

FINLAND

FINLAND'S NETWORK  
MEDIA ECONOMY:

# Growth, Concentration and Upheaval

2018-2023



Global Media & Internet  
Concentration Project

[www.gmicp.org](http://www.gmicp.org)

The Global Media & Internet Concentration Project (GMIC Project) is led by Professor Dwayne Winseck, School of Journalism and Communications, Carleton University. It is an independent scholarly effort funded by the Social Sciences and Humanities Research Council of Canada. Its aims are to provide an independent, long-term analysis of the telecoms, digital media, broadcasting and publishing industries in Canada and three dozen other countries. Its goal is also to better inform research, teaching, and public policy-related discussions about these issues.

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### **Questions and Corrections**

If you have questions or believe that any of the data are mistaken, please let us know.

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# Analyzing the Communications, Internet, and Media Industries

## Insights from the Global Media & Internet Concentration Project— Finland



# Executive summary

This report presents the preliminary findings on Finland as part of the Global Media and Internet Concentration Project (GMICP), an international research initiative funded by the Canadian Social Science and Humanities Research Council. Covering the years 2018 to 2023, the report provides a comprehensive overview of market and concentration trends in Finland's media and internet sectors. The GMICP investigates global developments in media and internet markets, and this report contributes to that effort by examining key Finnish segments in a way that allows for international comparison.

The scope of the report is broad, encompassing traditional media, digital content production, communication infrastructure, and new areas shaped by the convergence of IT, telecommunications, and media. It focuses on selected segments that reflect wider global trends, offering insights into how these markets have evolved and become increasingly concentrated. Although Finland's media and communications industry is not among the largest in economic terms, it plays a crucial societal role by enabling interpersonal communication, supporting democratic discourse, and shaping the national information environment. Understanding ownership structures, concentration levels, and international influence is thus essential for both researchers and policymakers.

Between 2018 and 2023, the total estimated revenues of Finland's networked media economy grew steadily, rising from EUR 10.6 billion in 2018 to EUR 12.05 billion (around USD 13 billion) in 2023. This overall increase of approximately 14% reflects growth across several key sectors, despite some fluctuations along the way. This estimate of EUR 12 billion is a conservative figure due to data gaps, especially in core internet sectors such as those dominated by global tech giants like Google and Facebook, and infrastructure services like content delivery networks (CDNs). Traditional and online media services, the largest segment of Finland's networked media economy, experienced moderate fluctuations, peaking at EUR 6.8 billion in 2021 and settling at EUR 6.6 billion in 2023. Although smaller in scale, online advertising grew the fastest, increasing by 67% from EUR 421 million in 2018 to EUR 704 million in 2023, highlighting a clear shift in advertising spending toward digital platforms. Telecom and internet access services remained stable, generating approximately EUR 3.2 billion in 2023. Meanwhile, the data centre sector demonstrated steady and robust growth, expanding by over 40% from EUR 1.1 billion in 2019 to EUR 1.5 billion in 2023. This growth has been concentrated in access and backbone infrastructure, while legacy media sectors, such as

newspapers and magazines, continue to decline. These developments reflect the increasing dominance of powerful, largely US-based digital actors in shaping Finland's media and communications environment, raising broader concerns for national media policy and European regulatory frameworks.

In 2024, telecommunications company Elisa Oyj was the largest player in Finland's networked media economy by turnover, generating EUR 2.2 billion. It was followed closely by game company Supercell, with a turnover of EUR 1.7 billion. Telia Finland Oyj and Sanoma Oyj, the latter being Finland's leading cross-media company, each reported turnover of approximately EUR 1.4 billion. The third major telecom operator, DNA, completed the top five with EUR 1.1 billion in turnover. Public service media Yleisradio Oy reported a turnover of EUR 527 million.

The findings highlight that Finland's media and communications sectors are generally highly concentrated. In most sub-sectors, a small number of firms dominate, a dynamic partly explained by Finland's relatively small population of 5.6 million. Core internet applications, particularly search engines, exhibit extreme concentration, often approaching monopolistic conditions, with significant control held by US companies. Traditional wired telephony has become obsolete, and wireless services now represent the largest share of telecom revenues. At the same time, established entertainment media, such as radio, books, and at least to some extent also television, remain relatively stable, maintaining consistent revenue streams despite digital disruption. The Finnish digital games industry stands out as a globally competitive and export-oriented sector, contributing significantly to the national economy. Conversely, the newspaper industry continues to struggle, with declining print circulation and limited digital revenue growth failing to compensate for losses in advertising and subscriptions.

Between 2018 and 2023, the CR4 scores for traditional and online media reveal significant concentration trends and market dynamics. Commercial TV broadcasting remained highly concentrated, increasing slightly from 92.7 to 94.7. In contrast, online video services saw a notable decline in concentration, from 72.5 in 2020 to 60.7 by 2022, suggesting rising competition. Digital games also experienced a steady drop, from 91.1 in 2018 to 73.1 in 2023, reflecting market diversification. The book sector showed the opposite trend, increasing its CR4 score from 44.9 to 66.4, indicating growing consolidation. Overall, traditional telecom and broadcasting sectors remain tightly concentrated, while digital and online segments show more competitive and shifting market dynamics.

From 2018 to 2023, HHI scores for the telecoms and internet access sectors indicate sustained high concentration levels, particularly in wireless services. Internet service providers and wireline services also showed high concentration. Notably, commercial TV broadcasting saw a steady rise in HHI, reaching 3,227 by 2023, reflecting growing market dominance by top firms. In contrast, online video services had much lower HHI scores (around 1,563 in 2022–2023), pointing to a more competitive and fragmented market. Film exhibition and digital games sectors remained highly concentrated, despite some fluctuations. Overall, traditional media and telecom sectors remain tightly controlled by a few large players, while newer and digital markets show signs of greater competitiveness.

The report relies on publicly available and mostly free statistics. Whenever possible, it draws on official statistical sources and annual company reports; however, in many instances, it has had to use a variety of other sources, including ministerial reports, trade association data, consultancy reports, and other unofficial sources. A major challenge identified in the report is the lack of comprehensive and reliable statistical data, particularly for emerging internet services and content markets. While telecommunications data are relatively robust, statistics on digital platforms, revenue flows, and market shares are fragmented or altogether missing. This data gap hinders research, policymaking, and regulation. Recent studies (e.g., Ala-Fossi et al., 2018 and 2020; Lehtisaari et al., 2024) have highlighted growing concerns about the increasing difficulty in tracking the media sector's development, with some aspects becoming nearly impossible to monitor due to the narrowing of available data.

The most recent setback in data collection occurred at the end of 2024, when Statistics Finland decided to discontinue its mass media statistics in line with government austerity measures. This loss represents a serious setback for understanding the Finnish media landscape, as the dataset had been a vital resource for nearly three decades. Given these challenges, the report strongly recommends strengthening the collection and availability of official statistics in the media and communications sector—an increasingly urgent need in light of forthcoming EU legislation such as the European Media Freedom Act.

In conclusion, the report underscores both the structural shifts occurring in Finland's media and communications sectors and the pressing need for better data to understand and manage them. Concentration remains a defining feature across most markets, driven by global tech dominance and local market dynamics. Ensuring transparency, competitiveness, and democratic accountability in this environment will depend on robust data and informed policy responses.

# Key Findings

- Finland’s networked media economy grew by ~14% from 2018 to 2023, rising to €12.05 billion—driven by digital segments despite traditional media stagnation or decline.
- Online advertising was the fastest-growing sector, increasing by 67% from €421 million in 2018 to €704 million in 2023, underscoring the digital shift in advertising markets.
- Telecom and infrastructure services remained stable and dominant, with Elisa Oyj leading the market at €2.2 billion turnover in 2024, followed by major players like Telia Finland Oyj and DNA Oyj.
- Market concentration remains high across most sectors, with traditional telecom, TV, and print media dominated by a few firms; CR4 and HHI scores confirm persistent oligopoly or monopoly-like conditions.
- US-based digital platforms, especially Google and Facebook, exert growing control, particularly in search, social media, and advertising—contributing to the erosion of domestic media influence.
- The digital games industry is a rare export success, with firms like Supercell making Finland globally competitive in this sector, in contrast to newspaper and print media segments.
- Some digital markets show declining concentration, notably online video and games, where CR4 scores fell between 2018–2023—suggesting increasing competition or diversification.
- Data gaps hinder research and regulation, especially in core internet sectors; estimates are conservative and lack detail on platform revenues and market shares due to missing or incomplete data.
- The 2024 termination of Statistics Finland’s mass media data collection is a major setback, undermining a vital 30-year dataset and impeding policy, academic, and regulatory oversight.

- The report calls for urgent reform to strengthen media statistics, especially in light of incoming EU legislation (e.g., the European Media Freedom Act) requiring transparency and data availability.

# Introduction

Finland is a small and sparsely populated country with its 5.6 million inhabitants and land area of 304,000 square kilometres. The country has two official languages: Finnish (86.9% of population) and Swedish (5.2%). In addition, the native Sámi is recognised as a minority language. According to preliminary data from Statistics Finland, GDP per capita in 2023 was 49,005 EUR (52,926 USD) at current prices. Finland is ranked among the top countries in the Digital Economy and Society Index (DESI) and ever since the launch of the World Press Freedom Index approximately two decades ago, Finland has always been among the top five countries of the index. According to annual Reuters Digital News reports, Finnish people also have the highest level of trust in the news media and one of the highest levels of press readership in the EU (Newman et al., 2024; Reunanen et al., 2024). As a member of the European Union (EU), Finland is bound by EU legislation, including the *Digital Markets and Digital Services Acts* and the *European Media Freedom Act*.

Finland is a highly digitised society whose citizens are generally digitally literate, avid users of internet and social media. According to Traficom statistics (2024), by 2023, 89% of households will have access to at least 100 Mbps 5G, and 95% will have access to at least 100 Mbps 4G. According to a Kantar Media (2023) study, in 2023, Finns aged 15-74 will spend almost 10 hours a day on media, with some media consumption overlapping. Most time was spent on linear TV and social media. Media consumption will continue to change, with online consumption of different media groups increasing. In particular, music streaming services and other audio and podcast services have grown in percentage terms in recent years. Radio listening in Finland is higher than in the other Nordic countries. Linear television viewing is also still more popular in Finland than in the other Nordic countries. Especially among the youngest target groups, linear TV viewing is declining, and more time is spent on various VOD services.

The role of the news media in Finland is exceptionally strong by international standards. The reach of print news media is slowly declining, but with digital growth, overall reach has remained fairly stable. However, their use of internet applications is just as concentrated as in the rest of Europe, with a reliance on a few dominant, US-based providers of operating systems, search engines, and social media. This report aims to shed some light on the structure of these markets and their interconnections, with the goal of enhancing the knowledge base necessary for regulating the networked media economy.

Like many European countries, Finland's communication ecosystem underwent liberalisation and privatisation in the 1980s and 1990s. The media sector has been an early adopter of digitalisation processes. The Finnish government made the key decision to digitalize television broadcasting in the spring of 1996, with the first digital terrestrial channels launching in the autumn of 2001. The complete switch-off of analogue television, including cable, occurred in February 2008, making Finland one of the first countries in Europe to make the transition (Hellman, 2010).

The first newspaper websites were launched around the mid-1990s and the first news organisations implemented digital user payment systems (paywalls) in the early years of the 2010s. Finnish newspapers have seen moderate success in retaining digital revenue. In Finland, the proportion of consumers who pay for online news is lower than in Sweden and Norway. In 2023, only one fifth (20%) of Finnish consumers paid for digital news content, compared to 40% in Norway and 31% in Sweden (Newman et al., 2024). In 2023, approximately quarter (28%) of all newspaper revenues came from digital ( News Media Finland, 2024). However, amount of digital revenues between different newspaper titles and categories vary considerably. For example, digital revenues of local newspapers accounted for less than one tenth (8%) of their total revenues. According to statistics from News Media Finland, the 10 newspaper titles with the highest digital revenues accounted for 79% of the total digital revenues in the newspaper sector in 2023. In addition, it's important to note that digital revenues are concentrated among the largest players, particularly national publications like *Helsingin Sanomat* and tabloids *Ilta-Sanomat* and *Ilta-Sanomat*.

In 2022, the News Media Finland's member newspapers generated 61% of their net sales from consumer sales<sup>1</sup> and 39% from media sales. Domestic ownership is still predominant in newspaper sector but for example in radio broadcasting and telecommunication foreign ownership is significant. In 2023, the public service media Yle's TV channels reached 75% of Finns weekly, while its radio channels reached 45%. Yle's online and mobile services, including *Yle Areena*, engaged 81% of the population each week. Additionally, 84% of Finns expressed trust in Yle news, which is regarded as the most reliable media source in Finland. (Yle, 2024) However, platform and social media usage is high, especially among younger

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<sup>1</sup> Includes revenue from both print and digital subscriptions, as well as occasional single-copy sales.

users, while legacy media struggle to maintain revenue due to competition from Meta and Alphabet.

According to Statistics Finland's data, the total volume of the mass media market<sup>2</sup> grew throughout most of the first decade of the 21st century, reaching around EUR 4 billion in 2010. Since then, the total volume of the mass media market has fluctuated. In 2023, the total volume was again around €4 billion. Over the same period, the share of mass media in GDP has fallen slightly to 1.4% from X% in 2010. According to data collected by Statistics Finland (at the turn of the millennium, traditional publishing<sup>3</sup> still accounted for almost three quarters of the mass media market (72%) and paid newspapers alone for one third (34%). By the 2010s, publishing still accounted for well over half (62%) of the total mass media market, falling to well below half (41%) by 2023. In 2023, the share of paid newspapers was one fifth (20%). In contrast, the share of electronic media<sup>4</sup> in the mass media market has increased significantly in the 2000s. From just under a third (31%) at the beginning of the decade, the share has risen to over half (53%) in 2021, with TV accounting for around 36% and the internet just approximately 14%.

Media concentration in Western democracies, including Finland, is a growing concern, as it can threaten information quality and hinder competition. Over the past three decades, Finland's media market has become highly concentrated, as we will see in more detail in the pages ahead. The Finnish media landscape is lightly regulated, with self-regulation being the norm until the Media Freedom Act (MFA) of 2024, which expands ownership diversity rules to all media sectors. Recent legislative changes are expected to lead to more scrutiny of media acquisitions. These developments will be discussed in more detail in the following section of the report.

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2 More detailed information on the figures and classification not presented in this chapter can be found on Statistics Finland's Mass media market volume in Finland 1997 - 2023  
[https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fpxhopea2.stat.fi%2Fsahkoiset\\_julkaisut%2Fjoukkoviestintatilasto%2Fdata%2Ft101.xls&wdOrigin=BROWSELINK](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fpxhopea2.stat.fi%2Fsahkoiset_julkaisut%2Fjoukkoviestintatilasto%2Fdata%2Ft101.xls&wdOrigin=BROWSELINK)

3 Newspapers, free-sheets & city papers, magazines & periodicals and books

4 Television broadcast, radio broadcast, internet advertising and influencer marketing

# 1. Understanding media concentration: What it is, why it matters, and how to study it

Media concentration has been a topic of research for many years, with studies showing that the Finnish media market has not only undergone significant structural changes but has also become increasingly concentrated over the past three decades (Ala-Fossi et al., 2020). However, earlier research has often focused on only one or a few specific media sectors. For instance, a recent report by Lehtisaari et al. (2024), commissioned by the Prime Minister's Office, analysed the current state of news media ownership concentration in Finland, its impact on media content, and potential regulatory approaches to address this concentration and its consequences.

The GMICP project builds on this existing knowledge, offering an updated perspective on media concentration while broadening the scope to include multiple sectors beyond traditional or legacy media. This expanded scope covers a broader array of industries beyond the traditional definition of "media." The project adopts a multisectoral approach, examining telecommunications, audio-visual media, publishing, and key internet sectors (for more details, visit [www.gmicp.org](http://www.gmicp.org)). This approach is essential due to the ongoing technological and industrial convergence across these sectors, where companies have increasingly blurred traditional sector boundaries by offering services across multiple market areas.

Access technologies and key internet services form the communications infrastructure that underpins freedom of expression and democracy. The control and concentration of these sectors can impact legacy media, which rely on these infrastructures for distribution. In recent years, user content consumption has become more diverse with the rise of global streaming platforms, making it increasingly difficult for national media organizations, such as broadcasters and newspaper publishers, to compete. The internet applications, browsers, and operating systems used by most people are controlled by a few global giants like Alphabet, Amazon, Apple, and Meta. The detailed evidence on this point will be introduced and reviewed in the pages ahead. These platform players are also expanding their influence in critical internet technologies, such as undersea cables, data centres, and

content distribution networks—services essential for both media organizations and users to access and share information (Sjøvaag et al., 2024).

Diversity in media ownership and content is a core value of media policy in democratic countries like Finland (Lehtisaari et al., 2024). The Constitution guarantees the free flow of information and freedom of opinion, traditionally supported by a pluralistic media landscape that provides access to multiple sources, enables scrutiny of societal interests, encourages diverse perspectives, and fosters public debate (Heinonen and Nordenstreng, 2015; Neuvonen, 2018). However, these democratic principles are increasingly shaped by global, commercial, and largely unregulated internet platforms. Major international technology companies do not disclose country-specific revenue data, making it difficult to monitor market concentration nationally. This lack of transparency hampers oversight and becomes increasingly problematic as these actors expand their influence.

In Western democracies, media concentration is seen as a threat to both democracy and market competition (Harcourt and Picard, 2009; Just, 2009; Sjøvaag, 2014). From a democratic standpoint, it allows dominant actors to control public discourse, reduce the diversity of viewpoints, and set news agendas (Baker, 2007), potentially leading to public disengagement. Economically, it undermines competition, raises costs, and limits the variety and quality of available content (Dertouzos and Trautman, 1990; Picard, 1988, 1993; Doyle, 2002; von Kranenburg, 2002). Moreover, growing governmental dependence on global tech giants for distribution, connectivity, and computing infrastructure further concentrates power and heightens the risk of political and social vulnerability.

The consolidation of media companies and concentrated ownership are seen as potential threats to the quality of public information in market-driven democracies because this concentration is also thought to diminish healthy competition among firms (Lehtisaari et al., 2024). Ala-Fossi et al. (2022) identify three key factors that explain this trend. First, while foreign investment in Finland was once heavily restricted, Finnish media policy since the 1990s has not actively sought to prevent acquisitions or firm consolidations through ownership restrictions or regulations. Second, there is no specific competition legislation in the media sector designed to prevent ownership concentration or protect ownership diversity. Third, indirect tax subsidies, such as reduced VAT rates for the largest media companies, may have further contributed to the concentration of ownership in the news sector.

The Finnish mass media market has traditionally been lightly regulated, relying largely on self-regulation rather than state intervention (Jyrkiäinen, 2019). In addition, until the Media Freedom Act (EMFA) comes into force, EU legislation has primarily addressed media ownership concentration within the audio-visual sector, with a focus on ensuring diversity and transparency. The EMFA marks a significant shift in this approach, as it extends these principles—particularly the promotion of media pluralism and the safeguarding of editorial independence—to all media sectors across the EU, including Finland (Lehtisaari et al., 2024). In April 2025, the Government proposed the enactment of a new law on media market monitoring. Under the proposal, the Finnish Transport and Communications Agency (Traficom) would be responsible for overseeing compliance with the obligations set out in the European Media Freedom Act (EMFA) in Finland. As part of this role, Traficom would also be tasked with establishing a national, publicly accessible database containing information on media ownership, among other things.

Finland's monitoring of media concentration, through the Finnish Competition and Consumer Authority (FCCA), aligns with European standards. The FCCA oversees concentration through merger control and refers harmful transactions to the Market Court for review, but media diversity is not a focus of this monitoring. The Finnish Transport and Communications Agency (Traficom) oversees audio-visual media licenses and assesses market impact, referring significant cases to the Government. The market impact of public service media company Yle, for example, is assessed by its Board of Directors. Since the 21st century, the FCCA has approved most media acquisitions. This was mostly the consequence, until 2023, of the fact that the notification threshold was unusually high, exempting many acquisitions from review, especially in the newspaper sector. With the threshold since lowered, more ownership changes are expected to appear on the FCCA's agenda. Broadcasting services are regulated under the Broadcasting Act and EU competition rules, which focus on dominant market positions rather than concentration. This has led to several preliminary assessments and complaints to the European Commission, one resulting in a legislative amendment clarifying Yle's public service remit. (Lehtisaari et al., 2024)

This report takes a holistic approach to measuring the concentration of communication infrastructures. The project focuses on the concentration of supply and demand for communication and information services, based on the revenues and the number of subscribers and users in the different communication services markets. The focus is not

primarily on ownership, but on the market shares of the different ownership groups and their associated companies, operating divisions, brands and labels. There is clearly a close, but not unambiguous, link between ownership concentration and market share concentration. For example, the ownership distribution of firms may increase at the same time as market concentration increases.

The data for this report are gathered sector by sector, primarily based on available revenue figures and other market indicators, such as subscription numbers. The sources of these data are highly varied, which unfortunately means that the quality and consistency of the data can differ. The primary national sources include Statistics Finland, which annually compiles media-related figures in its Mass Media Statistics table service, and Traficom, which oversees market data from the telecommunications sector. For other sectors, such as digital games, data is mainly sourced from a mix of official statistics and industry reports. For example, revenue from music services is drawn from Music Finland's Finnish Music Industry reports (various years) and includes income generated by Finnish entities across recordings, live music, copyright royalties, grants, and subsidies—excluding the Finnish National Opera. Data on the digital games sector come from the Neogames Finland Association (Finnish Game Industry reports, various years) and Statistics Finland, covering companies active in the domestic gaming industry.

Another important source is Statistics Finland's Structural Business and Financial Statement Statistics<sup>5</sup>, which provide detailed data by industry, including the number of enterprises, workforce size, and financial indicators. These statistics are compiled from the Tax Administration's business taxation records and enterprise surveys and are published biannually. For example, total revenue for the book publishing sector is based on these statistics and includes all companies classified under book publishing (TOL 2008 code 58110). This sector has traditionally played a significant cultural role, particularly in the Nordic region. Magazine revenue estimates are based on Statistics Finland's 2024 data. Additional information for the report has been collected from diverse sources, including company financial statements, reports from ministries, and industry associations. For

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5 Standard Industrial Classification TOL 2008 is based on the EU's classification of economic activities NACE. In their official statistics, the EU Member States have to use NACE or a national version based on it, which is what TOL 2008 is. NACE is, in turn, derived from the UN's International Standard Classification of All Economic Activities (ISIC). Groups on all NACE levels are defined so that they are either uniform with ISIC groups or so that the ISIC group is a combination of NACE sub-divisions, so the corresponding ISIC groups can always be combined from NACE 3-digit and 4-digit level groups. The main groups and 2-digit levels are totally uniform, but further divisions have been made in NACE to many ISIC groups on the 3 and 4-digit levels.

instance, News Media Finland (NMF) publishes annual figures on advertising and circulation revenues for its member publications. However, in some sectors, relevant data is only published sporadically or may be completely unavailable.

Historically, statistics on the Finnish media sector have been both comprehensive and longitudinal in scope. In the 1980s, Statistics Finland and the Ministry of Transport and Communication began collaborating on the development of mass media statistics, with the first aggregate publications being released towards the end of the decade. The Mass Media Statistics provide insights into the economy, business structures, content, consumption, audiences, and workforce across various mass media sectors. These statistics are published in an ongoing, updated tabular service. They offer an overview of how markets such as press, radio, television, video on demand, and cinemas have evolved in Finland.

However, recent studies (e.g., Ala-Fossi et al., 2018 and 2020; Lehtisaari et al., 2024) have raised concerns about the increasing difficulty in tracking the development of the media sector, with some aspects becoming almost impossible to monitor due to the narrowing of the data base. The latest deterioration in the collection of the media data base was seen at the end of 2024, when Statistics Finland decided to discontinue the mass media statistics in line with the government's austerity targets. As a result of this decision, an exceptionally extensive and valuable source of data on the Finnish media sector, which has been collected for almost three decades, is under threat. Moreover, despite the fact that many large media companies are listed on the stock exchange, since the 2010s they have reported less and less about their activities, especially at a level that would help to understand the situation in the different media sectors.

In addition, while global consolidated financial data for Alphabet and Meta is publicly accessible, detailed financial information specific to their Finnish operations is limited. In contrast, Spotify provides comprehensive financial data for its Finnish subsidiary, facilitating a more detailed analysis of its operations in Finland. Although estimates of their share of internet advertising exist, it is not meaningful to present company-specific euro figures in this report. The next steps of this project will also seek to find a justifiable solution for calculating such euro amounts.

Market concentration measures how much of the market share is controlled by a smaller group of firms. As mentioned earlier, it is often used as an indicator of competitive intensity. There are various methods to assess market concentration, and in this report, the

level of concentration in the sectors is evaluated using the Herfindahl-Hirschman Index (HHI) and the CR4 index.

The concentration ratio CR4 represents the combined market share of the four largest firms in a market. It is calculated by adding together the market shares of these top four firms. However, the CR4 does not account for variations in the relative size of the firms, meaning it treats all firms equally regardless of their individual market share. One key advantage of the HHI is that it not only considers the distribution of market shares across firms but also accounts for the number of firms in the industry. In an HHI, the market shares of each company in a given market are squared and the squared numbers are added. The Herfindahl-Hirschman Index (HHI) ranges from near 0 in a perfectly competitive market to 10,000 in a monopoly (i.e., 100% market share).

According to the US merger guidelines (2010) markets with an HHI figure below 1500 are normally considered as reasonable competitive; figures between 1500 and 2500 are considered as challenging with respect to competition; figures beyond 2500 are considered as concentrated. However, on December 2023, the Department of Justice and the Federal Trade Commission released new Merger Guidelines. The new guidelines state that markets with an HHI below 1000 are considered unconcentrated, those with an HHI between 1000 and 1800 are moderately concentrated, and those with an HHI above 1800 are highly concentrated.

The European Commission has not provided HHI thresholds as clearly as the Federal Trade Commission. However, the Guidelines on the Assessment of Horizontal Mergers under the Council Regulation on the Control of Concentrations between Undertakings<sup>6</sup> (2004/C 31/03) offer indications of certain HHI threshold levels. The Commission is unlikely to identify horizontal competition concerns in a market with a post-merger HHI below 1000 and such markets normally do not require extensive analysis. The Commission is also unlikely to identify horizontal competition concerns in a merger with a post-merger HHI between 1000 and 2000 and a change in “before” and “after” below 250, or a merger with a post-merger HHI above 2000 and a delta below 150, except in exceptional circumstances.

Cavalleri et al. (2019) have stated that the empirical literature generally adopts these same threshold values for HHI. However, the HHI measurement results are subject to differences

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6 Further details on these special circumstances and related issues can be found in the Guidelines on the Assessment of Horizontal Mergers under the Council Regulation on the Control of Concentrations between Undertakings [https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52004XC0205\(02\)](https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52004XC0205(02))

in interpretation due to the size of the market. According to Trappel and Meier (2022), HHI values below 1500 indicate low concentration, while values above 2500 indicate very high concentration. In addition, the number of players in the sector influences the interpretation. According to Lehtisaari et al (2024), since there are still dozens of newspaper companies in Finland despite concentration, HHI values above 2000 should be taken as an indication of a very high degree of concentration. Calculations presented in this report reflect the degree of concentration, though they depend on the quality of the underlying industry data. With the implementation of the European Media Freedom Act, it is hoped that increased focus on media concentration will help improve the statistical data foundation for the media and communication sectors.

The report is organized into sectors, similar to other Nordic reports. The Telecom and Internet Infrastructure sector covers access technologies, including traditional telephony (wireline), mobile broadband (wireless), Internet Service Providers (ISPs), and multichannel video distribution (cable TV, satellite, fibre, and DTT). The Digital and Traditional Audio-Visual and Publishing Media sector includes content-producing media, such as broadcasting (TV and radio), pay TV and online video services, film exhibition, digital games, music services, newspapers, magazines, and books. The third sector focuses on core internet applications and industries, covering internet advertising, app distribution, search engines, browsers, operating systems, and social media platforms. The fourth sector, covering the technical backbones of the internet, must be said to be exploratory, covering Content Delivery Networks (CDNs), International Submarine Cables, Data Centres, Data Brokers. Lastly, a unified birds eye view is established for the media landscape as a whole.

## 2. The development and concentration of the media, communications, and internet industries

### 3.1. Telecoms and Internet Access Services

This section focuses on network provision, which encompasses traditional telecommunications, such as wireline and wireless communications, Internet Service Provision (ISP), and Multichannel Video Distribution, offering users TV programming packages. Due to technological and industrial convergence, it can sometimes be challenging to clearly distinguish between these sub-sectors. For instance, wireline services include both traditional circuit-switched voice communication (PSTN) and packet-based internet communication (ISDN). In Finland, telecom companies have either already phased out or are in the process of phasing out their copper-based landline networks.

In Finland, mobile phones quickly began to replace landlines, and by 1998, the number of mobile subscriptions had already equalled that of landline connections. After the turn of the millennium, this shift accelerated. As mobile phones and wireless networks improved in terms of data transmission capacity, Finns became increasingly active users of mobile data. Mobile broadband usage in Finland ranks among the highest in the world, both in terms of data consumption and the number of users. High-speed 4G and 5G connections are available to nearly everyone in the country, with 93% of households subscribing to mobile broadband by 2022. According to a consumer survey by Traficom, 53% of Finns had both fixed and mobile broadband, while 42% relied solely on mobile broadband. Only around 4% of Finns did not have an internet connection. By the end of 2023, approximately 90% of the 8.9 million mobile subscriptions (covering voice, voice and data, and mobile broadband) included unlimited data in their monthly plans. ISP refers to licensed providers of broadband and fibre internet services, while Multichannel Video Distribution includes access technologies such as satellite, cable, IPTV, and Digital Terrestrial Television (DTT).

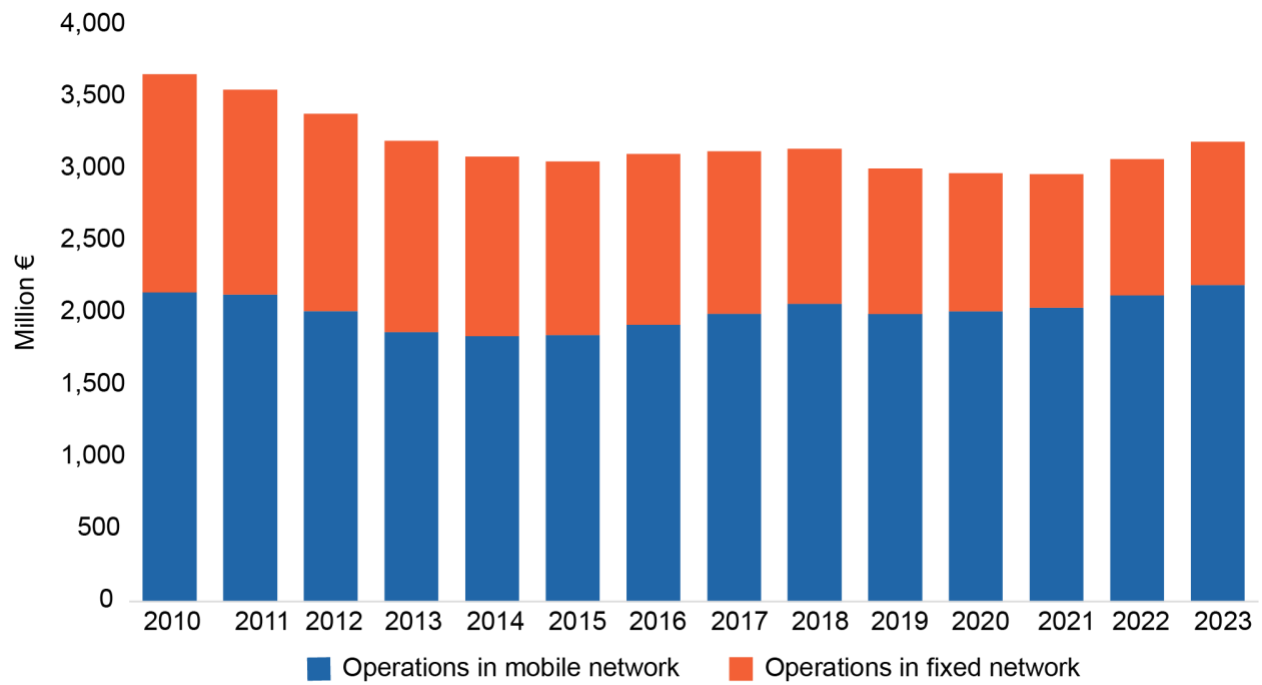
The telecommunications services sector saw fluctuating turnover from 2010 to 2023 (see Figure 1). After peaking at approximately Euro 3.7 billion in 2010, turnover declined steadily to around Euro 3.1 billion by 2014. It then remained stable with minor fluctuations until

another slight dip in 2019–2020. Recovery began in 2021, with turnover reaching EUR 3.2 billion in 2023.

The main actors are Telia Finland Oyj, Elisa Oyj, DNA Oyj and the Finnet Association. Telia Finland Oyj is a subsidiary of Telia Company AB, a Swedish multinational telecommunications operator (formerly TeliaSonera AB formed in 2002 through the merger of Telia of Sweden and Sonera of Finland). The largest shareholder of Telia Company AB is the Swedish state, which holds 41.1 percent of the company. The other major player in the Finnish telecommunications market is Elisa Oyj, a Finnish telecommunications, ICT and online services company operating mainly in Finland and Estonia. DNA Oyj is part of the Norwegian Telenor Group, of which the Norwegian state is the largest shareholder, owning approximately 54 percent. The Finnet Group consists of 17 independent regional companies (formerly telephone companies) and the Finnet Association, including its member companies, subsidiaries, and affiliates.

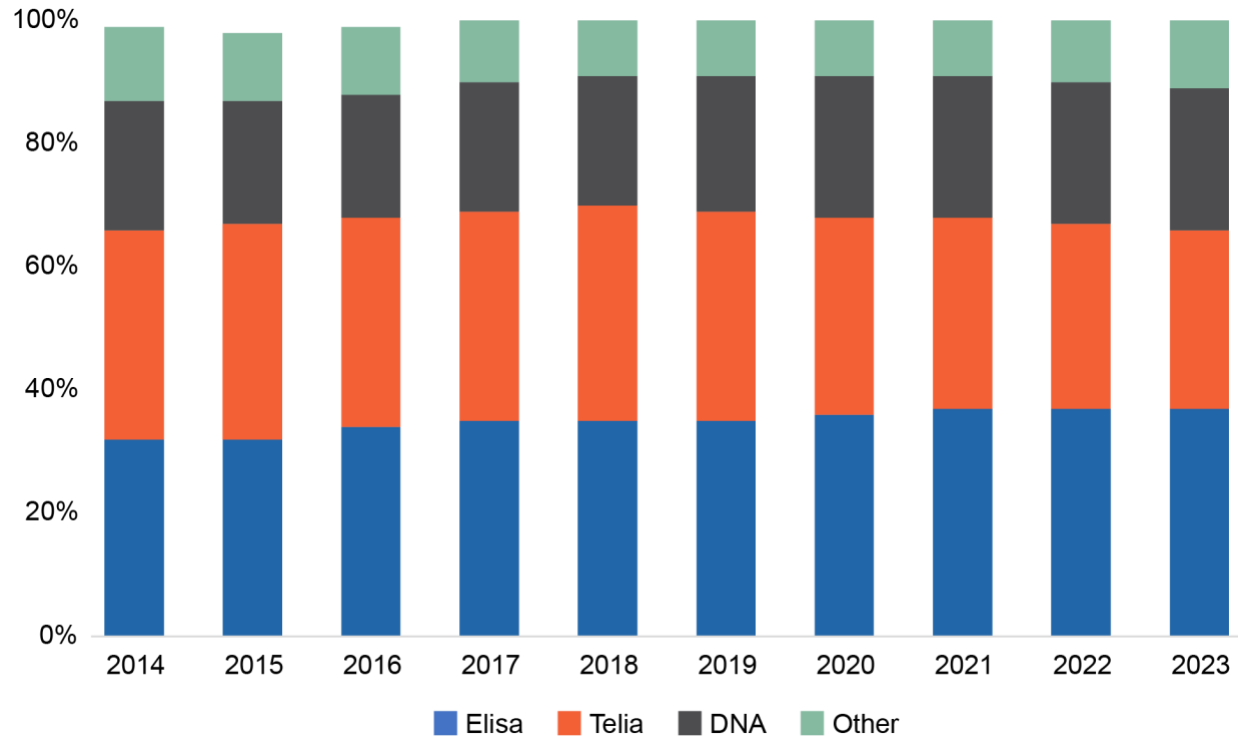
According to data from Traficom, between 2014 and 2023, the market shares of telecommunications turnover in Finland underwent some shifts among the main operators Elisa, Telia, and DNA (see Figure 2). Elisa experienced a steady increase in market share, rising from 32.5% in 2014 to 37% by 2023, marking it as the leading operator by the end of the period. In contrast, Telia's share declined consistently after peaking at 35% in 2015 and 2018, falling to 29% by 2023. DNA showed moderate growth, increasing its share from 21.5% in 2014 to 23% by 2020, after which it stabilized at that level through to 2023. Meanwhile, the share held by other operators decreased from 12.5% in 2014 to a low of 9% between 2018 and 2021, but slightly recovered to 11% in 2023.

**Figure 1: Telecommunications services turnover 2010-2023 (millions €)**



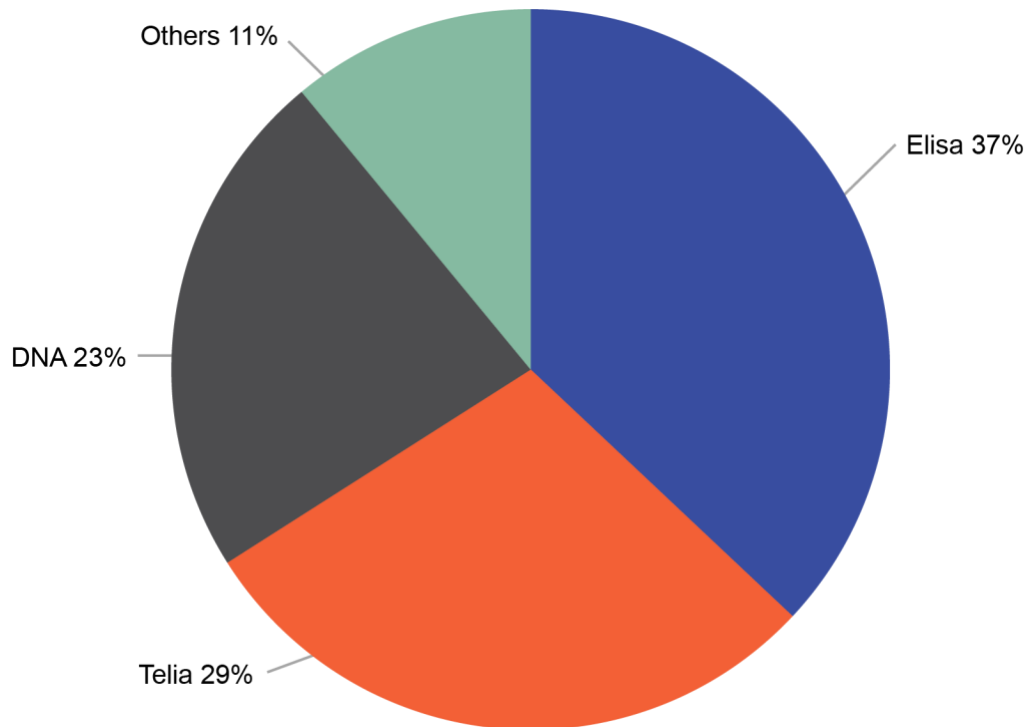
Source: Traficom Communications Statistics

**Figure 2: Market shares of telecommunications turnover 2014-2023 (%)**



Source: Traficom Communications Statistics

**Figure 3: Market shares of telecommunications turnover 2023 (%)**



Source: Traficom Communications Statistics

The state plays a key role in regulating mobile networks in Finland, establishing a framework that ensures broadband services are accessible to all citizens. The Finnish Transport and Communications Agency, Traficom, is the government body responsible for overseeing the operation of mobile networks. Its duties include:

- **Licensing:** Traficom manages the allocation of frequency bands to operators and issues licenses for the construction of mobile networks.
- **Spectrum policy:** The agency develops spectrum policy guidelines to ensure fair and efficient use of spectrum.
- **Network security:** Traficom also monitors the security of mobile networks, ensuring their reliability and safe operation.

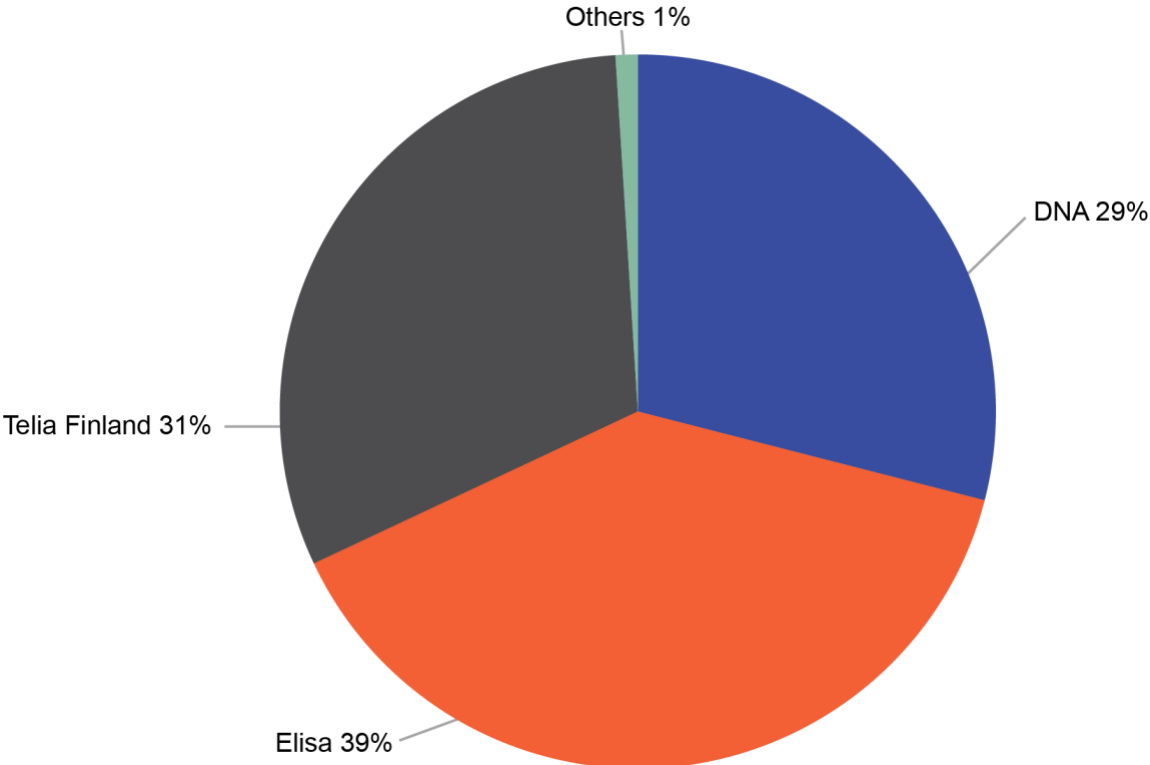
From 2010 to 2023, revenue from mobile/wireless network operations in Finland experienced an initial decline, followed by steady growth. In 2010, revenues stood at somewhat over Euro 2.1 billion but decreased consistently until reaching a low of around Euro 1.8 billion in 2014. After this period of decline, the sector began recovering, with revenues gradually increasing

from 2015 onward. By 2018, revenue surpassed Euro 2 billion again, and despite a slight dip in 2019, the upward trend continued. The COVID-19 pandemic in 2020 did not significantly disrupt the sector, as revenues remained stable at just over Euro 2.0 billion. Growth accelerated from 2021 onwards, reaching Euro 2.2 billion in 2023, the highest level in over a decade. This trend reflects the increasing reliance on mobile networks, driven by greater demand for mobile data, connectivity, and digital services. The sector's resilience and steady expansion highlight its growing importance within the broader telecommunications industry.

The mobile spectrum is licenced infrastructure, the three holders of which are Elisa, Telia, and DNA. According to data collected by the Traficom from telecoms companies, fast 4G or 5G mobile networks covered 96% of Finnish households at the end of June 2024. In Finland, 5G networks have been rapidly deployed since the beginning of the decade and by the end of June 2024, 91% of Finnish households had availability to access to a high-speed 5G network. However, the network covered only 16% of the land area, meaning that there are populated areas outside cities and urban areas that do not have access to high-speed mobile connections. Similarly, for high-speed 4G, availability was 96% of households and 26% of the surface area. Based on statistics from the Traficom (Traficom), the number of mobile subscriptions was 9.21 million in mid-2024. Of these, 71.8% were used by households, while the remainder were used by businesses.

In May 2024, the cost of a basic subscription with a maximum download speed of 100–300 Mbit/s, unlimited data, and unlimited calls within Finland ranged from €26 to €36.90 per month, depending on the operator. Meanwhile, subscriptions offering faster data speeds of 600 Mbit/s or more, with unlimited data and calls in Finland, were priced between €34.90 and €44.99 per month. In 2024, 5G subscriptions accounted for 30% of all subscriptions. By 2030, 5G subscriptions are estimated to account for 80% of all subscriptions.

**Figure 4: Market shares of mobile subscriptions 2023 (%)**



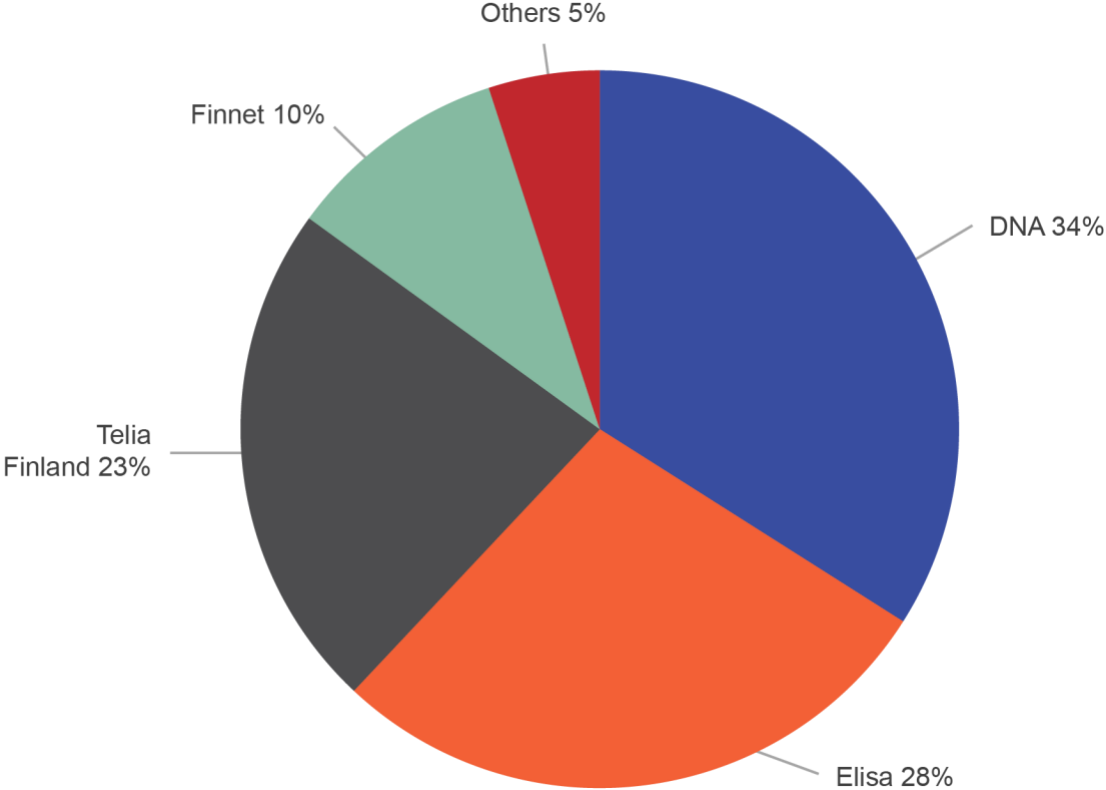
Source: Traficom Communications Statistics

As Figure 4 shows, from 2010 to 2023, revenue from fixed network operations in Finland saw a steady decline, reflecting the ongoing shift from traditional fixed-line services to mobile and digital alternatives. In 2010, revenues stood at Euro 1,5 billion but gradually decreased year after year, reaching little over Euro 1,2 billion by 2014 and continuing downward to Euro 1,0 billion in 2019. The decline persisted into 2020, with revenue hitting a low of Euro 959 million. However, from 2021 onward, the sector showed signs of stabilization. Revenue rebounded slightly to Euro 925 million in 2021 and continued to grow modestly, reaching Euro 995 million by 2023.

According to Traficom (2024), there were around 2 million fixed broadband connections in Finland in the first half of 2024. This represents an increase of 3% compared to a year ago. Households accounted for 92.7% (just under 1.9 million) of the total. Among access technologies, the number of copper lines decreased by 44% in the year. Fiber to the Building (FTTB) lines grew by 5%, Fiber to the Home (FTTH) by 14%, cable modems by 1% and other access technologies by 39%. Copper lines accounted for 3% of all lines, fibre (FTTB and FTTH) for 67%, cable modems for 27% and others for 3%. In the same period, the

total number of mobile broadband subscriptions was around 8.9 million. 71.8% (6.6 million) of these lines were in households. The number of unlimited data subscriptions was 7.9 million, representing 89% of all mobile broadband subscriptions.

**Figure 5: Market shares of fixed network broadband subscriptions 2023 (%)**

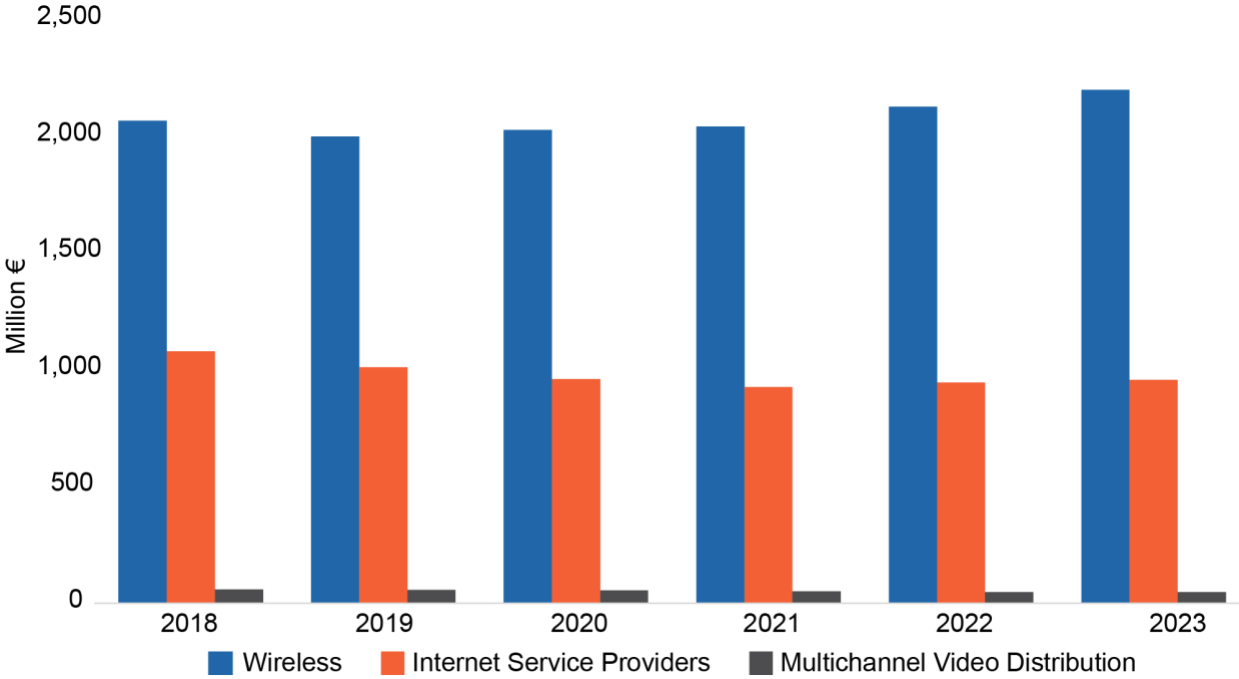


Source: Source: Traficom Communications Statistics

In 2023 TV reception (includes all households that receive TV content by this type of connection) is dominated by cable at 53 percent and digital terrestrial television (DTT) at 42 percent. Share of Internet Protocol TV (IPTV) was 21 percent and satellite only 2 percent (Finnpanel Oy, 2024). In 2023, cable was the only means of receiving TV content for 39% of households. This compares to 30% for DTT and 4% for IPTV. Among these, cable services are in a slight decline.

Figure 6 reports revenue in the different sub-sectors and the overall sector. Mobile (wireless) is clearly the largest sector followed by Internet Service Providers which is half the size. Traditional fixed-line telephony (wireline), particularly in households, has nearly vanished, being replaced by mobile phones and internet-based services.

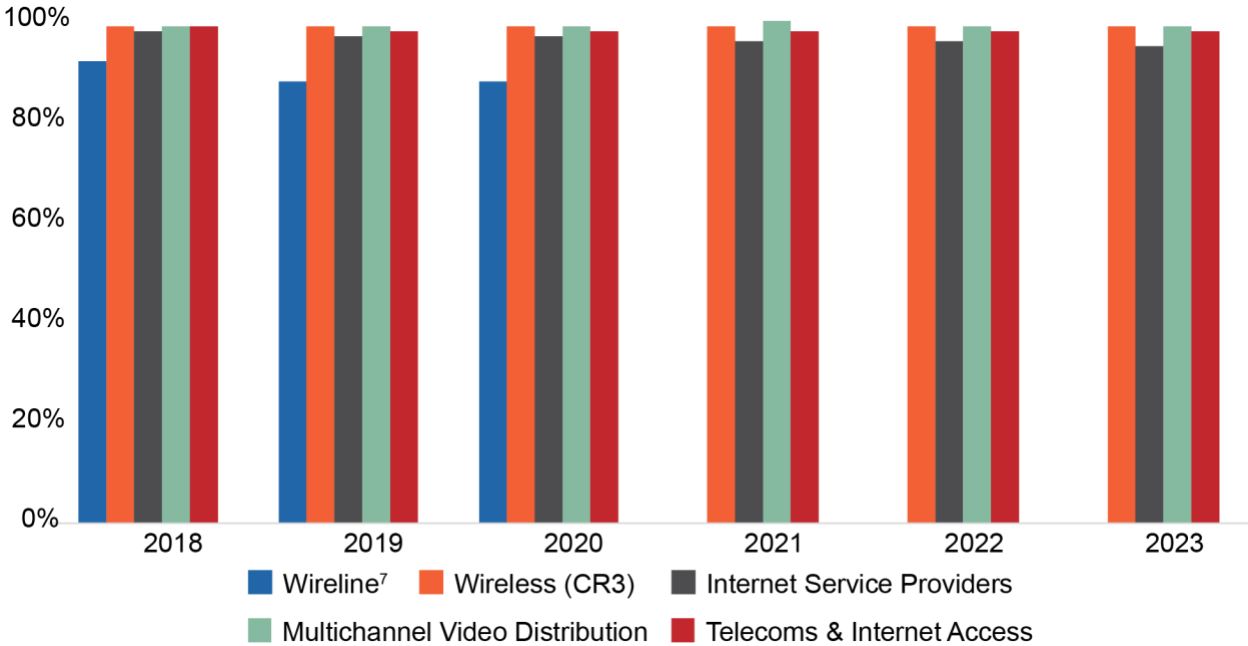
**Figure 6: Revenues for the Telecom & Internet Access Services 2018-2023 (millions €)**



Sources: The Finnish Transport and Communications Agency (Traficom) and Statistics Finland

Figure 7 shows the calculated CR4 figures for the sub-sectors and the overall sector. The CR4 figures for the overall sector show the CR4 figures for the four largest firms in the overall sector as such. The higher the CR4 figure, the higher the concentration of the sector, and a CR4 figure above 50 percent is generally considered as a sign of a concentrated market.

**Figure 7: CR4 Scores for the Telecoms & Internet Access Sectors, 2018-2023**



Sources: The Finnish Transport and Communications Agency (Traficom) and Statistics Finland

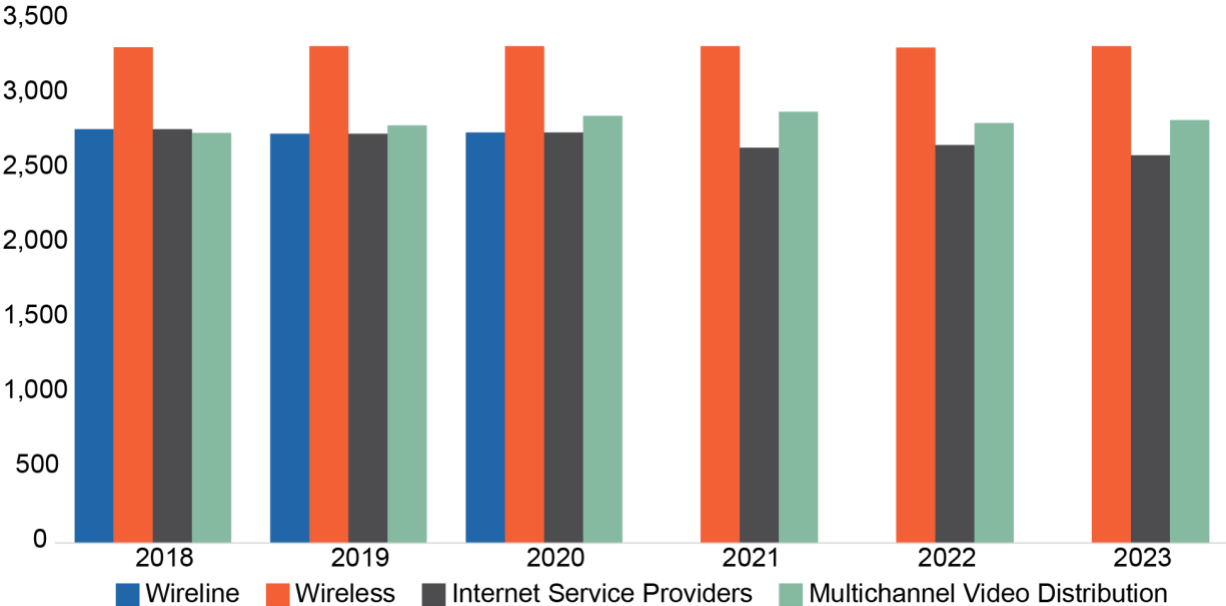
In general, CR4 scores for the telecom and internet access sector indicate that all four sub-sectors are very concentrated – with the four largest companies in each category scoring close to 100 percent. Moreover, the overall sector is highly concentrated. Part of the reason for this is the high barriers to entry in internet access services. Wireless in particular requires serious investment in infrastructure, and moreover, mobile is licenced infrastructure which limits the number of actors.

Figure 8 represents the HHI figures for the sub-sectors. Here, HHI is calculated with ‘others’ providers lumped together, as reported by official statistics. In Wireless, ‘others’ amounts to

7 From 2009 onward, the figures for Internet Service Providers also include the turnover from fixed telephone lines. Telia (previously Sonera) and Elisa stopped selling new landline subscriptions in 2015. After 2019, the Finnish Transport and Communications Agency (Traficom) ceased collecting data on wireline telephone services due to the declining number of fixed lines. That same year, Telia Finland discontinued its landline services. The remaining Elisa fixed lines are not exchangeable or transferable in case of relocation. According to statistics from the Finnish Transport and Communications Agency Traficom, there were around 165,000 fixed network (landline) telephone subscriptions in Finland in the beginning 2024. Households accounted for 16.4% (around 27,000 subscriptions) of the total, with the remainder in businesses. DNA discontinued its services to the small landline customer base by the end of 2024. After that, only business services will remain available in certain parts of Finland.

only 1 percent. For ISP, this is about 3-5 percent, while in Multichannel Video Distribution, 'others' amount to only about 1 percent.

**Figure 8: HHI Scores for the Telecoms & Internet Access Sectors, 2018-2023 (by market share)**



Sources: The Finnish Transport and Communications Agency (Traficom) and Statistics Finland

HHI figures for these sectors indicate that the telecom and internet access sectors in Finland are highly concentrated. Wireless has been the most highly concentrated sector, and stayed so during the last five years. Internet service provision (ISP) is challenging in terms of competition, but is seeing a slight move towards more moderate competition. Concentration in Multichannel Video Distribution is also high at above 2800. CR4 scores also illustrate that all these markets are dominated by few large players who take the majority of the revenue.

**3.2. Online Media and Traditional Media Services (Content Media)**

This section presents the results of market concentration in both Online Media and Traditional Media Services, collectively referred to as Content Media. It examines the distribution of market shares and revenue patterns across key sectors such as newspapers, television, radio, magazines, and digital games. By presenting both traditional and digital content markets, the chapter highlights how concentration trends have evolved in

response to technological change, shifts in consumer behaviour, and broader structural transformations in the media landscape.

**TV markets** in Finland are not directly comparable to other Nordic national markets covered by the Global Media and Internet Concentration Project. In Finland, broadcast TV means free-to-air television funded by advertising. This does not exist anymore for example in Norway and Sweden. According to Traficom, approximately half of Finnish households watch television through the terrestrial network, using rooftop antennas. This network reaches over 99.9% of the population in Finland (Traficom, 2023a).

Television in Finland is a mixed market consisting of public service broadcasting and commercial broadcasting. The biggest player in the market is the Finnish Broadcasting Company (Yle) – a state-funded public service media. Yle, the public service media company, is a cornerstone of the media ecosystem. In addition to its main news bureaus in Helsinki and Tampere, Yle operates local newsrooms that produce content in Finnish, Swedish, and Sámi. Yle has a network of 31 regional news offices across Finland: 25 for Finnish-speaking audiences, 8 for Swedish speakers, and 2 for the Sámi community. Overall, Yle provides content in twelve languages, including Finnish, Swedish, three Sámi languages, Finnish and Finnish-Swedish sign language, Romani, Karelian, English, Russian, and Ukrainian. Furthermore, Yle produces programs in plain Finnish and plain Swedish to ensure accessibility and inclusivity.

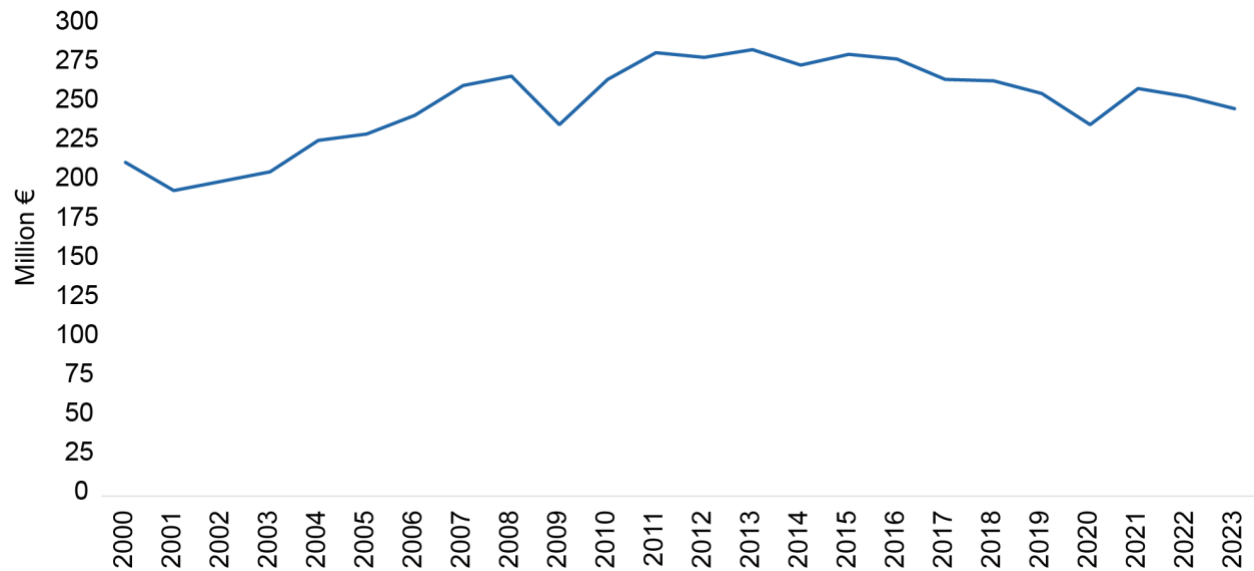
Yle's public service content and services are funded by taxes (up until beginning of 2013 funded through the license fee). All residents of mainland Finland who are 18 or over and have an annual income of more than €14,000 pay Yle tax. In 2024 the maximum tax was €163, but the government has proposed that this should be reduced by €3 in 2025. Yle's activities are governed by the Yleisradio Oy Act (1380/1993), which is responsible for providing diverse and comprehensive public service television and radio programming and related ancillary and supplementary services on equal terms. Yle's near-monopoly lasted until 1993, when the first commercial licence was granted to MTV3. The second commercial channel, Nelonen, was launched in 1997.

It should be noted that revenues from commercial TV broadcasting include advertising revenues from all commercial channels while Yle's public service funding for television and radio is reported separately under non-commercial broadcast TV and radio. In this context it is appropriate to mention that Yle's financing has been relatively stable over the years

revenues, indicating consistent public funding and audience support. However, in September 2024, a parliamentary working group approved the largest cuts in YLE's history. The cuts will be implemented through an increase in the Yle's financing value added (VAT) and the freezing of index adjustments. From 2025 to 2027, the YLE index will be frozen, resulting in a €47 million reduction in inflation-adjusted terms by 2027. The VAT increase will have an annual impact of approximately €19 million, meaning the total effect of these austerity measures will reach a net loss of around €66 million by 2027.

As shown in Figure 9, from 2000 to 2023, Finland's commercial broadcast television revenues fluctuated due to economic shifts and changing media consumption. After starting at €213 million in 2000, revenues peaked at €283 million in 2011 before gradually declining. The 2008 financial crisis caused sharp drop in television advertising revenues. The revenue development in the commercial broadcast television sector in Finland from 2018 to 2023 shows a slight decline, particularly from 2020 onwards, with some fluctuation in the years in between. The drop in 2020 can be attributed to the economic disruption caused by the COVID-19 pandemic, which significantly impacted advertising revenues. Although there was a recovery in 2021, the sector has since experienced some stabilization. However, the overall trend suggests that traditional commercial television continues to face pressure, likely due to increasing competition from digital streaming services, shifting consumer habits, and changing advertiser preferences. As a result, revenues in 2023, approximately €247 million, were 7% lower than in 2018.

**Figure 9: Revenues<sup>8</sup> of commercial broadcast television (ad-based) 2000–2023 (millions €)**

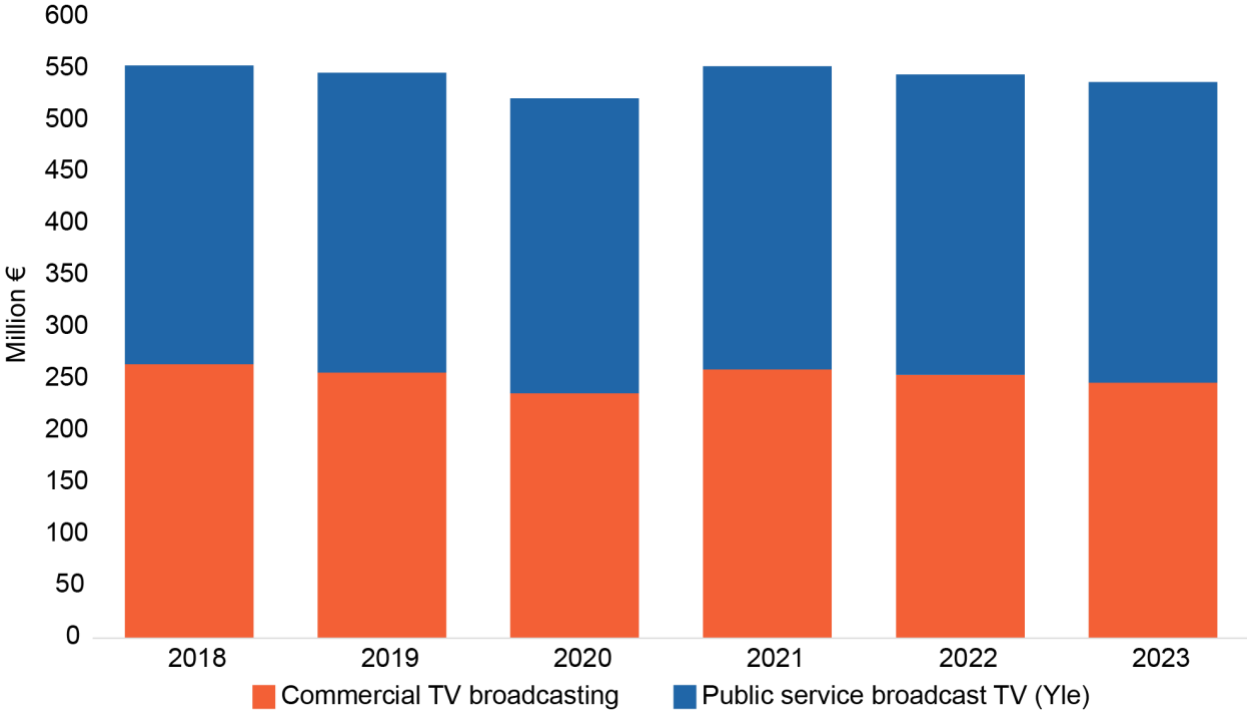


Sources: Finnish Advertising Council, Kantar Media (prev. Kantar Media)

Between 2018 and 2023, the total estimated annual revenues for television broadcasting, including public and commercial television broadcasting, in Finland declined slightly, from €554 million to €538 million (see Figure 10). This decrease was primarily driven by a reduction in commercial TV advertising revenue, which fell from €265 million to €247 million over the period. Commercial broadcasting revenues fluctuated—dropping to €237 million in 2020, likely due to the COVID-19 pandemic—followed by a modest recovery. In contrast, public service broadcaster Yle maintained stable funding, consistently generating around €290 million annually. As a result, Yle’s share of total TV broadcasting revenues grew modestly, ranging from 52.2% in 2018 to 54.1% in 2023. This reflects the structural difference between the two sectors: Yle benefitted from predictable public funding through the broadcasting tax, while commercial broadcasters are more vulnerable to market shifts, especially in advertising.

<sup>8</sup> Including digital advertising as of 2013

**Figure 10: Revenues of broadcast television<sup>9</sup> 2018–2023 (millions €)**



Sources: Finnish Advertising Council, Kantar Media (prev. Kantar Media) and Yle's annual reports on its activities to Traficom

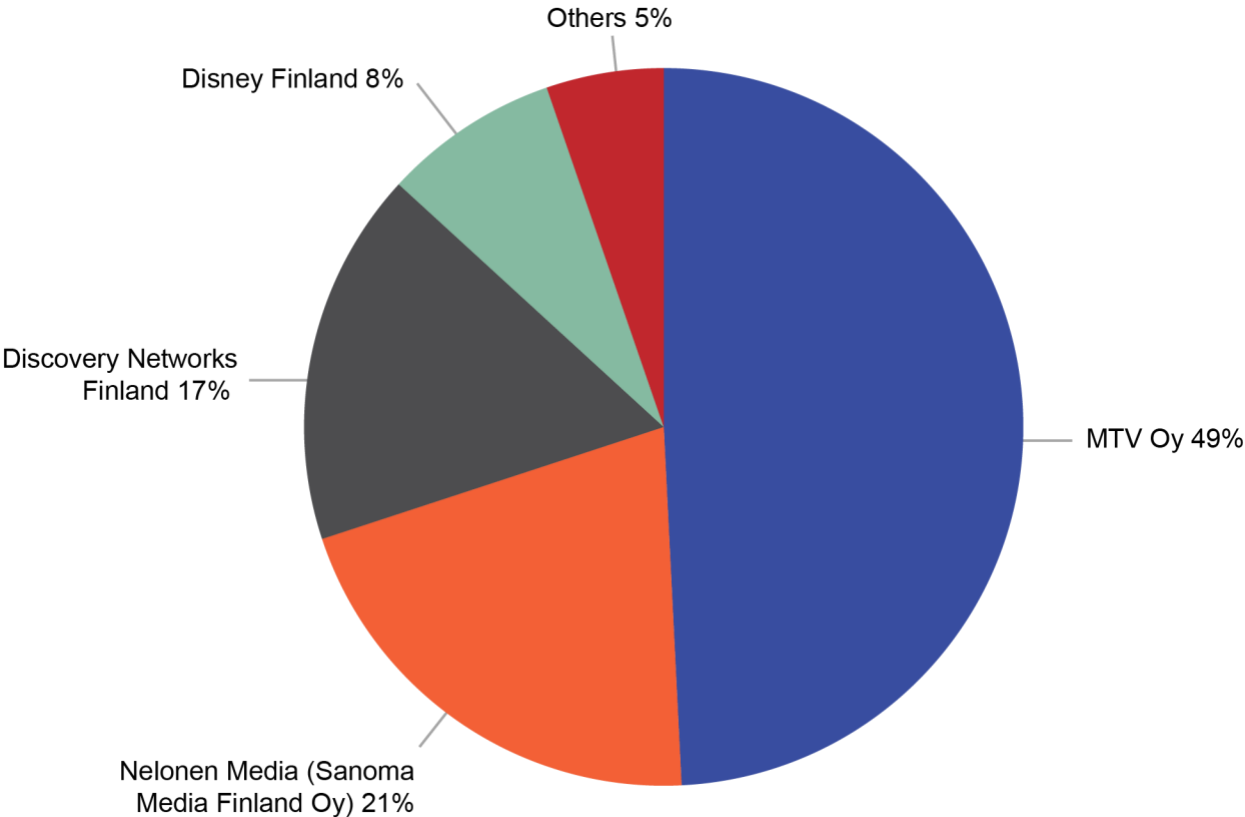
The digitalisation of television, launched in 2001, was specifically aimed at increasing the choice of channels available to the public (Hellman 2010a), which has also brought international players to the Finnish market. In the 2010s, new players entered the market and the number of channels increased. In 2023, Finland had a total of 22 national free-to-air TV channels, three of which were public service channels, and additional 38 national pay-tv channels.

However, there is a high degree of concentration of audiences across companies. Almost half (43.1%) of television viewing is concentrated on the channels of the largest company, Yle. The two largest commercial players in Finland's terrestrial television broadcasting are Sanoma Media Finland Oy, part of the Sanoma Group, and MTV Oy, a subsidiary of the Swedish multinational telecommunications company Telia Company Ab. The channels of Finland's largest commercial broadcaster, MTV Oy, captured just over a quarter (28.0%) of

<sup>9</sup> Yle's annual television broadcasting revenues—representing approximately 75% of its total broadcasting income from both television and radio—are estimates based on historical data, including the relative shares of TV and radio, annual broadcast hours, and pricing.

the audience, while the combined audience share of the third-largest operator, Sanoma Media Finland Oy, part of the Sanoma Group, was just under 12%. Together, the three largest operators accounted for more than more than four fifths (82.9%) of broadcast television viewing. Other television broadcasters include subsidiaries of international media giants such as Warner Bros. Discovery and The Walt Disney Company Ltd, but their share of audience viewing time is quite modest, given the concentration of attention on the services of the top three ownership groups, as just indicated. In commercial television broadcasting the CR4 scores remained high, fluctuating slightly but generally slightly, indicating a highly concentrated market. In commercial broadcast radio CR2 scores fluctuating around 80 indicate a highly concentrated market. In online video services CR4 scores decreased from 72.5 in 2020 to 60.7 in 2023, suggesting a decrease in market concentration as new players have entered market.

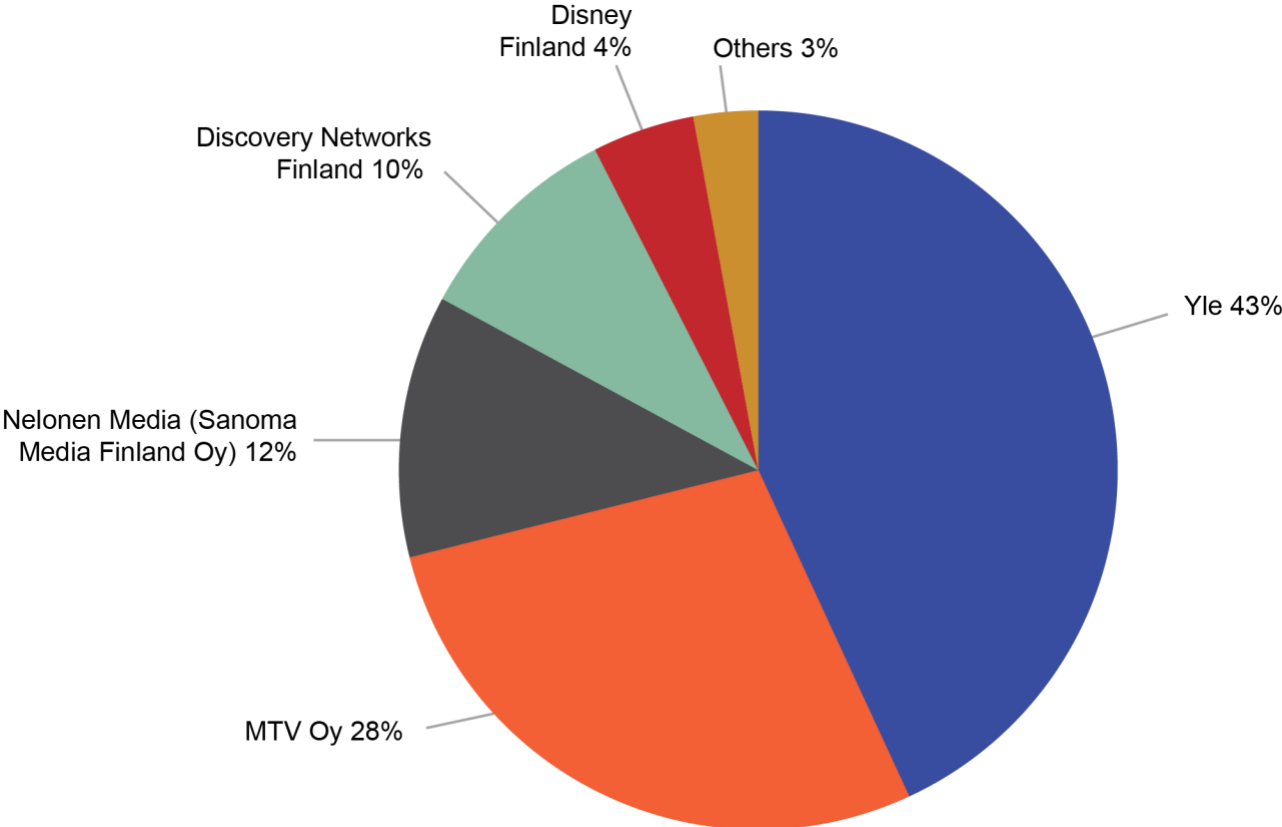
**Figure 11: Total audience<sup>10</sup> share of commercial television channels by company 2023 (%)**



Sources: TV peplemeter study, Finnpanel Oy and Yle Audience research

10 The data are based on continuous, metered monitoring and are averages for the whole year. The sample of the peplemeter study consisted of 1,100 households or a total of some 2,300 people until 2017. As of 2018, the sample is

**Figure 12: Total audience<sup>11</sup> share of television channels by company 2023 (%)**



Sources: TV peplemeter study, Finnpanel Oy and Yle Audience research

Revenues in the **online video services** sector have nearly doubled between 2018 and 2023 from €172 million to just under €337 million (see Figure 13). However, this growth has not been consistent, instead following a fluctuating pattern with annual growth rates varying between approximately 2% and 26%. According to the Polaris Nordic Digital Music in the Nordics report<sup>12</sup> (2024), streaming TV and movie content is a widespread activity in Finland,

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reduced to 1,000 households or a total of some 2,100 people. In 2023, the sample was 1,000 households or a total of some 1,950 people. From 2008, guest viewing plus playback of recorded programs within 7 days of transmission are included in the viewing time.

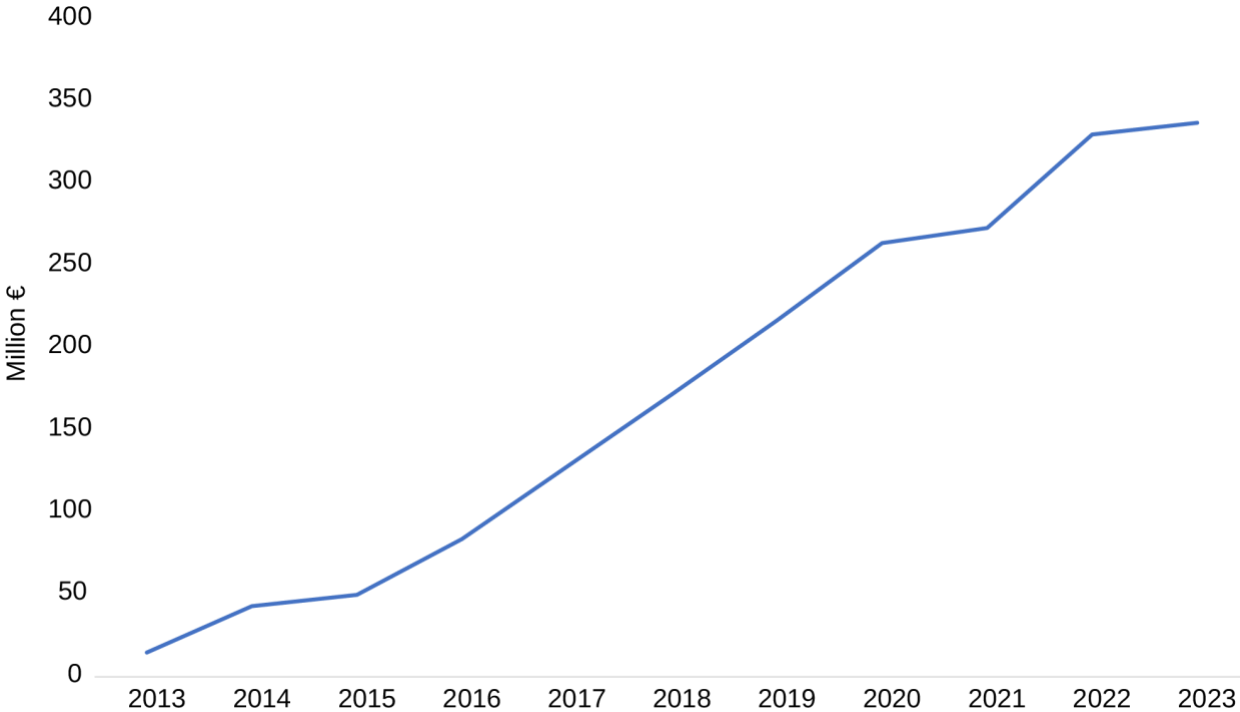
11 See footnote 10.

12 The "Polaris Nordic Digital Music in the Nordics 2024" survey covers data collected from the four Nordic countries—Denmark, Norway, Sweden, and Finland—during the period from May 8th to May 22nd, 2024. The survey targets a nationally representative sample, ensuring a balanced distribution in terms of gender, region, and age (12-65 years old) within each country. A total of 4,000 interviews were conducted online through the YouGov panels. The data collected was weighted according to gender, age, and geography to align with the ideal distribution set by local statistical agencies in each country, ensuring that the results accurately reflect the population in each region. This study follows a series of previous surveys conducted in 2015, 2017, 2018, 2020, and 2022.

with 86% of the population engaging in it in 2024. On average, Finns spend 2.8 hours per day streaming TV and movie content.

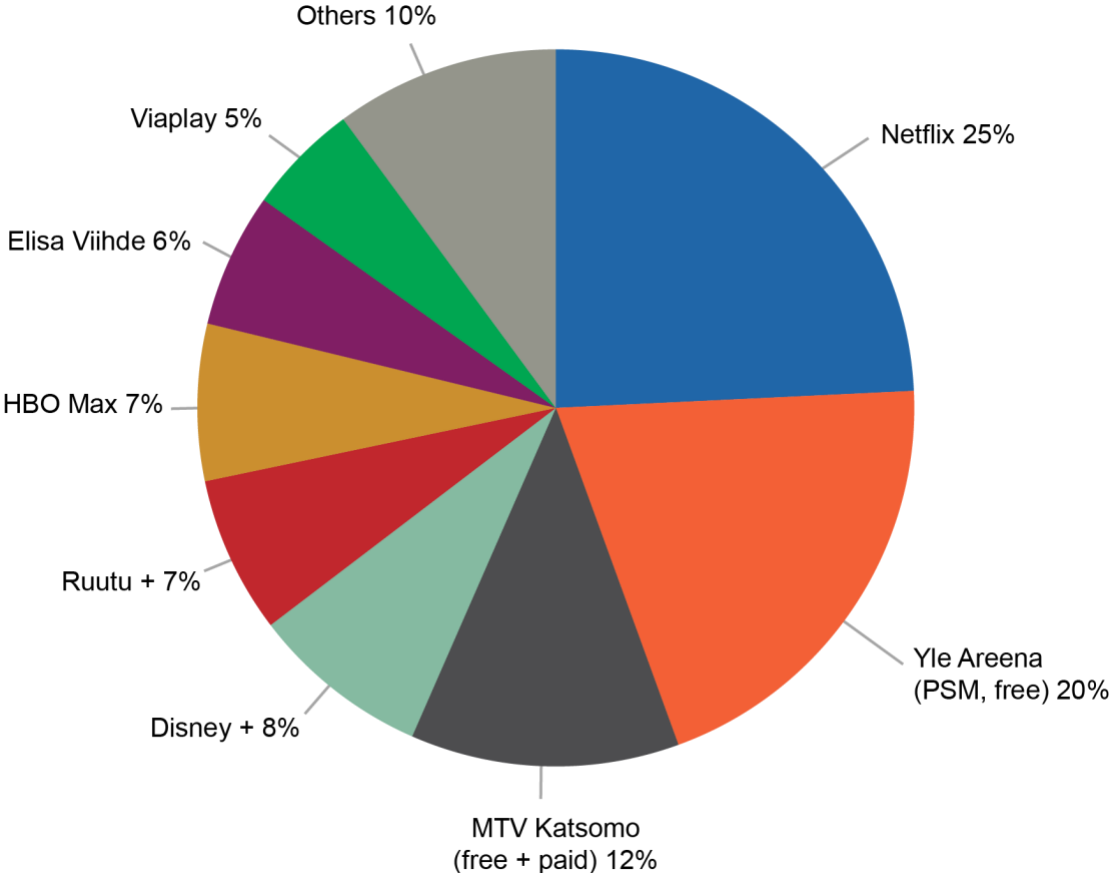
The most popular streaming service in Finland is Yle Areena, offered by the public service media Yle, which is used by 54% of Finns and has seen a significant increase in its audience by 17 percentage points over the past two years. At the same time, the share of commercial streaming services has risen, from 73% to 78%. Among free-to-air commercial channels, MTV Oy's MTV Katsomo free version is used by 24%, while the paid version is subscribed to by 13% of Finnish respondents. Sanoma Media Finland's Ruutu+ is used by 18%. The world's most popular VOD services also have a strong position in the Finnish market. In the paid streaming segment, Netflix remains the most popular service, with 42% of Finns using it, followed by Max+ (formerly HBO Max) at 20%, Disney+ at 19%, Viaplay at 11% and Amazon Prime at 6%. In 2024, the daily time spent streaming video content was primarily divided between Netflix, with 24%, and Yle Areena, with 20%. All other streaming services accounted for less than 10% of daily viewing time.

**Figure 13: Revenues of online video services 2013-2023 (millions €)**



Source: Statistics Finland, Mass media statistics

**Figure 14: Share of online video services in daily time spent streaming video content in 2024 (%)**

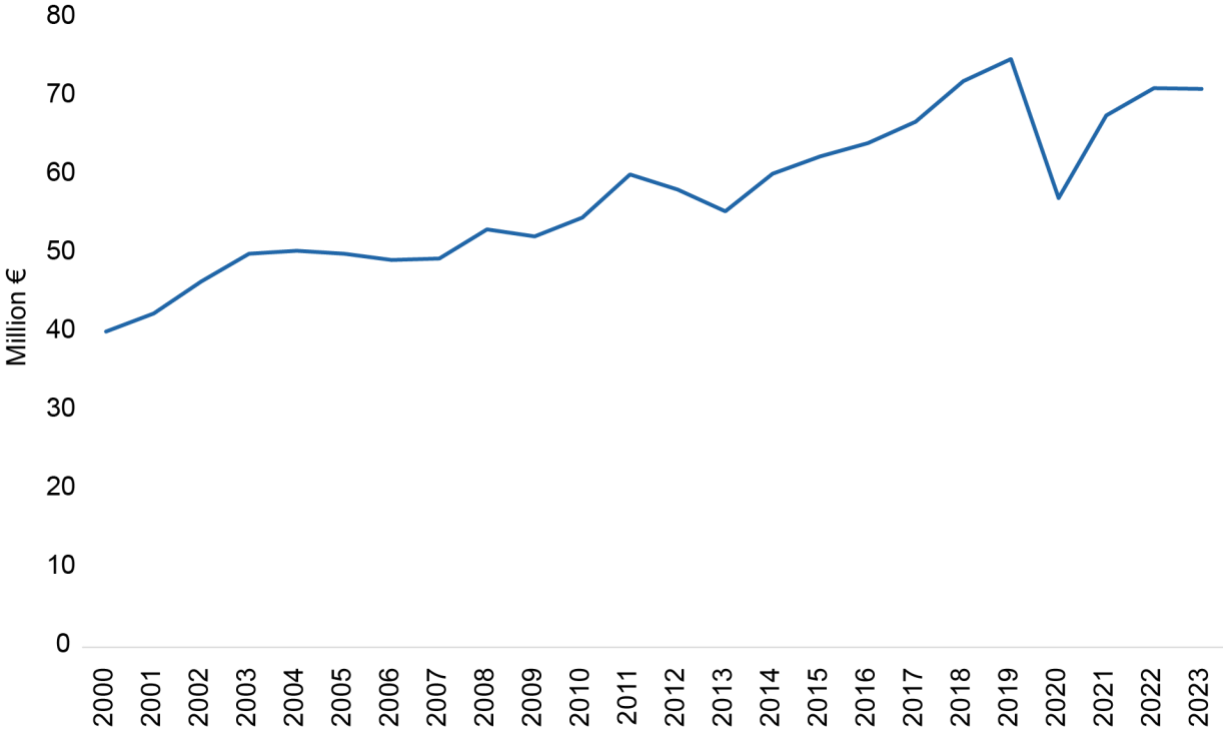


Source: Polaris Nordic, Digital Music in the Nordics 2024

The number of national radio channels in **the Finnish broadcast radio market** is influenced by the size and growth potential of the market on the one hand and licensing policy on the other. When radio broadcasting was opened up to commercial services and competition in 1985, a large number of privately owned and commercially financed local radio stations entered the market. This helped to create a new radio culture and also pushed Yle, which until then had been a monopoly, to reorganise its offer (Lehtisaari & al., 2024). By the mid-2010s, radio licensing followed the same liberalisation as television. Traficom was required to grant licenses to serious applicants with clear distribution plans, without assessing programming needs or overall impact, as long as frequencies were available. While national and sub-national channels grew after the 2018 licensing round, local stations began to level off and decline, partly due to frequency reorganisation and expanded technical coverage.

The data presented in Figure 13 illustrates the revenue trends of commercial broadcast radio from 2000 to 2023, measured in millions of euros. Over nearly a quarter of a century, revenues generally show a steady increase, despite some fluctuations. Starting at €40 million in 2000, the revenues gradually climbed throughout the 2000s, peaking at €75 million in 2019. The COVID-19 pandemic in 2020 led to a significant dip to €57 million, reflecting the global economic challenges faced by the media industry. However, the sector recovered quickly, with revenues rising to €71 million in both 2022 and 2023. In 2023, digital advertising revenues for commercial radio were approximately €5 million, accounting for about 7% of total advertising revenues.

**Figure 15: Revenues<sup>13</sup> of commercial broadcast radio 2000–2023 (millions €)**



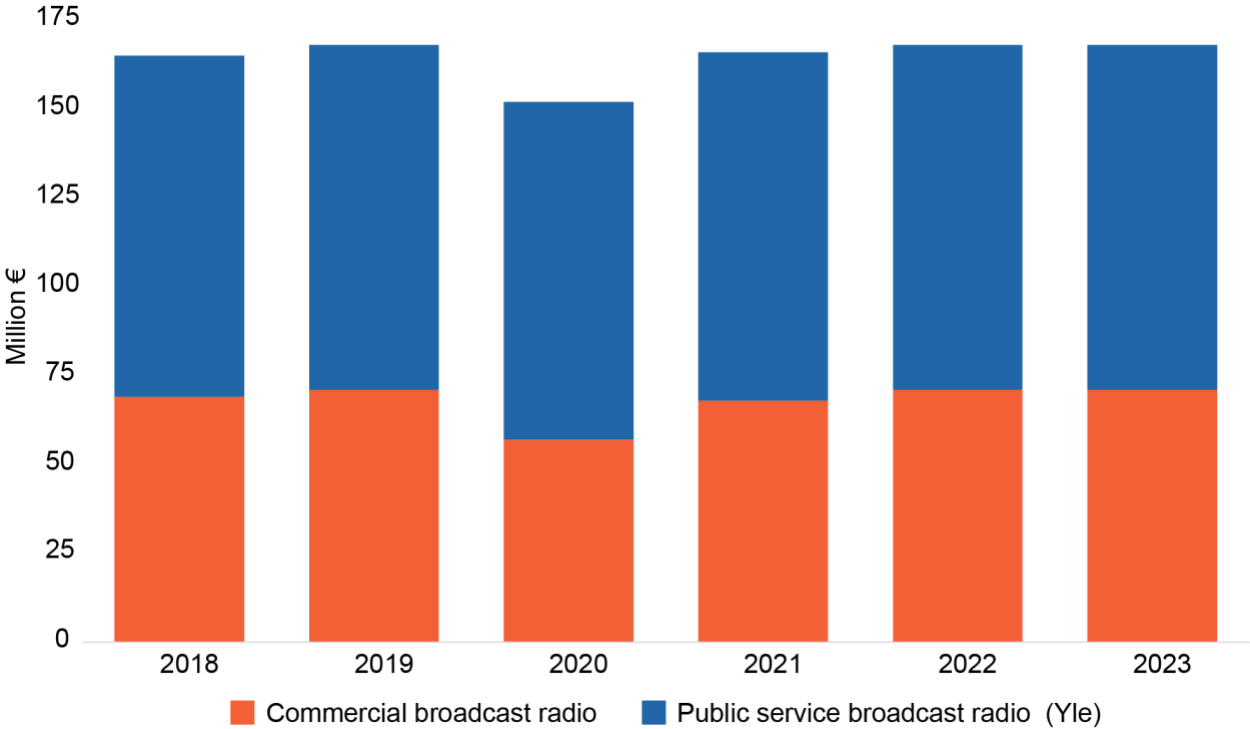
Sources: RadioMedia, TNS Gallup Group and Statistics Finland

From 2018 to 2023, the total revenues of public service and commercial radio broadcast radio in Finland remained relatively stable, fluctuating within a narrow range of €152 to €168 million (see Figure 16). Total revenue declined temporarily in 2020 to €152 million, likely reflecting the broader economic impact of the COVID-19 pandemic. However, it recovered to pre-pandemic levels by 2021 and remained steady at €168 million through

<sup>13</sup> Including digital advertising as of 2018.

2023. Commercial broadcast radio revenues experienced more volatility during this period, dropping from €71 million in 2019 to €57 million in 2020, before recovering to €71 million by 2022 and remaining constant in 2023. In contrast, public service radio (Yle) revenues showed greater stability, consistently ranging between €95 million and €98 million throughout the six-year period.

**Figure 16: Revenues<sup>14</sup> of broadcast radio 2000–2023 (millions €)**



Sources: Finnish Advertising Council, Kantar Media (prev. Kantar Media) and Yle's annual reports on its activities to Traficom

In Finland, radio operations still require a license, with the current licensing period set for ten years (2020-2029). A total of 70 FM licenses were granted to commercial radio stations, along with eight FM licenses allocated to Yleisradio, the public service media (PSM). Currently, there are approximately 50 commercial radio channels operating. Of these, around 30 operate at a national or semi-national level, while the rest primarily serve regional audiences, with only a few truly local stations. In addition, RadioMedia, the umbrella organization for Finnish

14 Yle's annual radio broadcasting revenues—representing approximately 25% of its total broadcasting income from both television and radio—are estimates based on historical data, including the relative shares of TV and radio, annual broadcast hours, and pricing.

commercial radios. and Yle jointly maintain the Radioplayer service, which provides access to all Finnish radio stations across various devices.

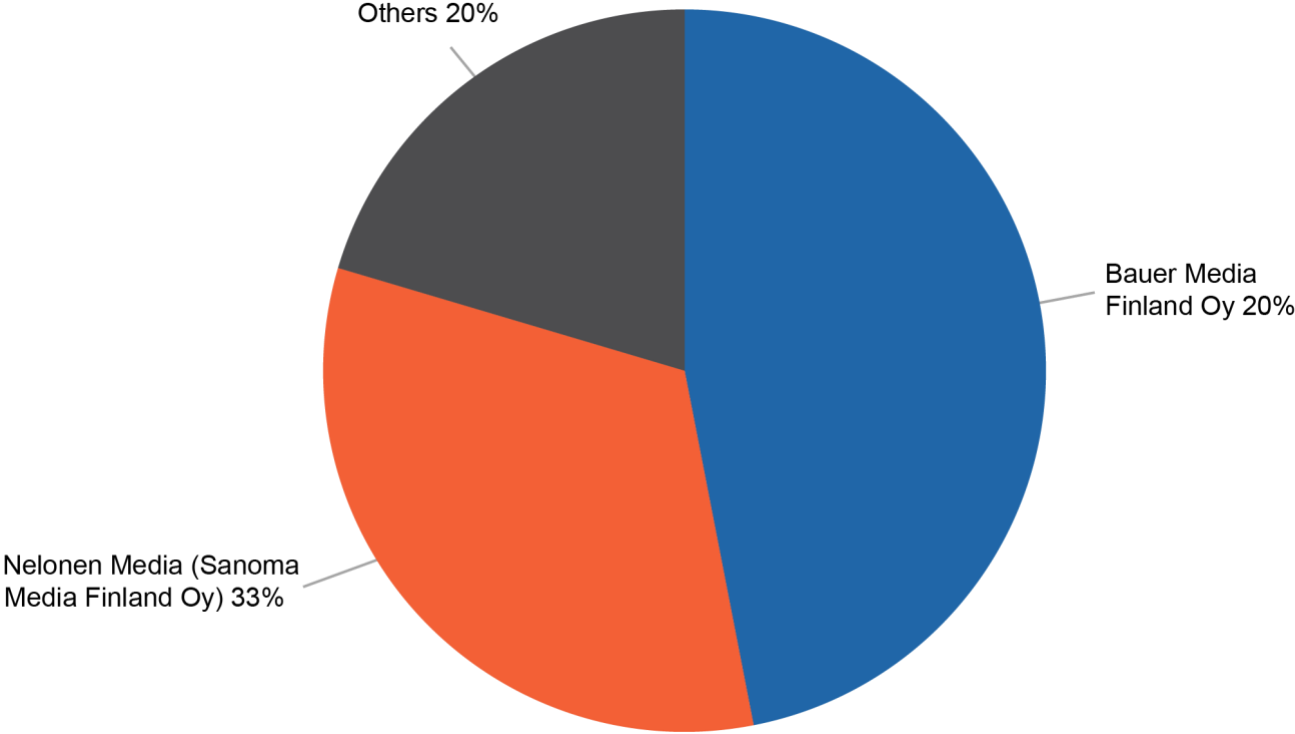
The sector has also seen major acquisitions that consolidated the industry. Two major processes have contributed to the consolidation of the radio sector. The first is Sanoma Group's gradual expansion into the radio market, beginning in 2007 with the launch of its first radio channel, Radio Rock. Since then, Sanoma has strengthened its position through acquisitions, such as the 2012 purchase of Metroradio Finland's radio stations from Irish Communicorp Group Ltd.

Another key factor in the industry's consolidation has been the entry of the German Bauer Group through various acquisitions. In 2015, Bauer acquired Radio Nova, previously owned by MTV Oy, along with several channels that were originally part of SBS Discovery Radio (formerly Discovery Finland). Additionally, Bauer expanded its holdings by acquiring Basso Media Oy, Kevyt Kanava Oy, and Mediatakojat Oy. Today radio broadcasting exhibits one of the highest levels of concentration among all media sectors in Finland. This domain is predominantly governed by three principal entities: the public broadcaster Yleisradio Oy, Sanoma Media Finland Oy (a part of the Sanoma Group), and Bauer Media Finland Oy (a subsidiary of the German Bauer Media Group).

According to Finnpanel's National Radio Survey, the most-listened-to radio station in 2023 was Yle Radio Suomi, which, as in previous years, accounted for a third (34%) of total radio listening. Overall, Yle's radio channels made up half (51%) of total listening. The commercial radio market is dominated by two companies. German-owned Bauer Media's channels together accounted for about a quarter (23%) of total listening, while Nelonen Media, part of the Sanoma group, had just under a fifth (16%). Notably, these two major companies are estimated to account for approximately four-fifths of all revenues generated by commercial radio stations in Finland. The combined audience share of all other commercial operators was just 10%.

The CR2 scores (see Figure 17), which represent the combined market share of the top two firms, show some fluctuations over the years. Starting at 79.0 in 2018, the highest score was recorded in 2021 at 81.3, before settling at 79.6 in 2023. These variations suggest ongoing competition among the leading firms. Similarly, the HHI scores for the same period reflect comparable trends, rising from 3572 in 2018 to a peak of 3759 in 2021. By 2023, the HHI score had decreased slightly to 3686, still indicating a highly concentrated market.

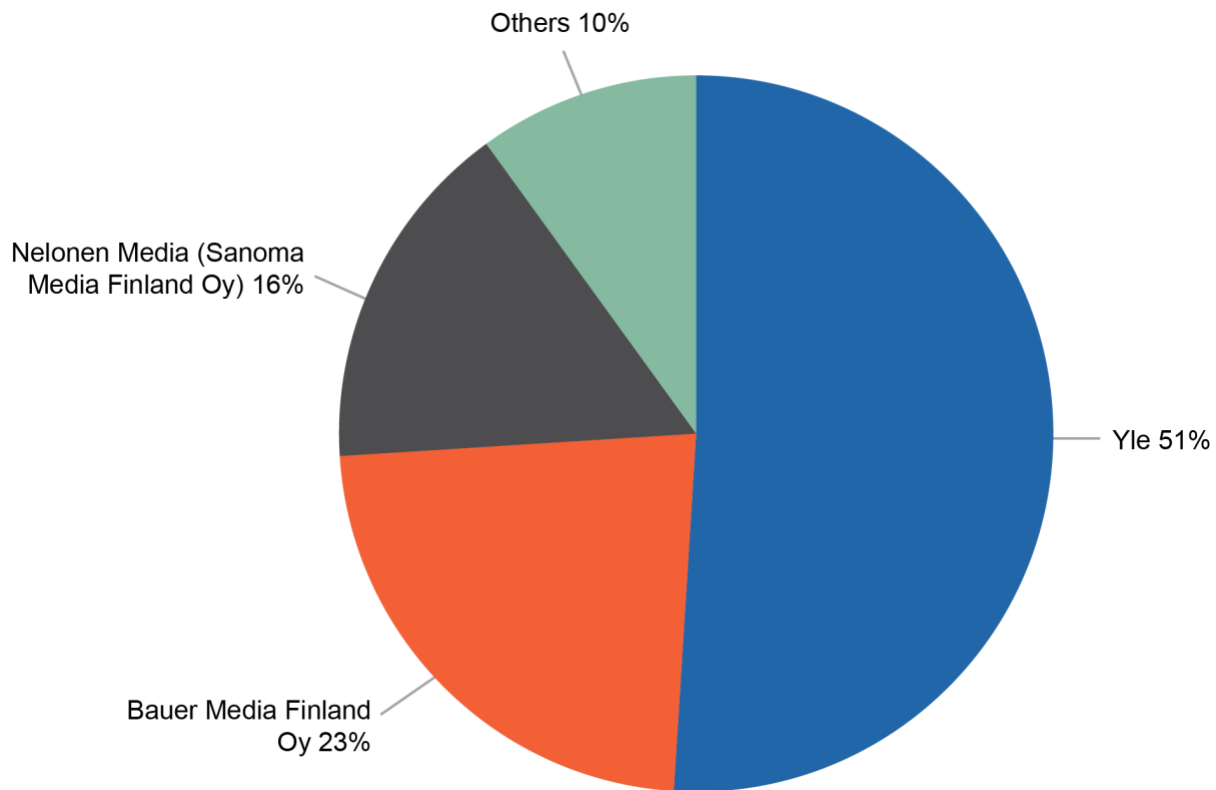
**Figure 17: Total listening<sup>15</sup> share of commercial radio channels by company 2023 (%)**



Source: Finnpanel Oy

15 Radio listening is measured using diaries. The annual national sample size is about 21,000 diaries. Until 2011 there was a 7-day study wave every month. The periods were selected randomly. There were 12 waves each year. From 2012 onwards, there is a 7-day study wave every week and approximately 52 waves each year. The base population for KRT is 9+ years old Finnish and Swedish speaking population excluding the Åland islands.

**Figure 18: Total listening<sup>16</sup> share of radio channels by company 2023 (%)**



Source: Finnpanel Oy

In the Finnish **newspaper market**, revenues from both paid newspapers and free city papers have fluctuated significantly between the turn of the millennium and 2023, but the overall trend has been steadily downward from the end of the first decade of the millennium. Starting at 1,078 million euros for paid-for newspapers and 1,165 million euros for total revenues in 2000, there was a gradual decline until 2003. A recovery phase followed, with revenues peaking in 2008 at 1,291 million euros for total revenues. However, the global financial crisis in 2009 led to a sharp decline, with total revenues dropping to 1,157 million euros. Despite a brief recovery in 2010 and 2011, the downward trend resumed. By 2023, total revenues fell to 821 million euros. This period reflects the challenges faced by the newspaper industry, including the impact of digital media, changing consumer habits, and economic fluctuations.

Figure 19 shows that between 2000 and 2021, the revenue sources for Finnish newspapers, including both dailies (4-7 issues per week) and non-dailies (1-3 issues per week),

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<sup>16</sup> See Footnote 15.

experienced significant shifts. For daily newspapers, advertising revenue, which made up 58% of total revenue in 2000, steadily declined to 38% by 2021. Non-dailies, on the other hand, started with 59% of their revenue coming from advertising in 2000, with this share gradually dropping to 41% by 2021. These trends underscore the ongoing challenges faced by the newspaper industry in maintaining advertising revenue, highlighting an increasing reliance on direct consumer payments to sustain operations. In 2022, the News Media Finland revised its classification of newspaper types for statistical purposes. By 2023, consumer revenues had risen to account for 70% of the total revenue for daily newspapers, while for local newspapers, consumer revenues made up 57%.

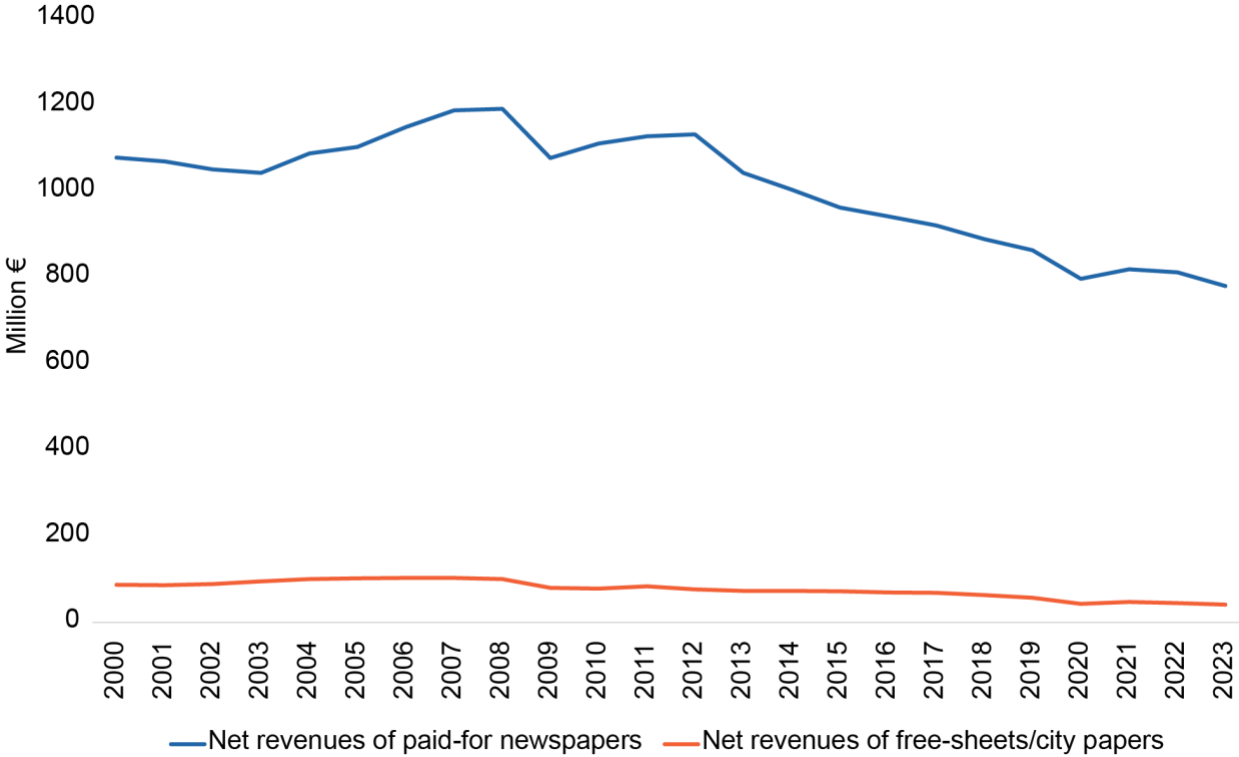
Based on News Media Finland's (NMF) statistics, between 2011 and 2023, the share of printed and digital editions in newspaper revenues<sup>17</sup> has clearly shifted. In 2011, printed editions dominated the market with an almost 97% share, while digital editions made up less than 4%. Over the years, the share of printed editions steadily declined, dropping to 72% by 2023. In contrast, digital editions experienced consistent growth, increasing to 28% in 2023. This shift reflects a growing preference for digital content among consumers, driven by technological advancements and evolving reading habits.

Finland gradually phased out direct press subsidies in the 1990s and, two decades later, replaced the zero-rate VAT with a reduced rate. In both cases, these policy changes were driven by a severe fiscal crisis (Ala-Fossi, 2020; Ots et al., 2016). However, even during periods of economic growth, Finnish governments have not reinstated direct press subsidies, except for short-term crisis measures such as those introduced during the COVID-19 pandemic. Currently, the only permanent direct financial support for newspapers in Finland consists of €0.5 million in discretionary subsidies for newspapers serving national minority languages and Swedish-language news services. In 2023, an additional one-off direct news media support of €7 million was granted. However, compared to Sweden and Norway, Finland's direct government subsidies for news media remain relatively small. Despite this, tax-based support has provided significant financial benefits to the industry. According to annual calculations by the VATT Institute for Economic Research—operating under the Ministry of Finance—the cumulative tax benefit for newspapers and magazines has exceeded €3 billion since the early 2000s and remains over €1.5 billion since the 2010s.

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17 The figures do not include free and city newspapers

**Figure 19: Net revenues of newspapers<sup>18</sup> 2000 -2023 (millions €)**



Sources: News Media Finland (prev. Finnish Newspapers Association) and Statistics Finland/Media statistics

The Finnish newspaper landscape is primarily built around strong regional newspapers, with a still-vibrant local press continuing to play a significant role despite a decline in the number of titles. Although the number of newspaper closures has slightly increased, Finland still has a diverse newspaper market with titles published across the country. According to the National Library of Finland, there were 269 newspaper titles, including free sheets, in 2023. However, there is some discrepancy in the statistics, as NMF’s figures only include paid newspapers that were members of the association at the time. According to NMF, the number of paid newspaper titles in 2023 was 170<sup>19</sup>, about three-quarters of which were non-dailies. When including the free-sheets/-newspapers that are members of the NMF, the total number of member titles increases to 224. While the local media scene remains dynamic, commercial news outlets are still heavily reliant on advertising revenue

18 Until 2009 revenues of printed newspapers only. From 2010 onwards, revenues of digital sales are included.

19 There are some small local newspapers that are not members of the News Media Finland. For example, two newspapers in the self-governing province of the Åland Islands are not members of the trade association.

from print editions, making them vulnerable to fluctuations in advertising volume and targeting (Ala-Fossi et al., 2020). Competition from Google and Facebook has had a noticeable impact on advertising revenue. Statistics by the Finnish Advertising Council and Kantar TNS indicate that two major international players, Meta and Alphabet, collect the majority of digital advertising revenue.

The number of newspapers has fallen significantly in the 2000s as a result of newspaper closures. Since the turn of the millennium, the number of daily newspapers has fallen from 55 to 37, i.e. by a third. At the same time, the number of actual local newspapers has fallen by only a tenth, from 158 to 133 (-16%). Although the number non-dailies has fallen less, their frequency of publication has clearly decreased. The number of twice- or thrice-weekly newspapers has halved, and around three out of four local newspapers now appear only once a week. The reduction in the number of publishing companies in NMF has been significant. While in 2000 there were 117 newspaper companies publishing newspapers in Finland, by 2022 the number of newspaper publishing companies had fallen to 61, i.e. almost halved (Lehtisaari et al., 2024). However, the balance of power and the order of size of the groups have varied, meaning that the concentration process has not been straightforward. Groups have sometimes increased and sometimes decreased their holdings. Major newspaper chains have disappeared completely through mergers and changes of ownership. The changes in ownership reflect the economic development of the sector and the strategic choices made by newspaper companies.

Newspaper publishing that is presently characterised by frequent mergers and shows pace of consolidation. Keskisuomalainen Corporation has steadily expanded its newspaper portfolio throughout the 2000s, growing from just eight newspapers in 2000 to 55 in 2025. The company has seen particularly strong growth over the past decade. Other companies focused on growth include TS-Yhtymä Oy, which expanded its portfolio in the early 2000s, Kaleva Oy, and Hilla Group Oyj. The former expanded into new regions in the late 2010s, while the latter did so in the early 2020s. In the 2010s, both Sanoma and Alma media reduced their newspaper holdings by selling them to regional newspaper companies, but in 2020, Sanoma made a strong return to newspaper publishing with the acquisition of Alma's regional and local newspapers. In 2023, Sanoma also acquired Marva Group's newspapers. That same year, Swedish-owned Bonnier News became the main shareholder of a new company, which publishes Finland's largest Swedish-language newspaper, *Hufvudstadsbladet*, along with the two additional Swedish-language newspapers. In 2024,

Bonnier further expanded its presence by acquiring the entire share capital of HSS Media Ab, gaining ownership of additional three Swedish-language newspapers.

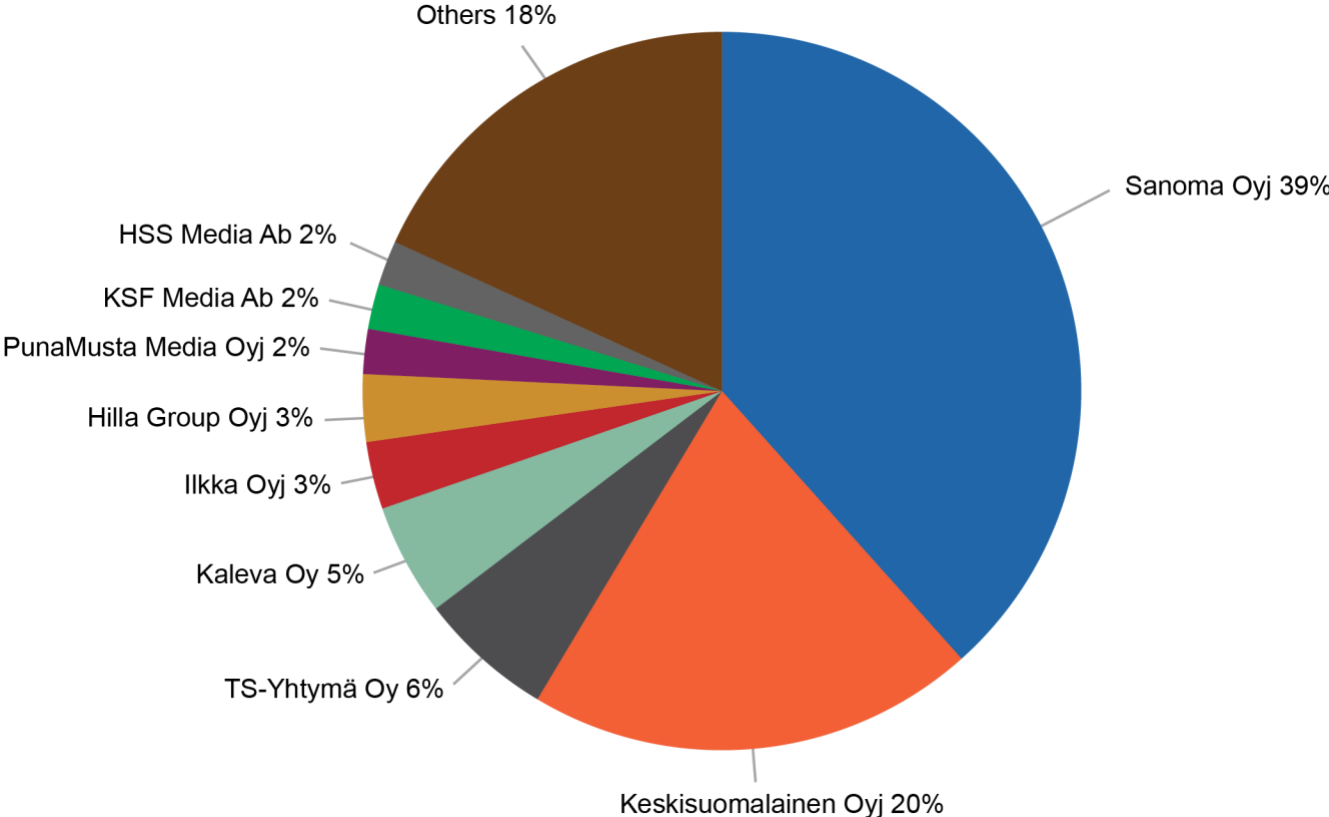
Through these acquisitions, Bonnier News has emerged as a significant new player in the newspaper market and dominant player in the Swedish language press in Finland. In April 2025, Ilkka Oyj and Kaleva Oy announced their decision to merge their media businesses. The two companies will form a joint venture, with Kaleva holding a 65% stake and Ilkka Oyj owning 35%. According to the companies, the merger will result in a media entity encompassing more than 20 newspapers and city publications. The new company's estimated turnover is approximately €60 million.

The changes in the number of newspapers owned reflect the sector's structural and economic development. There have been numerous ownership restructurings, with concentration into fewer hands and consolidation of operations aimed at achieving savings and synergies to help newspapers remain viable (see Figures 20 and 21). Over this period, the share of published titles held by the eight largest groups grew from 35% to 64%, while the share of independent titles declined from 41% to 25%. In 2023, almost a third (30%) of all member publications, both newspapers and free sheets, of the News Media Finland (NMF), belonged to the Keski-suomalainen Group. When measured by the number of titles, the five largest newspaper groups<sup>20</sup> own more than half (58%) of all member titles of the NMF, with the ten biggest groups owning two-thirds (68%).

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20 Keski-suomalainen Oyj, Hilla Group Oyj, Sanoma Oyj, Kaleva Oy and TS-Yhtymä Oy

Figure 20: Newspaper groups' revenue market shares<sup>21</sup> in 2023 (%)



Source: News Media Finland

21 The revenues of Alma Media Corporation's publications—including the tabloid *Ilta-Suomi*, the financial newspaper *Kauppalehti*, and the online newspaper *Uusi Suomi*—are categorized under "Others."

**Figure 21: Number of paid-for newspaper titles<sup>22</sup> owned by the leading groups 2000-2025**

2000		2010		2020		2025	
Alma Media	22	Alma Media	25	Keskisuomalainen	44	Keskisuomalainen	55
Savon Mediat	14	Keskisuomalainen	22	Sanoma	15	Hilla	18
Sanoma	11	Sanoma	10	TS-Yhtymä	9	Sanoma	15
Keskisuomalainen	8	TS-Yhtymä	9	Suomalainen Kirjapaino	9	Ts-Yhtymä	9
Ilkka	8	Ilkka	7	Kaleva	8	Kaleva <sup>23</sup>	9
Suomenmaa	6	Pohjois-Karjalan Kirjapaino	7	KPK-Yhtiöt	8	Ilkka	6
TS-Yhtymä	5	Länsi-Savo	6	PunaMusta Media	7	Bonnier	6
Pohjois-Karjalan Kirjapaino	5	Keski-Pohjanmaan Kirjapaino	6	Ilkka	6	Pirmediat	5
Other group of companies	53	Other group of companies	51	Other group of companies	30	Other group of companies	12
Independent newspapers	91	Independent newspapers	67	Independent newspapers	48	Independent newspapers	39
<b>Total</b>	<b>223</b>	<b>Total</b>	<b>210</b>	<b>Total</b>	<b>184</b>	<b>Total</b>	<b>174</b>

Source: The number of newspapers in 2000, 2010, and 2020 is based on Lehtisaari et al. (2024). The figures for 2025 have been calculated using similar methods, drawing from statistics provided by the News Media Finland.

The CR4 score started at 67.2 in 2018 and gradually increased to 69.2 in 2021. However, it dropped slightly as a result of the restructuring of the business landscape in 2022 before rising to 65.5 in 2023. This suggests that while the overall market share of the top four players in the newspaper industry has remained relatively stable. The Herfindahl-Hirschman Index (HHI) scores, indicates a more significant variation in market concentration. The HHI score for newspapers began at 1686 in 2018 and steadily increased reaching 2254 in 2023. The rising HHI values reflect a growing concentration of revenue within a few key players in the newspaper industry, suggesting a trend towards higher monopolization or oligopolization during this period. Together, these figures highlight the contrasting dynamics in market concentration, with the CR4 scores showing modest shifts

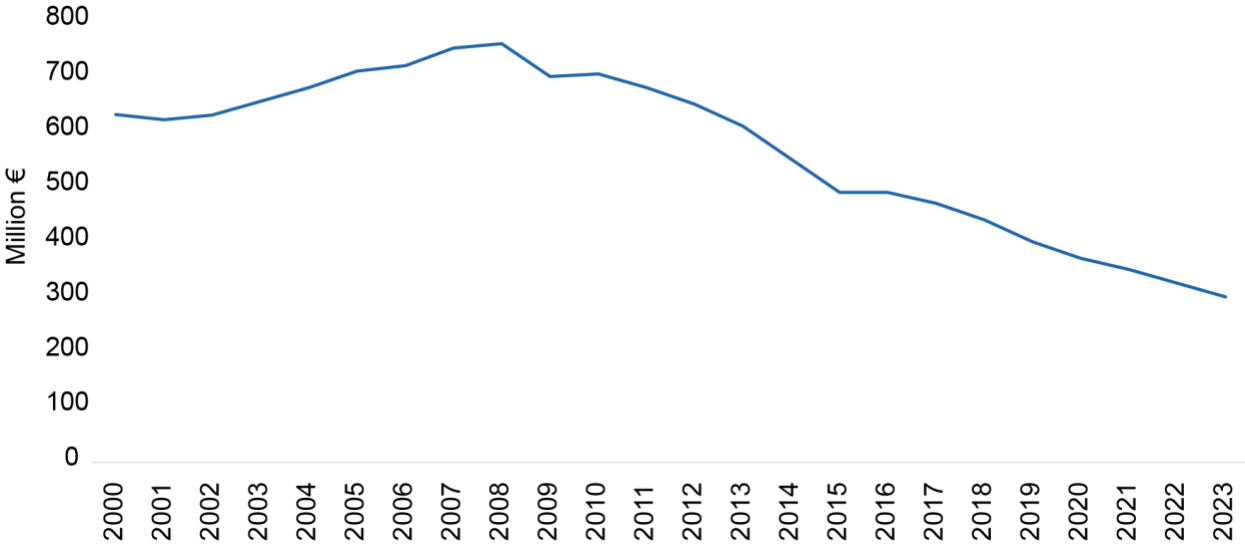
22 These numbers exclude free and city newspapers owned by the companies, as well as certain small newspaper titles that are not members of the News Media Finland.

23 In 2025, Kaleva and Ilkka Oyj will form a joint venture that will include all of their newspapers.

and the HHI scores revealing a more pronounced trend towards increased concentration in the newspaper sector over the last several years.

The development of revenues of magazine publishing sector from 2000 to 2023 reveals a clear downward trend over the period (see Figure 22). Starting at 631 million euros in 2000, revenues experienced a gradual increase, peaking at 760 million euros in 2008. This peak was followed by a steady decline, with revenues dropping to 700 million euros in 2009 and continuing to decrease in subsequent years. By 2013, revenues had fallen to 610 million euros, and the downward trajectory persisted, reaching 490 million euros in 2015. The decline continued, with revenues decreasing to 440 million euros in 2018 and further to 300 million euros in 2023., indicating a significant reduction from the early 2000s. This development indicates a substantial shift in the magazine publishing industry, influenced by changes in consumer behaviour, the rise of digital media, and evolving market dynamics. The consistent decline in revenues highlights the challenges faced by traditional print media in maintaining their market share and profitability in an increasingly digital business environment.

**Figure 22: Magazine revenues<sup>24</sup> 2000-2023 (millions €)**



Source: Statistics Finland, Mass media statistics

24 The figures are estimates provided by Statistics Finland

Annual data<sup>25</sup> on media advertising revenues for printed magazines and periodicals shows a steady decline from €192 million in 2000 to €40 million in 2023. This decline reflects challenges such as changing consumer behaviour and the rise of digital media. However, during the last five years digital advertising sales for magazines have remained relatively stable, with sales increasing slightly from €12.6 million in 2018 to €13.1 million in 2023, accounting for a quarter of total magazine advertising revenue. In line with the developments outlined above, the breakdown of magazine revenues from 2000 to 2023 highlights some shifts in the industry's income sources. Subscriptions have consistently been the dominant revenue stream, starting at 59% in 2000 and gradually rising to a peak of 74% in 2017. By 2023, subscription revenues accounted for 71%, reflecting a growing reliance on subscription-based models over time. Single copy sales, however, have remained relatively low, fluctuating between 6% and 9% in 2023. In contrast, advertising revenue has experienced a notable decline. It represented one-third (33%) of total revenues in 2000 but steadily decreased to 19% by 2020, before stabilizing at around 20% in recent years.

In Finnish media statistics, magazines and periodicals are categorized into three main groups: consumer magazines, trade and business magazines, and customer magazines. Finland's magazine publishing sector is dominated by three major players: A-Lehdet Oy, Otavamedia Oy, and Sanoma Media Finland Oy, which collectively published more than 50 magazine titles in 2023. Other significant players include Alma Talent Oy, the foreign-owned Aller Julkaisut Oy, Bonnier Publications International AS, Story House Egmont Oy Ab, and CIL Suomi Oy. According to the statistics from the National Library of Finland the total number of magazine publications has steadily declined since the turn of the millennium, from 5,104 in 2000 to 1,909 in 2023. Weekly publications decreased from 57 to 23, while those published 1-2 times a month dropped from 448 to 231. Publications issued 4-11 times a year saw a significant reduction from 3,044 to 1,178. Minor opinion and cultural magazines are eligible to apply for government subsidies, which support circulation, online publishing, delivery, and library subscriptions. Since 2018, the Arts Promotion Centre Finland has administered these subsidies. In 2023, the total subsidy amounted to 0.8 million euros. The aim of the subsidy is to enhance cultural diversity, communication variety, and pluralism in society.

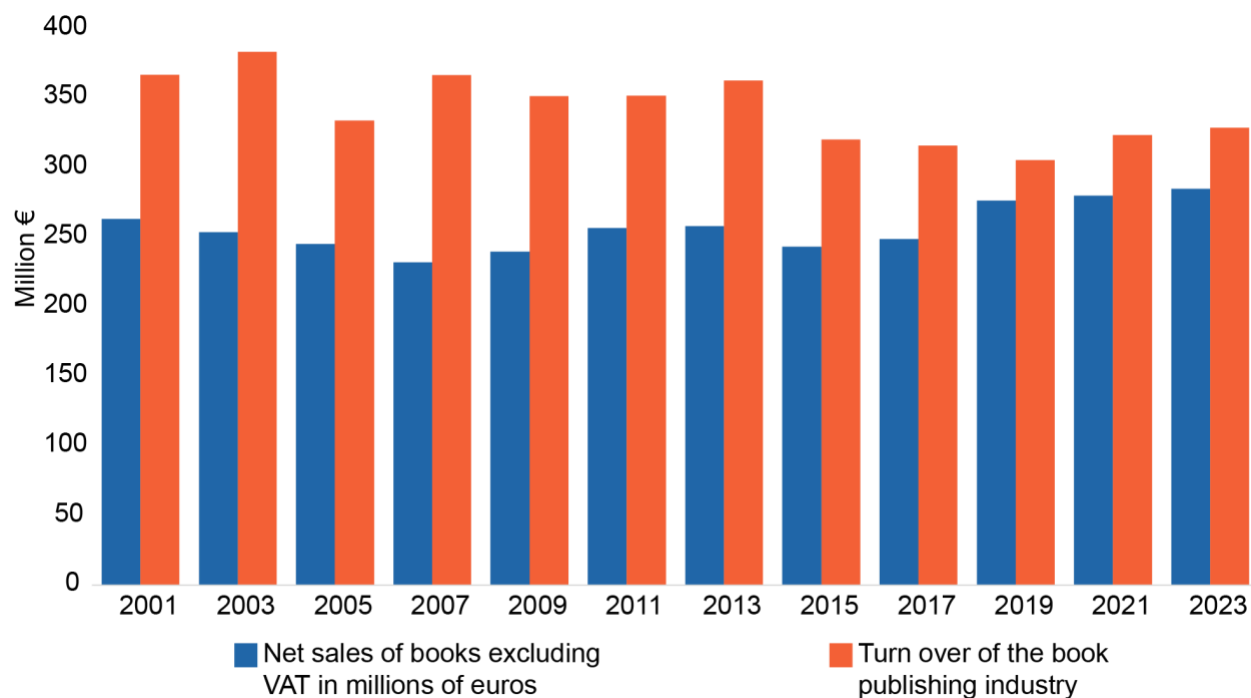
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25 Advertising revenue data from the Finnish Advertising Council and Kantar Media (formerly Kantar Media) includes figures for consumer magazines, trade and organizational magazines, and customer magazines.

Figure 23 presents the net sales of books excluding VAT and the turnover of the **book publishing industry** from 2001 to 2023, measured in millions of euros. The net sales of books show a general downward trend from 263 million euros in 2001 to a low of 232 million euros in 2007. However, there is a gradual recovery observed from 2009 onwards, with net sales increasing to 285 million euros by 2023. In contrast, the turnover of the book publishing industry exhibits more fluctuation. Starting at 367 million euros in 2001, the turnover peaked at 383 million euros in 2003 before experiencing a significant drop to 334 million euros in 2005. The turnover then recovered to 366 million euros in 2007, followed by another decline and subsequent fluctuations. By 2023, the turnover reached 329 million euros, showing a slight increase from the previous years but still below the early 2000s peak. Overall, the data shows that while net sales of books have shown a steady recovery in recent years, the turnover of the book publishing industry has experienced more volatility.

The book publishing market in Finland features some significant players. The three largest companies in the market are Kustannusosakeyhtiö Otava, Sanoma Pro Oy (part of Sanoma Group), and Werner Söderström Osakeyhtiö (WSOY). Kustannusosakeyhtiö Otava, the largest book publisher in Finland, specializes in fiction, non-fiction, and educational materials. Sanoma Pro Oy, a subsidiary of Sanoma Oyj, holds the top position in the Finnish educational publishing sector. Werner Söderström Osakeyhtiö (WSOY), owned by the Swedish company Bonnier, is the leading publisher of general literature. In addition to these major players, the market also includes several important medium-sized companies and a variety of smaller publishers.

**Figure 23: Net sales of books<sup>26</sup> and turnover of book publishing industry<sup>27</sup> 2001-2023 (millions €)**



Sources: Finnish Publishers Association and Statistics Finland’s Structural Business and financial statement statistics

The Finnish **digital games industry** is one of the most successful and innovative sectors of the country's economy, earning international recognition for its significant contributions to the global gaming market. Finland is home to a diverse range of game developers, from small independent studios to large companies, and has produced several globally popular and successful games. Notable Finnish game companies include Supercell Oy, Small Giant Games Oy, Rovio Entertainment Oy, Remedy Entertainment Oy, and Housemarque Oy.

In 2023, the industry's total turnover was approximately EUR 2.7 billion, providing thousands of jobs. According to Neogames, a membership-based non-profit association for the gaming industry, 98% of Finland's digital game development revenue comes from exports, making it one of the country's important export sectors. The Finnish government has played an active role in supporting the gaming industry through various programs,

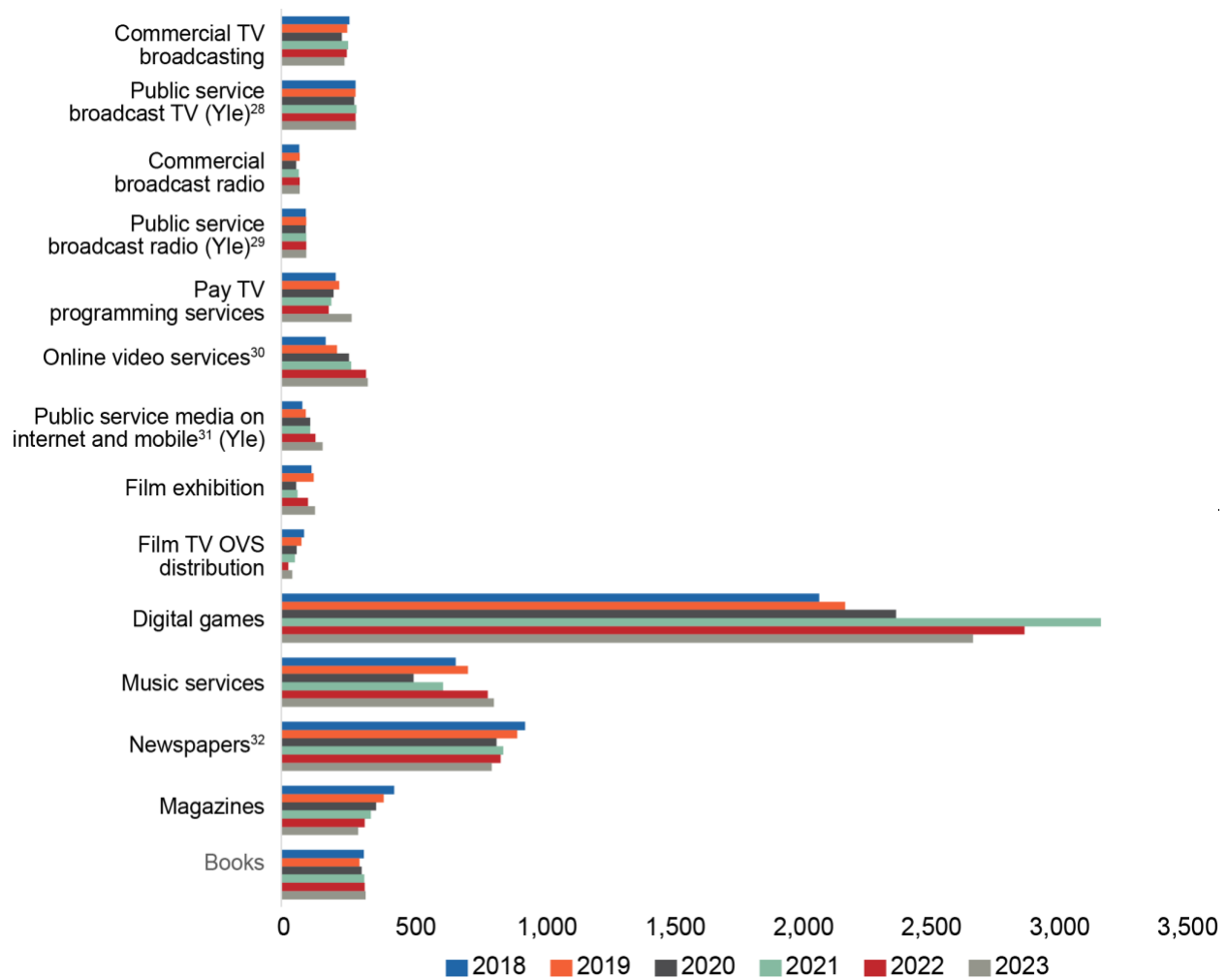
26 Annual statistics are collected from all member publishers of the Finnish Publishers Association and annual sales figures are based on the price of works sold by publishers to the next level of distribution, exclusive of VAT.

27 Total turnover of all book publishers (NACE/TOL Code 5811 Book Publishing). Includes also the turnover of enterprises in the industry that are not members of the Finnish Publishers' Association.

grants, and tax incentives, which have fuelled its rapid growth. For example, the Skene programme (2012–2015) was designed to professionalize the Finnish game industry and enhance its economic impact. During this period, Finnish Funding Agency for Innovation Tekes (today Business Finland) funded 105 game company projects and nine academic research projects. The total funding provided by Tekes under the Skene programme amounted to €33.3 million. In addition to this, the applicants contributed their own matching funds, totalling €33.2 million (Venäläinen et al., 2019). According to Hiltunen & Latva (2013) the success of the Finnish games industry is based on a long history of development, which began in the late 1980s. The mobile gaming experience dates back to the mobile hype of the turn of the millennium, where mistakes were made but a lot was learned. Many of today's successful companies are second- and third-round entrepreneurs with a solid background in the games industry.

The international growth of the mobile market has provided a unique opportunity for Finnish companies to capitalise on deep specialist knowledge and rapid market expansion, especially as growth in other technology platforms has slowed. Domestic success stories have also encouraged other entrepreneurs and attracted international interest, as Finnishness itself has given the sector credibility in international markets (Hiltunen & Latva, 2013). While the Finnish gaming industry is highly successful, it also faces challenges, including increasing competition in the global market and the ongoing need for innovation.

**Figure 24: Revenues for Traditional and Online Media (millions €)**



Sources: Statistics Finland, European Audiovisual Observatory, News Media Finland, Neogames, Music Finland, Yle

28 To adapt to today's converged multimedia environment, the public service media company Yle restructured its organization in the mid-2010s, merging its television and radio operations into a unified service. As a result, financial data for television and radio operations has no longer been available separately since 2016. However, based on historical data of television and radio shares, as well as annual broadcast hours and pricing, we have estimated that Yle's television activities account for approximately 75% and radio activities for 25% of the total broadcasting activities.

29 See previous footnote

30 All figures for online video services exclude public service media Yle's Yle Areena.

31 Yle's internet services offer both audio and video content broadcast on radio and TV channels, as well as content created specifically for online publication. Most of the content available on Yle's internet services is also broadcast on its radio and TV channels. Yle's internet services, accessible through a computer browser, include for example streaming platform Yle Areena, Yle Learning, and the Living Archive. In addition to these browser-based services, this category also encompasses mobile services provided through applications installed on mobile devices. The majority of mobile content is also broadcast on Yle's radio and TV channels.

The digital games industry constitutes the largest segment among these markets. According to the latest Game industry in Finland report, in 2022, the Finnish Game Industry ranked among the top five largest national game industries in Europe by turnover and was a European leader in mobile game development. Among the traditional media, both newspaper and magazine publishing and, in recent years, commercial television are in decline. Online video revenue continues to grow, although the pace of growth seems to have slowed in 2023. Some traditional media markets, such as the book industry, are maintaining relative stability. Similarly, film exhibition is gradually recovering after a significant decline during the COVID-19 pandemic years.

### ***Market concentration and competition in traditional and online media sectors***

Many traditional and online media markets are oligopolistic with few large providers dominating each sector. Incumbents also dominate in traditional markets. In addition, a few companies operate across multiple media sectors. The most prominent example is Sanoma Corporation, Finland's leading consumer media company, which plays a major role in newspaper, magazine, and educational publishing, as well as in commercial television and radio. Another example is the Otava Group, a major player in the publishing of books, magazines and educational materials. Alma Media's operations in Finland that relevant in this study include, for example, business and professional media (magazines and books) as well as national consumer media (tabloid newspaper and a business daily).

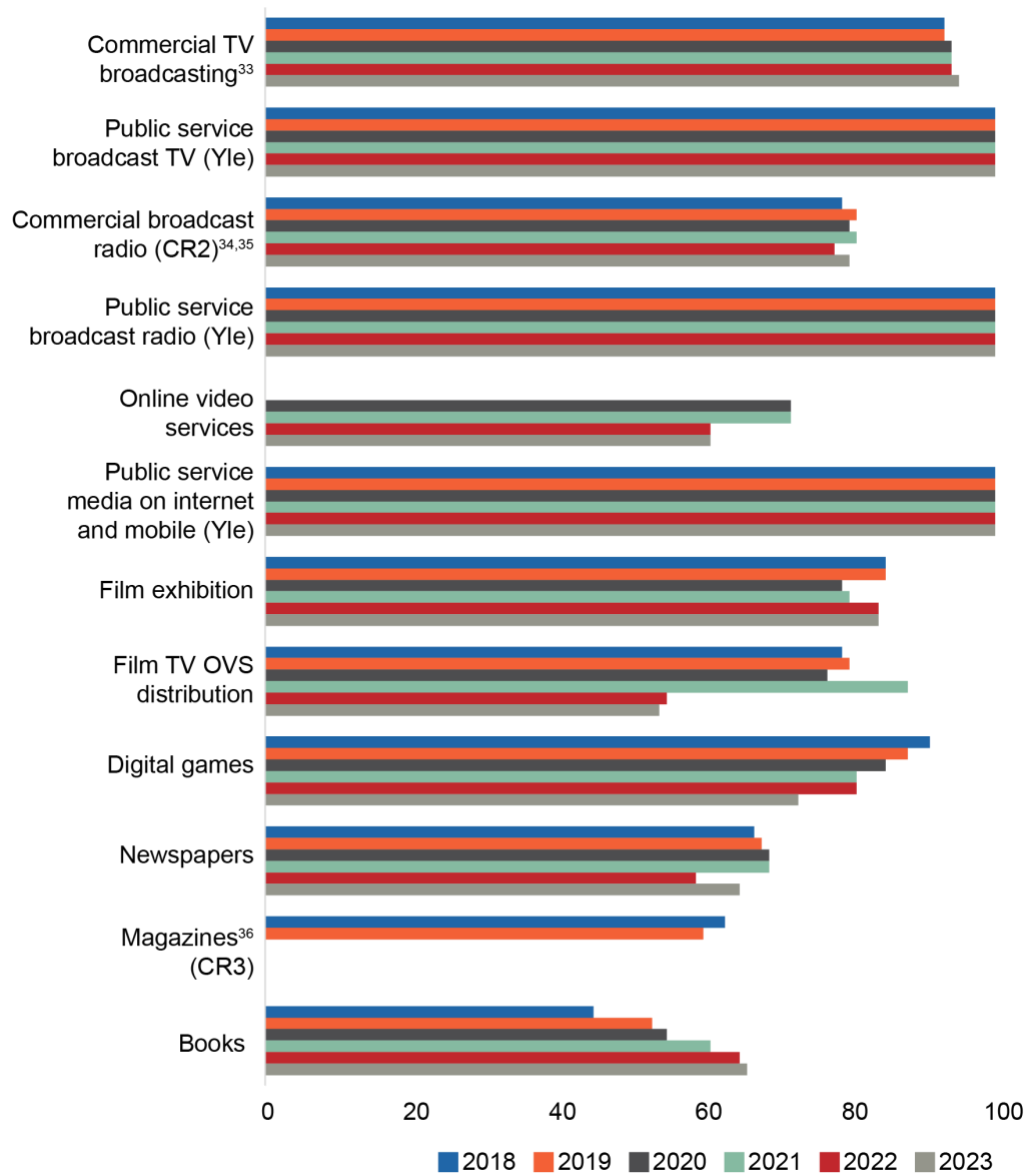
CR4 figures for all sectors are high, while HHI figures demonstrate good-to-reasonable competitiveness in all the markets. Newspaper and book publishing are highly concentrated sectors according to CR4 figures, but HHI also displays that there are a relatively large number of smaller providers in these markets. In this context, it is important to note that the national concentration of newspapers seems to be lower than the regional concentration (Grönlund and Björkroth, 2011; Hellman, 2022; Jyrkiäinen, 2017). While the traditional geographical boundaries of newspaper chains have somewhat blurred over the past few decades, the largest newspaper companies still maintain their original regional 'home markets' and, in some cases, dominate or have a presence in other regions. It can be argued that these newspaper chains have effectively divided geographically distinct markets among themselves, thereby creating monopolistic regional markets (Björkroth and Grönlund, 2014 and 2015; Hellman, 2022).

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32 These figures include the total net sales of paid daily and non-daily newspapers, as well as free sheets and free newspapers.

**Figure 25: CR4 Scores for Traditional and Online Media, 2018-2023 (based on revenue)**

33 34 35 36



Sources: Statistics Finland, European Audiovisual Observatory, News Media Finland, Neogames, Music Finland

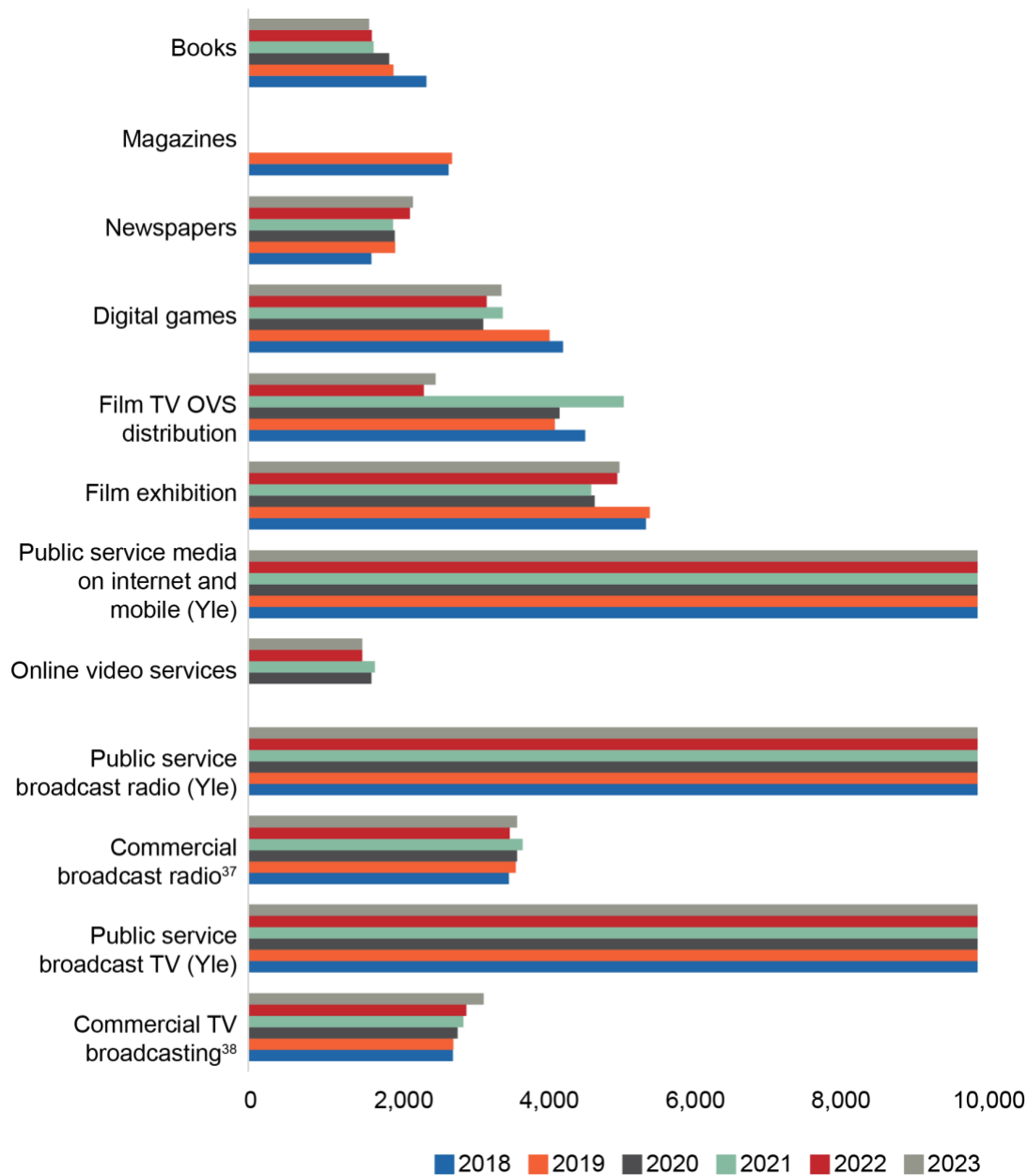
33 The figures represent the share of daily television watching time for each television channel, calculated as a percentage of the total watching time for all commercial broadcast television channels.

34 The CR2 for 2018 and 2019 is based on the share of radio advertising revenues.

35 The figures from 2020 onward represent the share of daily listening time for each radio channel, calculated as a percentage of the total listening time for all commercial radio channels.

36 The CR3 for 2018 and 2019 is based on the annual turnovers of the magazine publishers.

**Figure 26: HHI Scores for Traditional and Online Media, 2018-2023 (based on revenue)**



Sources: Statistics Finland, European Audiovisual Observatory, News Media Finland, Neogames, Music Finland

37 The figures represent the share of daily radio listening time for each radio channel, calculated as a percentage of the total listening time for all commercial broadcast radio channels.

38 The figures represent the share of daily television watching time for each television channel, calculated as a percentage of the total watching time for all commercial broadcast television channels.

CR4 scores for many traditional and online media services in Finland indicate that these sectors are dominated by a few large players earning the majority of revenues. In 2023, the largest player in the Finnish media landscape by a wide margin was Sanoma Oyj, with a turnover of EUR 1.4 billion. As a diversified cross-media company, Sanoma operates across all major content sectors—newspapers, magazines, books, digital media, television, and radio—demonstrating its extensive market reach. Finland’s public service media provider, Yleisradio Oy (Yle), followed with EUR 527 million in revenue, focusing on television, radio, and digital services. Alma Media Oyj ranked third with EUR305 million, maintaining a strong position in newspapers, magazines, and digital publishing. The traditional publishing house Otava, with EUR 233 million in turnover, remained a key player in the book and magazine markets. Keskisuomalainen Oyj (EUR209 million) and PunaMusta Media Oyj (EUR134 million) were also notable for their extensive newspaper operations, each with additional small-scale activities in radio broadcasting. HHI figures also illustrate that commercial television and radio broadcasting are highly concentrated. Online Video Services competition seems to have increased with the growth of different services and operators, but not below the 1500 mark. For some of the sectors examined, it is difficult to determine concentration trends because some longitudinal data are difficult to obtain or good data are no longer available. Overall, the data shows varying levels of market concentration across different media sectors, with some sectors experiencing increased concentration over time and others showing a decrease.

### **3.3. Core Internet Applications**

This section covers Core Internet Applications. This includes internet advertising, app distribution, mobile and desktop operating systems (OS) and search engines, as well as social media platforms. However, revenue statistics for OS, search, social media and app distribution are not possible to find for Finland. There are, however, some estimates of their market shares. According to Statcounter GlobalStats, in 2023, Windows holds a 79 percent share of the desktop OS market in Finland, followed by OS X at 11 percent, Chrome OS at 3.5 percent, and Linux at 3.3 percent. On mobile, Android leads with a 64 percent market share, while iOS follows with 35 percent.

In the search engine market, Google dominates with nearly 94 percent of the market share across all platforms. The browser market is slightly more diverse, with Chrome leading at 65 percent, followed by Safari at 16 percent and Firefox at 7 percent. On desktop, Chrome is even more dominant, holding 69 percent of the market, followed by Firefox at 11 percent

and Safari at 6 percent. On mobile, Chrome maintains its lead with a 59 percent share, while Safari holds a significant 31 percent share.

In 2023, Meta's total market share of social media platforms exceeded two thirds (71%) with Facebook holding the largest share at 54 percent, followed by Instagram at 17 percent. X (previously Twitter) has a market share of 14 percent. Pinterest accounts for 9 percent, while platforms such as YouTube, Reddit, and others each have market shares below 5 percent.

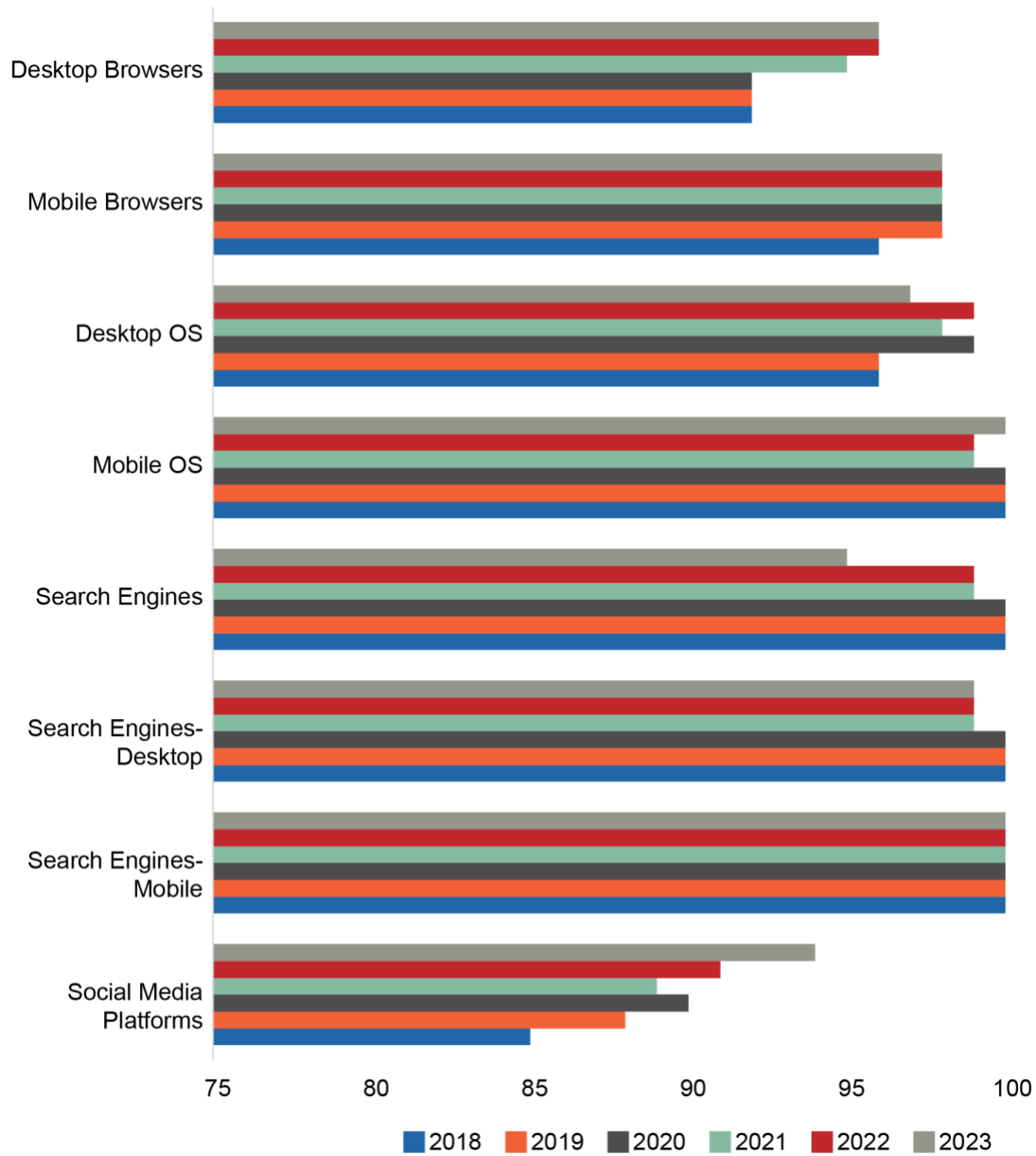
From 2018 to 2023, CR4 and HHI scores across core internet sectors indicate consistently high market concentration, with several sectors becoming even more dominated by a small number of firms. Search engines—both mobile and desktop—remained the most concentrated, with CR4 scores consistently above 98 percent and HHI scores near or above 9,000, reflecting near-monopoly conditions. Although the overall CR4 for search engines slightly declined to 94.8 percent in 2023, it still points to very limited competition.

Social media platforms saw increasing concentration, with CR4 rising from 85.3 percent in 2018 to 93.8 percent in 2023. The corresponding HHI scores fluctuated but ultimately increased, suggesting a return to consolidation after a brief period of fragmentation. Operating systems for both mobile and desktop remained heavily concentrated throughout, with CR4 scores above 95 percent and HHI values consistently high, particularly for desktop OS, which peaked at 6,459 in 2023.

Browser markets also stayed highly concentrated. Mobile browsers maintained CR4 scores above 96 percent, while desktop browsers grew more concentrated over time, reaching 95.9 percent CR4 and 5,052 HHI in 2023. Overall, the data shows that market power in core internet sectors continues to be dominated by a few key players, with only minor and temporary shifts in competition.

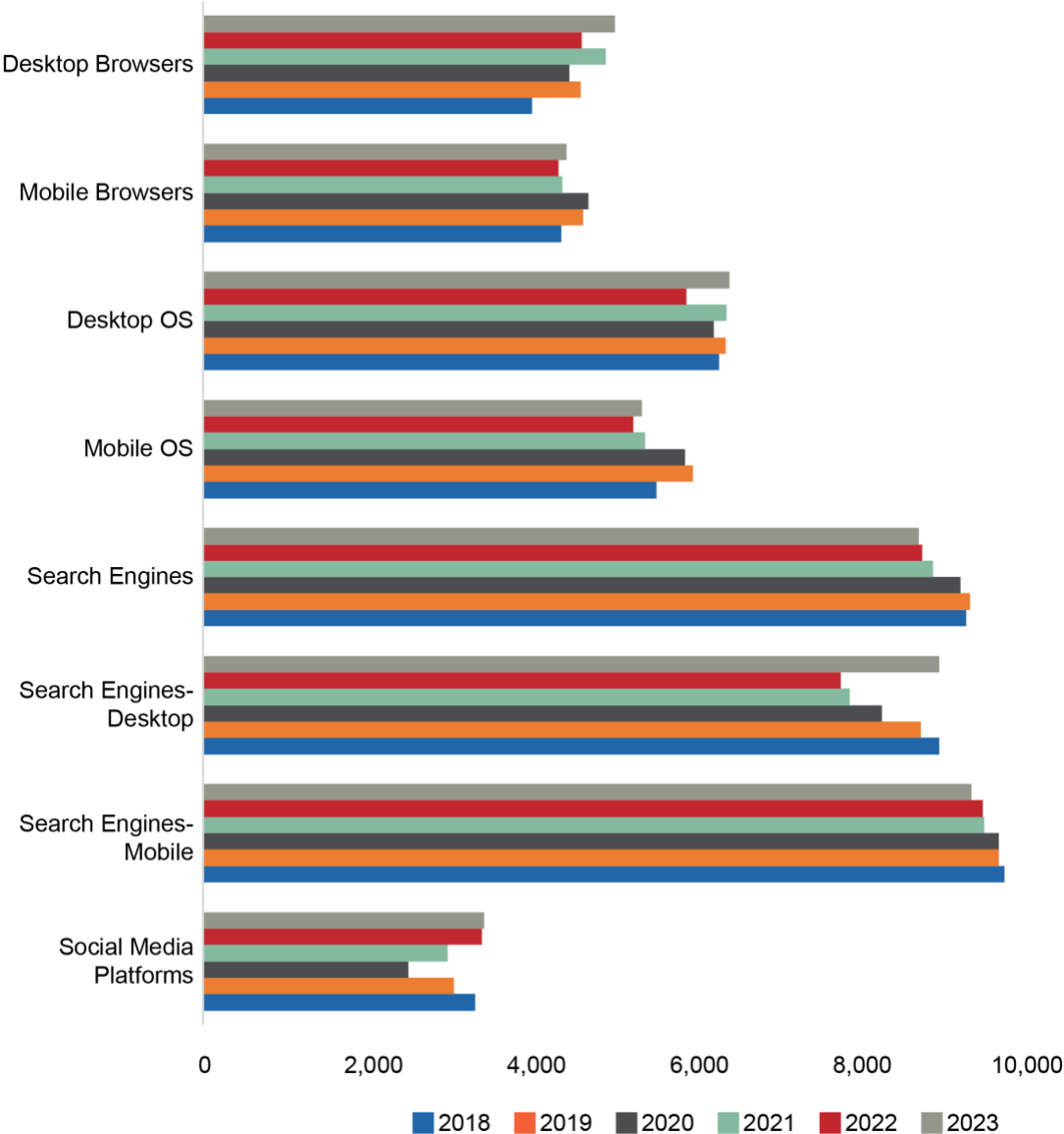
While there are no specific figures for app distribution, Finland is likely to follow the global trend, with Apple's App Store and Alphabet's Google Play Store dominating the market. Statista provides detailed data on downloads by category, but it does not offer compiled revenue data.

**Figure 27: CR4 Scores for Core Internet Sectors (based on market share)**



Source: Statcounter GlobalStats

**Figure 28: HHI Scores for Core Internet Sectors**



Source: Statcounter GlobalStats

Here, the CR4 scores in this analysis are calculated based on share of page views rather than revenue<sup>39</sup>. HHI figures indicate that all markets are highly concentrated. The search

39 Statcounter is a web analytics service whose tracking code is installed on over 1.5 million websites worldwide. These sites span a wide range of activities and geographic locations. Each month, the service records billions of page views. For every page view, data such as the browser, operating system, screen resolution, and whether the view came from a mobile device is analyzed. For search engine statistics, each referred page view is attributed to a specific search engine. Similarly, for social media statistics, referrals are analyzed based on the originating social media platform. More information about Statcounter’s methodology can be found <https://gs.statcounter.com/faq#methodology>

engine market is monopolistic, with Google holding a dominant position, especially on desktop, although Safari remains a significant competitor, particularly in the mobile space. Windows dominates the desktop OS market, consistently maintaining a market share close to 80 percent in recent years. The mobile OS market is also a duopoly, with Android leading ahead of iOS. In social media, Facebook is the clear leader, while other platforms have considerably smaller market shares. Instagram and X each hold around 15 percent, and Pinterest has approximately 9 percent. All other social media platforms have relatively marginal shares in comparison.

Small fluctuations in these core internet services may reflect the level of privacy concerns felt by the general public. Digital trust also appears to be a factor in these sectors, as users become increasingly wary of data collection practices by companies like Meta and Alphabet, as well as Chinese operators like ByteDance, which owns TikTok. The European Data Protection Board (EDPB) has established a working group to coordinate measures related to TikTok and address concerns about its handling of personal data (EDPB, 2020). Despite these data protection issues, the majority of Finns continue to actively use social media platforms like Facebook, Instagram, and TikTok. As a result, core internet services in Finland remain dominated by US-based technology companies, reflecting broader market concentration concerns at the European level.

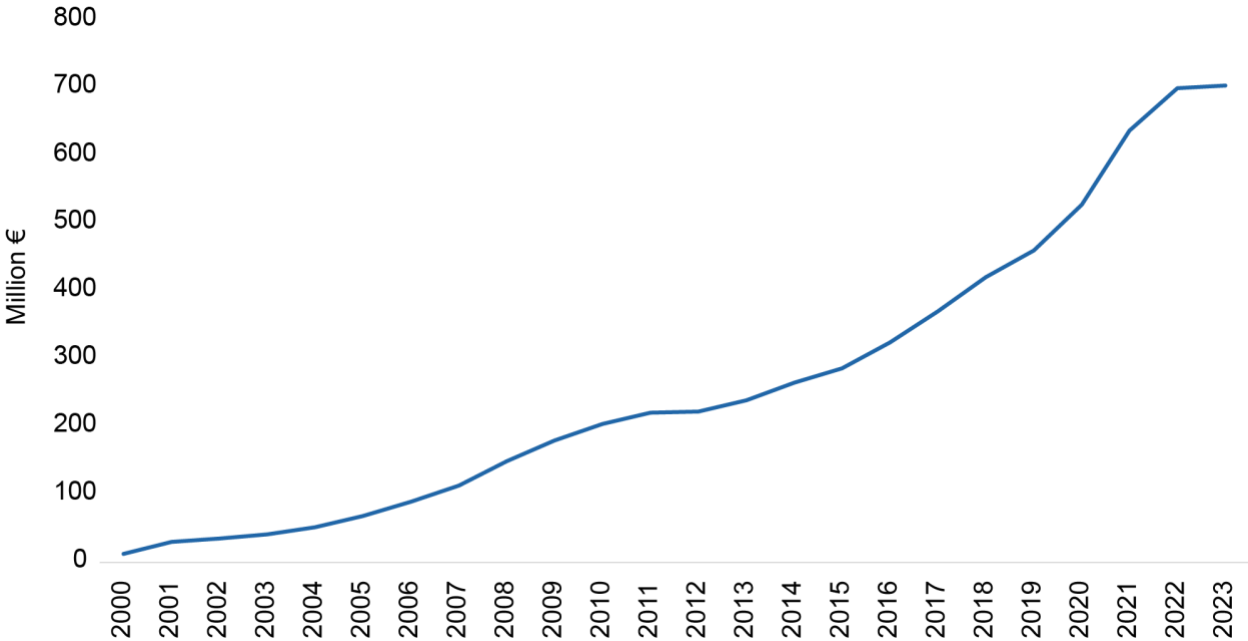
The only revenue figures available for Finland in this section relate to **internet advertising**, which are drawn from highly reliable statistics on advertising market trends published annually by Kantar Media. These figures are based on Kantar Media's monthly monitoring and a separate survey conducted in collaboration with media industry associations and media outlets. The figures used by Kantar for search and social media advertising volumes are estimates provided by IAB Finland. It is part of the international IAB network, which operates in 29 countries in Europe and nearly 70 countries worldwide.

Internet advertising revenues from 2000 to 2023, measured in millions of euros, show a clear upward trend, with revenues starting at €12 million in 2000 and increasing consistently over the following years (see figure 29). Between 2000 and 2007, internet advertising revenues experienced steady growth, reaching €113 million by 2007. The period from 2008 to 2014 saw a significant acceleration, with revenues jumping from €149 million in 2008 to €265 million by 2014. This growth continued into the following decade, reaching €370 million in 2017 and surpassing €700 million in 2022 and 2023, peaking at €704 million in 2023. This trend reflects the increasing dominance of internet advertising as

a key revenue stream, driven by the expansion of digital platforms, the growing use of targeted advertising, and the shift from traditional to online media consumption.

Alphabet and Meta, in particular, have had a significant impact on advertising markets, including in Finland. Statistics by the Finnish Advertising Council and Kantar TNS indicate that these two internationals collect the majority of digital advertising revenue. In 2023, social media, search engine, and display advertising will make up more than four-fifths (87%) of all online advertising. These are the key channels through which the two dominant international players, Google (Alphabet Inc.) and Facebook (Meta Platforms Inc.), will capture most of the digital advertising revenue, including in Finland. Since Meta and Alphabet do not disclose country-specific data on their advertising revenues, estimates of their combined market share of around two-thirds are based on secondary data. This suggests that Alphabet and Meta together generated approximately €460 million in advertising revenue.

**Figure 29: Internet advertising revenues from 2000 to 2023 (millions €)**



Source: Finnish Advertising Council and Kantar Media (prev. Kantar TNS)

### 3.4. Backbone sectors

This sector covers internet backbone services including content delivery networks, international submarine cables, data centres, and data brokers. Revenue and market share figures for these sectors are largely unavailable, but there are official estimates for the data

centre sector. Revenue figures for national submarine cable operators are also available (regnskapstall.no).

Internet backbone services represent a growing segment within core internet services and are primarily dominated by global technology companies, most of which are based in the United States. While there are a few national players involved in backbone provision, particularly in the subsea cable sector—where national telecoms and the State of Finland, hold a position in cable technology—foreign operators largely control the cloud, data centre, and CDN markets, capturing the majority of market share.

These backbone sectors, while aspirational for this project's purposes, are likely to be central in future analyses of internet concentration. Not only are they highly profitable, but media and communication industries also depend entirely on them for content distribution. Additionally, these sectors play a crucial role in national security, societal preparedness, and infrastructural resilience. Dominated by global players in largely unregulated industries, the backbone sectors are also experiencing significant growth and investment. Due to the high barriers to entry, particularly the scale required to compete, these sectors are expected to consolidate in the future, leading to greater concentration within the internet backbone.

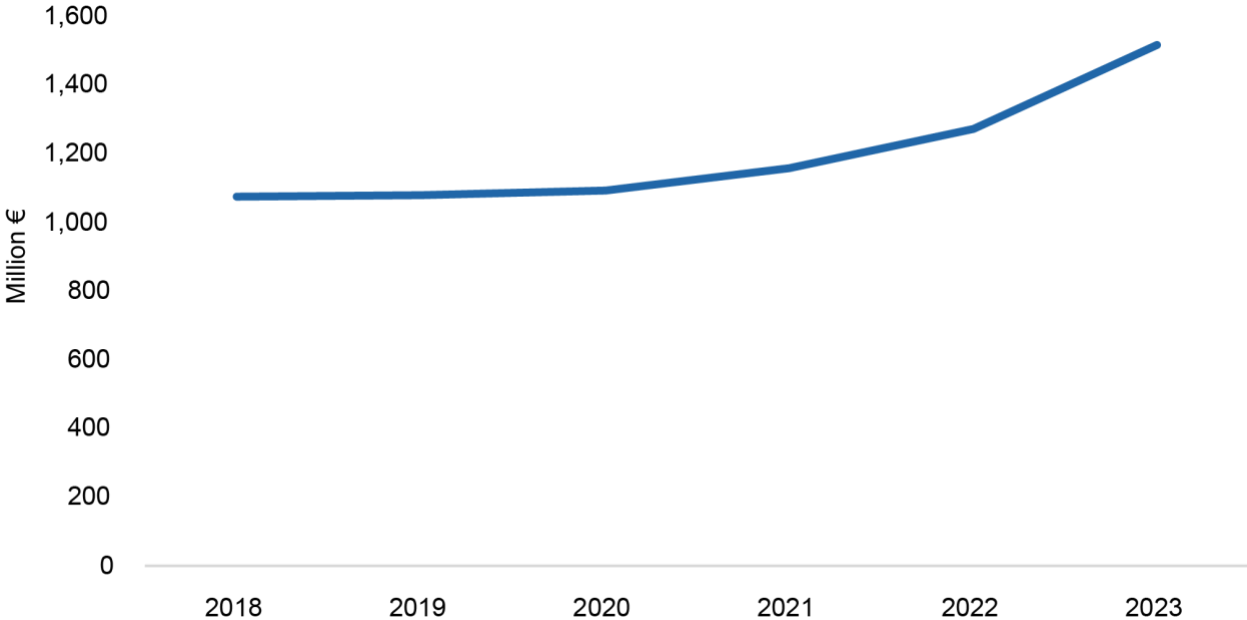
Moreover, these sectors are increasingly converging, creating interdependencies between submarine cables, data centres, peering, and cloud services that media industries rely on. As data sovereignty issues spark geopolitical tensions, data brokerage is likely to become more deeply connected to the physical infrastructure of the internet. Finally, as these sectors displace national infrastructure, their influence on national communication systems will only grow, raising important questions about regulation. Transparency around ownership, revenue, and concentration will be crucial to ensuring diverse media systems worldwide.

There is active Government push to attract **data centre industry** operators to Finland. With renewable power and with easy access to water for cooling the facilities, and a stable political and economic environment, data centres are a key part of the digital infrastructure, enabling many services such as email, online banking and cloud computing. In Finland, the development of data centres is particularly focused on energy efficiency and data security. The importance and competitive advantages of data centres in Finland have

been highlighted by experts and the government on several occasions and are seen as an important part of Finland's economic and technological development.

According to Statista Market Insights (2024), in 2023, total revenues of data centre markets was estimated to be EUR 1.52 billion (USD 1.64 billion) Finland's data centre industry is expanding rapidly, with significant investments in both existing and upcoming facilities. The combination of favourable environmental conditions and a commitment to renewable energy positions Finland as a leading destination for data centre operations. The data centre market in Finland is projected to reach approximately EUR 1,8 billion (USD 1.91 billion) in 2025, with an annual growth rate of 6.1% from 2025 to 2029, resulting in a market volume of over EUR 2,2 billion (USD 2.42 billion) by 2029 (Statista Market Insights, 2024).

**Figure 30: Revenues for Backbone Sectors (millions €)**



Source: Statista Market Insights

According to Cloudscene (2024), there are currently around 50 data centres in Finland. The above figure does not include companies' own data centres in different sectors. It should also be noted that some of the public sector data centres are related to Finland's security of supply<sup>40</sup> and therefore no data is available for them. Hiekkanen et al. (2020) have

40 For more information National Emergency Supply Agency <https://www.huoltovarmuuskus.fi/en>

estimated that there are dozens of private and public sector data centres in Finland. Finland's data centre industry is experiencing significant growth, driven by its favourable climate, renewable energy resources, and robust digital infrastructure. Here's an overview of the current and upcoming data centre capacities across the country. Google's data center, operated by Tuikie Finland Oy, is one of the largest in Finland, with a capacity of 81 megawatts (MW). In 2023, Tuikie Finland's turnover was approximately EUR 307.2 million. Telia Cygate Oy reported a turnover of EUR 137 million. Nebius has announced plans to expand its data center capacity from 25 MW to 75 MW. In 2023, Nebius DC Oy's turnover was EUR 32 million. Verne Global, which previously operated under the name Ficolo Oy, is developing a sustainable data center campus with an initial capacity of 70 MW. In 2023, Ficolo Oy had a turnover of EUR 15 million. The facility will run entirely on renewable energy, supporting high-performance computing (HPC) and AI workloads. XTX Markets intends to invest over €1 billion in a data centre complex, comprising five centres. The first facility, covering 15,000 square meters, is expected to be operational by 2026, with a computing power of 22.5 MW. However, exact and reliable aggregated capacity figures for all data centres in Finland are not at the moment available.

There are several challenges and objections to data centres in Finland, which have sparked debate. Although data centres bring investment and jobs, only part of the money stays in Finland. Data centres consume a lot of electricity, which raises concerns about the sufficiency of electricity for other users. Although data centres use renewable energy and waste heat, their construction and operation can have an environmental impact. In some cases, local residents and communities have opposed the construction of data centres. There have also been discussions about how much tax revenue data centres bring to Finland and how taxation should be organised to make it fair and attractive to international operators. These challenges and opposition are part of a wider debate on how data centres can best serve both economic and environmental objectives in Finland.

**Content Delivery Networks (CDNs)** are services that manage website dynamics for media companies and stream content on behalf of broadcasters. As a critical component of the internet infrastructure, CDNs are estimated to carry 70 percent of global internet traffic, the majority of which consists of video content (Sjøvaag et al., 2024). The media and entertainment industries, along with advertising and retail, are among the largest consumers of CDN services, making them highly dependent on US technology companies to deliver content to users. The global market value for CDNs was reported at USD 21.67

billion in 2023, with an expected annual growth rate of around 10 percent. The sector is primarily dominated by American technology companies, with major players including Akamai, Microsoft Azure, Amazon CloudFront, Fastly, and Lumen. Google also offers CDN services for websites. As such, the CDN sector should be viewed as a global market where scale offers a significant competitive advantage.

According to the CDN Industry Statistics by Cognitive Market Research (CMR), the CDN market in Europe was valued at USD 6.8 billion in 2024, although other market research estimates vary significantly. Data specific to Finland is hard to find, and it is not feasible to extrapolate global market share figures to the national level. However, given that Finland's media and internet markets are highly concentrated, and the number of CDN providers is limited, it is likely that the CDN market in Finland is similarly concentrated. For example, Finland's public service media, Yle, relies on Akamai for its content delivery network.

**International submarine cables** carry an estimated 99 percent of global internet traffic (Munn, 2023), making them crucial for the globalization of content markets. These subsea fibre cables span 1.4 million kilometres, connecting over 550 cable systems and more than 1,300 landing sites worldwide. Investment in this sector has surged in recent years, with TeleGeography (2024) estimating an annual investment of USD 2 billion over the past eight years. This growth is driven not only by increasing capacity demands but also by geopolitical factors, particularly US-China relations, which influence the routing of data. While most subsea cables are owned and operated by consortia of incumbent telecoms and technology companies, major platform companies like Google and Facebook have begun constructing their own cables, moving deeper into the internet's backbone (Wired, 2021). This shift has led to stronger interdependencies between the subsea and data centre sectors, as fibre operators increasingly seek to connect their cables directly to data centres to reduce latency and improve security (Sjøvaag et al., 2024).

Finland is connected to the global internet through 12 submarine cables. A significant portion of these cables is owned by the Finnish State via Cinia Oy. Another major domestic owner is Elisa Oyj, while international players such as Swedish Arelion and Eastern Light also hold stakes in Finland's submarine cable infrastructure. Revenue data for the subsea cable sector is challenging to obtain, much like in other backbone sectors. A few Finnish-registered cable companies, such as Cinia Oy, do report their revenue figures. In 2023, state-owned Cinia Oy reported a turnover of EUR 84 million, while Eastern Light's Finnish

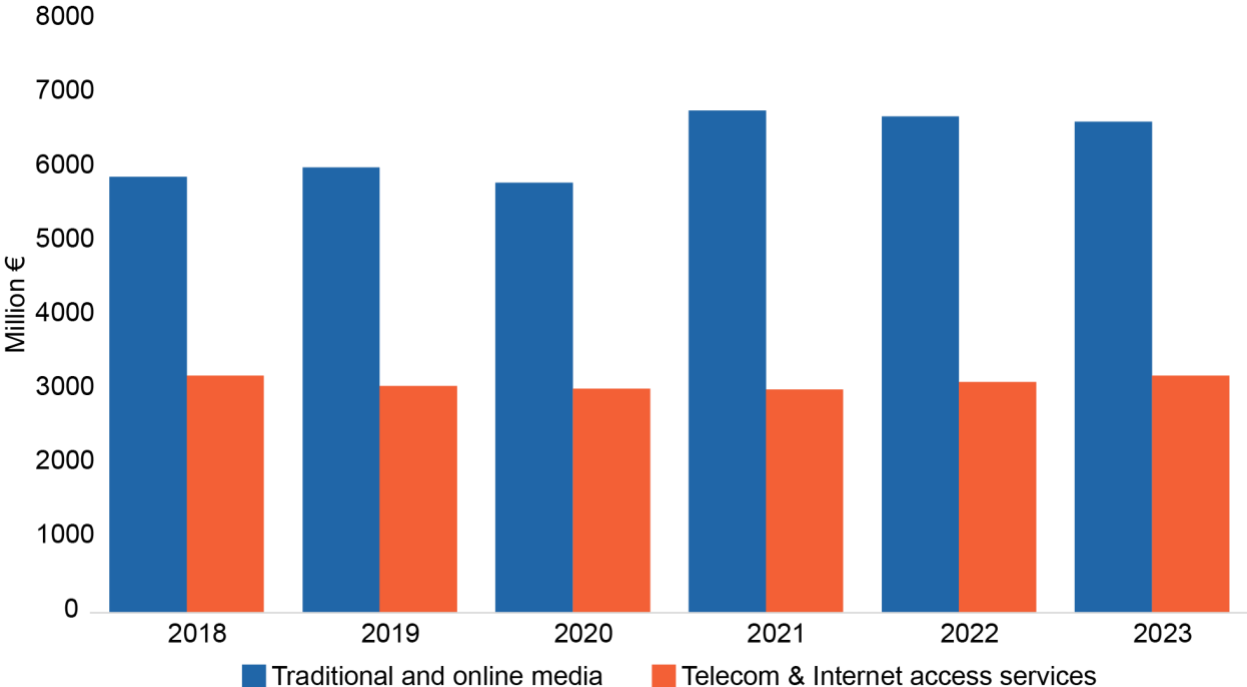
subsidiary, Northern Light Finland Oy, had a much smaller turnover of just EUR 0.15 million.

**Data brokers** Data brokers represent an emerging sector for this project. Mapping the providers in this field is challenging, particularly because many of the key players are global and foreign-owned, such as Google Analytics. In Finland, data brokers operate under strict regulations to protect consumer privacy and ensure data security. The Office of the Data Protection Ombudsman monitors compliance with the General Data Protection Regulation (GDPR) and other relevant laws, ensuring that data collection and processing are carried out transparently and ethically. The Finnish data brokerage market features a mix of established companies and emerging start-ups, all utilizing advanced technologies like artificial intelligence and machine learning to enhance their data analysis capabilities. In this landscape, Google Analytics is likely the market leader for media industries in Finland.

### 3. Development and concentration trends across media, communication, and Internet

This section of the report brings together the sector-by-sector observations to provide a broader, macro-level overview. **Telecom and internet access services** are highly stable sectors, with the exception of traditional wireline services, which are becoming increasingly obsolete in Finland. These sectors generate substantial revenue. In contrast to the traditional and digital media sectors, which are composed of numerous sub-sectors and a wide range of players, the telecom and internet access markets tend to be more concentrated, with a small number of companies operating across various technologies.

**Figure 31: Revenues for the Telecom & Internet Access Services and Traditional and online media 2018-2023 (millions €)**



Between 2010 and 2023, turnover in mobile network operations in Finland initially declined but began to recover from 2016 onward, rising steadily to €2,2 billion by 2023. This growth reflects increasing demand for mobile data and the expansion of mobile technologies. In contrast, fixed network turnover declined consistently to less than € 1 billion in 2021,

highlighting a shift away from traditional services. However, a slight recovery is seen in 2022 and 2023, possibly due to renewed demand for reliable faster broadband connections. Wireless services saw steady growth during this period, highlighting consumers' growing preference for mobile connectivity. In contrast, revenue from internet service providers declined, possibly due to competitive pricing, service bundling, or market saturation. Revenue from multichannel video distribution experienced a gradual decrease, dropping from, which aligns with global trends of declining traditional TV subscriptions in favour of streaming services.

The high level of market concentration is also reflected in CR4 and HHI scores. The CR4 and CR3 figures remained very high across all segments, with the wireless sector consistently achieving a CR3 score of 99.0 between 2018 and 2023. This indicates that nearly the entire market is controlled by the top three providers. Similarly, internet service providers and multichannel video services remained highly concentrated, although the ISP segment showed a slight decrease in concentration.

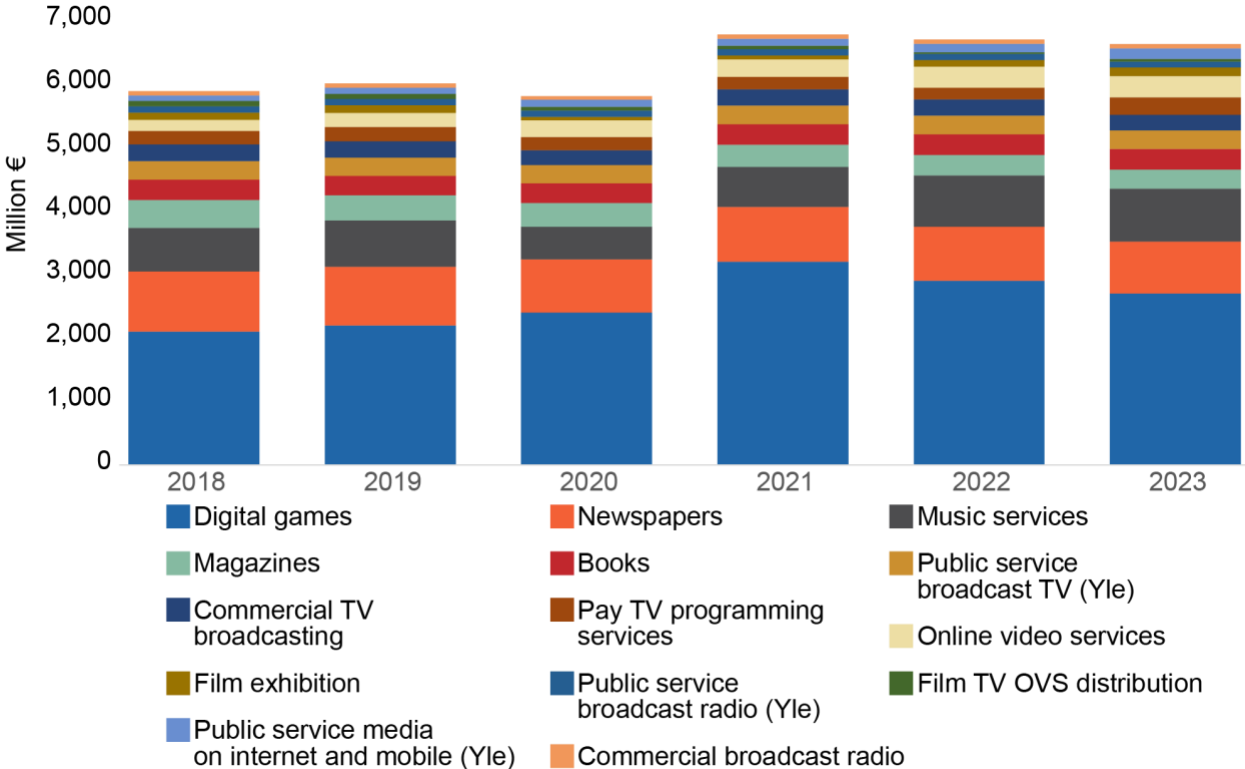
In conclusion, the Finnish telecommunications market has remained stable yet highly concentrated over the past decade. While the sector continues to be dominated by a few major players, there are signs of gradual change in certain areas, such as the ISP market. Overall revenue has held steady, but the composition is shifting, with wireless services gaining prominence and traditional services like fixed networks and multichannel video steadily declining. This evolution highlights the sector's need to adapt to changing consumption patterns and the growing importance of digital and mobile connectivity.

**Traditional and digital media** still provide substantial income. Between 2018 and 2023, Finland's media landscape experienced substantial transformation, both in revenue generation and market concentration. Total media sector revenues peaked at €6.78 billion in 2021 but slightly declined to €6.63 billion by 2023. Despite the modest decline, both traditional and digital media continue to generate significant income. However, the balance is clearly shifting: while traditional media such as commercial TV broadcasting, newspapers, and magazines have seen stagnating or declining revenues, digital and online platforms have grown steadily, driven by changing consumer habits, technological advancements, and post-pandemic recovery.

Digital games emerged as the most lucrative sector, reaching a peak of €3.2 billion in 2021 before decreasing slightly to €2.7 billion in 2023. Online video services nearly doubled their

revenue over the period, from €172 million in 2018 to €337 million in 2023, reflecting the boom in streaming culture. Public service digital platforms, such as Yle’s online and mobile services, also saw strong growth, from €82 million to €161 million. Music services benefited from the increasing popularity of digital streaming and the rebound of live music events, with revenues rising from €681 million in 2018 to €829 million in 2023. Meanwhile, the film exhibition sector, severely impacted by COVID-19, has been recovering as audiences return to cinemas. Traditional media, on the other hand, has struggled to maintain its market share. Newspaper revenues declined from €952 million in 2018 to €821 million in 2023, while magazines dropped from €440 million to €300 million over the same period. Commercial TV broadcasting revenues fell from €265 million to €247 million, and although public service broadcasting remained stable, it did not grow significantly. These trends reflect a broader shift in consumer preferences toward digital platforms and on-demand content.

**Figure 32: Revenues for Traditional and Online Media 2018-2023 (millions €)**



Market concentration remains a defining feature of Finland’s media sectors. Public service media Yle, continues to hold strong positions in broadcast TV, radio, and online public content. Traditional media sectors, such as commercial TV broadcasting and radio, are

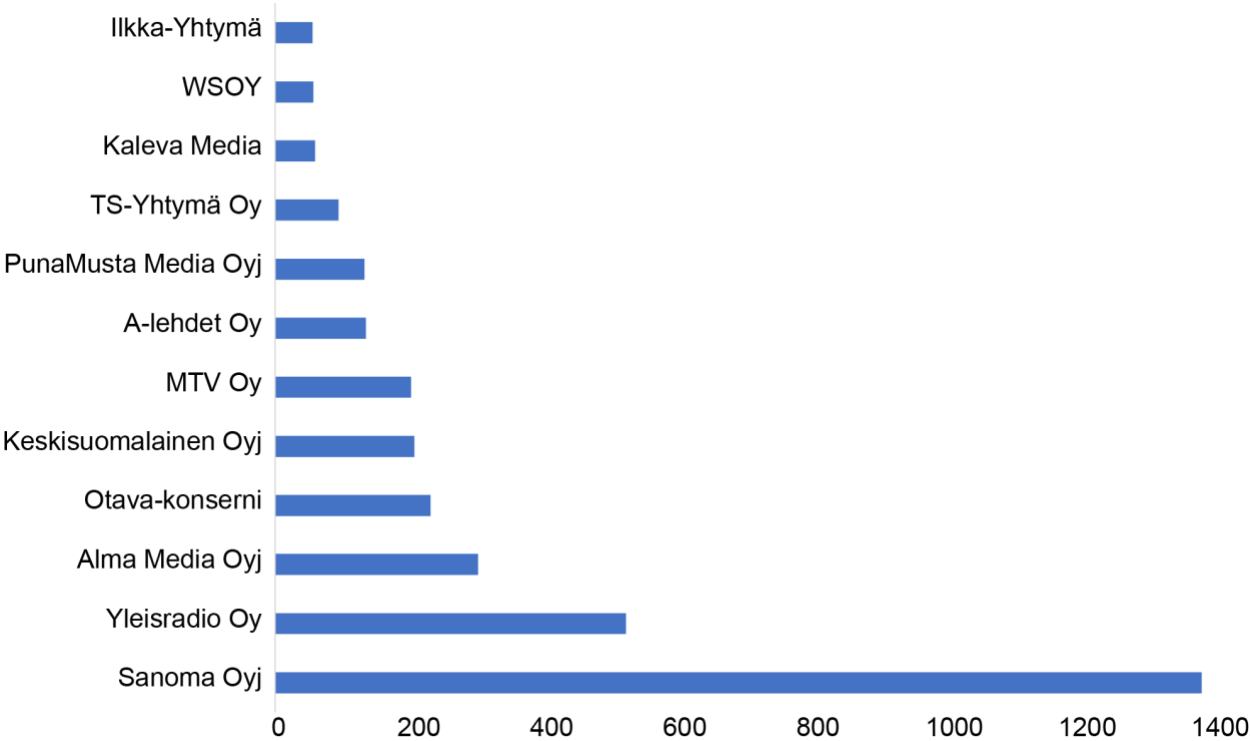
highly concentrated. In contrast, digital and online media sectors exhibit increasing competition and decrease in concentration, reflecting the entry of new players and diversification of the market. The newspaper sector is experienced moderate concentration in national level but extremely high concentration in regional level. The film exhibition sector, while still concentrated, has seen some fluctuations, likely influenced by external factors such as the pandemic. Overall, the data highlights a clear shift towards greater competition in digital and online media, while traditional media sectors remain more concentrated. This trend underscores the dynamic nature of the media landscape, driven by technological advancements and changing consumer preferences.

In contrast, digital media sectors are showing signs of increased competition. Online video services, for example, maintain a moderate concentration with HHI values around 1,563 in recent years, while the digital games sector, although still concentrated, has seen its HHI decrease from 4,313 in 2018 to 3,472 in 2023—signalling the entry of new players and diversification in offerings. The book sector also shows relatively lower concentration, with HHI values around 1,657 in 2023. These trends suggest that while traditional sectors are dominated by a few major companies, digital markets are becoming more open and dynamic.

The shift towards digital consumption is also reflected in the rankings of Finland's leading media companies. Sanoma Oyj has consistently held the top position throughout this period, despite fluctuations in turnover — peaking at close to €2,8 billion in 2010, then declining to approximately €1,1 billion in 2020 before rebounding to €1,4 billion in 2023. The decline in turnover is explained by the fact that in the 2010s Sanoma Oyj started to focus on its core activities and sold its cinemas, kiosks, withdrew from the Eastern European market and sold its media business in the Netherlands, among others. Yleisradio Oy, Finland's public service media company, has maintained a steady second place with modest but stable growth, increasing from €398 million in 2010 to €527 million in 2023. The third to fifth spots have seen more variability. Alma Media Oyj, once holding third place in 2010, dropped and then returned to prominence in 2023 with a turnover of €305 million. Otava Group strong in books and magazines, held steady in the top five across the years. Meanwhile, Keski-suomalainen Oyj, now the largest newspaper publisher in Finland by number of titles, has risen in prominence, consistently ranking in the top six, with a turnover of €209 million in 2023.

Lower in the rankings, companies like commercial television broadcaster MTV Oy and magazine publishing company A-lehdet Oy have held relatively stable positions, though their turnover figures show less dramatic shifts. PunaMusta Media Oyj has notably improved its standing since 2010, when it did not appear in the top list, rising to eighth place by 2023. Other traditional names like TS-Yhtymä Oy, Kaleva Media, and Ilkka-Yhtymä remain present, though often fluctuating in rank. Notably, companies such as WSOY, Talentum Oyj, and Suomen Lehtiyhtymä Oy, which appeared in earlier years, have either declined or been absorbed, highlighting the sector’s consolidation and the shifting dynamics of media consumption and ownership in Finland.

**Figure 33: Largest media companies by turnover in 2023 (millions €)**



Source: Source: *Talouselämä*, Nov 3, 2023; Company annual reports and other company data

In conclusion, the Finnish media sector is undergoing a significant transformation, marked by a shift from traditional to digital and online platforms. While legacy media struggles with declining or stagnant revenues, digital sectors such as streaming, gaming, and online news are growing rapidly, driven by evolving consumer habits and technological innovation. This transition highlights the need for media companies to remain agile and forward-thinking in

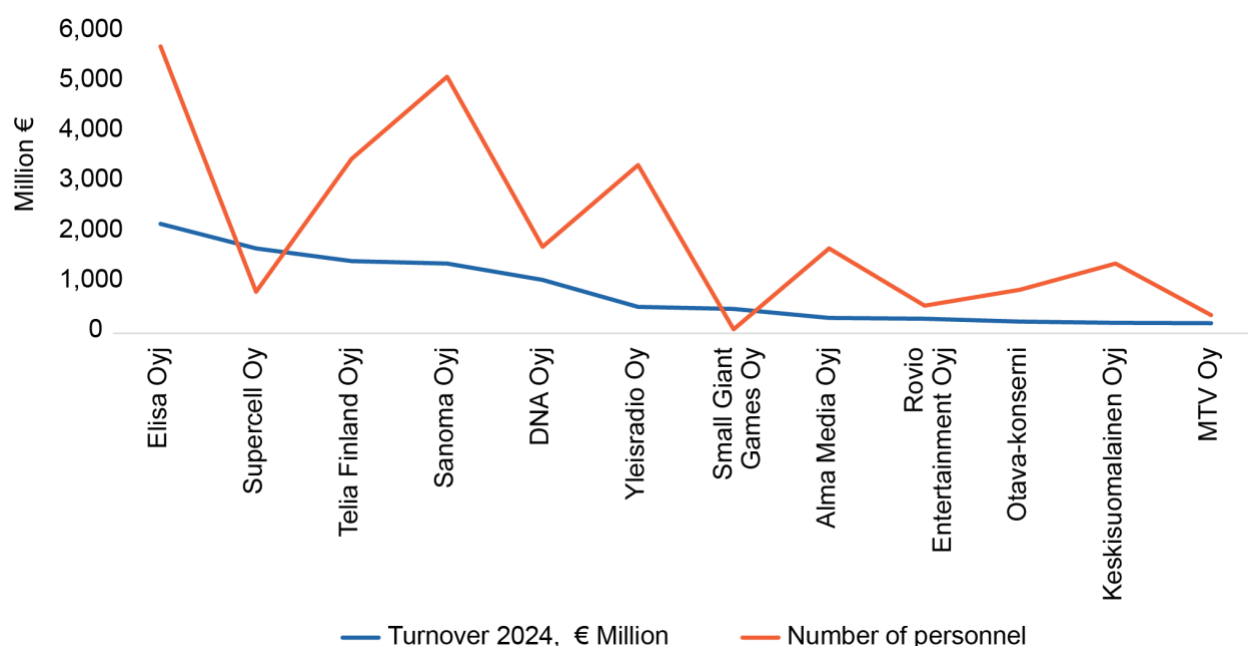
order to stay competitive. The landscape is becoming increasingly divided—traditional media remains highly concentrated and dominated by a few major players, while digital markets are more fragmented and dynamic, offering opportunities for new entrants and niche services. As the sector continues to evolve, adaptability and innovation will be crucial for long-term sustainability and growth.

The **core internet sectors** comprising OS, search, browsing, and social media are the most concentrated areas mapped in this report. Most sectors are dominated by one key player, such as Google for search and Microsoft for operating systems. This is reflective of the fact that these are winner-takes-most markets with strong network effects.

The **backbone sectors** comprising CDNs, subsea cables and data centres are likely less concentrated than more mature sectors such as telecom services, but they are nevertheless dominated in most cases by global-reaching US-based tech companies, or they are growing more global as profitable sectors like data centres attract more foreign investment.

In 2024, Elisa Oyj emerged as the largest company by turnover among the listed firms, generating an impressive €2,181 million with a workforce of 5,721 employees (see Figure 34). Following closely was Supercell, with a turnover of €1,698 million, despite having a significantly smaller team of 829 personnel. Telia Finland Oyj and Sanoma Oyj also demonstrated strong performances, with turnovers of €1,441 million and €1,393 million, respectively. DNA, with a turnover of €1,063 million, rounded out the top five. Notably, Yleisradio Oy, despite its substantial workforce of 3,360 employees, had a turnover of €527 million. Small Giant Games Oy stood out for its high turnover of €484 million with only 78 employees, highlighting its remarkable efficiency. The list also included Alma Media Oyj, Rovio Entertainment, Otava, Keski-suomalainen Oyj, and MTV Oy, with turnovers ranging from €305 million to €204 million. This diverse group of companies showcases a wide range of industries and operational scales, reflecting the dynamic nature of the business landscape in 2024.

**Figure 34: Largest companies by turnover in 2024<sup>41</sup> (millions €)**



Source: *Talouselämä* TE 500 list of Finland's largest companies

None of these markets show CR4 scores below 50, nor do any have HHI scores below 1500, indicating that all are moderately to highly concentrated. The most concentrated markets are found in non-commercial television and radio broadcasting, which are state monopolies. The film exhibition market has an HHI just over 5000, with the largest player controlling around 70% of the market. In commercial radio broadcasting, the CR2 score is close to 80, while commercial television has a CR4 score of approximately 95. In the Telecom and Internet Access Services sector, the Wireline (CR3), ISP, and Multichannel Video Distribution markets have CR4 scores ranging between 95 and 99, indicating a high degree of concentration. However, the HHI scores for these sectors vary between 2600 and 3300, reflecting an oligopolistic structure with 3-4 dominant players providing some market choice.

There are not many sectors with HHI scores in the moderate range closer to 1500 than 2500 (see Figure 35). The book market, with a CR4 score of 66.4 and an HHI of 1654 for 2023, is characterized by a few dominant players and several smaller companies, offering a level of choice for consumers. Online video services (1563) is below 2000, illustrative of the

41 Global technology companies Meta and Alphabet do not disclose their advertising revenues from the Finnish market. However, with an estimated two-thirds share of online advertising in Finland—amounting to approximately €460 million in 2024—it is possible that at least one of the two would qualify for inclusion on this list.

'streaming wars' gearing up in this period. On the national level, the newspaper publishing market has a CR4 of 66.5 and an HHI score of 2254. As mentioned earlier, regional newspaper markets are significantly more concentrated. Core internet sectors are, overall, the most concentrated within the Network Media Economy. This concentration raises important considerations regarding the regulation of these markets, as they serve as the primary gateways for global access to information.

**Figure 35: Concentration in the Network Media Economy according to HHI scores in 2023**

Low concentration (100-1500)	Moderate concentration (1500-2500)	High concentration (2500-10.000)
	Online Video Services	Wireline
	Books	Wireless
	Newspapers <sup>42</sup>	Multichannel Video Distribution
		Broadcast Television
		Broadcast Radio
		Film exhibition
		Social Media Platforms
		Search Engines
		Operating Systems
		Browsers

42 Lehtisaari et al. (2024) suggest that although Finland still has dozens of newspaper companies, HHI values exceeding 2000 should be interpreted as a sign of a very high level of market concentration.

## 4. Conclusion

The conclusion of this report reflects the broader shifts taking place within Finland's media and communications industries and underscores the growing complexity of the networked media economy. Although the analysis has focused primarily on revenue and market concentration, it is important to recognize that these dynamics intersect with, but do not entirely reflect, ownership structures. The convergence of telecommunications, IT, and media has blurred traditional boundaries, and this report has sought to address that interconnectedness by including both content-producing industries and the infrastructures through which content is delivered and discovered, such as internet access, search engines, and social media platforms.

A challenge throughout the analysis has been the occasional uneven availability and quality of data for the sectors concerned. While total revenues for traditional and digital media sectors are generally accessible, detailed information about individual companies' market shares remains limited. Media conglomerates often report figures at the group level without disaggregating by business area, making it difficult to assess sector-specific concentration accurately. In some cases, estimates have been derived using alternative indicators such as audience shares or through rough approximations, especially in infrastructure-heavy areas like the backbone internet sector. This data scarcity poses serious limitations, not only for the accuracy of market concentration assessments but also for the formulation of evidence-based regulation. The recent discontinuation of Finland's national media statistics as part of austerity measures further undermines the ability to monitor developments across this vital sector. With the upcoming implementation of the European Media Freedom Act, the need for robust, transparent, and comprehensive statistical data has never been more urgent.

While the media economy is not among Finland's largest industries in terms of financial value, its role in supporting democracy, cultural identity, and public discourse is fundamental. At the same time, the very rapid growth of global technology companies into the world's largest firms shows that there is a stark contrast in scale and influence. The rise of firms like NVIDIA, Apple, Alphabet, and Meta exemplifies the shift toward data-driven business models and the increasing significance of physical and technical infrastructures, particularly in artificial intelligence and high-performance computing. These trends are reshaping the global media and internet landscape, including Finland's place within it.

In this context, the Finnish media and communications industries can be characterized in most cases as being highly concentrated. Most sectors are dominated by a few major players, a pattern often shaped by the relatively small size of the national market. The core internet application sector, especially search and social media, is marked by extreme concentration and is almost entirely controlled by large US-based tech firms. Traditional fixed-line telephony has become obsolete, with mobile services now accounting for the majority of telecom revenues. Meanwhile, submarine cable infrastructure has taken on heightened importance due to national security concerns, particularly given recent incidents in the Baltic Sea region.

Some traditional media sectors, such as cinema, books, radio, and television, continue to generate steady revenues and retain cultural significance. However, the newspaper industry remains in a state of structural decline, with falling print circulation and a long-term erosion of advertising revenues. The shift toward digital has not yet offset these losses, casting uncertainty over the future sustainability of news media. In contrast, Finland's digital games sector stands out as an innovation-driven, export-oriented success story, underscoring the global competitiveness of certain areas within the networked media economy.

Overall, Finland's media landscape is in the midst of a significant transformation. Digital platforms, streaming services, and interactive content are reshaping media consumption, while the infrastructure that supports this ecosystem remains highly consolidated. These developments raise important questions for national media policy, especially in relation to competition, innovation, media pluralism, and the regulation of dominant global actors. To navigate this rapidly evolving environment effectively and fairly, it is crucial that public authorities and media industry stakeholders adopt a coordinated and collaborative approach to data collection and analysis.

In conclusion, while this report offers a detailed overview of market concentration and economic structures in Finland's media and communications sectors, it also highlights critical gaps in data and the need for coordinated policy responses. Addressing these gaps will be crucial not only for safeguarding media diversity and democratic discourse but also for ensuring that Finland remains resilient and competitive in a global media economy increasingly shaped by technological convergence and transnational corporate power.

# References

- Ala-Fossi, M., Alén-Savikko, A., Grönlund, M., Haara, P. & Hellman, H. (2018) The state of media- and communications policy and how to measure it Final report. Liikenne- ja viestintäministeriön julkaisuja 4/2018. Helsinki: LVM <http://urn.fi/URN:ISBN:978-952-243-548-4>
- Ala-Fossi, M., Grönlund, M., Hellman, H. & Lehtisaari, K. (2020) Media- ja viestintäpolitiikan seurantaraportti 2019. Liikenne- ja viestintäministeriön julkaisuja 2020: 4. Helsinki: LVM. <http://urn.fi/URN:ISBN:978-952-243-581-1>
- Ala-Fossi, M. (2020) "Finland: Media Welfare State in the Digital Era?", Journal of Digital Media & Policy. Vol. 11(2), pp. 133–150. DOI: <https://doi.org/10.1386/jdmp.00020.1>.
- Ala-Fossi, M., Grönlund, M., Hellman, H., Lehtisaari, K., Karppinen, K. & Nieminen, H. (2023) Prioritising National Competitiveness over Support for Democracy? Finnish Media Policy in the 21st Century. Retrieved from <https://journalse.com/prioritising-national-competitiveness-over-support-for-democracy-finnish-media-policy-in-the-21st-century/>
- Baker, C. E. (2007). Media Concentration and Democracy: Why Ownership Matters. New York: Cambridge University Press.
- Björkroth, T. & Grönlund, M. (2014). The growth of leading regional newspapers. Nordicom Review 35 (1): 115–133. [https://gupea.ub.gu.se/bitstream/handle/2077/37355/gupea\\_2077\\_37355\\_1.pdf?sequence=1&isAllowed=y](https://gupea.ub.gu.se/bitstream/handle/2077/37355/gupea_2077_37355_1.pdf?sequence=1&isAllowed=y).
- Björkroth, T. & Grönlund, M. (2015). Market share mobility in regional newspaper markets. European Journal of Communication 30 (6): 714–744. <https://doi.org/10.1177/0267323115612214>.
- Cavalleri, M.C., Eliet, A., McAdam, P., Petroulakis, F., Soares, A. & Vansteenkiste, I. (2019) Concentration, market power and dynamism in the euro area. European Central Bank Working Papers No 2253 / March 2019 <https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2253-cf7b9d7539.en.pdf>
- Cognitive Market Research (2025) Europe Content Delivery Network CDN Market Report 2025
- Doyle, G. (2002). Media Ownership: The Economics and Politics of Convergence and Concentration in the UK and European Media. London: Sage.
- European Data Protection (2020) EDPB\_Press Release 2020\_10 [https://www.edpb.europa.eu/edpb\\_en](https://www.edpb.europa.eu/edpb_en)
- Finnish Transport and Communications Agency Traficom Statistics on transport and communications <https://tieto.traficom.fi/en/view-statistics-transport-and-communications>
- Grönlund, M. & Björkroth, T. (2011). Newspaper market concentration, competitive pressure and financial performance: The case of Finland. Journal of Media Business Studies 8 (3): 19–50. <https://doi.org/10.1080/16522354.2011.11073525>.
- Harcourt, A. & Picard, R.G. (2009). Policy, economic, and business challenges of media ownership regulation. Journal of Media Business Studies 6 (3): 1–17. <https://doi.org/10.1080/16522354.2009.11073486>.
- Heinonen, A. & Nordenstreng, K. (2015). Yhteenveto: Sananvapaus tarkkailussa. Teoksessa Sananvapaus Suomessa, toimittaja Kaarle Nordenstreng, 234–247. Tampere: Tampere University Press.
- Hellman, H. (2010) Liberal turn in media policy: the case of Finland's digital television. International Journal of Digital Television, Volume 1, Issue 2, Jun 2010, p. 193 – 213. DOI: <https://doi.org/10.1386/jdvtv.1.2.193.1>
- Hellman, H. (2022). Lehdistön alueelliset valtiat: Sanomalehdistön kilpailu ja keskittyminen merkityksellisillä markkinoilla. Media & viestintä 45 (3): 1–29. <https://doi.org/10.23983/mv.122138>.

- Hiekkanen, K., Seppälä, T. & Ylhäinen, I. (2020). Informaatiosektorin energian- ja sähkökäyttö Suomessa. ETLA Raportti No 104. <https://www.etla.fi/wp-content/uploads/ETLA-Raportit-Reports-104.pdf>
- Hiltunen, K.P & Latva, S. (2013) Peliteollisuus – kehityspolku, Tekes 2013 / 1 [https://www.neogames.fi/wp-content/uploads/2013/10/Tekes\\_Peliteollisuus\\_kehityspolku\\_2013.pdf](https://www.neogames.fi/wp-content/uploads/2013/10/Tekes_Peliteollisuus_kehityspolku_2013.pdf)
- Just, N. (2009). Measuring media concentration and diversity: New approaches and instruments in Europe and the US. *Media, Culture & Society* 31 (1): 97–117. <https://doi.org/10.1177/0163443708098248>.
- Jyrkiäinen, J. (2017). Sanomalehdistö. Teoksessa Suomen mediamaisema, toimittajat Kaarle Nordenstreng ja Hannu Nieminen, 65–117. Tampere: Vastapaino.
- Jyrkiäinen, J. (2019). Media landscapes: Finland. <https://medialandscapes.org/country/finland>
- Koski, H., Anttila, J., Björk, A., Djakonoff, V., Kässi, O., Niemi-Hugaerts, H., Pajarinen, M. & Parkkari, J.-P. (2024) Datatalouden mittaaminen ja vaikuttavuuden arviointi. Valtioneuvoston selvitys- ja tutkimustoiminnan julkaisusarja 2024:44. <http://urn.fi/URN:ISBN:978-952-383-231-2>
- Lehtisaari, K-, Grönlund, M., Hellman, H., Ranti, T. & Suikkanen, R. (2024) Median keskittyminen ja mediasisältöjen moninaisuus Suomessa. Valtioneuvoston selvitys- ja tutkimustoiminnan julkaisusarja 2024:6. Helsinki: Valtioneuvoston kanslia <http://urn.fi/URN:ISBN:978-952-383-168-1>
- Mass Media Statistics table service, Statistics Finland  
[https://pxhopea2.stat.fi/sahkoiset\\_julkaisut/joukkoviestintatilasto/html/engl0000.htm](https://pxhopea2.stat.fi/sahkoiset_julkaisut/joukkoviestintatilasto/html/engl0000.htm)
- Neogames (2018) Pelialan politiikkasuositukset vuosille 2019–2024  
<https://www.neogames.fi/wp-content/uploads/2018/11/Pelialan-politiikkasuositukset-vuosille-2019-2024.pdf>
- Neuvonen, R. (2018). Sananvapauden historia Suomessa. Helsinki: Gaudeamus.
- Newman, N., Fletcher, R., Robertson, C. T., Ross Arguedas, A., & Nielsen, R. K. (2024). Reuters Institute digital news report 2024. Reuters Institute for the Study of Journalism. <https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2024>
- Picard, R.G. (1988). "Measures of concentration in the daily newspaper industry." *Journal of Media Economics* 1 (1): 61–74. <https://doi.org/10.1080/08997768809358167>.
- Picard, R.G. (1993). "Economics of the daily newspaper industry." Teoksessa Media Economics: Theory and Practice, toimittajat Alison Alexander, James Owers ja Rod Carveth, 181–203. Hillsdale: Lawrence Erlbaum.
- Polaris Nordic Digital Music in the Nordics 2024 <https://www.teosto.fi/wp-content/uploads/2024/06/Polaris-Nordic-Digital-Music-in-the-Nordics-2024.pdf>
- Reunanen, E., Alanne, N., Hubara, K., Kauppinen, P., Mäkinen, E., Shingler, N. & Silfverberg, Kalle (2024) Uutismedia verkossa 2024. Reuters-instituutin Digital News Report - Suomen maaraportti <https://urn.fi/URN:ISBN:978-952-03-3504-5>
- Sjøvaag, H. (2014). The principles of regulation and the assumption of media effects. *Journal of Media Business Studies*, 11(1), 5-20.
- Sjøvaag, H., Ferrer-Conill, R., & Olsen, R. K. (2024). Capture Beyond the Platforms: The Material and Infrastructural Conditions for Digital Journalism. *Digital Journalism*, 1-20.
- Statistics Finland Mass media statistics' table service  
[https://pxhopea2.stat.fi/sahkoiset\\_julkaisut/joukkoviestintatilasto/html/engl0000.htm](https://pxhopea2.stat.fi/sahkoiset_julkaisut/joukkoviestintatilasto/html/engl0000.htm)

Syvertsen, Trine, Ole Mjøs, Hallvord Moe & Gunn Enli (2014). The media welfare state: Nordic media in the digital era (p. 165). Ann Arbor: University of Michigan Press.

Trappel, J. & Meier, W.A. (2022). Soaring media ownership concentration: Comparing the effects of digitalisation on media pluralism and diversity. In Success and Failure in News Media Performance: Comparative Analysis in the Media for Democracy Monitor 2021, eds. Josef Trappel ja Tales Tomaz, 147–164. Göteborg: Nordicom. <https://doi.org/10.48335/9789188855589-7>.

van Kranenburg, H. (2002). Mobility and market structure in the Dutch daily newspaper market segments. Journal of Media Economics 15 (2): 107–123. [https://doi.org/10.1207/S15327736ME1502\\_3](https://doi.org/10.1207/S15327736ME1502_3).

Venäläinen, P., Kato, R., Della Rocca, J., & Lähde, K. (2019) Programmes for education and gaming: Evaluation of skene, learning solutions, future learning Finland and education export Finland programmes. Business Finland. Report 3/2019 [https://www.businessfinland.fi/49dec6/globalassets/julkaisut/3\\_2019-programmes-for-education-and-gaming.pdf](https://www.businessfinland.fi/49dec6/globalassets/julkaisut/3_2019-programmes-for-education-and-gaming.pdf)

Ylikoski, M., & Ala-Fossi, M. (2024). Monitoring media pluralism in the digital era : application of the media pluralism monitor in the European member states and in candidate countries in 2023. Country report : Finland. EUROPEAN UNIVERSITY INSTITUTE (EUI). <https://doi.org/10.2870/266863>