulkunen et al., 2019). Starting in the 1980s, and boosted by online access, gambling grew from a small-scale activity to a global commercial project (Reith, 2013; Kingma, 2008; Markham & Young, 2015). Casey (2024, pp. 447–448) has described the neoliberal ideologies behind increasingly commercial gambling markets as the consequence of a ‘growing belief in neoliberal ideals of deregulation, competitive markets and a shrinking role of the state, along with the valorisation of individual choice and responsibility.’

Online gambling expanded to new products and new market segments during the late 1990s and early 2000s. The first online products included lotteries, sports betting and online casinos. The first online bingo and the first online poker sites became available in 1998. The first betting exchanges launched in 2000 (Williams et al., 2012). Gambling also expanded to mobile environments. The first online casinos were already available on Nokia phones of the early 2000s. However, mobile gambling grew significantly after the launch of smartphones in 2007 (Uplatform, 2022). By 2012, mobile phone gambling was becoming increasingly interesting to companies (Cassidy, 2020). One early online gambling entrepreneur was Bet365. The Guardian (Davies, 2024) reports how the head of Bet365, Denise Coates, ‘began building her online betting empire in 2000 from a portable building in a carpark.’ By 2005, Bet365 had sold off its land-based locations and focused entirely on online gambling. In 2006–2007, the company earned £91 million (105 million euros). In 2023, it produced over £3 billion (3.5 billion euros) (Davies, 2024).

The next section looks more closely at what early gambling websites looked like and how they evolved as the online gambling market matured.

Early gambling websites

To investigate what early gambling websites were like and how they developed over time, we collected historical website data from The Wayback Machine¹ (accessible at <https://web.archive.org/>). The Wayback Machine is a digital archive that was created by the Internet Archive, a non-profit digital library. The Wayback Machine allows accessing and browsing historical versions of websites. We searched back historical data on ten websites: Veikkaus (Finland), PAF (Finland Åland Islands), Svenska Spel (Sweden), FDJ (France), Bet365 (UK), Betfair (UK), Betway (UK), LeoVegas (Estonia), FanDuel (US). We also tried to access Stake.com, but data on this operator was not available. As I wanted to look at longer-term changes and developments, the main focus was on national operators and a selection of other established companies that have been around for long periods of time.

The Wayback Machine takes snapshots of webpages at various time points. For this data collection, we recorded pictures of the first available versions

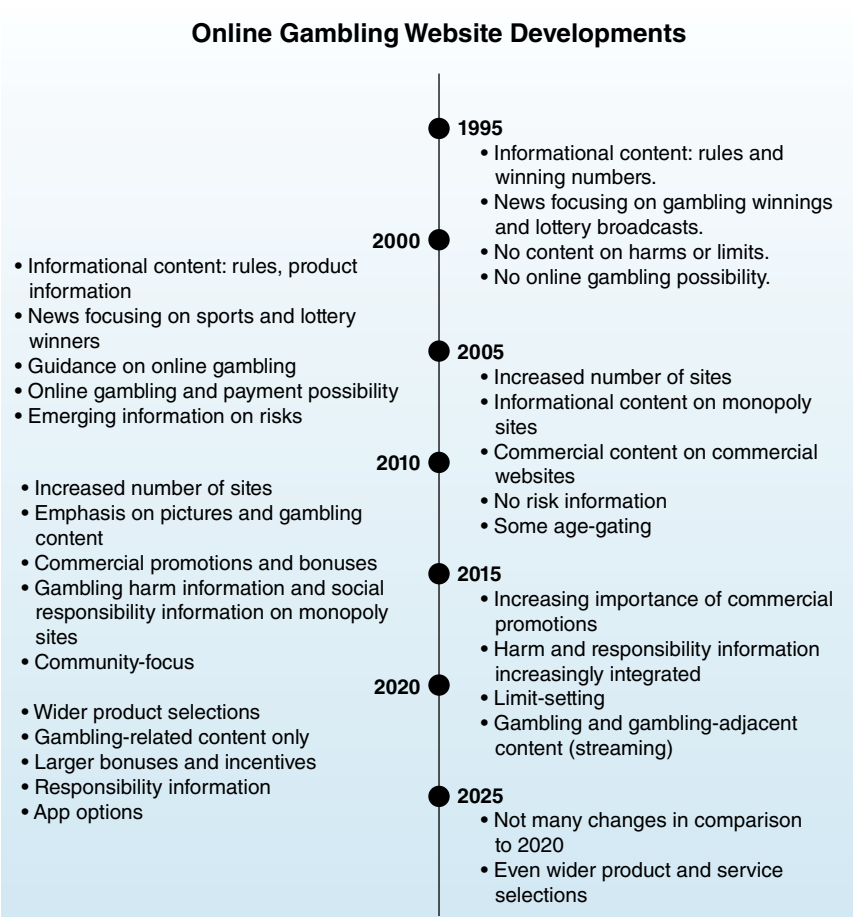


Figure 1.1 Timeline of gambling website development 1995–2025.

as well as subsequent versions from 2000, 2005, 2010, 2015, 2020 and 2024/2025, or closest available years when data on the Wayback Machine were not systematically available. The aim was to look at what kinds of products are available, what other content is available, how the graphical design has changed and whether information on gambling harms or tools to limit one’s gambling were available. The main developments of websites are summarised in [Figure 1.1](#).

1990s

The only website that was available in our data collection during the 1990s was the Finnish gambling monopoly Veikkaus website (see [Figure 1.2](#)).



Figure 1.2 Finnish gambling monopoly Veikkaus gambling product selection in 1996.

The first available record in the Wayback Machine for the Veikkaus website dates back to November 1996. The website design is plain and focuses on providing information about gambling. The website does not yet permit gambling – the option to gamble online was made available in the following year. The provided information content focuses on different gambling products, their rules and results.

The website also introduces a gambling community called the ‘Veikkaus club’ that gives you access to Veikkaus materials and a quarterly newsletter. Joining the club costs 30 Finnish marks (about 8 euros in today’s currency) a year. Interestingly, the website also includes a feedback form prompting for detailed background information about the customer (email, age, gender, gambling habits, employment). The increasingly data-driven business model was perhaps already emerging in online gambling.

2000

Two websites in our data collection were available by 2000 (Veikkaus and Svenska Spel). The first recorded version of the Svenska Spel website

was available in December 1999. In comparison to the 1990s, websites of early 2000s are more detailed and informational. Websites are also less colourful, focusing on content and simplicity. Information on the front pages includes sports news, news about lottery winners and gambling product details. The Veikkaus website does not have any information on gambling harms or problems, but the Svenska Spel website includes a link to a self-test.

The product selection on both websites is strictly limited to slow-paced gambling products, including different types of lotteries and football pools. Available gambling products can also change depending on the day, depending on when lottery draws or football matches take place. The online gambling interface is highly simplistic. Figure 1.3. displays the Veikkaus online lottery interface.

Both websites include detailed instructions on how online gambling and online payments work. Payments for online gambling were possible via bank transfer to a personal gambling account or by printing out the online ticket and bringing it to a local land-based gambling reseller. The websites actively encouraged trying online gambling, as this was described as simple and straightforward. The Svenska Spel website from 2000 instructs how to gamble at football pools:

Gambling on the Internet is both smooth and easy. [...] Mark the outcomes (1,X,2) that you believe in, by placing the mouse cursor in the box and clicking. You can see information about costs and more for your game immediately. When the game is completely filled in, the OK button lights up. Click it when you are satisfied with your line/system. If you have a gambling account and are logged in, you can choose to pay immediately or save in 'My Games' and pay later.

PAF had also begun operation in 1999, but no version of the website from this time was recorded in the Wayback Machine. The first recorded version of the PAF website is available from 2001. Unlike Veikkaus and Svenska Spel, the PAF website includes an online casino, in addition to lottery and sports betting. However, the front-page design is simplistic, and records do not permit accessing any other subsites on the platform.

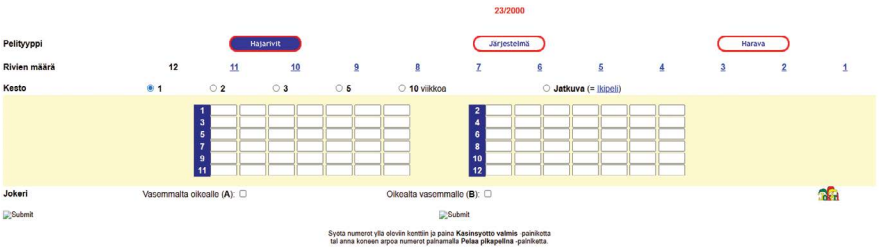


Figure 1.3 Online lottery gambling interface on the Veikkaus website in 2000.

2005

Online gambling had become significantly more widespread and diverse by 2005. Website design has become more colourful, and websites contain pictures and graphics. There are clear differences between commercial and monopoly websites. Potentially reflecting the upcoming British Gambling Act, UK-based companies have entered the online gambling market (Bet365 website is available in 2005, Betfair and Betway websites in 2006). These UK-based websites focus strongly on sports betting, but Bet365 and Betway also offer casino, poker, 'games' and virtual racing. The Betway website is the only one to advertise for a sign-up bonus on its front page: '100% bonus on your first bet!'. Betfair focuses on advertising better odds in comparison to competitors.

Nordic monopoly websites (Veikkaus, Svenska Spel) continue to focus strongly on sports content, gambling product information and information about lottery draws. The French monopoly website, FDJ, first appears in 2004 and follows a similar design, with the exception that, unlike Veikkaus and Svenska Spel, it also proposes access to poker and blackjack.

Information on the risk of gambling problems or harms is largely absent from websites. Interestingly, the self-test that was still available on the front page of the Svenska Spel website in 2000, has been removed. The only visible harm-related information on operator front pages in 2005 includes an 18+ marking on the PAF website and a small print at the bottom of the Betfair website reading 'Parental supervision (using Net Nanny, CyberPatrol) is advised and encouraged.'

The Veikkaus website has introduced a lengthy 'help' section, but this help only assists with questions related to product and internet usage. The section on 'gambling-related problems' is also focused on practical issues and technical support rather than gambling harm. Illustratively, the help section includes a sub-section on frequently asked questions (FAQ). None of these addresses gambling-related problems or harms. Instead, six different 'frequently asked questions' focus on what to do when winning significant amounts of money, including 'What happens now that I won money – a lot of it?', 'Do I get all my winnings without tax?', 'Are winnings in the millions also paid directly into my account?' or:

Q: Can this be real – a million euros?

A: Large winnings can be withdrawn after the 21-day protest period, either from the Veikkaus headquarters in Vantaa or the side office in Tampere. For a winning this large, it is worth the trip, and you get to see a bit of the world at the same time!

2010s

Around 2010, all gambling websites within the data collection have gone online. The first record of FanDuel is from 2009 and the first record of LeoVegas is from 2012. Website design between 2010 and 2015 is in general colourful,

with pictures occupying most of the space. Clear differences between commercial and monopoly sites are still apparent.

Commercial websites (UK-based websites, FanDuel, Leo Vegas, partly PAF) focus on making gambling offers commercially attractive. Sports-betting websites include pictures of victorious football players. Some websites also promote additional services such as live streams to watch sports matches (Bet365), a new Android gambling app (Betfair), welcome bonuses (Betfair, PAF, see also Figure 1.4), free spins (PAF) and free bets (Betway, Bet365). The front page of the FanDuel 2009 website dedicates significant space to highlighting the legality of fantasy sports, as online gambling was largely illegal in the United States at that time. Other than gambling-related content has a minimal role. Information on gambling-related problems and harms is also largely missing or minimal.

In contrast, monopoly websites (Veikkaus, Svenska Spel, FDJ, partly PAF) have started to include substantive sections on ‘responsible gambling.’ Sections include signposting to help, self-tests and other information on how to control one’s gambling. Svenska Spel advertises the ability to set your own gambling limits. In versions after 2011, when online gambling was regulated in France, the FDJ website also includes a banner at the top of the website informing about gambling harms and how to get help.

Some companies engage in social responsibility activities. FDJ promotes its work to raise awareness about gambling-related problems in the French society. PAF advertises company-sponsored research aiming to identify gambling problems in health service settings. Veikkaus provides extensive information on how gambling proceeds are utilised to fund social causes in Finnish society; This subsite is called ‘A Finn always wins.’

PAF and Veikkaus dedicate significant space to their loyalty programmes and clubs. Unlike the early Veikkaus community of the 1990s, these loyalty

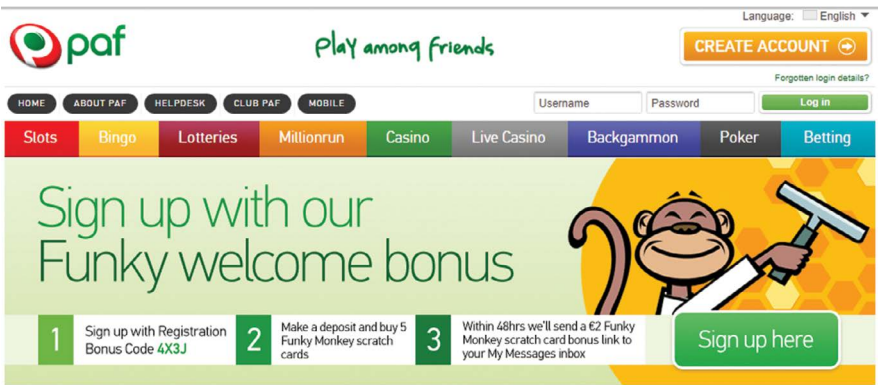


Figure 1.4 Front page of the PAF online casino in 2012.

programmes no longer require payment of membership fees. Instead, they propose attractive rewards for members. Signing up to the Veikkaus loyalty programme will, for example, provide you with a 'Veikkaus card [to identify in land-based gambling], special prize draws, special gambling products, immediate transfers, promotions in Finnish businesses and free access to Veikkaus online TV sports content.' PAF similarly advertises its free Club PAF: 'Fun and free. Last year over 1,200 PAF friends won Club PAF trips around the world. Come and join us too.' Both Veikkaus and PAF appear to have vibrant discussion forums on their websites.

Website versions from between 2010 and 2015 start to advertise social media presence, with prompts to follow gambling operators on Facebook, Twitter or YouTube.

2020s

Modern gambling website design has evolved significantly since the early informational platforms of the 1990s and early 2000s. In comparison to the 2010s, websites of the 2020s have become even more colourful. Content such as sports news or news about lottery winners have largely disappeared. The gambling product selections are increasingly centred around casino products. For example, the Finnish Veikkaus website highlights online casino products alongside the more traditional lottery and sports betting offers. Several websites also advertise their live casino offers.

Harm information and 'responsible gambling' are visibly present on monopoly websites, including front pages. This includes information about mandatory limit-setting for all customers. Conversely, bonuses and gambling incentives have become an even more prominent feature of commercial gambling websites. Bonuses have also increased in terms of size in comparison to the previous decade.

The most notable change between the 2010s and 2020s has taken place on the FanDuel website. In 2020, the front page basically functions as a large advertisement for the FanDuel mobile app. Following the legalisation of sports betting in the US in 2019, the FanDuel website has expanded to include new sports betting products and information on the states in which these are available. In 2025, the FanDuel website has also extended to casino products. Interestingly, and in contrast to the developments in European gambling websites, the FanDuel website has introduced a sports news section in its 2025 version.

In conclusion, this review into the history of gambling website design and content shows the significant changes in how online gambling has looked like over the years. In the 1990s and early 2000s, before widespread commercialisation, online gambling focused strongly on monopoly operations, lotteries and football pools. Websites also offered other content, such as sports news. After 2005, and particularly during the 2010s, gambling websites have

become increasingly commercial. Product selections have extended to new, even faster-paced verticals such as online slots and live casino. Bonus offers have become commonplace, and increasingly attractive. The design of websites appears to reflect broader commercialisation developments in the global gambling industry (Wardle et al., 2024). In addition to increased availability, developments around product selections, bonuses and attractive website design may partly explain why online gambling has become so prevalent in the past years.

Booming online gambling

The emergence of online gambling has coincided with a broader shift towards market-led expansion and diminishing government control over gambling (see Chapter 6). The commercialisation of gambling began in the 1980s but has accelerated after the turn of the millennium (Cassidy, 2020; Sulkunen et al., 2019). A similar shift has been identified in several countries.

Sytze Kingma (2004, 2008) described the evolution of gambling regulation in the Netherlands as a shift from a so-called alibi model to a risk model. Under the alibi model, gambling was perceived as a controversial activity. Legal gambling was only permissible to prevent illegal markets or to fund beneficial purposes. The intention was to restrict the gambling market, and this was typically accomplished via monopoly structures. The alibi model became increasingly replaced by the risk model after the 1980s (Kingma, 2004). The risk model is characterised by more tolerance of gambling. This led to the expansion of gambling, which, in turn, led to the rise of a commercial industry that treats gambling as a legitimate entertainment market (Kingma, 2008, see Chapter 6).

We found a similar shift in policy in the Finnish case (Järvinen-Tassopoulos et al., 2024): The objectives and practices of the Finnish gambling monopoly have become increasingly commercial since 2018. This is particularly interesting in a monopoly environment. While the existence of a monopoly should, in principle, prevent competition, the online gambling environment effectively pushes monopoly operators into a commercial space in which they compete with offshore offers and attempt to maintain their market share in the name of channelling (see also Chapter 6).

The change in regulatory policy is probably the most visible in the UK where Jim Orford has noted a shift in rhetoric and policy between the 1968 and the 2005 Gambling Acts. According to Orford (2010, p. 173), the 2005 Gambling Act ‘encapsulated the new pro-market and anti-regulation philosophy’ by permitting the creation of demand of gambling, rather than just responding to unstimulated demand: The act aims to permit. Reith and Wardle (2022) describe the regulatory landscape that followed the 2005 Gambling Act as neoliberal, prioritising ‘free’ deregulated markets and minimal state intervention. Prior to 2005, gambling was tolerated, but the 2005

Act reframed gambling as a mainstream leisure activity and source of economic growth. This has meant that consumerism and the ‘freedom to choose’ have since been prioritised over harm prevention and social protection. The 2005 Gambling Act also coincided with the rise of online and mobile gambling, but these were not regulated as anything else than another delivery method (Davies, 2022). The lack of online-specific regulation gave significant leeway for operators to expand their online operations. Today, the UK still remains by far the largest online gambling market in the world (see Table 1.1).

Gambling is of course not the only industry impacted by digitalisation, globalisation and increased commercialisation. Sociologist Manuel Castells (1996) has asserted that the emergence and spread of digital technologies have led to the development of the Information Age. The Information Society is characterised by connectedness, information and communication technologies (ICTs), and restructuring of capitalism. Alongside digitalisation, the new capitalist logic has been shaped by other global drivers, economic systems and commercial determinants (Mialon, 2020). Gambling is arguably one of the sectors where the impact of informational capitalism, networked corporate practices and their impacts on individuals have been particularly profound.

Table 1.1 Largest online gambling markets globally in 2025

<i>Jurisdiction</i>	<i>Regulated online GGR (Million Euros)</i>
United Kingdom	13402.6
Brazil	8791.7
Italy	6666.0
Pennsylvania	5206.2
Ontario	4994.2
New Jersey	4568.8
Michigan	4456.7
Philippines	4130.4
Australia	3948.2
South Africa	3613.9
France	3567.3
New York	2832.5
Spain	2284.9
Poland	2247.8
Florida	2225.1
Germany	2199.9
Sweden	2031.6
Czech Republic	1977.3
Mexico	1930.5
Netherlands	1835.9

Source: Vixio (2025b).

Note: Revenue data were originally reported in USD. Data were converted to EUR using 0.85 conversion rate (16 September 2025).

Growth trends

Since its early years, the growth of online gambling has been rapid. Global online gross gambling revenue (GGR) has seen a growth from around 250 million euros in 1997 to approximately 75 billion euros in 2024 (Beem & Mikler, 2011; Statista, 2025a). At an average compound annual growth rate of about 23%, this is an almost 287-fold increase. Until recently, growth of online gambling has been driven mainly by developments in Europe. Market increase has been relatively constant, but some years stand out as having particularly rapid growth. Figure 1.5 displays the growth of online gambling in the European market between 2016 and 2025, split by largest market jurisdictions.

The growth trend is also visible in the online presence of gambling. Schwartz (2006) estimated that by the end of 1996, 15 online gambling websites were operating globally. In 2011, there were 2,412 gambling websites (Williams et al., 2012). In 2025, online gambling review site Casino Guru lists over 8,000 gambling websites (Casinoguru, n.d.). The largest online gambling companies include major global corporations such as Flutter Entertainment, DraftKings and Entain, in addition to major land-based casino groups in the United States and Asia (Companiesmarketcap, n.d. see also Chapter 2).

Online gambling experienced two significant growth periods before 2016 (Gainsbury, 2012). The first took place around 2004–2006. This growth may have been driven partly by preparations for the opening UK market. Another online-specific development that took place around 2004 was the global

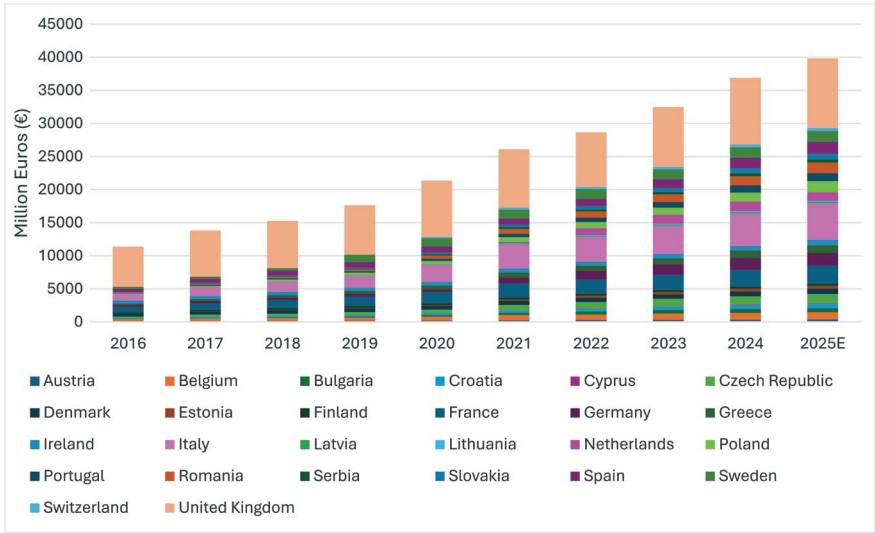


Figure 1.5 Growth of online gambling in the European market, 2016–2025.

Source: Vixio (2025a).

poker boom. Reasons for this boom included popular televised poker tournaments and associated increased legitimacy of poker. Players in the World Series of Poker were strongly involved in promoting online poker websites (Pilling & Bartlett, 2012).

The growth of online gambling slowed after 2007 (Gainsbury, 2015), most likely due to the US prohibition of online gambling in the Unlawful Internet Gambling Enforcement Act (UIGEA) from 2006. The UIGEA made it illegal for financial institutions to facilitate online gambling transactions and made online gambling unlawful (Beem & Mikler, 2011). As a result, many major online gambling providers stopped operating in the United States and started directing their operations towards the European market (Pilling & Bartlett, 2012).

Early 2010s were characterised by increased legal availability of commercial gambling across European jurisdictions. During this time, many European Union (EU) Member States faced difficulties with the European Commission with regard to their national gambling monopolies. Private gambling operators brought cases against Member States to the Court of Justice of the EU, with the aim of dismantling monopoly structures and opening online gambling markets to private corporations (Cisneros Örnberg & Hettne, 2018). Many European countries introduced licensed gambling markets, including major EU Member States such as France in 2010, Italy, Spain and Denmark in 2011. Industry organisation European Gaming and Betting Association (EGBA) (2019) estimated that in 2009, 21 EU Member States had either monopolies or prohibitions on online gambling. In 2019, 26 EU Member States had introduced a multi-license regime. Finland was the only EU country to still uphold its online gambling monopoly at the end of the decade.

Alongside political pressures, the commercialisation of European gambling markets reflects economic imperatives. Research has shown that the deregulation of gambling typically coincides with state revenue needs. Industry lobbying highlights the economic benefits of gambling and policymakers can see gambling as a relatively painless new source of tax revenue (Livingstone & Woolley, 2007; Sulkunen et al., 2019). The power of the promise of money has been visible in gambling policy changes across the globe (Wardle et al., 2024). For example, in Italy, the legalisation of online casino gambling and other new gambling formats around 2011, followed from a severe macro-economic crisis and associated financial needs (Matteucci, 2022). The Italian policy shift was enabled by continued lobbying and financial argumentation from the industry side. As a result, the gambling market in Italy has seen continuous growth during the past 20 years, and is the largest gambling market in Europe, alongside the UK (Matteucci, 2022).

COVID-19

During 2020–2021, the COVID-19 pandemic accelerated the growth trend of online gambling. The jump is also visible in Figure 1.5. Before the COVID-19

pandemic, online channels made up about one-quarter of all gambling in Europe (EGBA, 2022). The closure of many land-based gambling opportunities, alongside social distancing measures, reduced land-based gambling consumption across jurisdictions. Some of this consumption was replaced by increases in online gambling (e.g., [Brodeur et al., 2021](#); [Catalano et al., 2024](#); [Hodgins & Stevens, 2021](#)). [Figure 1.6](#) shows the share of online gambling of European gambling markets in 2019 and 2023 based on data published by EGBA (2022, 2025).

In 2021, together with colleagues,² we conducted interviews and a survey with Finnish individuals about their gambling during the COVID-19 pandemic (N = 214). Before COVID-19, Finnish gambling was still mainly land-based, reflecting the wide availability of land-based EGMs. During COVID-19, we asked our participants about their experiences and engagement with online gambling, whether they had switched their gambling online, and why. The dataset is also described in other analyses that we have published on the experiences of Finnish individuals during COVID-19 ([Marionneau & Järvinen-Tassopoulos, 2022a, 2022b](#); [Marionneau et al., 2025a](#)). Overall, we found that approximately one-third of our participants reported shifting some of their land-based gambling to online environments.

Many of those who had moved to online gambling reported increased gambling engagement. Reasons for increased online gambling included boredom and anxiety due to COVID-19, as well as shifting habits from closed land-based gambling products. Some of those who had gambled with land-based EGMs before the pandemic, had started to gamble with online EGMs, instead.

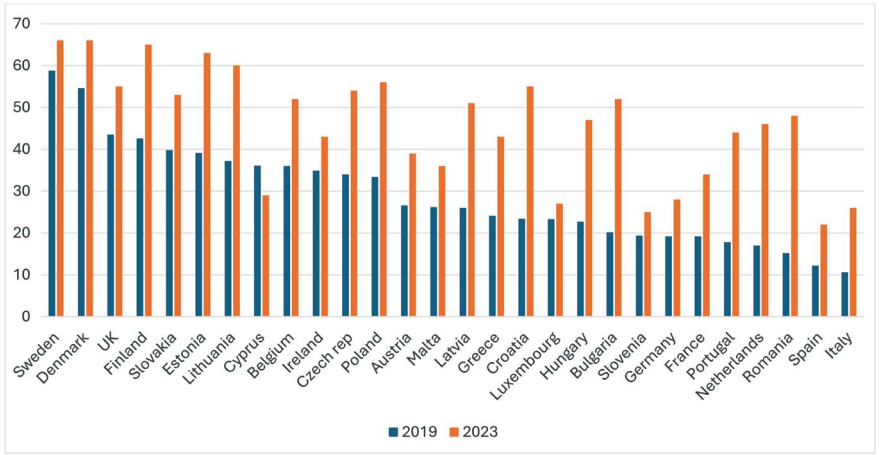


Figure 1.6 Share of online gambling in European markets before and after COVID-19 (2019, 2023).

Source: EGBA Key figures sheets 2019 and 2023 ([EGBA, 2022; 2025](#)).

Some of those who had bet on sports, had shifted to online poker or esports betting due to sports league suspensions during COVID-19. Two of our interviewees who gambled actively but did not report having problems, described this shift as follows:

My hobby is sports betting. At least last spring when all [leagues] were suspended, I started looking into e-sports, in addition. So, in that sense there was some new interests, but less than before

There has been a good side to this COVID-19. It is that I have become interested in online poker again. And it seems like many others have gotten excited about it as well. There has been a kind of a golden age in online [poker] finally again

The constant availability of online gambling has also created health and financial harms for many. Some described losing all their money on online gambling, while others felt a ‘constant urge to play on the Veikkaus website.’ One of our survey participants described their increased gambling during the pandemic:

My use of money went out of control in the autumn of 2020. I have overdrawn on two credit cards, and I have taken an instant loan [...]. During COVID-19, I started playing on foreign online casinos. I did not know before that I had a gambling problem. In 2020, the situation became dramatically worse.

Global expansion

Alongside COVID-19, another major reason for the growth of online gambling relates to legalisation in new markets. The gambling industry has expanded rapidly to new areas globally. As European markets appear to become gradually more saturated, the aim has been to seek new markets (Wardle et al., 2024). In 2024, we estimated that 80% of global jurisdictions had some form of legal gambling (Ukhova et al., 2024a). This expansion is visible in rankings of major global gambling markets. In 2019, 13 of the top 15 largest online gambling markets were European jurisdictions (only joined by Australia and New Jersey) (Stone, 2023). In 2024, ten of the top 15 largest online gambling markets, and 11 of the top 20 largest online gambling markets are located outside of Europe (see Table 1.1). The next section will look more closely at these non-European jurisdictions that have risen to the top of global rankings. The expansion of gambling in these markets has mainly been the result of regulations that are favourable to industry, as well as intensive creation of demand by gambling companies entering these markets.

The United States is probably the best example of the rapid global expansion of the gambling industry. Some US states, including Pennsylvania, New

Jersey and Michigan, are also amongst the largest online gambling markets today (Table 1.1). Prior to the UIGEA, the US and UK accounted for approximately 50% of global gambling revenue (Beem & Mikler, 2011). However, the prohibition of online gambling limited the growth of gambling in the US for over a decade. In 2018, the US Supreme Court ruled to legalise sports betting. In 2025, sports betting became available in 39 states. Online casino gambling (slots, poker, table games) is available in eight states. These market segments are also rapidly growing, as visible in Figure 1.7. The US market is largely controlled by two sports betting giants: FanDuel and DraftKings. These two brands hold approximately 75% of the full US market (Smiley, 2025) excluding prediction market actors. Figure 1.7 shows the growth trend of online gambling markets in North America, compared to Europe.

Market growth has been so rapid in the United States, that one regulator called the US gambling industry ‘a highway without speed limits’ (Jones, 2025). The consequences of rapid expansion and lacking regulatory protections are visible in the severe and growing gambling harms reported in the US context. Emerging evidence shows that gambling-related problems as well as help-seeking have increased in North America (Ukhova et al., 2024a,b). Expanded gambling is also impacting the financial health of Americans. One study compared consumer financial outcomes in a sample of seven million

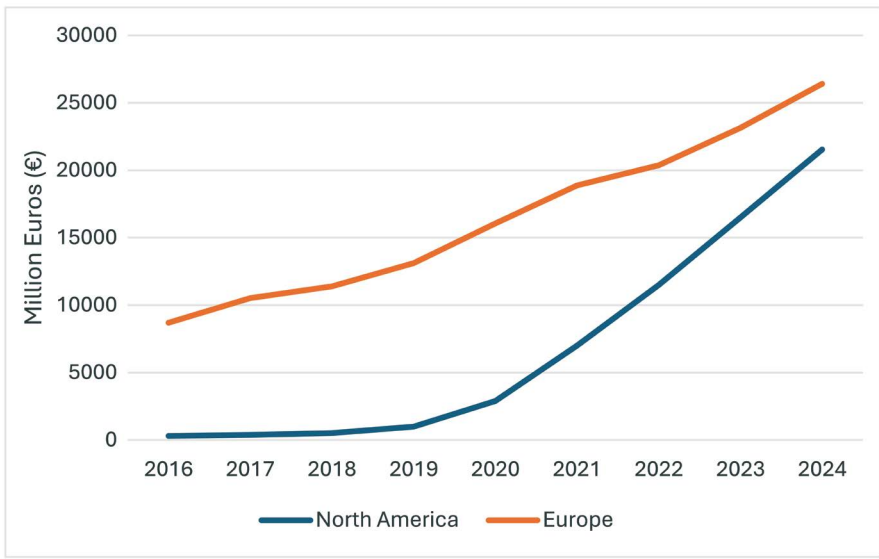


Figure 1.7 Growth of online gambling markets in Europe and North America.
Source: Vixio (2025a).
Note: Based on data from 29 European jurisdictions and 35 North American jurisdictions in the United States and Canada.

US citizens ([Hollenbeck et al., 2024](#)). The researchers found that in states that legalised online sports betting, average credit scores had decreased, and indicators of debt and bankruptcy rates had increased. On average, states with legalised online gambling saw an additional 8 billion USD (6.9 billion euros) in debt collections.

Ontario and Mexico constitute other major online gambling markets in North America. In Ontario, Canada, competitive online markets were introduced in 2022. The market shift followed from the 2021 decision of the government of Canada to legalise single event sports betting. [Turner et al. \(2024\)](#) have described how people in Ontario have since been inundated with gambling advertisements and gambling offers. One year after the market opened, 45 licensed operators were active in the Ontario market. Gambling revenues have grown rapidly ever since. Although the catalyst for the market opening was the legalisation of single event sports betting, the market is now driven by online casino gambling. According to Vixio Gambling Compliance (2025c), casino gambling made up 77.8% of overall revenue in the Ontario online gambling market in the first half of 2025. As a result of the rapid growth of online gambling, the number of helpline calls has increased significantly in Ontario ([Turner et al., 2024](#)).

In Mexico, online gambling provision is currently legal to operators who hold a land-based casino license, although the Mexican government has been preparing a new gambling legislation ([Kilsby, 2025](#)). Yet, the Mexican gambling market is still amongst the largest in the world. Part of the reason is that despite restrictions on who can obtain an online gambling license, existing licensees are able to provide online gambling. Until 2023, licensees were also able to partner with other third parties to launch 'skins' under their licenses (a white label kind of arrangement, see [Chapter 2](#)). For example, Betsson and Bet365 were able to enter the Mexican market in this way ([iGamingToday, 2025](#); [Vixio, 2022](#)). The availability of online gambling was therefore much wider than the number of licensees, alone.

In South America, Colombia was the first country to open a licensing regime for online gambling in 2016. Other countries, including Peru and Paraguay, have since followed. However, Brazil stands out as the world's second-largest online gambling market in 2025, the same year the country opened its online gambling market to licensed providers. During the first wave of licensing, Brazil has granted 70 full or provisional licenses for online gambling operators. In addition, some states grant local licenses for online betting. The largest operators in the Brazilian market include international brands like Bet365, Betsson, Stake and Sportingbet, as well as some local brands ([Vixio, 2025d](#)). Research from Brazil shows that in 2024, just prior to the market opening, gambling was already widespread and highly concentrated to more vulnerable social groups. A recent survey showed that 86% of Brazilians who gamble reported debt and 63% said that gambling had substituted other essential purchases

(Rodriguez, 2025). After the market opened, Brazil has been described as 'a modern-day gambling gold rush' (D'Elia, 2025). Just between January 2025 and June 2025, monthly online GGR in Brazil grew by 53% (Vixio, 2025e).

Outside of the Americas, the Philippines and South Africa are amongst countries within the top 20 global online gambling markets. The Philippines have been described as 'one of the largest and most permissive gam[bl]ing markets in the [Asia-Pacific] region' (Vixio, n.d.). Interestingly, the Philippine Amusement and Gaming Corporation (PAGCOR) functions in the country as both operator and a regulator. In addition, PAGCOR issues licenses for other online gambling operators. In addition, the Philippines has the Cagayan Economic Zone within its borders. The Cagayan Special Economic Zone and Freeport is a region in the Philippines with separate regulations, including serving as a hub for offshore gambling operators (Vixio, n.d.). Reports show that an increasing number of individuals are now taking part in online gambling and experiencing problems with online gambling in the Philippines, raising concern over the burden on mental health and social problems (Galap et al., 2025; Pelew, 2025).

South Africa has long been the leading gambling market in Africa. Online gambling became available in South Africa following the introduction of event betting in 2020 which permitted land-based operators to offer online products. The government has since attempted to tighten regulations, but the bill introducing restrictions around advertising and protection of minors has gotten stuck in Parliament (Vixio, 2024). The market-oriented South African model has nevertheless served as a blueprint for other African jurisdictions that have begun opening their gambling markets to licensed operators in a 'domino effect' (Vixio, 2024). In South Africa, as elsewhere in the African continent, growing gambling markets have had devastating effects. A systematic review on the effects of online gambling on African families (Rammutla, 2024) found that some African families rely on online gambling for income and subsistence due to high poverty and unemployment. At the same time, gambling is causing addiction and harm to families, including breadwinners being absent from their families due to gambling. Other reports from Africa similarly connect the increased popularity of gambling in Africa to poverty, problem gambling and severe health harms (Ahaibwe et al., 2016; Bitanihirwe & Ssewanyana, 2021; Bunn et al., 2022).

Gambling is also growing elsewhere in the world. Several African gambling markets are currently liberalising their regulations, including Botswana, DR Congo, Malawi and Zimbabwe. In South America, countries opening their gambling markets include Chile, Costa Rica, Ecuador, Peru and Venezuela. In Canada, the province of Alberta will soon follow Ontario in introducing a competitive online gambling market. In Europe, most countries are currently moving towards tightening regulations around online gambling, with the exception of Finland that is dismantling its gambling monopoly to introduce

a licensed online gambling market as of 2027 (Vixio, 2025f). Elsewhere in Europe, there may still be some interest for online gambling operators to enter markets where the share of GGR from online gambling remains comparatively low. European gambling industry organisation [EGBA \(2025\)](#) reports that online gambling already makes up about 70% of overall gambling in Denmark, Finland and Sweden. However, the share of online gambling remains under 25% of the full market in countries such as Spain, Slovenia, Italy and Germany.

Offshore gambling markets

Early online gambling was exclusively offshore. [Gainsbury et al. \(2019\)](#) define offshore gambling as sites that offer online gambling to consumers residing in jurisdictions where the operator does not hold a valid license. Offshore gambling, therefore, is a distinct business model that some gambling companies employ. Offshore gambling originates from overseas, export-oriented jurisdictions. Usually, these offshore jurisdictions offer advantageous taxation regimes, lenient regulations and little oversight. A recent report mapping the landscape of offshore gambling ([Menary & Begovic, 2025](#), p. 7) describes the offshore gambling industry as ‘deliberately opaque multi-national hydra-like structures, which are facilitated by poorly regulated financial service providers and operate as a conduit for money-laundering.’

Offshore gambling provision consists of a range of diverse forms. The European Commission distinguishes between so-called grey and black-market operations. Grey market refers to offshore gambling provision emanating from within the European Economic Area (EEA), whereas black market refers to provision from outside the European area (see [van Schalkwyk et al., 2021](#)). In the Asian context, the United Nations Office on Drugs and Crime ([UNODC, 2021](#)) has defined grey market offers as gambling that is licensed in at least one jurisdiction but that is also provided in jurisdictions where the product is illegal. Black market refers to offshore gambling that operates in multiple jurisdictions and has connections to organised crime.

[Cassidy \(2020\)](#) describes how early internet was largely characterised by two complementary industries: Gambling and porn. Cassidy’s field work with gambling industry representatives paints a picture of early pioneers of online gambling operating in a kind of Wild West. The first bookmaker to adopt the offshore business model was Victor Chandler. Chandler obtained a betting license for BetVictor in Gibraltar in 1996 and established his business there ([Davies, 2022](#)). The first operators in the Pacific Islands launched their offshore gambling operations in 1997 ([Cassidy, 2014](#)). The island nation of Vanuatu boasts being the first country to issue an online gambling license ([Vanuatu Gaming Authority, n.d.](#)). Early operators based in the Caribbean were targeting potential customers in America, while operators established in Gibraltar and the Channel Islands targeted the UK. Other important

offshore destinations during the early years of internet gambling included the Kahnawake territory in Québec, Canada (Belanger, 2012; Cassidy, 2020; Davies, 2022).

Only as the internet developed, the gambling industry began to construct a more 'acceptable' public image. By 1999, the emerging gambling industry was seeking respectability, investment and political influence, leading to at least some form of licensing and regulation (Cassidy, 2020). At the same time, governments were facing increased difficulties in maintaining restrictive regulations or prohibitions on gambling, including online. Cassidy (2014) describes how gambling revenue was leaking out of jurisdictions, creating a 'domino effect in the USA, mainland Europe and Australasia': As individual countries legalised gambling, their neighbours were forced to do the same to keep revenue within their borders. This applied particularly to land-based formats, such as casinos and lotteries, but is also visible in online gambling. Legalised commercial online gambling markets in one jurisdiction tend to push neighbouring countries towards the same direction.

Perhaps one factor behind the growth of offshore gambling in the European context, related to the licensing model of Europe's largest market, the UK. Based on the 2005 Gambling Act, the UK did not require operators targeting their citizens to hold a UK license. A license in a whitelisted jurisdiction was enough. In 2011, Jim Orford (2010) noted that as online gambling is a global industry, operators can choose to situate themselves in Britain or elsewhere. For operators, obtaining a UK license meant credibility, but also comparatively heavy taxation and compliance requirements (Orford, 2010). On the other hand, whitelisting allowed jurisdictions like Malta, Gibraltar, Isle of Man or Guernsey to develop their gambling markets while offering operators advantageous taxation regimes (Cassidy, 2020; Davies, 2022).

Malta joined the EU in 2004 and started developing its remote gambling markets in the same year. Malta became the first EU Member State to regulate remote gambling and became an attractive regime for operators seeking access to the EU market. Malta's economic strategy has been to establish itself as a regulatory hub for international operators, offering comparatively simple licensing procedures and flexible implementation of regulatory requirements and protections (Norman, 2025). Today, gambling makes up a significant part of Malta's GDP (Norman, 2025). Similarly, Gibraltar soon established itself as an offshore gambling location. In 2012, a significant part of Europe's leading online gambling providers were established in Gibraltar, attracted by low taxes and easy access to European markets (Davies, 2022).

Menary and Begovic (2025) mapped the contemporary landscape of offshore gambling jurisdictions. According to their report, there are currently over 20 offshore jurisdictions offering gambling licenses that could be exploited by illegal operators. These jurisdictions differ in terms of their licensing practices, regulatory frameworks and taxation regimes. However, as a rule, costs of registration and fees are usually low, and taxation is advantageous: Gambling

taxes are usually between 0% and 5% on GGR, whereas the European average is over 20% on GGR (Marionneau et al., 2025b; Menary & Begovic, 2025). The main offshore gambling jurisdictions globally are described in Table 1.2. Jurisdictions are geographically spread across Asia, Africa, the Americas and Europe.

Apart from the Philippines, Panama and Estonia, offshore jurisdictions are located on small islands with limited other local industry. Gambling is therefore seen as a means to raise needed revenue (Menary & Begovic, 2025). Illustratively, in 2025, a reporter from Sveriges Radio, the Swedish public broadcaster, went undercover to an industry conference in Malta. The reporter asked other attendees about how to start an online casino targeting the Swedish market without a Swedish license. He was quickly assured that this was not only possible but very easy – he just needed a license in Curaçao (Sveriges Radio, 2025).

How much exactly is gambled every year on the offshore market is anyone's guess. It is impossible for to reliably measure the size of the offshore market since offshore operators do not disclose their sales figures. In Asia,

Table 1.2 Offshore gambling jurisdictions in 2025

<i>Jurisdiction</i>	<i>Number of active online licenses</i>	<i>Number of registered websites</i>
Anjouan (Africa)	825	2,000
Alderney (Europe)	22 + 19 assoc. certificates	214
Antigua & Barbuda (Americas)	–	1
Northern Mariana Islands (Oceania)	–	–
Curaçao (Americas)	–	991
Estonia (Europe)	37	96
Equatorial Guinea (Africa)	–	–
Gibraltar (Europe)	53	72
Isle of Man (Europe)	72	17
Kahnawake (Canada, Americas)	184	162
Laos (Asia)	–	–
Malta (Europe)	323	449
Mwali/Mohéli (Comoros, Africa)	–	941
Palau (Oceania)	4	–
Panama (Americas)	–	–
Philippines (Asia)	Shutdown ^a	17
St Kitts & Nevis (Americas)	–	–
Tobique (Canada, Americas)	–	32
Vanuatu (Oceania)	–	1

Source: Menary & Begovic, 2025; Casinoguru (n.d.). Gaps in the table represent no data available.

^a Shutdown of offshore gambling licensing in the Philippines in 2024. Timor-Leste was removed from the original list after announcement in September 2025 that the country cancelled its plans to develop an online gambling industry.

the UNODC estimated that 1.5 trillion euros are gambled annually on illegal gambling markets that are controlled by organised crime (UNODC, 2021). In Europe, EGBA estimated that offshore gambling made up around 13% of online gambling markets in 2022 (EGBA, 2022). However, estimates vary significantly between themselves. In one recent paper (Marionneau et al., 2026), we looked at different estimates on the size of the offshore gambling industry in different Nordic countries (Finland, Sweden, Denmark and Norway). We found that different stakeholders – regulators, researchers and industry – produce estimates on the size of the offshore market, but these diverge significantly due to methodological issues and assumptions. We also noticed that industry tended to produce estimates that inflated the size of the offshore industry (see also Chapter 6, discussing how the industry uses the offshore argument as a trope for regulatory resistance). Regardless of the accurate size of this market, offshore gambling continues to be an issue for regulators and individuals who gamble.

One of the biggest offshore actors in the global market is [Stake.com](#). Stake.com also serves as a case in point to illustrate the logic of offshore gambling. A fascinating recent investigation (Schmitt, 2025) looked into the background and operations of the Curaçao-licensed company. The report shows that [Stake.com](#) is connected to a complex ecosystem of payment subsidiaries, sponsorship deals in major leagues, and influencer collaboration (see also Chapter 2). These networks have allowed [Stake.com](#) to expand aggressively and become one of the leading brands in sports betting, despite its mainly offshore status. [Stake.com](#) has licenses in a handful of jurisdictions, while operating illegally in dozens more. Schmitt (2025) concludes: ‘Despite operating illegally in dozens of jurisdictions, Stake has managed to avoid significant legal consequences. The company has built a billion-dollar empire while blatantly violating gambling laws in multiple countries.’

Offshore gambling has been a regulatory and public health problem in the past and continues to be a significant issue in contemporary online gambling markets. The lack of regulatory oversight and requirements in offshore jurisdictions also makes offshore gambling in many ways more dangerous to individuals who gamble (e.g., Gainsbury et al., 2018; Lahtinen et al., 2025). In addition, offshore gambling poses significant data protection and product integrity-related risks, as well as a criminal threat. In some cases, offshore gambling operations can be traced back to organised crime networks, money-laundering and elaborate match-fixing schemes (Menary & Begovic, 2025; UNODC, 2024).

Towards new developments

The size and operation of online gambling industry has changed significantly from its early years. As the internet has developed and become more complex, so has online gambling. Brynjolfsson and McAfee (2014) have argued

that the emergence of digital technologies like AI and robotics have brought in a new era of technological innovation that is comparable to the Industrial Revolution. What they call the Second Machine Age is driven by exponential growth of computing power and technological transformation. The Second Machine Age brings societies increased overall wealth, productivity and innovation, but also economic disruption and inequality (Brynjolfsson & McAfee, 2014). When applied to a harmful industry such as gambling, the Second Machine Age can also further amplify the risks and boost the exploitative power of addictive industries.

The phenomenal growth of online gambling results from many concurrent developments. First, as we have seen throughout this chapter, many industry actors have been eager to push individuals to online environments. Online gambling is in general cheaper to produce and distribute than land-based gambling: In one study we found that gambling companies that are expanding their product portfolios towards online channels tend to have lower operating costs (Sulkunen et al., 2022). The online development is therefore beneficial for industries. Second, individuals who gamble also gravitate towards online offers due to ease of access and availability, as demonstrated by studies conducted during COVID-19 (e.g., Catalano et al., 2024). A third reason relates to governments that legalise and expand the availability of regulated online markets. Recently, we looked at recent significant gambling policy changes globally between 2018 and 2021, defined as either opening or restricting a market segment (Ukhova et al., 2024a). In almost 70% of included cases, the significant policy change concerned the legalisation of online gambling.

In the future, gambling industries are likely to continue to seek new markets by expanding to new countries, and by introducing new products in established markets. Provision of cryptocurrency betting, new formats of gambling, developments in mobile environments, and inclusion of virtual reality elements are likely to continue to change the structures of the online gambling industry (see also Chapter 3). There are no signs that the growth of the online gambling industry is stopping or even slowing down.

Instead, we are seeing some signs that land-based gambling may be slowly dying, at least in some geographical areas. In Sweden, the last land-based casino closed down in April 2025, and land-based casinos are set to be banned as of 2026. According to an industry news website, the reason for the legislation to ban has been lack of demand, not public health concerns (Fletcher, 2025). In Finland, the second land-based casino that was opened in the city of Tampere in 2021 was closed just two years after because it failed to achieve profitability (Hellman & Jääskeläinen, 2025). Similarly, Finnish land-based EGM gambling has been declining rapidly after COVID-19 and now forms only a minor part of the gambling monopoly's revenue stream (Marionneau et al., 2024). Whether these developments in the Nordic countries will spread to other parts of the world, remains to be seen. Land-based gambling still remains a significant part of the industry in areas such as South Europe (Figure 1.6).

In this chapter, we have followed the development of the online gambling industry. In the next chapter, we will turn to the broader ecosystem of the online gambling industry. As online gambling has developed, and continues to develop, online gambling industries have also become more complex. Today, a wide network of actors gravitates around online gambling companies, supplying them with online infrastructures, products and services. Analysing this ecosystem is crucial to understanding what online gambling looks like today.

Notes

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- 2 I want to acknowledge my colleagues Johanna Järvinen-Tassopoulos and Katariina Mankinen who collaborated with me in this interview project.

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The Online Gambling Ecosystem

What is an ecosystem?

What do we talk about when we talk about the gambling industry? Peter [Adams \(2016\)](#) has suggested that industry is, in fact, a confusing term. Industries are complex networks, making it difficult to say where the industry begins and where it ends. The Lancet Public Health Commission on Gambling ([Wardle et al., 2024](#)) notes that the production of online gambling takes place in an ecosystem of software, information technology infrastructure, financial technology services as well as partnerships in media, social media and professional sports organisations. Access to this wide network of associated interests gives the gambling industry significant power and influence over policy and consumers.

The word ecosystem has become increasingly popular in analyses focusing on industry structures ([Kuzmin et al., 2025](#)). This is no wonder, since it is a very practical tool to describe what inter-connected industry networks look like. Ecosystems are more than the sum of their parts; they are complex and interdependent networks. Ecosystems usually have some clear central nodes, such as market leaders or platforms ([Marty, 2023](#)).

Ecosystems differ from other closely resembling concepts, such as societal sectors, industrial symbioses or value chains (also [Kuzmin et al., 2025](#)). Industrial symbiosis is a term that has been used to describe physical exchanges and shared management of geographically proximate firms ([Ashton, 2008](#)), making the concept less applicable to an online industry such as gambling. Social sectors refer to the sum of all organisations within a society supplying a specific type of product or service, alongside their customers, suppliers, financiers, regulators, etc. ([Scott & Meyer, 1991](#)). The concept does not consider the varying relationships and varying input of different actors into the production of gambling. Value chains see manufacturing as a processual system with different subsystems ([Porter, 1985](#)). The concept focuses on the value-production of a commodity rather than the constellation of other interests that might be present in an ecosystem. The value chain approach also assumes that value is created, something that has been contested in the case of gambling ([Reith, 2007](#)).

A recent literature review (Kuzmin et al., 2025) suggests that industry ecosystems consist of at least four distinct components. Structural components refer to the participants, design and infrastructures of which the ecosystem is made. Organisational components refer to the ways in which the ecosystem self-regulates, collaborates and crosses national boundaries. Functional components focus on synergies and circular dependencies within the ecosystem. Finally, technological components refer to how digitalisation and integration of systems and data allow interoperability and coordinated action. Digital ecosystems are connected by technologies and platforms. Like any ecosystem, digital ecosystems do not grow through centralised planning, but rather as networks of innovation, adoption and scaling (Bygstad & Dulsrud, 2020). Some examples of ecosystems include major online platforms, like eBay or Amazon.

These ideas can easily be observed in the gambling ecosystem. The gambling ecosystem consists of a range of structures (operators, suppliers), organisational tendencies veering towards self-regulation, a kind of functionalist synergy between actors, and high dependency on digitalisation and data to improve economic performance. Online gambling is a highly innovative ecosystem, with new products constantly rolled out to attract new and existing customers (see also Chapter 3). The central nodes of online gambling ecosystems are major gambling corporations and groups that yield significant economic power. Major producers of gambling software and services also emerge as important ecosystem nodes, connecting different gambling providers through the same software solutions. Figure 2.1. presents a conceptual model of the main actors in the online gambling ecosystem based on the findings of this chapter.

As the surrounding online world changes, the online gambling ecosystem adapts and becomes more complex. In the earlier days of online gambling, production structures were more vertical, with gambling companies typically owning their own technology platforms and producing most of their own content (Regulus Partners, 2021). Some companies still operate this type of in-house model, whereas others are increasingly outsourcing much of their production. Regulus Partners (2021) estimated that between 2005 and 2020, the production of marketing services and content, in particular, had become increasingly outsourced in the online gambling business. For example, the value of content purchases in the online gambling market had increased from under 1 billion euros to nearly 4 billion euros in 15 years (Regulus Partners, 2021).

This chapter focuses on the gambling ecosystem: who are the actors in the ecosystem and what does the ecosystem look like? The growth of online gambling has fundamentally changed the scale at which it is produced. Today, the production of online gambling involves a broad ecosystem of outsourced and otherwise connected actors. Unfortunately, and despite the importance of industry structures, very little empirical research has been conducted on

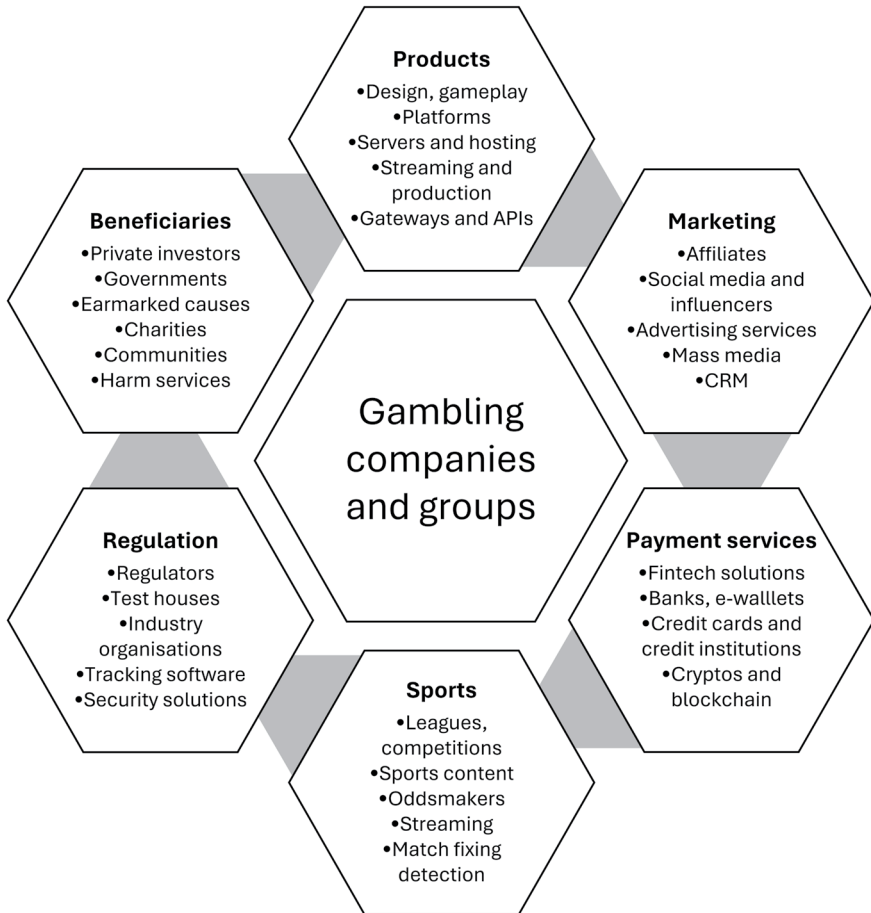


Figure 2.1 A conceptual model of the online gambling ecosystem.

the gambling ecosystem. In this chapter, the aim is to sketch an outline based on available evidence.

Actors in the gambling ecosystem

The gambling ecosystem consists of a range of different types of actors. We have previously roughly divided these into suppliers and beneficiaries (Marionneau & Nikkinen, 2020a). Suppliers are a part of the ecosystem that produce and sell gambling. In land-based gambling, these are, for example, resale networks, marketing services and producers of equipment and materials (Marionneau & Nikkinen, 2020a). In online gambling, suppliers consist of software production services, online infrastructure, payment services and

marketing services, including affiliates. The beneficiary side of gambling includes actors such as investors, states, earmarked causes and charities. In addition, other actors, such as regulatory and compliance bodies, are a part of the ecosystem.

To identify actors in the gambling ecosystem, I draw from literature on the kinds of industries that have been connected to gambling operators in previous literature (Regulus Partners, 2021; Rintoul et al., 2025; Wardle et al., 2024). In addition, I have used data on gambling supplier networks from Vixio Gambling Compliance. An increasing number of regulators globally are starting to focus on the broader ecosystem via supplier licensing. Data from Vixio Gambling Compliance supplier licensing overview reports (Vixio, n.d.-a) includes 25 jurisdictions that already require some form of supplier licensing (see Table 2.1). The most common types of supplier services include gambling software, platforms, payment services, management services, compliance services and services related to data storage and customer data.

We can also see some interesting geographical differences. European jurisdictions with supplier licensing tend to have more generic provisions about supplier licensing. For example, Sweden requires anyone who ‘manufactures, supplies, installs or changes’ any gambling software to acquire a supplier license (Spellag 2018, p. 1138). In comparison, jurisdictions in North America are more specific. For example, in New Jersey, the regulator requires a range of different suppliers and providers to obtain licenses:

Entities offering goods or services which directly relate to casino, race-track, sports wagering, or gam[bl]ing activity, or internet gam[bl]ing activity, including gam[bl]ing equipment and simulcast wagering equipment manufacturers, suppliers, repairers, and independent testing laboratories, and companies that supply sports wagering equipment or services, require such a license.

(New Jersey Revised Statutes, 2024, § 5:12–92)

A survey with gambling suppliers ($N = 119$) conducted by Vixio Gambling Compliance (Vixio, 2025b) shows that 93% of respondents believed that direct supplier licensing will become increasingly prevalent globally and mandated in most European jurisdictions. Licensing is expected to put further pressure on the full ecosystem of online gambling provision to comply with regulatory requirements, including compliance with harm prevention measures and integrity standards.

Supplier licensing is also a step forward for regulatory efforts to stifle offshore gambling markets. As discussed in Chapter 1, the offshore gambling market represents an important part of online gambling provision in many jurisdictions. The gambling ecosystem has partly supported the emergence and thriving of the offshore industry. Many suppliers provide their software and services to operators active in both onshore and offshore markets. Licensing

Romania	x	x	x		x	x		x	x			x	x
Sweden	x												
United Kingdom	x												
Ukraine	x												
West Virginia	x												
TOTAL	24	7	9	3	9	5	3	4	5	5	3	2	7

Source: Based on country reports provided by Vixio Gambling Compliance in September 2025 ([Vixio, 2025a](#)). Included only jurisdictions with provisions for supplier licensing. Coding into categories by myself, subject to interpretation. ¹General provision, such as any software or systems;

²Registration requirement only, no licensing.

requirements on these suppliers can therefore be a mechanism to prevent the provision of software solutions to the unlicensed market (see also [Chapter 6](#)). The survey data from Vixio further shows that over 70% of respondents believed that suppliers will soon need to make a clear choice on whether they supply to the onshore (green) markets or offshore (grey) markets.

In the following, we look at different online gambling supplier sectors. The focus is on the most common types of suppliers. I will also consider the unique characteristics of offshore ecosystems. However, it is important to bear in mind that the gambling industry is not uniform. Gambling companies vary from charities and national monopolies to large multinational corporations and small offshore companies. Some companies operate at the intersections of different definitions. For example, companies licensed in some jurisdictions may also operate in markets where they are not licensed. The gambling ecosystem can, therefore, look different for individual companies.

Corporate groups

Gambling websites and gambling companies are not the same thing. Some of the largest corporate groups operating within the gambling sector today include Flutter Entertainment, Evoke (former 888 Holdings), FDJ United (partly former Kindred), Entain (former GVC Holdings) and Betson group. Each of these corporations owns a number of gambling brands, operating globally or targeting specific markets. [Table 2.2](#) shows what kinds of brands these different groups hold and in which market segments and geographical areas they operate. Many, if not most, of the world's largest gambling brands belong to a select few corporations and holding companies. Some groups also hold brands that are not directly gambling providers but other supplier services (e.g., media and content provision, risk management services and broadcasting services).

Interestingly, these groups hold a variety of different types and sizes of brands. All groups hold one or several global flagship brands as well as major brands targeting the largest online markets in the world (United Kingdom, United States). Groups also hold brands that are exclusively targeted to comparatively small geographical markets, such as smaller European countries. Although all groups have a global focus, they also differ somewhat in their regional foci.

Flutter Entertainment is headquartered in the United States, having moved there from Ireland in 2024. The US presence is visible in the ownership of one of the two market leaders in the US online gambling market, FanDuel. At the same time, the origins of the company in Ireland are visible in the strong focus on the United Kingdom and Irish markets for other brands. Evoke (888 Holdings) is headquartered in Gibraltar, with a strong UK and European focus. FDJ United is the successor of the French National Lottery La Française des Jeux (FDJ) and is headquartered in France. FDJ United acquired Kindred

Table 2.2 Largest gambling corporate groups and their brands

<i>Brand</i>	<i>Product lines or sub-brands</i>	<i>Main market</i>
Flutter Entertainment		
Fanduel	Sports betting, casino	United States
Sky betting & gaming	Sky Bet, Sky Vegas, Sky Bingo, Sky Casino, Sky Poker	United Kingdom and Ireland
Sportsbet	Sports betting	Australia
Pokerstars	Pokerstars, Pokerstars Sports, Pokerstars Casino	Global
Paddy Power	Sports betting, casino, lotteries	United Kingdom and Ireland
Sisal	Lottery, sports betting, casino	Italy
Adjarbet	Sports betting, casino, Betfair Exchange	Georgia, Armenia
Betfair	Sports betting, casino	United Kingdom and Ireland
Tombola	Bingo, casino	United Kingdom
Maxbet	Sports betting, casino	Serbia, Balkans
Snai	Sports betting, casino	Italy
Betnacional	Sports betting, casino	Brazil
TVG	Horse racing broadcaster	United States
Airon risk management	Sports risk management	Global
Sporting life	Sports media	United Kingdom
Timeform	Horse racing data and content provider	United Kingdom and Ireland
Evoke (888 Holdings)		
William Hill	Sports betting, casino	United Kingdom, Spain, Italy
888 Casino	Casino, product development	Global
888 Sport	Sports betting	United Kingdom, Spain, Italy
888 Poker	Poker	Global
Mr Green	Casino, sports betting	Sweden, Denmark
Winner	Sports betting, casino	Romania
FDJ United (Kindred)		
Unibet	Sports betting, casino	Global
32Red	Casino	United Kingdom, Romania
Maria Casino	Casino	Global
Bingo.com	Bingo, casino	Global
Otto Casino	Casino	Sweden
Vlad Kazino	Casino	Romania
Storspelare	Casino	Sweden, Nordics
Entain (GVC Holdings)		
Ladbrokes	Sports betting, casino	United Kingdom
Ladbrokes Australia	Sports betting	Australia
Ladbrokes Belgium	Sports betting	Belgium

(Continued)

Table 2.2 (Continued)

<i>Brand</i>	<i>Product lines or sub-brands</i>	<i>Main market</i>
Coral	Sports betting, casino	United Kingdom
Bet MGM	Sports betting, casino	United States
Eurobet	Sports betting, casino, lotteries	Italy
Super Sport	Sports betting, casino	Croatia
STS	Sports Betting	Poland
Sportingbet	Sports betting, casino	South America
BetCity	Sports betting, casino	The Netherlands
Crystalbet	Sports betting, casino	Georgia
TAB	Sports betting	New Zealand
Betcha	Sports betting	New Zealand
365 Scores	Sports data and content	Global
Bwin	Sports betting, casino	Germany, Europe
Gioco Digitale	Casino, sports betting	Italy
Optibet	Sports betting, casino	Baltics
Gala Bingo	Bingo, casino	United Kingdom
Foxy Bingo	Bingo, casino	United Kingdom
Neds	Sports Betting	Australia
Sports Interaction	Sports betting, casino	Canada
Laimz	Casino	Latvia
Nutz	Casino	Estonia
Klondaika	Casino, sports betting	Latvia
Boost Casino	Casino	Nordics, Baltics
Borgata Bingo	Bingo, casino	United States
Ninja Casino	Casino, sports betting	Nordics, Baltics
Gala Casino	Casino	United Kingdom
Party Poker	Poker, casino, sports betting	Global
Foxy Games	Bingo, casino	Global
Party Casino	Casino, sports betting	Global
Betboo	Bingo, casino, sports betting	South America
Vistabet	Sports betting, casino	Greece
Stadium	Risk management	North America
Finnplay	Casino, sports betting	Nordics
Bettson Group		
Bettson	Sports betting, casino	Global
Betsafe	Sports betting, casino	Global
Betfirst	Sports betting, casino	Belgium
Inkabet	Sports betting, casino	Peru
Jalla casino	Casino	Sweden
Nordicbet	Sports betting, casino	Sweden, Denmark
Racebets	Sports betting	United Kingdom, Germany
Star Casino	Casino, sports betting	Italy
Rizk	Casino, sports betting	Global

Note: Data for this table have been collected from corporate websites in October 2025 and represent the situation at that time. Brands and product lines are listed in the order given on the websites. Main markets are listed based on information given on websites. When specific market information was not available, the market was marked as global.

in October 2024 (FDJ United, 2024), and the company's focus on the brands of Kindred. Kindred was registered in Malta but with Swedish origins under its original name Unibet. Tracing the group history back to its Swedish founders also explains the Nordic focus, including the Storspelare brand which is advertised as the only casino brand aimed at Nordic high rollers. Entain has the broadest global coverage and the highest number of brands of the included groups. Entain has its headquarters on the Isle of Man. Finally, Betson group has its headquarters in Sweden and Malta, and a strong Nordic presence.

Aside from the brands of these large online gambling groups, we can also look into the number of brands and websites hosted by companies that have licenses in specific jurisdictions. In 2021, Regulus Partners (2021) compared the number of licensees in Sweden and Great Britain. They found that in GB, there were 190 active online licensees controlled by 160 companies. 41% of licenses were domestic and 33% were registered in other jurisdictions such as Malta, Alderney and Gibraltar. In the same year, Sweden had 66 active online licensees controlled by 48 groups. 88% were domiciled in Malta. On average, each group in Sweden had four brands. In GB, each group had an average of six brands. However, this statistic is misleading as in both cases, over half of all licensees had only one brand, and a small number of licensees had over 20 brands (two licensees in Sweden, ten licensees in GB). Four GB licensees had over 100 brands, each of which were white labels (see below).

The corporate structure of the online gambling industry is not stable but constantly evolving and consolidating around leading groups. In economics, the concentration and tendency towards market dominance by one group or network have been observed across different sectors. Particularly in the digital age, there has been an increasing tendency toward natural monopolies and winner-take-all scenarios (Tirole, 2017; Bystad & Dulsrud, 2020). While most current work (e.g., Tirole, 2017) focuses on digital platform giants like Google and Meta, a similar tendency can be observed in online gambling.

Recently, we conducted a study on mergers and acquisitions in the online gambling industry, focusing on developments between 2009 and 2024 ($N = 137$) (Berret et al., forthcoming). We found that the number of mergers and acquisitions in the gambling field has accelerated during the period. The largest gambling groups in our dataset (Entain, Flutter, The Stars Group (later acquired by Flutter) as well as largely land-based Tabcorp (Australia) and Ceasars Entertainment (United States)), represented almost one-third of all transactions. Perhaps surprisingly, we also found that an increasing number of mergers and acquisitions are taking place between gambling suppliers or between operators and suppliers. This may be explained by competitive issues, such as having major gambling products in-house, or by the desire of companies to diversify operations.

Products and platforms

As we saw in Chapter 1, online gambling emerged as a largely offshore business. Many suppliers still operate from offshore locations and cater to offshore

markets ([Regulus Partners, 2021](#)). At the same time, the growth of online gambling markets has changed technological structures and increased competition between suppliers ([Regulus Partners, 2021](#)). The software provider and supplier market is consolidating, with mergers and acquisitions becoming increasingly common ([Berret et al., forthcoming](#)). [Schneider \(2010\)](#) has noted that back in the 1990s, leading gambling software suppliers were also gambling operators. This began to change with increased concern over competition and product integrity. Consequently, many software providers ceased their gambling operations. By the 2010s, some operators have again begun developing their own software business and white-label solutions.

Platforms are the key basic component in online gambling. [Regulus Partners \(2021\)](#) estimated that platform costs make up about 2% of supplier costs for operators, although largest operators tend to have their own in-house platforms. Platforms constitute the backbone of online gambling provision, supplying essential infrastructure such as front-end and back-end systems, gambling management and payment gateway modules for websites and apps. The platform also needs to comply with regulations, including compliance with data protection and anti-money laundering (AML) provisions as well as secure identification and authentication of users (also [Williams et al., 2012](#)). In video gaming, the term platformisation has been used to describe platform architectures that facilitate interactions between activities, influence consumers who are active within that platform, and encourage expanded engagement ([Nieborg & Poell, 2018](#)). Although gambling websites are not platforms in the strict sense, they still sit at the interface between individuals who gamble, and gambling offers from different product suppliers.

Gambling products are an important lever in the competitive online gambling market. According to a review by [Regulus Partners \(2021\)](#), operators usually want a wide selection of different gambling products from a range of suppliers. Gambling products can include sports betting and different types of casino gambling, such as EGMs, poker and other table gambling formats (see also [Chapter 3](#)). Larger operators tend to have a higher proportion of more expensive products, such as live gambling streams, whereas smaller operators may rely on a smaller selection of suppliers with less costly products. [Regulus Partners \(2021\)](#) estimates that up to 20% of online company revenue is spent on acquiring and running gambling products.

Gambling products need to be hosted on servers. In some cases, this is done in-house, but many online gambling products are also hosted on large cloud servers such as Amazon AWS or gambling-specialised cloud solution providers (also [Regulus Partners, 2021](#)).

Business models

Gambling companies differ in terms of their business models. Some large companies, like Bet365, LeoVegas or Bettson, operate mainly in-house.

Others, such as William Hill and Unibet, have largely outsourced their services to suppliers. Outsourcing tends to focus on a handful of major B2B providers that typically offer vertically integrated platform, software and content solutions (Regulus Partners, 2021; Berret et al., forthcoming). For example, Maria Casino, a brand of FDJ United (see Table 2.2), is advertised on the group website as holding a vast access to products developed by well-known gambling product providers:

With a gam[bl]ing library consisting of over 500 games from 25 providers such as NetEnt, Microgaming, Playtech, IGT and Williams Interactive, players are spoilt for choice! Maria Casino is currently plugged in to 17 different casino platforms allowing them access to the best casino content available.

(FDJ United, n.d.)

A third category of companies operate under so-called white label models. White label services provide their customers (in this case, gambling operators) with a bundled and complete software solution, including all operational services, platforms, integration of gambling product providers, payment systems, compliance tools and technical support (Mulitsa, 2025). White labels are prevalent amongst new operators or actors such as charities that also operate gambling (Regulus Partners, 2021). Gambling companies become effectively ‘skins’ for these software solutions (Regulus Partners, 2021; Schneider, 2010). Crucially, the licensee in these situations is the white label owner, while the operator does not need to apply for a separate license. This licensing model sets white labels apart from turnkey models. Turnkey solutions can also come with full software setups but require operators to get their own licenses (Mulitsa, 2025).

White label models make it increasingly easy to start an online casino. They can also be an effective way to quickly reach new markets. White labels are generally permitted in offshore jurisdictions, such as Curaçao or Malta. In many European markets, such as Sweden or Germany, white labels are not permitted, and each online operator needs to have their own license. In the United Kingdom, white labels exist, but these have been criticised for enabling offshore gambling and for undermining regulatory controls (e.g., McNary et al., 2024). In 2021, 29 of 190 active British online gambling licensees held 600 white label brands (Regulus Partners, 2021).

Supplier markets

Online gambling companies require a set of different software and solutions to operate. The largest online gambling suppliers today equal the size of large online gambling providers. The size of largest suppliers has also been growing fast. Figures 2.2 and 2.3 use data from Vixio Gambling Compliance supplier

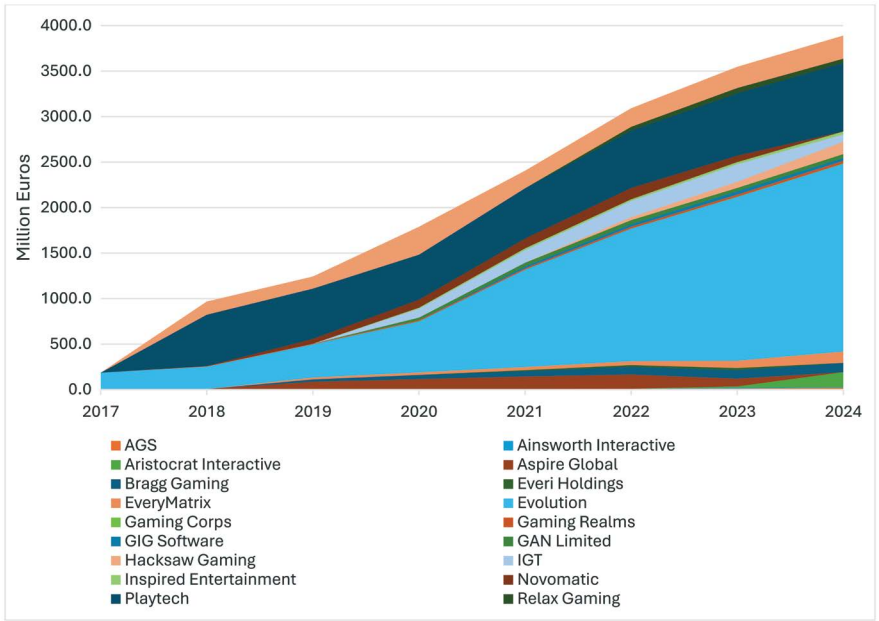


Figure 2.2 Market evolution of large online casino gambling suppliers, 2017–2024.

Source: Vixio Online Supplier Benchmarking data (2025). Note: Aristocrat acquired Neo-Games in April 2024. IGT data for 2024 includes only H1. Novomatic data for 2023 includes only H1. Currencies converted to Euros using currency rates in September 2025 (SEK 0.091; AUD 0.56; USD 0.85; GBP 1.15).

benchmarking database to show the market evolution of the largest suppliers of online casino gambling and online sports betting services. The dataset focuses on suppliers listed in the United Kingdom, Sweden, the United States and Australia (Vixio, 2025a).

The figures show that supplier markets have grown rapidly, particularly for online casino gambling. The observation is in line with the overall growth of online casino gambling (see also Chapter 3). Largest suppliers, notably Evolution, Playtech and Light & Wonder (former Scientific Games), hold a significant part of the casino product market. Sportsradar group, alongside Endeavour Group and Genius Sports, controls the bulk of the sports betting product market, with a strong focus on sports data and analytics. Suppliers engage in active competition for market shares. Descriptively, two market leaders, Evolution and Playtech have been involved in a defamation lawsuit in 2025, following claims by Playtech that Evolution allegedly conducts illegal business in jurisdictions where online gambling is not regulated, damaging Evolution’s share value (Vixio, 2025c).

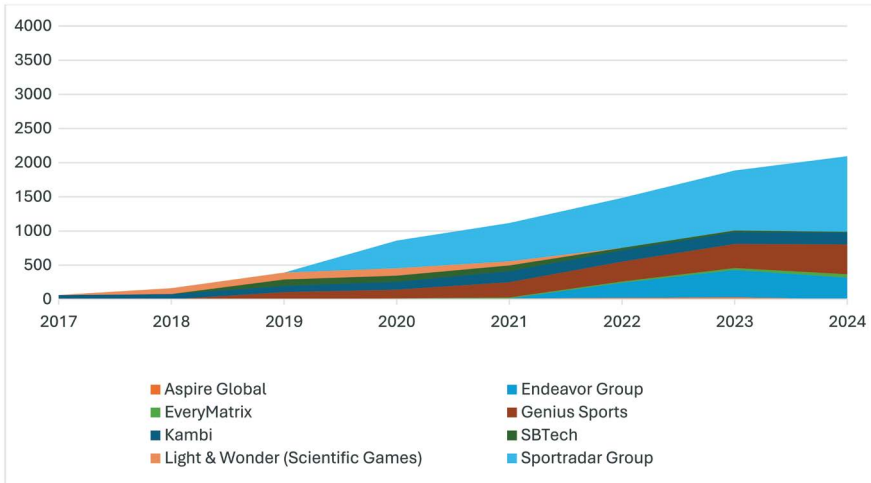


Figure 2.3 Market evolution of large online sports betting suppliers, 2017–2024.

Source: Vixio Online Supplier Benchmarking data (2025). Note: SBTech data for 2024 only Q1–Q3; Light & Wonder data for 2021 only H1, the company sold its betting business to Endeavor in September 2021. Currencies converted to Euros using currency rates in September 2025 (USD 0.85).

Major suppliers provide a range of services. [Regulus Partners \(2021\)](#) lists ten different supplier services, including betting products, casino products, platforms, gambling content, gambling content management, sports content, payment and fraud management, customer support services, marketing and affiliate management, and turnkey services. Some suppliers, particularly the largest ones, provide services across all these categories as white labels. Others may be more focused on specific software solutions. The market is highly concentrated. [Regulus Partners \(2021\)](#) estimated that twenty-one key service providers captured over 95% of the supplier market in Europe in 2021.

For example, Evolution Group holds a number of brands, supplying gambling operators with online slots (NetEnt brand, Red Tiger brand, BTG brand), table gambling (Red Tiger brand), live casino services (Ezugi brand), platforms (Nolimit City brand), bonus management applications (Red Tiger brand), a range of licensed gambling product mechanics (BTG brand, Nolimit City brand, DigiWheel brand), and even a service allowing operators to connect to gambling streamers via an API (Application Programming Interface) to gamble together (Livespins) ([Evolution, n.d.](#)). Smaller suppliers can offer plug-ins into other services via APIs. APIs act as a bridge between software solutions, enabling different applications to communicate with each other. For example, Finnplay, a Finnish online gambling platform supplier, advertises on its website that ‘the platform has ready implementation APIs for the majority of the leading 3rd party game providers’ ([Finnplay, 2025](#)).

Payment services

During earlier days of online gambling, banks were distrustful of online gambling transactions and fraudulent practices were common (Regulus Partners, 2021). Payments in gambling are still considered high-risk, due to concerns related to fraud or chargeback (reversal of funds that have been used for a purchase). For this reason, some payment intermediaries still avoid the gambling industry or charge higher service fees (Villa, 2025).

Gambling payment services have developed into major business. Fintech (financial technology) solutions use software and algorithms to automate payment processes, making them even more immediate. Gambling companies have adopted these technologies, allowing consumers to directly access funds from their bank accounts (Gainsbury & Blaszczynski, 2020). Credit institutions, such as payday loan providers, also orbit in the gambling ecosystem. High levels of gambling have been connected to higher levels of instant loans and credit card use (Marionneau et al., 2023; Muggleton et al., 2021; Baker et al., 2024). In online environments, fast credit has become even easier to access.

Payment services are a necessary part of the online gambling ecosystem. Payment services are used to transfer money to and from gambling websites and apps, and to contribute to AML and KYC compliance. From the perspective of the gambling operator, it is vital to ensure as little friction as possible: smooth deposits keep customers engaged. From a customer's perspective, gambling operators seem more trustworthy if they offer different and familiar payment options (Villa, 2025). Payment services for online gambling include major banks and credit cards (where credit card gambling is legal), e-wallets, direct bank transfers, prepaid cards and cryptocurrencies. Operators usually need to adapt payment methods to jurisdictional requirements when entering new markets (Regulus Partners 2021). Regulus Partners (2021) estimates that while some companies run their own payment infrastructures, others outsource them to specialised suppliers. This service forms up to 10% of online gambling gross gambling revenue (GGR).

Fintech solutions collect data on gambling activities in real time. The ability to collect and infer data from online activities can help fintech companies reduce risks associated with the payment business (Marty, 2023). These data could also, at least in theory, be used to deliver personalised interventions and intervene in cases of harm (e.g., Lakew et al., 2024). Some payment intermediaries already provide the opportunity to block gambling payments. However, there are also risks attached to individual data travelling the wider payment services networks. The ability of payment services to process data derived from a variety of sources shows just how far insights on gambling behaviours travel within the online gambling ecosystem (see Chapter 5).

An additional regulatory and compliance issue affecting payment services and other suppliers relates to so-called double-dipping. The same suppliers often accept and mediate payments from regulated as well as offshore websites. For example, part of the Casinopapers investigation (see below), published in the Guardian in 2025 (Das & Peigné, 2025) showed that major credit card companies Mastercard and Visa had been processing payments for illegal and fraudulent gambling websites, despite pledges to stop these payments. The credit card companies used an external payment mediation tool that is used to route transactions via different financial institutions, maximising their chance of being approved.

Cryptocurrencies

Decentralised financing (DeFi) is a financial system that uses blockchain technology to automate financial transactions by eliminating intermediaries, such as banks. DeFi transactions often involve cryptocurrencies or other digital assets like video gaming skins (also Wardle, 2021). Incorporation of DeFi and cryptocurrencies into gambling transactions has opened new opportunities for gambling operators, particularly in offshore locations. Operators like Stake.com, licensed in Curaçao, base their business model on gambling with cryptos. Stake.com advertises itself as the world's leading cryptocurrency casino site, accepting 21 different cryptocurrencies in addition to fiat currency (Stake.com, 2024).

Cryptocurrencies are based on blockchain technology, which is a digital ledger system. The system records transactions in units called blocks. These blocks are then cryptographically linked and secured. All new pieces of information are embedded into the chain, making it nearly impossible to alter or tamper with existing information. Cryptocurrencies are the largest application of blockchain technology (Mills, 2024, Gainsbury & Blaszczyński, 2017). Blockchains are an ecosystem in themselves, representing 'a sophisticated network of interconnected stakeholders, including consumers, sellers, products, regulators, validators, and the various platforms needed to process transactions' (Mills, 2024, p. 428). The value of cryptocurrencies is created through material properties (such as scarcity and mining) as well as community engagement (Tikkanen et al., 2022).

A recent report in the Globe Newswire (2025) describes a study of over 200 gambling sites operating with digital currencies. The report found that crypto casinos are gaining market share: total bet volumes had doubled in the first quarter of 2025 while payout disputes had dropped by 38% amongst compliant operators. In 2024, the market of cryptocurrency gambling was estimated at over 200 million euros (Globe Newswire, 2025).

For gambling operators, cryptos offer many advantages. Cryptos render payments smoother, cheaper and faster (Gainsbury & Blaszczyński, 2017). Cryptocurrencies can offer anonymity, privacy and enhanced security of

transactions. Every bet and outcome is permanently recorded, creating a trail that can be verified but not altered ([Globe Newswire, 2025](#)). Crypto-based gambling could, in principle, eliminate some of the opacity involved in online gambling and data ownership, even enabling individuals to track their gambling across operators. However, cryptocurrencies can also hide critical information about the origin and owners of crypto funds. Therefore, crypto technology raises novel privacy concerns related to how sensitive information is protected within the blockchain, and who is in charge of controlling access to this database or ensuring individual anonymity ([Mills, 2024](#)). Concerns are highlighted because cryptocasino providers often operate within the already opaque offshore market.

Gambling operators have an incentive to push their customers towards cryptos at the expense of other payment services and methods. In addition to cutting costs, eliminating friction and making gambling faster, crypto-based gambling allows operators to avoid some regulatory restrictions. Traditional banking institutions have oversight duties over payments, as well as having a role in enforcing national gambling regulations, such as payment blocking systems ([Egerer & Marionneau, 2024](#)). Use of cryptocurrencies can therefore enable some form of regulatory evasion.

Advertising and marketing

Gambling operators spend a staggering amount of money on advertising. Advertising is amongst the largest cost items for online gambling companies (see also [Chapter 5](#)). Regulus Partners ([2021](#)) has estimated that marketing budgets tend to be up to 50% of GGR for early-stage operators and around 20% of GGR for larger and more established companies. The average is around 30%. Advertising and marketing involve a wide network of interests. Gambling advertising connects with a broad marketing ecosystem, consisting of actors such as tech giants, media houses and more specialised advertising agencies, advertising technology companies, affiliates and affiliate management, influencers and content creators.

Alongside traditional media houses, tech giants control a large proportion of the online advertising infrastructure. The corporate landscape of online advertising is effectively a duopoly, dominated by Google (Alphabet) and Facebook (Meta). These two companies capture over half of all worldwide digital advertising spending ([Cramer-Flood, 2024](#)). Google and Meta also hold vast amounts of data on internet users which further increases their advantage in the digital advertising space (Zuboff, 2019), including data on gambling behaviours and preferences (see [Chapter 5](#); [Das & Ungood-Thomas, 2025](#)). [Chapter 5](#) discusses the role played by online platforms, including social media, in the advertising infrastructure of online gambling in more detail. This chapter focuses on the actors that are present in this ecosystem.

Social media and streaming platforms

Social media channels offer a simple and inexpensive way for gambling companies to reach audiences and to promote gambling with fewer constraints than traditional media (Gainsbury et al., 2016). In 2016, Facebook and Twitter were the dominant platforms used by gambling companies (Gainsbury et al., 2016). These same websites remain popular amongst gambling advertisers in 2025 due to their large user base and flexible advertising policies that permit gambling adverts (MacIntyre, 2025; Smartico, 2025). Facebook has a vast audience and precise ad targeting options for regulated operators. Telegram has an open content policy, making it another attractive channel for operators to share gambling content (MacIntyre, 2025). Platforms with more stringent rules on gambling content, such as YouTube or TikTok, can also be used to distribute influencer content. For example, TikTok bans gambling promotions but permits influencer content if they disclose partnerships. Influencer content is particularly effective amongst young audiences, contributing not only to gambling but also to wider digital dependency (Bolat et al., 2025).

Streaming websites, notably Twitch and Kick, livestream real-time gambling as one of their most popular content categories. Twitch implemented restrictions on some forms of gambling content on its platform in 2022. However, gambling content continues to be prominent on the platform and impactful amongst those who view it (Hughes et al., 2025). Kick became an alternative to Twitch, offering an option with less restrictions on gambling content. Some partnerships were directly carried over from Twitch to Kick (Holmes, 2024).

Streamers broadcast themselves gambling at different products and chatting through it in real time. Gambling streams are also interactive, allowing viewers to participate in the experience, or even gambling together with the streamer, and to experience a kind-of parasocial relationship (Hughes et al., 2025). Prominent streamers are usually sponsored by gambling companies, or they can have an affiliate relationship with gambling companies. According to one estimate, the most popular streamers earn can over 8,500 euros (10,000 USD) per stream. Smaller streamers may earn a few hundred euros per stream (The European Business Review, 2023).

Affiliates

Affiliates partner with gambling operators to drive traffic to gambling websites. Affiliates can be large corporations or smaller-scale individuals who host websites that specialise in specific gambling products. Large affiliate businesses have significant scale and online presence, including media content and special services for subscribers. Some large affiliates can also access customer data from gambling operators, making them more like white label solutions or country managers for operators (Regulus Partners, 2021). In some jurisdictions, affiliates require a license to operate

(Regulus, 2021, also [Chapter 6](#)). Other affiliates specialise in advertising offshore providers. Affiliates tend to focus either on the regulated or the offshore market ([Op de Woerd, 2025](#)).

Affiliate marketers derive their revenue from commissions paid by gambling operators. The business model functions as follows: Affiliates use different channels to market gambling, including tipster and comparison websites, social media content, streaming websites and intensive search engine optimisation to improve rankings in online search results. Affiliates post links to partnered gambling operators. In return, gambling operators pay affiliates for recruiting new customers and for enticing existing customers to bet more ([Hing et al., 2024](#); [Zangeneh et al., 2008](#); James & Bradley, 2021). Compensation to affiliates consist of two primary models. A revenue share or commission-based model pays affiliates a percentage of the lifetime losses of referred customers. These sums can be around 30% of losses ([Houghton et al., 2020](#)). A cost-per-acquisition (CPA) model pays affiliates a bulk sum for each new registered customer ([Hing et al., 2024](#)).

The revenue share model is more advantageous to affiliates ([Hing et al., 2024](#); [Op de Woerd, 2025](#)). Affiliate data from Vixio Gambling Compliance (Vixio 2025a) show that revenue shares make up around 50% of all revenue. The share of CPA revenue is generally lower, at around 10%–15% of total revenue. Other revenue sources include subscription fees, listing fees or different media and publishing contracts. Two affiliates also supply revenue splits by gambling product (Catena Media, [Gambling.com](#)). In both cases, earnings from casino products made up over 70% of revenue while sports betting made up under 30% of revenue. The share had remained relatively stable across 2018–2024. However, the revenue share model can also incentivise affiliates to target individuals who are likely to lose more than they can afford. An Australian interview study with key informants, including affiliates and regulators ([Hing et al., 2024](#): 15) found that some super affiliates were seen to ‘groom customers to bet by [...] first providing informed tips and then promoting losing tips once they have built trust’ (see also [Chapter 4](#)).

Customer relationships

Gambling operators use customer data platforms (CDPs) to analyse data and to create profiles of their customers. CDPs inform customer relationship and customer relationship management (CRM) services that then work to enhance profitability and customer loyalty (see [Chapters 4 and 5](#), also [Faganel & Constantini, 2020](#)). Customer support consists of telephone and chat functions. Part of these contacts may be outsourced to support centres, often placed in locations with cheap labour costs. Support for the most profitable VIPs are typically kept in-house ([Regulus Partners, 2021](#)). Customer relationships are essentially marketing, as CRM software, powered by AI, are leveraged to provide customers with personalised content and promotions. From a gambling

company's perspective, effective CRM increases lifetime value of customers (see also [Chapter 5](#)). For example, one industry blog highlights how 'in 2025, CRM is no longer a database – it is a revenue driver' ([Groovetech, 2025](#)).

Sports and sports content

The close relationship between gambling and sports – or even gamblification of sports – has been documented in previous research (e.g., [McGee & Bunn, 2023](#); [Nosál, 2022](#)). Gambling brands have accumulated significant power in the world of sports by associating their brands with sports teams, leagues and competitions around the world ([Reith, 2023](#)). Investigate Europe ([Buzzoni et al., 2025](#)) recently calculated that two-thirds of European sports teams in premier competitions (296 teams of 442) had a gambling sponsor in the 2024/25 season. For one-third of teams, the gambling partner was a front-of-shirt sponsor. In addition, almost half of top sports leagues in Europe had a gambling or lottery sponsor. All investigated teams in Austria, Sweden, the Netherlands, Czechia, Hungary and England had a gambling sponsor. In countries like Belgium and Italy, gambling sponsorship is prohibited, but a minority of teams still had gambling presence on their shirts in the form of alibi brands/brand extensions (e.g., news websites with the same name as the gambling brand) ([Buzzoni et al., 2025](#)).

The influence of gambling sponsorship is equally important outside of Europe. European football, and particularly British football, has an important position in many markets globally, serving as a key gambling product for local providers ([Bunn et al., 2020](#)). Building on the global viewership of British football, gambling brands, particularly from Asia, sponsor British football clubs to gain visibility in their local markets, notably China ([Wheaton, 2024](#)). Investigate Europe ([Buzzoni et al., 2025](#)) found a total of 27 teams across Europe with sponsorship deals involving Asia-facing brands. These gambling sponsors draw on the complexities of the online gambling ecosystem: In the United Kingdom, the legal basis for this sponsorship is found in white label agreements ([Wheaton, 2024](#)).

Sports services and data

In addition to sponsorship deals with clubs, gambling industries require other sports-related services to maintain their betting offers. Sports is not only a gateway to brand visibility, but also the raw material for gambling content. In more traditional outcome-based sports betting, sports content was comparatively easy to produce: bets were placed on publicly available data on match or race outcomes ([Regulus Partners, 2021](#)). Today, over half of online sports betting revenue is derived from live betting (an instant form of betting, see also [Chapter 3](#)). Live betting has created a need for constant and real-time results, turning sports betting data services into big business

(Regulus Partners, 2021). Sports data are usually owned by leagues, but private suppliers participate in refining and processing data (Feld, 2020). Sports data consist of event data (e.g., match events such as goals) and performance data (statistics on the performance of participating athletes). Event data are collected manually, while performance data are based on software and sensors tracking athlete movements. Sensors can be found, for example, in balls or player jerseys (Feld, 2020).

Intimately related to sports data provision, oddsmaking is also a big and data-driven business. Historically, odds were drafted based on the experience of individual oddsmakers. Today, oddsmaking is based on high-level statistics and data analytics. Oddsmakers use sports data as a crucial component for accurate prediction (Feld, 2020). Bookmakers collect large amounts of data, including player and team statistics, live game data and social media sentiment. These data are analysed and managed using machine learning techniques to produce competitive odds that can attract customers while ensuring profitability for bookmakers (Galekwa et al., 2024).

Other sports betting-related services for gambling companies include streaming services. Many sports betting providers run their own streaming services or even television channels to broadcast sports matches and races that customers can bet on. Streaming services are one of the costliest supplier elements for sports betting operators (Regulus Partners, 2021). At the same time, streaming enables betting providers to significantly expand their portfolio of gambling provision. With streaming, betting is no longer restricted to televised matches or national leagues in terms of availability and timing. Live streams of international sports or low-profile events, even late at night, allow operators to offer more bets (Parke & Parke, 2019).

The close relationship between gambling and sport carries a high risk of match-fixing and other sports-related fraud. Match-fixing is more common in lower-level divisions and in sports or countries with low levels of compensation to professional players (Forrest, 2024). To prevent match-fixing, gambling providers, as well as sports leagues, use software to detect anomalies in sports events. Specialist agencies use real-time odds tracking to monitor betting markets and flag matches as suspicious when odds shift in unexpected ways. In addition, fraud detection systems use statistical models to identify anomalies in betting patterns (Forrest, 2024; McHale, 2024). Monitoring sports content integrity usually requires additional software and solutions that may be provided by sports data suppliers (Regulus Partners, 2021).

Regulation and compliance

Regulators have an important position in the gambling ecosystem. Regulators have multiple roles and tasks to ensure compliance across regulatory domains (see Chapter 6, Wardle et al., 2024). Regulators outsource some of these tasks, particularly the more technical ones, to external bodies or the

gambling industry's self-regulation. From the perspective of gambling companies, regulatory costs and licenses are a cost element. In addition, regulators usually have the power to issue fines. Fines can constitute an additional financial burden on non-compliant operators. The number of fines has been increasing at least in established and regulated European markets, and the United States. Regulators issue most fines for breaches related to AML and responsibility mandates (Wardle et al., 2024; Vixio, n.d.-b).

Test houses, or test laboratories, are enlisted to test the technical standards of gambling. Test houses are private suppliers contributing to regulation by testing new gambling products and gambling software for compliance with technical standards, fairness and integrity. Some products are also tested for harmful features (e.g., limits, speed), but these are not based on set standards (Regulus Partners, 2021). Casey (2022) argues that gambling regulators have come to depend on test houses due to a lack of technical expertise within regulatory bodies. Test houses are generally seen as independent and impartial actors within the ecosystem. At the same time, test houses are a highly concentrated industry, wielding significant power within the ecosystem. Test houses have the capacity to interpret often generic standards or even to create these standards (Casey, 2022). Some regulators publish lists of accepted test houses (Vixio, n.d.-a.) but few jurisdictions require test houses to have a supplier license (see Table 2.1).

Gambling trade associations are another example of outsourced regulation. For example, eCOGRA (eCommerce Online Gaming Regulation and Assurance) was an early trade association and testing agency aiming to fill regulatory gaps in the early online market (Casey, 2024). The gambling industry continues to be organised around trade organisations nationally and internationally. These industry bodies shape regulatory environments and coordinate industry action under self-regulatory codes of conduct. Codes of conduct complement statutory regulation in some cases, and influence it in others (Casey, 2024, see also Chapter 6).

Gambling companies need to comply with several security issues, including handling sensitive data, responsibilities related to KYC (know your customer) and AML obligations, and responsibilities related to duty of care mandates. Security obligations can be accomplished with software solutions. KYC and AML software can be in-house or outsourced, especially for turnkey-type operations (Regulus Partners, 2021). Similarly, duty of care-type solutions can be based on third-party monitoring systems or in-house models (see Chapter 5; Marionneau et al., 2025a).

Beneficiaries of gambling

On the flipside of gambling provision and suppliers are the actors who benefit financially from gambling proceeds. New forms of gambling are legalised across global contexts with the promise of economic development, added

tax revenue or added revenue for a range of earmarked causes (e.g., culture, schooling, sports). The Lancet Public Health Commission on Gambling (Wardle et al., 2024) reviewed legislative framings for gambling in 80 jurisdictions that had implemented major legislative change in recent years, in most cases to legalise online gambling. 65% of jurisdictions cited revenue generation as a reason for the policy change. Revenue-related framings were particularly prevalent in North America and Africa, although less so in Europe and Asia.

When gambling was still predominantly land-based, and monopoly structures were more common, governments and earmarked beneficiaries received, on average, two-thirds of gambling company GGR in European contexts. Government revenue was derived via direct ownership of monopolistic companies, with monopoly profits transferred directly and almost in full to state coffers or earmarked beneficiaries. The remaining profit was used for production costs and administrative costs (Marionneau & Nikkinen, 2020a).

In most competitive online markets, surplus to the state is derived via direct taxation. In some cases, part of tax money is earmarked to special causes (Rintoul et al., 2025). Contribution to states via taxation tends to be lower than in models where all monopoly profits were transferred to states. Gambling taxes are usually levied on GGR. In Europe, the average tax rate on GGR in 2021 was around 22%, with a trend towards increased taxation (Marionneau et al., 2025b). For example, in the Netherlands, gambling tax rates increased from 30.5% to 34.2% in 2025, with a further increase to 37.8% in 2026 (Netherlands Enterprise Agency, 2025). In Denmark gambling tax rate was increased from 20% to 28%/GGR in 2021 and in Sweden from 18% to 22%/GGR in 2024 (Marionneau et al., 2025b, c (or bc)). Still, this is lower than two thirds of GGR transferred to states in some monopoly systems (Marionneau & Nikkinen, 2020a).

In addition to governments, private investors and owners receive much of the benefits of online gambling. Major gambling groups are listed in the stock exchange and are open to private investments. Gambling, therefore, generates shareholder value to these investors. Investor website Investopedia wrote in a recent article that ‘the most reliable way to profit from all that [gambling] action is not to wager on the next point spread, but to invest in the companies that skim a fraction of every spin, slip, or parlay’ (Hayes, 2025).

Institutional investors, in particular, yield important market power due to their size and prominent position in societies. Institutional investors include companies such as banks or pension funds (Berret et al., 2024). In a recent study (Berret et al., 2024), we looked at the role of institutional investors in the gambling industry ecosystem and found that investment in gambling industries is widespread, with only 35% of our sample excluding gambling from investment portfolios. Exclusion of gambling was more common in Europe than in other global regions, with the exception of the UK where gambling investment was prevalent. Most investors that excluded gambling

or other addictive industries from their portfolios did so due to reputational concerns.

Local communities can also have an interest in gambling proceeds. Gambling is often legalised with the promise of generating employment and economic multiplier effects within communities. This claim can hold, at least partly, for land-based destination casino gambling (e.g., [Marionneau & Nikkinen, 2020b](#); [Walker & Sobel, 2016](#)) but cases where online gambling directly benefits a community have been scarcer. Remote offshore locations may be one such example (see also [Chapter 1](#)). Another example the case of Stoke-on-Trent in Northwest of England. Stoke-on-Trent is the home of Bet365, one of the largest online gambling companies in the world. A recent article in *The Guardian* ([Davies, 2024](#)) describes the impacts of the company in the local community. According to locals in the city, Bet365 supports about 10% of local employment, including in the local football club which is also owned by the same family that runs Bet365. In addition, the company is described to attract talent to the city, including a scheme to recruit math teachers to improve the talent pool of future Bet365 employees in the community. However, this type of community engagement, even if to company benefit, is likely to have a comparatively minor part within the overall gambling ecosystem.

Finally, the treatment sector, the gambling harm prevention sector and the gambling research community can be seen as benefitting actors within the ecosystem, particularly in jurisdictions where these activities are directly funded by gambling proceeds or by gambling companies. The optimal way to finance harm services has been debated in and out of academia for a long time, particularly with regard to the UK gambling levy (e.g., [van Schalkwyk et al., 2023](#); [Wise, 2024](#)). Similarly to all beneficiaries, the focus of this debate has centred around conflicting interests (see [Adams, 2016](#)). The Lancet Public Health Commission on Gambling ([Wardle et al., 2024](#)) recommended that academics accept no direct or indirect funding from the gambling industry to protect integrity and impartiality of scientific evidence.

Ecosystems of the offshore industry

This section focuses on ecosystem actors of the offshore industry. The offshore industry is not inherently different from the regulated industry, and many of the same suppliers provide services for both market segments. However, some actors are specific to the offshore ecosystem. These actors include potential connections to organised crime.

The Casinopapers leak

In 2025, the so-called Casinopapers data leak and investigation revealed information about the structures of the offshore gambling industry. The Casinopapers investigation was a collaboration between a Dutch investigator

platform, called Follow the Money, and a team of journalists from different European countries, supported by a grant from Investigative Journalism for Europe. The investigation focused on tens of thousands of leaked internal documents from offshore gambling operators. In addition, journalists conducted undercover research at various gambling conferences.

Austrian newspaper *Der Standard* (2025) reported how the Casinopapers leak was the first to provide insight into ‘a globally networked industry that is reluctant to comply with national laws and knows exactly how to circumvent them.’ The investigation centred around a company called Delasport. Delasport is a software company providing turnkey solutions for online gambling operators, including technical aspects, casino management, payments and compliance. The company has a supplier license in comparatively strict markets, including Great Britain and Sweden. However, documents show that behind the façade, Delasport also runs dozens of online casinos via shell companies registered in offshore jurisdictions (Der Standard, 2025; The Shift News, 2025). These online casinos target markets in which they are not licensed. Der Standard (2025) quotes an employee email from 2022 stating that ‘Currently, our main target countries are most EU countries and in particular Germany, Austria, Italy, the Netherlands, Finland and Denmark.’

Companies and corporate groups that are double-dipping in the regulated and offshore markets pose a particular risk for regulators and consumers. Shell companies conceal the real ownership structures of online gambling websites, making it difficult, if not impossible, for regulators to take down sites that illegally target markets in which they are not licensed. In addition, corporations with licensed operations in a country could exploit their insights to advance offshore operations in the same country. Notably, many self-excluded individuals report being actively targeted by offshore gambling companies and affiliates (e.g., Cannane, 2024; Devault-Tousignant et al., 2023; iGaming Business, 2023; Kraus et al., 2024). Of course, companies’ means to target self-excluded individuals are manifold, and do not necessarily equate to data breaches. Yet, an Australian report (Financial Counselling Australia, 2015), drawing from insider interviews, reports that gambling companies regularly swap and sell lists of customers who have stopped gambling with them, allowing other companies to start targeting the same individuals.

Criminal actors

Promotion of offshore or illegal gambling websites can take place via affiliates specialising in this market, or other promotional websites. In China, where online gambling is illegal, gambling apps are promoted in a wide network of gambling and porn promotion pages. These pages redirect users to third-party supply websites that allow app downloads (Han et al., 2023). Illegal gambling apps have become the primary revenue source for organised crime groups in the area (Gao et al., 2021). One Chinese study (Gao et al., 2021) identified

over 11 thousand server domains related to Chinese-targeting gambling apps, half of them located in mainland China. Almost all registrant information was concealed.

A recent report on offshore gambling from India ([Shastry, 2025](#)) revealed that despite bans on online gambling, online traffic data shows consistently high volumes of visits to gambling websites and a broad user reach. Direct traffic made up 66% of all traffic, suggesting that most who visit offshore websites use direct links from adverts or bookmarks; 15% of traffic came from so-called referral traffic, such as affiliates; and 12% of traffic consisted of search traffic, aided by search engine optimisation tactics and indexing (see also [Chapter 4](#)). Gambling websites made widespread use of mirror websites and encrypted apps to escape regulatory control. Similarly, the primary channel for payments, United Payments Interface, uses money mules and malicious mobile applications to manage these mules. Criminal networks have even developed apps that manage the extensive networks of money mules. [Shastry \(2025\)](#) concludes that illegal gambling operations in India is a sophisticated ecosystem of operators with connections to criminality and money laundering.

Similar results have been reported by the United Nations Office on Drugs and Crime (UNODC). In a report on illegal gambling networks in Southeast Asia, the UNODC (2024) describes how organised criminal groups use advanced data-driven and blockchain technologies to facilitate illegal gambling transactions and money laundering. Groups operated mainly in the Mekong region, which is a trans-national area located in the basin of the Mekong River around Cambodia, China, Laos, Myanmar, Thailand and Vietnam. The UNODC (2024) concludes that the scale and sophistication of these operations have created a significant asymmetry between the technological abilities of criminals and the possibilities of governments to intervene with and dismantle these networks. We come back to the regulation of online gambling, including offshore gambling, in [Chapter 6](#).

The ecosystem and economic power

Online gambling industries are connected to a host of other service providers. In the online world, the production of gambling has become more complex in comparison to traditional land-based formats. This chapter has traced the outlines of a gambling ecosystem in which suppliers and other dependent actors revolve around gambling industries. The ecosystem includes actors involved in product development, marketing, payment services, sports, regulation and those benefitting from gambling revenue. These interest networks are intertwined within themselves and across gambling operators. Large suppliers typically have different gambling operators in their client rosters. In some cases, the same suppliers cater to regulated and offshore operators. Part of the ecosystem is therefore also enabling offshore gambling.

The gambling ecosystem expands to a multitude of other industries and their networks. The gambling ecosystem is connected to other ecosystems, such as the payments ecosystem or the advertising ecosystem. The central node depends on perspective. Other online services, including video gaming are connected to the same suppliers as gambling operators (Wardle, 2021). Some of the suppliers and beneficiaries of gambling are also active in other unhealthy commodity sectors, like alcohol (Berret et al., 2024; Rintoul et al., 2025). As the word internet suggests, the online ecosystem consists of 'interconnected networks' that link together and form a global economic and information system.

The ecosystem is characterised by intertwined financial interests. Interests in gambling revenue and gambling business span beyond individual operators, reaching diverse actors from mass media and platform technology to institutional investors, blockchain technologies, product developers and beneficiaries. Each of these actors has an interest in lobbying for advantageous regulatory arrangements for themselves and, by extension, for gambling operators. As an example, research has shown that linking gambling revenues to charitable causes legitimises gambling in societies, and risks turning beneficiaries into proponents of gambling (e.g., Egerer et al., 2018; Francis & Livingstone, 2020; Marionneau & Kankainen, 2018).

Complex ecosystems can also obscure responsibilities. The more layers of outsourcing, the greater the risk that regulators will not be able to hold licensed operators accountable for any wrongdoing (also Regulus Partners, 2021). Each actor in the ecosystem is responsible only for their own part, complicating regulatory action. For example, it is difficult to identify who is responsible for accepting a payment to an offshore gambling website: the platform, the payment intermediary or the bank. Recently, one payment mediation service was quoted in *the Guardian* (Das & Peigné, 2025) saying it was a neutral software solution that did not have any responsibilities in controlling customer funds. This type of complexity masks responsibilities and makes it easy for different actors in the ecosystem to point their fingers at each other in cases of possible violations.

The benefits of an ecosystem, in theory, would be to foster innovation, flexibility, efficiency and global interaction (Kuzmin et al., 2025). Competitive online markets may also, at least on the surface, seem like they produce consumer value by increasing choice. However, the constraints of the online ecosystem generate very similar business models across operators and platforms within the ecosystem, in reality limiting individual choice: gambling platforms that seemingly compete with each other actually belong to the same large groups and offer the same products that are developed by the same major suppliers. Institutional sociologist Mark Granovetter (1985) has argued that the notion of independent actors is false because actions are embedded within institutional arrangements. In online gambling, the ecosystem provides the outlines of these institutional constraints.

Economic power of ecosystems is further accelerated by shared interests in consumer data and profiling. Actors in the ecosystem share data and purchase data from each other to manage their own client portfolios. The larger the ecosystem, the more data can be leveraged on individuals, and the more effective direct marketing efforts will be. The next chapters will be devoted to the kind of data that the online gambling industry and its ecosystem hold on people, and how these actors use data to deliver even more effective gambling content and marketing messages.

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Products, Platforms and Design

Design of online gambling

Online gambling reproduces land-based gambling but also breaks from it. Many online gambling products are similar to land-based equivalents: casino gambling products, lotteries, or sports betting can be delivered via either medium. At the same time, new online-specific products extend from traditional categories. Online EGMs are increasingly immersive. Online scratch cards now look and feel much more like EGMs than their cardboard cousins. In-match betting has turned sports betting into a continuous gambling format, making it very different from traditional football pools or pre-match betting. Online-specific products without clear land-based equivalents include at least crash games (e.g., aviator) or some virtual sports betting products.

Similarly to products, online gambling environments expand from land-based settings. A body of research describes how land-based casinos are purposefully designed to immerse customers into the gambling space. Traditional casino designs are maze-like, lack natural light and encourage continued gambling (Sulkunen et al., 2019; Schüll, 2012). In contrast, land-based convenience gambling has been designed to encourage high availability and impulse gambling. Examples of convenience gambling design include EGMs placed in dedicated gambling corners of supermarkets or petrol stations (Egerer & Marionneau, 2019). Online gambling settings combine characteristics of these different land-based environments: Similarly to land-based casinos, online gambling websites and apps are designed to be immersive and encourage continuous gambling. Similarly to land-based convenience locations, online gambling environments are also designed to be constantly available and to push frequent reminders to gamble.

The design of online gambling products and environments contributes to making them particularly harmful. [Figure 3.1](#) presents a summary of design features of online gambling based on the findings of this chapter. In the following, the chapter looks more closely at design features of online gambling products and platforms. It then moves on to discuss how gambling websites use different nudges and dark patterns to direct people to behave in ways that

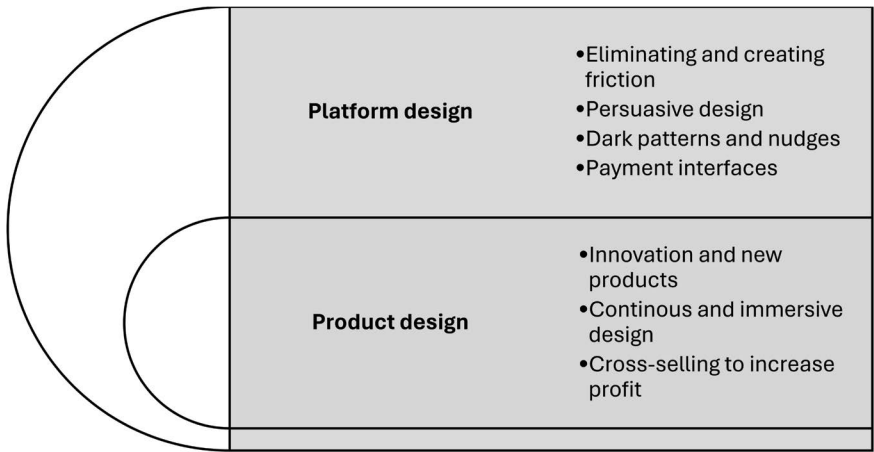


Figure 3.1 Design features in online gambling interfaces and products.

are beneficial for gambling operators but not to users. Finally, the chapter presents empirical findings on what online gambling websites look like and what kinds of impact online design choices have.

Products

Most research looking into online gambling has focused on characteristics of people who gamble online rather than the characteristics of online products (Lawn et al., 2020). Yet, online gambling formats are characterised by a range of situational and structural characteristics that make them highly accessible and highly intensive (McCormack & Griffiths, 2013).

The Lancet Public Health Commission on Gambling (Wardle et al., 2024) lists eight different features that are characteristic of high-risk gambling products. These are: (1) high speed; (2) high intensity and rhythm; (3) sensory stimuli; (4) reinforcement characteristics that encourage continued gambling; (5) seamless payment systems; (6) near misses and losses disguised as wins; (7) informational reinforcement making gambling easier; and (8) availability-related characteristics. The evidence behind these harmful characteristics comes mainly from land-based gambling and EGMs. In online gambling, many harmful product features are further strengthened: Online gambling products are constantly available, seamless to access and highly intensive.

Online gambling products can be divided into two broad groups: online casino products and online sports betting products. Most jurisdictions regulating online gambling, divide licensure between these product categories. As a result, most operators and jurisdictions also report their online gambling revenue and statistics based on this dual categorisation. Overall, the share of

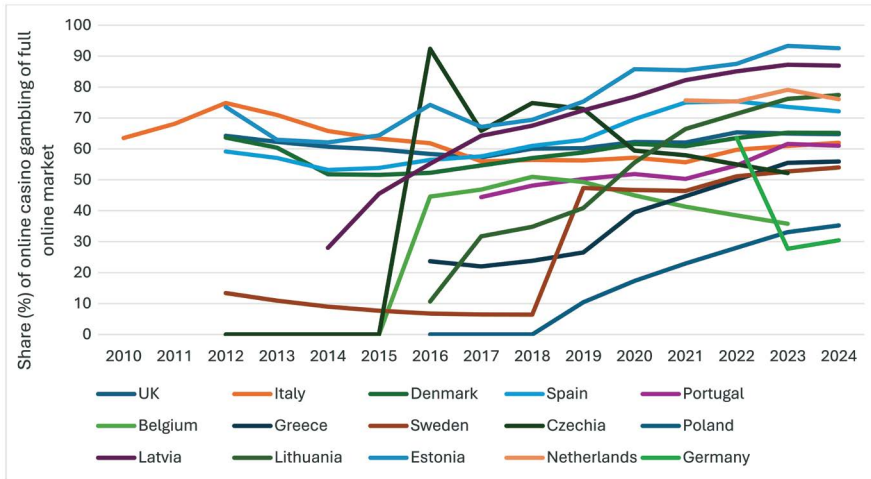


Figure 3.2 Share of online casino gambling in competitive online markets of European countries, 2010–2024.

Note: Data were retrieved from Vixio Gambling Compliance (2025a) European online gambling market monitor. The data in the market monitor are collated from official sources in European countries. The table includes European countries where online GGR is reported separately for casino and betting products.

online casino gambling is growing across regulated online gambling markets in Europe. [Figure 3.2](#) shows how the share of online casino gambling has evolved within European competitive online markets (consisting of casino and sports betting products, excluding online lotteries). The figure shows that the share of online casino gambling has increased across most markets.

On average, the share of online casino gambling has risen, while the share of sports betting has decreased. Before COVID-19, and particularly across 2016–2019, the split between casino and betting products was almost 50/50 at the European level. In 2019, 49% of total GGR in these 15 European countries was generated by betting products and 51% by casino products. During and after the pandemic, online casino products have increasingly dominated the market. The share of casino gambling is the highest in the Baltics but also reaches over 70% of the market in the Netherlands and Spain. The share of online casino gambling is lowest in Germany and Poland. In both of these countries, accessibility of online casino gambling has been restricted with policy. In Poland, online casino gambling is under the monopoly of Totalizator Sportowy, while online sports betting is a competitive market. Germany has a strict cross-operator deposit limit that reduces overall losses ([Marionneau et al., 2025](#), also [Chapter 6](#)).

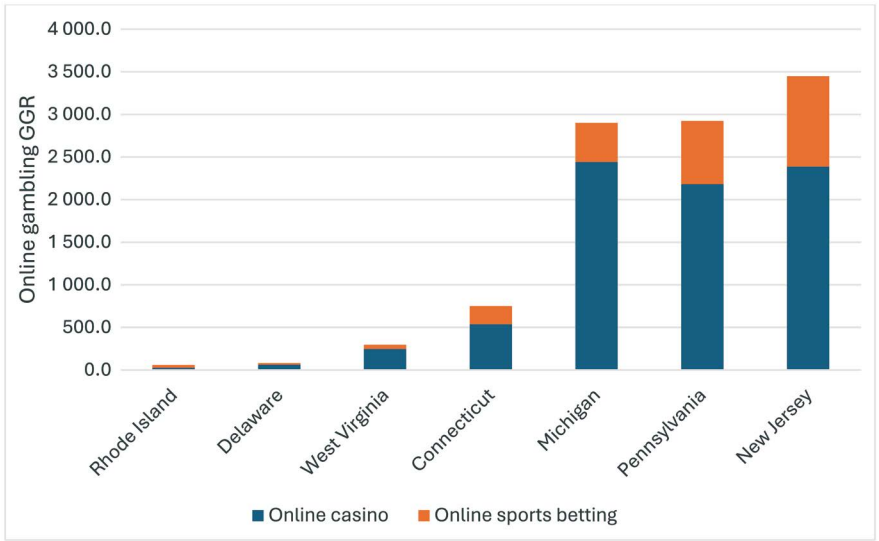


Figure 3.3 Share of online casino gambling of competitive markets in US states, 2024.

Note: Data were retrieved from Vixio Gambling Compliance (2025b; 2025c) US online sports betting and US online gaming [sic] reports. The table includes states that have both market segments.

Figure 3.3 shows the share of online casino gambling of competitive on-line markets (online casino and online sports betting) in different US states in 2024. I was not able to retrieve trend data for the United States. However, changes are likely to be less obvious than in Europe because the US markets are comparatively young (see Chapter 1). Nevertheless, the data show that, similarly to the European context, online casino gambling makes up a significant part of the market in the United States. In West Virginia and Michigan, online casino gambling makes up over 80% of the commercial online gambling markets. Rhode Island is the only state where the share of online casino gambling is under 50%, but the state only legalised the online casino market segment in 2024.

The reason for the observed trend in the split between casino and betting products is likely that the online casino market grows even more rapidly than the online betting market in most countries. This is not to say that the sports betting market is dwindling: between 2012 and 2024, online sports betting GGR grew by 176% in the United Kingdom, 273% in Denmark and 1,165% in Spain. However, the online casino markets grew by even more. Between 2012 and 2024, the online casino GGR grew by 183% in the United Kingdom, 452% in Denmark and a staggering 2,162% in Spain. This means that the speed of growth of online casino gambling has been double that of online

sports betting in some countries. It is also remarkable that in many countries, the amount of sports betting is larger during the early years of newly legalised online gambling markets, but decreases in subsequent years.

The share of online casino gambling is likely to keep growing in the future. Statistics from the ICE industry event in 2025 show that the primary area of interest of attendees was casino gambling (35% compared to 29% in 2023). Sports betting was the primary interest of 17% of attendees (down from 20% in 2023). Other interests, such as payments or other gambling products, were reported by less than 10% of participants as a primary interest (ICE, 2025). ICE is a major annual gambling industry event where operators and suppliers exhibit innovations. The 2025 event reported over 50,000 unique visitors from 186 countries (ICE, 2025).

The growth of online casino GGR is likely related to product characteristics that encourage continuous gambling, generating significant surplus to gambling operators. It is therefore also in the interests of operators to cross-sell and up-sell their customers to online casino products and to make these products as attractive as possible. We will look at some of the characteristics that are unique to contemporary online casino and online betting products in the next sections.

Online casino products

Online casino products share many similarities with land-based equivalents. Products include online table gambling products such as poker, blackjack and roulette, as well as a wide variety of different online EGM products, or online slots. Online EGMs are reel-type gambling products that are gambled against the house. Table gambling products are generally peer-to-peer products where customers gamble against each other. Online bingo and online scratch cards are also classified as a type of casino gambling in some jurisdictions (eCOGRA, 2024). In online environments, bingo has become an increasingly fast-paced product, closely resembling other casino formats (Casse, 2018). The same appears to be true of online scratch cards.

The most profitable casino type gambling product is online EGMs (also eCOGRA, 2024). Online EGMs generate the bulk of all online casino revenue. Online EGMs also explain the growth of online casino gambling more broadly. Figure 3.4 shows the GGR of different casino-type gambling products in Great Britain across 2015–2023. The figure shows that while GGR from table products, poker and bingo has remained constant during the period, GGR from online EGMs has more than doubled.

In-product design elements of online EGMs are similar to EGMs in land-based casinos. Sometimes, the same gambling products can be available on land-based EGM terminals and in the online space (website and app). This type of omnichannel strategy – or digital-retail convergence – can contribute to increasing revenue and introducing new customers to the online space of a

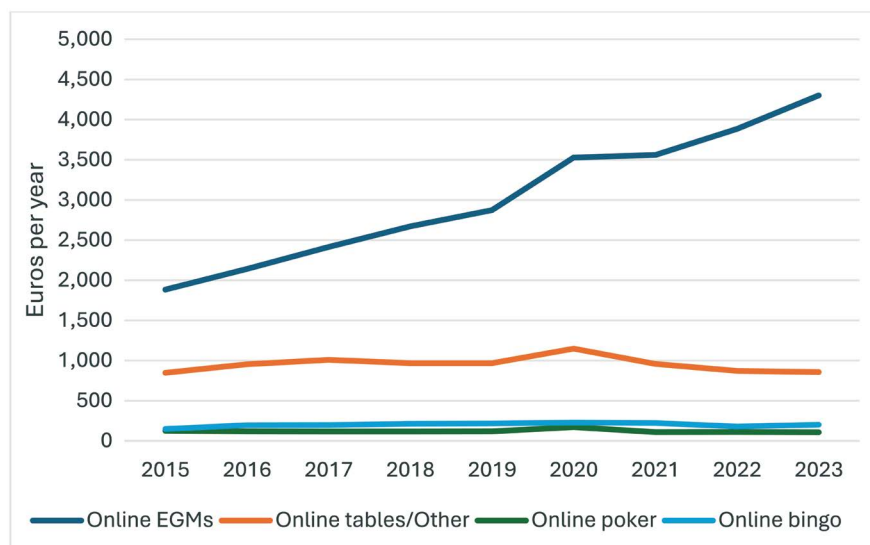


Figure 3.4 GGR from different online casino gambling products in Great Britain, 2015–2023.

Note: Data were retrieved from Vixio Gambling Compliance (2025a) European online gambling market monitor. The original source of the data is the GB Gambling Commission. Data are converted from GBP to Euros.

land-based brand (Segovia, 2025). As an example, during COVID-19, we noticed that for most individuals who shifted their gambling from land-based to online channels, this shift took place from land-based EGMs to online EGMs (Marionneau & Järvinen-Tassopoulos, 2022).

EGMs contain many of the most harmful product characteristics. EGMs, whether online or land-based, are designed in a way that encourages prolonged gambling. Schüll (2012) coined the term ‘addiction by design’ to describe how EGMs are purposely constructed in a manner that makes it difficult to stop but easy to get hooked. Design elements that increase time-on-device can include, for example, sensory effects that increase excitement, interactivity and illusion of control, reward characteristics like bonus ladders, rapidity and high event frequency. In addition, EGMs have features that include near misses, losses disguised as wins or the possibility for autoplay (Livingstone, 2017; Sulkunen et al., 2019). Some of these characteristics can be accentuated in online EGMs. One participant from our interview data during COVID-19 described their experience of shifting to online EGM gambling and how that has impacted their gambling behaviour:

When you gamble online, money no longer has any function, it is just a video that you watch for hours. And then you have to deposit more,

depending on your stakes. And then it just takes you away. It's different from physical EGMs in the sense that you lose all sense of money. Gambling just turns into watching a video.

As also visible in the quote above, online EGMs have specific characteristics that make them particularly immersive. EGMs are based on random number generator (RNG) algorithms that cycle symbols and stop at a random set. Unlike some other gambling formats, the outcome of EGM gambling is always random, and involves no skill. Gambling providers can also offer different types of reward mechanisms in EGMs. For example, some EGMs may have a higher volatility whereas others have a lower volatility. Such differences attract different types of customers (Sulkunen et al., 2019; [Fuad, 2025](#)). In online environments, operators can further leverage access to customer data to customise products based on individual user preferences.

Online EGMs also have a high return percentage, further encouraging continuous gambling. Spanish operator data shows that the average return to player rate of online casino and EGM products is 96.2% (compared to 83.5% for bingo products and 93.3% for online sports betting products, but somewhat lower than the 97.6% for online poker) ([Vixio, 2025d](#)).

Common characteristics to all online EGMs include playlines, free spins, sliding symbols, multipliers, wild and scatter symbols and bonus round rewards. Building on these, according to industry news, there are at least five different variations to online EGM design that often co-occur in different EGM products ([Fuad, 2025](#); [Times of Malta, 2021](#)):

- 1 Classic EMGs are simple single or multiple-line products. Winnings require three similar symbols. The number of paylines can range from one to over 200, with more lines permitting higher bets (and higher losses).
- 2 Progressive EGMs function in the same way as classic slots but can be more attractive because of accumulating jackpots that allow higher winnings (and higher losses). In online environments, progressive jackpots can be generated from a large number of customers.
- 3 Online EGMs with mini games are conventional slots that have mini games in bonus rounds. These products can be particularly attractive to younger people who are used to playing video games.
- 4 Virtual reality (VR) EGMs function with immersive VR cases that offer realistic graphics and movements. This type of EGM is particularly immersive.
- 5 3D EGMs incorporate 3D elements and are often designed based on popular cinema and video games. 3D graphics and animations make the storylines around EGMs more captivating.

EGM-type gambling products can be endlessly reproduced with different themes and skins, making them attractive to different audiences. One study

(Wannenburg et al., 2013) found that for most people gambling with EGMs (66%), the theme played an important part in choosing a specific product. The same study found that thematic preferences of women and men differ significantly. In the study, women were less interested in rugby and chess themed EGMs than men. According to industry reporting, the most popular themes are based on famous films, television shows, video games and music (Rise up Fuad, 2025), reflecting a kind of cultural capture and commodification of symbols (Borrell, 2008). At the ICE industry event of 2025, product branding was identified as one of the major highlights:

[We see a] transformative impact of intellectual property in creating unique entertainment [...], whether branded games, machines or immersive experiences, all in the pursuit of growing Millennial and Gen Z players.
(ICE, 2025)

Online EGM design increasingly borrows from online video gaming to further increase immersion and attractiveness (Wardle, 2021). Research on structural characteristics of video gaming products show that features such as realistic graphics, avatar creation and customisation, socialisation features and multiplayer modes, in-game currencies, as well as different reward and punishment features contribute to gaming problems and harm (Flayelle et al., 2023; Saini & Hodgins, 2023; Rehbein et al., 2021). Saini and Hodgins (2023) conclude that two broad categories of video gaming product features contribute to problems: gambling-like features and features that enhance in-game immersion and realism. Similar features are also increasingly integrated into online gambling products.

Online sports betting products

The global growth of online sports betting has not been as rapid as that of online casino gambling, but sports betting is still a growing market. In many jurisdictions, sports betting has been the frontrunner product of legalised online gambling (Ukhova et al., 2024). As sports betting has moved online and particularly in mobile environments, accessibility has increased, and sports betting has become more effortless and impulsive (Torrance et al., 2024). For example, in the United States, 95.1% of sports betting now takes place online (Vixio, 2025b).

While land-based sports betting was typically tied to singular events such as the outcome of a match, online sports betting products have become diversified, offering different types of bets and incorporating EGM-like features like micro bets and short pay-out intervals (Newall et al., 2021; Torrance et al., 2024). As discussed in Chapter 2, the incorporation of statistics, information and live streams has also expanded sports betting to new products that may not be available on linear television.

In-match bets are probably the most EGM-like characteristic of contemporary sports betting. In-match betting allows bookmakers to offer an unlimited number of bets on different events during matches. In-match betting consists of two types: The first allows betting on the outcome during the match, as odds are changing. This type of in-match betting comes close to cash-out options that allow settling a bet before the event has concluded (Killick & Griffiths, 2019). The second type of in-match betting, microbetting, refers to events within the match (Killick & Griffiths, 2019; Torrance et al., 2024). Microbetting allows placing bets on small moments in the match, with almost immediate results. For instance, microbets could be placed on the next serve in tennis, the next corner in football, or the next pass in American football (Torrance et al., 2024; Martin, 2024). Microbetting is highly profitable for operators. For example, in the United States, Draftkings expanded its microbetting options to college football matches in 2022 due to ‘popularity’ (Martin, 2024).

According to Cassidy (2020), in-match betting works by splitting sporting events into smaller pieces, making it possible to bet continuously. In-match betting has expanded the commercial possibilities of sports betting operations and grown the industry significantly. It is therefore also in the interest of bookmakers to propose these types of bets. A scoping study from 2019 (Killick & Griffiths, 2019) found that 26% of investigated websites offered in-match betting. The share is likely to have increased since. In the comparatively recent US sports betting markets, in-match betting now makes up over 50% of sports betting GGR in different states (Vixio, 2025b). Similarly, in Germany, in-match betting accounted for 53% of total sports betting stakes in online and retail channels in 2024 (Vixio, 2025e).

Parlay bets, or multibets, are combined wagers that make bets riskier but also increase potential payouts (Webber, 2025). In parlay bets, payouts require multiple events to happen together. As customers are less likely to win, these types of bets are also more profitable to the industry (Rintoul et al., 2025). Parlay bets are particularly popular in the US market. In some states, parlay bets generate up to 50% of GGR (Vixio, 2025b). Other popular formats of sports betting, particularly in the United States, include fantasy sports. Fantasy sports enable users to pick players for their own sports teams and earn points according to how well the fantasy team performs. Daily fantasy sports is a faster-paced extension of fantasy sports (Wardle, 2021). After more traditional sports betting was legalised in the United States, the market share of fantasy sports has declined (Wardle et al., 2024).

Similarly to online EGMs, sports betting products incorporate customisation and interactive features. For example, operators can propose custom bets based on individual preferences or allow customers to combine their own bets together from multiple events (Torrance et al., 2024). Another

more recent feature in sports betting is increased interaction. A review of utility patents in the field (Torrance et al., 2024) showed that several patents involved a user interface that allows users to communicate while in-match betting, or to compete against each other in tournaments and on ranking systems. Another new development focused on the incorporation of augmented reality that could enable sports betting at real-time sporting events.

Other online gambling products

The online space has enabled gambling operators to extend their product portfolios to new online-specific verticals and product ranges. Previous research has particularly focused on esports betting, skin gambling and cryptocurrency gambling (e.g., Delfabbro et al., 2021; Mangat et al., 2024; Wardle, 2021).

Esports betting refers to bets placed on video gaming competitions and leagues in different esports titles, like League of Legends, Counter Strike: Global Offensive, Fortnite and the FIFA series (Mangat et al., 2024). Bets are typically offered by commercial gambling companies (Wardle, 2021). Esports is a rapidly growing market (Torrance et al., 2024). Many major gambling operators and brands now offer esports betting. For example, the Bet365 platform proposes several major esports events in its sporting calendar (Bet365, 2025).

Esports gambling is often linked to skin gambling because both involve video gaming (Mangat et al., 2024). Skin betting involves gambling with video gaming skins, such as decorative and customised in-game items. These skins hold value that can be traded and sold in marketplaces or used as currency for placing bets (Wardle, 2021). Skin gambling websites function within the offshore market (Mangat et al., 2024).

Cryptocurrency gambling can refer to the use of cryptocurrencies as a payment method for gambling (see Chapter 2). Cryptos can also be traded on exchanges similarly to stock investments, but these trades are highly volatile, making cryptotrading a very gambling-like product (Delfabbro et al., 2021).
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Prediction markets are a growing gambling-like product, particularly in the United States. A significant part of prediction market ‘trading’ concerns the outcome of sports events. Some gambling companies are expanding their product portfolios to incorporate prediction markets: In the United States, leading gambling brands FadDuel (Flutter) and Draft Kings have both recently joined forces with prediction platforms to start offering bets on financial market outcomes, including the stock market and cryptocurrencies, as well as other real-world events (Gopalan, 2025; Tallman, 2025). This type of betting resembles stock trading, except that instead of investing in companies, users speculate on events (Tallman, 2025).

Virtual sports gambling has been around for some years already. Virtual betting involves betting on the outcome of computer-generated sporting events (e.g., football matches, horse races). The outcomes are determined by

RNGs, making virtual betting an EGM-like product rather than a sports betting product (Williams et al., 2017). Although virtual betting has been available in land-based terminals in some jurisdictions (Ukhova et al., 2024), most offers are available on online gambling platforms. According to one industry estimate, virtual betting constituted around 3%–5% of UK gambling revenue in 2023, and was growing (Doggett, 2023). Virtual betting is faster-paced than traditional betting. It is also available 24 hours a day, as betting is not limited to real sporting events. Virtual matches or races are based on real teams, with odds calculated based on sports statistics. Bets are accompanied by computer-generated graphics of matches, making virtual betting an immersive experience (Doggett, 2023).

Live casino is another product group that has become increasingly popular. The popularity of live casino gambling has been attributed to popular gambling streaming on platforms like Twitch (Majka, 2024, see Chapter 4). Live casino replicates traditional casino products in a virtual environment. Users are able to interact with other users and the host/dealer, and to participate in real-time sessions via video streaming on the gambling platform.

An additional new(ish) gambling phenomenon are so-called crash games. Crash games first appeared in the market in 2015, and have risen in popularity since, particularly amongst young people (Holmes, 2023). Crash games resemble traditional EGM products, but they also have distinct features. Crash games incorporate multiplayer options, social interaction and a fast pace. The most popular and most famous crash game is Aviator that was launched in 2018. Aviator functions as follows: the user is a pilot of an airplane. Stakes are multiplied as the plane rises and the aim is to cash out before the plane crashes (flies off the screen) (Spribe, n.d.). Aviator became hugely popular during 2022. By 2023, the product had been sold to over 2,000 gambling brands and had 10 million active monthly users (iGamingBusiness, 2023). Aviator is particularly popular in the African and Asia-Pacific markets (iGamingToday, 2025).

Cross-selling and cross-participation

Participation in different gambling formats co-occurs, although the co-consumption of certain products is more common than that of others. Figure 3.5 presents data on the co-consumption of different online gambling formats in Spanish data. The Spanish regulator has created a data vault of operator information and publishes annual reports on the online gambling market based on these operator data. The unique data available from Spain is exceptionally detailed. Such granular access to data on the gambling market is not available in most jurisdictions. One interesting feature that these data show is that engagement with certain gambling products clusters together.

As shown in the figure, Spanish individuals who play poker, are also likely to take part in sports betting and other casino table products. Bingo and

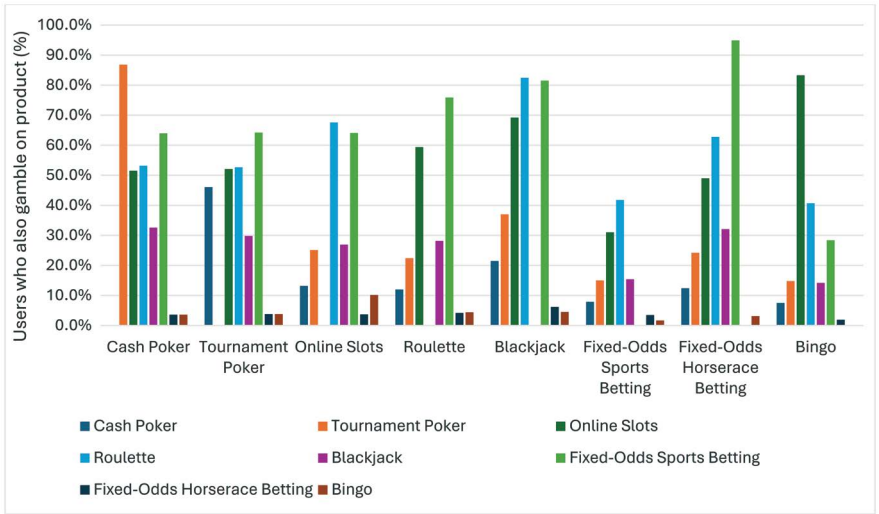


Figure 3.5 Co-consumption of different online gambling formats in Spanish data (2024).

Note: Data reported by Vixio Gambling Compliance (2025d) based on the Spanish online player report 2024.

horserace betting are almost mutually exclusive. Those who gamble with online slots, are also likely to gamble at the roulette or sports betting. At the same time, online slots seem to be common amongst users of almost any other products. Over 50% of individuals who gamble at poker, roulette, blackjack or bingo, also gamble with online slots. The share is slightly under 50% amongst those who participate in horse betting and lower for those who engage with fixed odds sports betting. Similarly to online slots, fixed odds sports betting is popular amongst individuals who gamble at most other products. One likely reason for this is that the number of unique online EGM and online sports betting users is much higher than that of other products.

Reasons for cross-consumption of different products are likely manifold. In online spaces, different kinds of products are usually available on the same platform, making different formats easy to access. Most individuals in the Spanish dataset only hold one gambling account (65% of all registered customers in 2024), making it likely that most cross-consumption takes place on one platform. Operators are also incentivised to cross-sell their customers to other gambling formats. As online EGMs are the most profitable product group from the company’s perspective, operators have a financial incentive to push customers towards this vertical to increase the ‘lifetime value’ of their customers. According to one industry estimate, the expected customer lifetime value (CLV) of somebody gambling with online casinos is 36% higher

than that for somebody gambling with sports betting. However, those who gamble with both have the overall highest CLV – at 50% higher than sports betting alone (Optimove, 2023).

Platforms and apps

Online gambling can be accessed via websites and mobile apps. Emerging technologies and interfaces include access to gambling via VR metaverse (Tashev, 2025). However, these technologies are not yet widespread, and the focus in this section will be on more traditional platforms. In 2024, 58% of European online gambling revenue was generated via mobile devices, and 42% via desktop access to websites (EGBA, 2025). The trend is towards increased mobile gambling. In 2019, 45% of European online gambling revenue was derived from mobile access, but the share is estimated to reach 67% by 2029 (EGBA, 2025).

For providers, website and app design is important to engage users, and to compete with other gambling operators for customers. As most gambling operators offer very similar products, run similar software (see Chapter 2), and offer similar bonuses and promotions (see Chapter 4), the means of distinction between operators in competitive markets are minor. Smooth and attractive website design can be one way to distinguish from competitors. Newall (2025) has argued that website design is as important to online operators as casino architecture and design are for land-based operators. Website design requires expertise across different fields, including web designers, web developers, interface designers, content writers and back-end developers. Albarrán-Torres (2014) calls digital gambling interfaces ‘assemblages’ that consist of complex systems combining software, hardware, user data and media elements.

Gambling websites serve multiple functions. Online gambling interfaces function primarily as online shops for gambling, but they are also vehicles for gambling promotion, in addition to functioning as kind-of media outlets and as a means of communication between users or between users and the provider. Research on website design shows that informative, visually appealing and easy to navigate websites increase user involvement (Ash et al., 2018; Hasan, 2016).

Accumulated consumer data are central to how gambling websites and apps are designed. Data analytics can be used to analyse user behaviours to tailor the interface and content. For example, customers could be delivered personalised product recommendations and tailored bonuses based on past activity (see Chapter 4). Like any online business, gambling operators use cookies and web analytics to monitor user engagement on their website (see Chapter 5). Aggregated data help operators optimise the site via A/B testing to see how any changes affect user behaviours (Ash et al., 2018; Kapinus, 2025). In online environments, it is easy and

cheap to modify the presentation of the website or app, just to see what happens (Schneider et al., 2018). Davies, R. (2022) has suggested that companies, themselves, might not even know what is hooking people, they just know it works.

Most gambling operators put significant effort into their website design and optimisation, building interfaces in ways that eliminate friction and act as persuasive nudges to gamble. In the following, we look more closely at these design elements of online gambling interfaces.

Friction and persuasion

Friction is a term that is often used by the gambling industry to describe any technical obstacles on their platforms. Friction means any unwanted interruptions that can slow or stop users from completing a task on a digital interface (Ash et al., 2018). Friction can lead to incomplete transactions and drop-offs, also known as churn (see Chapter 4). Friction can occur because of poor interface design, although some level of friction is inherent to all interfaces, in particular around ‘thresholds’ that require an action or a decision from the user (Ash et al., 2018). Examples of friction in online design include tedious checkout processes, long sign-up forms, confusing navigation and persistent pop-ups (Kollin, 2018).

Friction has a double role on gambling platforms. On the one hand, users are more likely to stay on the platform and to generate revenue if friction associated with gambling transactions is minimised. On the other hand, it is in the interest of gambling operators to introduce friction around tasks that are not in their profit interests.

Eliminating friction can help make the gambling interface as seamless as possible. According to Zuboff (2019), boundaries and borders become intolerable in online spaces because they are a threat to corporate revenue. Techniques to eliminate friction are of course not unique to gambling websites. Different types of websites, such as banking and retail, implement designs to reduce friction and to increase user engagement. The Digital Advisory Panel of the GB Gambling Commission (2024) noted that successful operators have invested in the simplicity of their customer interfaces to make their apps and websites frictionless. Mobile apps, in particular, eliminate friction efficiently as they generally prioritise quick loading times and make navigation easier (Bitubicorp, 2025).

Gambling interfaces may deliberately introduce friction around elements that they do not wish for users to interact with. Adding friction to choices that would be in one’s own interests is also called ‘sludge’ (Newall, 2025; OECD, 2022). According to Newall (2025), sludge refers to detrimental frictions. For example, it can take much longer to close an account than to open one. Setting a deposit limit can be more difficult than placing a bet. It is also common for operators to make withdrawal processes difficult. While deposits are frictionless and instant, some operators place delays of several days

on withdrawals ([Behavioural Insights Team, 2022](#); [Kansspelautoriteit, 2025](#)). This harmful practice has been banned at least in Great Britain ([Torrance et al., 2024](#)) but remains typical in the offshore market. The Casinopapers investigation (see [Chapter 2](#)) found that some offshore casinos even prevent users from withdrawing winnings by deleting accounts ([Das & Peigné, 2025](#)). Our interview dataset from 2021 describes the same phenomenon:

[My problems] started when I started gambling with online products. First I gambled with a company that was probably based on Malta, and I won. I think I had 5,000€ to withdraw. I tried to withdraw this money, and they told me to send an ID, send an electricity bill, nothing was enough. And when you have a gambling problem, you are a person who cannot stand waiting. I didn't get the money immediately on my account, so I thought to myself 'Hey, I just won 4,000€, maybe I'll win more.' Well, before I managed to withdraw anything, everything was gone.

In addition to leveraging friction in ways that are beneficial to gambling providers, gambling platforms are designed to be persuasive and attractive. Persuasive techniques are used to appeal to existing users and to gain new customers. The Digital Advisory Board of the GB [Gambling Commission \(2024\)](#) highlights that the gambling industry has 'a whole playbook of techniques' that can be used to get users engaged with online gambling for as long as possible. Platforms are designed in a way that creates a 'looping cycle that consists of a trigger, an action, a variable reward and continued investment' ([Gambling Commission, 2024](#)). Apps can incorporate social interaction or gaming-like elements, like sharing achievements, tournaments and leaderboards as further elements of persuasion ([Bitubicorp, 2025](#)).

Other research shows that online gambling environments are rendered attractive by using atmospheric cues, highlighting trust and safeness of transactions, promoting product variety, presenting gambling as fun and harmless, and presenting information in ways that highlight the chance of winning ([Abarbanel, 2013](#); [Newall, 2025](#)). Persuasion is usually most effective when strategies highlight credibility and affection: One study of 10 offshore gambling websites operating in Malta or Gibraltar ([Hyyrynen, 2015](#)) found that websites use different kinds of persuasive language to promote their products. Strategies included highlighting certainty and encouraging engagement ('take a look!'), using affective trigger words ('free,' 'thrilling'), and drawing on logic by highlighting what should happen next ('check the promotions page').

Alongside friction and persuasion, online platforms can employ misleading strategies to increase user engagement. The following section focuses on how so-called dark patterns and nudges are used to further the commercial interests of online gambling provision.

Dark patterns and nudges

Dark patterns and nudges are part of the online choice architecture of digital environments. Nudges refer to any design elements that guide people's behaviours in online choice environments (Schneider et al., 2018). Dark patterns refer to misleading design elements that can impair consumer autonomy and choice by manipulating users to act against their own interest (Newall, 2025; OECD, 2022). The EU Digital Services Act defines dark patterns as 'practices that materially distort or impair, either purposefully or in effect, the ability of recipients of the service to make autonomous and informed choices or decisions' (Regulation EU 2022/2065, recital 67). On an online gambling website, dark patterns can manipulate users to spend more time or money gambling, or to share more of their personal data than they might wish to (Kansspelautoriteit, 2025).

There are several existing taxonomies of dark patterns, some with broader and some with narrower inclusion criteria. Here, I will draw on seven categories proposed by the OECD (2022) that provides a generic outlook on dark patterns across different sectors. I use the term 'websites' to describe known dark patterns in online spaces, but these also apply to apps.

- 1 **Forced action** refers to websites forcing or manipulating users to do something that they might not want to do. For example, websites may force users to register or trick them into thinking that registration is necessary (Mathur et al., 2019; OECD, 2022). Users may also be forced to disclose personal data such as personal information, browsing history or even information about contacts (friend spamming) to use the service (ICO, 2023; OECD, 2022). Websites ask users to accept cookies upon accessing the content, and to consent to data use for personalisation during sign-up, but options to opt-out are made more difficult to access than accepting. In some cases, consent can be sought by 'confirmshaming' (making users feel that opting out is shameful) or by 'bundling' (asking users for consent to multiple separate purposes at once, making it hard to understand what they consent to) (ICO, 2023; Mathur et al., 2019).
- 2 **Interface interference** refers to giving visual prominence to options that are favourable to the business. Websites may hide or distort important information. For example, online businesses can show discounts next to a falsely 'original' higher price, or hide information related to delivery costs or associated subscriptions (European Commission, 2022). Websites can also frame information in a way that emphasises the supposed benefits of a particular option or the supposed risks of alternatives. For example, a website might warn users that not consenting to personalisation will make the service less relevant (ICO, 2023). In addition, websites may use default options or present decoy options to nudge users towards choices that are more beneficial to the business (ICO, 2023; Schneider et al., 2018).

For example, companies can set predefined default settings around privacy features, opt-ins for marketing or automatic subscriptions. Changing these defaults may involve multiple steps and friction (Jachimowicz et al., 2019; ICO, 2023). In the gambling field, one study found that removing high pre-set options (anchors) for deposit limits reduced chosen deposit limits by 45% (Behavioural Insights Team, 2022).

- 3 **Nagging** refers to repeated requests to do something favourable to the business. For example, a website may continuously ask the user to turn on notifications or location-tracking (OECD, 2022). A website might ask the user to turn on notifications with the options ‘yes’ or ‘not now,’ with the latter option leading to the website asking again in a week or two (Luguri & Strahilevitz, 2021).
- 4 **Obstruction** is a dark pattern that makes it hard for users to accomplish a task. Often, it is easy to sign up to a service or to opt-in to marketing, but it is more difficult to cancel these options. Websites and platforms may also make it difficult or even impossible to close and delete an account (Mathur et al., 2019; OECD, 2022).
- 5 **Sneaking** refers to hiding, disguising or delaying relevant information. The most common example is adding non-optional charges to the final price of online purchases at the last stage (drip pricing). Some online shops may also sneak items into the basket without consent or automatically renew purchases via a hidden subscription model (forced continuity) (OECD, 2022; EC, 2022; Mathur et al., 2019).
- 6 **Social proof** consists of using other users’ behaviours as triggers. For example, users might be shown consumers’ activities or testimonials about recent purchases (Mathur et al., 2019; OECD, 2022). These activity notifications and testimonials may be fabricated. One website was found using an RNG to show information about recent sales (Mathur et al., 2019).
- 7 **Urgency** refers to using real or fake countdown timers or other temporal limits on a deal to increase pressure to make a purchase. For example, online shops may advertise that stock is running low or that a promotion is about to expire (European Commission, 2022; Mathur et al., 2019; OECD, 2022; Schneider et al., 2018).

Dark patterns and nudges can manipulate the choice environment to guide our behaviour towards certain choices. As Zuboff (2019) has described, companies not only know how we behave online, but they also shape our online behaviours with data-driven design. The aim is to increase business revenue, gain more user data and promote active engagement on a platform. Dark patterns are not accidental, but a purposeful result of interface design (OECD, 2022). Dark patterns are common across different online platforms. Recent studies or sweeps have shown that anywhere between 60% and 100% of popular websites and apps contain at least one dark pattern, and many include several (OECD, 2022).

In many cases, dark patterns are facilitated by third parties within the online ecosystem, such as marketing services (OECD, 2022, see also [Chapter 2](#)). A study mapping dark patterns on thousands of shopping websites (Mathur et al., 2019) found 22 third-party entities that offered dark patterns as ‘turnkey solutions.’ Third-party entities were found in around 10% of websites, but this was an underestimate, according to the authors. Third parties provided websites with marketing services that enabled dark patterns, or provided content that could be directly classified as dark patterns – notably social proof activity notifications.

Consumers are usually unaware of dark patterns and the harms that these can cause. Research shows that consumers tend to ignore many types of content in digital interfaces and have even greater difficulty processing information on mobile devices (OECD, 2022). Yet, dark patterns can have a significant impact on behaviours. One US study (Luguri & Strahilevitz, 2021) exposed representative samples of American consumers to mild and more aggressive dark patterns. In comparison to the control group, users exposed to mild dark patterns were twice as likely to sign up for the service. Users receiving aggressive dark patterns were four times more likely to sign up. The same study found that the most effective dark patterns, from the perspective of companies, related to hidden information, trick questions and obstruction strategies. Urgency-related patterns were not as effective. The authors concluded that dark patterns were more important in guiding behaviour than pricing.

Some audits of dark patterns and nudges have been conducted in the gambling field. A study conducted by the Dutch gambling regulator (Kansspelautoriteit, 2025) investigated dark patterns and nudges across regulated gambling websites in the Netherlands. In the United Kingdom, a 2022 sweep focused on gambling apps (Behavioural Insights Team, 2022). [Table 3.1](#) lists the behavioural nudges and dark patterns that were identified in these two reports. Many identified dark patterns and nudges are based on manipulative designs, persuasion and deliberate friction.

Alongside dark patterns, websites can also incorporate so-called bright patterns. On gambling websites, bright patterns can include automated feedback on gambling behaviour, options to pause or self-exclude from gambling, limit-setting functions and preventive messages. However, many of these potential bright patterns are undermined on gambling websites. For example, preventive messages may be hidden or infrequent, and limits may be easily bypassed or raised (Kansspelautoriteit, 2025). Research from the United Kingdom also shows that operators tend to show safer gambling messaging using a font that is hard to spot (Newall, 2025).

Payments

Payment solutions are not just passive enablers of gambling but a structural characteristic within gambling interface design. A body of research from

Table 3.1 Dark patterns and nudges found on gambling interfaces in the Netherlands and the United Kingdom

Type	Stage	Description
Behavioural nudges	Landing page	Misleading cookie banners, forced consent (NL)
	Registration	Pre-filled limits, bonus offers, friction in setting limits (NL); Frictionless registration lacking effective age verification (UK)
	Gambling environment	Easy repeat bets, autoplay, misleading win displays (NL); Easy repeat bets, absence of features showing losses or time spent on platform (UK)
	Account management	Difficult account closure, easy limit increases (NL); Gambling management tools difficult to find, showing promotions on account management page (UK)
	Withdrawals	Hidden fees, bonus loss, unclear processes (NL); Minimum account balance required for withdrawals (UK)
	Notifications	Frequent emails and SMS on bonuses and tournaments (NL); Prompts to place another bet after previous one (UK)
Dark patterns	Preselection	Default options that encourage higher spending (NL); High default amounts for deposits and bets (UK)
	Friction	Making it difficult to close account or withdraw money (NL); Accounts that are hard to close or cannot be closed (UK)
	Urgency	Time-limited offers and countdowns (NL); Push notifications and emails stressing urgency and scarcity of betting offers (UK)
	Social proof	Displaying other users' wins (but not losses) (NL)
	Illusion of control	Suggesting skill can influence outcomes (NL)

Source: [Behavioural Insights Team \(2022\)](#); [Kansspelautoriteit \(2025\)](#).

Note: Based on categorisation presented by Kansspelautoriteit.

land-based gambling shows that individuals tend to spend more on gambling when using cards or credits, rather than cash ([Palmer et al., 2022](#)). In the on-line world, different digital payment solutions contribute to making deposits and transactions as smooth and frictionless as possible. To guarantee access to funds, and to enhance customer trust, it is also in the interest of gambling operators to offer multiple payment options that can be connected to an account ([Lakew et al., 2024](#)).

The Spanish dataset from 2024, derived from the regulator data vault on all regulated online operators, shows that while debit and credit cards were

the most common methods of payment amongst Spaniards (76.7%), other methods were also used by significant minorities of individuals who gamble online. Other methods included e-wallets (8.1% of payments), instant payments (5.7%), prepaid cards (4.6%) and wire transfers (4.3%) ([Vixio, 2025d](#)). Some research evidence shows that individuals who gamble with regulated or offshore providers use different payment methods. In Finland, we conducted a study comparing bank transactions to onshore and offshore websites ([Lahtinen et al., 2025](#)). We found that while e-wallet payments were not available for the monopoly, 69% of deposits to offshore websites were made using e-wallets. The remainder of the identified payments were made using bank cards or bank transfers. Cryptocurrencies are also commonly accepted in the offshore market (see [Chapter 2](#)).

From the perspective of gambling operators, digital payments offer many advantages. In recent years, gambling websites have moved towards an even more frictionless design. Seamless deposits increase time spent gambling. Digital payment providers can authenticate users, making registration easier. In many cases, gambling websites now offer the chance to deposit money without registration. One of our interviewees in 2021 already described this phenomenon:

Something that has increased in the past year are these pay'n'play casinos. So you don't have to register any more, it's enough to have a bank account. You use Trustly or Zimpler [e-wallets] to access your bank account and make a deposit. You don't have to register, so it's clearly changed. Based on the ads I receive, I would say 70% of online casinos have shifted to a pay'n'play model.

The ease of digital payments acts as a harmful nudge on online gambling websites. A Swedish interview study ([Lakew et al., 2024](#)) found that digital payment services have different types of direct impacts on people's behaviours on gambling platforms: Frictionless payments facilitate impulsive deposits, prolong time-on-device and nudge towards more harmful gambling products such as online EGMs. Available payment options can also directly influence the choice of gambling operator, particularly in the offshore market. At the same time, delayed withdrawals encourage re-staking winnings. Promotional inducements, such as bonuses or free spins, also encourage further and continued gambling and deposits ([Palmer et al., 2022](#); [Chapter 4](#)).

What do online gambling websites look like?

To get an idea of what kind of design features gambling websites have, I reviewed the top recommended gambling sites according to four comparative websites ([Gamblingsites.com](#); [Aksgamblers.com](#), [Casino.org](#), [Sportytrader.com](#)).¹ As these comparative websites identified me as being from Finland,

recommendations were likely specific to my location, although none of the included websites had a license in Finland. The sample consisted of 14 most recommended casino websites and 12 most recommended online betting websites according to these platforms (top 5 for each recommendation site featuring the product group, minus doubles and one sports betting website that was geoblocked in Finland).² Front pages of these websites are analysed here using qualitative content analysis.

All the websites that I reviewed were licensed in offshore jurisdictions (12 in Curacao, 11 in Malta, and one each in Estonia, Kahnawake and Gibraltar) (see [Chapter 1](#)). Therefore, the dataset focuses on the offshore market segment, and practices are likely to be somewhat different in more regulated jurisdictions. Although none of the websites were licensed in Finland during the data collection (summer 2025 when Finland still had a monopoly system), 65% of websites (17/26) were displayed in Finnish, and one even featured a famous Finnish celebrity on its front page. The remainder were displayed in English. English websites included large sports betting brands that are likely to apply for a Finnish license in 2026 and may want to avoid targeting Finnish users to avoid issues in the license process.

Interestingly, although the European GDPR regulations mandate all websites operating in Europe to ask for consent to cookies, not all websites displayed a cookie notice. Nine websites did not have a cookie announcement when I entered the site. Eight websites noted that they use cookies, but did not allow rejecting them – The only buttons available were ‘accept’ or ‘proceed.’ Six websites did allow rejecting cookies, but this took more clicks than accepting them. Only three websites in this data allowed rejecting cookies with one click.

Almost all websites offered a welcome bonus (24/26 websites). Some websites even advertised separate welcome bonuses for different product groups. Overall, advertised welcome bonuses were higher for online casino gambling than for sports betting. The median advertised welcome bonus was 100 euros for sports betting websites and 1,000 euros for online casino websites. In addition to welcome bonuses, several online casinos offered varying amounts of free spins (anywhere from 20 to 250). However, all bonuses were subject to conditions that were described in smaller print. Conditions included minimum deposits as well as requirements on how many times the bonus has to be wagered on the website before winnings can be withdrawn. For sports betting bonuses, minimum deposit requirements were on average (median) 10 euros and required on average six play-throughs. For online casino bonuses, minimum deposits were on average (median) 20 euros, and needed to be played through 35 times on average.

In addition to bonuses, websites used many other methods of persuasion. Persuasion was particularly common on websites focusing on casino gambling. Persuasive tactics can be divided into three groups. The first group consisted of social proof-type practices. Websites advertised users

who had recently won on the websites, some even showing the initial bets and winnings. The top winning on one of the websites was reported to be almost 3 million euros with just an 80 cent bet. Websites also promoted rolling jackpots on front pages or under product titles. A few casino websites published testimonials from customers, all of which were overwhelmingly positive.

The second category of persuasion is related to frictionless usability. Several websites highlighted easy registration, or even no registration requirements (deposit & play, or pay'n'play model). Some advertised seamless integration of the app. Fast payments without fees, different payment options, and cryptocurrency support were emphasised to make gambling convenient and easy. Some casinos offered tens of different payment methods, including bank transfers, e-wallets, credit cards, mobile payments, prepaid cards, cryptos and cheques. Several websites also highlighted the security and trustworthiness of their websites, including the chance to try gambling products in demo versions before choosing whether to try them with real money, or short videos showing how different products worked.

The third category of persuasive techniques is related to attractive products. This included different types of promotions, bonus ladder systems, tournaments and other events, as well as a wide variety of casino products. Several online casinos highlighted that they have products by top developers and studios (see [Chapter 2](#)). Many also had exclusive products. Products were typically promoted by listing different categories on front pages. Slot categories could include, for example, Egypt, gods, fruit, fishing, candy, Oktoberfest or Christmas. In addition to slots, almost all websites offered live casino products that were generally advertised by showing pictures of attractive hostesses. Some websites also had other casino products, live gameshows, bingo or online scratch cards. Online scratchcard themes were often the same as those for online slots.

In comparison to casino websites, sports betting websites had more variation in terms of their strategies of persuasion. Whereas only a few casino websites offered sports betting content, all sports betting websites offered casino-type gambling. The prominence given to casino-type gambling on these websites varied. Despite being promoted as sports betting websites, half of these featured casino products more prominently than sports betting on their front page. The front pages of the other half focused on sports, or on sports and casinos equally.

Sports betting websites with a casino focus used the same persuasive strategies as other casino websites, focusing on social proof, frictionless usability and attractive products. Some websites even had a feature where you could let the page pick a gambling product at random if you were unable to choose one yourself. In contrast, websites that focused mainly on sports, devoted their front pages to presenting odds, sports-related information and streaming services. A few sports websites also highlighted existing sponsorship

agreements with prominent sports teams. Payment options were not highlighted on sports-focused websites, unlike casino-focused websites.

Across the full sample of casino and sports betting websites, any information about gambling-related harms or 'responsible gambling' was located at the very bottom of front pages or on separate pages at the bottom of navigation menus. Most harm information was generic, focusing on reminding users about age limits or urging to 'gamble responsibly.' Some websites signposted to treatment and help. However, even for websites with a Finnish-language version, the help services were not located in Finland but on Malta, the United Kingdom or Estonia. One website urged customers experiencing harm to contact the gambling provider.

Impacts on people who gamble

This chapter has presented an outline of what the design of online gambling products and platforms looks like. Online gambling products are designed to be immersive, continuous and constantly available. Platforms are designed to be persuasive and encouraging of continued and habitual gambling, in many cases with the help of dark patterns. Analytics and data give gambling operators significant power to manipulate friction in ways that can increase gambling. These design choices have devastating consequences for people who gamble.

Across studies, online gambling formats emerge as the most harmful types of gambling (e.g., [Allami et al., 2021](#); [Akçayır et al., 2022](#); [Tran et al., 2024](#)). A global meta-analysis of population studies ([Tran et al., 2024](#)) found that while the prevalence of problem gambling was 1.41% in the global population (2.2% for men, 1% for women), 15.8% of those who gamble with online casino products had problem gambling. This proportion was the highest for any product in the study. Similarly, a meta-analysis of a range of risk factors for problem gambling ([Allami et al., 2021](#)) found the highest odds ratio of any included factor for online gambling (OR 7.59), followed by engagement in other fast-paced and continuous gambling formats like EGMs or casino gambling products.

Online gambling products are also reported by help-seekers as causing the most harm. We recently looked at data on products that cause harm amongst help-seekers to Nordic gambling helplines (Denmark, Finland, Sweden) between 2019 and 2022 ($N = 46,646$) ([Marionneau et al., 2024](#)). We found that the share of help-seekers reporting online casino gambling had increased in all countries during the period of observation, reaching 70% in Finland and Sweden. The share of help-seekers reporting online sports betting had also increased in Finland but remained constant in Denmark and Sweden. In contrast, the share of help-seekers reporting land-based gambling had declined across all contexts. This finding is most likely related to the overall decline in land-based gambling participation in the Nordics (also [Chapter 1](#)).

Use of offshore gambling websites is associated with even higher levels of harm than the use of onshore websites (e.g., [Gainsbury et al., 2018](#); [Lahtinen et al., 2025](#)). Data from the Finnish gambling helpline Peluuri shows that over 50% of help-seekers report primarily gambling with offshore gambling providers (Marionneau et al., forthcoming). Offshore gambling can be harmful for many reasons. The design of offshore gambling environments and products has even less regulatory oversight than regulated offers. Offshore gambling is available to individuals who self-exclude ([Håkansson & Komzia, 2023](#)). Offshore gambling also increases availability: Emerging research suggests that harms are even more accentuated amongst those who gamble with both onshore and offshore providers than those who gamble offshore only (e.g., Marionneau et al., forthcoming; [Lahtinen et al., 2025](#)). These observations suggest that in many cases, initial harms may already be created in the regulated market and then accentuated in the offshore market.

In addition to harming consumer health, addictive gambling designs harm principles of consumer protection and fairness. [Young and Markham \(2017\)](#) have called gambling products ‘coercive commodities’ that promote consumption against the best interests of consumers. The way that gambling products and environments are designed is in direct contrast with the basic premises of the idea of ‘responsible gambling’ (see [Livingstone & Rintoul, 2020](#)).

Design choices generate a situation of asymmetry between the gambling industry and those who use their products. The industry knows what works, but the majority of people who gamble have little information about gambling products, essentially reducing the ability of individuals to stay in control. In any online industry, the accumulation of data allows companies to know everything about us, but their operations are designed in a way that allow us to know very little about them ([Zuboff, 2019](#)). Gambling operators leverage their unique access to data on consumers to derive maximum profit, at the expense of customer welfare. User data are exploited to refine the design of products and platforms, to profile customers and to deliver personalised marketing messages to users. Gambling operators use the power of data to drive repeated use and to form habits that are against the interests of their customers.

In the next chapter, we complement the picture of harmful design by focusing on the marketing practices of the online gambling industry.

Notes

- 1 Thans to Mette Kivistö for helping me collect some variables in this dataset.
- 2 Included casino-type sites ($N = 14$) were: Jackpotcity, 888 Casino, Casumom Play-amo, Ducky luck, Bit Starz, Winz.io, N1, Kakadu Casino, Slot Hunter, Malina Casino, Kingmaker, Nova Jackpot, Spin Casino. Included betting-type sites ($N = 12$) were: 20bet, Bet365, 22Bet, Betway, Wallacebet, Winnerz, Evobet, SvenPlay, Betsson, 1x Bet, [Stake.com](#), Betwinner.

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Advertising and Targeting

Gambling advertising is pervasive and ubiquitous

As gambling has moved to online environments, digital technologies and customer profiling have transformed the gambling advertising landscape. Traditional, indirect and linear forms of gambling advertising – such as television adverts, billboards and newspaper adverts – have made way to online formats, including affiliate links, organic social media content and search engine optimisation. At the same time, indirect advertising is increasingly replaced by direct forms of advertising. Direct advertising consists of many online-specific practices, including email communications, social media adverts, push notifications and other targeted messaging (Hörnle et al., 2019; McGrane et al., 2025; Torrance et al., 2021). In some cases, online advertising is embedded and difficult to identify as advertising. Embedded advertising includes marketing practices such as influencer content and brand ambassadors (Hörnle et al., 2019).

This chapter focuses on the landscape of gambling advertising as it is moving from linear channels to targeted online channels. Gambling advertising is pervasive and ubiquitous across different media. However, online channels make the advertising experience different for everyone. Some individuals can be inundated with gambling advertising, while others encounter marketing content more rarely. Targeting, personalisation and ease of customisation make online advertising particularly effective from the perspective of the gambling business.

Prevalence of indirect advertising

Where regulatory controls are permissive or inexistent, gambling advertising can be particularly omnipresent. The most visible manifestation of this is indirect advertising in jurisdictions with recently opened or expanded gambling markets.

In the United States, the Supreme Court overturned a federal ban on sports betting in 2018, resulting in the introduction of competitive online gambling

markets in most states (see also [Chapter 1](#)). In 2025, one study focusing on major US sports leagues ([Rossi et al., 2025](#)) found gambling advertising every 13 seconds in six ice hockey Stanley Cup matches. While the numbers were lower for NBA basketball matches, with approximately one gambling reference every four minutes, the number of gambling references is striking. Adverts included logos on jerseys, on the rink side and in commercials during the broadcast. This finding is even more striking because the industry body American Gaming Association reports that advertising spending has been gradually dropping since the early years of legalised online gambling, having peaked in 2021 ([American Gaming Association, 2024](#)).

In Australia, the Australian Communications and Media Authority ([ACMA, 2023](#)) found that over 1 million gambling adverts were aired on television and radio between May 2022 and April 2023. 50% of these spots were for online gambling providers. Most of these gambling adverts were broadcast during peak hours on both television and radio.

In the United Kingdom, one study compared the volumes of gambling advertising across different sports broadcasts (football, rugby, tennis, boxing, formula 1 racing) ([Purves et al., 2020](#)). The results showed the highest prevalence of gambling adverts during the boxing broadcast: A gambling reference every 13 seconds, mirroring results from the United States. Gambling adverts were also prevalent in football, with one gambling reference every 21 seconds. In tennis, gambling was referenced once every 9 minutes. The included Formula 1 race was the only sport in which the researchers found no references to gambling. Another UK study reported that during the 2018 football world cup, 18% of advertising was for gambling, including 2.16 in-match betting adverts per match ([Newall et al., 2019](#)).

Reflecting the close relationship between gambling and sport, gambling company sponsorship is highly prevalent and visible across European sports. Approximately two thirds of teams across the EU and United Kingdom have a gambling sponsor ([Buzzoni et al., 2025](#), also [Chapter 2](#)). Sports, like gambling, are also moving online, and sports sponsorship has extended to e-sports. One UK study ([Biggar et al., 2023](#)) investigated sponsorship deals in three e-sports world championship events in 2021. They found that gambling sponsorship was prevalent in two of the three leagues, with half of top esports teams sponsored by gambling companies. The authors concluded that esports is an interesting target for gambling companies that are attempting to attract the growing audience of young esports fans (also [Wardle, 2021](#)).

Highly prevalent and visible gambling marketing is not only a feature of competitive markets. Evidence from monopoly markets shows that gambling advertising can also be ubiquitous in systems where monopolies are supposed to deter competition. In Finland, the gambling monopoly Veikkaus is amongst the largest media advertisers in the country – only surpassed by actors such as large supermarket chains ([Kantar, 2024](#)). A Swedish study ([Håkansson & Widinghoff, 2019](#)), conducted before Sweden partially dismantled

its gambling monopoly, showed that 19% of advertisements across different TV channels promoted gambling. In total, 8% of the studied gambling ads were broadcast during children's programmes.

Rising importance of direct marketing

While indirect gambling advertising is highly visible, it represents only one side of contemporary gambling marketing. In online environments, gambling advertising can be even more pervasive. Projections on advertising spending in Western and Central Europe show that by 2030, 79.7% of advertising spending is expected to come from digital advertising (Statista, 2025). Search engine advertising, personalised digital banner advertising, direct messaging and social media advertising are amongst the largest advertising channels in Europe (Statista, 2025).

The gambling sector is no exception, with gambling companies increasingly and strongly leveraging digital channels to promote and sell their products. In the United Kingdom, 80% of gambling company advertising revenue was directed to digital channels already in 2017. Direct online advertising, alone, accounted for 48% of all advertising spending, compared to television advertising which only made up approximately 15% of total advertising spend (Gambling Commission, 2019). The high prevalence of online advertising may be particularly typical of European markets. In the United States, gambling companies report spending around 25%–50% of their marketing budgets on online advertising (Sramek, 2024). In Australia, television remains the largest advertising channel, with 68% of advertising spent on television, compared to 15% on social media and 8% on other online platforms (ACMA, 2023).

It was not possible to systematically compare advertising spending across countries. Most jurisdictions do not publish comparable figures on gambling advertising spending or how this is broken down across digital and non-digital channels. Most countries either report lump sums for all advertising or only track certain sectors, such as television advertising. Better data and transparency would improve the evidence base. One reason why better data are not available is that gambling companies may be (and are likely to be) reluctant to disclose such data because advertising remains one of the key components in market competition.

Even with limited data, it is still easy to see how important digital advertising is for gambling companies. It is also likely that the share of digital channels and online advertising formats is growing. This may be cause for concern for at least three reasons. First, online advertising is generally cheaper to produce than linear advertising. This means that gambling company advertising budgets go much further, increasing overall volumes of advertising (Rossi & Nairn, 2022). The use of AI to generate content is likely to make gambling advertising even cheaper to produce, further increasing its prevalence and

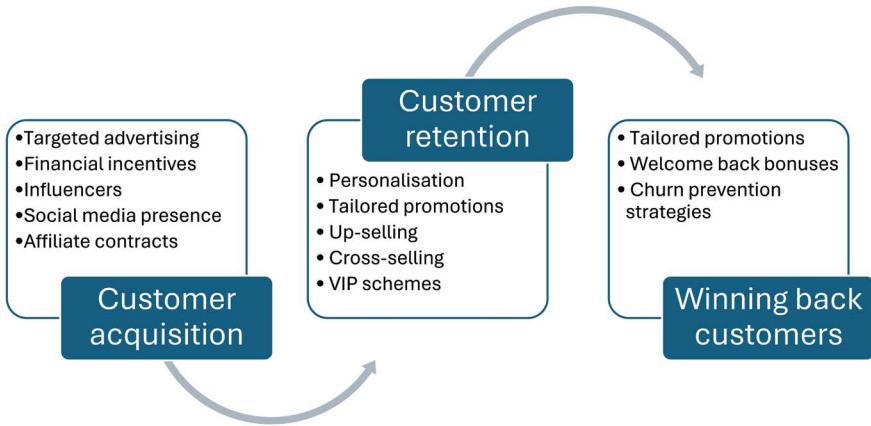


Figure 4.1 Advertising practices in the online world.

visibility with virtually no limit (also [Rossi, 2024](#)). Second, unlike traditional advertising, online advertising is a precision game ([Davies, 2022](#)). We all experience online advertising differently. Algorithms ensure that gambling ads are targeted to those who are most responsive, and that content is personalised in a manner that is effective. Third, because online advertising differs from person to person, it may be less visible to those who have the power to regulate gambling advertising. Advertising becomes nebulous: Largely invisible to some but extremely visible and pervasive to others.

Personalisation of digital advertising content takes place at different stages of so-called consumer journeys. Marketing content is tailored to boost new customer acquisition, but also to maintain habit formation amongst existing customers. Furthermore, tailored and targeted advertisements are delivered to win back customers who may have stopped gambling altogether, or with a specific provider. Competition for profitable customers can be intensive in the online gambling market, and attracting customers – as well as retaining old ones – is crucial for companies to stay afloat. To better understand the landscape of advertising in the online world, the next section looks at the different ways in which gambling operators and their affiliates use data, technology and targeting to advertise their products and drive consumption. [Figure 4.1](#) summarises the findings of this chapter on marketing mechanisms in online environments.

Targeting and customer acquisition

During the customer acquisition phase, gambling companies (like any advertisers) will want their advertising to have the largest possible reach. There are a number of ways to attract new customers and to increase brand visibility.

Despite the importance of customer acquisition (or attraction), very little research focuses on it specifically. One review of customer acquisition in the land-based casino market found that practices such as product diversification, price promotions, other recreational opportunities and geographical location were important factors to attract new customers (Tuguinay et al., 2024). Some of these factors, such as price promotions, also apply to customer acquisition in online environments. However, online operators also use more targeted means to make gambling attractive to prospective new customers.

One study, commissioned by an Estonian gambling company with mainly offshore-facing operations (Nikolajev, 2023) investigated company strategies for consumer acquisition and retention. According to interviews conducted with company management, the most effective approaches to attracting new customers included welcome bonuses and promotions. Such financial incentives were described to provide an initial boost and encourage customers to explore different gambling options. In addition, the company used a mix of targeted marketing strategies on social media, affiliate marketing sites and other platforms. The company also conducted market research to stay on top of industry trends and competitor activities.

Data-driven segmentation

Targeting and finding new prospective customers requires companies to engage in so-called market segmentation. Market segmentation refers to a widely used marketing strategy that consists of recognising different consumer groups and their preferences. This allows gambling companies to devise strategies, campaigns and offers that can reach different groups (see Chagas et al., 2022). Using market segmentation and socio-demographic profiling, gambling companies can target specific demographics in online environments.

Market segmentation can be refined based on socio-demographic characteristics, such as age, gender and income level. As an example, gambling companies could target different product verticals to different age groups. Companies can propose novel products like esports or live gambling to younger adults, while pushing simpler and more accessible products to older adults (Chagas et al., 2022). One gambling company manager identified the ideal target customer as a '23-48-year-old with a stable job, family and a car' (Nikolajev, 2023).

Young people are a particularly attractive market segment to operators, and gambling companies target this group via various channels. Incredibly enough, in the United States, a few gambling operators have even partnered with large public universities to target advertising to college students. Universities received attractive payments from operators in exchange for sponsorship of student sports teams and even the right to send advertising emails to student bodies encouraging them to bet online. Schools also received a bonus payment for each student who downloaded the operator's app

([Martin, 2024](#); Christovich, 2024). The relationship between universities and gambling operators has since ceased following public criticism ([Christovich, 2024](#)).

In addition to socio-demographic profiling, online advertisers have access to vast amounts of data on the more specific preferences of internet users. With the help of tech giants Google and Meta, advertisers (including gambling companies) can access detailed data on prospective customers and their digital footprints for even more effective targeting. The vast amount and quality of data that Google or Meta holds on us is remarkable. These platforms know our age, gender, where we live, where we work and what we like. They know who we take pictures of, where and when. Anything we connect to with our Google or Facebook profiles, becomes part of their data on us. Data mining and profiling practices are crucial for the online business model as this provides maximum value for advertisers. Gambling operators can make use of these data by studying the profiles of existing profitable customers and targeting similar demographics to acquire new users (see [Chapter 5](#)).

Large online platforms like Google and Meta usually charge online advertisers using a so-called pay-per-click model, where advertisers are charged a fee every time a user clicks on their ad. On Google Ads, the process works as follows: Companies first bid on relevant keywords, like 'gambling' or 'betting.' When someone searches for these keywords, the company's ad enters into a real-time auction against other advertisers who have bid on the same keywords. The ad is placed depending on the bid, as well as the quality and relevance of the ad and the expected click-through rate. The cost-per-click is only charged if a user clicks on the ad and visits the website ([Google, n.d.](#)).

The procedure is very similar with Meta Ads. Meta also uses an auction system to determine which ads appear. The Meta auction system does not function based on search terms but draws on user interests and digital footprints. Companies bid to get their ad shown to potential customers and pay if someone clicks on their ad. Meta also offers other payment options for ads, such as cost per 1,000 impressions (regardless of clicks) and cost per action, where advertisers only pay if users take a specific action, such as registering with a site ([Quicker, 2024](#)). When prospective customers have been identified, targeted adverts appear in different online environments, including social media, banner advertising and in-app advertising.

If you are a prime target for online casino advertising, such as a young male who has displayed an interest in sports and online video gaming, or even more so, gambling, you are almost certain to be targeted with a significant number of gambling advertising in the online space ([Di Censo et al., 2025](#); [Gainsbury et al., 2016](#)). People who gamble heavily with other companies, or brand switchers, are another interesting target for gambling companies' marketing efforts, as existing customers with other gambling brands have already shown an inclination towards gambling (Tuguinay et al. 2024).

Although neither Meta nor Google policies permit targeting gambling advertising to under-18-year-olds, there is evidence that young people still encounter gambling advertising online. In one Australian study (Backholer & Pathirana, 2024), 14–17-year-olds reported exposure to online gambling advertising daily, while over 18-year-olds encountered online gambling advertising several times a day. Other research and reporting show that children and young people are exposed to gambling advertising in video gaming apps (Abarbanel et al., 2017; Burgess, 2025). Some free gaming apps can even function as covert gambling apps or contain links to illegal online casinos (Sky News, 2025).

When potential customers have been identified, companies need to convert customer interest into business. Conversion, in advertising lingo, means that an advertisement succeeds in moving a user from viewing the ad to becoming a customer by, for example, clicking on the ad or registering with the site. There are a number of online advertisement services that help gambling companies convert advertisements to clicks and clicks to registrations and deposits (see also Chapter 5). Conversion can be achieved, for example, by offering targeted campaigns, behavioural segmentation or customised promotions. For instance, advanced data analytics can assist gambling companies in identifying promotions that have worked well before for certain customer groups and making use of them again in the future.

Bonuses and financial incentives

Financial incentives are amongst the most effective marketing strategies from the perspective of gambling companies (García-Pérez et al., 2024; McGrane et al., 2025). Companies can use income data to target different financial incentives to different consumer segments (Davies, 2022). For example, lower income individuals may be more attracted to promotions such as bonuses and cashbacks (Nikolajev, 2023). Data from Spain (García-Pérez et al., 2024) show that new account creations are positively correlated with bonuses, advertising spend and sponsorship spend. The same study shows that deposits into gambling accounts are positively correlated with company investment in advertising, bonuses and affiliate marketing. The total amount bet on gambling websites was also associated with spending on bonuses, advertising and sponsorship.

Welcome bonuses attract first-time customers to websites and incentivise existing customers to keep making deposits (Guillou-Landreat et al., 2021; Hing et al., 2014). From a gambling company's perspective, well-allocated bonuses are a necessary way to recruit new customers and keep existing users gambling (also Cassidy, 2020, Chapter 5). At the same time, bonuses are associated with restrictive terms and conditions. Bonus offers may require matched deposits or requirements to gamble the money several times (see also Chapter 3). In some jurisdictions, welcome bonuses are not allowed

(Marionneau et al., forthcoming). Financial incentives are particularly prominent in offshore gambling company advertising (Håkansson & Widinghoff, 2019).

Cashback offers, on the other hand, promise to pay back a certain percentage of losses over a certain period. According to one industry blog, cashback promotions may be a particularly attractive marketing strategy because they increase a sense of security: Users may feel like they can recover a part of their losses (Atlaslive, 2025). One Australian study similarly showed that individuals with problem gambling reported cashback offers as the most appealing form of gambling advertising (Hing et al., 2018). Cashback offers are also attractive to gambling operators as they prolong engagement. As an industry blog explains, ‘when players feel protected, they wager more frequently and in higher volumes, fostering increased betting activity’ (Atlaslive, 2025).

Social media and content marketing

Social media offers a direct marketing channel for gambling companies and their affiliates. Social media marketing can be paid or organic. Paid advertising makes use of granular user data to target specific groups. In addition to social media platform profiling, microtargeted advertising can make use of data harvested by so-called data brokers (see Chapter 5) that collect data on individuals from various sources and sell these to marketers. Gambling companies may, for example, be interested in individual income, debt and credit card information (Davies, 2022). Any prior interest in gambling will also increase exposure to further gambling advertising.

Social media advertising focuses on content. Content marketing can be defined as ‘the art of communication, without direct sales’ (Guillou-Landreat et al., 2021). Alongside product promotions, social media accounts deliver sports news, tips and tutorials, feature news and humorous content – but rarely information about harms (Guillou-Landreat et al., 2021; James & Bradley, 2021). Organic marketing consists of posts on social media accounts. Organic content increases visibility amongst followers and other audiences, if shared (Wardle et al., 2024). Organic social media content can be difficult to identify as marketing. Influencers, brand ambassadors and user-generated content marketing resembles normal social media content (Singer et al., 2024). In 2023, we asked 132 Finns who gamble regularly about their perceptions of gambling marketing (Jääskeläinen et al., 2025). We found that while around 80% of our respondents identified social media posts by gambling operators or influencers as marketing content, other popular types of social media content, such as news articles, were more difficult to recognise as marketing.

Organic social media marketing can be appealing to gambling companies as it is rarely regulated (James & Bradley, 2021). Social media marketing is also an effective way for gambling operators to reach and attract young

audiences (Rossi & Nairn, 2022). Research shows that children and young people are highly exposed to this type of marketing content. According to some estimates from the United Kingdom and Australia, over half of under-aged young people have been exposed to advertising for gambling on social media specifically (Gambling Commission, 2017; Ginnis & Kitson, 2020; Thomas et al., 2018). A UK study also found that around 6% of those who follow gambling accounts on social media are under 16 years old. The number is even higher for esports gambling accounts, rising to 17% (Ginnis & Kitson, 2020). Other research shows that most people who follow gambling brands on social media are under 25 years old (Rossi & Nairn, 2022).

Another key advantage of social media marketing, from the perspective of gambling operators, is the wide reach of communications to interested followers. The content and numbers of social media posts vary across operators. For example, on X, brands like Stake.com, Bet365 and Skybet have almost half a million followers. Largest operators also tend to deliver particularly high numbers of social media messages (James & Bradley, 2021). There may also be some jurisdictional differences. The volumes of gambling advertising across social media platforms appear to be higher in the United Kingdom than in other European countries including Finland, Sweden, Germany and Spain (Singer et al., 2024). This may be explained by the number of licensees.

On social media, brand reach is not limited to gambling accounts only, but also to their wider partnership networks. Sponsorship deals and collaborations with influencers increase the reach of social media marketing (see Chapter 2). For example, Biggar et al. (2023) found that sponsorship agreements with esports titles enabled gambling companies to reach followers of these leagues across Twitter, Instagram and Facebook. In some cases, gambling operators may even sponsor social media content that is completely unrelated to gambling. On Instagram, for example, some accounts posting memes include a frame with the logo of crypto casinos Stake.com or 500casino. Stake has reportedly struck similar deals with content creator accounts on X, paying them to embed its logo on all posts regardless of content (Carter, 2025).

Social media presence of gambling companies extends to different content types. In Australia, Gainsbury et al. (2015) interviewed individuals working in the Australian gambling industry about how they use social media to promote their products. The interviewees highlighted how they wanted to balance gambling content against a majority of non-gambling content (also Lindeman et al., 2023). A gambling company might post tutorial videos about rules and strategies of various gambling products to help with new customer acquisition. Similarly, blogs and articles are used to share content about new products, technologies or latest sports news (James & Bradley, 2021). Some operators even focus exclusively on non-gambling content. In Finland, my colleagues found that the monopoly Veikkaus positioned itself on social media as a reliable sports news agency, sharing editorial and behind-the-scenes content to followers about Finnish sports (Jääskeläinen et al., 2023).

Content can also vary across social media platforms. Facebook allows advanced data-driven targeting for paid advertising and promotions, while Instagram is more often used to post stories or videos about events and sports. YouTube can be used to post tutorials and guide videos as well as videos of gambling highlights. YouTube, as well as other streaming services such as Twitch or Kick, can also be used to live stream gambling. Kick was initially funded by crypto casino [Stake.com](#) in response to restrictions around gambling content on Twitch. Finally, Twitter/X has been used by gambling operators as more of an information tool ([James & Bradley, 2021](#); [Guillou-Landreat et al., 2021](#); [Lindeman et al., 2023](#); [Singer et al., 2023](#)).

Content marketing, especially when not recognisable as such, can be extremely powerful. User sharing can even make content viral. In February 2025, a clip of Canadian rapper Drake went viral. In the clip, a drone supposedly flew into Drake's penthouse in Australia. The drone first films a laptop and a glass of wine on a terrace, before showing Drake. Drake grabs a slipper and attempts to throw it at the drone (missing it by a wide margin). The video has since been called a 'masterclass example in gambling marketing' ([Rose, 2025](#)): The video was, in fact, a commercial collaboration with crypto casino [Stake.com](#). Drake has partnered with Stake since 2022, reportedly earning at least 85,000 euros (100,000 USD) annually from the partnership ([Khan, 2024](#)). In the case of the viral clip, internet users soon found out that the website that was open on Drake's laptop was, indeed, [Stake.com](#). The video and ensuing media attention created significant speculation and attention, resulting in a 185% surge in web searches for crypto bets following the video's release ([Rose, 2025](#)).

Drake is just one example of the spanning world of social media influencers. 'Influencer' can refer to celebrities and other macro influencers such as tipsters. Influencers can be attractive partners to gambling companies due to their wide reach in target audiences (see also [Chapter 2](#)). In the United States, gambling operator FanDuel reportedly announced 'racing for Gen Z' by signing deals with popular online influencers ([Bergin, 2024](#)). In some cases, famous celebrities have even been deepfaked into gambling advertising or turned into AI avatars that have been used to extend the reach of advertising ([Sky News, 2025](#)). It would not be surprising if these kinds of practices became even more common in the future, as companies compete for market share and visibility in social media.

Smaller-scale micro or nano influencers promote gambling via, for example, streaming services ([Wardle et al., 2024](#)). One recent study on gambling streaming viewers ([Hughes et al., 2025](#)) found that young adults who regularly watched gambling live streams are strongly influenced by this type of content. Streaming can also translate into behavioural effects and increased urges to gamble. Research from Australia has similarly found that influencer content and commercial collaborations with gambling brands can be particularly effective in normalising gambling amongst young people. Specifically, young individuals reported paying more attention to advertisements that involved celebrities or

social media influencers (Pitt et al., 2024). One of our interviewees in our data collection from 2021 discussed this then-emerging phenomenon:

Social media influencers are getting paid by different online casinos, so they make video clips in Youtube or Instagram, you could say weekly. They don't gamble with their own money but with online casino money. And they only publish videos where they win [...]. It's a way to recruit these young gamblers in significant numbers. I think it is a scary phenomenon in this gambling world.

Affiliates

An important part of social media marketing and customer acquisition activities is carried out by affiliates (see Chapter 2). Affiliates are third-party actors who market gambling products, often using tipster and comparison sites, and receive payment for each referred customer and their losses.

One estimate from the United Kingdom suggests that gambling operators recruit up to 50% of their new customers via affiliates (Hing et al., 2024a). Another UK estimate indicates that gambling operators spent one-fifth of their marketing budgets on affiliate marketing in 2017 (GC DAP, 2019). Amounts spent on affiliates have likely increased since. Although some companies, such as Sky Bet within the Flutter Group have since chosen to stop most affiliate marketing due to the unpredictability of this channel (Regulus Partners, 2021), the affiliate sector continues to grow. Data from Vixio Gambling Compliance (2025), presented in Figure 4.2, shows the growth of major online affiliate groups in the United States, Europe and Australia ($N = 8$). The market value of these groups, alone, has grown fourfold between 2018 and 2024 (see Figure 4.2).

Affiliate marketing can increase harm to those who gamble. The lack of transparency of gambling transactions and complicated commercial relationships masks a reality in which gambling losses are key to the revenue interests of multiple parties. Affiliates have little incentive to promote lower risk gambling practices or even provide 'responsibility information,' as they face little regulatory oversight (Hing et al., 2024b; Houghton et al., 2020). Affiliates can use similar data-driven techniques to gambling operators, targeting potential customers using advanced data analytics and profiling across online platforms. Affiliate marketing is therefore an additional component to already substantial operator marketing. Gambling advertising online becomes almost impossible to escape and avoid. In 2023, we conducted a qualitative survey with Finnish people who gamble actively (see Jääskeläinen et al., 2025 for details). Experiences were telling. One of our participants explained that:

The internet is completely full of gambling advertising. There are banners, there are video adverts embedded in streams and there are affiliate marketers.

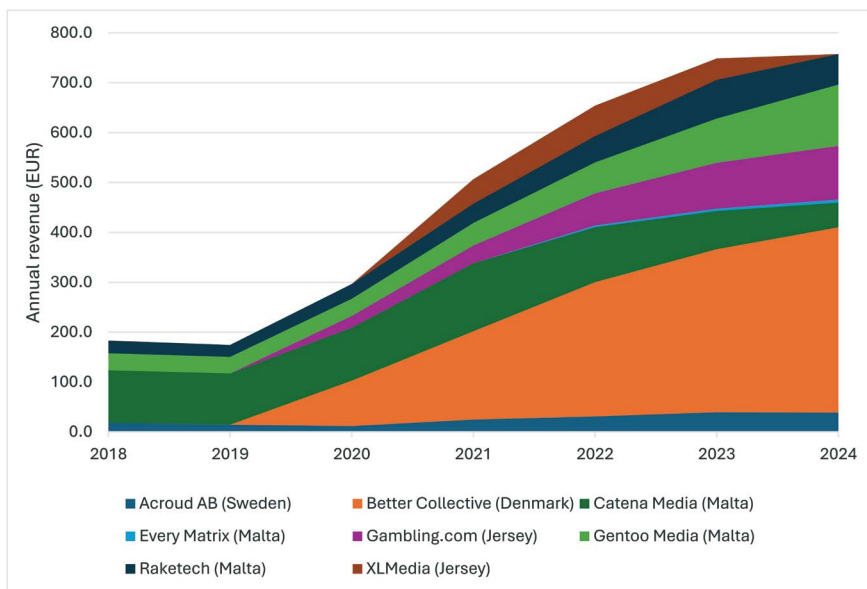


Figure 4.2 Revenue of major affiliate groups in the United States, Europe and Australia, 2018–2024.

Source: Vixio Gambling Compliance.

Note: Revenue data for XLMedia and [Gambling.com](#) was reported in USD. Data were converted to EUR using 0.85 conversion rate (16.9.2025). Note 2: XLMedia sold its European and Canadian assets to [Gambling.com](#) in 2024.

Still, affiliates form an integral part of the gambling market, and gambling companies are eager to pay higher commissions to affiliates that bring in profitable customers and boost traffic. However, industry websites also tell another side of the story in which affiliates and operators engage in constant negotiations and power struggles. In some cases, affiliates may engage in fraud by generating fake referrals or paying customers incentives to deposit on gambling platforms. Affiliates also face risks. Operators may, for example, charge admin fees that deduct profits or detach profitable customers from their affiliates. Affiliates rarely have access to gambling company data and have to trust the operator to calculate payments (e.g., [Abramova, 2023](#); [Aff-Papa, 2021](#); [Sramek, 2024](#)). In the affiliate field, improved regulatory controls might even be in the interest of commercial actors.

Profiling and customer retention

When a new customer has been reeled in and signed, companies will want to create customer loyalty and to maximise their so-called lifetime value

(customer lifetime value or CLV). Calculating the expected lifetime value of a customer requires data on average purchase values, purchase frequency and expected customer lifespan. The longer and the more often a person visits a gambling site, the more profit they are likely to generate for the gambling operator. From a gambling company's perspective, it is therefore essential to keep their existing customers gambling.

Customer retention has been widely studied in land-based casino markets. A systematic review showed that casinos use several measures to retain customers, including product diversification into automated gambling products, complimentary services such as food and beverages, branding and promotions such as free plays or special prizes (Tuguinay et al., 2024). In the online world, customer retention strategies are more personalised, and integrally linked with customer relationship management (CRM) processes and VIP programmes (see also Chapter 2).

Customer relationships

After an individual has registered with a gambling provider, consumer segmenting is further refined by the vast amount of cumulative data collected on each customer within the gambling space (also Chapter 5). Advanced segmentation enables even more personalised marketing, including, for example, mentioning favourite EGM products or sports teams in direct advertising messages.

CRM software, together with customer data platforms (CDPs) (see Chapter 5), allow companies to engage in advanced data analytics and segmentation. CRM software focus on customer relationships, while CDPs provide and consolidate user data to inform CRM activities. Using these tools, companies can divide their customers into specific groups, such as, 'recreational gamblers,' 'social gamblers,' 'problem gamblers' and 'high rollers' (Nikolajev, 2023).

Gambling companies can use different strategies to keep different groups engaged. A website comparing CRM solutions for gambling operators identifies four key advantages that a 'well-calibrated CRM' brings to gambling operators: CRM software allows segmenting customers, automating promotional campaigns based on segmentation and consumer preferences, running loyalty programmes for VIPs, and automating strategies to tempt inactive customers back to the gambling site (iGamingToday, 2024). If a customer contacts customer support and asks for a bonus, the CRM system can also be used to analyse account details to identify whether the customer might be eligible or not (Nikolajev, 2023).

Examples of tailored promotions can include giving free spins to individuals who gamble with EGMs, or cashback offers to those who engage with table gambling. Individuals with high losses may also be offered additional bonuses. A recent interview study (Di Censo et al., 2025) found that financial inducements elicit a fear of missing out for many and can therefore be

particularly effective in encouraging continued gambling. A Norwegian study (Syvertsen et al., 2020) looked at marketing experiences amongst people who have faced gambling problems. The study found that increased engagement with a gambling company led to changes in promotions, such as lowered bonus thresholds or additional promotions. The loss of large amounts of money could also result in being proposed significant amounts of free credit.

Operators will also want to cross-sell and upsell customers to other products on their platform. Cross-selling refers to urging customers to try other available products – for example, someone betting on sports might be tempted to try online EGMs during the off-season (see Chapter 3). Cross-selling to profitable EGM-type gambling is a key strategy for operators to maximise CLV (Suh & Alhaery, 2014; Wardle, 2021, see Chapter 3). Customer data makes cross-selling, like all advertising, more effective, because offers for other products can be personalised to make them more attractive.

These CRM-driven strategies are well summarised in an interview study with representatives of an Estonian offshore-facing gambling company (Nikolajev, 2023). The analysis showed how the gambling operator used a combination of demographic information and user behavioural analysis to identify different types of customers and their preferences. This allowed the company to, for example, target bonuses and promotions to those users who are most likely to use them and continue gambling. The company also personalised its communication channels based on consumer preferences. For example, some users respond better to newsletters while others follow social media channels for updates on promotions. The mobile app was used to send in-app notifications and personalised messages based on preferences, behaviours and demographics. The company also rewarded regular customers with free spins or cashback offers.

These retention strategies and automated CRM prompts may seem positive from the point of view of operators. However, CRM-driven personalisation can also have immediate and devastating effects. In 2025, *The Guardian* (Shanti & Ungood-Thomas, 2025) reported how Sky Bet (brand under Flutter Entertainment) had profiled Sam, who was dealing with problem gambling, as a ‘high value customer.’ Sky Bet had collected 2,400 spreadsheets of data on him and sent him 1,389 personalised emails offering free spins and bonus prizes. According to *The Guardian*, Sam engaged with 98% of them. This case is just one of many displaying how effective, and at the same time harmful, personalised and direct marketing can be.

VIPs and loyalty programmes

The most profitable customers for gambling operators are individuals who spend significant amounts on gambling. Gambling operators want to hold on to these customers as their business model largely depends on a small number of highest spenders. According to some estimates, around 50%, or more,

of gambling revenue is derived from 5% of customers (GREGO, 2019; Kesaite et al., 2023). Data from a German casino operator show that 70%–90% of revenue comes from less than 10% of customers who regularly spend over 250 euros on gambling (Medium, 2025). In the United Kingdom, 5% of consumers generate over 66% of the national online gambling revenue (Forrest & McHale, 2024). In the case of fast-paced online products, estimates suggest that only 1% of customers lose 60 percent of total gambling volume (GREGO, 2019).

Gambling operators want their biggest spenders to keep gambling with them. Loyalty programmes and VIP programmes are one way to encourage customers to stay with the provider. In comparison to basic CRM services, loyalty programmes offer even more personalised service and promotions to foster a long-term relationship with the operator. According to a systematic review of customer retention strategies in land-based gambling (Tuguinay et al., 2024), loyalty programmes are built similarly to other customer retention strategies but emphasise commitment and trust to an even higher degree. Some gambling operators can also identify as exclusive high-end brands to attract VIPs.

Loyalty programmes are designed to cater to and to retain VIPs, also known as ‘high value customers’ (HVCs), high-rollers or sometimes ‘whales.’ Signing a VIP occurs by first identifying a HCV from behavioural data or profiling that draws on behavioural data and characteristics of other HCVs. Identified individuals may be referred to the company loyalty department and invited to special loyalty programmes to encourage continued gambling. VIPs are offered exclusive perks, including higher bonuses or better cashback deals, personal account managers and special events (Guillou-Landreat et al., 2021).

Reporting from the United States and Asia suggests that operators earn up to 40% or even 70% of their revenue from VIPs (Macau Business, 2025; Polard, 2024; Sift, 2024). In the United Kingdom, the Gambling Commission recently calculated that VIP schemes generated only 3% of company revenue, although variation was significant across operators and sectors (Gambling Commission, 2025). This was after a significant regulatory intervention in 2018, mandating operators to apply stricter control over VIPs. As a result of the regulations, VIP schemes reduced by 90%. The lower numbers had remained consistent in 2024 (Gambling Commission, 2025). In addition to regulatory impacts, the UK dataset consisted only of large operators that, as a rule, tend to run less VIP schemes (Gambling Commission, 2025).

VIP programmes are more prevalent in casino-type gambling than in sports betting. Betting VIP schemes can also be more exclusive and require an invitation to join (Betvip, n.d.). My review of online gambling websites ($N = 27$, see Chapter 3 for details) showed that VIP programmes were available in 86% of the reviewed online casino sites but only in 23% of the reviewed online sports betting sites. Sports betting VIP programme members were chosen based on account activity. In contrast, casino VIP programmes were based on a tiered level system, with the number of levels ranging from six to 30.

Casino VIP programmes promised perks such as free spins, bonuses, cash-backs, higher withdrawal limits, a personal VIP manager, birthday gifts and exclusive tournaments. One VIP programme even promised a Ferrari to highest bettors. Getting a Ferrari required the customer to generate a turnover of about 150 million euros.

Industry strategies and VIPs

To better understand the world of VIP programmes, I searched through industry websites discussing ‘whales’ and ‘VIPs’ in online gambling ($N = 10$). This search yielded several examples of what it entails to ‘catch a whale.’ VIPs are first identified by analysing data on a customer’s potential lifetime value. Whales are usually repeat customers who wager large amounts and often – whales are sometimes defined as the highest spending VIP customers, and they can be worth millions to gambling operators. According to Casino Reports (Smiley, 2024), ‘whales drive the currents’ in the online gambling ecosystem.

Gambling operators use sophisticated marketing strategies and tailor exclusive experiences to compete for these big spenders. ‘What marketers need to remember is that catching a whale and keeping the whale with you are equally important,’ one site noted (Appier, 2025a). Based on industry websites, online casinos have three main strategies to keep their VIPs gambling. These are: 1) customised offers and bonuses; 2) invitations to private and exclusive events; and 3) personalised customer service.

Customised offers and bonuses can include, for example, deposit bonuses, cashback deals, prize draws, free spins or higher stake limits and free withdrawals. Many VIP schemes have a tier list where the rewards get better the higher one climbs. Progression on the tier list depends on how much one spends. Usually, the list has a point system that is connected to the amounts of money staked. According to one site, the largest rewards are reserved for ‘true high roller[s], typically making deposits in the range of 10,000 GBP [11,500 euros]’ at a regular basis (McColgan, 2025). According to another website, customers at bronze level generate around 10,000 USD [8,500 euros] in turnover. At this level, customers can expect monthly bonuses, a level achievement bonus and a cashback offer. Bonuses gradually improve through tiers. Diamond-level customers, with a turnover close to 10 million euros, are additionally offered weekly bonuses, reload bonuses (bonuses that reload based on turnover results), bonus increases and a personal VIP host (Plugatar, 2024).

Special events or rewards can include gambling-related events, such as special tournaments and in-person events. Other prizes may not be directly linked to gambling, such as golf outings, tickets to sports matches, holiday packages in exotic locations, gadgets and other luxury items (Peter McKenzie, 2025; Smiley, 2024). These personalised gifts and rewards are tailored to customer needs and preferences, in collaboration with the VIP host. According

to one site, the purpose of gifting is to ‘make casino gam[bl]ing more fun and meaningful for players, reinforcing their loyalty and commitment to the brand’ (Plugatar, 2024).

VIP hosts play an important part in keeping VIPs gambling. VIP hosts are gambling company employees who cater to high-end customers and their needs, including staying in regular contact with the customer and providing them with personal help with gambling. VIPs can expect 24/7 personal customer support. One website defined hosts as ‘a combination of gambling buddy and concierge’ or ‘more like a friend than a salesman’ (Smiley, 2024). To foster a connection, operators usually pair a VIP with a host based on shared background (language, geography, interests in sport). The host will monitor their VIPs data closely and proactively suggest bets and bonuses based on activity, or cross-sell new gambling products on the platform (Smiley, 2024). Another task is to try to win customers back if they have not gambled for a while (Reuters, 2024).

Some company strategies can vary across operators and even across customers. Operators compete for the same HCVs and try to attract VIPs with lucrative programmes. According to one source, very high value customers even have the power to negotiate packages and edges with gambling operators to get the best value for their ‘business’ (Smiley, 2024). At the same time, operators can attempt to lure profitable customers from each other. The Casinopapers leak (see Chapter 2) showed how offshore gambling operators target high-spending customers from competitors and collaborate with other luxury brands to access a pool of potential clients (Sveriges Radio, 2025). In the United States, a former DraftKings executive was sued by the company for taking his clients and trade secrets with him when he changed employer (Smiley, 2024).

Descriptive of the importance of VIPs to gambling business, another US report showed that a single VIP customer changing operator from DraftKings to Fanatics significantly shifted market shares of these operators in the state of New Jersey (Mulheir, 2024). It is also common, at least among US sports betting operators, to reward VIP hosts based on customer losses (Smiley, 2024). In the United Kingdom, a Gambling Commission (2025) survey on operator VIP schemes found that the majority of operators had policies to not incentivise staff for signing customers up for VIP schemes, but some did reward VIP hosts for generating revenue. In the United States, advertisements for roles as VIP account managers on FanDuel’s website as recently as in April 2024 stated that candidates would be expected to ‘increase player activity and drive revenue.’ The phrase has since been removed after enquiry by Reuters (Reuters, 2024).

VIP programmes and harm

VIP programmes can be deeply harmful to some individuals. While some gambling VIPs may be wealthy, many are gambling largely beyond their means.

GREO has estimated that around 50% of gambling company revenue is derived from individuals with problem gambling (GREO, 2019). Financial interests of companies and VIP hosts leave little incentive to intervene even if customers are experiencing severe problems due to their gambling. Evidence from land-based casino environments shows that staff are usually reluctant to intervene with harmful gambling behaviours due to role ambiguities and contradicting duties related to profit-generation and harm prevention (Hing & Nuske, 2011; Riley et al., 2018). In the United States, one operator has even allegedly used player data to single out customers showing addictive tendencies and assigning these individuals VIP hosts and personalised VIP perks to keep them engaged (Dimitrov, 2025).

Some high spenders may also be engaging in criminal activity, notably money laundering. In the United Kingdom, the Gambling Commission (2025) has raised concerns about VIP programmes related to increased harm and, in some cases, failures to prevent criminal proceeds from being spent on gambling. The Gambling Commission describes VIP schemes as a ‘contributory factor’ to other compliance issues (Gambling Commission, 2025).

Evidence from the Casinopapers leak shows how VIPs are encouraged to gamble significant sums with extra bonuses. In just a few weeks, enrolled individuals can lose tens of thousands of euros (Sveriges Radio, 2025; The Shift News, 2025). Just one example, widely reported in the Casinopapers news coverage, tells the story of Stefan, who wanted to close his account. Instead, the customer service offered to make him a VIP customer. Only once Stefan had exhausted all his funds, his account was quietly closed (Sveriges Radio, 2025). One former industry manager told Reuters (2024) that ‘there’s a very fine line between VIPs and someone with a gambling problem.’

Winning back a customer

Acquiring new customers tends to be more costly than retaining existing ones or winning old ones back. Companies across sectors will therefore attempt to hold on to existing business. Yet, some always leave. In these cases, operators need to find ways to win these customers back. Business literature shows that individuals who have a history of being interested in your product, who are familiar with the company and whose data the company already holds, can be more successfully won back with offers and promotions than completely new customers (e.g., Kumar et al., 2015). The same applies to gambling companies.

For operators, enticing old customers to return can occur at different times. While the customer is still on the site but about to leave, companies can launch so-called churn prevention strategies. Churn prevention refers to actions by businesses to reduce customer attrition, that is, stopping customers from leaving the site. In online environments, companies can use data to identify certain consumer behaviours that imply that the person is about to leave. These

behaviours include moving the mouse towards the back button, remaining idle or scrolling quickly to the top of the page. When such signs are detected, a company can take measures, such as displaying pop-ups with targeted offers and incentives to encourage them to stay (Appier 2025b, 2025c). When I was reviewing gambling websites for this book (see details in Chapter 3), I was prompted with messages like ‘are you still here?’ when idle.

If a customer has already left the gambling website and has not returned for some time, gambling companies can use their CRM software to trigger campaigns that are specifically designed for inactive customers. Such campaigns can, for example, include sending direct communications with special return bonuses (iGamingToday, 2024). These types of offers may continue for a long period after the person has stopped gambling. Curiously enough, in 2017, I published a paper on features of licensed French gambling websites (Mari-onneau & Järvinen-Tassopoulos, 2017). For that paper, I registered with all licensed operators in France at that time ($N = 17$) to see what kind of features their sites offered. For several years after, I kept receiving French gambling advertising emails urging me to return and promising bonuses – and I never even deposited money on these accounts. It is not difficult to imagine what kind of (and how many) emails I would get if I had been a profitable customer.

User data are, again, essential. By analysing behaviours and interests on the gambling site, companies can effectively target advertisements that reference products that an individual is interested in or offer the kinds of financial incentives that have previously worked. In some cases, these actions can further aggravate gambling problems and harms. A Norwegian interview study found examples of cases where individuals who had self-excluded from gambling were soon after contacted by a gambling company offering them bonuses if they returned (Syvertsen et al., 2020). An Austrian news story (Der Standard, 2025) told the story of Daniel, who had struggled with gambling problems and was experiencing suicidal thoughts. He had attempted to stop gambling, but online casinos kept targeting him with several emails a day with subject lines decorated with ‘emojis, dollar signs, fireworks, a gift: “20 secret free spins await.”’ (Der Standard, 2025). These examples show how the desire of operators to win back a profitable customer makes it even harder for a person struggling with gambling problems to recover. Marketing maintains a cycle of behaviour that effectively prevents attempts to stop gambling (also Houghton et al., 2023).

To avoid gambling advertising and relapse, people report developing their own tactics to avoid exposure to promotions. When gambling advertising was more linear, these tactics included avoiding sports broadcasts or switching television channels during commercial breaks (Binde, 2009). As advertising has expanded to digital and targeted formats, avoidance has become more difficult. Self-exclusions may help some. Many jurisdictions prohibit sending direct marketing messages to those who have self-excluded. In a review of European gambling advertising regulations, we found that over half of European

jurisdictions had provisions banning direct marketing in these situations. In addition, countries including Great Britain, the Netherlands and Norway prohibit marketing to individuals who show markers of harm in their gambling data (Marionneau et al., forthcoming). Still, the wide commercial ecosystems of online gambling and the commercial imperatives of competitive markets make it attractive for companies to target profitable customers. Even if this is not done by regulated operators, offshore operators may still continue to target promotions to people with self-exclusions.

In Sweden, a scandal occurred in 2025 when the Swedish national broadcaster *Sveriges Radio* (2025) reported that offshore gambling companies are actively targeting Swedish individuals who have self-excluded from gambling with direct advertising messages. *Sveriges Radio* questioned how these offshore gambling operators had managed to access data from the Swedish self-exclusion registry and if data leaks from the registry could have occurred. The Swedish authorities denied the possibility of a leak. Other explanations may be found in the broader online ecosystem and data infrastructures. Companies may obtain data from web searches, corporate networks and cookie preferences (see Chapter 5). In any case, targeting those who experience harm is deeply problematic on many levels, including from the perspectives of consumer protection and consumer rights.

Impacts of advertising

Research evidence shows that gambling advertising is associated with positive attitudes to gambling, gambling intentions, gambling behaviours and gambling harm. Several systematic reviews and an umbrella review have consistently found evidence of a 'dose-response' effect, meaning that greater exposure to gambling advertising increases participation and risk of harm (Bouguettaya et al., 2020; De Jans et al., 2024; McGrane et al., 2025; 2023). A recent longitudinal study from Australia, conducted using tracking data from a gambling operator, showed a direct relationship between online advertising and harm. The study compared individuals who opted out of receiving direct promotional messages to those who had opted in. The results showed that those who had opted out placed fewer bets, spent less and reported fewer harms from gambling than those who were opted in (Hing et al. (2024).

Two systematic reviews have looked specifically into the impacts of digital and online marketing (Guillou-Landreat et al., 2021; Singer et al., 2024). Both concluded that exposure to different forms of online advertising was consistently associated with an increased probability of gambling and increased intentions to gamble. Exposure to advertising also increased gambling spending. In addition, both studies concluded that exposure was linked to higher probability of at-risk or problem gambling. Qualitative evidence similarly shows a direct link between gambling advertising and behavioural impacts and harm, although effects vary across groups. Children, young people and those who

As these examples show, online gambling advertising is highly personalised and data-driven. These data-driven business models, or what Shoshana Zuboff (2019) calls surveillance capitalism, are used to enhance corporate profit (surplus) and certainty of this profit by directly intervening with and modifying how we behave. Algorithms ‘nudge, tune, herd, manipulate, and modify’ (Zuboff, 2019, p. 202) our behaviours. All our online actions ricochet back to corporations as behavioural data, allowing them to further refine their marketing messages. Applied to gambling, surveillance mechanisms can push individuals towards over-consumption of a deeply harmful product to maximise corporate profit. In the next chapter, we look at gambling and the use of behavioural data from the perspective of surveillance capitalism.

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Gambling and Surveillance Capitalism

Surveillance capitalism

The last two chapters, focusing on gambling products and marketing strategies, have shown the critical role played by data in driving corporate profit in the online world. Like any online industry, gambling companies now hold unparalleled levels of data on consumers, monitoring and recording their every single interaction in the digital space of the company, and beyond. The online environment provides gambling companies with a direct relationship with consumers via their smartphones and digital footprints. Gambling companies use user data to customise their products and interfaces, to target advertising to those who are most susceptible to it, and to drive their sales. Companies can also deploy dark patterns to funnel consumers to share more of their data than would be in their best interest.

Exploitation of user data for profit is common across different online sectors, from news and travel websites to e-commerce (e.g., [Kim et al., 2021](#); [Mathur et al., 2019](#); [Sin et al., 2022](#); [Soe et al., 2020](#)). For example, insurance companies can purchase data on individual health risks to determine insurance pricing. Similarly, travel websites adjust their dynamic pricing depending on user interest. Data can also be used to influence politics. In 2016, intelligence company Cambridge Analytica used data analytics and tracking to help Donald Trump win the presidential election. The company tracked people's answers to a viral personality quiz on Facebook and used these data to target millions of Americans with personalised election advertisements ([ur Rehman, 2019](#)).

As with any online industry, access to user data has given the gambling industry unprecedented power over their customers. In many jurisdictions, gambling companies hold a monopoly over most user data that they collect. Regulators may not have access to operator data at all, or only to a limited degree. In this asymmetrical situation, gambling companies know what works and how they can modify people's behaviours in the online space. Users, and often regulators, know much less. Shoshana [Zuboff \(2019\)](#) coined the term 'surveillance capitalism' to describe a new capitalist system that is based on

the exploitation of so-called behavioural surplus via the collection, sharing and analysis of large online datasets. In Zuboff's theory, behavioural surplus refers to the economic profits, or rent, that companies can derive from exploiting online data.

Surveillance capitalism is not an inherent characteristic of technological progress and online infrastructures – it is a capitalist and institutional logic that enables astronomical profits to some companies, notably the so-called Tech Giants like Google, Meta or Amazon (Zuboff, 2019). According to Zuboff (2019), Google invented the surveillance capitalist model. Google's search engine was initially just a machine, but it became smarter as it learnt from the search data of users. Google started storing these data and using them to better their service. There were no regulations to prevent this as early internet was not yet concerned with privacy rights. Eventually, Google started to exploit their user data for advertising and profit. As argued by Zuboff (2019), Google's users are not Google's real customers – users are just the raw material that Google sells to advertisers.

The surveillance capitalist model has since spread. Today, any website is full of surveillance technology. Cookies track our movements online, and our interactions are recorded to develop an even more accurate profile of us. Any economic sector and product described as 'smart' or 'personalised' is based on surveillance technology (Zuboff, 2019). The use of our data is justified in terms of helping make the user experience better, making advertising more interesting, and tailoring recommendations and experiences. Often, the use of data is highly efficient. Data-driven algorithms can be astonishingly precise in matching supply with demand. O'Reilly et al. (2024) have called these algorithmic systems a kind of proprietary invisible hand.

During the early phases of a new technology, like online gambling or any other online-first industry, markets grow via recruiting new customers, solving new problems and creating new innovations. Early market leaders can generate significant profits by being at the forefront of technological development (O'Reilly et al., 2024). However, once markets start to mature, they can no longer rely on significant numbers of new users or important new innovations to maintain profits. At that point, companies may turn to more extractive techniques. This phenomenon has been observed across the online platform economy. Platforms begin to focus on attracting advertisers rather than on providing a good service to users (O'Reilly et al., 2024). In online tech speech and literature, the phenomenon has been called 'enshittification' (Doctorow, 2025).

The basic mechanisms of capitalist extraction techniques are those of surveillance capitalism. In surveillance capitalism, the private experience of users becomes raw material for machines and corporations that sell it to advertisers. The most effective use of our data even shapes our futures: According to Zuboff (2019), data are computed and packaged into prediction products for other businesses who have an interest in what we might do next or soon. For advertisers, or gambling corporations, surveillance capitalism is a useful tool because it helps sell and target products better than ever before.

However, all of this is accomplished at the expense of user privacy and freedom. When individuals agree to the terms and conditions of websites, they also give tech companies or website operators the right to own their private data and to use them for commercial purposes. Our online personas are not private, and our data can be harvested and monetised without our knowledge or consent (Zuboff, 2019).

By collecting and combining small crumbs of data, online companies capture infinite details about our lives. According to Zuboff (2019), our online data includes everything ranging from age, gender, location, profession, lifestyle and habits to our career and hobbies. Based on our online activities, data can even reveal our personalities, moods, emotions and vulnerabilities (Schneider et al., 2018).

Profit from behavioural surplus accumulates within ecosystems that can extract and combine data from different online sources (Zuboff, 2019). Chapter 2 of this book looked into the ecosystem of online gambling. Commercial ecosystem entities benefit commercially from the growth of the gambling industry (also Rintoul et al., 2025). These same actors can have an interest in sharing and collectively exploiting user data. Similar processes are already seen in other sectors where data on user preferences are shared across commercial actors for the purposes of profit co-creation (Beverungen et al., 2022; Mazzucato et al., 2023). Corporations involved in this informational ecosystem yield power affecting the constitution of the whole ecosystem (O'Reilly et al., 2024), while at the same time involving different interests in influencing and engineering consumer behaviours (Zuboff, 2019).

The theory of surveillance capitalism has focused strongly on online platforms and their advertising practices. However, data-driven practices are also common in the gambling sector. This chapter investigates what surveillance capitalism looks like in the online world of gambling. The chapter delves into what kind of data gambling operators collect on their customers, and what kind of conditions are attached to this data collection. We then look at the broader data ecosystem before turning to how data on customers can be used to train algorithms to sell more gambling products. Data can also be used, at least ostensibly, to identify harm and to protect customers.

How are data collected?

Websites use different types of dark patterns to nudge users to consent to disclosing their personal data. User consent can be fraudulently achieved by bundling consent in a way that makes it difficult for users to understand what they are agreeing to. For example, a website may bundle the consent to use a service with consent to receive personalised marketing emails. In such a case, consent is not really informed as people are not aware of what they are consenting to (ICO, 2023). Consent can also be hidden within long contractual texts that users need to approve before proceeding to/within the site. Few people read these terms, and, again, users rarely know what they are agreeing

to. Evidence from the gambling field similarly shows that people who receive direct marketing rarely remember consenting to this but believe they had done so inadvertently when signing up to the site (Syvertsen et al., 2020).

Agreement to terms of service (TOS) has been called the ‘biggest lie on the internet’ (see Obar & Oeldorf-Hirsch, 2020). Research shows that less than 10% of people read terms and conditions or privacy policies, and even fewer understand what the documents say (Berkeley Ethical Legal Data Science, 2021). One experiment showed that 74% of people skip reading privacy policies and TOS altogether, and those who do open these documents, only read them for an average of 73 seconds. Yet, with an average reading speed, it would take on average about 30 minutes to read a full privacy policy, and 16 minutes to read a full TOS document (Obar & Oeldorf-Hirsch, 2020). Some TOS documents of popular web services take over an hour to read through (Statista, 2022). Zuboff (2019) has called website policies non-contractual because they are so inaccessible. Ambiguous contracts deceive us into agreeing to terms that are beneficial to companies, as any consent allows websites to gain permission to exploit data for a variety of commercial purposes.

Even in cases where users would opt out of data sharing, this comes with consequences. Customers may face limited functionalities and data security. For example, some websites now charge users if they do not consent to cookies. One Finnish news website started to charge a monthly fee from users who do not consent to cookies and targeted advertising. A representative of the website argued that the fee is compensation for revenue losses to the website from not being able to display targeted advertising. The monthly fee still does not mean no adverts – just that these are not targeted (Heikkilä et al., 2025). Other online newspapers internationally have similar practices in place. If reduced functionality or additional price do not make users consent, companies can also reward users for opting in, or present behavioural monitoring as a ‘fun’ and ‘interactive’ gamified element of product use (Zuboff, 2019).

In online environments, user data are collected via cookies and device fingerprinting that monitor how users interact within the online space and what kind of data they disclose in forms. Within apps, users are also tracked with advertising identifiers that are stored in smartphones (Federal Trade Commission, 2023). Data collection is conducted at different phases and for different purposes. Some data collection makes browsing easier, while other tracking can be harmful. In this part, the focus is on data collection via consent to cookies, privacy policies and TOS documents.

Cookie policies

When visiting a website, users need to consent to cookie tracking. Cookies are small data files that collect information for website analytics, advertising and personalisation. Cookies can be single-session-based or multi-session

(persistent), depending on whether they are deleted after closing the browser or if they are stored on the computer over a longer period. In addition, there are so-called evercookies, or zombie cookies, that are also used to track and identify browsers, but that are very difficult, if not impossible, to delete (Solberg Söilen, 2024; Wagner, 2020).

Cookies can be placed by the domain (first-party cookies). Cookies can also be placed by other domains such as data analytics, advertisers, tracking applications and even data vendors that aggregate data from different sources to create consumer profiles for advertisers (third-party cookies) (Cahn et al., 2016; Rasaii et al., 2023). Mellet and Beauvisage (2019) describe data vendors, or data brokers, as third-party entities that use proprietary and fast-developing technologies, sometimes even fraud, within complex online ecosystems to collect user data without their knowledge. One study that looked at cookie characteristics on 100,000 websites, found that third-party cookies were twice as common as first-party cookies. The bulk of third-party cookies were used for targeted advertising. Cookies were also able to aggregate information widely across websites (Cahn et al., 2016). Cookies can therefore pose important risks on privacy as they allow advertisers or even malicious actors to gather information across sites and effectively profile individuals.

Some cookies, particularly first-party cookies, serve helpful purposes such as making browsing faster by storing settings and keeping a user logged in. Improving browsing speed and user experience was also the initial intent of cookies when they were invented in 1994 (Solberg Söilen, 2024). However, the ability of cookies to track online behaviours has expanded their use towards widespread monitoring of user activities across the internet. Cookies are now an integral part of targeted advertising and personalisation, even across websites (Mellet & Beauvisage, 2019; Solberg Söilen, 2024). Gambling websites have these types of cookies as well. Figure 5.1 describes the kinds of cookies that can be found on gambling websites, based on information provided by specialist website About Cookies (2025).

Cookies have become so institutionalised that they form their own data infrastructures. According to Mellet and Beauvisage (2019) online advertising has become dependent on cookies to a point where the whole advertising industry has become ‘cookiefied.’ Typically, users have not (at least knowingly) consented to the level of profiling that cookies enable (Solberg Söilen, 2024). Yet, we continue to encounter situations in which data on us are utilised and exploited. Mellet and Beauvisage (2019) argue that:

[O]rdinary life events become objects of capitalisation by data brokers, private companies that manufacture and maintain databases of ‘digital doubles’ of virtually each individual consumer. These data doubles exist without the knowledge of and away from their human alter egos, and

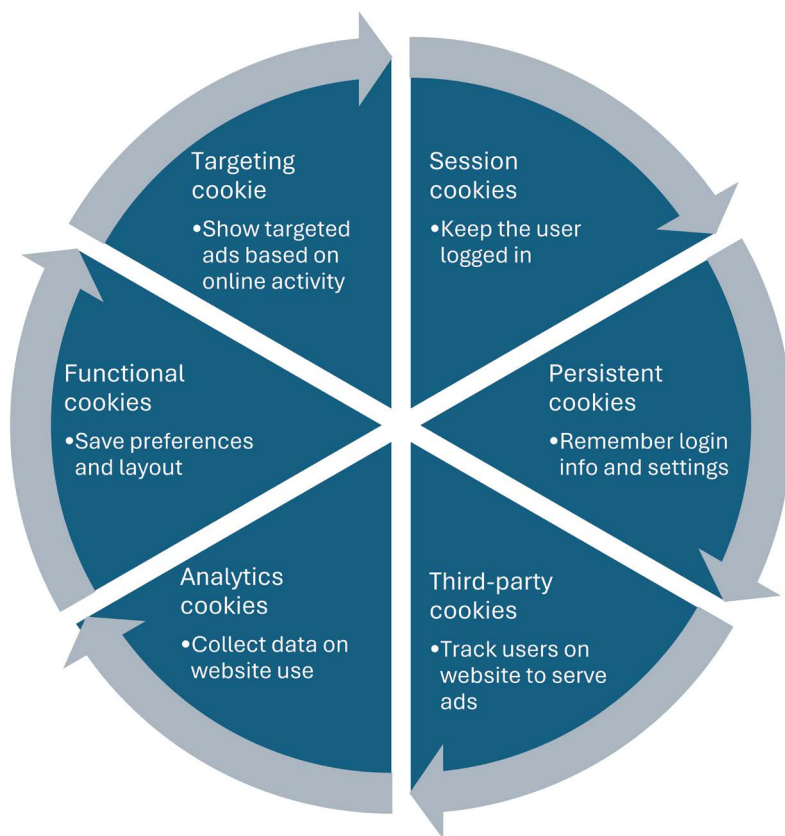


Figure 5.1 Cookies on online gambling websites.

Source: Based on categorisation provided on About Cookies (2025)

come to haunt them, more and more frequently, like phantoms (or monsters!), in the form of hyper-targeted marketing.

(Mellet and Beauvisage (2019, p. 5)

Cookies are designed for the desktop browser environment. They cannot be installed on mobile apps. The mobile equivalents to cookies are mobile identifiers that are collected via fingerprinting from multiple data points on the device. In addition, mobile advertising uses other means of tracking and targeting individuals. Most mobile apps are based on the need to log in, and stay logged in. If users log in using Meta or Google accounts, these major advertisers can monitor app use and connect data from apps and browser-based cookies for improved profiling (Mellet & Beauvisage, 2019).

The European General Data Protection Regulations ([Regulation 2016/679](#)) provide the most comprehensive regulatory framework around data privacy, including cookies. The GDPR took effect in 2018 and has obliged companies operating in Europe to significantly change the way they collect and process data. The main aims of the GDPR are to provide individuals with more control over their data. The GDPR states that companies are allowed to collect cookies, if users first consent to this. Similar legislative frameworks do not, at least yet, exist in the Americas or Asia ([Plachkinova, 2025](#), see also [Chapter 6](#)).

However, research on websites in Europe has shown that data collection practices routinely circumvent existing data protection legislation. Many websites do not actually seek informed consent, and many do not even give the option to decline cookies ([Soe et al., 2020](#); [Wagner, 2020](#)). One study investigated the top 10,000 websites in the United Kingdom, and found that only 11.8% complied with the minimum requirements of the GDPR. In other cases, websites engaged in a number of non-compliant actions. For example, decline buttons were not readily available, or user tracking took place regardless of whether individuals consented to cookies ([Nouwens et al., 2020](#)).

An investigation into the top 100 websites in the United Kingdom, including gambling websites, found that over 50% were using advertising cookies. The practices of one UK-based gambling website led to an investigation with the Information Commissioner's Office (ICO). The ICO concluded that the company was processing users' personal data in ways that was 'not lawful, transparent or fair.' According to ICO, the company processed personal information and shared it with advertising companies even before users had the option to accept or reject advertising cookies ([ICO, 2024](#)).

Another investigation, conducted by *The Observer* ([Das, 2025](#)) similarly found that targeted gambling advertising was delivered based on just visiting a gambling website. The journalist visited 150 UK gambling websites and did not give consent to having their data used for marketing. Yet, they found that websites shared data with Meta. One site told Meta that the journalist had clicked a button that would indicate they might place a bet on a specific football match the following week. Another website told Meta that the journalist was interested in a 'free spins' promotion. A few days later, the journalist reports that their Facebook feed was full of gambling adverts from a range of brands. During the testing, the journalist noted that many gambling websites had not asked for consent to data-sharing, or did not give the option to reject cookies. The review of websites in [Chapter 3](#) of this book also found that only a minority of investigated gambling websites offered a clear option to decline cookies.

Privacy policies and terms of service

When users register with a website, they are generally asked to accept the website's privacy policy and TOS. Privacy policy is a broad document that

details how the company handles user data, including data that have been obtained via tracking cookies. TOS are documents that detail the legal conditions of an online service. These two documents are related in the sense that users are usually asked to consent to both at the same time. In some geographical contexts, TOS and privacy policy documents can be bundled together. However, in the EU, the GDPR requires separating them (Lapin & Lūžytė, 2024).

Privacy policies are legal documents that detail what kinds of data websites can collect on users, how and for what purposes these data are used, and with which third-parties data are shared (Wagner, 2023). Privacy policies are notoriously lengthy and difficult to understand (McDonald et al., 2009). Few people read these documents, but similarly to consent to cookies, they are still used as the legal basis for taking advantage of user data. A study of over 50,000 privacy policy documents from 1996 to 2021 found that over time, policies have become longer but not clearer. Notably, policies were vague, and many attributes were not specified, including not naming third parties, collected information types, or not informing users clearly about changes to policies (Wagner, 2023). In some cases, companies can encourage users to also read privacy policies of companies to whom they are selling data, making it impossible for any internet user to keep up. Zuboff (2019, p. 25) has called this ‘a forced march towards madness or surrender.’

TOS are contracts that govern the rights and obligations between service providers and service users. In the European Union, users need to sign these contracts before using a service. TOS generally include liability and accountability provisions and sometimes privacy policies, making them also relevant for the use of personal data (Lapin & Lūžytė, 2024). Virtually every app and website have their own TOS document but, as with privacy policies, users rarely look at these or are aware of what they contain. Users are particularly unlikely to read TOS documents if they are provided in a separate link (Lapin & Lūžytė, 2024). One UK study that looked at the presentation of TOS documents on gambling adverts (Critchlow et al., 2020) found that most were either not present (11% of cases) or poorly visible (84% of cases). Even if users did read these documents, there would be very little they could do if they disagreed. The only choice given to users is to consent or not use the service (Lippi et al., 2019). Users are therefore encouraged to accept, even in cases where TOS documents contain clauses that are unfair from the perspective of users or unclear to them.

In 2023, the French gambling regulator *Autorité Nationale des Jeux* (ANJ, 2024) conducted a review of TOS documentation of all licensed operators in France. In France, as elsewhere, TOS documents are drafted by industry, and there has been no standardisation by the regulator. As a consequence of the review, operators were asked to remove several clauses due to their unlawful, exploitative or ambiguous nature. These included clauses that restricted

customers' rights to compensation in cases of breaches by the operator, clauses that made it difficult for customers to take legal action against the operator, or clauses that shortened the period during which customers can assert their rights against the operator. At the end of the review, French operators were reported to have changed their TOS, with some even rewriting them.

In the next sections, we look more closely at what privacy policies of online gambling operators look like. The focus is on the kinds of data variables that are collected, and the kinds of third parties that also have access to these data for a variety of purposes. I mainly focus on privacy policies as these have the main relevance with regard to surveillance capitalist practices.

Data infrastructures

Gambling companies have access to user data from a variety of actions and interactions within the gambling space, the broader ecosystem of gambling operations (see [Chapter 2](#)), and the overall online environment. Due to their crucial importance for online business, data have been called the 'digital fuel of the 21st century' ([Kundra, 2012](#)).

Within the online space, aided by user agreement to cookies and privacy policies, companies are able to combine gambling transaction data with other tracking data collected via browser activity, social media profiles, online searches and even financial data. We know that gambling companies have access to data from all possible gambling transactions within their space, and within the extended group of brands. These data include transactions, deposits, withdrawals, bets, wins and losses, as well as any interaction and clicks on the gambling website and responses to promotions ([Marionneau et al., 2025](#)). In addition, operators collect data from user registration forms, communications, and cookies, including identifiers such as IP addresses. Operators have certain legal obligations related to anti-money laundering (AML) and know your customer (KYC) procedures that also give them access to large amounts of financial data on their customers, including source of funds, banking information and occupation. Much of these data are highly sensitive, and some conflict with data privacy laws ([Gordon, 2024](#)). Based on their AML and KYC obligations, operators are mandated by law to track each customer within their space.

Operators are expected to keep certain data for separate and specific purposes, only. For example, sensitive financial information collected for KYC purposes should not be used for marketing ([EGBA, 2020](#)). However, privacy policies are often written in ways that make it difficult to understand how this separation is ensured. Furthermore, sensitive data can be compromised in cases of data breaches. In Germany, a casino company accidentally made all data stored in its casino systems publicly accessible ([Wittman, 2025](#)). The dataset included variables such as customers' names, addresses, contact information, payment information, detailed gambling session details, IP addresses and browser details.

The data files that gambling operators hold on their customers can be astonishingly large, full of information and commercially interesting for companies. *The Guardian* (Das & Ungood-Thomas, 2025a) reported a story about a person with a gambling problem who had requested their data from a gambling company. The GDPR gives all users access to their own data. Yet, the company initially declined to supply him with the data, choosing to instead suspend the account. After insisting, he finally received documents with thousands of pieces of data, collected by the company and partners using cookies and online sources. According to the Guardian, these data had been used to ‘create a “DNA” customer profile of his browsing habits, demographic characteristics, and customer ID, plus details of his gambling: His favourite games, when he played them, his wins and losses, the links he clicked, the marketing he responded to, and his location coordinates at the time.’ He was coded in the data as a ‘high value customer’ and prime target for marketing. When he eventually stopped gambling, the software coded him as someone to ‘win back’ (Das & Ungood-Thomas, 2025a).

Data collection according to privacy policies

To understand what kind of data gambling companies can collect on their customers, I looked at privacy policy documents of a sample of 26 online operators (14 of which were primarily casino operators, 12 primarily sports betting operators). The operators and the selection process are described in Chapter 3, where the same brands were analysed from the perspective of website design. Links to privacy policies were usually found in small print at the bottom of websites.

On average, privacy policies were 9 pages long while TOS documents were, on average, 22 pages long. I focus mainly on privacy policies, as these are the primary documents containing information about the kinds of data that companies collect, how these data are used and protected, and which third parties have access to customer data. In contrast, TOS documents focused strongly on protecting the rights of the gambling operator in cases of disputes, although they also had some interesting clauses regarding privacy and consent. For example, some companies reserved the right to carry out investigations on their customers for any reason, including detailed data mapping from different sources. Companies also reserved the right to terminate any accounts at their own discretion if these investigations resulted in negative or ambiguous results. Some companies also reserved the right to use their customers’ names in publicity regarding winnings – although with a picture of a model. All terms in TOS were non-negotiable. If users disagreed with these terms, broader privacy policies or any other conditions, the only alternative was to remove the gambling app.

Privacy policies had dedicated sections on data collected and sources of data collection. Table 5.1 lists different categories found across operators.

Table 5.1 Types of data points collected by online gambling operators

<i>Information provided at registration</i>	<i>Other information provided</i>	<i>Automatic info from device</i>	<i>KYC, AML, fraud prevention information</i>	<i>Information from other third parties</i>	<i>Information from website activity</i>
<i>Personal details</i>	<i>Content of communications</i>	<i>Identifiers</i>	<i>ID verification</i>	<i>Financial information</i>	<i>Website use</i>
✓ Account ID	✓ Emails	✓ UDID, IMEI, MAC address	✓ ✓ ID number	✓ Credit history	✓ Clickstream data
✓ Username	✓ Chats	✓ Browser fingerprinting	✓ ✓ Passport number	✓ Credit bureau checks	✓ Visit duration, timestamps
✓ Password	✓ Telephone calls	✓ IP address	✓ ✓ Passport copy	✓ Other financial information	✓ Log in / log out times
✓ Title	✓ Complaints	✓ GPS location	✓ ✓ Photograph	Publicly available information	✓ Activities on site
✓ First, middle and last name	✓ Feedback given	Technical info	✓ ✓ Proof of address	✓ Public info on social media	✓ Time spent on specific pages
✓ Gender	✓ Messaging platforms	✓ Operating system and platform	✓ ✓ Utility bill	✓ Info on linked social media	✓ Log files / audit logs
✓ Date of birth	Responses	✓ Browser type and version	✓ ✓ Proof of funds	✓ Forums	✓ App activity
✓ Place of birth	✓ Market research responses	✓ Browser extensions	Source of funds / affordability checks	✓ News articles	✓ Alerts
✓ Residential address	✓ Survey responses	✓ Screen resolution	✓ ✓ Credit ratings	Official databases	Gambling data
✓ Country	✓ Security question responses	✓ Browser and keyboard language	✓ ✓ Salary and assets	✓ County court judgements	✓ Deposits
✓ Nationality	Inference	✓ Time zone settings	✓ ✓ Scanned bank statements	✓ Bankruptcy records	✓ Withdrawals
✓ Email address	✓ Health information	✓ Technology on device used to connect	✓ ✓ Income certificates	✓ Official records like electoral roll	✓ Winnings

(Continued)

Table 5.1 (Continued)

Information provided at registration	Other information provided	Automatic info from device	KYC, AML, fraud prevention information	Information from other third parties	Information from website activity
Personal details	Content of communications	Identifiers	ID verification	Financial information	Website use
✓ Phone number	✓ Interests based on activity	✓ Software crash reports	Fraud / AML prevention	✓ Anti-fraud database status	✓ Win/loss history
✓ Other contact data	✓ Ethnicity from ID	✓ Linking website	✓ ✓ VPN usage	Other third parties	✓ Bets
✓ Social network accounts	✓ 'Any other information'		✓ ✓ Fraud software use	✓ Affiliate relationships	✓ Session duration
✓ Occupation			✓ ✓ Bonus hunter status	✓ PG rating from regulator	✓ Bonuses redeemed
✓ Personal description			✓ ✓ Betting integrity info	✓ Data from data vendors	✓ High scores
Payment details			✓ ✓ AML rating	✓ Data from other brands in group	✓ Products gambled
✓ Credit card number			✓ ✓ Criminal convictions, police checks	✓ Info from friends or family that contact operator	✓ Product preferences
✓ Bank account info					Safer gambling / tools
Preferences					✓ Self-exclusions
✓ Marketing preferences					✓ Operator exclusion
✓ Website preferences					✓ Deposit limits
✓ Subscriptions					✓ Product blocks
					✓ PG risk scores

Note: Data for this table were collected from privacy policy documents of 26 online gambling operators. The operators and inclusion criteria are described in [Chapter 3](#). AML = Anti-money laundering; KYC = Know your customer; PG = Problem gambling.

Not all categories were present for all operators, although all had provisions on personal information, payment information, information collected for KYC and AML purposes, cookies and automated information collection, third-party information, as well as information related to activities within the gambling space. In total, [Table 5.1](#) lists 106 different data categories that operators listed in their privacy policies.

Put together, these over 100 different data categories can form a comprehensive picture of each customer in the online gambling space. Gambling operators have access to each customer's personal details and preferences, knowledge about what kind of device individuals use to gamble and what kind of settings their device and browser have. Operators know every click, every transaction and every product that their users have looked at or gambled with, how much they have lost, and how or when they interact with promotions. Operators combine these data with anything their customers have revealed in personal communications with the operator. Some of these communications can be extensive, particularly in cases where a customer is assigned a personal VIP host within the framework of a VIP scheme (see [Chapter 4](#)).

All these data that are collected within the gambling platform, are further combined with a range of third-party data. Some of the collected third-party data categories are based on legal duties. Companies need to track their customers for AML and KYC purposes, including data on the person's finances or even a potential criminal history. However, gambling operators also access third-party data on their customers from public sources, social media profiles and affiliate marketers. Some operators allow registering with a Google or Facebook account, which can then provide access to further social media data. Operators are usually just one brand within a large parent group, and data are also aggregated across these brands. The more the market consolidates, the greater the access to data becomes for leading gambling groups ([Chapter 2](#)). In some cases, operators disclosed purchasing additional data from data vendors. Data vendors collect data on individuals from various sources, such as online activity, public records, and surveys, and sell them to businesses for profit.

As many of the operators included in this data collection could be regarded as 'offshore' (see [Chapter 3](#)), I also looked at the privacy policy of the Finnish gambling monopoly, Veikkaus, for balance. Not all gambling companies behave in the same way, and national regulations can also impact the kind of leeway that companies have in terms of data collection and use. In comparison to the other companies, Veikkaus had separate privacy policies for different parts of its operation. This suggests that data are likely kept separate for separate purposes. For example, Veikkaus had separate privacy policies for AML purposes, for its customer registry, for research, and for security camera footage at sales outlets. The data collected for the customer registry contained information provided at registration, gambling activity-related information and automated information from cookies. Unlike for other operators, the database did not contain third-party information.

Data sharing with third parties

Data sharing is common in the online world. Online companies share, buy and sell data to gain a commercial advantage in their analytics and advertising operations. In 2015, an analysis of top one million websites found that 88% of them shared data with an average of nine external domains. In 78% of cases, this external domain belonged to Google and in 32% of cases, to Facebook (Libert, 2015). Another study investigating smartphone apps found that more than 70% shared personal data with third-party tracking companies, and many sent data to other countries abroad (Vallina-Rodriguez & Sundaresan, 2017). People, even when they have ostensibly consented to data sharing, rarely know where their data travels.

To understand the data sharing practices of operators, I also analysed the privacy policies of the 26 gambling operators (described in Chapter 3) from the perspective of data sharing. Privacy policies are mandated to have a section on any third parties to whom data are transferred. The main results are presented in Figure 5.2. As with collected variables (Table 5.1), there was variation across operators, and all third parties were not present in all privacy policies. For example, data aggregators were only mentioned by one operator. In addition, none of the privacy policies detailed which data were shared with which third parties. However, most third-party categories were commonly found across operators.

Overall, the network of third parties to whom data can be potentially shared forms a large ecosystem consisting of other gambling providers, service providers, enforcement and integrity actors, marketing and analytics services, and other third parties. The ecosystem overlaps with third-party sources of data collection: Third parties such as marketing services, social media, enforcement actors, and other gambling operators within the same group have a bidirectional role as providers of data as well as recipients of data.

What happens to user data that has been transferred to third parties is no longer the gambling company's responsibility. A commonly repeated clause in privacy policies encourages readers to also familiarise themselves with privacy policies of third parties that may have different rules and that may further share the data onwards to their service providers or partners. In these enlarged networks of interests, private data becomes a commodity that the original data subjects no longer have any control over.

Other research similarly shows that data sharing is common within the online gambling ecosystem. Operators commonly share data within the group at a global level (EGBA, 2020). One prior investigation (Behavioural Insights Team, 2022) found that for half of investigated operators (5/10), customers were automatically signed up to advertising of other brands in the same parent company when creating an account. According to the research, cross-marketing across brands was a strategy to cross-sell different products to existing customers. Sharing data across brands is also a way to increase

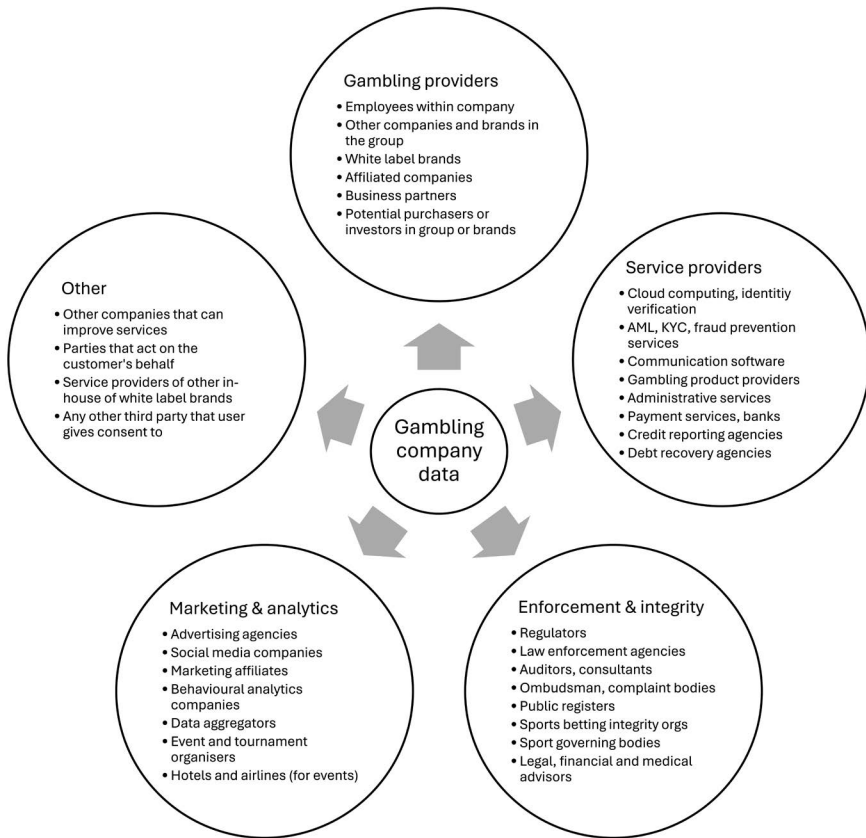


Figure 5.2 Data sharing ecosystem of gambling operators.

Note: Data for this graph were collected from privacy policy documents of 26 online gambling operators. The operators and inclusion criteria are described in [Chapter 3](#). AML = Anti-money laundering; KYC = Know your customer.

customer engagement within the group. UK data show that about 10% of individuals who gamble online have over 5 accounts. Keeping these ‘non-loyal’ individuals within the group is therefore in the interest of operators (Regulus Partners, 2021). [Figure 5.2](#) similarly shows that data are shared within the same parent group, but not with outside gambling operators.

Some parts of the data sharing ecosystem are not visible in privacy policies. In some cases, gambling companies can transfer user data without consent. For example, the Guardian ([Das & Ungood-Thomas, 2025b](#)) recently reported results of an investigation of 150 gambling sites. The results showed that gambling companies use a hidden piece of code, Meta Pixel, that tracked users and sent their data to Meta without consent, and regardless of marketing

preferences. The data were then used by Meta to target users with casino and sports betting advertisements.

User data are also valuable to criminal groups and hackers. Sensitive financial and personal data held by online gambling operators are interesting to criminal actors, making gambling companies vulnerable targets to cyberattacks and extortion (Gordon, 2024). According to one estimate, 70% of online casinos were targeted by cyberattacks in 2023, the third highest figure for any industry (Casino Beats, 2024). Cyberattacks pose a significant danger to user data. Several cases have recently emerged in the US where gambling operators have been hacked, and third parties have been able to access personal information of customers. These data include contact information, gender, date of birth and even social security numbers. For example, in 2022, hackers were able to access user information on 68,000 accounts from third-party sources. Hackers entered user accounts and withdrew money from some users' associated bank accounts. In 2023, Caesars Entertainment was targeted by hackers that gained access to its loyalty programme database. The company reportedly paid a USD 15 million ransom to prevent hackers from disclosing the stolen customer data (Gordon, 2024; Plachkinova, 2025).

From the perspective of people with gambling accounts, cyberattacks, data security breaches and fraudulent operators selling user data to third parties can have severely harmful consequences. The contact information and personal profiles of individuals can be shared within criminal casino and gambling networks that will then target gambling advertising to people who are known to be susceptible to them (Martin, 2024). In addition, other actors within the broader ecosystem of gambling may use and access data via fraudulent ways. For example, the instant loan industry uses many similar commercial tactics as the gambling industry, including targeting individuals who may be in financial trouble (Marionneau & Nikkinen, 2024). In our interview data on Finnish consumers who gamble, some participants have been certain that instant loan companies have access to gambling data to target their offers:

I would say that [offshore casinos] are connected to instant loan companies. The same owners operate both. At least to me it has happened that I gambled during the weekend and lost. Then on Sunday evening I got a promotion from an instant loan company, promising to lend me that amount. It can't just be a coincidence.

Algorithms and data analytics

Like any online firm, gambling companies are incentivised to make the maximum use of their valuable datasets. Data are the raw material for effective algorithms. The success of a gambling company requires effective algorithms,

which, in turn, depend on access to high-quality data. Better data and algorithms can therefore constitute a competitive advantage to companies (Marty, 2023).

The operation of online gambling is based on algorithms that make the website function. According to one industry website, '[b]ehind every online casino game is a complex system of algorithms that control fairness, gameplay, and user experience. These invisible frameworks silently run operations, much like staff in a real-world casino – but on a much larger, automated scale' (Robery, 2025). There are three main types of algorithms (Binesh & Ghaharian, 2025; Robery, 2025):

- 1 Outcome algorithms (like RNGs), probability algorithms (determining odds), and payout algorithms (determining wins and losses).
- 2 Security algorithms (anti-cheating algorithms) and data encryption algorithms (identifying suspicious patterns and protecting user data).
- 3 Customer management algorithms, tracking the habits and preferences of users via customer segmentation, risk assessment (e.g., for signs of harm), and bonus allocation based on behaviours.

Algorithms are the building blocks of AI-driven solutions in online gambling. The gambling industry is increasingly adopting complex AI-based solutions to drive further analytics, personalisation, tailored recommendations, and product development (Binesh & Ghaharian, 2025). Advances in machine learning have increased the potential for personalisation by using and combining data from a variety of sources and levels. Some algorithms and models, notably outcome algorithms, are audited by test houses and agencies to ensure that they are fair and secure. Others, notably those managing customers and marketing, are much less transparent and may also be developed in-house. In this part, the focus is on customer management algorithms due to their direct implications on harm. First, we will look at how algorithms are leveraged for profit, and then how they could – or should – be used for harm prevention.

Algorithms that sell

Zuboff (2019) argues that surveillance capitalism is based on the ability of companies to profile us and then shape our behaviours in specific directions. Algorithms are first trained with our data, and then they start to mould us. They determine what kind of content we see online and what kind of adverts we see, and when. Eventually, algorithms can make us act in the interest of corporations. Zuboff (2019) calls this process the 'economies of action': Algorithms tune and condition behaviours with subtle cues and rewards in ways that are profitable to companies. Algorithms that were initially trained with our data, start to determine how we act in a digital space.

Powered by AI, small crumbs of data from a variety of sources form a recognisable picture of each customer. As [Chapters 3 and 4](#) argued, user data can be leveraged at different levels and via different channels to keep customers engaged and gambling. Online choice architecture and nudges can be personalised to make the gambling space persuasive for each individual – including ‘recommended’ and ‘favourite’ products and tailored incentives. Dark patterns can make recommendations even more dynamic, as algorithms adjust based on each customer’s reactions to proposals, reshaping them further (also [Marty, 2023](#)). Marketing messages are highly personalised based on consumer segmentation and personal preferences, spanning beyond the world of gambling. As companies routinely collect data from third parties, including social media, they are able to form a broad picture of individual likes, dislikes and financial means. Following the logic of the surveillance capitalist model, customer profiles are then used to impact behaviours directly and to generate desirable actions (from the company’s perspective).

The Digital Advisory Board for the GB Gambling Commission has noted that practices inherent to surveillance capitalism will substantially increase the harmfulness of gambling (Gambling Commission, 2019). A part of this harm may be an accidental side product of the ways in which AI models function. If an algorithm is designed to optimise customer engagement, it will start reinforcing and triggering use that is harmful ([Binesh & Ghaharian, 2025](#)). However, I would argue that a significant part of the harm caused by AI-driven algorithmic solutions are also ingrained in the business model of gambling and the revenue interests of the industry (see also [Allsopp, 2021](#)). As most profits comes from a small number of customers (see [Chapter 4](#)), operators are incentivised to extract a maximum lifetime value from everyone that has created a gambling account with them.

Customer data platforms and solutions

Targeting is aided and enabled by collaboration with customer data platforms (CDPs). CDPs are software solutions that create profiles of each customer based on all their activities within and beyond the website (see also [Chapter 2](#)). The better the data, and the better the algorithm, the more value a CDP can provide to businesses. An effective CDP can even extrapolate potential interests and preferences based on observed patterns ([Appier, 2025a](#)). Therefore, at the level of customer retention, CDPs can be used to forecast future actions and cross-sell or upsell other products to customers by identifying the most effective timing, channels and promotions. CDPs calculate the expected lifetime value of each customer and the likelihood of them leaving – allowing operators to target offers proactively at these moments ([Appier, 2025b](#)). CDPs can also be used in customer acquisition. Profiling the company’s ‘best customers’ can help target people with a similar profile in Google and Meta ad services (see [Chapter 4](#)).

I reviewed the websites of 10 CDP solutions aimed at the gambling industry, selected based on the top 10 recommendations on industry website iGaming Today (2024).¹ The aim of this small data collection was not to systematically evaluate these businesses, but to identify how these solutions were sold to operators and what kind of possibilities they offered. Overall, eight of the top CDP solutions were gambling-specific, while two catered to any industry, including gambling. I use pseudonyms to refer to individual companies, as none of the practices are company-specific but a part of a broader infrastructure of data-driven operations that take place regardless of brands.

CDP solutions were advertised on webpages as a means for gambling operators to maximise revenue, conquer new markets, improve segmentation, hyper-personalise promotions, and maximise customer retention. Many software solutions offered a suite of different interrelated services and products for managing the online gambling business, of which CDP was one. The most common other services provided by the solutions were customer relationship management (CRM: e.g., automated marketing, VIP services, see [Chapter 4](#)), player account management (PAM: Customer profiles on each user, used to monitor and curate gambling consumption across different brands and channels), reporting and analytics services (including segmenting, churn prediction, A/B testing), risk and anti-fraud services, KYC compliance services, payment management, affiliate management, and central management of 'responsible gambling' tools like limit-setting. One solution offered a data-driven risk detection solution for signs of problem gambling.

Cutting across available services, CDP solutions were described to allow detailed segmentation and personalisation. One page advertised how its AI-driven CRM system can react instantly when a user is about to leave the page. 'If a bettor loses more than three times in a row, the system triggers an automated bonus to keep them in the game' (Supplier-A). The system was further described to prevent 'bonus waste' as it only delivers bonuses when they are truly needed, not when customers would keep gambling anyway.

Several websites promoted personalised marketing based on attributes related to demographics, geographical location, behaviours and the kind of device used. With the help of 'hyper-personalisation,' marketing emails and messages can consist of over a thousand alternatives that are delivered based on what is most likely to work with a specific individual. In some cases, DMP providers promised to use targeted marketed strategies to enhance cross-selling from sports betting to casino products. Profiling sports betting customers based on what keeps them engaged in betting, helps companies target these same people with similar strategies to try casino products.

Many software developers provided their own casino products, sports betting products and platform services. Several also proposed services that aimed at further 'gamifying' gambling for customers (see also [Chapter 3](#)). Gamification consisted of elements like tailored missions, leaderboards or mystery parcels that customers could receive if they gambled enough. One software

provider described how their gamified elements can help ‘[d]esign personalised missions that encourage specific player behaviours, such as completing spins or trying new games. Reward players with points, free spins, or bonuses to enhance engagement and retention.’ (Supplier-B).

In one case, the software provider even introduced gamified elements to its B2B operations with the gambling company. Gambling companies could earn rewards for achievements like financial performance, partnership tenure, and payments. In the world of online commerce, gamification is used as an additional incentive for customers – gambling is boosted with additional gamification, and even gambling providers are lured as B2B customers with additional gamification. As also argued by [Zuboff \(2019\)](#), gamification is a form of behavioural engineering that can be instrumentalised to change and modify behaviours towards objectives that are in the commercial interests of online industries, regardless of whether they target consumers or other businesses.

Algorithms that protect?

The vast amount of data collected by gambling companies, alongside advanced data analytics, have great potential to be used for detecting signs of harm and problems. A body of literature has investigated how data science and machine learning can be used to detect individuals who show signs of problem gambling. Some review studies have also analysed these models and their effectiveness or usability ([Ghaharian et al., 2023](#); [Marionneau et al., 2025](#)). AI algorithms are a kind of double-edged sword, because the same data-driven practices can be used to increase and intensify sales, but also to identify signs of harm in real-time to deliver personalised interventions to enhance protections (also [Ghaharian et al., 2024](#)).

In our recent review ([Marionneau et al., 2025](#)), we found that although data-driven models to identify harm do hold some promise, they are unlikely to reliably detect, let alone predict gambling harms. We found that industry involvement is prevalent in the development of harm detection algorithms as well as in funding research on them. We also found that there are still many questions that need to be solved before harm detection algorithms could be reliably counted on. Notably, there is no consensus on what constitutes a good marker of harm, what kind of thresholds should be used, and how results can be assessed and evaluated. For example, previous research ([Murch et al., 2025a](#)) has shown that different markers may be risk factors for some age and gender groups, but not others. This means that ‘one size fits all’ models will not be able to capture this variance. People who gamble, or people who are harmed by gambling, are also rarely asked to contribute to setting the standard for fairness in model development ([Murch et al., 2025b](#)).

Industry-developed harm detection algorithms are difficult to evaluate because there is very little publicly available information about how they work.

In our review study (Marionneau et al., 2025), we found that most publicly available information about industry-developed or commercial harm detection models contained generic and promotional descriptions, and little information about methodological choices. Algorithms, like any commercial products, are protected under the shield of proprietary information. However, this also means that they cannot be independently evaluated or tested for issues such as bias or inaccuracies. Mazzucato et al. (2022) have noted that the opacity of AI-based systems is commonplace in technology. Lack of openness makes it difficult to evaluate technical and normative aspects, including robustness, privacy protections and potential biases. For example, in many cases outside of the gambling field, algorithms that were designed to promote equality have actually contributed to increased stigma and institutionalisation of racism (Oldfield, 2024). In the gambling field, algorithms may similarly have potential issues that cannot be identified unless they are openly evaluated.

In most cases, the interventions that ensue from detected signs relate to behavioural feedback and, in some cases, contacting the customer. However, in comparison to the detailed potential of CDPs and solutions, with immediate actions and the ability to project behaviours in the future, harm detection algorithms appear underused and less developed, at least based on available information.

Research also shows that harm detection models are likely to underperform. Only a small number of individuals exceed risk thresholds, suggesting that thresholds are likely to be unnecessarily high (McAuliffe et al., 2022). A Swedish interview study with individuals who have experience of gambling problems found that few were contacted by companies despite clear signs of excessive gambling (Samuelsson & Cisneros Örnberg, 2022). A Dutch mystery shopping study found that only a minority of operators referred a person to help services when they asked for help. Most investigated operators (73%) referred the help-seeking person to bonus offers, instead (Blom et al., 2024). Regulatory interventions and enforcement are needed to set guidelines and standards for how harm detection should work. Regulations and regulatory potential around automated duty of care interventions are discussed further in Chapter 6.

The power of data

This chapter has outlined how the theory of surveillance capitalism can be applied to and expanded with the example of gambling. Scholarship on surveillance capitalism has centred mostly around so-called Tech Giants like Google and Meta. But the same practices apply to the gambling industry. The gambling industry collects vast amounts of data from users, combines these data points with other data from third parties, and uses them to produce detailed profiles of each customer. Data-driven profiling can reveal almost anything

about us – including solvency, personality traits and vulnerabilities. Access to granular data give corporation significant power to target promotions and offers in ways that are precise, timed, and highly personalised. Data can also be an asset that can be traded and sold with other third parties within the broader gambling ecosystem.

Surveillance capitalism has generated a situation where tech companies hold significant and accumulating power over individuals and societies (Zuboff, 2019). Gilles Deleuze (1990) argued already in 1990 that we live in societies of control where power is exercised through continuous, flexible, and subtle mechanisms that are ingrained in daily life. Control mechanisms operate through data and monitoring that take place via devices and individual actions. For Deleuze, individuals in control societies become ‘dividuals’ – divided into datapoints, markets and samples. It is quite astonishing that corporations have been able to develop a data-driven market of these proportions. In the words of Pesce (2023), ‘Throughout the world, vast warehouses, filled with racks of equipment, burning through gigawatts of electricity – all for no more than to offer up a slightly cheaper hotel room.’

How have online companies gotten away with this? Zuboff (2019) argues that surveillance technologies have become so prevalent in online environments that we fail to notice them, we fail to see that they are not inevitable, and we may even believe that we have no other options than to consent to being surveyed. As Zuboff (2019) argues, we have been taught to believe that it is wrong to impede technological progress. Criticism of technology-enabled practices is too easily taken as a criticism of the technology. At the same time, it is very difficult to exist in modern society without using online tools and accepting their TOS. The problem is not only that surveillance technologies control us, but also that companies employing these technologies are not open about it, do not take responsibility, and instead try to fend off regulations around online platforms (also Zuboff, 2019). Surveillance technologies have been largely unregulated and continue to not be regulated in large parts of the world, particularly outside Europe.

The next chapter turns to the regulation of the online world. Many online practices are deeply harmful and concerning, but effective regulations exist. When consistently implemented and enforced, regulatory controls can reduce harmful industry practices and harms to individual. Even the same company may behave differently depending on local regulations. The main regulatory challenges are to find ways to control the full gambling market, including off-shore offers, and to level existing asymmetries generated by data access and data ownership. Until then, those who hold the data, hold the power.

Note

- 1 Included CDP solutions were: Gr8 Tech, Optimove, Smartico, Zoho, Pragmatic Solutions, Playtech, Soft2Bet, SkillOnNet, BetConstruct, Altenar.

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Regulation in the Online World

On regulation

This book has thus far focused on industry practices. Intensive products and absorbing environments, profiling and targeted marketing, together with widespread networks of interest and a rapid industry growth, generate significant risks of harm to individuals and societies. To mitigate, prevent and reduce these risks, governments need effective regulations and control around how gambling is provided and under what conditions. In the online world, governments also need to juggle domestic interests with international pressures from an expanding industry. Online gambling has intensified many harmful industry practices but also posed new challenges for regulation ([Hörnle, 2021](#)). In the absence of effective international standards and control, governments are faced with increased regulatory needs and problems.

The Lancet Public Health Commission on Gambling ([Wardle et al., 2024](#)) found that governments balance at least six different types of regulatory priorities in the gambling field: Protecting the health and welfare of citizens, preventing crime, upholding integrity and transparency, raising state revenue and ensuring data security. Governments need to balance regulations across these often-contradicting aims and priorities. Regulatory problems are intertwined and interconnected, making it impossible to address them in isolation ([Yasuda, 2016](#)). For example, effective protection of public health reduces profits to those with a financial interest in gambling, including governments ([Orford, 2010](#); [Sulkunen et al., 2019](#)). Gambling-related crime and unlicensed forms of gambling are prevalent globally, undermining the efficiency of other regulatory actions.

Faced with this regulatory overload, usually coupled with poor resourcing and intense lobbying, governments often rely on increased outsourcing of regulation to self-regulatory functions. As a form of co-regulation, governments can adopt a risk-based regulatory model to help prioritise different regulatory tasks. To a different degree, self-regulation and risk-based regulation (RBR) are both based on an ideology emphasising flexible and industry-friendly solutions ([Lodge, 2011](#); [Sparrow, 2020](#)). In the gambling field, both regulatory approaches have become common, in many cases replacing strong state control.

Whereas traditional rules-based regulation is grounded on prescriptive and binding rules that apply to all actors equally, risk-based and self-regulatory models are more in line with goals-based approaches where companies play a role in devising strategies to achieve regulatory objectives (Decker, 2018). The regulatory model defines responsibilities across actors. In rules-based models, the responsibility is with the regulator. RBR is a form of co-regulation, consisting of joint responsibility between regulator and industry. Self-regulation shifts most responsibility for regulatory compliance to the industry.

Table 6.1 presents a typology of regulatory approaches to gambling, with focus on self-regulation, RBR and rules-based regulation. Although regulatory theory also identifies other models (Sparrow, 2020), these three forms have been most discussed in the gambling field. The models are ideal types. In reality, regulatory approaches coincide and overlap, and jurisdictions can have different models for different regulatory needs.

Industry self-regulation

In regulatory theory, self-regulation, or decentred regulation, is often contrasted with state-centred regulation (Black, 2001). Self-regulatory models are not formally sanctioned, making them non-binding. Often, reliance on self-regulation within a sector has been taken as a sign that governments do not prioritise the issue (Black, 2001). Self-regulatory approaches tend to promote industry-friendly solutions to problems that the industry has first created. Industry codes of conduct focus on regulations that are advantageous to industry interests, including voluntary action.

Gambling has a long history of self-regulation and industry-developed standards, aligning with the ‘responsible gambling’ (RG) framework (Casse, 2024; Rintoul et al., 2017). RG represents an understanding according to which the responsibility to prevent gambling harm lies with responsible

Table 6.1 Typology of regulatory approaches to gambling

	<i>Self-regulation</i>	<i>Risk-based regulation</i>	<i>Rules-based regulation</i>
Legal basis	Industry codes and practice	Licensing objectives	Laws and regulations
Legal validity	Voluntary, trade-group specific	Binding but varying implementation	Binding and universal
Resource needs	No oversight or resource needs	Resources directed to risk identification and monitoring	Resource-intensive
Examples in gambling regulation	Industry codes on responsible gambling, standardisation of markers of harm	Duty of care audits, AML audits	Tax law, Criminal law

individuals, not with products or the industry. RG posits that it is possible to have widespread availability of commercial gambling, so long as individuals are equipped with enough information to make rational and informed decisions about their gambling. The view is best described in the so-called Reno Model, which was formulated in collaboration with industry trade organisations (see [Casey, 2024](#)).

Many self-regulatory codes and standards have also become established and made their way into official regulatory recommendations, adopted officially by jurisdictions legalising gambling. As argued by [Casey \(2024\)](#), it has been in the interest of the industry to move first and to establish a benchmark for further regulator developments. RG policies became widespread in the casino industry during the latter half of the 1990s and have since become embedded in regulatory frameworks ([Casey, 2024](#); [Hing, 2010](#)).

Examples of associations following the RG framework include the American Gaming Association (AGA) which was established in 1995 to promote self-regulatory approaches and ward off government regulation ([Casey, 2024](#)). In the UK, the Interactive Gaming, Gambling and Betting Association (IGGBA) developed its own responsible gambling code in 2003, hoping that it would serve as a template for future government policies ([Casey, 2024](#)). Elsewhere in Europe, the European Betting Association – later European Gaming and Betting Association (EGBA) – was established in 2004 to represent European gambling operators with the aim of liberalising EU gambling markets ([Casey, 2024](#)). In 2008, EGBA, together with other industry associations eCOGRA (eCommerce and Online Gaming Regulation and Assurance), RGA (Remote Gambling Association) and IGC (Interactive Gambling Council) developed an international code of conduct to set industry standards for online operators. This industry code was later formally adopted as the European standard for ‘Responsible Remote Gambling Measures’ in the 2011 European Committee for Standardisation Workshop Agreement ([CEN, 2011](#)). The intent was to guide national authorities in how to regulate online gambling ([Casey, 2024](#); [CEN, 2011](#); [Williams et al., 2012](#)).

The industry code of conduct was adopted as a European standard by the European Committee for Standardisation (Comité Européen de Normalisation, CEN) ([CEN, 2011](#)). The document has a strong focus on RG and measures that promote individual responsibility, such as providing information on responsible gambling and helpline numbers, enabling voluntary deposit limits, offering operator-based cooling-off and self-exclusion periods and not providing customers credit unless this is permitted by the regulator and ‘adequate measures have been taken to establish the financial standing of the customer’ ([CEN, 2011](#)).

Industry codes are still common today, in the gambling field and other fields adjacent to it. For example, the CEN is currently in the process of developing a standard on markers of harm for duty of care purposes in online gambling (see [Chapter 5](#)), in collaboration with EGBA ([Focus Gaming News, 2025a](#)).

In the case of new technologies more broadly, lack of regulatory frameworks has led many AI companies to self-regulate and establish their own ethical codes (Olson, 2024). In the gambling field, industry trade group International Gaming Standards Association is also developing a best practices framework for AI practices to ‘help regulators understand the technology and its uses within the sector’ (Reynolds, 2025). The same association is also developing best practice guidelines for ‘responsible gambling’ and other online gambling policy issues, as well as technical standards (IGSA, 2025a; 2025b).

The self-regulatory model is not exclusive to countries with a license-based system. Monopolies can have significant power in societies (see Adams, 2007). In some cases, monopolies have gained so much influence that they effectively function as a state within the state. For example, in some African countries or in the Philippines, gambling monopolies are their own regulator (Sichali et al., 2023, Chapter 1). Some European gambling monopolies have been described to exert such strong influence that they can change the direction of policy (Marionneau et al., 2025a).

Risk-based regulation

In contrast to industry self-regulation, RBR is a collaborative model between government and industry. RBR is built on instruments like licensing, inspections and compliance requirements, certification standards and company liability as a deterrent against malpractice. In addition, RBR collaborates with and often draws from self-regulatory instruments, such as standards and certification from third-party organisations (Molfetas & Grava, 2020).

RBR has been endorsed in the UK and many other European countries (Black, 2005; Black & Baldwin, 2010; Molfetas & Grava, 2020). RBR is also endorsed by international organisations like the World Bank, according to which RBR is a good way to protect public health and safety while ‘avoiding unnecessary burdens on businesses’ and making ‘better use of scarce government resources’ (Molfetas & Grava, 2020, p. 3). Risk-based regulation focuses on identifying risks instead of enforcing rules. When considering risks, the regulator needs to balance the level of risks it is willing to tolerate, and the kind of assessment it is willing to undergo (e.g., risk scores, risk categories) (Black & Baldwin, 2010). The idea comes close to what Beck (1992) describes as the ‘risk society’: A society in which the focus is on managing risks in an environment of increased uncertainty and technological progress.

In the gambling field, authors like Kingma (2004) and Miers (2015) have argued that governments have moved increasingly towards a risk-based regulatory model, with RBR having largely replaced prior rules-based approaches. Under the risk model, gambling is regulated to reduce and manage risks involved in gambling, rather than gambling itself. Regulation appears to be successful if it governs, at least ostensibly, issues such as the prevalence of problem gambling, or the cost-benefit balance (Kingma, 2004).

Similar to self-regulatory approaches, risk-based gambling regulation is aligned with the 'responsible gambling' paradigm: Individuals who gamble, are seen as consumers who should be free to take risks, but who should also take responsibility for their decisions (Miers, 2015). As in other fields, RBR of gambling takes place in active collaboration and dialogue with industry. According to Miers (2015), in the United Kingdom, the Gambling Commission has considered operators to be best placed to identify and mitigate risks to licensing objectives. The role of regulators in this configuration is to audit for compliance and issue sanctions in cases where operators do not correct their actions (Miers, 2015).

RBR requires choosing and forecasting which risks need to be prioritised (also Black & Baldwin, 2010, Black 2001). Commercial gambling, like any regulatory issue, involves several risks to society. In the gambling field, risks range from health risks to the risk of crime, risk of underage participation, risk of revenue loss and security-related risks (cf. Fisher et al., 2025; Sparrow et al., 2009; Wardle et al., 2024). The Lancet Public Health Commission on Gambling (Wardle et al., 2024) noted that governments tend to prioritise certain risks, such as crime and taxation, over others, such as health-related risks. Prioritisations can be shaped by stakeholder influence and an attempt at consensus with the industry (also Sparrow et al., 2009).

New technologies bring new risks onto the regulatory agenda, challenging the risk-based model. The online world has created a space that was outside and beyond any national regulatory realm. Governments have been slow and reluctant to regulate the online space, and regulatory approaches have been piecemeal (Black & Murray, 2019). According to Black and Murray (2019), established risk-based frameworks have not enabled governments to look at the bigger picture or the new economic system and its inherent risks, leaving increased space for self-regulation. The same can be seen in the gambling field, specifically. Many regulators have not been adequately resourced to effectively regulate online gambling environments, nor to keep up to pace with industry developments (Fisher et al., 2025).

Rules-based regulation

Governmentally led, rules-based regulatory approaches involve prescriptive requirements that leave little room for interpretation. Evidence suggests that while rules-based regulation can be costly, it is also the most effective way to ensure that companies act in accordance with rules (Yasuda, 2016). A rules-based legislative underpinning can require companies to adhere to statutory duties with a real risk of consequences in cases of non-compliance. In addition, a rules-based approach can focus on broader population-level measures that cannot be implemented by industry actors, alone. Rules-based requires resourcing, sensitivity to sectoral specificities, and political alignment. For example, France and Germany have been much less receptive to risk-based

regulatory models than the UK, instead maintaining a more rules-based regulatory approach (Yasuda, 2016).

Within the gambling sector, rules-based regulations are common in fields such as tax law and criminal law, but less so in other priorities (Wardle et al., 2024). Before the commercialisation and expansion of gambling since the 1980s, other regulatory priorities were also commonly addressed with a rules-based approach. According to Kingma (2004), under a rules-based framework, or alibi model, gambling was viewed as a controversial sector that needed to be restricted and controlled centrally. The rules-based model therefore comes close to the state-centred principles of the welfare state (also Egerer et al., 2018; Kingma, 2004).

Rules-based approaches became less dominant during the 1980s and early 1990s as gambling offers became increasingly risky and commercial. The rise of EGM gambling in the 1980s, followed by online gambling in the 1990s and early 2000s, represented an expansive business model that was no longer compatible with strong state intervention and market restrictions (Kingma, 2004). In the UK, the expansion of gambling was accompanied by an increasingly neo-liberal ideology (Miers, 2015). Today, rules-based regulations have been largely replaced by self-regulatory or risk-based models, particularly in the realm of harm prevention (Wardle et al., 2024). While rules-based models can be rigid and less accommodative (Miers, 2015), revisiting rules-based principles might be worthwhile to improve control and protections, particularly at the population level.

Regulation of licensed online offers and practices

The focus of this part is on effective regulations to reduce or prevent (the risk of) gambling harms (e.g., health harms, financial harms, relationship harms). However, many approaches taken within other regulatory realms overlap with harm mitigation. For example, effective data protection regulations can also reduce exploitative data-driven practices that can cause harm to health and wellbeing. Similarly, effective controls on source of funds for AML purposes can also contribute to reducing over-expenditure from a harm reduction perspective.

Harm prevention and harm reduction take place on a spectrum. Both approaches aim at improving overall health, but from different perspectives. Harm prevention focuses on universal and primary measures with the aim of preventing the initial uptake of a harmful activity, such as gambling. Harm reduction is more targeted, taking place at the secondary and tertiary levels, with the aim to limit further escalations. Effective regulatory systems require measures at all different levels: Universal measures targeted at populations, selective measures targeted at those who gamble, and indicated measures targeted at those who are already experiencing harms and problems due to gambling (Blank et al., 2021; Marionneau et al., 2023; Wardle et al., 2024).

Table 6.2 Effective regulatory measures to prevent and reduce gambling harms

<i>Universal measures</i>	<i>Selective measures</i>	<i>Indicated measures</i>
Availability reductions	Binding mandatory limits	Self-exclusion systems
Accessibility reductions	Dynamic warning messages	Provision of low-threshold support
Visibility reductions (marketing)	Personalised feedback	Provision of effective formal treatment options
Limits on harmful products and harmful product characteristics	Automated interventions (low-threshold levels)	Interventions (higher-threshold levels)

Note: Summarised based on findings reported in [Wardle et al. \(2024\)](#).

The Lancet Public Health Commission on Gambling ([Wardle et al., 2024](#)) summarised available evidence on harm prevention and reduction measures that have been supported by scientific evidence. Measures with the strongest evidence-based support are presented in [Table 6.2](#). At the universal level, these regulations aim to reduce the availability, accessibility and visibility of gambling and overall harmful practices in product design. Selective measures are implemented within the gambling space, and include features such as binding limit-setting, warnings and feedback, as well as automated interventions at low-threshold levels. Indicated measures include self-exclusion systems, treatment and support as well as interventions at higher threshold levels. Importantly, none of these measures are stand-alone instrument. Regulators need to implement a wide portfolio of different tools to effectively address gambling harms.

There is increasing research supporting the efficacy of universal measures. Research has shown that availability and accessibility restrictions are an effective way to reduce total consumption, particularly in land-based gambling ([Sulkunen et al., 2019](#)). Specific product and design-related factors are known to cause harm (see also [Chapter 3](#)). Regulating these characteristics is likely to mitigate negative effects, although policy research has been scarce ([Delfabro et al., 2021](#); [Sulkunen, 2019](#)).

Advertising and marketing restrictions can reduce visibility and uptake of gambling ([McGrane et al., 2023](#)). For example, Spain limited advertising on television, radio and streaming services to a strict watershed and prohibited influencer marketing, bonus promotions and sponsorship in 2021. Policy evaluations showed that these restrictions led to statistically significant decreases in the number of new accounts and total money bet on gambling ([Aonso-Diego et al., 2025](#); [Garcia-Perez et al., 2024](#)). Belgium implemented a gambling advertising ban in 2023. As a result, advertising became less visible, although operators continue to exploit existing loopholes ([Boone et al., 2025](#); [Constadt & De Jans, 2024](#)).

Selective and indicated measures are effective when they are available and binding. For example, several studies show that binding and capped limit-setting systems can be effective in reducing overall gambling consumption and harm (Blank et al., 2021; Marionneau et al., 2024; Selin et al., 2025; Velasco et al., 2021). Automated warnings, feedback and interventions can be a part of a broader duty of care mandate on operators. The effectiveness of these measures depends on implementation and thresholds (see Chapter 5; Marionneau et al., 2025b). Self-exclusions, treatment and support can be effective for those who access them, at least in the short term and when well-enforced (Blank et al., 2021). However, these measures cannot prevent or even reduce gambling harms at a population level. As any measure, they are complementary to a wider set of policies.

In terms of regulatory trends and directions, certain practices are becoming more common. Overall, the trend across Western Europe appears to be toward stricter gambling control and higher taxes on gambling companies (also Bjoerck, 2025). In one recent study (Marionneau et al., 2025c), we compared gambling and alcohol regulations across the Nordic countries (Denmark, Finland, Iceland, Norway, Sweden). Traditionally, alcohol control had been stricter across most of the region in comparison to gambling control. However, in recent years, the trend in alcohol regulations was towards a more market-oriented direction, whereas in gambling, the trend in most countries was towards increased restrictions. Examples of tighter restrictions in gambling included tax hikes, tighter and expanded limit-setting systems and new restrictions on marketing.

Elsewhere in Europe, countries like the Netherlands, Belgium and Spain have significantly restricted their gambling marketing regulations in recent years (Marionneau et al., forthcoming), whereas countries without self-exclusion systems, are moving towards implementing them (Kankainen et al., 2026).

Geographical differences

Regulatory approaches to gambling vary significantly across the globe. Vixio Gambling Compliance has a benchmarking resource with a comparative overview of some harm reduction regulations for online gambling in different global regions (Vixio, n.d.a–d). These data compare jurisdictions based on whether they have provisions for: Financial limits, time limits, advertising restrictions, national self-exclusion system, self-exclusion systems more broadly, reality checks, timeouts, ‘responsibility’ messages, interventions, and staff training. While these 10 variables are reflective of only a small proportion of mainly selective and indicative measures, they allow a rough comparison of geographical differences in regulatory approaches.

The data show that, overall, countries¹ in South and Central America had an average (median) of eight different measures per jurisdiction. In Western and

Central Europe as well as North America, countries or jurisdictions had an average of seven measures per jurisdiction. In Eastern Europe, countries had an average of five measures, and in the African and Middle Eastern context, only four measures. There was also significant variation within geographical areas, with some countries across all regions having provisions for all measures, and others having measures for only one or two. The most commonly implemented measures were any forms of advertising restrictions, ‘responsibility’ messaging and self-exclusion policies.

This comparison does not permit analysing implementation details, stringency or even whether regulations are rules-based or self-regulatory. For example, reporting from North America shows that much of the regulatory effort within this context has taken place via self-regulatory models. Only recently, an increased backlash against aggressive industry expansion in the United States has resulted in plans and bills to improve statutory regulations around issues such as financial limits and industry practices (Bergin, 2024).

Implementation

Implementation is crucial to effectiveness. The same regulatory measure can look very different depending on implementation details. In some recent studies, I have compared gambling regulations and regulatory approaches in Western European countries. These studies have looked at policies and regulations at different levels, focusing on limit-setting, advertising regulations, self-exclusions and taxation (Kankainen et al., 2026; Marionneau et al., 2025d,e; Marionneau et al., forthcoming). Collectively, these studies have shown that there is significant contextual variation in how ostensibly similar policies are implemented, which in turn is likely to impact their effectiveness.

For example, almost all European countries have some form of limit-setting for online gambling, but limits are mandatory in less than a half of countries and capped in even fewer (23% of countries had caps on limits). Germany is the only country in Europe with a cross-operator limit-setting scheme, although Spain is preparing to implement a similar system (Marionneau et al., 2025e). Similarly, while 80% of European countries have a self-exclusion registry, minimum and maximum durations of exclusion periods vary, and few jurisdictions provide the possibility for a permanent exclusion (Kankainen et al., 2026).

In one study, we looked at regulations on gambling advertising. All included European countries regulated advertising. However, aside from an almost universal aim to protect minors from exposure to gambling adverts, implementation details varied significantly. Some countries focused more strongly on restricting the types of content shown in advertising or the types of gambling that can be advertised. Others focused on time or place-related restrictions, such as watersheds (Marionneau et al., forthcoming). In some cases, differences were regional, as countries tend to adopt and model their regulations based on practices found in their closest neighbouring countries.

An investigation conducted by the Dutch gambling authority [Kansspelautoriteit \(2025\)](#) found that, in some cases, implementation can also vary across operators within the same country, often due to negligence. Using a mystery shopping approach, the research showed that while some providers make limit-setting and self-exclusion tools easy to find, others make them more difficult to access. Duty of care mandates were also inconsistently applied. Some operators intervened, when necessary, but others failed to act even when signs of problematic gambling were evident and even encouraged continued gambling (see also [Chapter 5](#)).

Emerging regulations on data use

Some established regulatory tools, such as exclusion systems, limit-setting and interventions are comparatively easy to adapt to online environments ([Marionneau et al., 2025a](#)). However, online gambling is also connected to new regulatory challenges that require new controls. Many of these challenges relate to data-driven practices such as targeted marketing, dark patterns and nudges and duty of care mandates ([Blom et al., 2024](#); [Marionneau et al., 2025a](#)). The following sections look at current challenges in online-specific regulation, with focus on gaps and emerging regulations related to data-driven online practices that have been identified in prior chapters. Surveillance capitalist practices and data-driven business models of online gambling operators have largely escaped regulatory oversight, but some controls have started to emerge, particularly in the EU context.

Products and design

Gambling products are constantly developing. New gambling products can be created almost instantly with the help of AI. Although product integrity is tested by third-party test labs, this oversight does not typically focus on addictive characteristics (see [Chapter 3](#)). An additional regulatory challenge relates to the need to balance between regulations on individual products, product characteristics, and broader design features. Some countries prohibit certain gambling formats that are considered particularly harmful. For example, Australia and France prohibit online casino gambling (with the exception of poker in France) ([Regulus Partners, 2024](#)).

Regulations on different product characteristics include at least five categories ([Väkeväinen & Marionneau, 2025](#)):

- 1 Regulations on payments and bets (maximum bets, restricting payment options).
- 2 Regulations on gameplay (prohibitions on near misses, autoplay, slam stops).
- 3 Regulations on winnings (restrictions on return to player rates, bonus ladders).

- 4 Regulations on gambling rounds (restrictions on speed, intervals, simultaneous gambling).
- 5 Regulations on gambling environment design (restrictions on graphics, dark patterns, nudges).

However, most regulations are product group specific, and the majority focused on land-based EGMs. Few regulations address harmful nudges and dark patterns more broadly (Väkeväinen & Marionneau, 2025). Product-specific regulations can limit the applicability of controls across the full product range. Features found in individual products, like online slots, may also be prevalent in other similar fast-paced categories like live betting, crash games, or online scratch cards. Authorities in the Netherlands and the United Kingdom (Blom et al., 2024; ICO, 2023) now recommend that regulations should address online design more broadly.

Harmful designs and dark patterns are commonly found in online environments. The European Union has addressed this field (spanning beyond gambling) with the Digital Services Act (DSA). The DSA entered into force in 2022 and was mostly applied in 2024. The Act aims to create a safer digital environment by prohibiting online platforms from using deceptive or manipulative interfaces that distort or impair users' ability to make free and informed decisions (Article 25 of the DSA). In addition, the DSA requires major online platforms and search engines to moderate content, combat misinformation and protect user privacy. Although the DSA does not address gambling directly, it has implications on how online gambling can be advertised and what kind of content can be shown on gambling platforms within the EU (Verbeke, 2024).

The currently prepared EU Digital Fairness Act is set to further expand regulations on addictive design elements, including 'gambling-like features' in digital products. The Act will also introduce further regulations on deceptive practices and dark patterns. Gambling is frequently referenced in the preparatory document, and industry commentators are expecting gambling to be strongly within the scope of the Act (Ewens, 2025a).

In the United States, the Deceptive Experiences to Online Users Reduction Act (DETOUR Act) was proposed in 2019 to prevent online operators from using deceptive and manipulative practices and to ban dark patterns. However, the bill or its later versions have not been adopted into law (United States Congress, n.d.).

Profiling and algorithms

Access to data gives companies a competitive advantage within the market. Preventing such unfair competition is amongst the key aims of the EU DSA.

Access to data also gives companies significant power over their customers. Broader data protection regulations aim to ensure individuals' right to their

own data and to enforce against organisations that do not comply with data protection principles. The EU has regulated some of these surveillance and data collection practices in its General Data Protection Regulation (GDPR) that came into effect in 2018. The main provisions of the GDPR relate to how data are handled, processed and stored. The GDPR also enhances individual rights, including giving EU citizens the right to access, erase and restrict their data, and preventing practices related to automated decision-making and profiling. The United Kingdom has similar provisions in the UK GDPR. The EU Data Protection Board monitors and enforces the application of the GDPR and makes decisions on data protection dispute cases ([EDBP, n.d.](#)).

In addition, new AI legislation is coming into effect in the EU. The AI Act further enhances data protection, including prohibitions on different AI-driven practices. Many of these prohibitions have direct implications on the gambling industry. Regulations include prohibitions on using AI to develop deceptive and manipulative techniques (e.g., targeted marketing, personalised ‘customer journeys’), a ban on ‘social scoring’ (e.g., classifying individuals based on behaviours and social traits, also relevant to profiling), and a mandate to let users know if they are talking to an AI chatbot ([Ewens, 2025b](#)).

In the US, a proposed law called the Supporting Affordability and Safety with Every Bet Act (SAFE Bet Act) attempts to create federal oversight for mobile sports betting – including prohibitions on tracking user data and offering personalised promotions ([Birnbaum, 2025](#)). However, this legislation has not yet come to force.

Advertising

A review of gambling advertising regulations in Europe ([Marionneau et al., forthcoming](#)) showed that while advertising is regulated at different levels, on-line-specific regulations are only developing. 39% of included countries had regulations on opt-ins or opt-outs from direct marketing communications. 18% of countries regulated social media and influencer content (5/28) and only one country (Belgium) prohibited personalisation of gambling marketing messages based on behavioural data. Cross-selling was prohibited in the Netherlands and Germany. The British Gambling Commission also recently announced a ban on cross-selling due to increased risk of harm ([Macedo, 2025](#)).

The main regulatory gaps in online gambling advertising relate to social media/targeted advertising and affiliate marketing. Personalised and dynamic advertising is difficult to regulate, as online advertising experiences are different for each person. Each advert can have hundreds of different versions (see [Chapter 4](#)). [Parker et al. \(2024\)](#) have called online advertisements ‘dark’ because they are so personalised that adverts become hidden from public view and scrutiny. The World Health Organization ([WHO, 2024](#)) recommends prohibitions on gambling advertising. However, if this is not politically

feasible, regulators need to find ways to control and understand the ‘dark’ side of advertising.

Effective oversight of targeted advertising would require bringing tech platforms and their ad exchanges under stronger rules-based regulatory control. Online platforms such as Meta and Google have internal (self-regulatory) policies seeking to ensure that gambling advertisements comply with local laws. Before their release, adverts are subjected to an internal control, during which advertisers are expected to prove that adverts comply with local laws (Hörnle et al., 2019). For example, in Italy, a ban on gambling advertisement in 2019 was also adopted by tech giants in their updated advertising policies (Tani, 2018). YouTube is also working to prohibit gambling-related content that is not approved by Google, with the help of AI (Maxwell, 2025). However, a recent investigation (Parker et al., 2024) still found several instances of illegal gambling advertisements on social media platforms. Advertisements may be able to escape regulatory control due to offshore industry tactics, lacking regulatory resources to identify illegal advertisements, and lacking incentive for effective self-regulation at the platform level (Hörnle et al., 2019; Parker et al., 2024).

Oversight of ad exchanges and tech platforms requires public authorities and researchers to gain access to advertisement libraries (Parker et al., 2024). In the EU, the DSA now requires large platforms to keep an advertising library that shows all advertising content and variables that have been used for targeting. These data can be utilised to have a more complete picture of ‘dark’ online gambling advertising. Regulators could further improve enforcement and control over online advertising content regulations with the help of AI. In the alcohol field, the UK Advertising Standards Authority (2025) recently trialled using AI to strengthen alcohol advertising regulations and monitoring. The trial focused on 6,000 alcohol adverts, 96% of which were found to be compliant. Even more importantly, the trial showed the potential of AI to improve control resources, at least in the case of paid advertising.

Content marketing and user-generated content are currently not bound by platform advertising policies. Posts may be taken down, but processes rely on user complaints and the procedure is usually slow (Hörnle et al., 2019). In my own experience, reporting is also made very difficult, requiring the user to give detailed legal references to accompany the request. This additional loophole makes influencer and affiliate advertising a particularly attractive way for gambling operators to advertise outside the scope of regulatory scrutiny. Affiliates and influencers have not been regulated in most countries, although they do require supplier licenses in some jurisdictions (see Chapter 2). Content created by influencers and affiliates can be difficult to recognise as advertising, while the lack of oversight has resulted in irresponsible advertising practices such as targeting vulnerable groups and downplaying risks (Kansspelautoriteit, 2025).

Clear licensing conditions on influencers and affiliates within the advertising ecosystem could improve control. Some countries have also begun to

extend blocking measures and enforcement actions to illegal affiliates (e.g., in Australia, see ACMA, 2023; in Japan, see [Williams, 2025](#)). In the EU, the new Digital Fairness Act will, among other issues, introduce new regulations on digital marketing by influencers. One expected requirement is for influencers to clearly indicate when they are advertising a product ([Ewens, 2025a](#)). The EU Audio-Visual Media Services Directive also regulates product placement in linear and online environments, including a requirement to disclose collaborations.

Duty of care

Consumer data can be used for targeted advertising, but also to detect harmful gambling patterns. Requirements on companies to track and detect harms and intervene in cases of potential problems are generally part of duty of care mandates. Duty of care policies are common in the European market. According to a review by [Meerkerk \(2022\)](#), at least 11 European countries have legal provisions for duty of care practices. In the United States, New Jersey, alongside Colorado and Massachusetts, has recently introduced duty of care provisions and rules ([Kilsby, 2025](#)). Although duty of care policies are increasingly popular, they are often based on broad and vague principles, leaving most implementation details to gambling companies ([Marionneau et al., 2025b](#); see also [Chapter 5](#)).

In some jurisdictions, including France, the United Kingdom and the Netherlands, regulators have issued instructions on the kinds of ‘markers of harm’ that companies should track, and the interventions that are expected. Markers of harm usually include factors such as spending patterns, losses, time spent gambling, accessing and using self-exclusion pages or limit-setting tools, reaching limits or cancelling withdrawals. Interventions include practices such as pop-ups, being contacted by the operator or, in some cases, involuntary exclusions ([Marionneau et al., 2025b](#)). Industry influence has been significant in developing solutions to accomplish these tasks ([Marionneau et al., 2025b](#)).

To further improve duty of care mandates, systems should be based on clear instructions, oversight and monitoring. The Dutch gambling authority ([Kansspelautoriteit, 2025](#)) has also proposed that duty of care should no longer focus on markers of harm, but on markers of risk. According to the regulator, by the time harm is detected, it is already too late. Markers of risk could include variables indicating loss of control and increases in gambling. Markers could also consider provision-side factors, such as operator behaviours and gambling product features. In addition, [Kansspelautoriteit \(2025\)](#) has recommended improved oversight. As duty of care provisions have been largely left to company self-regulation, enforcement has been minimal and only focused on the most extreme cases of neglect. Improved rules-based control could increase operator compliance.

Another challenge in duty of care regulations is the lack of centralisation. As they stand, duty of care practices are company-specific. Yet, many individuals have several gambling accounts. In these situations, company-specific approaches fail to capture harms that occur across different providers. In Britain, the Gambling Commission aimed at developing a more centralised system, but the development was eventually left to industry. The industry solution, GamProtect, does not detect enrolled individuals based on markers of harm or risk. Instead, individuals are signed up if they declare to an operator that they have a health-related concern related to their gambling. The scheme and its industry-led development have been criticised as ineffective (Bedford, 2023; Murch et al., 2026). A centralised and non-industry-controlled duty of care system could involve a regulator-maintained central database where individuals and their risk profiles could be tracked across operators.

Data sharing and ecosystems

Many third-party instances have access to data from gambling operators. Yet, many of these actors are not covered by supplier licensing even in countries where B2B licensing is in place. For instance, major tech platforms, data aggregators or investors are not gambling-specific services and, therefore, not generally covered by supplier licensing. Developing regulatory controls on data sharing within the broader ecosystem would require a wider definition of third parties, covering at least those actors with access to data.

While some countries mandate supplier licensing (see Chapter 2), in many other cases, all third parties function outside of regulatory control. Gray area cases, such as white labels, are regulated as suppliers rather than providers. This is advantageous to white labels since, although they essentially run the gambling operation, regulatory requirements and oversight on suppliers can be less stringent than on operators (Regulus Partners, 2021). In self-regulatory and risk-based models, compliance responsibilities are allocated primarily to operators and license-holders. In practice, outsourced third parties produce the bulk of gambling services and may not always even be aware of all the obligations that fall on them (Regulus Partners, 2021). In some cases, both operators and suppliers use this complex division of labour to dodge blame by claiming they are not responsible for breaches.

Data sharing is governed in the EU and UK by the provisions of the GDPR. The GDPR mandates a lawful basis for data transfers, requires data minimisation, and compels companies to be transparent with their data subjects regarding data sharing. In practice, companies can only share necessary data if they have a valid reason to do so, and if customers are informed about the third parties with whom their data are shared with and the reasons for this sharing. The EU Data Act and Data Governance Act expand on the provisions of the GDPR. These legal texts set further regulations on users' rights to their

own data, and data portability across platforms. In addition, the Acts regulate how third parties process data. These provisions also apply to gambling company data (Repanse, 2025). However, in practice, the main outcome appears to have been that companies draft their privacy policies in line with these requirements (Chapter 5).

Regulation of the offshore industry

Offshore gambling poses numerous challenges for effective gambling regulation. Offshore jurisdictions tend to have weaker regulations regarding consumer protection, data privacy, age verification, and prevention of criminal involvement (e.g., Borch, 2022; Gainsbury et al., 2019; Hörnle et al., 2019). Availability of offshore gambling increases the availability and visibility of gambling in societies. Specifically, offshore websites are also available for individuals who self-exclude or who have reached their gambling limits. In the offshore market, individuals who try to ask for an exclusion, are often allowed to continue gambling or even proposed bonuses (Sveriges Radio, 2025). Due to the borderless availability of offshore gambling, the regulation of this market segment is of global interest, regardless of whether gambling is legal in a jurisdiction or not (also Wardle et al., 2024).

Channelling refers to directing gambling consumption from offshore markets to the licensed market (Borch, 2022). Often, channelling policies are justified in terms of improved control, consumer protection and the need to keep gambling revenues within the jurisdiction. In many cases, channelling has even become a policy objective in itself, and a measure of successful gambling system (Marionneau et al., 2026; see also Chapter 1). For example, in jurisdictions like the Netherlands, Finland, Sweden, Germany and Ontario, the introduction of competitive online markets was justified as a policy measure to improve channelling (Marionneau et al., 2025a).

Policy measures to improve channelling can be divided into two main approaches. The first approach is restrictive, aiming at making offshore gambling less visible or less accessible. The second approach is competitive, aiming at making the regulated markets more attractive to the industry and people who gamble. According to the competitive approach, channelling could be improved by permitting extensive marketing, bonuses and product development while maintaining a low tax burden on gambling operators. The rationale is that if rules and regulations are not overly stringent, operators and their suppliers would choose to obtain a license rather than remaining in the offshore market. In addition, the expectation is that people who gamble would choose the regulated market if it were attractive enough. The competitiveness argument is widely used by the gambling industry.

However, the competitive approach to channelling has notable caveats. First of all, the offshore market is enormous, consisting of thousands of

websites. This means that regardless of how attractive the onshore market is, the bulk of online gambling will always remain on the offshore market. Even the world's largest online market, the United Kingdom, has only around 200 active online licenses at group level ([Regulus Partners, 2024](#)). In most European countries, the number of licensees is counted in the tens. For example, France has 18 online gambling licensees, the Netherlands has 30 licensees, and Denmark has 42 licensees (ANJ, n.d.; [Kansspelautoriteit, n.d.](#); [Spillemyndigheden, n.d.](#)). In the United States, several states place caps on the number of licensees or types of actors that can operate online gambling ([Macintyre, 2025](#)).

Second, a significant part of people who gamble on the offshore market would not move to the onshore market. People gamble with the offshore market for numerous reasons, and only some of these may be interested in or even capable of being 'channelled' back to the licensed market. According to a Swedish regulator survey, 21% of people who gambled offshore had a self-exclusion ([Spelinspektionen, 2025](#)). Some people end up gambling with the offshore market accidentally and some may wish to gamble exclusively offshore for ideological reasons (also [Gambling Commission, 2025](#)).

The third caveat in the competitive approach is that tight regulatory controls and a higher level of consumer protection within the onshore market is also a competitive advantage. Studies show that a significant number of people choose to gamble within the licensed system precisely because they feel it offers better protections. In some cases, individuals also report wanting to support the local economy or designated causes that are funded with gambling proceeds ([Gainsbury et al., 2018](#); [Hagfors et al., 2024](#)).

Fourth and finally, making onshore gambling more attractive tends to increase total consumption which may eventually increase demand for offshore gambling. In most cases, people who gamble offshore, also gamble within the regulated market. The offshore and onshore segments are therefore not mutually exclusive (e.g., [Lahtinen et al., 2025](#)). Evidence from the United Kingdom shows that higher overall gambling involvement is associated with increased likelihood of offshore gambling ([Wardle & Marionneau, 2026](#)). Gambling harm can be created in the onshore market and further exacerbated in the offshore market. Therefore, reducing regulations within the onshore market and generating more harm within the system may ultimately lead to increased offshore gambling.

Due to these caveats and overall lack of research evidence showing that the competitive approach can channel gambling to the regulated market, the focus of this chapter is on restrictive measures aiming at curbing offshore gambling. [Table 6.3](#) summarises existing evidence of restrictive measures that are currently in use across different jurisdictions and increasingly supported by research evidence.

Table 6.3 Regulations on the offshore industry

<i>Blocking measures</i>	<i>Enforcement</i>	<i>Reduced visibility and availability</i>
Payment blocking	Fines for targeting	Collaboration with search engines
Website blocking	Take-down notices	International pressure
AI-driven blocking of mirror sites	B2B licensing	Warning messages
	Fining affiliates and third parties	

Blocking measures

Website blocking refers to preventing access to unauthorised gambling websites via blacklisting, IP blocking, DNS blocking, URL blocking and app blocking. Payment blocking refers to preventing payments to/from gambling websites. Blocking online traffic is common in European countries. In a recent article (Marionneau et al., 2025d), we found that 83% of investigated European countries had provisions for either website blocking or payment blocking, in some cases both. Overall, website blocking was available in 62% of European countries, and payment blocking was available in 69% of countries.

Implementation details of blocking measures vary significantly. In practice, if an internet user attempts to access a blocked website, the internet service provider will either not load the page, or will show a landing page, instead, indicating that the page is blocked. Emerging evidence on the effectiveness of blocking measures shows that efficacy depends largely on the stringency of implementation. For example, effectiveness is improved if regulators frequently update and monitor blocklists with the help of automated tools (Egerer & Marionneau, 2024). Blocking measures are also more effective when landing pages are used as an informational tool (Egerer & Marionneau, 2024). In Sweden the regulator can impose warning messages on landing pages, warning that any winnings from the offshore market are subject to income tax.

The efficiency of website blocking is somewhat undermined by the possibility to use VPNs to access sites. However, blocking can prevent accidental access to offshore sites, effectively protecting most people who gamble while creating friction for the rest (Regulus Partners, 2024).

Website blocking has also been weakened by the prevalence of mirror websites and rotating domains that enable offshore websites to stay open. In Australia, ACMA found that websites that have been blocked attempt to circumvent these blocks by launching mirror websites. However, monitoring by ACMA shows that in approximately half of cases, a blocked operator will withdraw from the Australian market without attempts at circumventing blocks (Parker et al., 2024). Furthermore, with new digital enforcement technologies,

mirror websites can be quickly detected. For example, in Singapore, authorities use AI and machine learning tools to identify and pre-emptively block unauthorised gambling sites, including mirror sites (Shastri, 2025).

Payment blocking can also be effective if it extends to different payment solutions and methods, including bank transfers, credit card payments and payment intermediaries. For example, in Great Britain, the Gambling Commission has entered into a voluntary agreement with Visa, Mastercard and PayPal to block payments to unlicensed operators. Payment blocking systems require systematic implementation to detect workarounds, such as disguising gambling transactions as something else (Regulus Partners, 2024). Enforcement is also key to effectiveness. In Norway, payment blocks are mandated by the regulator, and these have been described as having reduced offshore gambling (Egerer & Marionneau, 2024; Regulus Partners, 2024). While not preventing all payments, payment blocking – similarly to website blocking – still creates friction that can protect those who are not intent on gambling offshore (Regulus Partners, 2024).

Enforcement

Enforcement action includes fines and take-down notices targeted at offshore operators. In addition, enforcement is increasingly targeted at third parties and suppliers of gambling operators.

There is some evidence that action against gambling operators can be effective in reducing offshore offers. In Norway, the Gambling Authority required Norwegian websites to take down illegal gambling adverts on their websites, even in cases where these were delivered via ad exchanges. The approach was reportedly effective, as illegal adverts were no longer shown on Norwegian news websites (Hörnle et al., 2019). In Sweden, the regulator recently banned three companies from targeting the Swedish market. As a consequence, traffic from Sweden to these sites decreased by an average of 40 percent (Ewens, 2025c).

In most cases, enforcement resources are directed towards websites that ‘target’ citizens of a specific jurisdiction. However, what constitutes as targeting has been up to interpretation, and the issue has been debated in courts. For example, in Finland, targeting has been taken to mean advertising gambling offers to Finnish citizens in Finnish media and in Finnish or making a Finnish ID mandatory during registration (Nikkinen et al., 2023). In Sweden, targeting has meant making a website available in Swedish or listing the Swedish Krona as a payment option (Focus Gaming News, 2025b). Narrow definitions of targeting have complicated the possibilities for regulators to enforce against offshore operators. In addition, vague definitions have left loopholes where operators or their affiliates have been able to advertise and make their products available in more subtle ways.

Due to inherent problems in the definition of targeting, Sweden, similar to the Netherlands and the UK is moving to replace the discretionary targeting

criterion with a ‘participant criterion.’ This approach means that online operators are liable to enforcement if they do not actively prevent citizens of these countries from accessing their online offers with geo-blocking (Dayasena-Lowe, 2025). While there is no research evidence yet on the effectiveness of this approach in comparison to the targeting approach, commentators have argued that focusing on availability can be a good way forward to reduce offshore gambling (Dayasena-Lowe, 2025).

In addition to enforcing against offshore providers, regulators are increasingly shifting their focus to the broader ecosystem of suppliers and third parties that aid and abet offshore gambling. A recent report mapping the offshore gambling industry (Menary & Begovic, 2025) concludes that the most effective way to tackle the offshore market is to target the infrastructure that enables these operations. Third-party actors include affiliates and influencers, payment solutions, software providers, marketing services, sports data providers and even the broader corporate structures enabling parent groups to obtain licenses for part of their operations while keeping another arm of operations within the offshore market (see Chapter 2).

Enforcement is often based on supplier licensing conditions. In Sweden, licensed third parties such as Fintech suppliers have already faced penalties for serving offshore gambling operators (Lakew et al., 2024). The GB Gambling Commission recently reviewed software provider Evolution’s B2B license after products were sold to unlicensed operators (Menary & Begovic, 2025). In addition, some third-party enforcement has focused on marketing affiliates and influencers. For example, the Finnish Police Board has issued fines on several influencers that have marketed gambling in violation of the Finnish Lotteries Act (Poliisi, 2025). In Norway, two high-profile gambling streamers recently moved abroad after the Norwegian Gambling Authority threatened them with daily fines for targeting Norwegians with offshore casino promotions (iGaming Today, 2025).

Enforcement against third parties can make illegal gambling business much more difficult to operate (Regulus Partners, 2024). Some recent evidence suggests that the increased focus on targeting suppliers of offshore gambling has also negatively affected market valuations of suppliers that are active in offshore and onshore markets. This subtle sign may be an indication that the strategy is effective. As argued by an industry expert at Vixio, ‘while the prospect of enforcement action is a motivator for change, the prospect of executives missing out on big acquisition payouts is arguably even more likely to move the needle’ (Ewens, 2025d).

Reduced visibility and availability

A third category of restrictive approaches to offshore gambling consists of tools to reduce visibility and availability of offshore offers. The category partially overlaps with blocking and enforcement measures, as the aim of all policies is to make offshore gambling more difficult to access. However, the

availability reductions considered in this section focus on tools that reduce market visibility and access at a more systemic level.

Although the offshore market consists of thousands of websites, the bulk of this ecosystem is controlled by a few key actors and jurisdictions (Shastry, 2025; Chapter 2). There are already examples where international pressure against offshore jurisdictions has led to reduced licensing. For example, the Philippines was an attractive offshore gambling hub until online gambling licensing was banned in 2024 following criminal accusations against operators. In the Isle of Man, the Gambling Supervision Commission revoked several gambling licenses after an UNODC report revealed that organised crime operated white labels on the island (Menary & Begovic, 2025). These examples show that when international pressure is consistently applied, it can lead to some success. However, regulators need to stay vigilant because new offshore hubs often emerge when existing ones tighten their regulations (also Menary & Begovic, 2025).

International collaboration can also extend to increased collaboration with ad exchanges and tech platforms to take down search results and prevent illegal gambling advertisements. The UK Online Safety Act has strengthened regulatory powers over search engines, requiring them to prevent users from seeing illegal content, including unlicensed websites. According to Regulus Partners (2024), the effectiveness of the Online Safety Act could be further improved if offshore gambling were to be classified as ‘priority illegal content,’ giving the regulator even more control. The GB Gambling Commission also collaborates actively with search engines, including Google and Microsoft-powered search engines. Collaboration consists of referring illegal gambling URLs to the search engines to have them removed from search results (Gambling Commission, 2025). It is also important to extend search result removals to affiliates that use aggressive search engine optimisation tactics to rise in search rankings.

Availability could be further limited by developing new international collaboration measures. One such measure could be a European-wide self-exclusion registry that could help prevent access to offshore offers for self-excluded individuals, at least within the internal market (Kankainen et al., 2026). In addition, continued collaboration and exchange between regulators is likely to encourage the development of further approaches or even joint blocking systems.

Finally, reducing availability can also cover forms of social availability. Several countries have run public campaigns to raise consumer awareness of the risks associated with unlicensed gambling. For example, the Belgian Gambling Commission runs regular public health campaigns on gambling, including warning citizens not to gamble with illegal providers (Gaming Commission, n.d.). In Finland, the National Police Board recently ran a campaign to raise awareness of illegal influencer marketing of gambling in Finland (Poliisi, n.d.). In addition, blacklists or whitelists can function

as an informational tool, particularly if easily accessible ([Regulus Partners, 2024](#)).

Regulatory barriers and regulatory resistance

Although effective regulatory measures are increasingly well known, they are not always easy to adopt. Regulators and governments face many obstacles, ranging from lacking political will to ineffective and bureaucratic processes. In addition, industries protect their business interests and resist rules-based regulations via so-called corporate playbook strategies ([Lacy-Nichols et al., 2022](#)). Corporate playbook strategies are common across harmful industries. Tactics include, for example, framing the social debate in a favourable manner, manufacturing public support, influencing the political process, contesting and evading regulations, developing self-regulatory alternatives to rules-based policies, attacking and undermining legitimate science and shaping the evidence base to manufacture doubt ([Lacy-Nichols et al., 2022](#); [Ulucanlar et al., 2023](#); [Wardle et al., 2024](#)).

Corporate playbook strategies build significant barriers to effective regulations in the gambling field ([Marionneau et al., 2025f](#)). For example, framing the public debate on gambling in ways that highlight financial benefits and entertainment value of gambling, while downplaying harms as an issue of the small minority, can direct regulations towards ineffective and industry-friendly solutions (also [Wardle et al., 2024](#)). Online-specific corporate playbook strategies can include shifting focus on the offshore industry or capturing efforts for international collaboration.

The offshore trope

Offshore gambling has become a key rhetorical tool for the licensed industry to resist and contest regulations. Offshore gambling is harmful in itself, but it can also be a threat to effective regulation: Offshore offers are often used as a tool for regulatory resistance within the system ([Wardle et al., 2021](#); [Wyllie & Källman, 2024](#)). As described by a German key informant in our recent study ([Marionneau et al., 2025f](#)):

The gambling providers always maintain that the illegal market is growing and accounts for a large part of the total market, so we want to have more products or more freedom in the design of existing products. We want to set more incentives. We want to have less regulation.

Industry sources and reporting show numerous instances of this type of argumentation. Recently, the secretary general of the Swedish trade group BOS was quoted claiming that ‘the fundamental problem of the Swedish gambling market is that legal licensed gambling is not allowed to be sufficiently

attractive in the eyes of the consumer.’ He further argued that restrictive measures can only support channelling efforts, ‘but they can never replace the importance of first creating a licensed market that is attractive in the eyes of the consumer’ (Ewens, 2025c). Another recent Swedish industry-funded report argued that almost any regulations on the licensed market reduce the channelling rate of the Swedish system, including limitations in the products that can be offered, limitations on bonuses and marketing, duty of care requirements, limitations on offering bets on matches involving young players, AML requirements, and taxation. The evidence supporting these arguments was based on interviews with industry representatives (Ronde & McDonald, 2025).

In the UK, a recent industry-funded report raised alarm about the size of the offshore market in the country. An industry representative argued that re-sourcing the regulator to tackle the offshore market is not enough. Instead, the regulated industry needs less onerous regulations to compete with offshore providers, concluding that ‘proposals by anti-gambling prohibitionists like advertising bans or intrusive, blanket, low level affordability checks will not protect customers, in fact they will give another leg up to unscrupulous black-market operators, the last thing anyone wants.’ (Betting and Gaming Council, 2024). Yet, other UK-based authors have shown that despite the prevalence of the offshore argument, other industry sources suggest that the industry may not even believe that the black market is as significant as it claims (Reith & Wardle, 2022).

The offshore trope is also familiar from other harmful industries, such as the tobacco industry. As an example, the tobacco industry made a recent attempt to influence and infiltrate the democratic process in the EU by manufacturing public support and highlighting the threat of illegal tobacco trade: A public EU consultation into raising cigarette and nicotine taxes was flooded by thousands of industry-engineered ‘citizen responses’ that supported lower taxes for tobacco, using industry talking points like highlighting the threat of illicit markets (O’Neill, 2025).

Cassidy (2016) has previously shown how the gambling industry seeks to shape public perceptions through favourable tropes like problem gambling and responsible gambling. The offshore trope is a continuation to this framing strategy. As also argued by Ulucanlar et al. (2023), framing usually consists of presenting industry as good-intentioned and competent, while scientists and policymakers who advocate for more stringent regulations are portrayed as incompetent. Industry competence becomes further highlighted in highly technical sectors like AI – or online gambling (see Black & Murray, 2019). However, at the same time, the industry also does not have full knowledge of how to solve complex social problems. Many solutions proposed by corporate actors are ineffective, counterproductive and lack scientific backing. In the case of the offshore trope, I am not aware of any non-industry-produced evidence supporting the claim. In contrast, our recent paper looking at the

relationship between channelling rates and taxation levels showed that, contrary to industry claims, there is no evidence of correlation between high taxation and low channelling rates (Marionneau et al., 2025d).

International collaboration and international influence

Increased international collaboration is often recommended as a solution to improved regulation. International collaboration can improve regulations in many respects, particularly in an industry that is global and borderless. Collaboration is particularly urgently needed to develop responses to new data and AI-driven challenges. However, international collaboration can face barriers and even risks if it is guided by diverging agendas or becomes captured by industry interests as in the case of many industry-driven standardisation and best practice initiatives (see above). International collaboration can also be hampered by diverging political objectives of countries. Notably, EU-level collaboration has been weakened by diverging interests between Malta (point of sales jurisdictions) and countries targeted by Maltese offshore providers (Thompson et al., forthcoming).

International collaboration around online gambling regulation is driven by regulatory agencies, but often in absence of political attention. In Europe, the Gambling Regulators European Forum (GREF) coordinates collaboration across national regulators, and in collaboration with North American gambling regulators. Internationally, the International Association of Gambling Regulators (IAGR) has a similar coordinating role (Thompson, 2025). However, action in these forums depends on individual countries' priorities and resources with no binding commitment (Thompson, 2025).

Some countries have particularly powerful positions in the international arena and can guide developments elsewhere. Jurisdictions tend to rely on policy transfer and cross-jurisdictional learning to develop their gambling policies. In particular, the UK model has been exported to and copied by several other jurisdictions globally (Reith & Wardle, 2022). The 2005 Gambling Act was one of the first to regulate online gambling markets during a period when most jurisdictions still prohibited online gambling or restricted it to monopolies (Casey, 2024, Chapter 1). The UK approach has been based on the premise that gambling should be permitted, and regulations should be risk-based (Reith & Wardle, 2022). According to Beem and Mikler (2011), the UK has also been highly active in international collaboration to drive forward risk-based regulatory standards, often with industry support. Beem and Mikler (2011) argue that the intent has been to drive international regulations towards a direction that would be complementary with the UK approach.

The UK is of course not the only country guiding international policy. We have also seen evidence that French-speaking countries tend to look towards France when developing or revising their gambling regulations (Sichali et al., 2023). The same may be true of Spanish-speaking countries. South Africa acts

as a regulatory model in the African continent ([Chapter 1](#)). Large and powerful countries with significant global influence should be aware of the power over global gambling regulations, and act as examples of evidence-based regulations that put public health and public interest first. If, instead, these countries put the interests of industry first, a similar approach can spread globally.

Towards improved regulation

Regulation is a question of interests and priorities. According to [Sallaz \(2006\)](#), the main interests of governing officials are split between political legitimacy and economic solvency. [Adams \(2016\)](#) has similarly argued that governments are faced with competing interests with regard to gambling. On the one hand, governments have responsibilities to protect citizens. On the other hand, governments are also incentivised to permit and grow gambling markets. Money has an important role in fostering the growth of addictive consumptions and neutralising initiatives that threaten to reduce the levels of consumption. The solution has too often been to resort to industry self-regulatory codes or focusing regulations on specific risks.

Yet, self-regulation and co-regulation often result in regulatory failure due to complex (or conflicting) norms and intentions ([Wardle et al., 2024](#)). The only real goal of industry actors is to prioritise its fiduciary duty to shareholders. The industry should not be expected to put public health over revenue generation, as this is not the role of the industry. Third-party suppliers are even less likely to adjust business models in the public interests, particularly if they are not bound by supplier licensing.

Instead of relying on the industry for solutions, it should be the role of government to lead and rethink regulations in ways that focus on rules-based regulations limiting harmful industry practices. This requires governments to step up and prioritise the public interest (also [Sulkunen et al., 2019](#)). Governments are the actors that have legalised gambling within their territory, and they are also the only actors that can prioritise protections. If laws are adequate and appropriate, government regulation can give the state a powerful role that can effectively counter industry interests (also [Gostin et al., 2019](#)).

Good regulation requires a well-resourced and empowered regulator, clear, science-based and publicly acceptable rules and legislation, and enforcement of existing laws ([Gostin et al., 2019](#)). In addition, regulatory actors need comprehensive access to industry data to properly monitor operations and intervene in cases of problems. Finally, regulation should be based on meaningful collaborations globally and domestically. Ideally, regulation should form its own ecosystem involving diverse expertise from government actors, enforcement agencies, banks, universities and harm prevention professionals. Consolidating power of different actors can further promote better

regulations and level current asymmetries between powerful industries and currently under-resourced regulators.

Note

- 1 **Western and Central Europe:** Alderney, Austria, Belgium, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Gibraltar, Greece, Hungary, Ireland, Isle of Man, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, UK. **Eastern Europe:** Armenia, Belarus, Bosnia & Herzegovina, Bulgaria, Croatia, Georgia, Romania, Russia, Serbia, Ukraine. **North America:** Arizona, Arkansas, Colorado, Connecticut, Florida, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Nevada, New Hampshire, New Jersey, New York, North Carolina, Ohio, Ontario, Oregon, Pennsylvania, South Dakota, Tennessee, Vermont, Virginia, Washington, Washington DC, West Virginia, Wyoming. **South and Central America (Latin America):** Brazil, Buenos Aires City, Buenos Aires Province, Colombia, Dominican Republic, Mexico, Panama, Peru, Puerto Rico. **Africa and the Middle East:** Angola, Botswana, Cameroon, Ghana, Namibia, Seychelles, South Africa, Tanzania, Uganda, United Arab Emirates.

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Conclusion

A global and powerful industry

The aim of this book was to provide an overview of what online gambling looks like. The online gambling business model has many similarities to land-based gambling, but it also differs from it. Many online gambling products are extensions of land-based products. Online gambling environments are often designed to evoke images of traditional gambling venues. At the same time, the production of online gambling has inflated the size of the industry, made gambling available and accessible anytime and anywhere, and extended the commercial opportunities of gambling operators. Data-driven commercial practices, personalisation and targeting have fundamentally changed the landscape and experience of gambling.

The first two chapters of this book focused on the extraordinary growth of online gambling business and the networks that are entangled with gambling operations. Today, the online gambling industry is a digital ecosystem consisting of operators, suppliers and third parties. Actors in the ecosystem have a shared interest in maintaining and accelerating online gambling consumption. The broader ecosystem may not be a politically organised lobby group, but the structural logic of surveillance capitalism ([Zuboff, 2019](#)) can turn it into a powerful interest network. As also argued by sociologist Manuel [Castells \(1996\)](#), economic actors benefit from and take advantage of the global online economy to expand markets, escape jurisdictional regulations, and cut costs with complex global production networks.

The book has also looked at the design of gambling products and gambling environments in the online space. Personalised content, alongside dark patterns and harmful nudges, generates harms and limits individual freedoms, as design elements can lead consumers to make choices that they might not otherwise make ([Chapter 3](#)). The rise and effectiveness of targeted and direct marketing are enabled by data infrastructures within the gambling ecosystem and beyond. Consumer segmentation creates a digital double of us that can be used to target promotions and offers in ways that are hard to resist. Individuals have little control over their data. Consent to data use is rarely fully

informed (Chapter 5). Choice can also be undetermined in situations where data are shared with third parties. Often, consent is even irrevocable, as it is (next to) impossible to control one's data use after initially agreeing to it.

The last chapter focused on regulations, including emerging regulatory approaches targeting data-driven commercial practices. While there is increased evidence of effective regulation of gambling, regulations on harmful data use are only emerging. Within the European Union, regulations on data use and other harmful online practices focus on the online environment more broadly, although they also have implications for online gambling provision.

Offshore operations pose a challenge to the regulatory powers of national governments. Offshore gambling is a threat to regulation on many levels. First, offshore gambling is available even in jurisdictions without regulated gambling or adequate resourcing for controlling the offshore market. Second, offshore gambling is a serious health risk. Many harmful industry practices are inflated in the offshore industry. Offshore gambling is also available (and targeted) to individuals who have a self-exclusion from regulated offers. Third, in some cases, offshore gambling is associated with organised criminality, further enhancing regulatory risks. Fourth, the negative health impacts of offshore gambling are further compounded when the offshore trope is used as a lobbying tool to resist public health-oriented protections within the regulated market.

The perspective of this book has been strongly focused on the gambling industry and its data-driven practices. Of course, online gambling is also about much more: It is about the experience of people who gamble online, the changing geographies and spaces of gambling, the politics of online gambling, the convergence of gambling with other online activities, and so on. However, this book has focused on looking at online gambling through the lens of industry and its use of data for a specific reason: Despite the crucial importance of data within the online business model, little research has addressed this issue previously.

Throughout this book I have argued that the power of data underpins the online gambling business model. Gambling companies, like any online business, collect astounding amounts of data on their customers. Upon registration, customers provide information about their socio-demographics, contact details, payment details and preferences. Customers also consent to privacy policies, enabling further data collection. Any communications with the gambling operator – chats, emails, survey responses – accumulate additional personal data, even sensitive health information. Cookies and fingerprinting produce data about location, hardware and settings. Each activity in the online gambling space gets recorded. These data are then linked with data provided by third parties. Consent to privacy policies gives companies the right to share data with a number of other actors, ranging from other companies in the corporate network to authorities, suppliers, marketers and analytics services.

Better data give operators and corporate groups a significant competitive edge within the market. For any online company, including tech giants, substantial data resources expand the ability to produce value to advertisers and

investors (Olson, 2024). Data-driven targeting is key for companies to access new markets, acquire new customers, retain existing customers and, too often, cause significant harm in the process. Online corporations have turned into networks of companies that are kept together via information (also Castells, 1996). Collaborations are based on sharing information and knowledge to win market shares. Targeting and personalisation can increase sales even in situations in which the market might otherwise be saturated. Data on customers are likely one of the most valuable assets of any online gambling company, especially when almost everything else is outsourced to suppliers.

Who wins, who loses and who decides?

Data-driven business models constitute a threat to public health and public interest. To paraphrase Reith (2003) and Zuboff (2019), we can ask who wins, who loses and who decides in the online gambling world.

Who wins in online gambling? The online gambling business model perpetuates and accelerates patterns that are familiar from any gambling operation: The house always wins. Data-driven online practices enhance profits of gambling operators and their supplier networks. Data are profitable in any sector, but in the gambling sector, profitability is amplified by so-called addiction surplus (Adams & Livingstone, 2015). In addition to gambling companies, surveillance capitalism wins. Data collected by gambling companies can travel far within the online networks, further profiting third parties and their third parties. The surveillance capitalist business model becomes pervasive and unavoidable in the online environment.

Who loses? Almost everyone loses. Surveillance capitalist practices distort competition, harm consumer rights and privacy, and can infringe on consumer protection laws (ICO, 2023). In the case of a health-harming sector like gambling, surveillance capitalism has direct implications on the physical and financial health and well-being of individuals. You can lose your health, you can lose your money, and you are sure to lose control of your data. Societies lose because gambling does not deliver the kind of profit or revenue it often promises. Instead, gambling generates significant social costs and harm that are impossible or expensive – monetarily and humanly – to revert (Hautamäki et al., 2025). Eventually, if exploitative business practices are not better regulated, even gambling companies lose. At least, they are at a risk of losing consumer trust, and as a result, investor interest.

And who decides? According to Zuboff (2019), owners of private surveillance decide, enabled by states that are reluctant to assert oversight in the surveillance capitalist realm. It is important to note that surveillance capitalism is a structural logic rather than an intentional creation. As described by Zuboff (2019), the internet gave rise to surveillance capitalism almost by accident. Data were not initially considered valuable. However, data analytics and data ownership have since created a power structure that allows corporations to

control societal narratives, the experience of their customers, and in many cases, the regulatory landscape. Enabled by surveillance, corporate influence reflects two types of informational asymmetries that we can already see in the gambling field.

The first type of informational asymmetry arises between gambling operators and their customers. Operators and their ecosystems know almost everything about their customers, whilst people who gamble know very little about operators, their networks and their commercial practices (also [Sulkunen, 2022](#)). Therefore, surveillance capitalism impairs individual autonomy ([Zuboff, 2019](#)). Influence over customers in online environments extends from profiling to predicting futures and even moulding futures and actions with the use of prompts, dark patterns and targeted marketing. The role of users is to accept the terms and conditions set by operators.

The second type of informational asymmetry emerges between operators and regulators. This asymmetry stems from unequal access to data-driven market insights. Regulators (or researchers) can rarely have access to the same level of data granularity as online gambling operators. Asymmetric access to information makes it difficult for regulators to keep up with fast-developing technologies and systemic complexities of ecosystems. Many jurisdictions have reconciled this situation by endorsing self-regulatory and risk-based frameworks ([Chapter 6](#)).

What next?

The future of online gambling is likely to accelerate the trends that we can already see. Highlights from industry event ICE in 2025 focused on issues such as improving design and integrated platforms to make online gambling even more frictionless. Focus was also placed on developing new products that combine characteristics of existing gambling formats (casino gambling and betting, esports betting, crash products) as well as branding EGMs by partnering with famous brands. In addition, there was interest in increased consolidation around data-driven practices such as advanced analytics, CRM and harm detection. AI, in particular, is seen by the industry as a key for further growth: ‘AI is quickly reshaping the casino industry, providing leaders with powerful tools to optimise operations, enhance player engagement and drive profitability.’ ([ICE, 2025](#)).

It is likely that online gambling will continue to grow, and to an extent, cannibalise land-based markets. In the Nordic countries, we can already see some land-based formats disappearing (see [Chapter 1](#)). Yet, online gambling cannot grow indefinitely. At least three factors may eventually slow down current growth trends: First, gambling has already expanded to over 80% of global jurisdictions. Many markets, including Europe, are increasingly saturated. Even data-driven practices are unlikely to keep up with current growth. Second, online gambling competes for people’s attention with a range of other

online activities. We live in an era of almost endless digital entertainment, to a point where people report becoming increasingly bored, having shortening attention spans, and losing sense of meaning in online environments (Tam & Inzlicht, 2024). Third, growth of online gambling may also be slowed down with improved regulatory controls and harm prevention efforts.

As surveillance capitalist practices become increasingly common and obvious, gambling may even become less attractive to internet users. According to Doctorow (2025), the internet is rapidly becoming worse. In some online sectors, the need to maximise shareholder revenue has pushed platforms to use deceptive tactics and misinformation to increase user engagement while making their services progressively worse (Doctorow, 2025; Mazzucato & Strauss, 2024). It is possible that the same will happen in gambling. When I was reviewing websites for Chapter 3, I noticed that the product offers across almost all sites, even those with a highly sports-first brand image, tend to focus on endless varieties of online EGMs. The contrast is stark to the early websites I reviewed in Chapter 1, that had more varied content, including lotteries, sports news and sports content.

Online EGMs are the most harmful gambling product (Tran et al., 2024). Online EGMs are also the most profitable product for the industry. Therefore, it is in the interest of gambling companies to cross-sell their customers to online EGMs as this can maximise customer lifetime value with the company. The strategy has largely succeeded. As seen in Chapter 3, casino-type gambling, driven by online EGMs, has been the fastest-growing online gambling vertical across European jurisdictions. It is possible that the profitability of this one product group decreases choice and variety across sites. Of course, this observation is based on a small sample of gambling websites. Gambling sites differ and their practices are also likely to differ. Regardless, the continuous growth of the most harmful gambling formats gives significant cause for concern now, and will continue to do so in the future.

Although this book has focused on gambling, the commercial practices outlined in this book are not unique to gambling. Networked business models, drawing from a surveillance capitalist logic, are prevalent and increasingly common in any online sector. Online architecture and product characteristics seen in the gambling field, share commonalities with other digital products, such as online shopping, streaming and video gaming. Flayelle et al. (2023) produced a taxonomy of technological design features that promote potentially addictive online behaviours. They found common harmful design features across online spaces, including a wide variety of different product types, reinforcement schedules (bonus offers, rewards), algorithm-based recommendations, personalised push notifications, and convenient availability. Across online spaces, these design features function as cues, promote habit formation, and contribute to the emergence of problems and harms related to online activities.

Harmful data-driven practices are also likely to further extend to substance-based addictive commodities. Alcohol and tobacco are increasingly sold online. These products can also be connected to networks via the Internet of Things (IoT). Some years ago, a global spirits distributor announced bottles equipped with smart sensors to track purchases, collect sales data and communicate with their customers (Zuboff, 2019). Some e-cigarette models have been implanted with microchips that harvest data on tobacco use patterns and use these data to enhance marketing strategies (Przewoźniak, 2019).

As surveillance capitalist practices become increasingly prevalent in the gambling field and beyond, it is crucial for regulators to address the harms caused by this business model. The Lancet Public Health Commission on Gambling (Wardle et al., 2024) recently published eight recommendations to improve regulatory controls in the gambling field, including prioritisation of public health, international standards for regulatory approaches and increased collaboration to prevent gambling harms. Expanding on these recommendations, it has also become necessary for governments to step up regulations around data-driven commercial practices in the online space generally, and for gambling specifically. One way forward would consist of mandating corporations to share and disclose all data collected in the online space to regulators and independent researchers. Another way forward would entail meaningful inter-agency and international cooperation that builds on a public health mandate. Existing asymmetries, created by surveillance capitalism, can only be levelled with collective effort and equal access to information. All this matters because in an online world, those who hold the data, hold the power.

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