

As of July 2023, Google and Bing handle approximately 95 and 3 per cent, respectively, of Danish general online searches. For Europe as a whole, the corresponding shares are approximately 92 and 3 per cent, respectively.

General online search engines not only provide links to the most relevant web pages. Among other things, users are often presented with paid advertisement search results and/or integrated modules with various types of information, in response to the search query entered into the search engine.

The Danish Competition and Consumer Authority (DCCA) carried out a sector enquiry into the market for general online search engines. The enquiry was carried out between April 2020 to March 2023. The DCCA has published three articles in Danish, shedding light on the findings of the sector enquiry. This note provides a brief summary of the articles, in English:



Integrated modules on online search engines
(published June 2022)

Original title: [Indlejrede moduler på generelle søgemaskiner](#)



Ads and consumer behaviour on online search engines
(published March 2023)

Original title: [Betydningen af annoncer for forbrugernes adfærd på onlinesøgemaskiner](#)



Businesses' self-advertising on online search engines
(published March 2023)

Original title: [Virksomheders selvannoncering på onlinesøgemaskiner](#)

Integrated modules on online search engines

For some queries, users are presented with an *integrated module* that users can interact with and/or directly provide answers to the search query. Examples of such modules includes maps showing stores or restaurants in the user's local area, shopping modules with products, flight schedules, hotel room vacancies, exchange rates or weather information.

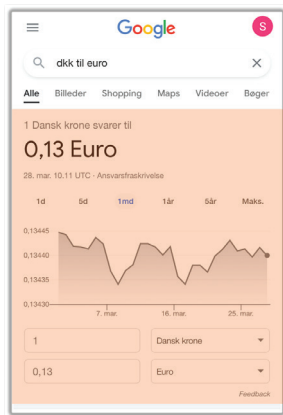
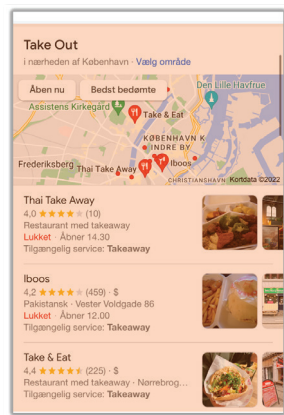
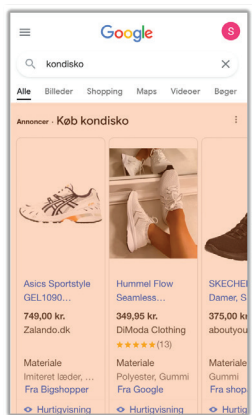
Such modules have become increasingly prevalent and influential in the Danish market. Google Search and Bing have continuously introduced and integrated various types

of modules over the last 15 years. The share of searches on Google that present the user with an integrated module has increased more than tenfold since 2014. The share of zero-click searches (i.e. searches where the user does not click on any of the search results) has increased between 2016 and 2019, especially on mobile device searches.

In a consumer experiment carried out by the DCCA as part of the sector enquiry, one-third of users chose to use Google's exchange rate module and one-sixth chose Google's shopping module, respectively, over clicking on an organic search result.

Integrated modules create consumer value, presumably primarily via the increased convenience they bring to users. The modules' prominent placement on the search result

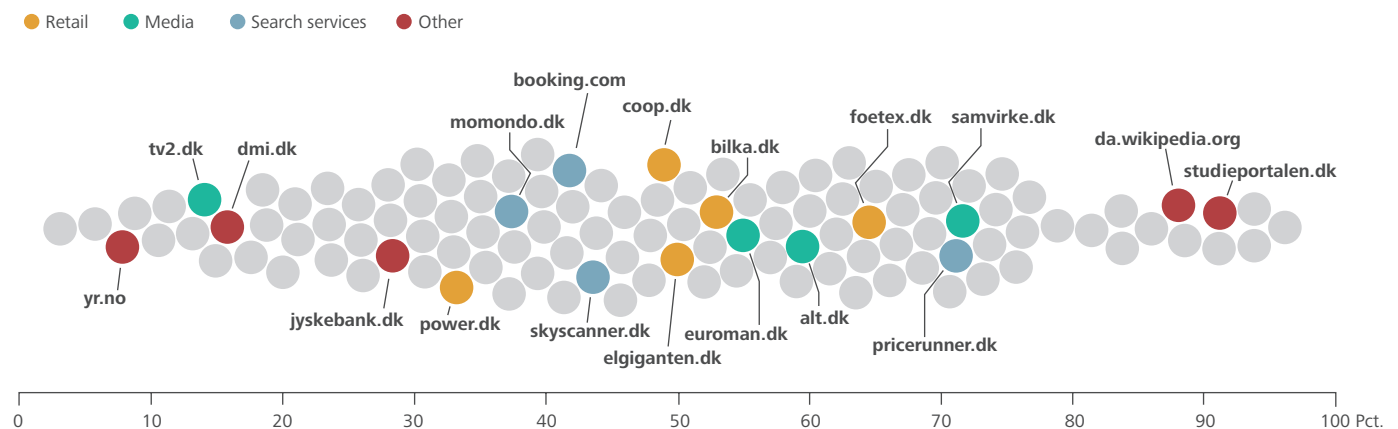
page is a likely contributing factor in that regard. However, integrated modules may at the same time displace web traffic to third-party web pages. A statistical analysis by the DCCA showed that a doubling of the display frequency of Google's currency module led to a 10 per cent reduction in web traffic to the top ten organic search results (i.e. third-party websites offering information about exchange rates). However, the DCCA has not been able to carry out similar analyses for other types of integrated modules, due to lack of data availability.



Decreases in organic traffic via general online search engines can significantly impact Danish firms that rely heavily on such traffic for e.g. customer attraction and sales – indeed, many Danish firms receives more than half of its web traffic via general online search engines, cf. Figure A. It may incentivise firms to (increasingly) purchase targeted ads on Google to counter the traffic decline, potentially resulting in higher costs for businesses and ultimately higher prices for consumers.

The introduction and changes of the algorithms underpinning the integrated modules, including when and how they are displayed, could lead to significant unpredictability for firms dependent on search engine web traffic. This includes shifts in module rankings or the criteria for sources for the information included in module displays, leading to uncertainty about firms' long-term prospects of attracting sufficient traffic from general online search engines.

Figure A. Share of website visitors received via general online search engines



Source: SimilarWeb.

Ads and consumer behaviour on online search engines

The Danish market for advertising on general online search engines (search advertising) has increased more than threefold between 2009 and 2018. Google is by far the largest player in this market, both in Denmark as well as globally.

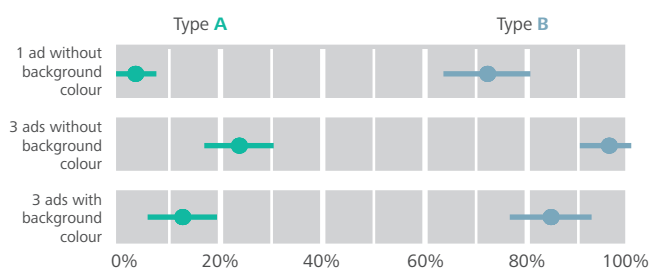
While advertising can be advantageous for consumers and businesses, to showcase products and enhance competition, it also poses challenges. The display of ad results displaces organic search results at the top of the search result page. Thus, the search result page gets crowded with less relevant search results, at least for some users.

The number of ads being displayed to users on the search result page on e.g. Google Search and Bing have increased substantially over time. At the same time, the visual display difference between ad results and organic results (the “ad labelling”) has gradually been made less clear, making it more difficult for users to differentiate between paid ads and organic search results.

A consumer experiment conducted by the DCCA as part of the sector enquiry revealed that users can be divided into two nearly equally-sized groups, or types, of users, cf. Figure B:

- Approximately 56% of users actively try to avoid clicking on ads, often due to mistrust of paid results. They take time to select which search result to choose and are typically aware of what type of search result they click on.
- Approximately 44% of users choose the result that seems most relevant, regardless of it being an ad result or organic result.

Figure B. Probability for clicking on an ad result, for type A and type B users, respectively

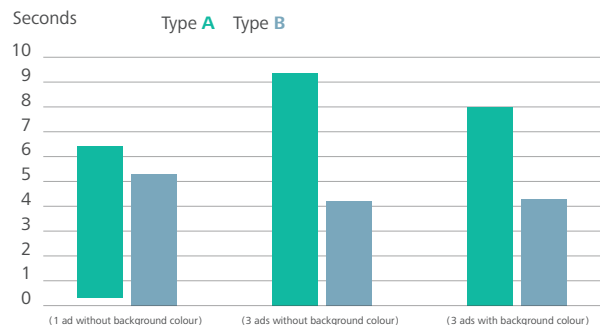


Source: DCCA consumer experiment.

The analysis further finds that, cf. Figure C:

- Increasing the number of ad results significantly increases the time for type A users (who try to avoid clicking on ads) to find their preferred organic search result.
- Making ads less clearly marked increases the time spent finding the preferred organic search result for type A users.

Figure C. Median time spent until clicking on the chosen search result (ad or organic)



Source: DCCA consumer experiment.

Businesses' self-advertising on online search engines

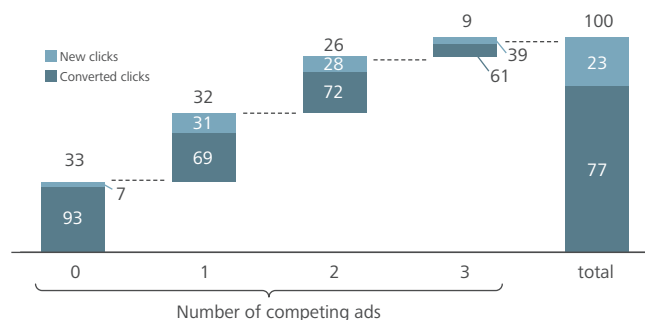
Danish firms spend around 500-750 million DKK annually on self-advertising (i.e. advertising on search queries containing the firm's name), on general online search engines. This constitutes approximately 12-19 per cent of the total Danish online advertising turnover. The majority of this spending is on Google Search.

Self-advertising is an effective method for firms to prevent "losing" clicks to competitors, especially when there are several competitors advertising for searches for the firm's name. It also enables the self-advertising firm to "fill up" the search result with links to their web domain, herunder by offering links to specific pages on their domain. However, the expenses on self-advertising only to a marginal extent generate new clicks that the firm would not have received otherwise, i.e. via the organic search results. The analysis indicates that:

- Self-advertising results in firms paying for about 45 per cent of all clicks to their websites when consumers search for the firm's name on Google Search, while the remaining 55 per cent are organic clicks.
- Around 9 out of 10 of the paid ad clicks are converted clicks, meaning the firm would have obtained those clicks organically, had there not been any ad results displayed on the search result page.
- The cost of self-advertising is lower when there are no competitors advertising on the firm's name. Nonetheless, over 75 per cent of self-advertising costs result in con-

verting free clicks into paid ones, making the real price for incremental clicks about four times higher than the nominal price.

Figure D. Share of expenses on self-advertising divided into new or converted clicks



Source: DCCA analysis based on data provided by Google.

A firm cannot know in advance whether competing firms are advertising on search queries for its firm name or not. If competitors do advertise, the firm may lose clicks to its competitors, if it refrains from self-advertising. This is because the ad results for the competitors will be placed at the top of the search result page.

This creates a situation where firms might feel compelled to pay for self-advertising on Google, thus obtaining clicks that would otherwise have been free, had there not been any ad results displayed. This underscores how firms might be pressured to spend on self-advertising to maintain visibility, potentially affecting their advertising budgets and, in the end, their consumer prices ■