center for social media, tech and democracy

ministry of digital affairs

How much do big tech platforms make on Danish children?

Copenhagen Economics CE

December 2025

Content

Executive summary

Danish children are active on big tech platforms, such as YouTube and TikTok. While these platforms offer entertainment and social connectivity, children may also be negatively affected if exposed to harmful content and addictive features. Although children are an important part of the platforms' business model, little is known about the economic interests at play. This may limit the ability of policymakers to understand and appropriately regulate the practices of the platforms.

Against this background, the Danish Ministry of Digital Affairs has asked us to develop an estimate of how much advertisement revenue big tech platforms make on Danish children.[1]

Our analysis estimates how much advertisement revenue big tech platforms – which in our study covers Facebook, Instagram, Snapchat, TikTok and YouTube – make on Danish children age 8-17. By combining existing data on user shares and time spent for all ages, we estimate the share of total platform use in Denmark that is related to children (share of total screen time). We then attribute platform-specific advertisement revenue in Denmark to children based on the share of total screen time. We make an adjustment in our attribution to reflect that advertisements to children are likely less valuable than those to adults because these advertisements may not be targeted to the same extent due to legislation.

We find that Danish children are a significant user group for big tech platforms, both in terms of time spent and revenue generated. Specifically, we find that:

- Based on our estimation approach, we find that the **five platforms** made an estimated total of **327 million DKK** on Danish children aged 8-17 in 2024.
- **The yearly revenue** for the average child who uses each of the platforms ranges from **59 DKK per user** (Snapchat) to **316 DKK per user** (TikTok).
- **The average monthly** user share across 8-17-year-olds ranges from **33 per cent** (Facebook) to **81 per cent** (YouTube).
- **The average daily time** spent by users of the respective platforms across 8-17-year-olds ranges from **25 minutes** (Facebook) to **130 minutes** (TikTok).

[1] Our study covers children age 8-17 in the baseline.

Background

Data shows that Danish children and youth are active on big tech platforms,[2] such as YouTube and TikTok. While these platforms offer entertainment and social connectivity, they may also expose minors to harmful content and addictive features – particularly when age verification mechanisms are ineffective, or easily bypassed, e.g. where children can simply state an older age.

This means that children and youth have become a core part of big tech platforms' business model. Children are primarily monetised directly via advertisement views. Beyond this, children may be monetised via subscription revenue or indirectly via the collection of behavioural data, which is used to fine-tune algorithms and platform design.

The digital rights of children have gained attention both in Denmark and at the EU level. In conjunction with assuming the EU Presidency, Denmark is aiming to make the digital rights of children a policy priority. Recently, the Danish government introduced a proposal for a national minimum age for access to social media,[3] generally allowing children to create a profile on social media not before they turn 15.[4] The stated purpose of this proposal is to better protect children and youth in a digital reality where many experience declining wellbeing and increasing addiction to social media.[5] At the EU level, the European Commission has initiated the first investigative actions following the Guidelines on Protection of Minors under the Digital Services Act. The Commission is requesting Snapchat, YouTube, Apple and Google to provide information on their age verification systems, as well as on how they prevent minors from accessing illegal products or harmful material.[6]

Although children and youth are key users of big tech platforms, there is currently little evidence regarding the economic interests at play. While big tech platforms such as Google and Meta, publish annual financial reports, these documents only provide aggregated global figures and general revenue categories. They are not obliged to disclose how much income is generated from specific national markets such as Denmark, nor how much of their revenue is related to children and young users. Therefore, any estimate must build on various third-party sources and assumptions. Research from 2023 provides an estimate of how much revenue big tech platforms generate from children and youth in the US.[7] However, no similar estimates are available for Denmark.

Our analysis provides an estimate for how much advertisement revenue big tech platforms make on Danish children age 8-17. The analysis is based largely on data that is publicly available, and we do not have any data directly from big tech platforms. To arrive at our estimates, we make various simplifying assumptions. Accordingly, our estimates are associated with some uncertainty.

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[2] In this analysis we include Facebook, Instagram, TikTok, Snapchat and YouTube.

[3] We note that there may be a discrepancy between "big tech platforms" as defined in this study and "social media platforms", e.g. whether YouTube is included or not.

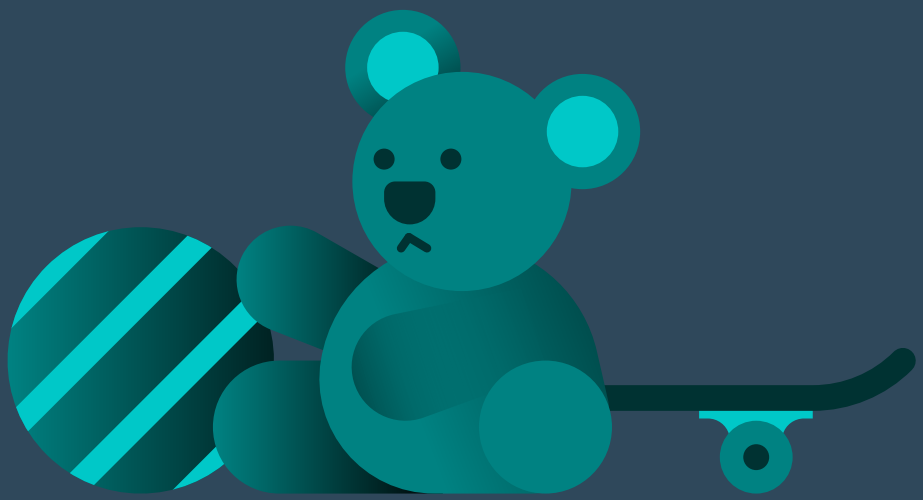
[4] For children aged 13 and 14, this may be allowed with parental consent according to the proposal. The age limit of 13 is in alignment with EU legislation.

[5] Ministry of Digitalisation (2025). Regeringen: Børn og unge under 15 år skal ikke have sociale medier (English: Government: Children and young people under 15 should not have social media), Available here. (Accessed: 31 October 2025).

[6] European Commission (2025). Commission scrutinises safeguards for minors on Snapchat, YouTube, Apple App Store and Google Play under the Digital Services Act, Available here. (Accessed: 31 October 2025).

[7] Raffoul, A., Ward, Z. J., Santoso, M., Kavanaugh, J. R., & Austin, S. B. (2023). Social media platforms generate billions of dollars in revenue from US youth: Findings from a simulated revenue model. Plos one, 18(12), e0295337.

1 Approach



1 Approach

We describe our approach to arrive at an estimate for advertisement revenue for each platform in two sections. First, we describe the data sources used in the analysis, see section 2.1. Second, we describe our used methodology, see section 2.2.

1.1 Data sources

To estimate how much advertisement revenue each platform makes on children age 8-17, we employ four types of input data:

- User shares, by age and platform
- Daily time spent among users, by age and platform
- Population data, by age
- Revenue in Denmark, by platform

In Table 1, we list the data sources we employ for estimating user shares:

Table 1: Overview of data sources for the estimation of user shares

Source	Survey period	Data covers	Source importance	Ages covered	Actual usage or self-reported usage
Danish Competition and Consumer Authority (2025)*	4th quarter, 2023	**User shares:** For each age, the number of people who have used the social media platform within the last month, divided by the number of respondents	**Main source:** used for user shares for 8–25-year-olds	Each age from 8 to 25	Self-reported usage
Statistics Denmark (2025a), table kv2ms1	2024	**User shares:** The share of respondents who used the platform within the last 12 months** (per cent of population)	**Secondary source:** Used to fill-in user shares that are not covered by the main source (i.e. for 26–90-year-olds)	16-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75+	Self-reported usage

Note: * For this source, we had access to the underlying data. ** To combine the two datasets, we assume that the number of users who used the platform in the past year but not in the past month is negligible.

Source: Copenhagen Economics.

In Table 2, we list the data sources we employ for estimating daily time spent among users:

Table 2: Overview of data sources for the estimation of daily time spent among users

Source	Survey period	Data covers	Source importance	Ages covered	Actual usage or self-reported usage
Kantar Gallup/ Social Media Life 2020 on behalf of the Danish Ministry of Culture	October 2020 - November 2020	**Average time spent among users:** Time spent "yesterday" among users who use the social media platform at least monthly, per platform	**Main source:** Used for average time spent among users in 2021 for 12-90-year-old	12-18, 19-34, 35-54, 55-70, 71+	Self-reported usage
Danish Competition and Consumer Authority (2025)*	4th quarter, 2023	**Average time spent among users:** Average daily time spent during the past week among those with valid time data.	**Secondary source:** Used to extrapolate average time spent among users aged 8-11 as this is not covered by the main source. Also used to level-adjust.	Each age from 8 to 25	Actual usage, where the platform is among top five most used platforms for a user**
Media Council for Children and Young People (2025)	December 2024 - January 2025	**Average time spent among users and non-users:** Time spent on an average day on each platform	**Secondary source:** Also used to level-adjust.	Each age from 13 to 17	Self-reported usage

Note: * For this source, we had access to the underlying data. ** Because the screenshots containing usage data only contain the five most used apps.

Source: Copenhagen Economics.

In Table 3, we list our source for population data:

Table 3: Overview of data source for population data

Source	Year	Data covers	Source importance	Ages covered
Statistics Denmark (2025b), table FOLK1AM	2025	**Population:** Number of individuals in Denmark in January 2025, by age*	**Main source:** Used to obtain the number of people at each age in Denmark	Each age from 0 to 125

Note: We use month "2025M1". Source: Copenhagen Economics.

In Table 4, we list the sources we employ for estimating revenue numbers:

Table 4: Overview of data sources for the estimation of revenue

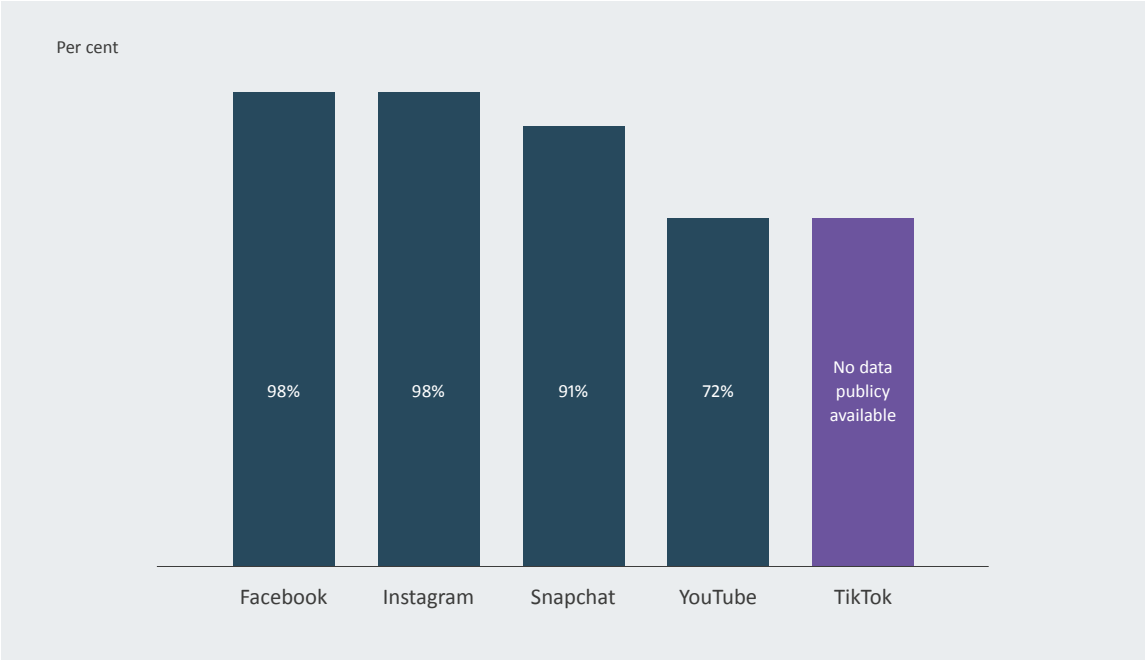
Source	Year	Data covers	Source importance	Platforms covered	Actual or estimated data
Statista (2025a)	2024	Annual advertisement spending in Denmark, by platform*	Main source	Facebook, Instagram, Snapchat, and TikTok	Estimated data
Alphabet annual report	2024	YouTube Ads global revenue & Alphabet's global revenue share in the EMEA region	Main source	YouTube	Actual data
International Monetary Fund	2025	GDP, by region (billion $)	Secondary source		Actual data
Statista (2025b)	2025	Monthly YouTube users, by country	Secondary source		Estimated data
Eurostat	2025	EU population, by country	Secondary source		Actual data
Exchange-rates.org	2024	Average USD/EUR exchange rate in 2024	Secondary source		Actual data

Note: * We calculate each platforms annual advertisement spending by multiplying total annual advertisement spending in Denmark by the 'brand shares' under 'key players' on the same link.

Source: Copenhagen Economics.

For advertisement revenue estimates, we use data from Statista who report advertisement revenue in Denmark in 2024 for Facebook, Instagram, TikTok, and Snapchat.[8] For YouTube, we approximate Danish advertisement revenue by scaling Alphabet's self-reported global advertisement revenue for YouTube Ads to Denmark. We apply this method due to the lack of publicly available reliable revenue estimates for YouTube's advertisement revenue.[9] We use advertisement revenue as opposed to total revenue since this is the best available revenue measure and, in any case, constitutes most of the platforms' revenue, see Figure 1.[10]

Figure 1
Advertisement revenue share of total global revenue, by platform



Note: The share for TikTok is unknown. TikTok also has a subscription solution. The estimates for Facebook and Instagram are identical as they are calculated using global revenue numbers for Meta. YouTube's advertisement revenue share is approximated using a quote in Alphabet's 2024 Q3 report saying that YouTube's total global revenue for the previous four quarter surpassed $50 billion revenue for the first time ever. In Alphabet's 2025 annual report, they report that YouTube Ads generated $36 billion globally in 2024.

Source: Copenhagen Economics based on Meta (2025), Alphabet (2025), Snapchat (2025), and Alphabet (2024).

[8] Statista (2025a).

[9] We approximate YouTube's advertisement revenue in Denmark by 1) approximating YouTube's advertisement revenue in the EMEA region by applying EMEA's share of Alphabet's total revenue to YouTube's global advertisement revenue. 2) Next, we scale this EMEA revenue number by the EU's GDP share of EMEA's GDP (in current $) to approximate YouTube's advertisement revenue in the EU. 3) Finally, we approximate YouTube's advertisement revenue in Denmark by applying Denmark's share of total YouTube users in the EU.

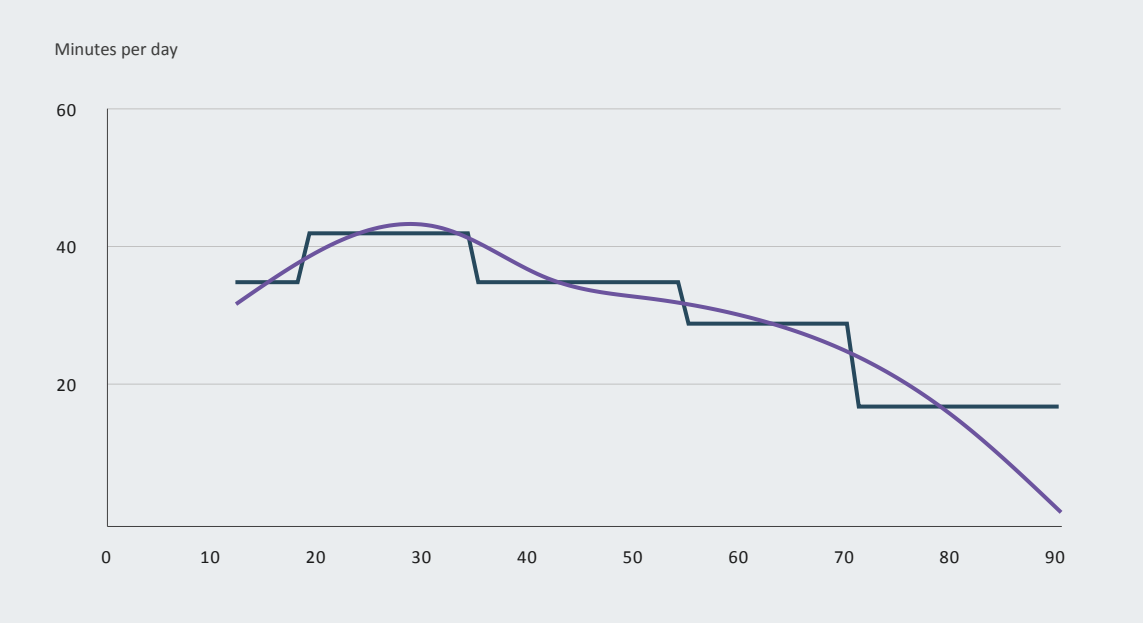
[10] Hereafter, we only focus on advertisement revenue, and all mentions of revenue refer to advertisement revenue.

1.2 Methodology

Estimating continuous age-specific estimates

For input data covering age intervals, we apply Natural Cubic Splines (NCS)[11] to generate continuous age-specific estimates for the data, see example in Figure 2.

Figure 2
Example of age-specific estimates using NCS compared to input data in ranges (daily time spent on Facebook for 12–90-year-olds)*



Note: * In the estimation, we impose a non-negativity constraint on the estimated values.

Source: Copenhagen Economics based on input data from Kantar Gallup/Social Media Life 2020 on behalf of the Danish Ministry of Culture (2021).

Additionally, we impose a set of assumptions to fill data gaps and take into account that our sources cover different time periods. Our approach is as follows:

To obtain age-specific **user shares**, we combine data from the Danish Competition and Consumer Authority (DCCA) from 2023 and Statistics Denmark from 2024.[12] For 8-25-year-olds, we use the data from the DCCA as these user shares are age-specific for each age between 8 and 25. We calculate the user share for each age by dividing the number of people who report they have used the platform within the last 30 days by the total number of respondents for each age.

As it is essential for our later revenue attribution calculations that we have user shares for all ages, and the data from the DCCA only covers 8-25-year-olds, we supplement this data with user shares for 26+ year olds from Statistics Denmark.

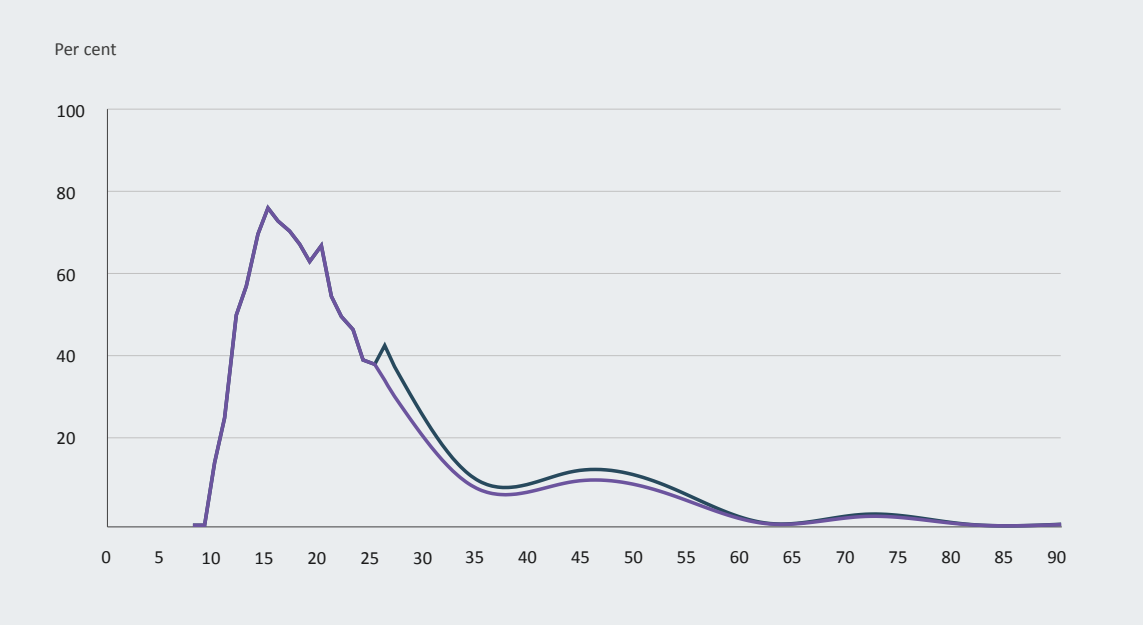
[11] Natural cubic splines" is a mathematical tool used to create smooth curves through a set of data points. "Cubic" means that each segment of the curve is defined by a cubic (third degree) polynomial which allows the curve that we fit to bend in a smooth way, which is ideal since platform usage does not necessarily increase or decrease in a straight line. "Natural" refers to boundary conditions that make the curve become increasingly linear when approaching the edges to avoid unrealistic swings at the endpoints.

[12] Statistics Denmark (2025a).

We use NCS to construct continuous age series for 26+ year olds based on the data from Statistics Denmark, as Statistics Denmark only report user shares as averages across age intervals. We construct the NCS such that the population-weighted averages of the NCS estimates are equal to the interval averages reported by Statistics Denmark.[13] The population-weights are also based on data from Statistics Denmark.[14] We impose two additional constraints; the estimates must be non-negative and not exceed 100 (as the estimates are in per cent).

To avoid kinks between 25-year-olds and 26-year-olds (i.e. where the two data sources intersect), we apply a level adjustment to the NCS series based on the difference between the DCCA data and the NCS estimates for 25-year-olds.[15] The adjustment is specific to each platform, see example in Figure 3.

Figure 3
Example of level adjustment of user share for TikTok



Note: We note that data from 8-25 is actual data based on the DCCA, so the "kink" that can be seen at age 19 is not due to a level difference but reflects the actual data.

Source: Copenhagen Economics based on the underlying data in Danish Competition and Consumer Authority (2025) and Statistics Denmark(2025a).

To obtain age-specific estimates for **time spent**, we combine data from the Danish Ministry of Culture (DMC) from 2020, the DCCA from 2023, and the Media Council for Children and Young People (the Media council) from 2024-2025.

We use the DMC data as our main source for time spent, as this source contains estimates from 12-year-olds to 71+-year-olds. We do this since it is again essential for our later revenue attribution calculations that we have time spent estimates for all ages (and that is neither available in the data from the DCCA nor in the data from the Media Council).

[13] For instance, this means the population-weighted average of the NCS estimates for the ages 16-24 exactly match the reported user share in the age interval 16-24 from Statistics Denmark (2025a). This applies for all age intervals.

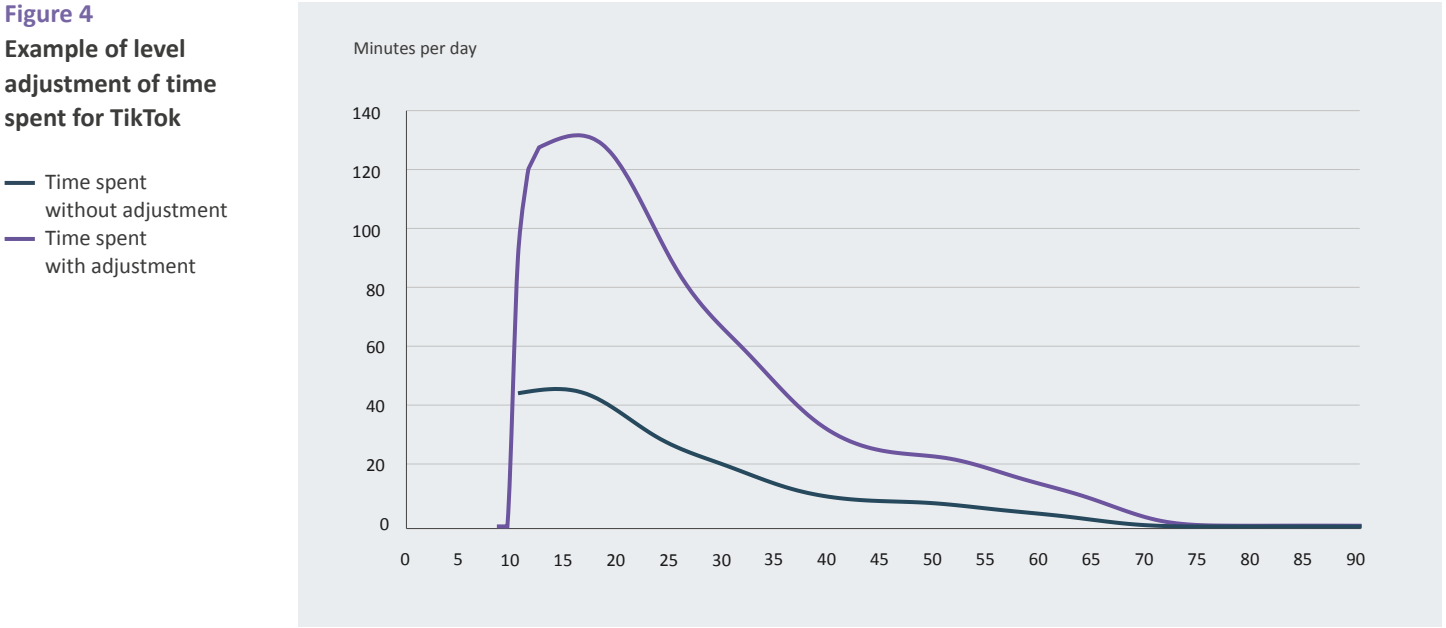
[14] Statistics Denmark (2025b).

[15] If the NCS estimate for 25-year-olds is higher, we reduce the entire NCS series by the per centage gap between 25-year-olds in the two sources. If the NCS estimate for 25-year-olds is lower, we adjust the entire NCS series proportionally to the remaining distance to 100 per cent between the two data sources, ensuring no estimate exceeds 100 per cent.

As the DMC data contains time spent in age intervals, we apply population-weighted NCS to obtain age-specific estimates for time spent. The method is largely the same as for user shares except that we do not impose an upper bound on the estimates, as these estimates are minutes, not shares. For ages 8-11, we use time spent data from the DCCA to extrapolate the NCS estimates.[16]

Next, we conduct a level-adjustment to account for the fact that the data from the DMC is from 2020 and thus significantly older than our data for user shares and advertisement revenue. We do this adjustment by combining the NCS estimates for the DMC data with more recent data for time spent from the DCCA and the Media council. All three sources provide platform specific time spent estimates for ages 13–17, allowing us to compute a level-adjustment based on these ages,[17] see an example in Figure 4.

Figure 4
Example of level adjustment of time spent for TikTok



Source: Copenhagen Economics based on data from Kantar Gallup/Social Media Life 2020 on behalf of the Danish Ministry of Culture (2021), the underlying data in Danish Competition and Consumer Authority (2025), and the Media Council for Children and Young People (2025).

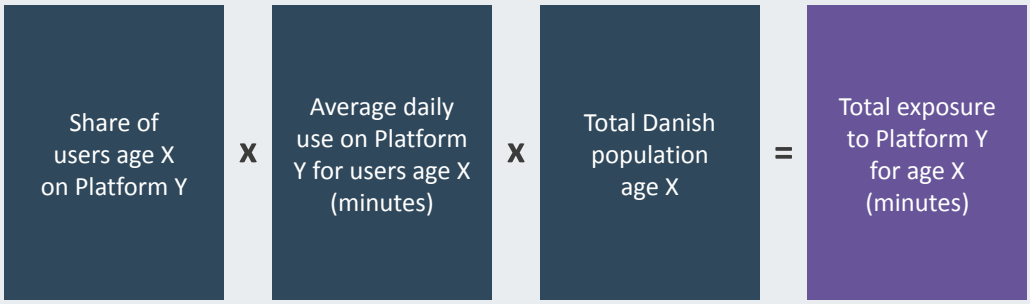
[16] Specifically, we use the per centage change between each age from age 12 to age 8 in the time spent data from DCCA on the NCS estimate for 12-year-olds. For instance, if there is a 10 per cent decrease in time spent from 12-year-olds to 11-year-olds in the DCCA data we apply a 10 per cent decrease to the NCS estimate for 12-year-olds to obtain an estimate for 11-year-olds.

[17] We use an equal weighting between the DCCA and the Media Council, as there is no clear argument for favouring one source over the other. On one hand, the data from DCCA contains actual data, which is preferable to self-reported data. However, as the DCCA only contains actual data from iPhone screenshots, it does not include usage on computer and tablets which self-reported data includes. Moreover, the iPhone screenshots only include top 5 most used apps which might underestimate time spent of some apps. Finally, the data from the Media Council is a bit more than a year newer than the data from DCCA but is in turn only reported in relatively broad time intervals. We conduct the scaling by applying the population-weighted difference between the DMC estimates and equally-weighted estimates from DCCA and the Media Council for ages 13–17 to scale all time spent estimates for each age from 8 to 90. As the Media Council reports time spent among users and non-users, we divide their values by our estimated user shares to obtain time spent among users, which makes the numbers directly comparable to the DMC and the DCCA data.

Estimating total time spent on each platform for 8-17-year-olds

By multiplying user shares and the average time spent among users, we obtain the average daily time spent per person (users and non-users) by age and platform. Then, by multiplying this number by the number of individuals in each age group, we obtain the total daily time spent by age and platform, see Figure 5.

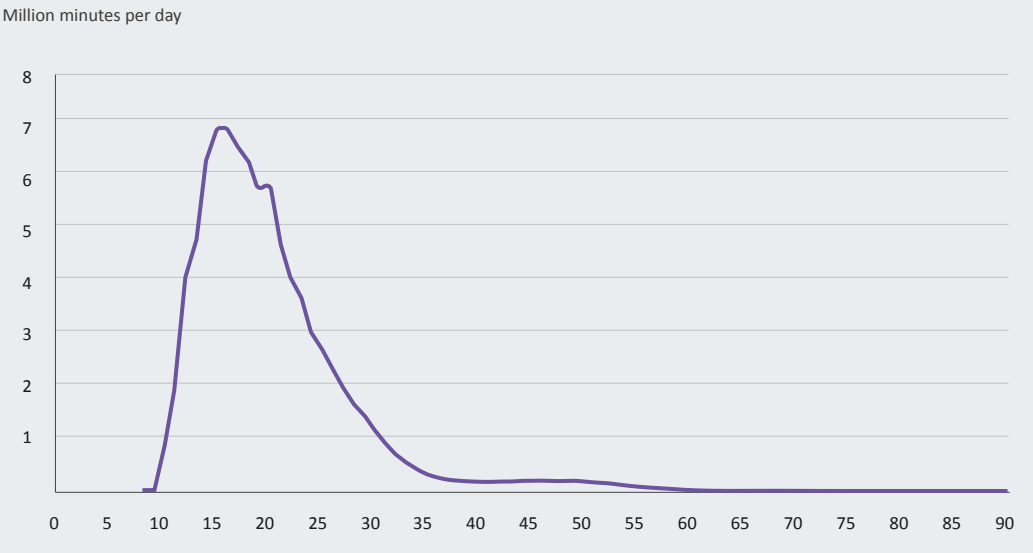
Figure 5
Estimating total share of screen time (exposure), by platform and age



Source: Copenhagen Economics.

Using these age-specific estimates we can calculate how much of the total time spent on each platform is attributable to Danish children aged 8–17, see example of total daily exposure for all ages for TikTok in Figure 6.

Figure 6
Total daily screen time on TikTok by age



Source: Copenhagen Economics.

Revenue attribution
Using age-specific estimates of total time spent on each platform we can calculate how much of the total time spent on each platform is attributable to Danish children across ages 8–17.

By calculating 8-17-year-olds share of the total number of minutes spent, we obtain how much of total screen time can be attributed to 8-17-year-olds in Denmark on each platform. As we do not believe it is realistic that revenue-per-minute is the same for children and adults, we impose age-specific revenue-per-minute adjustments.

This is due to the restriction that platforms cannot target advertisements towards minors based on profiling using personal data ('behavioural targeted advertising'),[18] and hence can only use contextual advertisements to children and youth below 18.[19] Contextual advertisements are often worth less than behavioural targeted advertisements e.g., due to a lower degree of personalisation, which can reduce effectiveness, i.e. advertisements are associated with lower click-through rates and conversion rates.

To reflect this potential difference in revenue (which we assume would be reflected in revenue-per-minute),[20] we rely on an estimate from the literature[21] and impose a constraint that advertisements to 8-17-year-olds are worth 75 per cent less than for adults.

We apply this adjustment to 78 per cent of 8-17-year-olds (on average), as we assume that the remaining 22 per cent misreport their age as being 18+ based on Ofcom (2024),[22] and hence are still exposed to targeted advertisements.[23] For the remaining 22 per cent, we assume that the revenue-per-minute is the same as for adults. This assumption about revenue-per-minute attribution is further discussed in section 3.

Total revenue
To estimate total revenue figures for the platforms, we multiply each platform's total revenue by the revenue-per-minute-adjusted time spent estimates, by age. This gives us how much of each platform's total revenue that can be attributed to each age. By summing the values for 8-17-year-olds, we obtain how much of each platform's total revenue that can be attributed to 8-17-year-olds.

[18] European Parliament & Council of the European Union (2022). Regulation (EU) 2022/2065 of the European Parliament and of the Council on a Single Market for Digital Services and amending Directive 2000/31/EC (Digital Services Act). Official Journal of the European Union, L 277, 1–127, Available here. (Accessed: 31 October 2025).

[19] In this context, targeted advertisements refers to the practice of using personal data to automatically evaluate or predict an individual's characteristics – such as their preferences, interests, behaviour, or location – in order to tailor and deliver specific advertisements, see the European Parliament & Council of the European Union (2016). Regulation (EU) 2016/679 of the European Parliament and of the Council on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation). Official Journal of the European Union, L 119, 1–88, Article 4, point (4), Available here. In contrast, contextual advertisements refers to the display of advertisements based on the content or context of the page being viewed, rather than on personal data or profiling of the user.

[20] Assuming also the same average advertisement impressions per minute across ages.

[21] Johnson, G. A., Shriver, S. K., & Du, S. (2020). Consumer privacy choice in online advertising: Who opts out and at what cost to industry?. Marketing Science, 39(1), 33-51.

[22] Ofcom (2024). Children's User Age Wave 3, Available here. (Accessed: 31 October 2025).

[23] 22 pct lie on average, but we apply age specific estimates based on the Ofcom source. We implicitly assume that this distribution is the same for all platforms.

2 Results

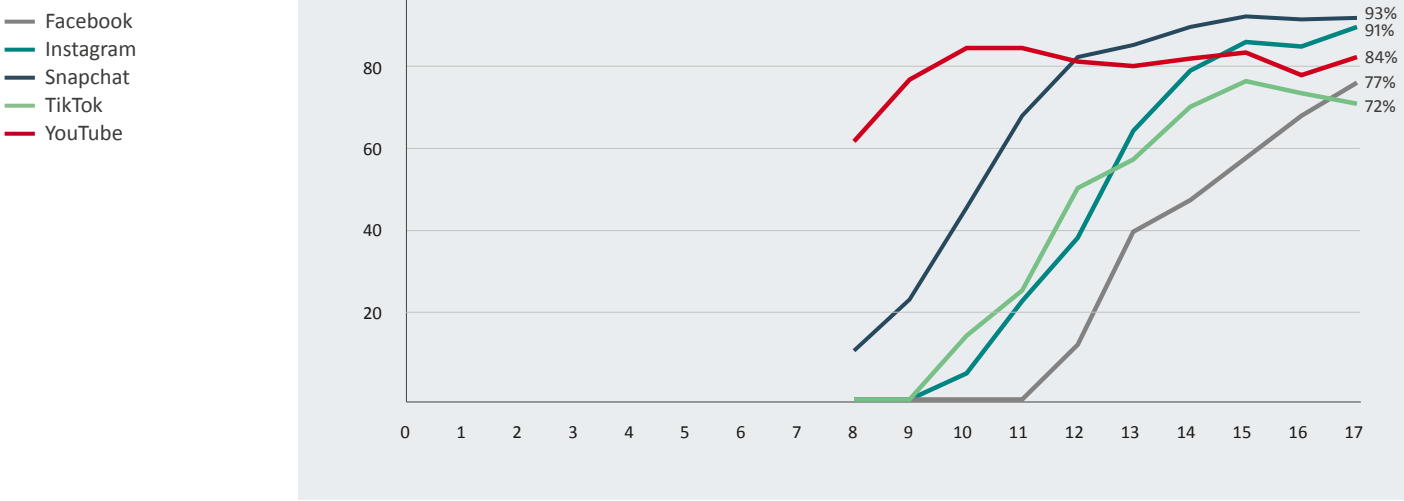
2 Results

We report four main results. First, we report the estimated share of Danish children age 8-17 who use each platform monthly, see section 3.1. Second, we report the estimated amount of time a Danish user age 8-17 spend on each platform daily, see section 3.2. Third, we report the number of hours that 8–17-year-olds in Denmark collectively spend on each platform over the course of a year, as well as the average annual time spent by 8-17-year-olds, see section 3.3. Last, we report the estimated advertisement revenue that each platform makes on Danish children age 8-17 and for the subgroup age 8-12 as well as additional measures that shed light on the im-portance of this user group to each platform, such as share of total screen time (exposure time), see section 3.4.

2.1 Monthly user shares for each platform

For each of the platforms included in the analysis, we first present estimates for the development in monthly user shares between age 8-17, see Figure 7.

Figure 7
Monthly user share, by platform and age



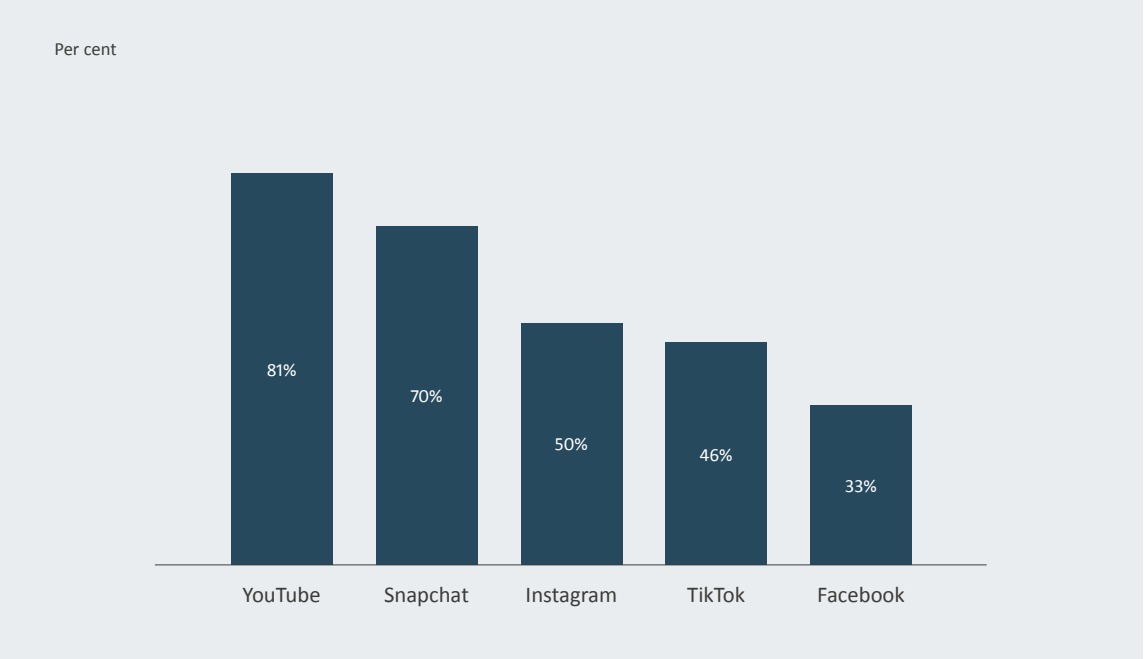
Note: Data is calculated using self-reported monthly use based on survey responses from 3,445 Danish children, teens, and young adults aged 8-25 with a smartphone. The number of respondents in each age range from 146 persons to 244 persons. User shares of 0 per cent do not necessarily imply zero users but rather reflect too few respondents reporting use of the specific platform. Consequently, those data are excluded due to discretionary considerations.

Source: Copenhagen Economics based on the underlying data in Danish Competition and Consumer Authority (2025).

We find that Facebook is generally the least used platform out of the five amongst 8-17-year-olds as well as the platform that children start using last. According to our findings, children start using TikTok and Instagram around age 10 while Facebook is introduced at age 12. We do however note that our data is based on children who have their own smartphone. It is likely that some usage is present also for younger children using tablets or their parents' smartphone. From the development between 8-17, we infer that it is likely that user shares for YouTube are substantial for children below 8 years while there is a low user share for Snapchat for children below 8 years. YouTube has the steadiest share of users across 8-17-year-olds compared to the four other platforms for which we see a sharp increase in users as children get older. At age 17 Snapchat has the highest share of users with 93 per cent of 17-year-olds using it monthly, while TikTok with 72 per cent has the lowest share of monthly users.

On average, YouTube has the highest share of users while Facebook has the lowest, see Figure 8.

Figure 8
Monthly user share for 8-17-year-olds, by platform



Note: Data is calculated by multiplying the monthly user shares from Figure 7 by the number of persons at each age. This gives the number of users in each age. Next, we sum the number of users aged 8-17 and divide this by the total number of people aged 8-17 in Denmark.

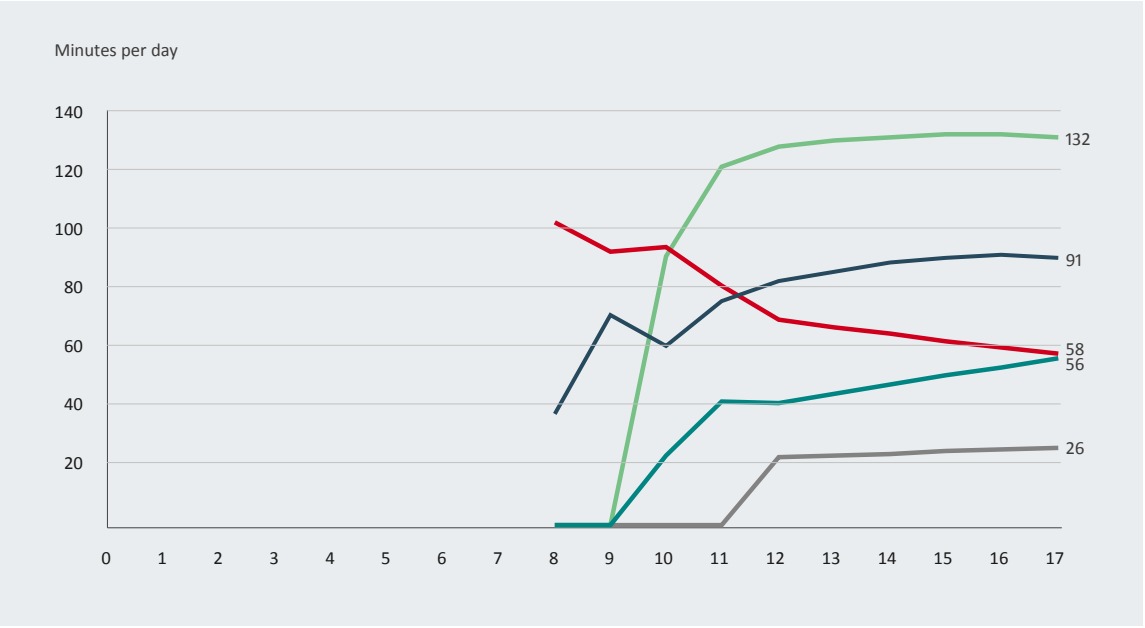
Source: Copenhagen Economics based on the underlying data in Danish Competition and Consumer Authority (2025), and population data from Statistics Denmark (2025b).

The average share of monthly users across 8-17-year-olds to a large degree reflects the introduction age of the platform. That is, when children start using a platform at an earlier age, the average will also be higher. By age 17, the five platforms have broadly similar user shares while user shares differ significantly at age 8.

2.2 Daily time spent for users of each platform

For each of the platforms in the analysis, we first present estimates for the development in daily time spent for users between age 8-17, see Figure 9.

Figure 9
Average daily time spent by users of the platform, by platform and age



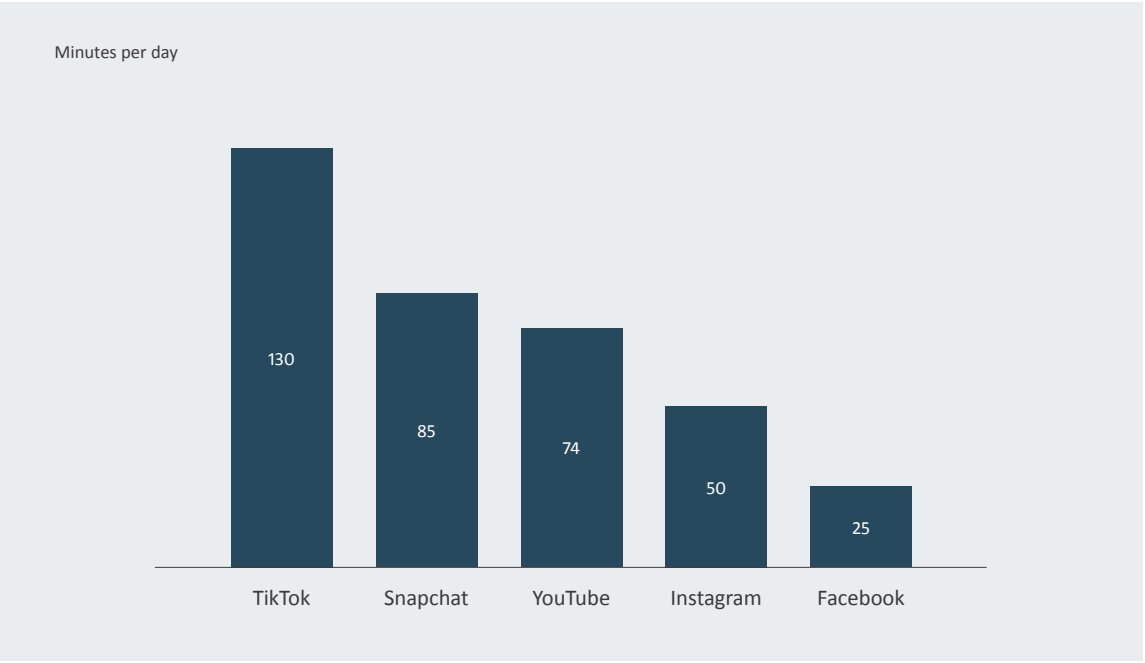
Note: Data is estimated using NCS on data from Kantar Gallup/Social Media Life 2020 on behalf of the Danish Ministry of Culture (2021), while additional data sources have been used to scale the data and for extrapolation of usage below age 12. Data are self-reported time spent, reported as the average amount of time users who use the platform at least monthly spent on the platform "yesterday" among 8-25-year-olds with a smartphone. Time spent values of 0 do not necessarily imply zero minutes spent but rather reflect too few respondents with available time spent data for the platform. Consequently, those data are excluded due to discretionary considerations.

Source: Copenhagen Economics based on data from Kantar Gallup/Social Media Life 2020 on behalf of the Danish Ministry of Culture (2021), the underlying data in Danish Competition and Consumer Authority (2025), and the Media Council for Children and Young People (2025).

We find that as well as having the fewest users within the age group of 8-17-year-olds, Facebook is also the platform that users spent least time on. Users in this age group spent most time on TikTok daily, and the daily time spent increases quickly as soon as children start using the platform. We find that daily time spent is relatively constant between age 12 and 17 for both TikTok and Snapchat after which it starts to decline. Interestingly, the daily time spent on YouTube appears to be declining from children are 8 years old. At age 17, the users who use TikTok and Snapchat spent the most time with 132 minutes and 91 minutes on average, respectively. Users of YouTube and Instagram age 17 spent around 1 hour daily on average while Facebook users at age 17 spent 26 minutes daily on average.

On average across all ages 8-17 we see a similar picture, see Figure 10.

Figure 10
Average daily time spent by users of the platform across 8-17-year-olds, by platform



Note: Data is calculated by multiplying the average daily time spent by users from Figure 9 by the share of users, per age, multiplied by the number of individuals in Denmark, per age. This gives total time spent among users in Denmark, by age and platform. Summing the total time spent across 8-17-year-olds and dividing this number by the total number of users aged 8-17 gives the average daily time spent among users.

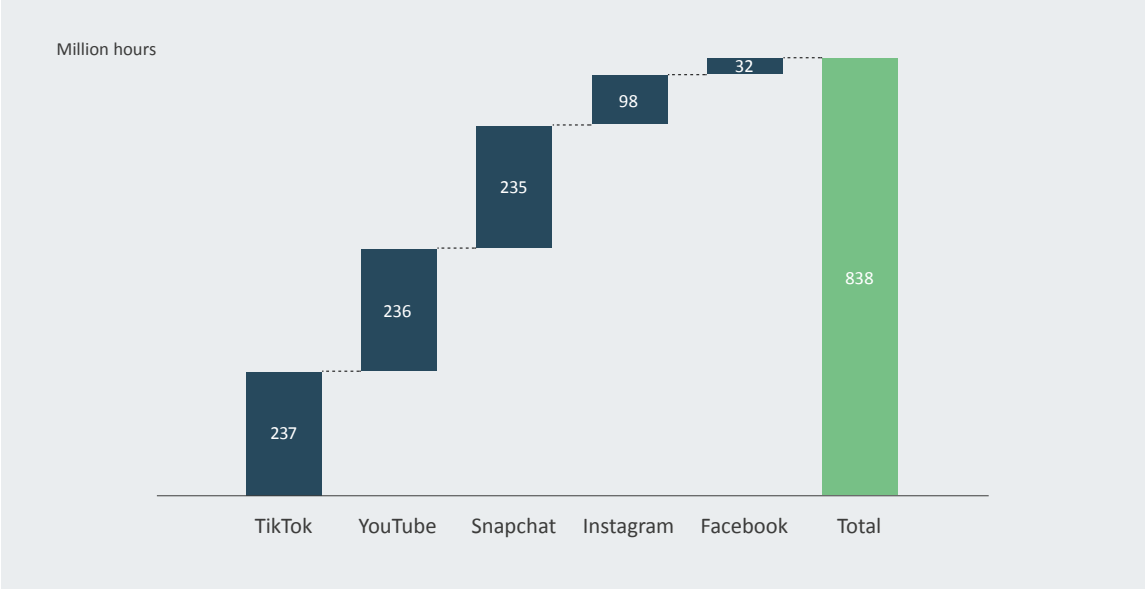
Source: Copenhagen Economics based on data from Kantar Gallup/Social Media Life 2020 on behalf of the Danish Ministry of Culture (2021), the underlying data in Danish Competition and Consumer Authority (2025), and the Media Council for Children and Young People (2025).

Children age 8-17 who use TikTok spent most time with a daily average of more than 2 hours. TikTok is followed by Snapchat, YouTube, Instagram and Facebook. The average will be affected by how much and how fast time spent develops once a platform is introduced.

2.3 Total time spent by all 8-17-year-olds in Denmark in a year on each platform

For each of the platforms, we report total time spent in a year by all 8-17-year-olds, see Figure 11.

Figure 11
Number of hours spent by 8-17-year-olds in Denmark in a year, by platform

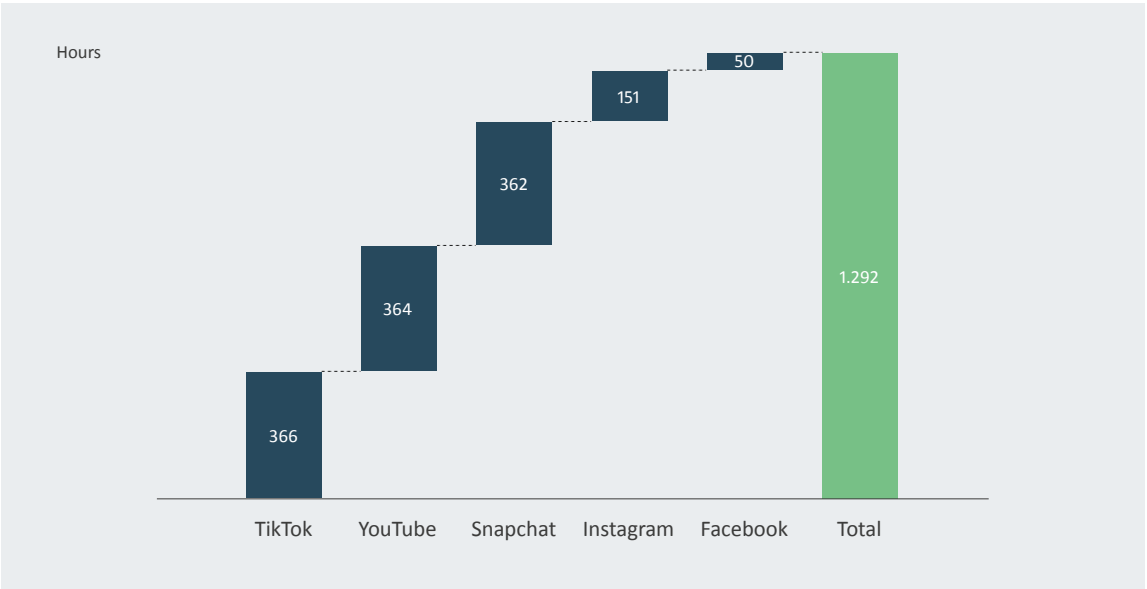


Note: Data is calculated by multiplying the average daily time spent by users by the number of users, per age, and multiplying by 365 days.
Source: Copenhagen Economics.

We find that Danish children age 8-17 in total spent 838 million hours on the five platforms in a year. More than 700 million of those hours were spent on either TikTok, YouTube or Snapchat.

This means that the average child age 8-17 on average spend 1,292 hours a year on the five platforms, equivalent to around 3.5 hours per day, see Figure 12. Please note that this is a simplification, as we do not know if the average child is present on all five platforms. It might as well be the case that the average child is only present on three or four platforms.

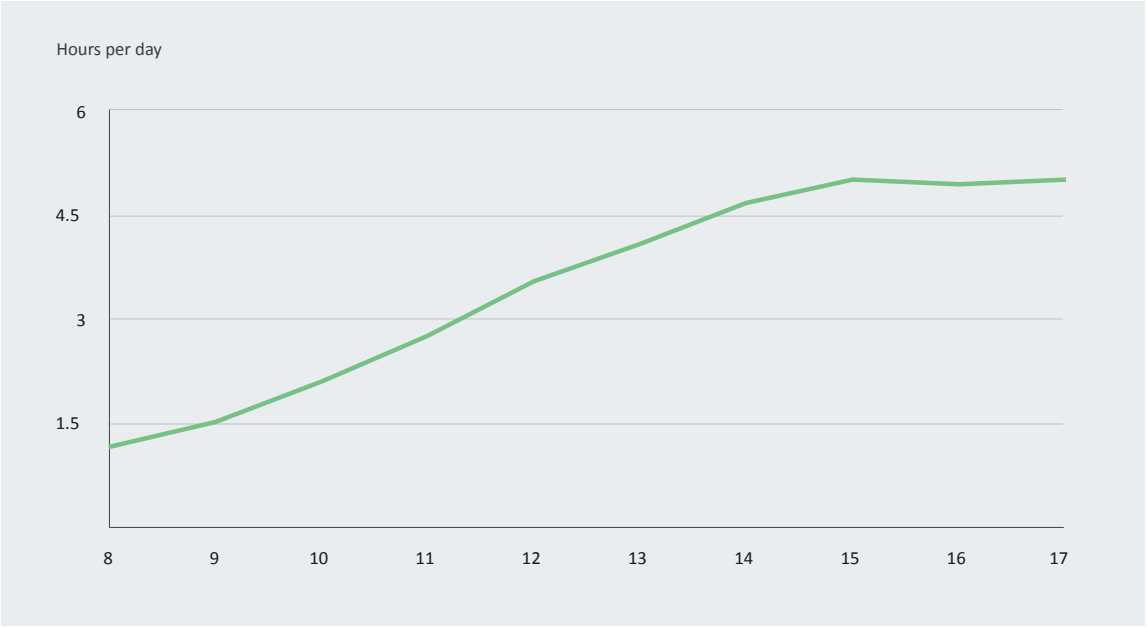
Figure 12
Number of hours spent by the average 8-17-year-old in a year in Denmark, by platform



Note: Data is calculated by dividing total number of hours spent by the number of 8-17-year-olds in Denmark.
Source: Copenhagen Economics.

Finally, by disaggregating the number of hours spent on all five platforms, by age, we find that the average 17-year-old spends roughly 5 hours per day on the platforms, see Figure 13.

Figure 13
Number of hours spent by the average 8-17-year-old in Denmark in a year, by platform



Note: Data is calculated by dividing total hours spent per day on all five platforms by the number individuals, per age.

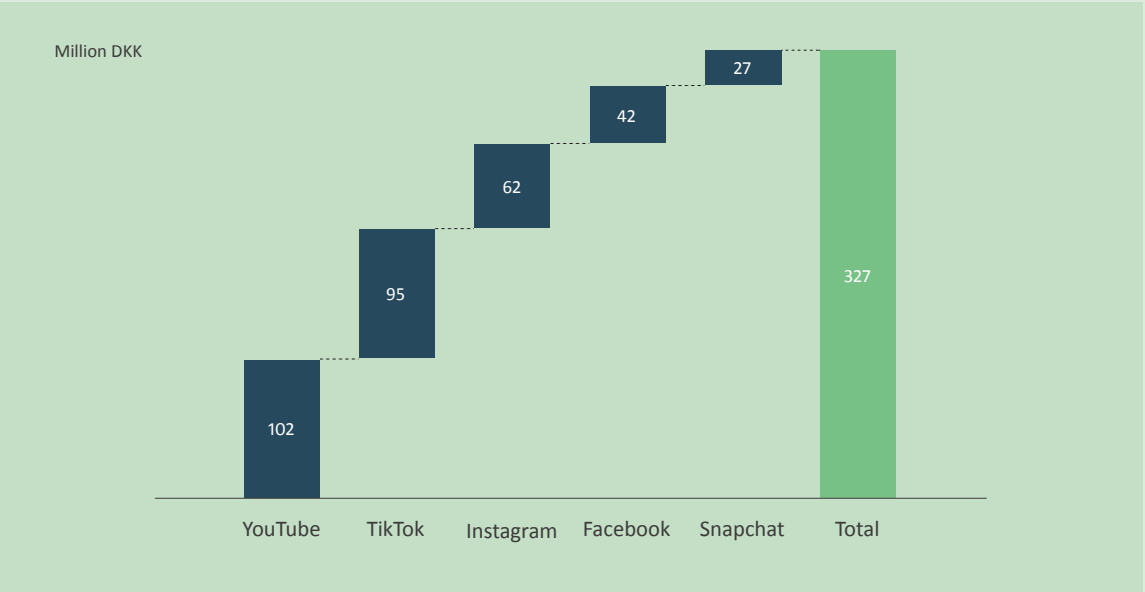
Source: Copenhagen Economics.

2.4 Total advertisement revenue each platform makes on Danish children

Main result – total advertisement revenue

The main result of our analysis is how much advertisement revenue the platforms included in the analysis make on 8-17-year-old Danish children on a yearly basis. We estimate that the five platforms made a total of 327 million DKK in 2024, see Figure 14.

Figure 14
Advertisement revenue from 8-17-year-olds in Denmark (2024), by platform

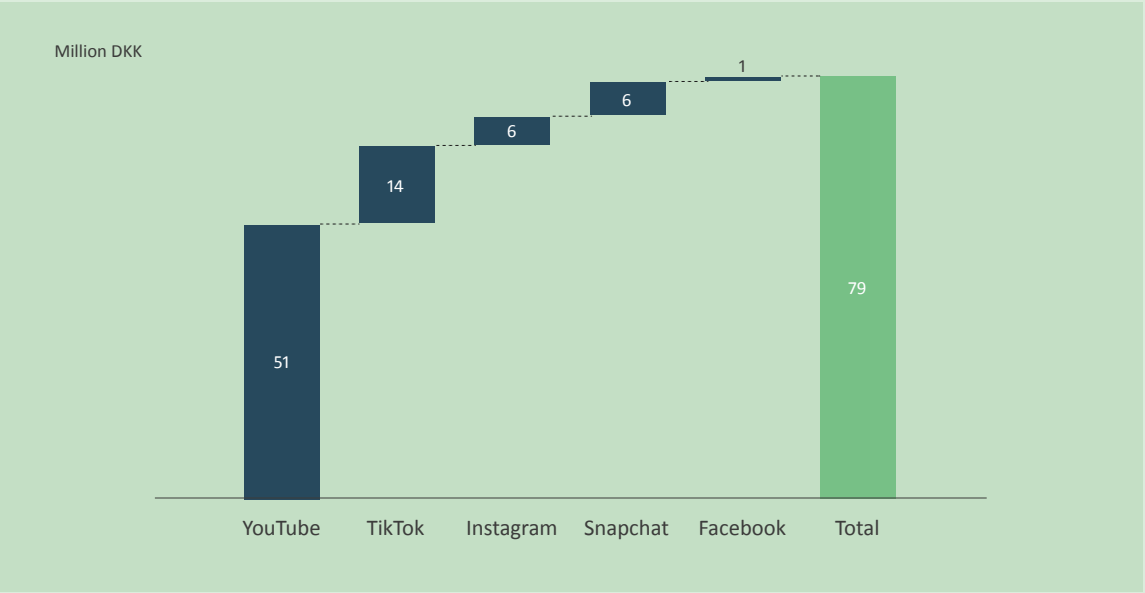


Source: Copenhagen Economics.

Our results show that YouTube accounted for the largest share of the total advertisement revenue made by the platforms, while Snapchat made the least. This result also reflects the general size and advertisement revenue of these platforms, as we saw that Snapchat was in fact widely and often used by 8-17-year-olds.

Moreover, we find that the platforms made 79 million DKK in 2024 on 8-12-year-olds which was mainly driven by YouTube. This corresponds to almost 25 per cent of the total advertisement revenue being made in relation to 8-17-year-olds and is particularly interesting, since children younger than 13 are not allowed to use the platforms due to age restrictions. We note that there is a nuance in relation to YouTube since it is possible to use this platform without a user profile. In addition, YouTube offers "YouTube Kids" which allows parents to set age-based restrictions on profiles also for children below age 13, see Figure 15.

Figure 15
Advertisement revenue from 8-12-year-olds in Denmark (2024), by platform



Source: Copenhagen Economics.

As mentioned in the methodology section, we assume a non-uniform relationship between age and how much revenue-per-minute a platform makes. We assume a lower revenue-per-minute for children (ages below 18) compared to adults. We do this because platforms are not allowed to target advertisements towards children, and research shows that contextual advertisements are worth less than targeted advertisements. See Box 1 for a wider discussion of this assumption.

Box 1 Uniform vs age-specific revenue-per-minute

As mentioned in the background introduction, there is recent evidence from the US on how much revenue big tech platforms make on children and youth. In this study, we use a similar methodology to the authors of the US study.

The authors of the US study, however, assume a uniform revenue-per-minute relationship for children and adults. The stated reason for this was a lack of sources to model a non-linear relationship ("Due to lack of data, we assumed that revenue per minute of platform use was constant by age.").[24] We agree that sources are scarce but find that an assumption of uniform revenue-per-minute is unrealistic and that such an assumption will likely lead to an overestimate of the revenue that can be attributed to children.

For this reason, we use different revenue-per-minute measures for children (below 18) and adults respectively. We assume that revenue-per-minute is 75 per cent lower for children compared to adults. This is based on a study by Johnson et. al (2020) which shows that when European users opt out of behavioural targeted advertising, this reduces advertisement effectiveness costing publishers an estimated 75 per cent of advertisement revenue.[25] That losing the ability to target advertisements by profiling significantly reduces advertisement revenue is backed by other sources, including a study by the UK Competition and Markets Authority (2020)[26] and Johnson et. al (2023). The latter took advantage of a natural experiment when YouTube under a settlement with the Federal Trade Commission limited personalization for made-for-kids (MFK) content in the US in 2020. The consequence was, among other things, that one YouTube MFK content creator experienced a 73 per cent drop in advertisement prices after the settlement.[27]

We acknowledge the difficulty in assessing the exact difference in advertisement revenue from children vs adults, and we highlight that our approach only attempts to account for any differences between behavioural targeted advertising and contextual advertising, while it could be that there are other differences between children and adults which affect the value of contextual advertisements. The main difference would be that children have lower purchasing power compared to adults, but other factors such as differences in attention span and conversion rates might also affect advertisement revenue. However, arguments also exist as to why this is not necessarily the case, for example that:

– Advertisements towards children and youth can be more impactful as children are more easily influenced.[28]
– Children influence their parents' spending (so-called "pester power").[29]

Source: Raffoul, A., Ward, Z. J., Santoso, M., Kavanaugh, J. R., & Austin, S. B. (2023). Social media platforms generate billions of dollars in revenue from US youth: Findings from a simulated revenue model. Plos one, 18(12), e0295337; Johnson, G. A., Shriver, S. K., & Du, S. (2020). Consumer privacy choice in online advertising: Who opts out and at what cost to industry?. Marketing Science, 39(1), 33-51; The Competition and Markets Authority (2020). Online platforms and digital advertising. Available here. (Accessed: 31 October 2025); Johnson, G., Lin, T., Cooper, J. C., & Zhong, L. (2023). COPPAcalypse? The Youtube Settlement's Impact on Kids Content (Vol. 4430334). SSRN.

Since research shows that some children lie about their age on social media to appear to be at least 18 years of age, we account for this in our revenue estimation. Specifically, since a recent study by Ofcom shows that 22 per cent of 8-17-year-olds (on average) specify a user age of at least 18,[30] we attribute the same revenue-per-minute as to adults to this share of the 8-17-year-olds,[31] since in practice these users can receive targeted advertisement.

Our assessment is that using a non-uniform relationship for revenue-per-minute is likely to be more accurate and, in any case, more conservative compared to using the same revenue-per-minute for all children and adults.

[24] Raffoul, A., et al. (2023).

[25] We adjust our revenue-per-minute attribution based on this study even though newer literature exists. The reason for this is that this study both offers a Europe-specific measure and is based on a broad user base.

[26] The study was based on an experiment conducted by Google. In the experiment Google effectively blocked the use of cookie data which decreased revenue for publishers by 70 per cent.

[27] We do not rely on this estimate since it only builds on one content creator.

[28] Although we note that even if an advertisement is more impactful it does not necessarily make it more profitable given that children and youth also have less purchasing power.

[29] See e.g. Lavuri, R., & Aileni, V. R. (2021). TV Advertisements: Assessing the Moderating Effect of Children's Pester Power on Parents Purchase Decision. Journal of Promotion Management, 28(5), 625–649.

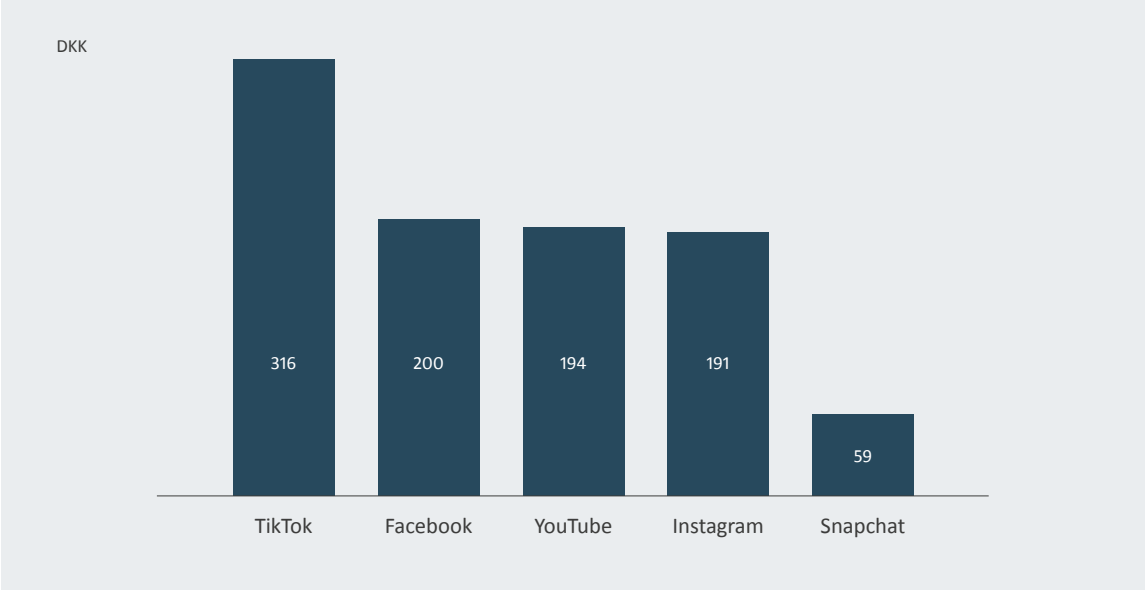
[30] Ofcom (2024).

[31] We use the specific numbers that Ofcom states: 17 per cent for 8-12s, 26 per cent for 13-15s, 28 per cent for 16-17s.

Results on advertisement revenue per user and share of revenue

To put the advertisement revenue of each platform into further context we have calculated the yearly advertisement revenue per user age 8-17, see Figure 16.

Figure 16
Yearly advertisement revenue per user age 8-17 (2024), by platform

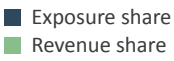


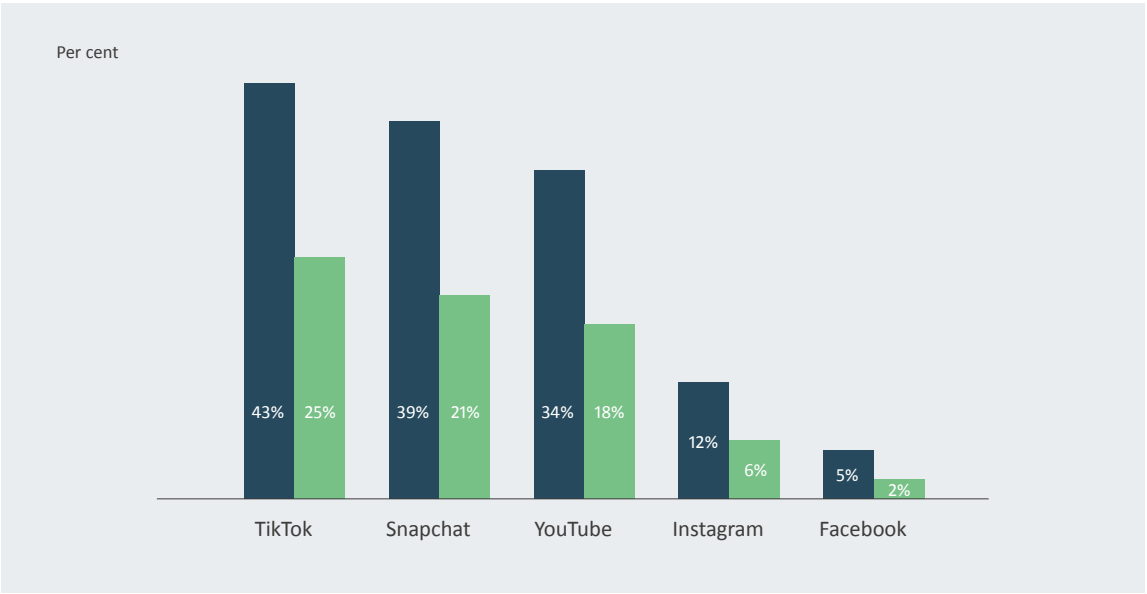
Source: Copenhagen Economics.

We thus estimate that for example TikTok makes 316 DKK in advertisement revenue in a year on the average Danish child age 8-17 who uses the platform.

To reflect further on the importance of the user group of 8-17-year-olds, we present both the share of total revenue in Denmark that can be attributed to children in this age group for each platform, as well as the share of total screen time (exposure). That is, how large a share of the total minutes spent on e.g. TikTok is spent by 8-17-year-olds, see Figure 17.

Figure 17
Share of total advertisement revenue and exposure time in Denmark from 8-17-year-olds (2024), by platform



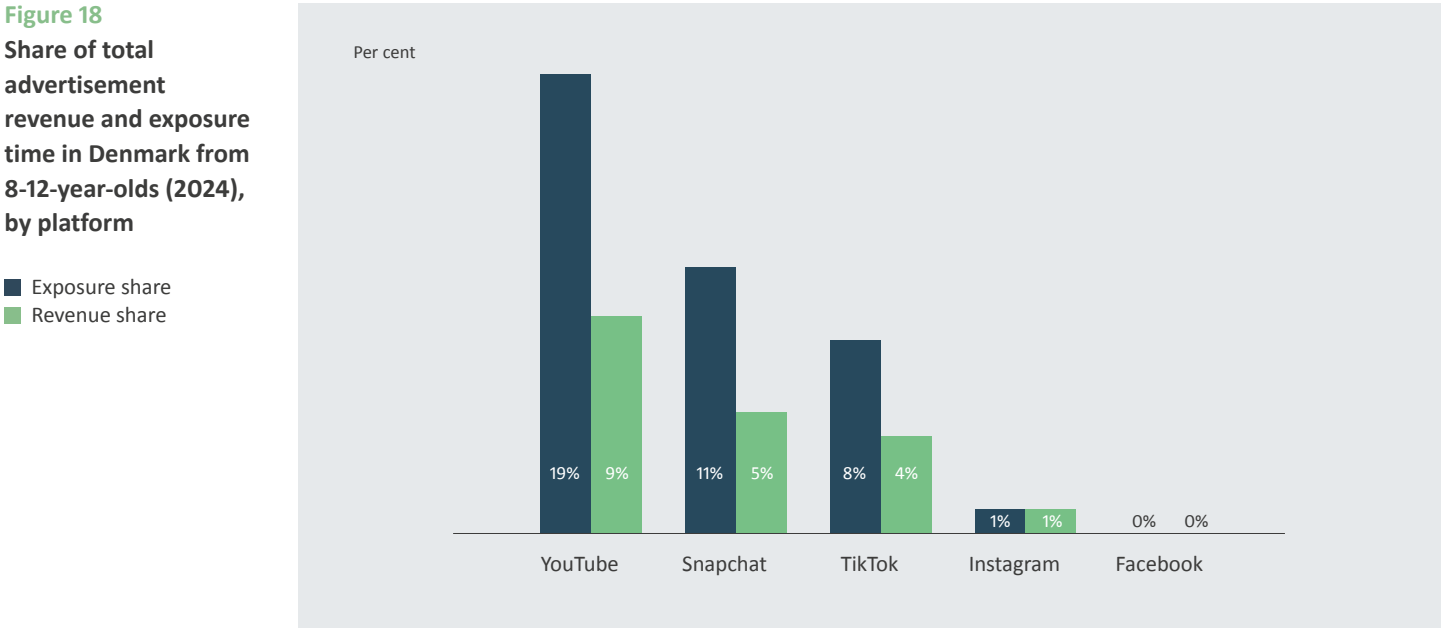


Source: Copenhagen Economics.

The revenue share is lower than exposure time due to the assumption of lower revenue-per-minute for children. We find that for TikTok, Snapchat and YouTube children account for a large share of total exposure with numbers as high as 43 per cent for TikTok.

By again looking at users age 8-12-year-olds, who are not allowed to use the platforms due to age restriction, we find this age group accounts for 19 per cent of YouTube's total exposure and 9 per cent of YouTube's revenue. We also find that both Instagram and Facebook are almost not used at all by 8-12-year-olds, see Figure 18.

Figure 18
Share of total advertisement revenue and exposure time in Denmark from 8-12-year-olds (2024), by platform



Source: Copenhagen Economics.

3 Sensitivity analysis

3 Sensitivity analysis

We conduct two different sensitivity analyses. First, we test the effect of our revenue-per-minute attribution, see section 4.1. Second, we test the effect of including children below 8 years in the analysis, see section 4.2.

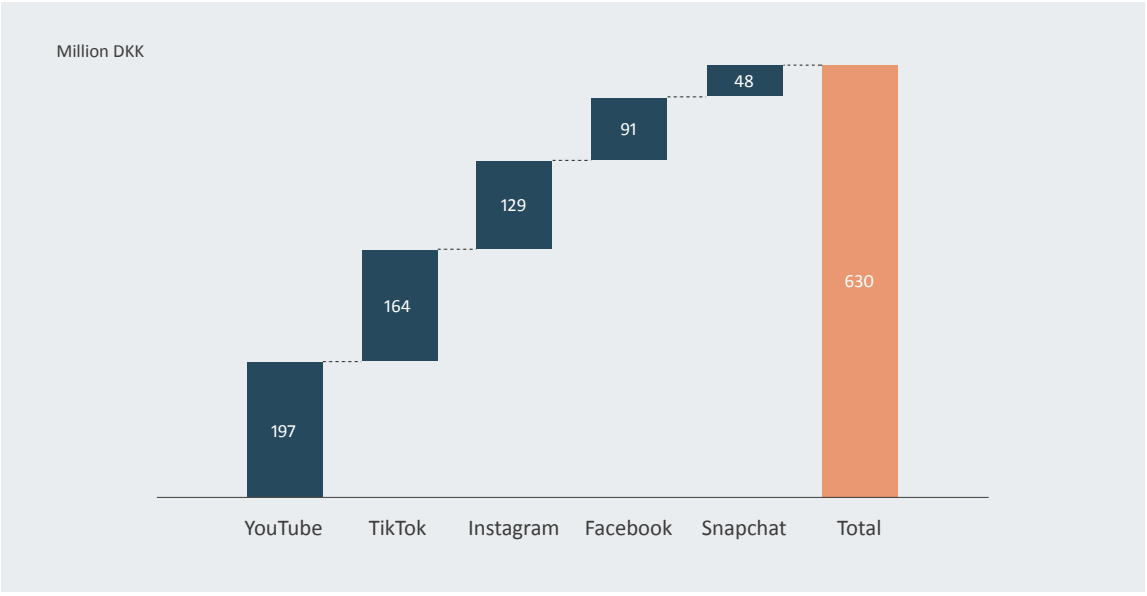
3.1 Revenue-per-minute attribution

We have made two choices that affect how we distribute total revenue to each age group and thus how much revenue is ultimately attributed to 8-17-year-olds for a given platform.

The first choice is the assumption of a non-uniform revenue-per-minute relationship between children and adults respectively. That is, we assume that platforms do not make the same on advertisements to children and adults. Specifically, we assume that advertisements viewed by children are worth 75 per cent less than advertisements viewed by adults. As a sensitivity test, we instead assume uniform revenue-per-minute, that is, we assume the same value for all users. This has the benefit of allowing comparison to the results of the US study[32] in terms of revenue share attributed to children and in terms of total revenue per child for comparable platforms. Results based on this sensitivity test can be viewed as a less conservative estimate for how much revenue each platform makes on 8-17-year-olds compared to our baseline result.

We find that when we assume a uniform revenue-per-minute for all ages the platforms in total make an estimated 630 million DKK in advertisement revenue on Danish children age 8-17, see Figure 19.

Figure 19
Advertisement revenue from 8-17-year-olds in Denmark when assuming uniform revenue-per-minute (2024), by platform



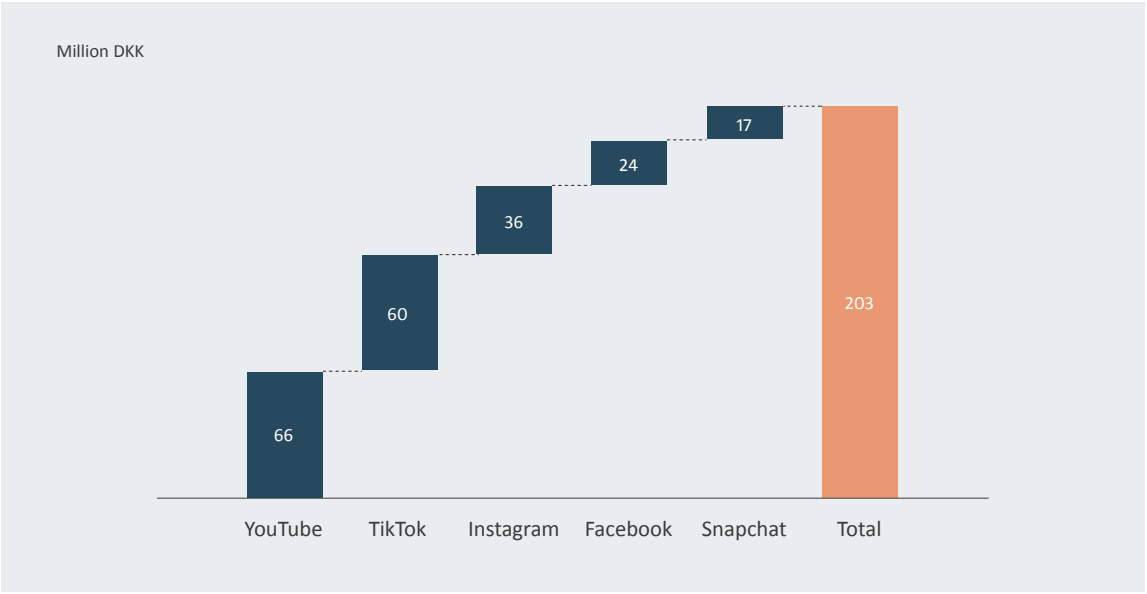
Source: Copenhagen Economics.

[32] Raffoul, A., et al. (2023).

The second choice is to allow a share (22 per cent on average) of 8-17-year-old users to have the same revenue-per-minute as adults. We do this because this share of children specifies an age of 18 or more on the platforms, they are present on, allowing them to receive targeted advertisement. As a sensitivity test, we withhold from making this adjustment. That is, we instead attribute a lower revenue-per-minute to all 8-17-year-olds. Results based on this sensitivity test can be viewed as a more conservative estimate of how much revenue each platform makes on 8-17-year-olds compared to our baseline result.

We find that when we do not adjust for children who lie about their age the platforms in total make an estimated 203 million DKK, see Figure 20.

Figure 20
Advertisement revenue from 8-17-year-olds in Denmark when not adjusting for children lying about their age (2024), by platform



Source: Copenhagen Economics.

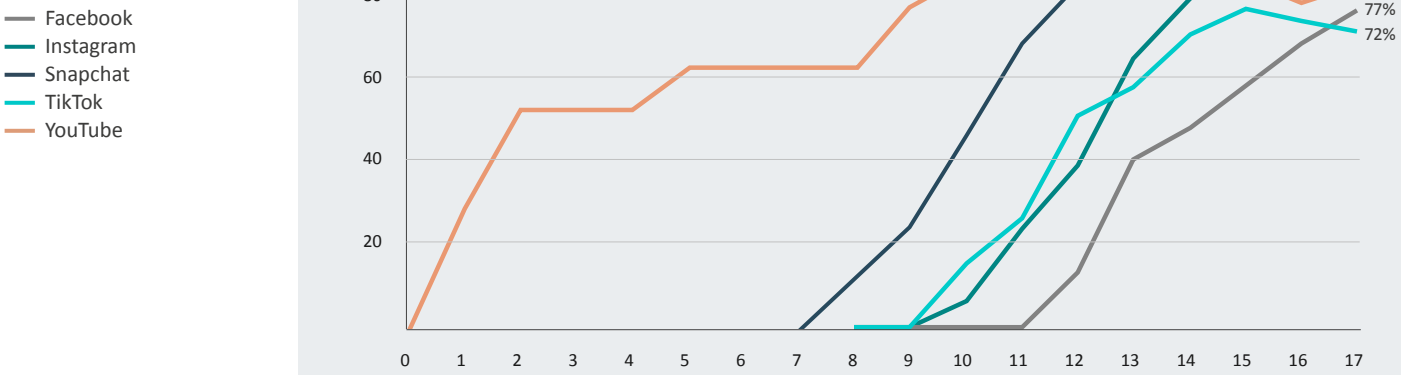
3.2 Including children below 8 years of age

Due to the reliability of our input data, our analysis in the baseline is based on 8-17-year-olds. Based on our results it is however likely that in particular YouTube but also Snapchat has users below the age of 8.

For this reason, we do a sensitivity test where we include children below the age of 8. The user shares and time spent for these platforms that we apply are subject to considerable uncertainty. We qualify the user shares and time spent for children below 8 for YouTube and Snapchat (since these are the only relevant ones). We rely on data from a 2025 US study from The Common Sense Census about media use by kids age 0-8 to extend the share of users of YouTube.[33] For Snapchat, we extrapolate our estimates linearly from 11-year-olds to 8-year-olds which would imply a negative user share for 7-year-olds. As this is not possible, we assume a monthly user share of 0 per cent for 0-7-year-olds, see Figure 21.

[33] Common Sense (2025). Media Use by Kids Zero to Eight, Available here. (Accessed: 31 October 2025).

Figure 21
Monthly user share when including below 8-year-olds, by platform and age

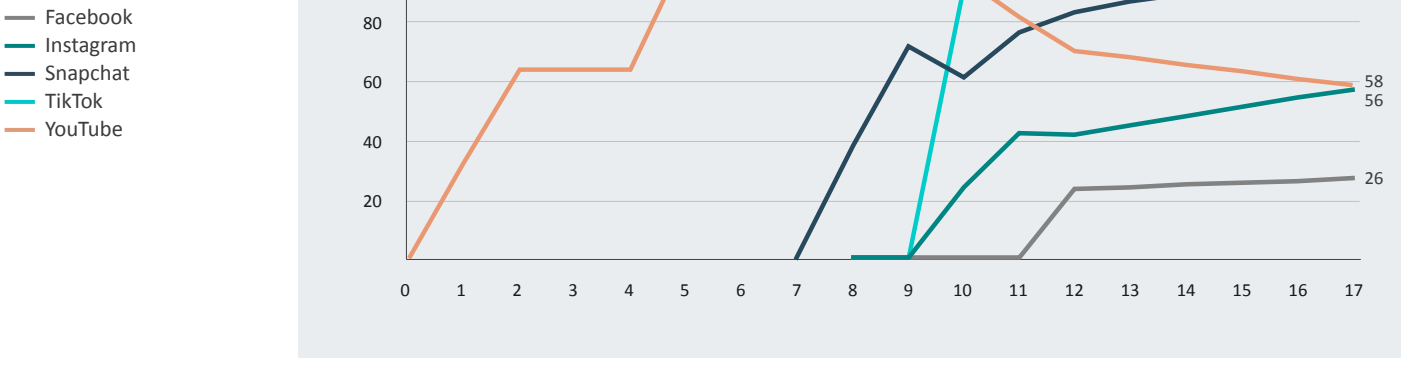


Note: We extrapolate user shares for 0-8-year-olds using American estimates from table 9 in Common Sense Media (2025). Consequently, for 5–8-year-olds, we apply factor 1 relative to the 8-year-olds. For 2-4-year-olds we apply 0.83 factor relative to the estimate for 8-year-olds. For 1-year olds we apply a 0.47 factor relative to 8-year-olds. Finally, we assume that 0 per cent of 0-year-olds use YouTube. User shares of 0 per cent do not necessarily imply zero users but rather reflect too few respondents reporting use of the specific platform. Consequently, those data are excluded due to discretionary considerations.

Source: Copenhagen Economics based on the underlying data in Danish Competition and Consumer Authority (2025), and Common Sense (2025).

We rely on data from the same US study to extent the series of daily time spent below age 8, see Figure 22.

Figure 22
Average daily time spent by users of the platform when including below 8-year-olds, by platform and age

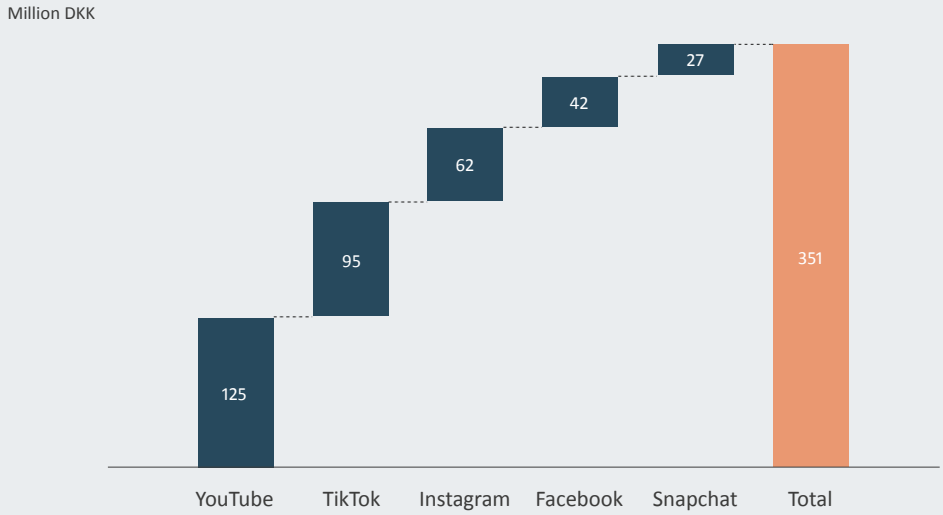


Note: We extrapolate daily time spent by users for 0-8-year-olds using American estimates from Figure A in Common Sense Media (2025). Consequently, for 5–8-year-olds, we apply a factor 1 relative to the 8-year-olds. For 2-4-year-olds we apply a 0.62 factor relative to the estimate for 8-year-olds. For 1-year olds we apply a 0.3 factor relative to 8-year-olds. Finally, we assume that 0-year-olds use YouTube 0 minutes. For Snapchat, our extrapolation of the monthly user share in Figure 21 implies that the average daily time spent by users is non-existent as the user share is 0 per cent. Time spent values of 0 do not necessarily imply zero minutes spent but rather reflect too few respondents with available time spent data for the platform. Consequently, those data are excluded due to discretionary considerations.

Source: Copenhagen Economics based on data from Common Sense (2025), Kantar Gallup/Social Media Life 2020 on behalf of the Danish Ministry of Culture (2021), the underlying data in Danish Competition and Consumer Authority (2025), and the Media Council for Children and Young People (2025).

When including children below 8 years of age, we find that the total estimated advertisement revenue made by all platforms amounts to 351 million DKK compared to 327 million DKK in the baseline, see Figure 23.

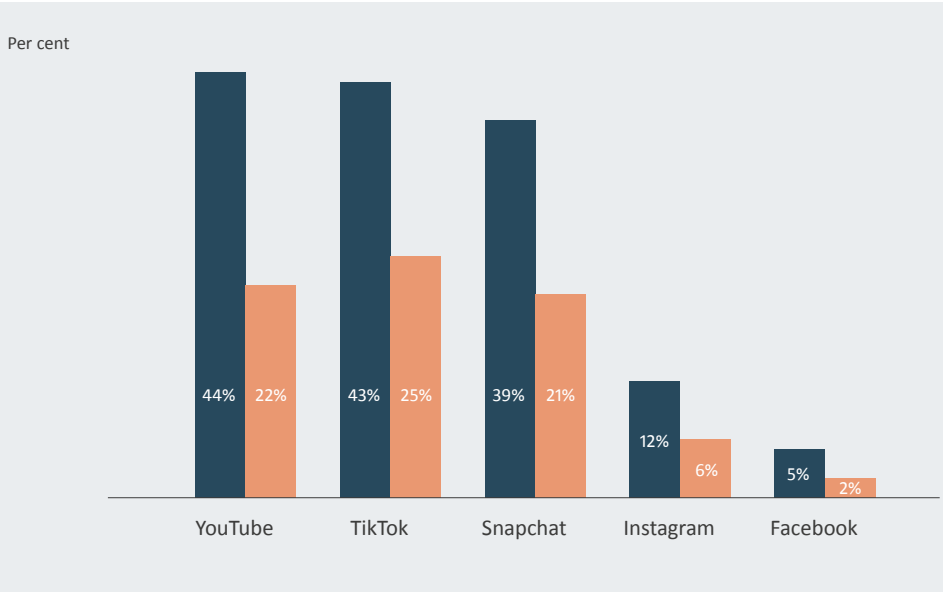
Figure 23
Advertisement revenue from 0-17-year-olds in Denmark when including below 8-year-olds (2024), by platform



Source: Copenhagen Economics.

We find that when including children below age 8, 0-17-year-olds exposure share of YouTube's total exposure increases from 34 per cent in the baseline, see Figure 17, to 44 per cent, see Figure 24. However, YouTube's revenue share from 0-17-year-olds only increases from 18 per cent to 22 per cent. For the other four platforms, the exposure and revenue shares in baseline and in this scenario are identical as we have monthly user shares of 0 per cent for 0-7-year-olds for these platforms.

Figure 24
Share of total advertisement revenue and exposure time in Denmark from 0-17-year-olds when including below 8-year-olds (2024), by platform



Source: Copenhagen Economics.

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Appendix A

Revenue data

In Table A.1 we report the revenue figures for Facebook, Instagram, Snapchat, and TikTok we use in the report:

Table A.1
Advertisement revenue in Denmark in 2024, by platform

Platform	Advertisment revenue (Million EUR)	Source
Facebook	230*	Statista*
Instagram	143*	Statista*
YouTube	77**	CE based on multiple sources**
TikTok	51*	Statista*
Snapchat	17*	Statista*

Note: * We calculate each platform's advertisement revenue by multiplying total annual advertisement spending in Denmark by the 'brand shares' under 'key players' on the same Statista link. ** We estimate the revenue number for YouTube using the method described in Chapter 2.1.

Source: See Table 4.

Appendix B

Estimation results

In table Table B.1, we report our estimated monthly user shares, by platform and age. In Table B.2 we report our estimated average daily time spent among users, by platform and age. In Table B.3, we report our estimated revenue in 2024, by platform and age.

Table B.1
Baseline: estimated monthly user shares (per cent), by platform and age

Age	Facebook	Instagram	Snapchat	TikTok	YouTube
8	0	0	12	0	63
9	0	0	24	0	78
10	0	6	47	16	86
11	0	24	69	26	86
12	13	39	84	51	83
13	41	66	86	59	81
14	49	80	91	71	83
15	59	87	94	78	85
16	69	86	93	75	79
17	77	91	93	72	84

Note: For data sources and methodology, see chapter 2.

Source: Copenhagen Economics based on the sources listed in Table 1.

Table B.2
Baseline: average daily time spent among users (minutes), by platform and age

Age	Facebook	Instagram	Snapchat	TikTok	YouTube
8	0	0	38	0	103
9	0	0	71	0	93
10	0	23	61	92	95
11	0	42	76	122	81
12	23	41	83	129	70
13	23	45	86	131	67
14	24	48	89	132	65
15	25	51	91	133	63
16	26	54	92	133	60
17	26	56	91	132	58

Note: For data sources and methodology, see chapter 2.

Source: Copenhagen Economics based on the sources listed in Table 2.

Appendix B

Table B.3
Baseline: estimated revenue in 2024 (million DKK), by platform and age

Age	Facebook	Instagram	Snapchat	TikTok	YouTube
8	0.0	0.0	0.2	0.0	10.0
9	0.0	0.0	0.6	0.0	10.7
10	0.0	0.3	1.0	1.8	11.8
11	0.0	2.0	1.9	4.0	10.0
12	1.2	3.3	2.6	8.6	8.6
13	4.8	7.1	3.4	12.0	9.9
14	6.3	10.0	4.0	15.8	10.4
15	7.9	11.6	4.2	17.4	10.3
16	10.3	13.0	4.5	18.0	10.0
17	11.6	14.3	4.4	17.0	9.9

Note: For data sources and methodology, see chapter 2.

Source: Copenhagen Economics.

center for
social media, tech
and democracy

ministry of
digital affairs

About Center for Social Media, Tech and Democracy

Center for Social Media, Tech and Democracy was established as part of the Media Agreement 2023-2026. The center is located in the Ministry of Digital Affairs. The center's tasks include contributing knowledge about the mental well-being of users, the impact and consequences of tech giants on society, and the impact of the spread of misinformation and disinformation on digital platforms on democratic discourse.

About Copenhagen Economics
Copenhagen Economics is one of Europe's leading economics consultancies with expertise in applied economics. It delivers rigorous analysis and clear, actionable insights to help organisations and private companies make informed decisions that create value for society. Each project is led by experienced specialists, ensuring complex issues are translated into practical solutions with clarity and impact.

How much do big tech platforms make on Danish children?
December 2025

Published by:
The Ministry of Digital Affairs
Center for Social Media, Tech and Democracy
Stormgade 2-6,
DK-1470 Copenhagen
+45 72 28 24 00
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ISBN: 978-87-85325-19-8

The publication can be downloaded at:
www.digmin.dk

Design: Kontrapunkt