<u>دی</u> Spillemyndigheden

Online gambling in Denmark

Survey of Danes' gambling habits on websites with and without a gambling licence

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Introduction

It is a core task for the Danish Gambling Authority to continuously monitor and analyse the Danes' gambling spend. The analyses are necessary to ensure that we are always at the fore-front of the latest trends and knowledge about the gambling market.

In 2012, betting and online casino were liberalised in Denmark. This means that anyone can apply for a licence to provide these gambling products. Before 2012, a large part of online gambling spend took place on unlicensed websites. Therefore, one of the purposes of the liberalisation was to move the gambling spend to licensed sites under Danish consumer protection.

Today, there are still gambling providers that target the Danish market without a licence, and thus there are Danes who gamble on sites without a licence. Knowledge about Danes' gambling on these sites is therefore central to understanding the behaviour in the gambling market.

In 2022-2023, the Danish Gambling Authority conducted a survey of Danes' online gambling habits. The study has a special focus on Danes' gambling habits on sites that do not have a licence to offer gambling in Denmark. No similar studies have previously been conducted in Denmark.

The report answers key questions about Danes' gambling, e.g.:

- How many Danes gamble online?
- Who participates in gambling activities?
- How many Danes gamble on unlicensed sites?
- Why do Danes gamble on unlicensed sites?

The report begins with a brief description of the study's design and methodology. This is followed by results and analyses of Danes' general online gambling. This is followed by results and analyses of Danes' gambling on unlicensed sites.

The report has appendices containing the survey questionnaire as well as supplementary tables with the statistical uncertainty of the results and regression analyses.

Summary

The study shows that:

- In total, 21.7% of Danes aged 15 and over have gambled online in the past year, which corresponds to approximately 1,082,000 people.
- 15% of young people aged 15-17 have gambled online in the past year, corresponding to 32,000 people. The age limit for online gambling in Denmark is 18 years.
- 3.8% of those who have gambled online in the past year have gambled on **unlicensed** sites, equivalent to 41,000 people. Over half of these players have knowingly gambled on unlicensed sites.
- 8.6% of players do not know if the sites they have gambled on are licensed.
- 91% of players who have gambled on unlicensed sites have also gambled on licensed sites. Of these, the majority have gambled mostly on licensed sites.
- Unlicensed sites are mainly used for online casino, betting and skin betting.
- Approximately two thirds of players who have knowingly gambled on unlicensed sites have found the sites by searching online themselves. Two thirds of players have seen videos and streaming of the sites on various media. Half of the players have heard about the sites from family, friends and acquaintances.
- Other game types, better/higher payback and bonuses are the most commonly cited reasons for gambling on **unlicensed** sites.
- Control and supervision, credibility and seriousness, and Danish language are the most commonly cited reasons for gambling on **licensed** sites.

Data and methodology



Data and methodology

This study is based on an online survey that has been developed in collaboration with Statistics Denmark. The survey consisted of 22 questions about Danes' online gambling, including gambling in the unregulated market.

Data is collected and aggregated to population by DST Survey, Statistics Denmark for the Danish Gambling Authority.

Sampling

The target group for the survey was people who were over 15 years old as of 1 October 2022, based on the CPR register (civil registration system). The population was divided into three strata (groups). The sample was randomly selected within the three strata with an over-sampling of men aged 15-39 years. This is done in order to have a sufficient number of responses, as men in this age group are particularly likely to gamble on unlicensed sites but respond at a lower rate than the other groups.

Statistics Denmark provided background information about the respondents such as gender and age.

The survey's net sample size is 30,070 people (this is after Statistics Denmark has sorted out deceased or address-protected citizens).

•	•			
Strata no.	Strata name	Net sample		
1	Men aged 15-39 years	12,057		
2	Women aged 15-39 years	4,105		
3	All 40+ years old	13,908		
In total	All strata combined	30,070		

Source: Data is collected and aggregated to population by DST Survey, Statistics Denmark for the Danish Gambling Authority.

Questionnaire

Table 1. Net sample by strata

In the design of the questionnaire, the Danish Gambling Authority and Statistics Denmark have collaborated to ensure that the questionnaire was easy to understand for the target group, that the response categories were exhaustive, and that the content of the questionnaire was professionally correct.

A pilot test was conducted to test the flow of the questionnaire and to uncover the respondents' answers in relation to time, length of the questionnaire and to estimate the expected number of responses. In addition, it was examined whether the questions could be misunderstood. After the pilot test, minor adjustments were made to the questionnaire. The questionnaire can be found in Appendix 1.

Data collection

The survey was distributed via CAWI (Computer Assisted Web Interviewing) and data was collected between 24 November 2022 and 15 January 2023. The expected response rate was 30%, while the actual response rate became 25.2%.

The invitation to participate and an information letter about the background of the survey were sent out via Digital Post and as physical letters to those who are exempt from Digital Post. For those invited under the age of 18, an information letter was sent to the parents. To get more responses, three reminders were sent out via Digital Post and one via NemSMS.

Answers

A total of 7,637 interviews were conducted. In addition, there are 242 partially completed interviews.

Only completed interviews are included in the results and the response rate was calculated at 25.2%.

Table 2. Number of responses	5
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Number of re-	Strata name	Number of re- Percentage of re		Response rate of	
sponses by strata	Silala liallie	sponses	sponses	sample	
1	Men aged 15-39 years	2,060	27.0%	17.0%	
2	Women aged 15-39 years	773	10.1%	18.8%	
3	All 40+ years old	4,804	62.9%	34.5%	
In total	All strata combined	7,637	100%		

Source: Data is collected and aggregated to population by DST Survey, Statistics Denmark for the Danish Gambling Authority.

Dropouts and proofing with weights

The survey had a non-response rate of 74% of invitees who did not participate in the survey.

The dropout rate for the survey is unevenly distributed across different population groups, which weakens representativeness. A non-response analysis has therefore been carried out, which takes into account the population groups that are over- or under-represented in the different strata. Based on the non-response analysis, weights are constructed that are associated with each response in the data. The weights ensure that the response data is representative of the total population.

The following variables were used to calculate the weights: gender, age, education, socio-economic status, quartile income, parental education, ancestry and family type.

Self-reported data and bias

It is important to keep in mind that there are various biases associated with conducting a survey based on self-reported data.

One bias that may be at play in this study is the so-called 'social desirability bias', which means that people may tend to want to appear better, more compliant or respond in a way that is socially acceptable. Since some of the questions are about gambling on unlicensed websites, there is a risk that respondents may not have wanted to disclose that they gamble on these sites, even if the players are not doing anything illegal.

This may mean that there are more people gambling on the sites than the survey shows. There is also a risk of respondents misunderstanding the questionnaire questions. This has been addressed through the pilot test and the subsequent adjustment of the form, making it as easy to understand as possible.

Statistical uncertainty

As the survey is based on a sample of the total Danish population aged 15 and up, there is a statistical uncertainty in the results. This is important to keep in mind when comparing, for example, which type of gambling product has been used by the most Danes, or whether there are more men or women gambling, etc. When the results are presented in the following sections, it is therefore described if a difference is statistically significant. Appendix 3 shows the statistical uncertainty of all the results in the report in the form of confidence intervals.

Online gambling in Denmark



Online gambling in Denmark

This section reviews the results of how Danes in general gamble online. There is no distinction between gambling on licensed and unlicensed sites. The section focuses in particular on the types of online gambling products Danes prefer and who participates in them.

In total, 21.7% of Danes aged 15 and over have gambled online in the past year, which corresponds to approximately 1,082,000 people. In 2022, the online gambling spend in Denmark amounted to approximately DKK 7 billion¹. This means that on average, each online gambler spent around DKK 6,500.

Lotteries are the most popular type of online gambling activity

There are several different gambling activities to participate in online. Lotteries and scratch cards (e.g., Lotto, Eurojackpot, Joker and Advent calendar scratch cards) are the most popular type of gambling products. 13.4% of Danes aged 15 and up have participated in online lotteries and bought scratch cards online in the past year, which is a statistically significantly higher proportion than for the other types of gambling products, *see figure 1*. For betting on sports and other events, it is 8.7%, while 4.1% have gambled on online casinos.

0.7% of Danes have participated in skin betting. Skin betting covers different types of gambling activities, such as betting, casino games and lotteries, that have in common that the deposit and/or winnings are a skin. For example, a skin is a decoration for a weapon or an avatar in a video game.

There are no gambling operators licensed to offer skin betting in Denmark, which means that skin betting can only take place on unlicensed websites.

25% of those who have gambled online in the past year have participated in at least two of the above types of gambling activities during this period, while 5% have participated in at least three of the types of gambling activities.

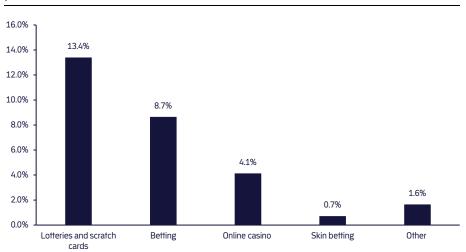


Figure 1. Percentage of Danes who have participated in different types of gambling activities online in the past year

Source: Data is collected and aggregated to population by DST Survey, Statistics Denmark for the Danish Gambling Authority.

¹ Source: The Danish Gambling Authority's gambling control system, data on duties reported by licence holders to the Danish Tax Agency, Danske Spil A/S, Det Danske Klasselotteri A/S, Varelotteriet, Landbrugslotteriet, and H2 Gambling Capital. Gambling spend is measured as the gross gaming revenue of the gambling operators.

How often do Danes gamble?

Some gambling activities, such as lotteries, are held at a fixed interval, e.g., a certain number of times a week, while other gambling activities are available at any time. It varies how often Danes gamble online. 43% of online players have stated that they only gamble a few times a year or less, *see figure 2*. 32% state that they gamble one to four times a month, while 25% gamble one to two times a week or more often.

Out of the players who gamble online 1-2 times a week or more often, 62% have participated in lotteries and bought scratch cards in the past year. 38% have bet, while 23% and 3% have played online casino and participated in skin betting respectively in the past year.

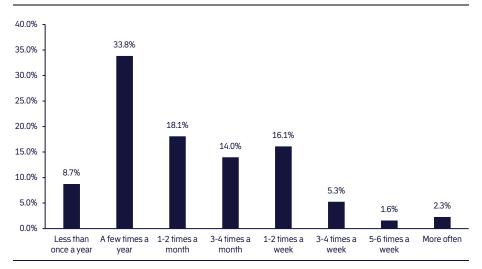
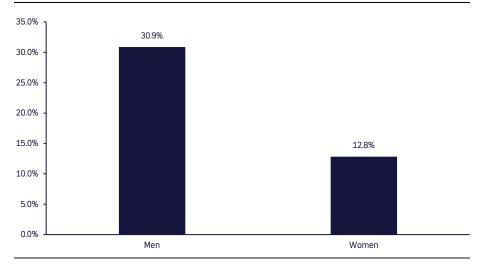


Figure 2. Share of online gamblers by how often they gamble

Source: Data is collected and aggregated to population by DST Survey, Statistics Denmark for the Danish Gambling Authority.

More men than women gamble online

Almost one in three men have gambled online in the past year, compared to just under 13% of women, which is a statistically significant difference. This means that 71% of online players are men.





Source: Data is collected and aggregated to population by DST Survey, Statistics Denmark for the Danish Gambling Authority.

What age groups gamble online?

The number of people who gamble online varies between age groups, *see figure 4.* You must be at least 18 years old to gamble on sites that are licensed to offer gambling in Denmark. 15.2% of 15-17-year-olds, corresponding to approximately 32,000 people, have gambled online in the past year.

One explanation for this could be that they have been gambling on unlicensed sites that do not necessarily check the age of the players or have an age limit of 18 years. They may also have gambled via another person's gambling account, such as an older family member or friend.

In the age groups of 18-69-year-olds, the proportion who have gambled online in the past year ranges from 19.3% among 60-69-year-olds to 29.7% among 40-49-year-olds.

The group who gambles the least is Danes aged 70 and up, where 9.7% have gambled online in the past year. This is statistically significantly lower than the other age groups.

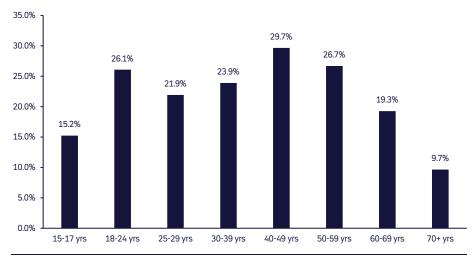


Figure 4. Percentage of Danes within each age group who have gambled online in the past year

Source: Data is collected and aggregated to population by DST Survey, Statistics Denmark for the Danish Gambling Authority.

Age groups and gambling types

Looking at the different types of gambling activities, you can also see variations in which age groups participate in them, see table 3.

For example, 19.3% of 18-24-year-old Danes have placed bets online in the past year. This is a statistically significantly higher proportion than in the other age groups. There is also a significantly higher proportion of 18-24-year-olds who have played online casino compared to the other age groups.

5.4% of 15-17-year-olds have participated in skin betting in the past year, making it the age group with the highest proportion of people who have participated in these gambling activities. This proportion is also statistically significantly higher than the other age groups.

	15-17	18-24	25-29	30-39	40-49	50-59	60-69	70+
	years							
	old							
Lotteries and scratch cards	3.2%	7.8%	13.0%	15.7%	20.6%	19.7%	13.5%	5.5%
Betting	10.3%	19.3%	12.6%	11.8%	12.2%	6.6%	3.1%	0.8%
Online casino	6.3%	10.9%	5.1%	5.3%	4.1%	3.2%	1.8%	0.8%
Skin betting	5.4%	2.5%	0.9%	0.7%	0.4%	0.0%	0.0%	0.0%
Other	0.6%	1.1%	0.3%	0.7%	1.0%	2.4%	2.4%	2.9%

Table 1. Percentage of Danes within age groups who have participated in various gambling activities online in the past year

Source: Data is collected and aggregated to population by DST Survey, Statistics Denmark for the Danish Gambling Authority.

Although overall there is a higher proportion of men than women who gamble, the difference varies between the types of gambling activities. For both betting, skin betting, online casino and lotteries and scratch cards, there are statistically significantly more men than women who have gambled in the past year. The difference is particularly large in skin betting and betting, where seven and six times more men than women have gambled, respectively.

Approximately four times more men than women have played online casino. The smallest gender gap is seen in online lotteries and scratch cards, where there are almost twice as many male players as female.

Effect of gender, age and education

A regression analysis has been conducted where the effect of gender, age and highest completed education is estimated for whether you have gambled online in the past year.

The regression analysis shows that the likelihood of having gambled online is higher for men compared to women. In addition, the likelihood is higher for people under 70 years old compared to people over 70 years old. Both results are statistically significant.

The analysis further shows that people with a long education are less likely to have gambled online compared to people with a short education. This comparison is also statistically significant.

The full regression table can be found in Appendix 2.

Gambling on unlicensed websites



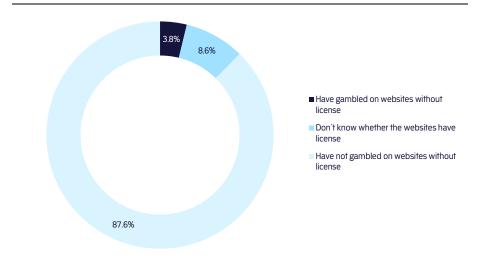
Gambling on unlicensed websites

In total, around 41,000 Danes aged 15 and over have gambled on an unlicensed site in the past year, which corresponds to around 0.8% of Danes in that age group.

This also means that 3.8% of those who have gambled online have gambled on an unlicensed site, *see figure 5*.

This means that the vast majority of players only choose to gamble on sites licensed and supervised by the Danish Gambling Authority.

Furthermore, 8.6% of players do not know whether they have gambled on sites with or without a licence from the Danish Gambling Authority.





Source: Data is collected and aggregated to population by DST Survey, Statistics Denmark for the Danish Gambling Authority.

In the survey, there are few respondents where their answer to one or more questions is inconsistent with the answer to other questions. This is if, for example, the respondent states having participated in skin betting, but at the same time states not having gambled on unlicensed sites.

In Denmark, there are no licensed skin betting operators and therefore all skin betting takes place on unlicensed sites. This suggests that these respondents have actually gambled on an unlicensed site. There are also respondents who have answered that they gamble on sites without a licence, but when asked to list the sites, they only mention sites with a licence.

Based on these answers, an alternative estimate of how many Danes have gambled unregulated has also been made. The alternative estimate is close to the above figures.

Here, 1.0% of Danes have gambled on unlicensed sites in the past year, corresponding to 4.5% of those who have gambled online in the past year.²

Sites with a licence can be recognised by the label from the Danish Gambling Authority, which is mandatory for operators to use, and they refer to the Danish Gambling Authority's helpline, StopSpillet, and the Register of Self-Excluded Players (ROFUS). The aforementioned

² In the alternative estimate, a total of 12 responses are corrected from having gambled on sites without a licence to not having gambled on sites without a licence, based on the sites they have mentioned that they have gambled on that do not have licence. In addition, 26 responses of "Don't know if the sites I have gambled on have a Danish licence" have been added as players who have gambled on sites without a licence along with 4 who have an-swered "no" to having gambled on sites without a licence.

examples and the fact that many players have also stated that they are unsure about the types of sites they have gambled on indicates that it can be difficult for some players to distinguish between licensed and unlicensed gambling sites.

Some deliberately gamble on sites without a licence

Some players are conscious of where they gamble.

For example, 2.1% of those who have gambled online in the past year have stated that they have knowingly gambled on sites without a licence. This means that approximately 56% of players on unlicensed sites have knowingly gambled on these sites.

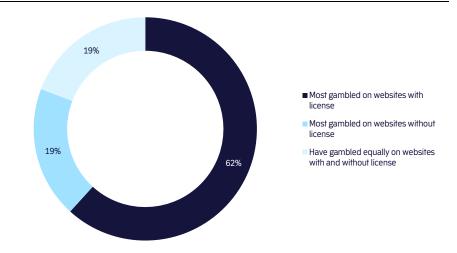
At the same time, 50% of those who have gambled online in the past year have knowingly gambled on licensed sites.

Most of those who have gambled on unlicensed sites in the past year have also gambled on licensed sites.

This applies to 91% who have gambled on unlicensed sites. Of these, the majority state that they gamble mostly on licensed sites, *see figure 6*.

There are 19% who estimate that they gamble mostly on unlicensed sites.





Kilde: Source: Data is collected and aggregated to population by DST Survey, Statistics Denmark for the Danish Gambling Authority.

The main gambling activities participated in on unlicensed sites are online casino, betting and skin betting

Approx. 43% of those who have gambled on unlicensed sites in the past year have played online casino on these sites, *see figure 7*. 36% and 34% have bet and participated in skin betting respectively. Approximately 12% of players have participated in lotteries and bought scratch cards in the past year, which is a statistically significantly smaller proportion than the other types of gambling.

19% have participated in at least two of the above types of gambling activities on unlicensed sites during the period, while 12% have participated in at least three types of gambling activities.

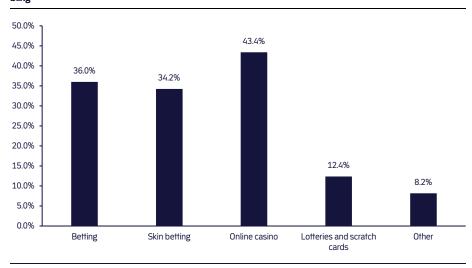


Figure 3. Share of players on unlicensed sites in the past year who have participated in different types of gambling

Source: Data is collected and aggregated to population by DST Survey, Statistics Denmark for the Danish Gambling Authority.

How do players find the sites without a licence?

It is illegal for gambling operators to target Danish players if they do not have a licence to provide gambling in Denmark. This means, for example, that it is not allowed to market directly to Danish players. Respondents were therefore asked in the survey how they found the unlicensed sites they have gambled on.

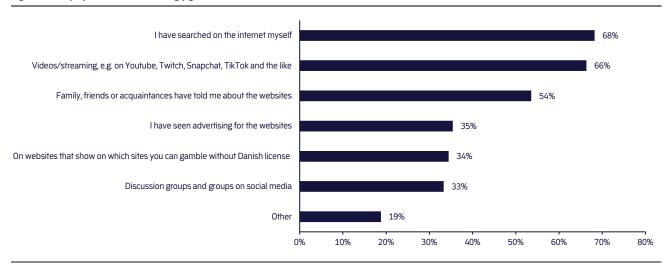
Approximately two out of three players who have knowingly gambled on unlicensed sites state that they have searched the internet themselves, *see figure 8*. About two out of three players also state that they have seen videos and streams of the sites on YouTube, Twitch, Snapchat, TikTok and similar social media.

Almost half of the players have been told about the sites by someone they know, such as family, friends or other acquaintances, while 35% and 33% have found the sites through advertisements for the sites or in discussion groups or social media groups, respectively.

The Danish Gambling Authority is aware that there are websites that specifically facilitate contact to gambling sites that do not have a licence, and 34% of the players who have knowingly gambled on sites without a licence state that they have found the gambling sites on these intermediary sites.

When the Danish Gambling Authority becomes aware of these types of sites, they are advised to stop the provision and possibly reported to the police, as it is illegal to provide access to gambling sites without a licence in Denmark.

Figure 4. How players who have knowingly gambled on unlicensed sites have found the sites



Source: Data is collected and aggregated to population by DST Survey, Statistics Denmark for the Danish Gambling Authority.

Gambling on unlicensed sites is affected by types of gambling, payback and bonuses, among other things

It is interesting what players who indicate that they have knowingly gambled on unlicensed sites find attractive about these sites, as it tells us something about the behaviour on the gambling market.

37% of the players who have knowingly gambled on sites without a licence state that they can participate in certain types of gambling activities on these sites that are not offered on sites with a licence, *see figure 9*. The price of the gambling activity also matters to some, with 32% stating that they gamble on unlicensed sites because they believe they get better/higher payback and winnings.

Many online gambling operators offer their customers bonuses. For example, some operators offer bonuses to players the first time they gamble via a newly created account.

On licensed sites, the value of the bonus and other promotional concepts cannot exceed DKK 1,000, and 26% state that better/bigger bonuses are the reason they have gambled on unlicensed sites.

On licensed sites, you can voluntarily exclude yourself from gambling for a shorter or longer period of time. This can be done through ROFUS (Register of Self-Excluded Players), where you exclude yourself from all licensed sites, physical casinos and land-based betting.

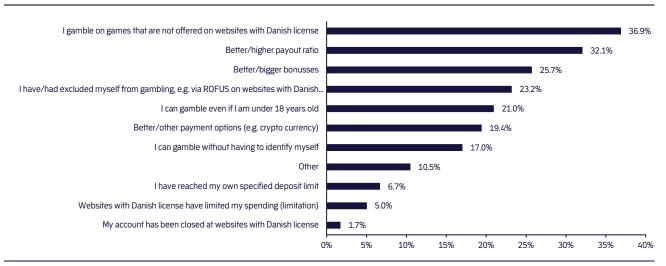
However, 23% of players who have knowingly gambled on unlicensed sites state that they have gambled here because they have excluded themselves from gambling on licensed sites.

You must be 18 years old to gamble online on licensed sites, but this is not necessarily the case on unlicensed sites. For example, 21% of players have stated that they have gambled on unlicensed sites because they could gamble here even though they were under 18 years old. In addition, 17% have indicated that they have gambled on the sites because they do not have to identify themselves.

Payment options are also important for some, as 19% have indicated that they have gambled on the sites because there were better/other payment options, e.g., crypto currency.

Other reasons for gambling on unlicensed sites include reaching the deposit limit they are required to set on a licensed site (almost 7%), licensed sites placing spending limits on gambling (5%), and having their account closed on a licensed site (almost 2%).

Figure 5. Reasons for gambling on unlicensed sites



Source: Data is collected and aggregated to population by DST Survey, Statistics Denmark for the Danish Gambling Authority.

Gambling on licensed sites is mainly explained by control, trustworthiness and Danish language

The Danish Gambling Authority supervises that licensed gambling sites provide gambling in accordance with Danish rules and conditions, and that the sites pay taxes to the state. However, it is interesting to see what the respondents who prefer licensed sites themselves say about the benefits of gambling on these sites.

57% of respondents who have knowingly gambled on licensed sites mention that they gamble here because they believe there is better control and supervision of these sites, *see figure 10*, while 48% mention that the sites are more trustworthy and serious. For 45% of the players, it matters that the sites are in Danish.

These three arguments are mentioned by statistically significantly more players than the other arguments.

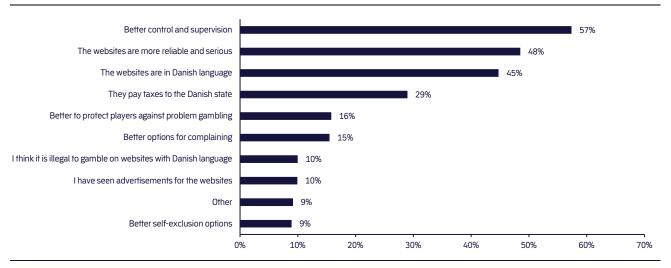
Licensed gambling operators pay gambling taxes to the Danish state. This is mentioned by 29% of respondents as a reason for gambling on these sites. 16% of the players mention that the sites are better at protecting players from gambling addiction, and 9% state that they offer better self-exclusion methods, which are one of the specific measures licensed sites must take to protect players from gambling addiction.

Better opportunities to complain are the reason why 15% of respondents gamble on licensed sites. In addition, 10% have stated that they believe it is illegal to gamble on the sites without a licence.

Finally, 10% mention that they have gambled on licensed sites because they have seen advertisements for the sites.

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Figure 6. Reasons for having gambled on sites with a licence



Source: Data is collected and aggregated to population by DST Survey, Statistics Denmark for the Danish Gambling Authority.

Bypassing blocks on illegal gambling sites

As part of the combat against illegal online gambling, the Danish Gambling Authority has blocked 276 sites that illegally offer gambling through the courts since 2012. Blocking is an important tool in the fight against illegal gambling. There are also some gambling sites that block Danish players themselves.

52% of the players who say that they have knowingly gambled on a site without a licence state that they have experienced that a site does not accept Danish players or is blocked by the Danish Gambling Authority, and that they have then tried to bypass the blocking to gamble on the site.

Men are overrepresented among players on unlicensed sites

It is mainly men who gamble on sites without a licence. 93% of those who have gambled on unlicensed sites in the past year are men, *see figure 11*.

This means that 5% of the men who have gambled online in the past year have gambled on unlicensed sites, while 0.9% of women who have gambled online have done so. This is a statistically significant difference.

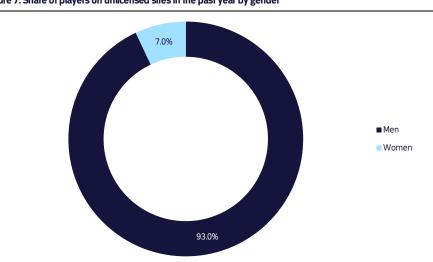


Figure 7. Share of players on unlicensed sites in the past year by gender

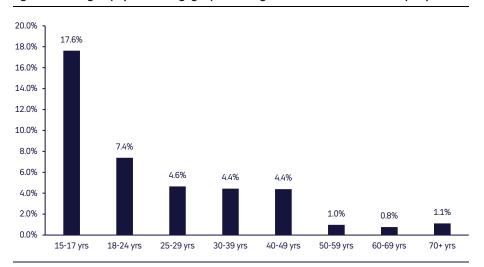
Source: Data is collected and aggregated to population by DST Survey, Statistics Denmark for the Danish Gambling Authority.

Especially in the youngest age group, a large proportion of players have gambled on unlicensed sites within the past year, *see figure 12*. Here, 17.6% of the players between the ages of 15 and 17 have indicated that they have gambled on unlicensed sites in the past year. This proportion is statistically significantly higher than for the 25+ age group.

Again, it should be noted that 15-17-year-olds cannot gamble on their own with licensed gambling operators unless it is through another person's account.

For the 18-24-year-olds, 7.4% of the players have gambled on unlicensed sites, while it is 4-5% for the 25-49-year-olds. For the age groups from 50 years and up, it's around 1% of the players.

The figures also mean that around half of those who have gambled on unlicensed sites in the past year are under 30 years old.





Source: Data is collected and aggregated to population by DST Survey, Statistics Denmark for the Danish Gambling Authority.

Effect of gender and socioeconomic status

A regression analysis was conducted to estimate the impact of gender and socioeconomic status on the likelihood of having gambled on unlicensed websites within the past year.

The likelihood of having gambled on unlicensed sites in the past year is statistically significantly higher for men and students (compared to the reference group of employed people).

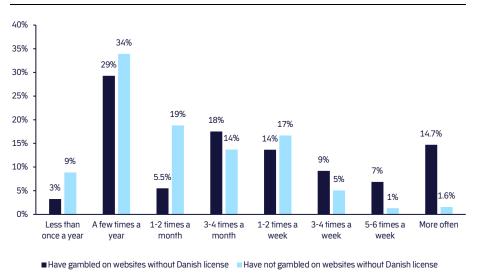
The full regression table can be found in Appendix 2.

How often do Danes gamble on unlicensed sites?

Approximately one in three players who have gambled on unlicensed sites in the past year gamble a few times a year or less (includes all online gambling, both on licensed and unlicensed sites), *see figure 13.* 23% gamble one to four times a month, while 30% gamble one to six times a week. Finally, around 15% state that they gamble more often than this.

This is a statistically significantly higher proportion than for those who gamble online but not on unlicensed sites, where just under two percent say they gamble more than 5-6 times a week.

Figure 9. Players who have and have not gambled on unlicensed sites in the past year, by how often they gamble online



Source: Data is collected and aggregated to population by DST Survey, Statistics Denmark for the Danish Gambling Authority.