

Online gambling in Denmark - Appendix



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Appendix 1 - Questionnaire

Variable	Text/question	Response options	Activations <i>This column refers to the fact that some questions have only been asked based on answers in previous questions.</i>
Intro A	Gambling on the Internet The first questions are about gambling on the Internet.		
Text A	<i>Gambling is all games where you must pay a stake (an amount) and there is a chance to win a prize. This is, for example, betting on sports and other events.</i> <i>It can also be online casinos (including online gaming machines, online bingo and online poker) and lotteries and scratch cards (e.g., Lotto, Joker, Quick scratch cards (e.g., Christmas scratch card), class lotteries, etc.).</i>		
A1	Have you tried gambling on the Internet in the past year?	<ol style="list-style-type: none"> 1. Yes 2. No 	
A2	How <u>often</u> do you gamble on the Internet?	<ol style="list-style-type: none"> 1. Less than once a year 2. Sometimes a year 3. 1-2 times a month 4. 3-4 times a month 5. 1-2 times a week 6. 3-4 times a week 7. 5-6 times a week 8. More often 	A1=1
A3	What types of gambling activities have you participated online in the past year? <i>It is possible to choose several answers</i>	<ol style="list-style-type: none"> 1. Betting on sports and other events 2. Skin betting (skin betting is a game where the stake and/or prize is a skin) 3. Online casino (including online gaming machines, online bingo or poker) 4. Lotteries and scratch cards 5. Other 	A1=1

A4	What type of gambling activity have you participated in online <u>the most</u> in the past year?	<ol style="list-style-type: none"> 1. Betting on sports and other events 2. Skin betting (skin betting is a game where the stake and/or prize is a skin) 3. Online casino (including online gaming machines, online bingo or poker) 4. Lotteries and scratch cards 5. Other 	A1=1 and that at least 2 answers are given in A3. Only answer options that were selected in A3 are displayed.
A5	<p>Do you know the Danish Gambling Authority's label?</p> <p><i>Gambling operators with a Danish licence must always display the Danish Gambling Authority's label on their websites.</i></p>	<ol style="list-style-type: none"> 1. Yes 2. No 	
Intro B	Gambling sites with or without a Danish licence		
Text B	<p>The next questions are about whether you or someone you know gamble online on sites with or without a Danish licence.</p> <p><i>Sites <u>with</u> a Danish licence mean that they <u>have</u> permission from the Danish Gambling Authority to offer gambling in Denmark. Sites <u>without</u> a Danish licence <u>do not</u> have a licence from the Danish Gambling Authority.</i></p> <p><i>Sites without a Danish licence do not have the Danish Gambling Authority's label and do not refer to the Danish Gambling Authority's helpline; Stop-Spillet, and ROFUS (Register of Self-Excluded Players).</i></p> <p><i>It is <u>not</u> illegal to gamble on sites that do not have a Danish licence.</i></p>		
B1	<p>In the past year, have you gambled for on sites that <u>do not</u> have a Danish licence?</p> <p><i>It is <u>not</u> illegal to gamble on sites that do not have a Danish licence.</i></p>	<ol style="list-style-type: none"> 1. Yes 2. No 3. I do not know if the sites I have gambled on have a Danish licence 	A1=1
B2	Have you <u>also</u> gambled on sites <u>with</u> a Danish licence in the past year?	<ol style="list-style-type: none"> 1. Yes 2. No 	B1=1
B3	Have you deliberately gambled on sites <u>with</u> a Danish licence?	<ol style="list-style-type: none"> 1. Yes 2. No 	B1=2 or B2=1
B4	<p>Have you deliberately gambled on sites <u>without</u> a Danish licence?</p> <p><i>It is <u>not</u> illegal to gamble on sites without a Danish licence.</i></p>	<ol style="list-style-type: none"> 1. Yes 2. No 	B1=1
B5	<p>Which types of gambling activities have you, within the past year, participated in on sites <u>without</u> a Danish licence?</p> <p>It is possible to choose several answers</p>	<ol style="list-style-type: none"> 1. Betting on sports and other events 2. Skin betting (skin betting is a game where the stake and/or prize is a skin) 3. Online casino (including online gaming machines, online bingo or poker) 4. Lotteries and scratch cards 5. Other 	B1=1

B6	Within the past year, which type of gambling activities have you <u>most often</u> participated in on sites <u>without</u> a Danish licence?	<ol style="list-style-type: none"> 1. Betting on sports and other events 2. Skin betting (skin betting is a game where the stake and/or prize is a skin) 3. Online casino (including online gaming machines, online bingo or poker) 4. Lotteries and scratch cards 5. Other 	B1=1 and that at least 2 answers are given in B5. Only answer options that were selected in B5 are displayed.
B7	Which sites have you gambled on that <u>do not</u> have a Danish licence? Name the sites that you can remember.	Answers are entered in the text field	B1=1
B7_1	Which sites have you gambled on that <u>have</u> a Danish licence? Name the sites that you can remember.	Answers are entered in the text field	B2=1 or B1=2
B7_2	What sites have you gambled on? Name the pages that you can remember	Answers are entered in the text field	B1=3
B8	How did you find the sites that <u>do not</u> have a Danish licence? <i>It is possible to choose several answers</i>		B4=1
B8_1	I have searched the internet myself	<ol style="list-style-type: none"> 1. Yes 2. No 	B4=1
B8_2	Family, friends or acquaintances have told me about the sites	<ol style="list-style-type: none"> 1. Yes 2. No 	B4=1
B8_3	I have seen advertisements for the sites	<ol style="list-style-type: none"> 1. Yes 2. No 	B4=1
B8_4	On websites that show which sites you can gamble on without a Danish licence	<ol style="list-style-type: none"> 1. Yes 2. No 	B4=1
B8_5	Videos/streaming on e.g., YouTube, Twitch, Snapchat, TikTok and the like	<ol style="list-style-type: none"> 1. Yes 2. No 	B4=1
B8_6	Discussion groups and social media groups	<ol style="list-style-type: none"> 1. Yes 2. No 	B4=1
B8_7	Other	<ol style="list-style-type: none"> 1. Yes 2. No 	B4=1
B_8X	How else did you find the sites without a Danish licence?	Answers are entered in the text field	B8_7=1
B9	In the past year, have you gambled mostly on sites <u>with</u> or <u>without</u> a Danish licence?	<ol style="list-style-type: none"> 1. On pages with a Danish licence 2. On pages without a Danish licence 3. I have gambled equally on sites with and without a Danish licence 	B2=1
B10	Why have you gambled on sites <u>without</u> a Danish licence? <i>It is possible to choose several answers</i>	<ol style="list-style-type: none"> 1. Better/higher reimbursement rate and winnings 2. Better/bigger bonuses 3. I have/had excluded myself from gambling, e.g., through ROFUS on sites with a Danish licence 4. Sites with a Danish licence have set spending limits on my gambling (limitation) 5. My account has been closed on sites with a Danish licence 6. I can gamble without identifying myself 	B4=1

		<ol style="list-style-type: none"> 7. I can gamble even if I am not over 18 years old 8. I have reached my own set deposit limit on sites with a Danish licence 9. Better/other payment options (e.g., cryptocurrency) 10. I participate in some gambling activities that are not offered on sites with a Danish licence 11. Other 	
B11	<p>Why have you gambled on sites <u>with</u> a Danish licence?</p>	<ol style="list-style-type: none"> 1. Better control and supervision 2. Better option of appeals 3. The sites are more trustworthy and serious 4. Better to protect players from gambling addiction 5. Better self-exclusion methods 6. The sites are in Danish 7. Tax is paid to the state 8. I believe that it is illegal to gamble on sites without a Danish licence 9. I have seen advertisements for the sites. 10. Other 	B3=1
B12	<p>Have you experienced that a site does not accept Danish players, or has been blocked by the Danish Gambling Authority, and then use a technical bypass (e.g., a VPN connection) to gamble on the site?</p>	<ol style="list-style-type: none"> 1. Yes 2. No 	B4=1
B13	<p>How many people do you know who gamble on sites <u>without</u> a Danish licence?</p>	<ol style="list-style-type: none"> 1. None 2. 1-2 3. 3-4 4. Over 5 	
B14	<p>What is your relationship with the person(s) you know who gamble on sites <u>without</u> a Danish licence?</p> <p><i>It is possible to choose several answers</i></p>	<ol style="list-style-type: none"> 1. Family 2. Friends 3. Co-workers 4. Study mates 5. Other relationship (answer in text field) 	B13=2,3 or 4
Intro C	Gambling at a physical location		
Text C	<p>Finally, we would like to ask questions about gambling at a physical location.</p> <p><i>Gambling at physical locations are all gambling products where you must pay a stake (an amount) and there is an opportunity to win a prize. This is, for example, betting on sports and other events. It can also be games on physical gaming machines and casinos, bingo or the purchase of lotteries and scratch cards (e.g., Lotto, Joker, Quick scratch cards (e.g., Christmas scratch card), class lotteries, etc.).</i></p> <p><i>A physical location is, for example, a supermarket, kiosk, casino, poker club, gambling hall, bar, pub, restaurant, racetrack or bingo hall.</i></p>		
C1	<p>Have you tried gambling at a <u>physical location</u> in the past year?</p>	<ol style="list-style-type: none"> 1. Yes 2. No 	

C2	What types of gambling activities have you participated in at a physical location in the past year?		C1=1
C2_1	Betting on sports and other events	1. Yes 2. No	C1=1
C2_2	Land-based casino (including gaming machines in land-based casinos, but excluding poker)	1. Yes 2. No	C1=1
C2_3	Poker	1. Yes 2. No	C1=1
C2_4	Physical gaming machines in a gambling hall, pub or restaurant	1. Yes 2. No	C1=1
C2_5	Lotteries, scratch cards and bingo	1. Yes 2. No	C1=1
C2_6	Other	1. Yes 2. No	C1=1
C2_X	What other types of gambling activities have you participated in at a physical location?	Answers are entered in the text field	C2_6=1
Outro	<p>That was the last question in the survey.</p> <p>Thank you for taking the time to answer the questionnaire. Your answer contributes important knowledge about online gambling and the spread of gambling on the Internet.</p> <p>If you have any final comments about the survey, you can write them here.</p> <p>The Danish Gambling Authority expects to publish the results of the investigation in 2023 at www.spillemyndigheden.dk</p>		

Appendix 2 - Regression analyses

Regression - All Online Gambling - Age Groups and Education

Logistic regression analysis where the dependent variable is whether you have participated in online gambling within the past year. The independent variables are age groups and highest completed education. The estimate is shown first, followed by the standard deviation in parentheses. The estimate is in "Log-Odds-Ratio" which means that a positive estimate suggests that this group is more likely to have gambled than the reference group. Similarly, a negative estimate means that it is less likely. Statistically significant estimates are marked with a "*".

	Model (N =7628)
Age groups	
15 – 17 years	0.55 (0.18)*
18 – 24 years	1.22 (0.14)*
25 – 29 years	1.07 (0.15)*
30 – 39 years	1.19 (0.13)*
40 – 49 years	1.49 (0.13)*
50 – 59 years	1.26 (0.12)*
60 – 69 years	0.80 (0.13)*
70+ years	1
Highest education completed	
Primary school, upper secondary education or unspecified	1
Vocational education (craftsmen) (EUD)	0.37 (0.11)
Other vocational education (EUD)	-0.01 (0.10)
Short or medium-term higher education (KVU) / (MVU)	-0.05 (0.10)
Bachelor, higher education (LVU) or Ph.D.	-0.48 (0.11)*
Constant	-2.27 (0.11)*
Pseudo R²	0.034

Regression - All Online Gambling - Gender

Logistic regression analysis where the dependent variable is whether you have participated in online gambling within the past year. The independent variable is gender. The estimate is shown first, followed by the standard deviation in parentheses. The estimate is in "Log-Odds-Ratio" which means that a positive estimate suggests that this group is more likely to have gambled than the reference group. Likewise, a negative estimate suggests that it is less likely. Statistically significant estimates are marked with a "*".

	Model (N =7628)
Gender	
Men	1.11 (0.07)*
Women	1
Constant	-1.91 (0.06)*
Pseudo R²	0.05

Regression – Gambling on unlicensed sites – Gender and socio-economic status

Logistic regression analysis where the dependent variable is whether you have gambled online on unlicensed sites within the past year. The independent variables are gender and socioeconomic status. The estimate is shown first, followed by the standard deviation in parentheses. The estimate is in "Log-Odds-Ratio" which means that a positive estimate suggests that this group is more likely to have gambled than the reference group. Likewise, a negative estimate suggests that it is less likely. Statistically significant estimates are marked with a "*".

	Model (N = 7628)
Gender	
Men	2.61 (0.62)*
Women	1
Socioeconomic status group	
Employed	1
Pensioners /persons receiving early retirement benefit	-1.01 (0.63)
Student	1.04 (0.26)*
Unemployed	0.72 (1.03)
Others outside the workforce, children, unspecified	-0.04 (0.54)
Constant	-6.82 (0.64)
Pseudo R2	0.11

Appendix 3 – Statistical uncertainty

The estimates below are calculated based on the weights made by Statistics Denmark. The confidence intervals are calculated with 95% statistical certainty. The intervals are calculated as a "Wald-type" interval on the log-odds scale, and are then transformed into probability.

For some estimates, the confidence intervals are not available. These are marked with "-".

	Estimate	Lower limit	Upper limit
Proportion of Danes who have gambled online within the past year:	21.7%	20.8%	22.8%
Proportion of Danes who have participated in various types of gambling activities within the past year:			
Lotteries and scratch cards	13.4%	12.6%	14.3%
Betting	8.7%	8.0%	9.3%
Online casino	4.1%	3.7%	4.6%
Skin betting	0.7%	0.6%	0.9%
Other	1.6%	-	-
Proportion of Danes who have gambled online within the past year, according to how often they have gambled:			
Less than once a year	8.7%	7.3%	10.4%
Sometimes a year	33.8%	31.4%	36.3%
1-2 times a month	18.1%	16.2%	20.2%
3-4 times a month	14.0%	12.3%	15.9%
1-2 times a week	16.1%	14.4%	18.6%
3-4 times a week	5.3%	4.2%	6.6%
5-6 times a week	1.6%	1.1%	2.4%
More often	2.3%	1.6%	3.2%
Proportion of Danes who have gambled online within the past year by gender:			
Men	30.9%	29.4%	32.4%
Women	12.8%	11.6%	14.2%

Proportion of Danes within each age group who have gambled online within the past year:			
15-17 years	15.2%	12.3%	18.8%
18-24 years	26.1%	23.2%	29.2%
25-29 years	21.9%	18.4%	26.0%
30-39 years	23.9%	21.4%	26.6%
40-49 years	29.7%	26.5%	33.0%
50-59 years	26.7%	24.1%	29.5%
60-69 years	19.3%	17.0%	21.8%
70+ years	9.7%	8.1%	11.5%
Proportion of Danes within age groups who have participated in various gambling activities online within the past year:			
<i>Lotteries and scratch cards:</i>			
15-17 years	3.2%	1.8%	5.7%
18-24 years	7.8%	6.0%	10.1%
25-29 years	13.0%	10.2%	16.4%
30-39 years	15.7%	13.5%	18.2%
40-49 years	20.6%	17.9%	23.7%
50-59 years	19.7%	17.4%	22.2%
60-69 years	13.5%	11.6%	15.7%
70+ years	5.5%	4.4%	6.9%
<i>Betting</i>			
15-17 years	10.3%	7.9%	13.3%
18-24 years	19.3%	16.9%	22.0%
25-29 years	12.6%	9.9%	16.0%
30-39 years	11.8%	10.2%	13.6%
40-49 years	12.2%	10.1%	14.8%
50-59 years	6.6%	5.3%	8.3%
60-69 years	3.1%	2.2%	4.3%
70+ years	0.8%	0.4%	1.5%
<i>Online casino</i>			
15-17 years	6.3%	4.7%	8.6%
18-24 years	10.9%	9.1%	13.0%
25-29 years	5.1%	3.5%	7.5%
30-39 years	5.3%	4.1%	6.8%
40-49 years	4.1%	2.9%	5.9%
50-59 years	3.2%	2.3%	4.6%
60-69 years	1.8%	1.2%	2.9%
70+ years	0.8%	0.4%	1.6%

<i>Skin betting</i>			
15-17 years	5.4%	3.7%	7.8%
18-24 years	2.5%	1.7%	3.6%
25-29 years	0.9%	0.4%	2.3%
30-39 years	0.7%	0.3%	1.4%
40-49 years	0.4%	0.0%	1.6%
50-59 years	0.0%	-	-
60-69 years	0.0%	-	-
70+ years	0.0%	-	-
<i>Other</i>			
15-17 years	0.6%	-	-
18-24 years	1.1%	-	-
25-29 years	0.3%	-	-
30-39 years	0.7%	-	-
40-49 years	1.0%	-	-
50-59 years	2.4%	-	-
60-69 years	2.4%	-	-
70+ years	2.9%	-	-
Proportion of Danes who have participated in various gambling activities online within the past year by gender:			
<i>Lotteries and scratch cards:</i>			
Men	17.7%	16.5%	19.0%
Women	9.2%	8.1%	10.3%
<i>Betting</i>			
Men	14.9%	13.8%	16.1%
Women	2.5%	2.0%	3.3%
<i>Online casino</i>			
Men	6.7%	6.0%	7.5%
Women	1.6%	1.2%	2.2%
<i>Skin betting</i>			
Men	1.3%	1.0%	1.6%
Women	0.2%	0.1%	0.5%
<i>Other</i>			
Men	-	-	-
Women	-	-	-

Proportion of players who have and have not gambled on unlicensed sites in the past year:			
Gambled on sites without a licence	3.8%	3.0%	4.8%
Do not know if sites you gambled on are licensed	8.6%	7.2%	10.1%
Have not gambled on sites without a licence	87.6%	85.9%	89.2%
Proportion of Danes who have gambled on sites without a licence within the past year:	0.8%	0.6%	1.1%
Alternative share of Danes who have gambled on sites without a licence within the past year:	1.0%	0.8%	1.2%
Alternative proportion of players who have gambled on unlicensed sites within the past year:	4.5%	3.6%	5.6%
Proportion of players who have knowingly gambled on sites without a licence:	2.1%	1.6%	2.9%
Proportion of players who have knowingly gambled on sites with a licence:	50.1%	47.5%	52.7%
Proportion of players who have gambled on sites without a licence who have also gambled on sites with a licence:	90.7%	81.6%	95.6%
Players who have gambled both on sites with and without a licence according to which sites they have gambled on the most:			
Gambled mostly on sites with a licence	61.7%	47.6%	74.2%
Gambled mostly on sites without a licence	19.1%	10.4%	32.3%
Have gambled equally on sites with and without a licence	19.2%	9.6%	34.7%
Proportion of players on sites without a licence within the last year who have participated in different types of gambling activities:			
Betting	36.0%	23.6%	48.4%
Skin betting	34.2%	24.7%	43.7%
Online casino	43.4%	30.6%	56.2%
Lotteries and scratch cards	12.4%	3.7%	21.0%
Other	8.2%	1.4%	14.9%
How the players who have knowingly gambled on sites without a licence have found the sites:			
Other	18.8%	9.7%	33.2%
Discussion groups and social media groups	33.3%	19.1%	47.5%
On websites that show which sites you can gamble on without a Danish licence	34.4%	18.6%	50.3%

I have seen advertisements for the sites	35.4%	19.9%	51.0%
Family, friends or acquaintances have told me about the sites	53.6%	37.2%	69.2%
Videos/streaming on e.g., YouTube, Twitch, Snapchat, TikTok and the like	66.3%	49.7%	79.7%
I have searched the internet myself	68.2%	52.2%	84.2%
Reasons for having gambled on sites without a licence:			
My account has been closed on sites with a Danish licence	1.7%	0.2%	12.2%
Sites with a Danish licence have set spending limits on my gambling (limitation)	5.0%	1.2%	19.5%
I have reached my own set deposit limit on sites with a Danish licence	6.7%	1.9%	20.9%
Other	10.5%	3.2%	29.7%
I can gamble without identifying myself	17.0%	9.0%	29.8%
Better/other payment options (e.g., cryptocurrency)	19.4%	10.8%	32.5%
I can gamble even if I am not over 18 years old	21.0%	12.2%	33.6%
I have/had excluded myself from gambling, e.g., through ROFUS on sites with a Danish licence	23.2%	11.8%	40.7%
Better/bigger bonuses	25.7%	14.9%	40.7%
Better/higher reimbursement rate and winnings	32.1%	19.1%	48.6%
I participate in some gambling activities that are not offered on sites with a Danish licence	36.9%	22.8%	53.6%
Reasons for gambling on sites with a licence:			
Better self-exclusion methods	8.9%	7.1%	11.2%
Other	9.2%	7.2%	11.6%
I have seen advertisements for the sites.	9.9%	7.9%	12.5%
I believe that it is illegal to gamble on sites without a Danish licence	10.0%	7.9%	12.6%
Better option of appeals	15.5%	12.9%	18.4%
Better to protect players from gambling addiction	15.8%	13.2%	18.7%
Tax is paid to the state	29.0%	25.8%	32.4%
The sites are in Danish	44.7%	41.0%	48.5%
The sites are more trustworthy and serious	48.5%	44.8%	52.2%
Better control and supervision	57.4%	53.6%	61.0%
Proportion of players who have deliberately gambled on sites without a licence, who have experienced that a site does not accept Danish players, or have been blocked by the Danish Gambling Authority, and then use a technical bypass (e.g., a VPN connection) to gamble on the site:	51.8%	35.1%	68.1%
Proportion of players who have gambled on unlicensed sites in the past year by gender:			

Men	93.0%	80.1%	97.8%
Women	7.0%	2.2%	19.9%
Proportion of players within each age group who have gambled on unlicensed sites in the past year:			
15-17 years	17.6%	10.7%	27.7%
18-24 years	7.4%	4.8%	11.1%
25-29 years	4.6%	2.2%	9.5%
30-39 years	4.4%	2.6%	7.6%
40-49 years	4.4%	2.3%	8.4%
50-59 years	1.0%	0.3%	3.1%
60-69 years	0.8%	0.2%	3.4%
70+ years	1.1%	0.2%	7.7%
Players who have gambled on unlicensed sites in the past year, broken down by how often they gamble online:			
Less than once a year	3.2%	1.0%	10.5%
Sometimes a year	29.3%	18.7%	42.8%
1-2 times a month	5.5%	2.0%	14.3%
3-4 times a month	17.5%	9.6%	29.7%
1-2 times a week	13.7%	7.2%	24.3%
3-4 times a week	9.2%	4.7%	17.4%
5-6 times a week	6.9%	2.4%	18.0%
More often	14.7%	7.4%	27.1%