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MERGER CONTROL ANALYSIS IN HEALTH CARE SECTOR IN FINLAND – PRESENCE AND IMPORTANCE OF PUBLIC SECTOR OFFERING

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Master's thesis in Economics

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Abstract for Master's thesis

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Title: Merger Control Analysis in Health Care Sector in Finland – Presence and Importance of Public Sector Offering
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Abstract: The Finnish private health care sector has faced consolidation during the past years. Consequently, also the Finnish Competition and Consumer Authority ('FCCA') has reviewed several mergers between private social and health care companies, such as the proposed merger between Mehiläinen and Pihlajalinna in 2020, which also gained significant public attention, as the FCCA proposed the Finnish Market Court to prohibit the merger. What influenced the FCCA's prohibition proposal significantly was the FCCA's conclusion that public and private health care operators do not compete with each other, which led to the merging parties having high combined shares of supply in the private sector. Against this background, this thesis analyses the FCCA's investigative measures regarding mergers in the social and health care sector. More explicitly, this thesis analyses i) in which type of merger cases the FCCA has considered the mixed oligopoly structure of the health care sector and is there a connection between such a consideration and the end result of the case; and ii) how the FCCA has assessed the objectives of the public health care providers as well as their freedom and/or possible constraints to choose their quality and pricing in its health care sector merger investigations. The thesis examines these research questions by analysing the FCCA's merger decisions in the social and health care sector (incl. also dental care) between 2011 and 2021 with a microeconomic theory-based content analysis. The results of the thesis indicate that the FCCA's position concerning the possible mixed oligopoly structure of the social and health care sector has shifted to some extent during the past 10 years, with the direction being not to consider the social and health care markets as mixed oligopolies, especially considering the health and dental care markets. The results do not indicate any clear correlations between the firm (and case) sizes as well as the FCCA considering the mixed oligopoly structure, however, a correlation between the FCCA not considering the mixed oligopoly structure as well as a negative end result can be identified, as in all cases in which the FCCA has required the prohibition of the merger or approved with commitments, the FCCA has decided not to take into account the competition between the public and private sector. Furthermore, considering the public sector's objectives and operating restraints, the thesis concludes that the FCCA focuses mainly on the differences between the public and private health care operators, instead of considering the effects of the presence and altruistic aims of the public sector for the private sector firms' possibilities to operate and the possible constraints that the public sector may impose to the private sector, as proposed by the microeconomic theory.
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Table of Contents

1 Introduction

The Finnish health care sector has experienced substantial consolidation during the past years. Particularly, the three largest private health care service providers in Finland (i.e., Mehiläinen, Pihlajalinna, and Terveystalo) have grown both organically and through acquisitions (FCCA, 2021; Nurminen, 2021). The development in Finland is, however, largely consistent with the broader trend, as also globally, the health care sector has undergone both horizontal and vertical consolidation. The consolidation pace is also expected to accelerate even further given the financial difficulties that many providers have faced worldwide during the Covid-19 pandemic (*Harvard Business Review*, 2021).

Consequently, in recent years, the Finnish Competition and Consumer Authority ('FCCA' or the 'Authority') has reviewed several mergers between private operators active in the health care industry in Finland. To name a few of the most recently announced and reviewed acquisitions, for instance, in mid-January 2022, the FCCA approved the transaction between Pihlajalinna Terveys Oy and Pohjola Sairaala Oy that is a continuum to a proposed transaction in 2020 by which one of the largest health care service providers, Mehiläinen Yhtiöt Oy ("Mehiläinen"), intended to acquire its competitor Pihlajalinna Oyj ("Pihlajalinna"). However, relating to the latter mentioned acquisition, the FCCA considered that a merger between such large market actors would lead to negative consumer effects and, thus, after the most extensive investigation in the Authority's history, the Authority proposed to the Finnish Market Court that the merger should be prohibited (FCCA, 2020). The FCCA's review and the prohibition proposal drew wide attention also in the media, which is not surprising considering the public interest in the health care sector, in addition to which prohibition proposals in general are relatively rare in Finland and actual decisions prohibiting mergers even more rare. However, in this case either, the Finnish Market Court ('Market Court' or 'Court') did not decide on the eventual prohibition, as the parties abandoned the transaction before any decision from the Court (Market Court, 2020). The Authority as well as the Ministry of Economic Affairs and Employment ('MEAE')

have also otherwise been interested in the private health care sector in recent years, as they have, for instance, investigated, without leading to any actions, the possibility to introduce sector-specific turnover thresholds for social and health care sector mergers that would have been lower than the general turnover thresholds for merger control (MEAE, 2017). In addition, in a memorandum concerning the possible lowering of the general merger control turnover thresholds published by the MEAE in mid-January 2022, the MEAE mentions the health care sector as one of the focus areas (MEAE, 2022).

In Finland, in addition to private health care operators, the health care system also includes public service providers. In fact, the basis for the present Finnish social and health care system are the municipal social and health care services that are produced with the support of state subsidies and under the guidance of an altruistic aim to improve and maintain the population's health, well-being, work and functional capacity, and social security as well as to reduce health inequalities (Ministry of Social Affairs and Health, 2021a). The offering of the private health care companies supplements the services of the municipalities and hospital districts (Ministry of Social Affairs and Health, 2021b).

The organisation of Finnish social and health care is currently being reformed: In summer 2021, the Finnish Parliament approved a government bill that will transfer the responsibility for organising health care and social welfare services from the municipalities and hospital districts to the (public) wellbeing services counties that will assume their responsibility for organising these services on 1 January 2023. The role of the private health care service operators does not, however, change in this sense by the reform and, hence, the offering of the private health care providers will continue to supplement the public offering (Finnish Government, 2021).

Against this background, in its recent investigations concerning mergers between private health care service operators, the FCCA has assessed the services provided by the public health care service operators as well as the resulting competitive pressure faced by the private sector operators. Furthermore, the FCCA has considered the planned social and health care reform to the extent the details thereof have been available. Despite noting the competitive pressure from the public sector, the FCCA concluded in its prohibition proposal in the *Mehiläinen/Pihlajalinna* case that public

and private health care services do not belong to the same relevant product market, but private health care services should be considered to constitute their own relevant market (FCCA, 2020), which contributed to the FCCA proposing the prohibition of the *Mehiläinen/Pihlajalinna* transaction to the Market Court, as the companies formed such a large proportion of the private health care markets.

The FCCA's investigative measures are largely based on economic and econometric analysis today, and for instance, in the *Mehiläinen/Pihlajalinna* case, the FCCA's 400-page prohibition proposal included an economic annex of almost 200 pages. The purpose of this thesis is to assess the investigative measures of the FCCA in the health care sector mergers[1] with the help of microeconomic theory. For this purpose, the following research questions are examined:

1. In which type of merger cases has the FCCA considered the mixed oligopoly structure of the health care sector? Is there a connection between such a consideration and the end result of the case?

   To be more explicit, with these questions, this thesis assesses whether a positive correlation exists between the size of the companies and, thus, cases as well as the FCCA considering the presence of the public health care sector providers. Furthermore, the thesis scrutinises whether a positive correlation exists between the FCCA considering the mixed oligopoly structure and the end result (i.e., approval, conditional approval, or prohibition) of the merger case.

2. As a follow-up question, this thesis examines how the FCCA has assessed the presence and drivers of the conduct of the public health care service providers in the health care sector merger cases.

   To be more explicit, the thesis examines how the FCCA has assessed the objectives of the public health care providers as well as their freedom and/or possible constraints to choose their quality and pricing in its health care sector merger investigations. The follow-up question is built on a theory study by

[1] The EU and Finnish merger regulations apply to 'concentrations', and the concept of concentration covers both mergers of earlier independent companies as well as acquisitions of control. In economic literature (see e.g., Motta, 2004), instead, the concept 'merger' is often used for all types of amalgamations of independent companies and, hence, also in this thesis, the concept 'merger' is used to cover all types of concentrations irrespective of their legal form.

Bisceglia et al. (2021), which shows that the assessment of the objectives and aims of the public sector health care providers is vital and disregarding the objectives of the public sector health care providers might lead to prohibiting mergers falsely in the health care sector.

These questions are also of significant practical interest, as public and private practitioners of competition law and economics must consider similar themes constantly in relation to merger investigations and court proceedings.

For this analysis, the FCCA's health care sector merger decisions from the past 10 years (i.e., between 2011 and 2021) are examined. The focus is on cases concerning the health care sector (including dental care), however, also cases concerning the social care sector are examined to provide further knowledge.

The competitive effects of mergers between competing companies have been researched increasingly in recent years (e.g., Motta and Tarantino, 2020 and Kaplow, 2021). Similarly, certain more theoretical studies concerning mergers in the health care sector have been conducted (e.g., Calem et al., 1999; Gaynor et al., 2000; Gal-Or, 1997 and 1999; Brekke et al., 2017; Bisceglia et al., 2021). However, these earlier studies focus on different angles than this thesis, and only a couple of earlier studies concerning the FCCA's empirical economic analysis are available (e.g., Hietamäki et al., 2020; Berg and Holm, 2021). In addition, when moving away from Finland, and especially to the United States, Garmon (2017) has analysed the accuracy of health care sector merger analysis methods used by competition authorities and courts in the United States. Although certain retrospective empirical studies on the effects of health care sector mergers are available from Finland, the Netherlands, and the UK, the majority of these studies derive from the United States (see also Nurminen, 2021; Ormosi et al., 2015). Consequently, none of the earlier studies focus on the research methods of competition authorities, specifically the FCCA, concerning the competitive effects of mergers between private health care service providers and more specifically, the possible competition between private and public health care.

Structurally, this thesis includes five chapters in addition to the introduction. In the following chapter, the relevant background information required for better understanding of the thesis topic is presented. The background chapter includes further information on the health care market and specifically, the Finnish health care sector,

in addition to which the basic framework for the Finnish merger control procedure is introduced. The background chapter also introduces the competition policy in the European Union ('EU' or 'Union'), which acts as a guidance for Member States' competition authorities when reviewing individual cases. While microeconomic theory does not provide universal guidance on the appropriate competition policy in markets with differentiated products, such as the health care markets, the third chapter introduces the theory for mixed oligopolies and, based thereof, how the market structure should be considered in competition authority investigations, specifically in the health care sector. In addition, the third chapter covers the earlier literature related to the thesis topic. The fourth chapter continues to describe the research methods as well as the actual data used in this thesis in more detail. The fifth chapter is the main chapter of the thesis. The research questions are described in more detail above, however, in summary, the fifth chapter discusses the results received by reviewing the merger decisions of the FCCA in the health care sector between 2011 and 2021 from the angle of competition between private and public health care sector providers. The sixth chapter compiles the analysis of the earlier chapters and provides conclusions on this basis.

2 Background

2.1 Introduction to Health Care Markets

2.1.1 Characteristics of Health Care Markets

Health care services have substantial political and economic weight, and well-functioning health care markets play an important role in national economies and for the wellbeing of population (Laine, 2019a; Nurminen, 2021). They also constitute a substantial part of the economies of developed countries, and, for example, in Finland

in 2019, the total spend in health care was approximately 22 billion euros, which constituted approximately to 9.2 per cent of the gross domestic product ("GDP") in the same year (Finnish institute for health and welfare THL, 2021). The importance is also ever-increasing, as the population of Finland, for example, is aging and the level of chronic diseases is growing (Laine, 2019a). Similarly, the current Covid-19 pandemic has shown that, for instance, the intensive care capacity in Finland is low compared to many other European countries, which has led to discussions on whether this capacity should be increased (Ministry of Social Affairs and Health, 2022).

The economic reasoning for competition enforcement is that social welfare can be maximised by the means of competition. In many industries, the linkage between competition and social welfare could be considered to be more direct than in health care, which may lead that competition laws should be enforced in a different way in the health care sector (Gaynor and Vogt, 2000). Health care markets are characterised by several imperfections, and they have multiple important features that combined distinguish them from other product and service markets (Gaynor and Vogt, 2000; Hurley, 2000; Nurminen, 2021). In his seminal paper, Arrow (1963) lists, although not exhaustively, some of these characteristics. Firstly, the demand for health care services depends on the health status of the population, which leads to the demand being both irregular, unpredictable, and uncertain, if compared, for example, with the demand for food or clothes. Furthermore, the demand is related to an assault on personal integrity, with a certain degree of risk of death and with a higher degree of risk of impairment of full functioning. The supply, instead, depends on the available medical treatments and the efficiency thereof. (Arrow, 1963; Laine, 2019b; Barros and Martinez-Giralt, 2013; McGuire, 2011) The suppliers are also incentivised to differentiate their services (Calem et al., 1999), in addition to which the suppliers have usually semi-altruistic objectives (Brekke et al., 2011). Similarly, and especially in rural areas, the number of suppliers of health care services is usually limited, however, suppliers typically include both private and public operators. Health care markets could, thus, be characterised as mixed oligopolies. (Garattini and Padula, 2019; Helby Petersen et al., 2017; Gaynor, 2012) Furthermore, both entry to and exit from the health care markets is costly, as majority of the procedures are performed on a patient basis, in addition to which health care facilities are specialised, which means that costs for converting these to other use are significant (Gaynor, 2012).

Consequently, both the demand and supply of health care services are uncertain. The uncertainty related to the demand and supply oh health care leads to the need for insurance companies[2] that in turn reimburse the costs (i.e., prices), which are usually regulated. As insurance companies are liable for the costs, competition on the health care markets mainly takes place via non-price factors, such as quality (Arrow, 1963; McGuire, 2011; Laine, 2019b).

Furthermore, the health care markets are coloured by asymmetric information from the patients', physicians', and insurance companies' viewpoint. This leads to moral hazard (inducing to excessive consumption of health care services as well as decreasing the incentives for patients to search for the health care services with lowest prices) and adverse selection in the health insurance market as well as to agency problems in the health care market. For instance, patients usually have limited information both about the possibilities and consequences of different medical treatments, whereas physicians have completed medical schools and gained experience in practice, which leads to them having significantly more medical knowledge than their average patients. Therefore, a principal-agent relationship is established between patients and physicians. (Sloan and Chee-Ruey, 2019; Gaynor and Vogt, 2000) Furthermore, patients usually have limited information about the quality of different health care providers. Similarly, the health care providers may have only limited knowledge about their patients. (Laine, 2019b; Chandra et al. 2011; McGuire, 2000)

In addition, health care services constitute differentiated products, like other services that can only be acquired directly from the seller (i.e., health care service provider), and thus, no second-hand market among consumers exists. Furthermore, the preferences of consumers are versatile: some patients are satisfied with a bare minimum treatment, while other patients prefer extensive discussions concerning their case. Furthermore, patients may prefer service providers with certain characteristics: some patients may wish to consult a generalist, whereas other patients prefer specialist physicians. (Gaynor and Vogt, 2000) Satterthwaite (1979, 1985) has argued that this combination of heterogenous products and preferences provides with market power for the service providers.

[2] In many countries, both public and private health insurance are an important feature of the health care sector, and usually both types of insurance coexist in each country (Barros and Siciliani, 2012).

All the above-described features of the health care markets indicate that the resources in these markets may be allocated inefficiently, which in turn leaves room for regulation in the sector (Dranove and Satterhwaite, 2000; Laine, 2019b; Garattini and Padula, 2019). Indeed, health care markets can also be characterised by extensive regulation that relates, for instance, to market entry (e.g., authorisations/licenses from relevant authorities), pricing of services, and service offerings. Apart from regulation, also competition (or antitrust, as it is referred in the United States) policy and enforcement are prominent tools in the health policies of different countries (Gaynor and Vogt, 2000).

In addition, health care systems around the world are versatile. However, in many countries, the health care sector is characterised by the interaction between private and public provision, with differing quantities depending on the chosen system. In some countries, also for-profit and not-for-profit firms compete against each other in the health care sector. Similarly, in most countries, health care is at least to some extent publicly financed, in addition to which both public and private health insurance are an important feature of the health care sector, and usually both types of insurance coexist in each country (Barros and Siciliani, 2012; Laine, 2019b; Gaynor and Vogt, 2000). Several different classification criteria are also used to describe and classify the versatile health care systems. For example, Sloan and Chee-Ruey (2019) use the two-dimensional criteria of state activity in health care financing and describing options for a country's health care system.[3] The first dimension used by Sloan and Chee-Ruey (2019) describes the extent to which the health care system of a given country is publicly financed, whereas the second dimension describes the extent to which the public sector is involved in the supply of health care services in each country. Below, the Finnish health care system and market are described in more detail.

[3] The classification system used by Sloan and Chee-Ruey (2019) is not the only system available. For further reference, please see Stabile and Thompson (2014).

2.1.2 Finnish Health Care System

Against the two-dimensional criteria of Sloan and Chee-Ruey (2019) described above, the health care system of Finland could be defined as a 'public system' with its relatively high level of public financing and provision of health care services, despite the trend toward increasing private sector participation. Based on the OECD[4] data, in the Finnish health care sector, the share of public financing was approximately 78% in 2020, which is at the average when compared to other OECD countries. The OECD data does not provide up-to-date figures on the share of public health care supply in Finland, however, in 2010, the share of public supply was 95.1% (Sloan and Chee-Ruey, 2019). According to an estimate of Terveystalo and NHG (2020), the share of public supply has since decreased and was 77% in 2016.

The above-discussed significance of the public sector provision is also evident from the legislation according to which the public sector is predominantly responsible for the primary care as well as specialised medical care in Finland. In more detail, pursuant to the Constitution of Finland (731/1999, as amended), the public authorities must guarantee adequate social, health, and medical services for everyone as well as promote health of the population. The Finnish social and health care system is decentralised, and currently, in the core of the current system is the municipal social and health care that is carried out with municipal tax revenues and state subsidies. The municipalities can produce the services by themselves, or they can also collaborate with other municipalities by forming so-called joint municipal authorities to perform the municipal obligations specified in the legislation. In addition, hospital districts formed by the municipalities are responsible for secondary or specialised medical care and the most demanding care is provided in the University Hospitals. (Ministry of Social Affairs and Health, 2013). Since 2014, patients have been able to freely choose the public health centre as well as the specialised medical unit from all the public health centres and hospitals in Finland (Health Care Act, 1326/2010, as amended). The public sector has also started to incorporate its hospital service operations increasingly. For instance, Orton in the capital region as well as Coxa and Heart Hospital in the

[4] Abbreviation from Organisation for Economic Co-operation and Development.

Pirkanmaa region have been incorporated, and they combine the operating models of public and private hospitals (Orton, 2022; Coxa, 2022; Heart Hospital, 2022).

In addition to the municipalities, also private companies and organisations produce primary and specialised health care services that complement the public offering. Private health care service providers may sell their services to the municipalities and joint municipal authorities that may outsource their duties to private operators to certain extent, but also directly to consumers. In general, the provision of private health care services is subject to authorisation by the Regional State Administrative Agency or the National Supervisory Authority for Welfare and Health (Valvira). (Ministry of Social Affairs and Health, 2013) The significance of private health care service providers has increased in Finland in the past ten years, and the growth of the private health care sector has outweighed the growth of the public sector (Lith, 2013; FCCA, 2016)

The major nation-wide private health care service providers in Finland include Mehiläinen, Pihlajalinna, and Terveystalo that all provide a broad range of different health care services to consumers, organisations (mainly occupational health service), insurance companies, as well as public sector customers. Approximately one third of the turnover of the private health care companies is derived from sales to private customers (including medical practice services, dentist services, and hospital services), one third from sales to corporate customers (a majority from occupational health service, the rest from insurance company services), and one third from services outsourced by municipalities. In addition to the nation-wide providers, the private sector also includes smaller companies that do not provide the whole range of different health care services, but only certain services or only in certain areas, such as Aava in the capital region and other larger cities. (FCCA, 2020)

According to the FCCA (2020), the private health care sector has consolidated significantly during the past years: in 2014, the combined market share of Mehiläinen, Pihlajalinna, and Terveystalo was approximately 20–30 per cent, and in 2019, the combined share of these three actors was already 70–80 per cent. While the firms have also grown organically, according to the FCCA (2020), the main reason for the market consolidation has been the acquisitions completed by the main service providers: for

example, Mehiläinen completed 81 acquisitions in total in the health care sector between 2015 and 2019.

The financing system of the Finnish health care sector is multi-channel, as the care may be paid by the public sector, employer, insurance company, or individual patient. The Act (734/1992, as amended) and Decree (912/1992, as amended) on Client Charges in Health care and Social Welfare regulate the maximum out-of-pocket fees that consumers may be charged for in the municipal health care. The purpose of the regulation is, on the one hand, to guarantee reasonable consumer charges, and on the other hand, to prevent inappropriate use of the municipal services. According to the Act, the municipal charges may not exceed the costs occurred from providing the service. Furthermore, the Act includes an annual payment ceiling after the attainment of which the municipal services are free of charge for consumers. These limitations apply to private health care operators only when they perform health care services outsourced to them by municipalities. Thus, with respect to purely private health care services, the health care service operators may set their prices freely. To some extent, consumers may, however, seek reimbursement from The Social Insurance Institution of Finland[5] (Health Insurance Act, 1224/2004, as amended), as all Finnish residents are covered by the statutory health insurance that is funded together by employees, employers, and the State. From the statutory health insurance, in addition to the reimbursements for private health care fees, for instance a part of the employer costs from organising a statutory occupational health care are covered. Although the demand for voluntary health insurance has increased in Finland during the past years, their role is still marginal in the Finnish health care system: slightly more than a half a million Finnish adults had a self-paid and around 265,000 adults an employer-paid voluntary health insurance in 2020 (Finanssiala ry, 2021).

The organisation of the Finnish health care is currently being reformed: After several failed proposals under different government terms, in summer 2021, the Parliament of Finland approved a government bill that will transfer the responsibility for organising health care and social welfare services from the municipalities and hospital districts to the (public) wellbeing services counties that will assume their responsibility for

[5] A parliamentary working group set by the Ministry of Social Affairs and Health is currently reviewing the possibility to remove the right to reimbursement from The Social Insurance Institution of Finland for private health care services (Finnish Government, 2021b).

organising these services on 1 January 2023. The first elections to elect the county representatives to oversee the wellbeing areas were also conducted in Finland in January 2022. The aims of the reform are, for instance, reduction of health and wellbeing disparities, ensuring equal health care services for all citizens, as well as improvement of access to health care services, whereas the reasons for the reform include, inter alia, the disproportion between the ageing population of Finland that increasingly needs services and the decreasing birth rate (Finnish Government, 2020).

In the reformed health care system, the wellbeing services counties must ensure a sufficient own service production in primary and specialised health care in order to ensure social and health care services at all times, and, for example, also in case a private health care company supplying services for the wellbeing services county became insolvent. Thus, the wellbeing services counties may not outsource all of their service production to private sector operators. However, similar to the current system, consumers and organisations may continue to purchase health care services directly from the private health care service providers also after the reform (Finnish Government, 2020). Many critics have, in fact, argued that the health care reform will lead to increasing customer flows to the private sector (the Finnish Broadcasting Company, 2021).

2.2 Framework for Competitive Assessment of Mergers

2.2.1 Aims and Objectives of Competition Policy

Understanding of the aims and objectives of competition policy is essential for the assessment of the thesis topic, as the understanding helps to systemise the possible pro- and anti-competitive effects of horizontal mergers in the health care industry. Furthermore, the objectives also provide guidance on how competition authorities exercise their powers in individual cases. In the below, focus is on the competition

policy of the EU, as it is decisive for the enforcement of the Authority in Finland as well.

Over its evolution, the EU competition policy and regulation have embraced and been influenced by the ideas of different economic schools. In the EU, especially the Harvard school, but also the Chicago school, have had a significant impact on the competition policy and rules as they are today. Similarly, since the late 1990s, the so-called European school, although usually not recognised as its own school of thought in economic literature, with its economic approach have guided the competition regulation of the EU. Without going into the details of the US economic theories, it can be summarised that the Chicago scholars see efficiency as the ultimate goal of antitrust. They advocate that the government intervention should be as minimal as possible, as the markets are able to correct themselves. In comparison to the Chicago school, the Harvard scholars' approach is more structuralist and focuses on the possibility, rather than the incentive, to restrict competition. Thus, the main disagreement between the Chicago and Harvard scholars lies in the question of the need of state intervention and thus, whether the markets can correct themselves or not. (Kuoppamäki, 2003; Evans and Padilla, 2005; Bradford et al., 2019)

Against this background and following the prevailing economic theories at a given time, the aims and interpretation of competition policy and regulation also evolve over time, reflecting the values and standards of the society. Over the years, EU competition policy has emphasised several different policy goals, some of which have been more debatable than others, in the sense whether they are able to protect competition. However, for quite a long time, the two most prominent objectives of the EU competition policy have been enhancing *consumer welfare* by protecting competition on the markets (but not inefficient competitors) as well as ensuring the *efficient allocation of resources*. In addition to lower prices, consumer welfare may be increased, for example, by better quality, new innovations, and thereby wider selection (European Commission, 2004b; Whish and Bailey, 2021; Huimala et al., 2012; Kaplow, 2010 and 2021). Furthermore, several other objectives have been advocated in literature, including freedom of choice, fairness, market integration, effective competition structure, fighting inflation, and economic freedom (Wasastjerna, 2019; Vestager, 2018; Motta, 2004).

Furthermore, it is worth mentioning that in the history of EU competition regulation, several different public policy considerations have also affected the enforcement of competition laws. Currently, the possibilities to promote objectives, such as sustainability, data protection, and gender equality by means of EU competition enforcement are being debated, however, in the past, also objectives, such as social aspects and employment as well as regional interests have been promoted with competition enforcement in addition to consumer welfare and efficient allocation of resources (Motta, 2004; Whish and Bailey, 2021; Kaplow, 2021).

Today, many economists prefer the total welfare standard instead of consumer welfare, which has however prevailed in the EU competition policy, as noted above (Belleflamme and Peitz, 2015; Motta, 2004; Froeb and Werden, 1998; Williamson, 1968). This is especially because the consumer welfare standard does not consider the gains made by companies active on the market even though many consumers own firms directly or through pension and investments funds and, thus, would be harmed in case of decreasing profits. Furthermore, in case the consumer welfare standard were the relevant objective for competition authorities, the pricing would be shifted towards marginal costs and, consequently, lead to companies being forced to exit the market in the long run if they did not receive subsidies to cover fixed costs. Lastly, low prices and profits are being argued to hinder the companies to invest in innovation and, thus, introduce new and better products, which would of course be detrimental to consumers as well (Motta, 2004). Motta (2004), however, notes that in many cases, the consumer and total welfare standards would actually lead to similar policy recommendations although the consumer welfare standard may raise the threshold required for efficiency gains to make a merger desirable from the society's perspective.

2.2.2 Finnish Merger Control Procedure

To provide context for the thesis topic concerning analysing the investigative measures of the FCCA in the recent health care sector mergers, the key elements of the Finnish merger control procedure and substantive assessment are introduced below.

The main competition rules providing the framework for merger control investigations are included in the European Union Merger Regulation ('EUMR')[6], which governs the EU merger control for mergers falling within the European Commission's ('Commission') jurisdiction[7], and the national Finnish Competition Act (948/2011, as amended)[8] for such mergers that do not meet the EU merger control thresholds. Pursuant to Section 22 of the Finnish Competition Act, a transaction must be notified to the FCCA prior to its completion in case the following cumulative conditions are met:

1) the combined worldwide turnover of the transactional parties exceeded EUR 350 million in the preceding financial year; and
2) both parties to the transaction generated turnover in excess of EUR 20 million from customers located in Finland in the preceding financial year.[9]

Usually, if a notification is required, so-called pre-notification discussions with the Authority before the formal submission of the merger notification are useful for the forthcoming review process. During the pre-notification discussions, the merging firms and the Authority have the possibility to prepare for the upcoming Authority investigation, identify the possible competition concerns, and possibly even conduct customer surveys and other economic analyses already before the formal investigation (European Commission, 2004c).

Pursuant to the Finnish Competition Act, after the formal notification of the transaction, the FCCA has 23 working days (so-called Phase I) to decide whether in-depth investigations due to the possible anti-competitive effects of the transaction are

[6] The European Union Merger Regulation (Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings) ("EUMR"). the EUMR's predecessor, the European Communities Merger Regulation ("ECMR") entered into force in 1990 (see e.g., Affeldt et al., 2021).
[7] Please note that the European Commission has the sole jurisdiction to investigate mergers between companies generating turnover in excess of the turnover thresholds set in the EUMR. Therefore, according to this so-called one-stop-shop rule, if the transactional parties' turnovers exceeded the EU-wide turnover thresholds, the transaction would not need to be notified to the FCCA but would be reviewed solely by the European Commission, if not referred in whole or partly to national competition authorities.
[8] Merger control was introduced in Finland in October 1998, when a separate chapter covering merger control was included in the then Act on Competition Restrictions (480/1992, as amended).
[9] At the FCCA's proposal, currently, the MEAE is considering whether the turnover thresholds should be lowered and/or whether the FCCA should be granted the possibility to request a merger notification even in cases where the turnover thresholds are not exceeded (MEAE, 2022).

needed or whether the transaction can be approved in Phase I. If the FCCA considers that more in-depth investigations are needed, it has further 69 working days (so-called Phase II, with possible extensions) to examine the transaction and decide whether it can be approved unconditionally or with conditions or whether to propose the Market Court to prohibit the transaction. A conditional approval refers to a situation where the FCCA identifies certain competition concerns that it concludes can be mitigated with remedies, which can be either behavioural or structural. Structural remedies usually refer to divestments of certain business areas where the FCCA has identified competition concerns. The FCCA has announced publicly that in horizontal merger cases, only structural remedies are acceptable (FCCA, 2021). What, thus, characterises merger control is that the competition authority evaluation is conducted ex ante, in comparison to the competition enforcement of anti-competitive conduct (e.g., cartels and abuse of dominant position), which is conducted ex post. This leads to that, in practice, competition authorities need to predict whether a merger will likely reduce competition in the future.

The substantive test[10] of the FCCA' merger control review is based on the so-called SIEC test that is generally applied by the Commission as well as national competition authorities of the EU Member States. Based on the SIEC test, which is also included in Section 25 of the Finnish Competition Act, the FCCA will examine whether a transaction *significantly impedes effective competition*, in particular through the creation or strengthening of a dominant market position. The FCCA assesses the merger against a counterfactual, which is a hypothetical scenario where the transaction would not take place (FCCA, 2011). It is noteworthy that this legal test allows competition authorities to prohibit mergers in already concentrated markets even if these do not lead to the creation or strengthening of a dominant market position (Berg and Holm, 2021).

In evaluating proposed horizontal mergers[11], the FCCA generally applies the rules summarised both in the FCCA's Guidelines on Merger Control (2011) and the

[10] Substantive assessment refers to the analysis framework under which the FCCA considers whether a transaction has anti-competitive effects.
[11] Horizontal mergers refer to mergers between competing firms. In economic literature, horizontal mergers have usually been distinguished from vertical and conglomerate mergers (Kuoppamäki, 2018).

Commission's Guidelines on the Assessment of Horizontal Mergers (2004)[12]. The FCCA's review of a merger usually starts with the definition of relevant markets and continues with the assessment of competitive effects of the merger in question. Especially market shares, but also concentration levels (measured by the Herfindahl-Hirschman Index ('HHI')), are usually used as a first and important indication of the merging parties' competitive significance.

To be able to calculate market shares and identify the boundaries of competition between the merging firms, as a first step, the FCCA typically defines the relevant product market(s)[13] and their geographic scope(s)[14] by identifying the interchangeability between the products and geographic areas. A vast consensus among economists exists on that, in practice, it is impossible to define the relevant markets precisely in a way that would be fully in line with the economic theory (Kaplow, 2021; Autio et al., 2020; Sousa Ferro, 2019; Schmalensee, 2009). However, the method generally used for market definition and, thus, finding the actual competitors of the potentially merged company, is the so-called SSNIP test, or the 'hypothetical monopolist test' that aims to identify the narrowest market in which a hypothetical monopolist would be able to profitably impose a 'Small but Significant Non-transitory Increase in Prices', ceteris paribus (Belleflamme and Peitz, 2015; Motta, 2004). Different methods to apply the SSNIP test[15] are available, however, the Commission's guidelines (1997) take as a starting point the question as to what would happen if a hypothetical monopolist were to implement a non-transitory price increase of five to ten per cent. If the price increase is profitable, the relevant market has been identified, however, if the price increase is unprofitable, the product or geographic area should be broadened until a profitable price increase has been found. To implement the SSNIP test, competition authorities increasingly use the critical loss analysis

[12] As the Finnish competition regulation corresponds with the EU regulation to a large extent, the Commission's guidelines may and are used in the Finnish process as well.
[13] Based on the Commission's guidance (1997), a relevant product market "comprises all those products and/or services which are regarded as interchangeable or substitutable by the consumer, by reason of the products' characteristics, their prices and their intended use".
[14] Based on the Commission's guidance (1997), the geographic scope "comprises the area in which the undertakings concerned are involved in the supply and demand of products or services, in which the conditions of competition are sufficiently homogenous, and which can be distinguished from neighbouring areas because the conditions of competition are appreciably different in those areas".
[15] See e.g. an article by Autio et al. (2020), where they argue that analysing market definition with a market-level approach instead of the more general firm-level perspective is more likely to lead to correct (and not too narrow) market definitions.

('CLA') test to identify the relevant markets. In the CLA test, the focus is on identifying such a decrease in sales that would have to occur in order to render a hypothetical price increase not profitable (Autio et al., 2020; Sousa Ferro, 2019).[16]

After the relevant markets and, thus, the boundaries of competition between the merging firms, have been identified, the competitive effects of the merger are assessed in more detail. According to the guidelines of the Commission and the FCCA, investigating both coordinated (i.e., does a merger create market conditions that enable collusion between market actors) and non-coordinated effects (i.e., does a merger provide market power for the merged firm) are of relevance when reviewing a particular merger, however, in practice, the assessment of possible non-coordinated effects is usually in the focus. A number of factors may indicate that a transaction is able to lead to significant non-coordinated effects. Although the list provided in the Commission's (2004) and the FCCA's (2011) guidelines is not exhaustive, for instance factors, such as the merging firms' large market shares, closeness of competition between the merging firms, customers' limited possibilities to switch supplier, competitors' inability to increase supply if the price level increases as a consequence of the merger, merged entity's ability to hinder expansion by its competitors, and the elimination of an important competitive force by the merger would all indicate that the merger could have significant (negative) non-coordinated effects.

According to the Commission's (2004) and FCCA's guidelines (2011), a merger that could otherwise harm consumers, for instance, due to negative non-coordinated effects, could, however, be approved, if the merger leads to efficiency gains that benefit consumers, are merger-specific, and can be verified. The efficiencies may take various forms, such as cost savings in production or distribution that lead to reduction in variable or marginal costs, and, thus, more likely to lower prices also for consumers. The benefit from efficiencies should, however, be substantial for consumers and, for instance, the FCCA has been quite hesitant to accept such efficiency claims in the past (more generally, see Kaplow, 2020).

In subchapter 3.2.1 below, the assessment of horizontal mergers in economic literature is examined in more detail.

[16] For further information on defining markets in the health care sector, please see Varkevisser et al. (2008).

3 Theoretical Framework

3.1 Competition in Mixed Health Care Oligopoly

3.1.1 Introduction to Oligopoly Theory

This thesis examines mergers and competition authorities' merger analysis in situations, where both private and public health care providers are present and compete for patients (i.e., mixed oligopolies). In order to be able to examine the theoretical aspects of mergers in mixed oligopolies in subchapter 3.2.2, in this subchapter, a short overview of the oligopoly theory in general is provided, after which the next subchapters continue to provide an overview of the mixed oligopoly theory in general as well as in health care.

As noted above, especially in rural areas, the number of suppliers of health care services is usually limited, and, thus, typical health care markets could be considered as oligopolies. However, as also noted above, suppliers typically include both private and public operators, which means that health care markets could be characterised as mixed oligopolies, as compared to markets including only firms aiming solely for the maximisation of their profits. (Garattini and Padula, 2019; Helby Petersen et al., 2017; Gaynor, 2012)

In an oligopolistic competition setting, firms cannot be described as pure price-takers, as in perfect competition, nor pure price-makers, like in monopolies. In fact, what differentiates oligopolistic competition from these other market forms is that in oligopolistic markets, firms cannot disregard their competitors' behaviour, but they must forecast and consider the (likely) actions of their competitors and react accordingly to reach optimal strategic decisions, which usually maximise their profits. Thus, in oligopolistic markets, competitors exist (as opposed to monopolies) and

usually, these competitors are large (as opposed to perfect competition). (Belleflamme and Peitz, 2015)

While game theory (including its concept Nash equilibrium) provides many useful tools to analyse strategic interaction on oligopolistic markets (see also subchapter 3.2.2 below), the analysis of oligopolistic competition dates back already to the nineteenth century and Augustin Cournot and Joseph Bertrand, who can be considered to have created the main oligopoly theories still in active use today (Belleflamme and Peitz, 2015). The Cournot models of oligopolistic competition are based on an idea that a limited number of firms set the *quantities* of output that they wish to provide on the market, however, the Cournot oligopolistic firms do not independently set the prices for these products, but the prices are determined by the supply and demand process. Thus, the market equilibrium will be reached at a point where the firms' output quantities give the best possible responses to the quantities of competing firms. The Bertrand models are, instead, based on the basic idea that a limited number of firms set the *prices* of their output products or services simultaneously on the market, but the output quantities are determined by the supply and demand process (Belleflamme and Peitz, 2015; Vives, 1999).

Cournot-based oligopoly models are more often exploited in oligopoly (as well as mixed oligopoly) studies than models inspired by the Bertrand oligopoly theory, as the Cournot oligopoly models are, in general, best placed to assess cases in which quantities (i.e., capacities) are limited and more difficult to alter than prices, which applies to most of the industrial sectors, including health care (Laine and Ma, 2017; De Fraja and Delbono, 1990). The simple Cournot quantity competition models are also useful as they, in general, provide similar outcomes as the more complex models where the firms commit to quantities first, only after which they engage in price competition (Belleflamme and Peitz, 2015).

3.1.2 Mixed Oligopoly Theory in General

The first studies examining oligopolistic competition concentrate on markets in which all firms are assumed to aim to maximise their profits. However, in the footsteps of the first mixed oligopoly study of Merrill and Schneider (1966) in the late 1960s, studies concentrating on mixed oligopolies have gained increased attention since the 1980s in connection with game theory providing guidance on the analysis of market power of market actors (De Fraja, 2009).

What differentiates mixed oligopoly analyses from general oligopoly studies is that in mixed oligopolies, actors with differing objectives exist. Usually, the mixed oligopoly studies and their theory models include at least one private profit maximising firm as well as at least one public firm that has broader objectives, typically the maximisation of the total surplus and, thus, the welfare of the industry that is defined as the sum of the producers' profits and the consumer surplus. What is crucial in the mixed oligopoly models is the objectives of the public actor. As the public actor wishes to maximise welfare in the society, it must increase its output and, thus, produce larger amounts (De Fraja, 2009; Willner, 2006).

The basic mixed oligopoly studies are usually built on the Cournot competition model in which firms choose their quantities. As the basic models are also based on an assumption of homogenous goods as well as constant and equal marginal costs, the fact that the public actor does not aim for profit maximisation but to welfare and output maximisation will unavoidably lead to the private firms being required to exit in this set-up. This phenomenon is typically called as the Cournot paradox and caused by losses of private firms due to their fixed costs and public actors' pricing equal to their average costs. Such an exit effect may be problematic for example if a society values both private and public entrepreneurship or if a public firm is efficient only in a competition situation (Willner, 2006).

To avoid the exit effect in mixed oligopoly models, it is naturally possible to assume that products are, for example, heterogenous, as the case is in practice for instance in the health care sector (as opposed to many other mixed industries, such as electricity and telecommunications). Such an assumption would change the set-up in a way that

the private actors would not necessarily be forced out of the market (also other assumptions are possible to avoid the forced exit by private actors, see e.g., Bisceglia et al. (2021) in subchapter 3.2.2). One of the most popular approaches for modelling differentiated product markets and mixed oligopolies is the Hotelling spatial competition model that has also been used in the health care markets (Laine and Ma, 2017; Willner, 2006; Cremer et al., 1991).

In addition, and especially in situations with homogenous products, it is possible to alter the cost functions for instance to assume that public sector firms are less efficient than their private counterparties or that the marginal costs are increasing, as then private firms could then survive by producing less. However, in practice, marginal costs would rarely be increasing, in addition to which assuming that public sector firms are less efficient than their private counterparties would require reasoning for such an assumption to be satisfactory (Willner, 2006; Jofre-Bonet, 2000; Cremer et al., 1989 and 1991; De Fraja and Delbono, 1990). Many studies also assume that the public actors face a budget constraint that requires them to price their products or services on a level at which they make nonnegative profits (Cremer et al., 1989). This assumption is also in line with the competitive neutrality regulation applied in several EU countries, including Finland.

The results of the earlier studies examining the welfare effects of mixed oligopolies in general are diverse and inconclusive, however, the presence of a public sector operator that gives weight to the total or consumer surplus instead of its own profits has usually been considered to lead to increased output and, thus, lower prices when compared to an oligopoly setting with only private profit-maximising operators. Similarly, the presence of public actors with aims other than profit maximisation has been considered to lead to increased competition, which, in general, is seen beneficial from the society's perspective. Therefore, introducing a mixed oligopoly setting on a given market has also been considered as a less punitive alternative, for example, to competition (i.e., antitrust) policies and their strict enforcement actions. (Willner, 2006)

3.1.3 Health Care Sector as Mixed Oligopoly

Several earlier studies have described and analysed the health care sector as a mixed oligopoly (e.g., Bisceglia et al., 2021; Laine and Ma, 2017; Levaggi and Levaggi, 2017 and 2020; Siciliani et al., 2013; Levaggi and Montefiori, 2013; Herr, 2011; Sanjo, 2009; Barros and Martinez-Giralt, 2002; Jofre-Bonet, 2000).

As noted above, the models used in earlier analyses studying mixed oligopolies in general are most often based on the Cournot oligopoly model in which the public sector firm has wider, social welfare, objectives than profit maximisation at the same time as the (two or more) private sector firms aim solely to maximise their profits (Laine and Ma, 2017; De Fraja and Delbono, 1990). This applies also to many of the studies examining the health care sector, including the study and theory model of Bisceglia et al. (2021) that is assessed in more detail in subchapter 3.2.2 below.

The results of the earlier studies concerning mixed oligopolies in the health care sector are versatile and, thus, do not provide a unanimous answer as to whether mixed oligopolies increase the quality of the health care. However, as characteristic to the health care sector, the earlier research concentrates on the effects on quality in the mixed oligopoly set-up and many studies also suggest that mixed oligopoly markets outperform markets with solely private actors. Except for Herr (2011), all the studies also consider the altruistic objectives of the public providers (Levaggi and Levaggi, 2017). In addition, apart from the study of Levaggi and Levaggi (2017), the models of the studies place private and public health care providers on the same market.

Jofre-Bonet (2000) has analysed different combinations of public and private health care operators as well as the effect of these combinations on quality levels and consumer welfare. In her study, Jofre-Bonet (2000) considers that there are different types of consumers, high income and low income, which determines the willingness to pay for health care services. Jofre-Bonet (2000) concludes that welfare is higher under a mixed oligopoly than in a purely private market structure, in addition to which mixed oligopoly models lead to the same level of consumer welfare than purely public systems, however, with lower costs (see also Barros and Martinez-Giralt (2002)).

Moreover, her analysis suggests that in a mixed oligopoly structure, public operators provide lower quality service, while the private sector's offering is of higher quality.

Laine and Ma (2019) have assessed a similar set-up, however in a mixed duopoly situation, and suggest that in some equilibria, the public firm chooses low quality, and the private firm chooses high quality, however, in some equilibria, the conclusion is the exact opposite. Levaggi and Montefiori (2013), instead, study the soft budget constraints in the patient selection in a mixed oligopoly situation and conclude that under three conditions, hospital competition leads to the undesired effect of patient selection. These conditions include asymmetry in hospitals' objectives, hospitals' private information, and the inability to enforce hard budget constraints.

Levaggi and Levaggi (2017, 2020) have also, otherwise, examined the oligopolistic competition in the health care sector. As opposed to the other studies that place private and public health care sector providers on the same market despite the asymmetry in their objectives, Levaggi and Levaggi (2017, 2020) conclude that private and public hospitals behave and are perceived differently by patients, however, also they conclude that mixed market structures outperform purely private or public models in welfare maximisation.

Lastly, Siciliani et al. (2013) have studied incentives for quality provision in markets with semi-altruistic and funded providers as well as regulated prices. The authors show that the presence of semi-altruistic providers lead to tougher dynamic competition and quality in case the price is sufficiently high. However, the results are opposite in case the price is sufficiently low (below unit costs), but the mixed oligopoly structure will lead to optimal welfare if the providers are altruistic enough.

3.2 Assessment of Horizontal Mergers' Effects in Health Care Sector

3.2.1 Evaluation of Horizontal Mergers in General

Considering the evaluation of horizontal mergers, from competition and microeconomic theory perspective, competition authorities' focus should be placed on mergers that are profitable for the merging companies but that otherwise reduce welfare. Such mergers can only occur on markets where competition is imperfect and the merging firms have market power (e.g., oligopolies), as mergers on such markets usually reduce competition and, thus, lead to anticompetitive effects (typically increased price levels), unless efficiency gains can be demonstrated (Belleflamme and Peitz, 2015). This means that only mergers between firms with significant market shares and, thus, market power could create such negative effects that could lead to competition authorities considering the prohibition of a merger. Consequently, this leads to that only mergers between firms with market power require more in-depth merger assessment by competition authorities.

For instance, Motta (2004) as well as Kaplow and Shapiro (2007) summarise the two primary circumstances that should be assessed when investigating the competitive effects of horizontal mergers. The first one is a case where a merger could allow the combined company to unilaterally exercise market power and, thus, raise prices (so-called *unilateral* or *non-coordinated effects*). The second one is a case where a merger may promote collusion in the industry in question and, thus, although the combined company could not unilaterally raise prices, the merger could create such conditions in the industry that could enhance the possibilities for collusion between competitors (so-called *coordinated effects*). Hence, these conditions correspond with the EU and Finnish competition authorities' horizontal merger guidelines as well. In the below, focus is on the non-coordinated effects and the assessment thereof as these are more often in the focus of the competition authorities.

A seminal paper in the context of horizontal merger analysis by Farrell and Shapiro (1990) examines horizontal mergers in a Cournot oligopoly situation in industries with homogenous products and increasing marginal costs[17]. Both Farrell and Shapiro (1990) as well as Motta (2004) consider that absent any efficiencies or synergies, mergers between competing firms tend to increase the market power of merging firms at least to some extent and consequently, decrease consumer surplus and total welfare by raising prices.[18] However, absent any efficiencies, the effect of a merger on the competitors of the merged firm is usually positive (at least if the merging firms are sufficiently small), as they may gain more than the merged entity, if the merged entity raises prices or lowers input (Belleflamme and Peitz, 2015; Motta, 2004; Farrell and Shapiro, 1990).

The situation without any efficiencies can be formalised with the standard Cournot model, where the firms have homogenous products and constant returns to scale (see e.g., Belleflamme and Peitz, 2015), which shows that if a merger results in extremely concentrated markets, the merger would be profitable for the merging parties, but at the same time, detrimental to consumers. The standard Cournot model shows that the sufficient condition for a merger to create positive external effects (i.e., welfare-increasing effects on consumers and market actors not involved in the merger) is

$$\sum_{i \in O} s_i - s_I > 0 \leftrightarrow (1 - s_I) - s_I > 0 \leftrightarrow s_I < \frac{1}{2},$$

with *s* referring to market shares/shares of supply. Hence, the above means that for a merger to create positive external effects, the merging firms cannot reach a combined market share above 50%[19]. However, for instance Belleflamme and Peitz (2015) have

[17] For further information on an analysis of horizontal mergers in industries with differentiated goods and decreasing marginal costs, see for instance Motta and Tarantino (2020). According to Motta and Tarantino (2020), absent efficiencies, a merger will reduce combined investments and, thus, be detrimental to consumers. However, the authors do not suggest that mergers are always harmful in practice if, for instance, the industry is characterised by R&D spill-overs or if the merger allows the merging firms to reduce their investment costs considerably.

[18] See Brekke et al. (2017b) for a study examining the effects of a horizontal merger when companies compete both on price and quality. Their conclusions include that due to a merger, the merging firms reduce both quality and price, whereas the outside firm increases price and quality. Consequently, the market price and quality increase. Although some consumers may benefit, in general, a merger reduces consumer welfare, but may increase total welfare.

[19] This is in line with the Commission's Guidelines on the Assessment of Horizontal Mergers (2004) that note that very large market shares (i.e., 50% or more) might in themselves be evidence of a dominant market position and, thus, possibly require for a merger being blocked (see para. 17).

shown that for a merger to be profitable, the merging firms should reach a combined market share above 80%. Thus, with linear demand and constant marginal costs, a merger on purely private markets would only be welfare-enhancing when it is extremely unprofitable, absent any efficiencies (see also Motta, 2004 and Salant et al., 1983). Such an effect is somewhat problematic, as it questions the whole ratio of the merger, however, also models with differentiated models lead to decreased (total and consumer) welfare absent any efficiencies (Motta, 2004).

Although a horizontal merger is likely to increase the market power of the merged entity absent any efficiencies, a several factors may restrict the merged entity from actually exercising its market power (Motta, 2004). According to Motta (2004), these restricting factors include the low concentration level of the market, low market shares (see also Farrell and Shapiro, 1990), high levels of unused capacity of competitors, existence of potential market entrants (see also Belleflamme and Peitz, 2015), high elasticity of market demand, as well as strong buyers with buyer power.[20]

In the economic literature, it has also been well established that in addition to the above factors, potential efficiencies may outweigh the increased market power and, thus, lead to higher (consumer) welfare. This is because efficiencies make the merging firms more productive and create savings on the merging firms' unit costs, which can lead to incentives for the merging firms to lower prices and attract additional customers (Belleflamme and Peitz, 2015; Motta, 2004; Farrell and Shapiro, 1990). According to Motta (2004), the more likely it is that a merger will able the merging parties to exert high market power, the higher also the efficiency gains should be.[21] However, according to Motta (2004), sufficiently large efficiencies will decrease the sales prices of the merged entity and consequently, lead to increased consumer and total welfare.[22] This can be formalised with the following sufficient condition:

[20] In addition, Motta (2004) points out the failing firm defence, which refers to a situation where a merging firm would not survive on the market if the merger was not approved. In a failing firm situation, in the counterfactual scenario, the failing firm would, thus, exit the market despite the merger. In such cases, a merger may be approved despite its anticompetitive effects, if the merging parties can prove the failing firm situation (Motta, 2004).

[21] Farrell and Shapiro (1990) specify that the required economies of scale or learning need to be even higher, the larger the market shares of the merging firms and the less the demand elasticity of the industry.

[22] For further information on the modelling of the unilateral effects and efficiency gains of a merger, see for instance Motta, 2004.

$$e \leq \bar{e} \equiv \frac{c\left((n^2 - 3n + 2)\gamma^2 + n(3n - 4)\gamma + 2n^2\right) - nv\gamma}{c(n + (n - 2)\gamma)(2n + (n - 1)\gamma)},$$

where the parameter *e* describes the inverse measure of the merger's efficiency gain, *c* the firms' marginal production costs, *n* the number of products in the sector, γ the product substitutability, and *v* a positive parameter. In case of efficiencies, the competitors of the merged entity are, nevertheless, usually placed in a less advantageous position when compared to a merger without any efficiencies, which explains why competitors usually oppose mergers during competition authorities' merger investigations.

According to Motta (2004), the usual sources for cost savings and efficiency gains are economies of scale and scope, in addition to which efficiencies might be derived from research and development, rationalisation of distribution and advertising, as well as cost savings. The costs savings should specifically be related to variable production costs rather than fixed costs, as variable cost savings usually have a more direct impact on pricing. Farrell and Shapiro (2001), instead, emphasise the importance of efficiencies derived from synergies resulting from the integration of the merging firms' assets, as these would more likely outweigh the anticompetitive effects of the increased market power than other efficiencies, in addition to which these could only be achieved with a merger. According to Farrell and Shapiro (1990), significant economies of scale of learning are required for a merger to lower prices, and these should be even higher if the merger led to the market structure to shift from a Cournot oligopoly to a less competitive market structure.

In addition, for instance Kaplow (2021), Motta and Tarantino (2020), as well as Brekke et al. (2017b) have assessed the competitive effects of horizontal mergers, while Ouattara (2015) and Méndez-Naya (2008 and 2011) have examined mergers in a mixed oligopoly. Considering mergers in mixed oligopolies, Méndez-Naya (2008) has examined merger profitability in a Cournot oligopoly model and concluded that the privatisation degree and the number of outside firms of the merger have an effect on the merger sustainability (which is in line with the results of Bisceglia et al. (2021), as described further in subchapter 3.2.2), however, there are profitable advantages also for merging firms in mergers that do not lead to a monopoly. In addition, Méndez-Naya (2011) has concluded that a merger between a public firm and a private firm

could alter the game from Stackelberg competition to Cournot competition, while a merger between two private firms would not change the timing of the game in a similar way. Ouattara (2015), instead, has examined the incentives to merge in a mixed oligopoly situation including two private firms and a public firm, which are dependent on the size of the technological gap between the public and private operators.

3.2.2 Evaluation of Horizontal Mergers in Mixed Oligopoly Health Care Markets

Competition authority analysis of sectors in which the interaction between private and public entities is a fundamental feature (such as health care and education) has been an unstudied field in economics for a long time, although the importance of such interplay has increased in recent years, as we have also seen in Finland in the health care sector, and will further increase in the foreseeable future, when, for example, sectors that have traditionally been dominated by the public sector are increasingly privatised (De Fraja, 2009). Recently, for example Bisceglia et al. (2021) and De Fraja (2009) have raised the interactions between the public and private sector as well as the importance thereof in their studies. Both Bisceglia et al. (2021) and De Fraja (2009) emphasise the significance of understanding the objectives and functions of different market agents: the ownership or background of the agent affects its behaviour, which in turn leads to different behaviours by the other market agents, and ultimately, different effects on other firms or agents in the industry in question. As Bisceglia et al. (2021) have specifically analysed the (consumer) welfare effects of mergers between private health care sector firms in a setting where both private and public providers exist, in the below, the theory models follow their analysis. Thus, although all the below sections do not include references, the whole theory model below is based on Bisceglia et al. (2021).

Thus, the below examines how mergers in mixed oligopolies should be evaluated according to the microeconomic theory and what is the impact of public providers' objectives on the merger evaluation. Furthermore, the subchapter 3.2.1 above shows

that in a private-only oligopoly setting, mergers without any efficiencies are seldom welfare-enhancing, however, also in such set-ups, mergers might be welfare-enhancing, if the efficiencies are sufficiently large. The below, instead, shows that the efficiencies possibly required in a mixed oligopoly setting are less significant, if non-existent, than in a private-only oligopoly.

Bisceglia et al. (2021) have assessed the competitive effects of a merger between two private health care operators (P_i, with $i = 1, 2$) on prices, quality, and consumer surplus (i.e., welfare) in a mixed oligopoly situation considering a circular-city model by Salop[23], where patients and health care providers (public provider, P_0, at 0, P_1 at 1/3 and P_2 at 2/3) are placed consistently around the perimeter of a circle (see also Brekke et al., 2017a and 2017b; Bisceglia et al., 2018):

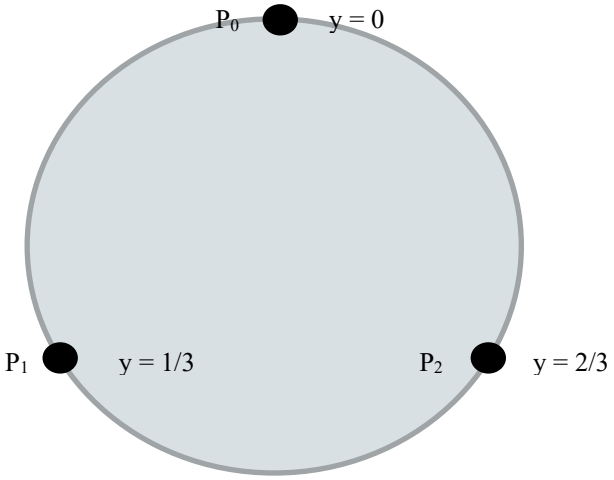

Figure 1: Circular-city model by Salop (1979) and Bisceglia et al. (2021).

The framework and assumptions of the model include, inter alia, that consumers always purchase a health care plan, which requires that consumers' gross valuation (v) of the basic service with quality $x_i = 0$ is sufficiently high. In addition, the model assumes that health care services are adequately (and symmetrically between private and public health care service providers) differentiated. Furthermore, the model assumes that the merger creates cost synergies. Additionally, the game's timing is standard and the solution results in a Subgame Perfect Nash Equilibrium (SPNE). In the analysis, two market formations are examined: one without the merger and the

[23] For further reference, see Salop (1979), however, in summary, Salop's circular city model assesses consumers' preferences in relation to the geographic location. Salop's model allows consumers to choose between heterogenous products.

other one after the merger. As the private operators are profit-maximising, in the pre-merger situation, they will solve the following problem:

$$\max_{p_i \geq 0, x_i \geq 0} D_i(\cdot)(p_i - c) - \psi(x_i),$$

whereas in the situation where the merger has been completed, the combined firm will solve the following problem:

$$\max_{p_i \geq 0, x_i \geq 0} \sum_{i=1,2} D_i(\cdot)(p_i - c^m) - \sum_{i=1,2} \psi(x_i)\,.$$

In the above problems, *D* refers to demand, *p* refers to price, *c* refers to unit cost, $\psi(x_i)$ refers to the cost of providing quality x_i, and c^m stands for the unit costs of the merged firm (as the merger is assumed to create synergies).

Bisceglia et al. (2021) have analysed the effects of a merger both in a situation, where the public sector provider's prices and quality are regulated (i.e., exogenous), and, where the public sector provider is only semi-altruistic and able to alter its behaviour to respond to the private operators' performance (i.e., endogenous). In the below, focus is on the less complex model with an exogenous behaviour of the public service provider, which is then complemented with conclusions from the more complex model with an endogenous behaviour of the public service provider.

Hence, first, the situation with regulated prices (at marginal cost, where $p_0 = c$) and service quality ($x_0 \geq 0$) is examined by Bisceglia et al. (2021). In the first situation, the quality of the public health care provider is achieved with the help of subsidies (*G*) from the nation's public budget. Due to competition neutrality reasons[24], in the model, the public health care sector provider may not price its services below marginal cost. However, if the public health care provider were able to provide its services for free of charge, this would lead to even more significant pricing constraints on the private providers. In addition, for the model not to lead into crowding out and, hence, a situation where only the public sector provider remains on the market (as the case

[24] Also in Finland, the Competition Act (948/2011, as amended) includes provisions (Chapter 4) on ensuring the competitive neutrality and, thus, equal conditions for the business activities of the public and private sector. The FCCA may intervene in public sector firms' business activities or operating structure, if the public sector actor's behaviour, such as pricing below costs, threatens to force private actors out of the market. The regulation applies only to economic activities, as defined in the EU regulation. For further reference, please refer to MEAE (2021).

would be in a simple Cournot oligopoly model, as noted in subchapter 3.1.2 above), a sufficiently low regulated quality ($x_0 \leq \frac{1}{6}$) is assumed. For similar reasons, restrictions ($e \leq \frac{8t+6x_0-3}{6c}$) apply also to the level of efficiencies (e) created by the merger in order to guarantee that also the public provider will remain on the market in the post-merger situation.

Based on Bisceglia et al. (2021), the quality and pricing of the private sector operators in the pre-merger situation can be examined by solving the first-order conditions ('FOC') with respect x_i (quality) and p_i (price):

$$x^* \triangleq \frac{2t - 3x_0}{3(3t-1)} \qquad p^* \triangleq c + tx^*.$$

With reference to the above, x^* and p^* decrease in x_0 and increase in t (referring to differentiation), in addition to which also p^* increases in c (i.e., unit cost). As p^* decreases in x_0, it is possible to draw the conclusion that the higher quality of the public health care sector provider leads to lower private health care sector prices.

In the post-merger situation, one private health care operator with a multiple product offering competes with the public health care provider. By solving the first-order conditions of the above maximisation problem taking into account the cost synergies created by the merger, it is possible to examine the prices charged (p^m) and quality provided (x^m) by the merged entity:

$$x^m \triangleq \frac{2t + 3(ce - x_0)}{3(4t-1)} \qquad p^m \triangleq c^m + 2tx^m.$$

The above means that the merger and the efficiencies created thereby increase the quality of the combined private health care service provider (x^m) due to reduced marginal costs, increased profit margins and, thus, increased return on the quality investment. The standard also leads to decreasing prices of private health care services taking into account the efficiency level created by the merger.

When considering the consumer welfare effects of the merger between the private health care providers, it is possible to note that the behaviour of the private sector provider alters between the pre- and post-merger situations although the policy that the public sector provider follows remains unchanged. The efficiencies (e) resulting from

the merger must be sufficiently high (i.e., that the price charged by the private provider are lower and quality higher than in the pre-merger situation) for the merger to be consumer welfare-enhancing. This can be formalised with the following condition:

$$e \geq \underline{e} \triangleq t\frac{2t - 3x_0}{3c(3t-1)},$$
$$with\ \underline{e} \leq 1\ for$$
$$x_0 \geq \underline{x_0} \triangleq max\left\{0, \frac{2t^2 - 3c(3t-1)}{t}\right\}.$$

The above means that the mixed oligopoly merger is consumer welfare-enhancing when $e \geq \underline{e}$. Such an effect is even greater, when services are more differentiated (i.e., t is higher), the public health care is of higher quality, and the public sector provider becomes less efficient than the combined company in relative terms. The public sector operator's quality must also be sufficiently high (in other words, that it receives significant subsidies) for the merger to become welfare-enhancing.

In comparison, on a market including only profit-maximising firms, the merger would increase consumer surplus only in case $e \geq \frac{t}{3c}\ and\ t$[25] $\leq 3c$. The level of required efficiencies (e) is, thus, higher in a private-only market. The reason for this is that if the public sector provider has other than purely profit-maximising objectives, in relative terms, the combined private sector operator continues to face a more significant competitive constraint and be required to pass on a larger share of its efficiencies to consumers to diminish its losses than it would be required in a private-only setting.

In the alternative, endogenous, case, the public sector health care provider can adjust its pricing and quality behaviour to best reply to the merged entity's strategies. This case assumes that the public sector provider is semi-altruistic and, thus, maximises a weighted sum of returns and consumer surplus (in addition to Bisceglia et al. (2021), see Brekke et al. (2017b) and Siciliani et al. (2013)), which can be formalised as follows:

$$\max_{p_0 \geq 0, x_0 \geq 0} D_0(\cdot)(p_0 - c) - \psi(x_0) + \beta CS(\cdot).$$

[25] t refers to the level of differentiation.

In the maximisation problem above, D continues to stand for demand, p to price, c to unit cost, and $\psi(x_0)$ to the cost of providing quality x_0. $CS(\cdot)$, instead, refers to consumer surplus and $\beta \geq 0$ to the level of altruism of the public health care provider. In the post-merger situation with a semi-altruistic public provider, the merger is consumer welfare-enhancing if (see in more detail in Bisceglia et al., 2021):

$$e \geq \underline{e_\beta} \triangleq \frac{t\big((5-3\beta)t-3\big)}{3c((5-2\beta)t-3}.$$

Thus, according to Bisceglia et al. (2021), the level of efficiencies and the degree of altruism of the public health care provider have an effect on the post-merger quality and prices on the market and, consequently, the consumer welfare impact of the merger. If the degree of altruism (β) of the public provider is small, the efficiencies (e) must be significant as the behaviour of the public health care service provider resembles the behaviour of a private profit-maximising firm. With large β, instead, the merger encourages the public health care provider to lower its prices, which in turn forces the merged entity to pass on a larger share of the synergies created by the merger to its customers in the form of lower prices and increased quality in order not to lose customers for the public provider. With large enough synergies, the customers may be better off in the post-merger situation when compared to the pre-merger situation.

The above results of Bisceglia et al. (2021) mean that the likely consumer effects of a merger between private health care providers are dependent, among other things, on the aims and objectives as well as pricing and quality constraints of the public health care operator. According to Bisceglia et al. (2021), these factors must be considered in competition authorities' merger investigations in order to avoid undue prohibitions of mergers and thus, consumer harm.

In addition to Bisceglia et al. (2021), for instance, Brekke et al. (2017a), Gaynor et al. (2000), Calem et al. (1999), and Gal-Or (1997 and 1999) have examined the effects of health care mergers theoretically. Brekke et al. (2017a) examined the effects of a health care sector merger in a spatial competition framework in which semi-altruistic hospitals choose quality and cost reduction effort. They conclude that the effect of a merger on quality is dependent on the degree of altruism as well as the efficiency of the cost control effort. Gaynor et al. (2000), instead, show that a competitive health insurance market leads to consumers being at least as well off under low and high

prices and, thus, no efficiency enhancing effects are needed by a merger. Moreover, Calem et al. (1999) suggest that health care sector mergers would have positive welfare effects in the sense that they would mitigate the excessive use of health care services. Lastly, Gal-Or (1997 and 1999) has assessed the relationship and bargaining between health care service and insurance providers as well as their incentives to merge in an imperfect competition model. In addition, a few studies are available assessing horizontal mergers in the health care insurance market (Chorniy et al. 2020; Dafny et al. 2019; Dafny et al. 2012; Dafny, 2010).

3.3 Related Literature

As noted above, health care markets, competition between private and public health care service providers, as well as horizontal mergers in the health care sector are all themes that have been widely unstudied earlier, but currently analysed by economists increasingly, as also the importance of the health care sector is ever-increasing and the consolidation pace in the sector is accelerating.

Despite the growth of the literature and increasing consolidation pace, in the earlier economic literature, little focus has, however, been placed on the specific question concerning the competition authority investigations and the authorities' investigatory measures in the health care sector. The available studies are mainly empirical in nature, assessing the effects of health care sector mergers on prices or volumes in the United States, in addition to which a few empirical studies are available from Finland, the Netherlands and the United Kingdom.[26] Thus, in summary, these studies, that are examined in more detail below, concentrate on the question whether a decision of a competition authority to approve a health care sector merger has been detrimental to competition. Furthermore, although the FCCA has reviewed several mergers in the

[26] See also Varkevisser and Schut (2009) for a comparison of health care merger control in the Netherlands, Germany, and the United States as well as Schmid and Varkevisser (2016) for a comparison between the Netherlands, Germany, and England.

health care sector in recent years, only a few economic studies analysing the Finnish competition authority decisions are available.

Berg and Holm (2021) have analysed certain recent Nordic mergers, including the FCCA's *Mehiläinen/Pihlajalinna*[27] case, in light of the judgement of the General Court of the European Union (the 'General Court') in the *Hutchison 3G UK ('Three')/Telefónica UK ('O2')*[28] case in 2020. In view of the judgement, their commentary, however, concentrates on the FCCA's analysis on whether the merging parties were particularly close competitors and the Illustrative Price Rise ('IPR') test used by the FCCA that was criticised in the General Court's judgement.

Furthermore, as part of their study concerning the empirical economic analysis in merger control on a general level in Finland, Hietamäki, Sääskilahti, and Väänänen (2020) examine the economic analysis and tools used by the FCCA in recent cases, including a merger between private oral health care providers, *Colosseum Dental Group/Med Group*, in 2018. A key question also in the FCCA review of the merger between Colosseum Dental Group and Med Group was whether private and public oral health care services belong to the same market, and the authors discuss briefly the FCCA's investigative measures on the basis of which the Authority concluded that substitutability between private and public oral health care is low. The authors do not, however, provide any further analysis on the question.

In addition, Nurminen (2021) has empirically assessed the effects of corporate acquisitions on competition and prices in the private health care markets in Finland, however, his analyses do not specifically examine the Authority outcomes nor their proportionality. Nurminen's results suggest that the health care sector acquisitions in 2008–2017 decreased competition and increased prices charged particularly by gynaecologists due to high switching costs (especially patient loyalty), however, the

[27] The Mehiläinen/Pihlajalinna case has also been assessed from a legal perspective by Pohjanpalo and Keränen in 2021. Their focus was on the merger control process and its specific features, including the disagreement between the notifying party (Mehiläinen) and the FCCA on the market definition and, thus, the competition between public and private health care providers.

[28] The Three/O2 case (C-376/20 P) is currently being reviewed by the European Union Court of Justice and, thus, the judgement of the General Court (in case T-399/16) is not yet final. The judgement of the General Court to annul the Commission's decision to prohibit a merger between the British telecoms companies has, however, been described as a landmark ruling, as the General Court clarified and raised the standard of proof that competition authorities need to meet in order to prove the significant impediments to competition following by a merger, especially on oligopolistic markets.

prices of primary care physicians increased less, in addition to which the study did not find any statistically significant effects for other physician specialties. Furthermore, Nurminen's results suggest that the acquisitions in 2008–2017 raised prices of blood tests significantly, however, the prices of these tests did not seem to have any meaningful impact on the customers' choice on the facility where the tests are conducted, but the customers tended to use the diagnostic services of the same health care firm in which their physician works. Nurminen's study do not find any statistically significant price effects for other diagnostic products (X-rays and MRIs).

Moving away from Finland, certain studies assessing the health care sector merger analysis tools in the United States are available, while outside the United States, the literature is clearly scarcer. Garmon (2017) has analysed the accuracy of health care sector merger analysis methods used by competition authorities and courts in the United States, the mainly private health care system of which largely differs from the Finnish system[29]. In his analysis, Garmon (2017) examines health care sector merger screening tools empirically with pre- and post-merger price data in North Carolina between 1997–2001 and 2007–2012. Garmon (2017) concludes that the recent investigative methods (especially, diversion ratios, WTP, and LOCI) are better in capturing the possible price effects of mergers than the traditional methods related to market definition and measuring concentration levels. However, he also highlights the need for more robust models and better data to estimate the possible post-merger price changes more accurately.

In the United States, also otherwise, several retrospective empiric analyses (i.e., reduced form analyses) of horizontal health care mergers have been conducted especially following the Federal Trade Commission's ('FTC') Hospital Merger Retrospective Project in 2002. These empirical studies have mainly been conducted using differences-in-differences estimates on the reviewed mergers' price impact (Haas-Wilson and Vita, 2011; Ashenfelter et al., 2011). Interestingly, as part of this Hospital Merger Retrospective Project, Haas-Wilson and Garmon (2011) and Tenn (2011) find based on empirical evidence that mergers between not-for-profit health

[29] In 2010, the share of public financing in the US health care system was 47.4%, whereas the share of public supply was only 24.5% (Sloan and Chee-Ruey, 2016). However, it is noteworthy that based on OECD data (2021), the share of public financing has risen in the United States in recent years and was already 82.7% in 2019.

care companies are not immune for possible anticompetitive effects, as successfully argued in many litigated merger cases (see also Gaynor and Town, 2011). Similar conclusions have also been reached by Gaynor and Vogt (2003) as well as Vita and Sacher (2001) earlier. Furthermore, Vogt and Town (2006) have surveyed the empirical studies on the health care sector consolidation, and their summary of the earlier studies suggest that prices have been increased by at least five per cent because of the health care sector consolidation in the 1990s. A few studies assessing the impact of health care sector mergers are available also from the Netherlands (ACM, 2017 and Kemp et al., 2012).

Despite the similarities with the above studies and this thesis, none of the above studies concentrate on the exact same research questions that are assessed in this thesis, i.e., competition authorities' merger investigations in situations where both private and public health care actors are present.

4 Method and Data

4.1 Research Method

Since the late nineteenth century, the key economic concepts, such as market power and competition, have been focal in antitrust and competition laws globally. Over the past few decades, in the footsteps of the Chicago School and the Nobel prize laureate Ronald Coase's studies and influence, the role of economics in competition law and enforcement has proliferated (Kaplow and Shapiro, 2007; Neven, 2006). Hence, competition law and policy are areas in which it is natural that law and economics intersect, and that microeconomic analysis of the legal aspects and problems is conducted. Competition law is also an area of law, where the exploitation of economics has exceptionally been considered uncontroversial by both academic economists and lawyers (Posner, 1975). Some authors have even argued that law, in general, is

included in the most significant areas of applied economics, and its importance is ever-increasing both in the United States and Europe (Salzberger, 2007).

The microeconomic aspects of (competition) law may be analysed both quantitatively and qualitatively, however, as the field of law and economics is relatively young, no clearly defined and generalised research methods have been created (Tyc and Schneider, 2019). While rigorous quantitative analysis is considered as a standard in some circumstances, in competition authorities' enforcement practice as well as academic research, decision-making and analysis may also be based on qualitative evidence, for instance, related to the market definition or competitive effects of a merger provided that the evidence is robust and appropriate under the theory being examined. (Aron and Tenn, 2019; Filistrucchi, 2018) Furthermore, in academic research, the field of law and economics may include both normative and positive analysis of regulation, in addition to which some researchers also use descriptive analysis. While positive economics seeks to find causal connections and predictions on the effects between various variables, normative economic analysis[30] seeks to describe the desirable legal rules or arrangements and is helpful in assessing court and authority decisions. (Muntean Jemna, 2016; Salzberger, 2007) In this respect, the research questions of this master's thesis combine both positive and normative elements.

The main distinctive feature between quantitative and qualitative research is the presence and absence of figures, by which it is meant that quantitative analysis is focused on the collection and measuring of numerical data, whereas qualitative analysis concentrates on the collection and analysis of non-numerical data, such as documents (Muntean Jemna, 2016; Bryman, 2012). In this respect, this master's thesis is clearly of qualitative nature, as the underlying data of interest are the FCCA's (verbal) merger decisions in the health care sector in Finland between 2011 and 2021.

In addition to the underlying data, quantitative and qualitative research differ in their typical research questions. While quantitative economic analysis seeks to respond to questions such as how many, how often, or to what extent, qualitative economic analysis is usually engaged in questions, such as why, how, and in which way

[30] As an example of normative law and economics academic Ronald Coase can be mentioned, while Richard Posner represents the positive school.

(Radović-Marković and Alecchi, 2019). Considering the research questions of this thesis, this study could be described to contain elements from both quantitative and qualitative research. On the one hand, the first research question seeks to find causalities between the FCCA's analysis on the mixed oligopoly structure and the end results of the merger cases, which is more characteristic for quantitative analysis. However, many qualitative research also includes a certain amount of quantification, in addition to which nowadays, it is more general to draw causal inferences from qualitative data (see e.g., Jensen, 2021; Plümper et al., 2019; Bryman, 2012). On the other hand, the second research question is clearly of qualitative nature, as it seeks to understand how the FCCA has assessed the presence and drivers of the public health care providers in its merger decisions. In addition, in qualitative research, the aim is to answer the research questions verbally on the basis of the content of the documents of interest, which points towards the qualitative nature of this thesis (Sarajärvi and Tuomi, 2018).

In academic research, several reasons exist for choosing the qualitative approach, including the nature of the research question(s), the aim to guide the practical work of experts, as well as the aim to create new and thorough information and understanding (Radović-Marković and Alecchi, 2019). In addition, the complex nature of a phenomenon that requires understanding, for instance, of competition or the behaviour of an institution usually points towards choosing the qualitative research method (Muntean Jemna, 2016). In this thesis, the nature of the research question that seeks to analyse the competition authorities' decision-making in health care sector mergers based on historical competition authority decisions, is such that may be better analysed with qualitative rather than quantitative methods due to the nature of the underlying (verbal) data. In addition, as the research question is widely unassessed, qualitative research provides valuable and in-depth knowledge on the topic, of which importance is constantly increasing in practical circumstances, not least due to the ongoing social and health care reform in Finland. The results of this study may also be exploited in further analysis on the subject matter. Furthermore, as practitioners of competition economics and lawyers constantly face questions on the competition between public and private health care in their day-to-day work, this master's thesis may provide useful guidance on the future work of practitioners of competition economists and lawyers.

Similar to quantitative methods, also qualitative methods should be as explicit and concise as possible (Radović-Marković and Alecchi, 2019; Greenhalgh and Taylor, 1997). The basic and most prevalent analysis method in qualitative research, which is also used in this thesis, is content analysis that is a method to systematically analyse texts and make empirical observations from data. To be more exact, the content analysis method used in this master's thesis is theory-based content analysis, and the findings of the master's thesis are analysed and interpreted against the explicitly defined theoretical framework. In line with the Chicago and Yale schools' approaches that take the microeconomic models and framework as the basis for analysing different legal questions, in this master's thesis, the underlying theory is based on microeconomic theory, including its concept on consumer welfare. (Sarajärvi and Tuomi, 2018; Bryman, 2012; Hall and Wright, 2008; Salzberger, 2007) It is also worth noting that content analysis has previously been used to analyse legal documentation (Hall and Steiner, 2020; Hall and Wright, 2008).

Documents as a source for analysis in social sciences may be personal or official documents, and the latter may further be divided into private and state documents (Bryman, 2012). In this case, the content of interest to be analysed are official state documents. To be more explicit, the source documents for the analysis of this thesis are the FCCA's publicly available merger decisions in health care sector mergers between 2011 and 2021. As the thesis examines existing and publicly available official competition authority documents that are not produced on the request of the author, the objectivity of the data is well retained. In addition, the source documents are authentic and of unquestionable origin, credible, comprehensive, and representative in the sense that the documents are typical of their kind. Indeed, the significance of state documentation and official reports for social and economic researchers is well-established. (Johnson and Reynolds, 2005; Bryman, 2012) The data in the meaning of the actual research of this thesis is described in more detail in subchapter 4.2 below.

As all analysis methods, also qualitative research methods have their own shortcomings. The shortcomings of which qualitative research methods have typically been criticised when compared to quantitative techniques are their lack of accuracy or reliability as well as validity (Muntean Jemna, 2016; Bryman, 2012). Pertaining to the trustworthiness of an analysis and its methods, researchers have suggested to assess

and improve the reliability of a qualitative study against the following parameters: credibility, transferability, dependability, and confirmability. Firstly, *credibility* can be established by different means, such as triangulation, in which emphasis is on methods of investigation as well as sources of data. With regard to this master's thesis, as discussed above, while this thesis predominantly is a qualitative study, the research questions also combine elements that are exploited in many quantitative studies. In addition, above, the merits of the underlying data of this master's thesis have been discussed in order to answer to the general criticism of qualitative research. In addition, the credibility of the analysis is enhanced by documenting the sources of statements presented in the thesis carefully and including direct quotations (i.e., unofficial translations of the quotations) of the decisions, where necessary.

Secondly, *transferability* refers to the transferability of the study to different contexts. While the legal and health care systems of different jurisdictions vary, for instance, in the EU Member States, competition regulation has been harmonised to a large extent. In addition, similarities in the health care systems of different nations can be found. Therefore, while the empirical results of studies assessing the decision-making in different countries may – and undoubtedly will – vary, this study could be conducted also in other jurisdictions, especially in the EU and its Member States. Thirdly, *dependability* refers to ensuring that all phases of the research project are fully recorded. In this master's thesis, dependability is ensured by describing the different components (method, data collection, analysis, and discussion) of the study comprehensively and fairly in the course of this thesis. Lastly, *confirmability* refers to the requirement of acting in good faith and without clear influence of personal values, when conducting qualitative research. While social sciences and economics in general are never fully free from the influence of the author's view of world, in this master's thesis, the comprehensive assessment of the underlying theories and earlier research provides a strong and credibility-enhancing framework for this study. Furthermore, as noted above, careful documentation and the inclusion of direct quotations, where necessary, enhances the confirmability of the study. Similarly, on the basis of this study, it is not possible to provide absolute policy recommendations or conclude whether the FCCA has in general decided correctly on the mergers, but rather, the purpose of this study is to provide an in-depth overview of the causalities of the

FCCA's decision-making as well as the FCCA's analyses behind these decisions (Sarajärvi and Tuomi, 2018; Bryman, 2012)

4.2 Data

The data used in this analysis are collected from the website[31] of the FCCA, which includes public versions[32] of all the merger decisions issued by the FCCA[33] between 1999[34] and 2022 so far. To limit the dataset to be analysed to a meaningful level, the merger decisions used in this study are issued during the past 10 years, i.e., between 2011 and 2021. Such timeframe is sensible also in the sense that the FCCA's substantive merger control assessment test (the so-called SIEC test, see subchapter 2.2.2) has been applied since the second half of 2011, and, thus, the dataset to be reviewed comprise mainly decisions under the current regime. Despite limiting the dataset, however, a 10-year timeframe provides with a comprehensive overview of the FCCA's decision-making in merger cases in the health care sector.

The decisions used in the analysis contain all horizontal health care sector mergers (i.e., mergers between competitors) scrutinised by the FCCA between 2011 and 2021. To provide as comprehensive data set as possible, under the definition of health care, also merger decisions concerning dental and oral health care as well as social care are included. The merger decisions concerning other than horizontal mergers (i.e., vertical mergers or mergers without any links between the parties, such as private equity mergers) are not included in the data set due to the economic theories on the competitive effects focusing on horizontal mergers (see subchapters 3.2.1 and 3.2.2),

[31] For further reference, please visit: https://arkisto.kkv.fi/ratkaisut-ja-julkaisut/kilpailuasiat/yrityskaupparatkaisut/.
[32] From public versions, certain information may have been redacted as trade secrets.
[33] The Finnish Competition Authority was merged with the Finnish Consumer Authority in 2013 after which the authority has been called as the Finnish Competition and Consumer Authority ('FCCA'). In this thesis, for the sake of clarity, the abbreviation FCCA also refers to the Finnish Competition Authority prior to the merger in 2013.
[34] Please note that the merger regime entered into force on 1 October 1998 and, thus, the FCCA's website includes all the merger decisions issued after the regime entered into force.

as traditionally, mergers between competitors have considered to contain the highest potential for detrimental effects on consumer welfare.[35]

The dataset includes all the FCCA's final merger decisions regardless of the end result or the phase in which the FCCA has concluded the decision. In other words, the dataset includes all unconditional approvals, conditional approvals, as well as prohibition proposals issued between 2011 and 2021. Similarly, the dataset includes all decisions, irrespective of whether they have been concluded in phase I or phase II (for further details of the Finnish merger control process, see subchapter 2.2.2).

In the below, all (in total 12) decisions included in the dataset are listed in a chronological order. The decisions are grouped in unconditional approvals, conditional approvals, and prohibition proposals. The segmentation corresponds with the segmentation used on the FCCA's website, where the decisions are segmented into unconditional approvals, conditional approvals, and other decisions. In the FCCA's segmentation, in addition to prohibition proposals, other decisions also include, for instance, decisions on the opening of in-depth reviews. However, in this thesis, it is reasonable to concentrate on the final decisions of the FCCA and, thus, such interim decisions are not included in the review. The majority of the FCCA's final decisions are unconditional approvals. The FCCA has issued in total nine unconditional approvals, two conditional approvals, and one prohibition proposal between 2011 and 2021.

In table 1 below, all unconditional merger decisions of the FCCA in the health care sector between 2011 and 2021 are listed. Interestingly, the in-depth phase II investigations concentrate on the years 2017 and 2018:

Table 1: Unconditional merger approvals in the health care sector (2011–2021)

Date	Party 1	Party 2	Approval phase

[35] Please note, however, that the number of non-horizontal merger decisions during the period between 2011 and 2021 has been limited. In total, only four merger decisions (two social care, one health care, and one oral health care decision) were excluded from the analysis on this basis. These decisions include *HgCapital LLP / Mainio Vire Oy* (2011), *CapMan Oyj (Renideo Holding Oy) / Oral Hammaslääkärit Oyj* (2014), *Humana AB / Arjessa Oy* (2016), and *Tradeka-Yhtiöt Oy / Med Group Holding Oy* (2018).

16 December 2011	Terveystalo Healthcare Oy	Lääkäriasema Pulssi Oy	Phase I
5 January 2015	Mehiläinen Oy	Mediverkko Yhtymä Oy	Phase I
6 July 2016	Mehiläinen Oy	Vire Care Oy	Phase I
20 January 2017	Esperi Care Oy	MediVida Oy	Phase I
23 March 2017	Terveystalo Healthcare Oy	Diacor Terveyspalvelut Oy	Phase II
20 October 2017	Attendo Intressenter AB	Mi-Hoiva Oy	Phase II
14 December 2018	Terveystalo Healthcare Oy	Attendo Terveyspalvelut Oy	(Extended) Phase II
8 April 2019	Humana AB	Coronaria Hoiva Oy	Phase I
4 November 2021	Mehiläinen Hoivapalvelut Oy	Vetrea Terveys Oy	Phase I

As is discernible from the table 2 below, the FCCA has issued two conditional merger decisions in the health care sector between 2011 and 2021. These land quite equally within the timeframe (i.e., 2011 and 2018):

Table 2: Conditional merger approvals in the health care sector (2011–2021)

Date	Party 1	Party 2	Approval Phase
11 May 2011	Terveystalo Healthcare Oy	ODL Terveys Oy	Phase II
13 July 2018	Colosseum Dental Group AS	Med Group Hammaslääkärit Oy	Phase II

As visible from the table 3 below, the FCCA has also issued one prohibition proposal in the health care sector. The prohibition proposal has been issued in 2020:

Table 3: Prohibition proposals in the health care sector (2011–2021)

Date	Party 1	Party 2	Prohibition Phase
29 September 2020	Mehiläinen Yhtiöt Oy	Pihlajalinna Oyj	(Extended) Phase II

As discernible from the tables above, the FCCA has approved the majority (75 per cent) of the cases unconditionally in the health care sector in Finland between 2011 and 2021. Only one case (approximately 8 per cent) has been prohibited, and two cases (approximately 17 per cent) have been approved with conditions (i.e., divestments).

The full texts of the above merger decisions form the content analysed in this master's thesis. Although the merger decisions are reviewed in their entirety during the analysis, due to the research questions, the focus is on the sections of the decisions that concern the potential competition between public and private health care. The extent and length of the FCCA's health care merger decisions between 2011–2021 vary between 6–380 pages.

Lastly, it can be noted that the first research question concerns the potential positive correlation between the size of the merging firms and, thus, cases as well as the FCCA considering the presence of the public sector health care providers. As a measure of the size of a firm, turnover, and more explicitly, the Finnish turnover is used. Turnover can be considered to be a relevant indicator for the size of a company, not least because the thresholds for the Finnish merger control procedure are also based on turnovers (see subchapter 2.2.2). The Finnish turnover is a relevant measure, as the health care market could be described to be national, at the largest, as seeking for health care outside the nation's borders is still an exception. The turnover figures used in the analysis below are mainly based on the FCCA's decisions above. In some decisions, the turnover figures are provided with ranges. In these cases, these approximate figures are used. However, in some decisions, the turnovers are redacted in full. In these cases, as an alternative source for turnover information, the companies' annual reports and press releases related to the merger cases have been used. However, annual reports and press releases are only used as a secondary source, as these do not always provide information on the Finnish turnover, which is of interest in this thesis, of the merging

parties. Despite the source of the figures, the latest (audited) turnover information available on the date of the decision (usually from the preceding financial year) are used.

5 FCCA's Analysis in Recent Health Care Sector Mergers

5.1 Results

5.1.1 Mixed Oligopoly Structure, Case Size, and End Result

This subchapter examines whether a positive correlation exists between the size of the merging firms and, consequently, the size of the cases as well as the FCCA considering the mixed oligopoly structure of the health care sector. Furthermore, this subchapter scrutinises whether a positive correlation exists between the FCCA considering the mixed oligopoly structure and the positive end result (i.e., approval) of a merger case.

Prior to examining the results in more detail, it can be noted that all the decisions included in the dataset refer, at least, to some extent to the mixed oligopoly structure and, thus, competition between public and private health care providers in Finland. Hence, although the conclusions on the actual market situation differ between the cases, this is a clearly relevant question in the Finnish health care sector and consequently, in the FCCA's merger control analysis.

To initiate the assessment of whether a positive correlation exists between the size of the firms and, thus, cases as well as the FCCA considering the mixed oligopoly structure of the health care markets, in the below, the merger cases under review are listed based on the combined turnovers of the merging firms. In addition, to provide a first glance on the research questions, the below table provides short 'yes', 'no',

'partly[36]' or 'unclear[37]' answers to the question of whether the FCCA has considered the mixed oligopoly structure in its decision-making. Moreover, the below table summarises the end results (i.e., unconditional approval, conditional approval, prohibition) of each case. After the first glance, a more in-depth analysis of whether and in which kind of cases the FCCA has considered the presence of the public sector health care providers and such consideration's impact on the end results of the cases, is conducted.

Table 4: List of the FCCA's merger decisions in the health care sector based on the combined size of the firms (2011–2021)

Decision year	Parties	Combined turnover	Mixed oligopoly structure	End result
2020	Mehiläinen Yhtiöt Oy / Pihlajalinna Oyj	EUR 1,404 million	No/unclear	Prohibition[38]
2021	Mehiläinen Hoivapalvelut Oy / Vetrea Terveys Oy	EUR 1,188 million *(EUR 144 million, when considering only Mehiläinen's social care services)*	Yes	Approval
2018	Terveystalo Healthcare Oy / Attendo Terveyspalvelut Oy	EUR 925 million	No/partly	Approval
2016	Mehiläinen Oy / Vire Care Oy	EUR 592 million	Yes	Approval
2017	Attendo Intressenter AB / Mi-Hoiva Oy	EUR 543 million	Partly	Approval
2017	Terveystalo Healthcare Oy /	EUR 402 million	Partly	Approval

[36] 'Partly' refers mainly to a situation in which the FCCA has considered the mixed oligopoly structure in some market segments considered in the decision, however, not in all segments.
[37] 'Unclear' refers to a situation where it is not possible to interpret based on the decision whether the FCCA has taken the mixed oligopoly structure into account or not.
[38] The Market Court never decided on the case and, hence, the prohibition refers to the FCCA's proposal to prohibit the merger.

	Diacor Terveyspalvelut Oy			
2015	Mehiläinen Oy / Mediverkko Yhtymä Oy	EUR 345–400 million	Unclear	Approval
2011	Terveystalo Healthcare Oy / Lääkäriasema Pulssi Oy	EUR 253 million	Partly	Approval
2011	Terveystalo Healthcare Oy / ODL Terveys Oy	EUR 250 million	Partly	Conditional approval
2017	Esperi Care Oy / MediVida Oy	EUR 147 million	Yes	Approval
2018	Colosseum Dental Group AS / Med Group Hammaslääkärit Oy	EUR 118–128 million	No/partly	Conditional approval
2019	Humana AB / Coronaria Hoiva Oy	EUR 102 million	Yes	Approval

As can be seen from the table above, no clear correlations between the case size and the FCCA considering the competition between the public and private health care can be concluded. On the one hand, in the largest case, which is the proposed merger between Mehiläinen and Pihlajalinna in 2020, the FCCA did not consider the health care markets as mixed oligopolies and finished with proposing the prohibition of the merger to the Market Court (which did not have the chance to decide conclusively on the case due to the parties abandoning the merger before the Court decision). However, also in this case, the FCCA did not clearly oppose on considering the social care markets as mixed oligopolies, in addition to which in some market segments, the FCCA took into account publicly owned hospital companies. On the other hand, in the second largest case, between Mehiläinen and Vetrea Terveys, the FCCA considered the mixed oligopoly structure. However, it must be noted that based on the reading of the decisions, the latter decision considered solely social care services, and only a fraction of Mehiläinen's turnover was generated from these services, whereas in the

first-mentioned case, the merging parties' services overlapped more extensively in the health care services.

Similarly, no clear correlation between the FCCA considering the mixed oligopoly structure and a positive end result (i.e., unconditional approval) is discernible from the table above, as the FCCA has also approved such mergers in which it has considered the mixed oligopoly structure solely partly (i.e., only related to certain sectors within the health care market). However, from the above, a clear correlation between the FCCA not considering (or only partly considering) the mixed oligopoly structure as well as a negative decision (i.e., prohibition or conditional approval) can be identified, as in all three cases in which the FCCA has decided to require conditions or prohibit the merger in its entirety, the FCCA has not considered (or has considered only partly) the mixed oligopoly structure of the health care markets. Usually, the sectors in which the FCCA has identified concerns have not been considered as mixed oligopolies by the FCCA.

The assessment of the presence and objectives of the public health care providers as well as reasoning of the FCCA are scrutinised in more detail in subchapter 5.1.2 below. However, in this subchapter, it is relevant to contextualise the above results – and especially, the correlation between considering the mixed oligopoly structure and the end result of the case – to provide further understanding on the research questions. For this purpose, the actual wordings of the FCCA's decisions concerning the mixed oligopoly structure of the social and health care markets are assessed. The wordings used in the thesis are unofficial translations from Finnish to English by the author of the thesis.

In the decisions included in the dataset, the FCCA has assessed several narrower market segmentations within the social and health care market and have come to different conclusions on the market structure of these segments. This explains that within one decision, the FCCA might have considered that only certain narrower segments included in the business scope of the merging parties can be characterised as mixed oligopolies, while others not. Within the *health care sector*, the FCCA has used the following segmentations for different health care services: i) physician and support

services provided to private customers[39]; ii) occupational health services[40]; iii) hospital services[41]; iv) infertility treatment services[42]; v) outsourcing of health care and in-bought services[43]; and vi) insurance company services[44]. In the decisions concerning the health care sector, the FCCA has used the following wordings to indicate its decision on whether to consider the mixed oligopoly structure of the health care sector or not:

Table 5: Wordings related to mixed oligopolies in the health care sector

Case	Wordings
Mehiläinen Yhtiöt Oy / Pihlajalinna Oyj (2020)	*"The Authority's investigations unequivocally indicate that private medical centres form a separate relevant market."* (para. 238) *"The FCCA considers that the relevant product market in the present case is formed by occupational health care services provided by private service providers."* (para. 426) *"- - the FCCA considers that private hospital services form a separate relevant product market."* (para. 636) *"- - the Authority considers that private infertility treatment clinics form an own market, separate from the services provided by the public sector."* (para. 734) *"According to the Authority's view, neither do the public sector operators belong to the same relevant [insurance company services] market."* (para. 988)
Terveystalo Healthcare Oy / Attendo Terveyspalvelut Oy (2018)	*"The FCCA has considered, inter alia, in its Terveystalo/Diacor decision that private and public physician services do not belong to the same relevant product markets. - - the Authority considers that defining the relevant product market is not necessary in connection with this transaction."* (para. 20) *"- - the Authority considers that defining the relevant product market for health care services*

[39] Please refer to the following cases: *Mehiläinen Yhtiöt Oy / Pihlajalinna Oyj* (2020), *Terveystalo Healthcare Oy / Attendo Terveyspalvelut Oy* (2018), *Terveystalo Healthcare Oy / Diacor terveyspalvelut Oy* (2017), and *Mehiläinen Oy / Mediverkko Yhtymä Oy* (2015).
[40] Please refer to the following cases: *Mehiläinen Yhtiöt Oy / Pihlajalinna Oyj* (2020), *Terveystalo Healthcare Oy / Attendo Terveyspalvelut Oy* (2018), *Terveystalo Healthcare Oy / Diacor terveyspalvelut Oy* (2017), *Mehiläinen Oy / Mediverkko Yhtymä Oy* (2015), and *Terveystalo Healthcare Oy / Lääkäriasema Pulssi Oy* (2011).
[41] Please refer to the following case: *Mehiläinen Yhtiöt Oy / Pihlajalinna Oyj* (2020).
[42] Please refer to the following case: *Mehiläinen Yhtiöt Oy / Pihlajalinna Oyj* (2020).
[43] Please refer to the following cases: *Mehiläinen Yhtiöt Oy / Pihlajalinna Oyj* (2020), *Terveystalo Healthcare Oy / Attendo Terveyspalvelut Oy* (2018), *Mehiläinen Oy / Mediverkko Yhtymä Oy* (2015), and *Terveystalo Healthcare Oy / Lääkäriasema Pulssi Oy* (2011).
[44] Please refer to the following cases: *Mehiläinen Yhtiöt Oy / Pihlajalinna Oyj* (2020), *Terveystalo Healthcare Oy / Attendo Terveyspalvelut Oy* (2018), *Terveystalo Healthcare Oy / Diacor terveyspalvelut Oy* (2017), and *Terveystalo Healthcare Oy / Lääkäriasema Pulssi Oy* (2011).

	paid by insurance companies is not necessary in this matter." (para. 30) *"Thus, including publicly owned service providers into the [occupational] health care market would have distorted the estimate of the competitive pressure on private service providers exercised by the public sector."* (para. 41)
Terveystalo Healthcare Oy / Diacor terveyspalvelut Oy (2017)	*"Municipal enterprises and primary care centres provide occupational health care services also especially for small and medium-sized local firms. Considering the supply for third parties, the FCCA considers that public service providers compete on the same markets with other service providers."* (para. 21) *"- - the FCCA estimates that private and public hospital services do not, in principle, belong to the same relevant product markets - -"* (para. 89) - - *"public and private sector have, however, converged to some extent in hospital services provided to private customers."* (para. 90) *"the Authority considers that private and public physician services do not belong the same relevant product markets."* (para. 93) *"the FCCA has stated in its earlier decisions that insurance companies purchase a significant amount of services from public operators. - - the market for insurance services has, however, changed after the earlier decisions. - - insurance companies' closer integration to health care markets has lessened the role of the public sector as a service provider on the market."* - - *"- - the FCCA considers that it is not necessary to define the insurance company services markets in detail in this case."* (para. 116)
Esperi Care Oy / MediVida Oy (2017)	*"The most important competitors of the parties to the transaction in physician services and rental doctors are Attendo Oy, Mehiläinen Oy, Coronaria Hoitoketju Oy / COR Group Oy, Mediradix Oy and Suomen Kotilääkäripalvelu Oy."* (p. 5) *"Based on the FCCA's assessment, the transaction does not lead to the significant impediment of effective competition, as several public, private, and third sector operators will remain on the market despite the transaction."* (p. 5)
Mehiläinen Oy / Mediverkko Yhtymä Oy (2015)	*"- - despite the transaction, in all of the above-mentioned services, several service providers exist."* (para. 29)
Terveystalo Healthcare Oy / Lääkäriasema Pulssi Oy (2011)	*"In its market definitions, the notifying party refers to the Competition Authority's merger decision of last spring in Terveystalo Healthcare Oy / ODL Terveys Oy - -"* (para. 7) *"According to the assessment of the Competition Authority, the definition of relevant product and geographic market may be left open, as the concentration does not lead to*

	significant competition problems with any possible market definition." (para. 17)
Terveystalo Healthcare Oy / ODL Terveys Oy (2011)	*"- - the occupational health care services provided by public operators and the occupational health care services provided by private operators belong to the same product market when considering the competitive effects of the concentration."* (para. 25) *"According to the Competition Authority's assessment, it is not essential to the outcome of the case to define the relevant product and geographic market for in-bought services in a precise manner - -"* (para. 57) *"The notifying party estimates that the Finnish market for insurance company services in 2009 was approximately EUR 100–120 million of which the market share of the parties was approximately [25–35]%, the share of public services was approximately [35–45]%, and the share of other private actors was approximately [25–35]%."* (para. 65) "*According to the assessment of the Competition Authority, the definition of relevant product and geographic market may be left open, as the concentration does not lead to competition problems in the market for insurance company services - -"* (para. 64) *"Thus, according to the Authority's assessment, private and public hospital services do not belong to the same relevant product market."* (para. 91) *"According to the Authority's assessment, private and public physician services do not belong to the same relevant product market, especially with regard to non-urgent treatment."* (para. 125)

The above wordings enable to conclude that the FCCA's position as regards the mixed oligopoly structure of different health care market segments has changed to some extent during the past 10 years. For instance, while the FCCA concluded in 2011 that the occupational health care service market would be considered as a mixed oligopoly (see *Terveystalo Healthcare Oy / ODL Terveys Oy* (2011)), after that, the FCCA's position has shifted, and in 2020, the FCCA concluded that the private and public occupational health care providers do not compete on the same market (see *Mehiläinen Yhtiöt Oy / Pihlajalinna Oyj* (2020)). During the review period, similar development can also be distinguished with regard to insurance company and, in fact, in the latest decision in 2020, the FCCA did not take into account the mixed oligopoly structure in any of the health care market segments (with the exception of publicly owned hospital companies). Although any clear correlations between the FCCA considering the mixed oligopoly structure and a positive end result are not visible based on the above, it can

be concluded that in the case in which the FCCA has prohibited the merger (*Mehiläinen Yhtiöt Oy / Pihlajalinna Oyj* (2020)), the FCCA has not taken into account the mixed oligopoly structure. Similarly, in the case *Terveystalo Healthcare Oy / ODL Terveys Oy* (2011), the FCCA required commitments in physician and hospital services. Neither in this case did the FCCA consider the mixed oligopoly structure with regard to physician and hospital services. Hence, based on the health care decisions, the FCCA not considering the mixed oligopoly structure could be considered to correlate with a negative end result. However, it must be borne in mind that the decisions and conclusions are always a combination of many factors and, thus, the unique background and features of the cases could shift the end results in one particular direction or another.

Within the *social care sector*, the different services and, thus, used market definitions include i) social care for the elderly[45] (in some cases, housing services for the elderly[46]), ii) substance abuse care[47], iii) mental health recovery care[48] (in some cases, housing services for mental health and substance abuse rehabilitators[49]), iv) child protection services[50], v) social services for disabled persons[51] (in some cases, housing services for disabled persons[52]), and vi) migration services[53]. In these cases, the FCCA has not concluded any definitive decisions on the market structures, however, based on the reading of the available decisions, in most of the cases, the FCCA has considered the different segments of social care to be characterised by mixed oligopolies. Such an interpretation can be concluded based on the wordings used by

[45] Please refer to the following cases: *Humana AB / Coronaria Hoiva Oy* (2019), *Attendo Intressenter AB / Mi-Hoiva Oy* (2017), *Esperi Care Oy / MediVida Oy* (2016), *Mehiläinen Oy / Vire Care Oy* (2016), and *Mehiläinen Oy / Mediverkko Yhtymä Oy* (2015).
[46] Please refer to the following case: *Mehiläinen Hoivapalvelut Oy / Vetrea Terveys Oy* (2021).
[47] Please refer to the following cases: *Humana AB / Coronaria Hoiva Oy* (2019), *Esperi Care Oy / MediVida Oy* (2016), and *Mehiläinen Oy / Vire Care Oy* (2016).
[48] Please refer to the following cases: *Humana AB / Coronaria Hoiva Oy* (2019), *Esperi Care Oy / MediVida Oy* (2016), and *Mehiläinen Oy / Vire Care Oy* (2016).
[49] Please refer to the following cases: *Mehiläinen Hoivapalvelut Oy / Vetrea Terveys Oy* (2021) and *Attendo Intressenter AB / Mi-Hoiva Oy* (2017).
[50] Please refer to the following cases: *Humana AB / Coronaria Hoiva Oy* (2019), *Esperi Care Oy / MediVida Oy* (2016), *Mehiläinen Oy / Vire Care Oy* (2016), and *Mehiläinen Oy / Mediverkko Yhtymä Oy* (2015).
[51] Please refer to the following cases: *Humana AB / Coronaria Hoiva Oy* (2019), *Esperi Care Oy / MediVida Oy* (2016), *Mehiläinen Oy / Vire Care Oy* (2016), and *Mehiläinen Oy / Mediverkko Yhtymä Oy* (2015).
[52] Please refer to the following cases: *Mehiläinen Hoivapalvelut Oy / Vetrea Terveys Oy* (2021) and *Attendo Intressenter AB / Mi-Hoiva Oy* (2017).
[53] Please refer to the following case: *Esperi Care Oy / MediVida Oy* (2016).

the FCCA, as referred below. From these, the interpretation is the vaguest *Attendo Intressenter AB / Mi-Hoiva Oy* (2017) in which the FCCA, on the hand, notes the starting point of private markets, whereas, on the other hand, also considers the public sector in the assessment of effects of the merger. In addition, a few decisions leave the FCCA's position to some extent unclear. The wordings are listed below, starting from the wordings pointing towards the mixed oligopoly structure and ending to the unclear wordings.

Table 6: Wordings related to mixed oligopolies in the social care sector

Case	Wordings
Mehiläinen Hoivapalvelut Oy / Vetrea Terveys Oy (2021)	*"According to the notifying party, both publicly and privately produced services can be included in the markets."* (pp. 1–2) *"The Authority has addressed the competitive effects of the transaction in line with the market definition proposed by the notifying party. However, the market definition may be left open - -"* (p. 2)
Esperi Care Oy / MediVida Oy (2017)	*"According to the notifying party, the market for social services covers both the own service production of the public sector and the service production of private and third sector."* (p. 2) "*Based on the FCCA's assessment, the transaction does not lead to the significant impediment of effective competition, as several public, private, and third sector operators will remain on the market despite the transaction."* (p. 5)
Mehiläinen Oy / Vire Care Oy (2016)	*"According to the notifying party, the market for social services covers both the own service production of the public sector and the service production of private and third sector."* (p. 2) *"Based on the FCCA's assessment, the transaction does not lead to the significant impediment of effective competition, as several public, private, and third sector operators will remain on the market despite the transaction."* (p. 7)
Attendo Intressenter AB / Mi-Hoiva Oy (2017)	*"As a starting point of its assessment, the Authority has considered the competitive situation between private social care providers, however, taking into account the significance of the service production of municipalities and joint municipal authorities in the overall assessment. - -"* (para. 106)

Humana AB / Coronaria Hoiva Oy (2019)	*"On the basis of the above, the notifying party considers that the child protection services produced by the municipalities themselves as well as the child protection services purchased from the private and third sectors form an integrated whole."* (p. 3) *The market share of the parties - - was [10–20] per cent based on customer capacity[54]."* (p. 5) *"Taking into account - - and the significant number of competing providers, the FCCA considers that the transaction does not impede effective competition - -."* (p. 5)
Mehiläinen Oy / Mediverkko Yhtymä Oy (2015)	*"Municipalities can decide whether to produce the [childcare] services themselves or to purchase from private service providers."* (para. 27) *"- - regardless of the transaction, in all the above-mentioned services, several service providers exist."* (para. 29)
Mehiläinen Yhtiöt Oy / Pihlajalinna Oyj (2020)	*"According to the notifying party, the market for social care covers both public and private service production - -"* (para. 24) *According to the investigations, - - on the markets, strong actors Attendo and Esperi operate and can compete with the merged entity. In all examined segments, also smaller operators exist."* (para. 31)

The FCCA has not prohibited any mergers concerning solely social care. Neither has the FCCA required any commitments related to social care. Hence, based on the social care decisions, the FCCA considering the mixed oligopoly structure could be considered to correlate with a positive end result. However, it must be noted that the decisions and conclusions are always a combination of many factors and, thus, the unique background and features of the cases could shift the end results in one particular direction or another.

In addition, the FCCA has also reviewed cases considering *oral and dental care* in three cases. The wordings of the most recent decisions clearly indicate that the FCCA does not consider the mixed oligopoly structure of the oral and dental care sector in its merger decisions, although the FCCA notes that to some extent, the public and private oral care compete:

[54] "Including both public and private production." (footnote 2 on p. 3)

Table 7: Wordings related to mixed oligopolies in the oral care sector

Case	Wordings
Mehiläinen Oy / Mediverkko Yhtymä Oy (2015)	*"According to the estimate of the notifying party, in 2013, the visits in the establishments of Mehiläinen and Mediverkko represented [5–15]% of all the dental health care visits in the Jyväskylä region."* (para. 22) *"According to the FCCA, the exact market definition may, however, be left open in this case."* (para. 23)
Colosseum Dental Group AS / Med Group Hammaslääkärit Oy (2018)	*"- - the Finnish Competition and Consumer Authority considers that public and private oral health care form separate product markets. Based on the FCCA's investigations, public service production poses a competitive constraint to private actors to certain extent."* (para. 105)
Terveystalo Healthcare Oy / Attendo Terveyspalvelut Oy (2018)	*"The FCCA has investigated the market for oral health care in detail in case Oral/Med Group this year, in which the FCCA considered that public and private oral care form separate relevant product markets. - - According to the FCCA's estimate, the market definitions in question apply in principle also in the currently notified case as a basis for the assessment."* (para. 26)
Mehiläinen Yhtiöt Oy / Pihlajalinna Oyj (2020)	*"According to the FCCA's investigations, the nation-wide, private oral health care market in 2019 was approximately [300–350] million euros when measured by sales value - -"* (para. 22)

As the exclusion of the public sector led to the merging parties to have significant market shares in certain cities in Finland in the *Colosseum Dental Group AS / Med Group Hammaslääkärit Oy* case, the FCCA required certain remedies from the parties and, thus, approved the merger conditionally. Hence, based on the oral and dental care decisions, the FCCA not considering the mixed oligopoly structure could be considered to correlate with a negative end result. However, despite ignoring the mixed oligopoly structure, the FCCA has also approved mergers concerning oral and dental health care. In addition, it must be borne in mind that the decisions and conclusions are always a combination of many factors and, thus, the unique background and features of the cases could shift the end results in one particular direction or another. For instance, in the case concerning *Mehiläinen Yhtiöt Oy* and *Pihlajalinna Oyj* (2020),

the FCCA did consider the oral and dental care market as unproblematic, even though it did not consider the presence of the public sector when examining the competitive effects of the merger.

When summarising the above, it can be concluded that the above results do not indicate any clear correlations between the firm (and case) sizes as well as the FCCA considering the mixed oligopoly structure. However, it could be considered that the FCCA has assessed the market structure in more detail in such cases in which the merging firms have been significant and, thus, larger actors, for instance, in some cities or areas in Finland. However, based on the above results, a correlation between the FCCA not considering the mixed oligopoly structure as well as a negative end result can be identified, as in all cases in which the FCCA has required the prohibition of the merger or approved with commitments, the FCCA has decided not to take into account the competition between the public and private sector.

In the subsection 5.1.2 below, the FCCA's assessment and reasoning related to the presence and objectives of the public sector is examined in more detail. Furthermore, the results presented above are discussed more closely against the theory framework in subsection 5.2 below.

5.1.2 Assessment of Presence and Objectives of Public Sector

This subchapter scrutinises how and with what kind of methods the FCCA has assessed the presence and objectives of the public sector social and health care providers in the cases included in the dataset. Firstly, it must be noted that the extent and length of the FCCA's social and health care merger decisions between 2011–2021 vary heavily, between 6–380 pages (excluding appendices). Thus, already on this basis, it is possible to conclude that also the level of depth of the analysis fluctuates significantly between the decisions.

In fact, there are several decisions, in which no analysis of the presence and objectives of the public sector providers has been conducted, despite considering the mixed

oligopoly structure of markets. Decisions in which no analysis has been conducted have usually been concluded with unconditional clearance, which means that in such cases, no detrimental competitive effects were identified, even within the narrowest market definitions. The cases that do not include any more in-depth analysis on the presence and objectives of the public sector are mainly related to the social care sector and include: *Mehiläinen Hoivapalvelut Oy / Vetrea Terveys Oy* (2021), *Humana AB / Coronaria Hoiva Oy* (2019), *Esperi Care Oy / MediVida Oy* (2016), *Mehiläinen Oy / Vire Care Oy* (2016), and *Mehiläinen Oy / Mediverkko Yhtymä Oy* (2015). In addition, while the FCCA considered mainly the mixed oligopoly structure in the *Terveystalo Healthcare Oy / Lääkäriasema Pulssi Oy* (2011) case, the decision follows mostly the reasoning of the *Terveystalo Healthcare Oy / ODL Terveys Oy* (2011) decision given earlier during the same year and, thus, the latter decision do not include any significant additional analysis on the relationship between public and private health care. Hence, the above-mentioned cases are not discussed in more detail in this subchapter.

In the decisions including analysis related to the presence and objectives of the public sector, the analysis of the mixed oligopoly structure is mainly included in the first parts of the decision in which the FCCA examines the market definitions to be used in the decision. In the below, the FCCA's decisions including analysis on the mixed oligopoly structure are examined in a chronological order to be able to form a better understanding of the development of the analysis and its methods as well as possible discrepancies between the decisions.

The earliest decision in the dataset including analysis on the role and objectives of the public sector is the *Terveystalo Healthcare Oy / ODL Terveys Oy* (2011) case. In the said case, the FCCA's reasoning concerning the mixed oligopoly structure of the occupational health care market focuses on the following aspects, which are mainly related to the differences between the public and private health care:

> *The FCCA considered that occupational health services provided by public operators and occupational health services provided by private operators belong to the same relevant product market, as both private and public occupational health care service providers provide comprehensive occupational health care. Furthermore, the FCCA considered that local public actors act as subcontractors for multi-site occupational health contracts. In addition, the FCCA concluded that the pricing of services, the medical resources available, and the availability of physician appointments do not differ significantly in terms of whether the service is*

> *private or public. Lastly, based on the FCCA's investigations, a sufficient number of customers considered occupational health services provided by both public and private service providers to be alternative services.* (see para. 25)

In the same case, the FCCA considered that the reasoning for *not* including the public and private hospital services in the same relevant market was as follows:

> *According to the FCCA, the service selection of the private sector is significantly narrower than the offering of the public sector. In the private sector, it is also possible to conduct such medical procedures (e.g., cosmetic surgeries) that would not be conducted in the public sector. Furthermore, the treatment criteria may differ between the public and private sector. The most urgent and severe cases are also treated solely in the public sector, while with regard to non-urgent treatment, the private sector may be an alternative.* (see paras. 80–84)
>
> *The pricing of the private and public hospital services differs substantially. The pricing of the public sector hospital charges is based on regulation, whereas the pricing of the private sector is market-based, and charges are higher than in the public sector, although some customers do receive reimbursement from their insurance companies. Some customers do not consider the public and private hospital services as alternatives due to the significant price difference.* (see paras. 85–90)

The assessment related to physician services for private customers considered similar factors as the assessment for hospital services. In addition, the FCCA considered that in the private sector, access to non-urgent treatment is generally significantly faster in the private sector than in the public sector.

After the *Terveystalo Healthcare Oy / ODL Terveys Oy* (2011) decision assessed above, the next decision including assessment on the role of public sector is related to the *Terveystalo Healthcare Oy / Diacor Terveyspalvelut Oy* (2017) case. In the said case, the FCCA conducted a customer survey, based on which the public service providers create only a very limited competitive pressure on the merging parties:

> *According to the FCCA's survey, only a limited proportion of the merging parties' customers acquire so-called statutory occupational health care that the public sector predominantly provides. Instead, most of the customers also acquire a wide range of imagining and laboratory services. Furthermore, the FCCA's survey showed that the merging parties' customers request quotations for occupational health care services from the public sector providers only rarely.* (see para. 55)

With regard to competition between private and public hospital services as well as physician services for individual customers, firstly, the FCCA referred to the

Terveystalo Healthcare Oy / ODL Terveys Oy (2011) decision, which has been described in more detail above. However, the FCCA noted additionally the following:

> *The FCCA noted the recent developments in the hospital services sector and considers the increased convergence between the public and private hospital services during the past years. As an example, the FCCA mentions HYKSin Oy (currently Orton) of which the Helsinki University Hospital ('HUS') owns 70 per cent.* (see para. 90)
>
> *In addition, in the decision, the FCCA did not assess the role of the public sector in the insurance sector services, however, the FCCA noted that the market for insurance company services has altered during the past years, as many insurance companies have integrated vertically into the health care services markets. As an example, the FCCA mentioned OP-Pohjola that has established its own Pohjola Sairaala network as well as LähiTapiola that has extended its activities in the health and welfare services. According to the FCCA, the vertical integration of the insurance companies has decreased the role of the public sector on the markets.* (see para. 116)

In the next decision, *Attendo Intressenter AB / Mi-Hoiva Oy* (2017), the FCCA considered briefly that municipalities do not attend to the tender processes related to social care services, and, therefore, they do not create any direct competitive pressure on private operators. However, the FCCA considered in its overall assessment related to the competitive effects of the merger that the role of municipalities provides them with the opportunity to affect the amount of bought-in services as a response to price changes by private operators (see para. 31). Similar considerations had been included in the statements provided to the FCCA during the market hearing.

The consequent decision, *Colosseum Dental Group AS / Med Group Hammaslääkärit Oy* (2018) is specifically related to oral and dental health care. Considering the dataset of this study, the said decision is the first one including more detailed econometric analyses. In the said case, the FCCA exploited a dataset received from the Social Insurance Institution of Finland ('Kela/Fpa') that covered all oral health care customer visits in private clinics between 2012 and 2017 in relation to which the customer had received reimbursement from the Social Insurance Institution of Finland. In addition, the FCCA conducted a customer survey that focused, for instance, on investigating whether the customers consider private and public oral health care services as substitutes. The FCCA's analysis on whether public and private health care compete

on the same market consisted of a critical loss type of GUPPI[55] analysis as well analysis on whether reductions in the amount of reimbursement received from the Social Insurance Institution of Finland affect the number of customers in the private sector. On this basis, the FCCA noted the following on the role of the public sector as well as the competition between public and private health care:

> *The FCCA noted that a significant difference in the price levels of the public and private sector can be identified. A significant and permanent price difference between two products may, as such, refer to the products likely belonging to different relevant markets. However, with regard to market definition, the central question is how consumers react to changes in relative price differences. The substitutability of products may be measured with cross elasticity of demand. Based on the FCCA's analysis conducted on the basis of the data from the Social Insurance Institution of Finland, the customer switching from the private sector to the public sector has been low considering the changes in the relative price differences between the public and private sector. Furthermore, several other factors point towards the low substitutability of the public and private oral health care services, including the differences in the changes in the number of customer visits.* (see paras. 42–62)
>
> *In addition, the FCCA conducted a critical loss type of test to analyse the substitutability of the private and public oral health care services. The test used by the FCCA is based on the so-called GUPPI indicator that is applied as a market definition instrument. In the GUPPI analysis, the FCCA examined customer switching between the private and public sector due to price increases in the private sector, the price-cost margins of the competitors to the merging parties, as well as the prices of the merging parties as compared to other private service providers. Based on the FCCA's analysis, for a private monopolist, it would be profitable to raise prices with 5 per cent in all municipalities and in most of the municipalities, with 10 per cent.* (see paras. 63–85)
>
> *The FCCA also considered that the responses received in the customer survey over-emphasised the customer switching to the public sector, as the respondents lacked information for alternative private oral health care providers.* (see para. 86)
>
> *In addition, the FCCA considered the differences in the pricing and customer segments of the public and private oral health care as well as the effects of the social and health care reform on the market for oral health care. For instance, the FCCA considered that the socio-economic background of the customers affects the choice between public and private oral health care.* (see paras. 87–91)

[55] For further reference on the GUPPI indicator, please refer, for instance, to Moresi (2010).

The analysis related to the role and objectives of the public sector in the case *Terveystalo Healthcare Oy / Attendo Terveyspalvelut Oy* (2018) refers mainly to the earlier cases *Terveystalo Healthcare Oy / Diacor Terveyspalvelut Oy* (2017) and *Colosseum Dental Group AS / Med Group Hammaslääkärit Oy* (2018). However, considering the occupational health care, the FCCA noted that at the time of the decision, a project related to establishing a nation-wide publicly owned occupational health care company was underway. The FCCA considered this as an additional factor limiting the potential negative competitive effects of the merger in question.

The most comprehensive analysis of the role and objectives of the public sector as well as the possible competition between private and public health care providers is included in of the most recent decisions included in the dataset, *Mehiläinen Yhtiöt Oy / Pihlajalinna Oyj* (2020), in which the FCCA concluded to request the Market Court to prohibit the merger in its entirety. The decision culminated on the question whether public and private health care compete on the different segments of the social and health care sector. Firstly, the FCCA analysed the segment of physician services for individual customers (see section 10.4.2.2 of the FCCA's prohibition proposal):

> *In its analyses, the FCCA relied on several complementary quantitative datasets received from different sources. The most important datasets related to the reimbursements of health care costs that was received from the Social Insurance Institution of Finland as well as sales information collected from the merging parties' competitors.*
>
> *Firstly, the FCCA described the objectives of public health care sector based on regulation. The FCCA devoted attention to the operation logic of the public sector and notes that the operation logic differs significantly from the logic of the private sector. The FCCA also noted that the prices charged by public operators are based on municipal decision-making and regulation, and they do not cover the costs occurred from producing the services. The operation of the public sector is steered by public health objectives. Furthermore, the public sector does not compete within the meaning of competition used in market economy.*
>
> *Secondly, the FCCA drew attention to the differences between public and private health care, including access to treatment, customers using voluntary health insurance, primary customer groups, pricing, and customer impressions.*
>
> *Thirdly, the FCCA exploited a theory model based critical loss analysis (more precisely, three different versions of the critical loss analysis) using aggregate diversions based on the customer survey to investigate whether private and public health care providers are active on the same market. In the customer survey, the FCCA used forced diversion questions (instead*

of diversion due to price increases). Based on the analysis, the FCCA considered that the diversion to the public sector is low, especially when considering the distribution of the clinic visits between the public and private sector in Finland.

The next segment that the FCCA analysed is the occupational health care services (see section 11.2.2 of the FCCA's prohibition proposal). In addition to the types of data used in the above-analysed physician services, the FCCA used information received by consulting customers as well as a dataset received from the Finnish Institute for Occupational Health. Similar to the physician services, the FCCA analysed the competition between private and public health care with a critical loss analysis. Based on the test, interestingly, when compared to the earlier decisions, the FCCA excluded all (incl. incorporated) municipal occupational health care providers in their entirety from its analysis related to the competitive effects of the merger.

Concerning the presence of public service providers in the hospital service market (see section 12.1.2 of the FCCA's prohibition proposal), the FCCA relied on descriptive analysis within the framework of the SSNIP test, as due to the lack of appropriate data, analyses based on quantitative methods were not possible. In its descriptive analysis, the FCCA focused on the differences in the services, customer groups, access to treatment, and prices between the public and private providers[56]. In addition, the FCCA considered the differences in the objectives and financing of the services between the public and private health care. Based on these differences, the FCCA decided that private and public hospital services belong to different product markets. However, based on the decision, it appears that the FCCA included publicly owned hospital companies, such as Hyksin (nowadays Orton), Coxa, and Heart Hospital in the same market with private hospitals where appropriate, although the FCCA noted that the operations of such publicly owned market actors are not fully market based due to their ownership.

[56] As regards fertility treatment, the FCCA's research methods, analysis, and conclusions correspond mainly with the analysis related to private hospital services. Thus, the FCCA's descriptive analysis focused on the differences in the services provided by public and private health care providers. In addition, as regards insurance company services, the FCCA exploited similar research methods and considered, for instance, the complementary nature of private and public hospital services, differing pricing mechanisms, differences in access to treatment, and differences in participation to insurance companies' tender processes.

In the following subchapter, the results presented in the subchapters 5.1.1 and 5.1.2 are discussed against the theory framework. In addition, the following subchapter discusses whether alternative research methods exist that would be well suited to analyse the presence of the public sector, in addition to which the following subchapter discusses whether, for instance, the current social and health care reform has potential future impact on the competition authority analysis related to the presence and objectives of the public sector.

5.2 Discussion

Above, the results of the analysis of the FCCA's assessment in the social and health care sector merger cases are presented. In this subchapter, the results of the assessment are summarised and discussed against the relevant microeconomic theories as well as the earlier research presented in chapter 3, in addition to which the results are reflected against the reality of the Finnish health care system as presented in subchapter 2.1.2, including its forthcoming changes and amendments due to the social and health care reform.

As presented in the subparagraph 5.1.1, no clear correlation between the firm and case size as well as the FCCA considering the mixed oligopoly structure is discernible from the decisions included in the dataset, although it could be considered that the FCCA has assessed the market structure in more detail in cases in which the merging firms have been significant and, thus, larger actors, for instance, in some cities or areas in Finland. Same conclusion also applies to the possible correlation between the FCCA considering the mixed oligopoly structure and a positive end result, as the FCCA has also unconditionally approved such mergers, where it has considered the mixed oligopoly structure only partly, for instance, in some market segments. On the other hand, with regard to the social care sector, a positive correlation between the positive end result and the FCCA considering the mixed oligopoly structure could be identified, as the FCCA has been more inclined to take into account the competition between public and private operators in the social care sector, than in pure health care sector

mergers. Furthermore, a clear correlation between the FCCA not considering the mixed oligopoly structure and a negative end result could be identified, as in all cases in which the FCCA has proposed the prohibition of a merger or approved it only with conditions, it has not considered the competition between public and private operators (or considered it only in some market segments).

Against the theoretical background presented in paragraph 3 and framework for merger control analysis presented in subparagraph 2.2.2, the correlation between the FCCA not considering the mixed oligopoly structure of the health care markets and a higher risk of negative end result is logical, as the exclusion of the public health care providers from the market on which the merging parties compete will inevitably lead to a situation in which the total market size is smaller and, hence, the merging parties relatively more significant actors than they would be on a broader market. The same also applies to the correlation between the FCCA considering the mixed oligopoly structure and a positive end result in the social care sector, as the significance of the merging parties and their possibilities to use market power are weaker on a broader market including a larger number of competitors. The fact that no clear correlation between the FCCA considering the mixed oligopoly structure and a positive end result on other market segments can be identified is also understandable, as the decision-making in a merger case is a sum of several factors and, thus, the FCCA considering the mixed oligopoly structure is not the only decisive factor, but the approval decision may be based on various circumstances, for instance, on the merging parties not being close competitors (meaning that they, for instance, focus on different services or clients). Also otherwise, it is important to bear in mind that identifying the correlations between different factors in competition authority decisions and the end results of the case are always simplifications and do not consider all the details and characteristics of different cases.

Instead, against the theoretical background, it appears rather illogical that no positive correlation between the case size and the FCCA considering the mixed oligopoly structure can be found, as firstly, oligopoly is a market structure in which a few larger competitors are present. Secondly, the vast majority of the earlier research related to the health care sector has considered the health care markets as mixed oligopolies. The larger the companies on the market and, thus, cases, the more likely it should be that

the markets would be considered as mixed oligopolies. On the other hand, it must be noted that the FCCA has assessed the market structure in more detail in the cases in which the merging firms have been significant and, thus, larger actors, for instance, in some cities or areas in Finland, although not concluding such more detailed assessment in the existence of a mixed oligopoly.

Furthermore, as presented in the subparagraph 5.1.2 related to the ways and methods of the FCCA to assess the presence and objectives of the public sector social and health care, it can be noted that the FCCA's research methods as well as the depth of economic analysis, especially, have evolved over time, in addition to which the level of depth of the decisions themselves has varied significantly, assumingly due to the differences in the potential for problematic nature of the cases from the consumer welfare perspective. Similarly, the FCCA's approach towards considering the mixed oligopoly structure in the health care sector has shifted during the review period, as, in the earlier cases considering, for instance, occupational health care, the FCCA has concluded that the private and public occupational health care providers compete on the same market, whereas in the more recent decisions, an opposite conclusion has been made. However, the FCCA's methods assessing the boundaries of competition of the merging parties in mixed oligopoly sectors, such as health care, do not seem to differ from the methods used in purely private sector mergers.

Furthermore, in relation to the FCCA's analysis on the presence and objectives of the public sector in the social and health care markets, it can be noted that this analysis has largely been conducted in the first parts of the decisions concerning the relevant product markets, which then provide the framework in which the competitive effects of the mergers should be evaluated in more detail during the merger review. In these sections, the FCCA's research methods have varied between descriptive, for instance regulation-based, analysis, market surveys, and more rigorous econometric analysis. The analysis methods have shifting towards more econometrics-based since 2018, however, also after that, the FCCA has relied also on descriptive analysis on the presence and objectives of the public sector. This development of research methods to include more econometric approach is largely in line with the FCCA's more general trend to deepen its econometric analysis in merger cases.

When considering the FCCA's research methods and approach to assess the presence and objectives of the public sector social and health care against the background of the microeconomic theory presented especially in subparagraph 3.2.2 above, the theoretical background proposes that mergers in a mixed oligopoly setting would more likely be welfare enhancing than mergers in pure private oligopolies. The theoretical framework proposes additionally that consumer welfare effects of a merger between private health care providers are dependent, among other things, on the aims and objectives of as well as pricing and quality constraints of the public health care operators, and that these factors must be considered in competition authorities' merger investigations in order to avoid undue prohibitions of mergers and thus, consumer harm (Bisceglia et al., 2021). Considering, for instance, the most in-depth analysis of the FCCA in the *Mehiläinen/Pihlajalinna* case in 2020, the FCCA has analysed the presence and objectives of the public health care in the decision. In the decision, the FCCA also describes the financing and pricing models of the public and private actors and emphasises the legal duty of the public health care operators to provide all citizens with sufficient health care. Against the theoretical framework on mixed oligopolies that proposes that the consumer welfare effects of a merger are dependent on the public sector's objectives and operating restraints, it is, however, surprising that in its decisions, the FCCA focuses on the differences between the public and private health care operators, for instance, related to the operational logics of these actors, instead of considering the effects of the presence and altruistic aims of the public sector for the private sector firms' possibilities to operate and the possible constraints that the public sector may impose to the private sector.

Hence, as described in section 2.2.2, the FCCA's approach considering the competition between public and private health care operators is in line with the current competition authority practices and guidelines, which propose that the first phase of a merger investigation is to define the boundaries of competition of the merged entity by defining the relevant product and geographic markets. However, the earlier research (see e.g., Kaplow, 2010) has questioned whether defining the relevant markets correctly is even possible, as the market definition exercise is embedded with a prior presumption of the market power question. In fact, in the past, the FCCA, itself, has also conducted merger control analyses without defining the relevant markets conclusively, and instead, it has directly gone to assessing the effects of the mergers

(see e.g., *Ruokakesko Oy / Suomen Lähikauppa Oy* (2016), in which the FCCA assessed the competitive effects of the merger and closeness of competition between the merging parties without defining the relevant markets).

Although defining the relevant markets appear to be an inherent part of a merger control analysis based, for instance, on the competition authorities' guidelines in Finland and the EU, an analysis on whether the approach taken by the FCCA, for instance, in the *Ruokakesko Oy / Suomen Lähikauppa Oy* case in 2016 would be better suited to analyse mergers and their competitive effects also in sectors with a mixed oligopoly nature, such as in the health and social care sector, could be beneficial. In this way, competition authorities could go directly to the effects assessment without the need to define the boundaries of competition conclusively prior to analysing the effects of a merger. In addition, in earlier literature, for instance Bisceglia et al. (2021) have noted that the research methods of competition authorities used in a purely private markets may not be well-suited to analyse the competitive effects in a mixed oligopoly setting. However, Bisceglia et al. (2021) do not provide suggestions of more appropriate measures, apart from proposing that the effects of the presence and objectives of the public sector should be analysed in merger control decisions.

Moving away from the theoretical background to other recent developments that might be of interest for the thesis topic, it could be mentioned that the FCCA's decisions, for instance, in the *Attendo Intressenter AB / Mi-Hoiva Oy* (2017) and *Mehiläinen / Pihlajalinna* (2020) cases, suggest that the FCCA takes a different approach on publicly owned, but incorporated, health care companies, such as Coxa and Heart Hospital, than on pure municipal health care providers that perform their statutory tasks on providing health care services for all citizens and, hence, do not operate on the market based on the FCCA. Against this background, it is interesting to see whether the FCCA's approach in merger control will change, should the number of such publicly owned health care companies increase in the future. This appears likely based on the decisions included in the dataset.

Lastly, should the forthcoming social and health care reform change the dynamics of the social and health care markets, it seems likely that the assessment of these dynamics would be included in the FCCA's decision-making. The FCCA has already noted the forthcoming changes in the merger decisions included in the dataset (see e.g.,

Mehiläinen / Pihlajalinna (2020)), however, due to the then uncertainties related to the actual future model, the FCCA has not given greater weight to the arguments related to the reform. Although the forthcoming social and health care reform does not change the fundamental objectives and aims of public health care, it seems apparent that the effects of the new ways of operating the social and health care services on the competition between public and private health care should be examined in the future merger decisions. Especially, as mixed arguments on the social and health care reform's effects on private health care provision have been presented recently: on the one hand, the possibilities of the wellbeing areas to outsource their health care services to private actors have been argued to become more limited by the reform, and on the other hand, private health care providers expect increased numbers of clients after the reform (Gråsten, 2021).

6 Conclusions

The purpose of this thesis was to examine the FCCA's merger control analysis in the Finnish health care sector, and more specifically, the Authority's analysis related to competition between private and public health care providers. The thesis examined whether there are positive correlations between the case sizes and the FCCA considering the mixed oligopoly structure as well as between the FCCA considering the mixed oligopoly structure and a positive end result of the case. Furthermore, the thesis examined the development of the FCCA's research methods related to analysing the presence and objectives of public sector health care providers in more detail. Instead, the purpose of this thesis was not to evaluate whether the FCCA's conclusions in these health care mergers have been correct or not, but to analyse against the theoretical framework how the FCCA has investigated the possible competition between private and public health care operators.

Between 2011 and 2021, the FCCA examined in total 12 horizontal mergers in the Finnish social and health care sector. During that time, according to the FCCA, the

Finnish health care sector has faced a significant consolidation, mainly due to the three largest private health care operators being active on the mergers & acquisitions front. In addition, during this ten-year period, the FCCA's position towards the mixed oligopoly structure of the health care sector has shifted, and consequently, in 2020, in its largest ever merger investigation, the FCCA considered that the public health care operators do not impose competitive constraints on their private counterparties. The same conclusion also applies to competition in the oral and dental care, however, the position appears to be less strict with regard to the social care sector. Furthermore, during the ten-year period, the FCCA's research methods have developed, and the amount of econometric analysis as part of the FCCA's merger investigations related to the competition between public and private health care has increased significantly. What has, instead, maintained during the whole ten-year period is that the FCCA's analysis on the possible mixed oligopoly structure of the social and health care sector has been included in the sections of the decisions concerning the relevant product and geographic markets. However, against the theoretical background, a question arises whether the competitive effects of the cases would be beneficial to be assessed without definitive market definitions, as the FCCA has also done in other industrial sectors in the past. This is especially due to the fact that in the recent theoretical analyses, the presence and objectives of the public health care providers have been seen to influence the potential consumer welfare effects of the private health care firm mergers.

In the thesis, no clear correlations between the firm or case size and the FCCA considering the mixed oligopoly structure were identified. Similarly, the thesis did not find clear correlations between the FCCA considering the mixed oligopoly structure and a positive end result of the case. The merger cases reviewed by the FCCA are all unique in their special characteristics, and hence, the clearance of a merger case can naturally be based on various different factors apart from the market being considered as a mixed oligopoly. However, based on the analysis of the thesis, a correlation can be seen between the FCCA not considering the mixed oligopoly structure and a negative end result of a case, as in all three cases in which the FCCA has approved the merger only with conditions or has proposed the prohibition of the merger, the FCCA has not considered the health care markets as mixed oligopolies, or has only considered certain market segments to be characterised by competition between private and public health care operators.

In the future, it will be interesting to see whether the FCCA's analysis on the competition between private and public health care will develop, especially due to the new social welfare and health care services system taking place in the beginning of 2023. While the reform will not change the fundamental objectives and aims of the public health care, it has been debated to have an impact on the dynamics between the private and public health care: on the one hand, the reform has been argued to limit the possibilities of the wellbeing counties to outsource their services to private sector, and on the other hand, the reform has been estimated to increase the customer flows of the private health care sector. Another interesting future development might be related to the possible increase in the number of publicly owned, but incorporated, health care companies and their possible effect on the merger control analysis related to the mixed oligopoly structure of the health care sector. As the FCCA has taken a different position to such publicly owned companies than to pure municipal health care providers, the possible rise in the number of such health care companies may affect the FCCA's merger analyses and the competition between private and public health care in the future.

SUMMARY IN SWEDISH – SVENSK SAMMANFATTNING

KONCENTRATIONSANALYS AV HÄLSOVÅRDSSEKTORN I FINLAND – DEN OFFENTLIGA SEKTORNS NÄRVARO OCH BETYDELSE

Den finländska hälsovårdssektorn har konsoliderats kraftigt under de senaste åren, i synnerhet eftersom de tre största privata hälsovårdsbolagen (Mehiläinen, Pihlajalinna och Terveystalo) har ökat både organiskt och genom företagsförvärv (KKV, 2020). Följaktligen har även Konkurrens- och konsumentverket (KKV) granskat ett flertal koncentrationer mellan privata företag inom social- och hälsovårdssektorn i Finland, till exempel Mehiläinens planerade förvärv av Pihlajalinna år 2020, vilket parterna senare övergav efter KKV:s förslag till marknadsdomstolen att förbjuda förvärvet. Motiveringen till KKV:s förslag, som även fick uppmärksamhet i medierna, var att förvärvet i alltför hög grad skulle ha minskat konkurrensen på den privata social- och hälsovårdsmarknaden på grund av den sammanslagna enhetens betydande marknadsandel. I sitt förslag ansåg KKV således att privata och offentliga social- och hälsovårdsleverantörer inte konkurrerar med varandra, utan privata social- och hälsovårdstjänster bör betraktas som den relevanta produktmarknaden (KKV, 2020).

Mot bakgrund av detta analyserar denna avhandling KKV:s undersökningsåtgärder när det gäller fusioner inom social- och hälsovårdssektorn. I synnerhet granskar denna avhandling om och i vilken typ av koncentrationsärenden KKV har uppfattat social- och hälsovårdsmarknaden som ett blandat oligopol där både privata och offentliga aktörer är verksamma. Ytterligare granskas det ifall det finns ett positivt samband mellan parternas (dvs. fallets) storlek och om den blandade oligopolstrukturen tas i betraktande i KKV:s beslut. Dessutom analyseras det om det finns ett positivt samband mellan slutresultatet (dvs. godkännande, villkorligt godkännande eller förbud) och att beakta den blandade oligopolstrukturen. Som en uppföljningsforskningsfråga undersöker denna avhandling om och hur KKV har granskat de offentliga vårdleverantörernas närvaro, drivkrafter samt möjliga kvalitets- och prissättningsbegränsningar i sina koncentrationsbeslut. Dessa frågor är även av betydande praktiskt intresse, för både konkurrensmyndigheter och nationalekonomer samt advokater som är specialiserade på konkurrensfrågor. De måste ständigt analysera liknande frågor i koncentrations- och domstolsförfarandet. Avhandlingens

resultat kan även utnyttjas av andra sektorer, såsom barndagvård, som kännetecknas av växelverkan mellan privata och offentliga leverantörer.

Avhandlingen ger allmän bakgrundsinformation om det finländska hälso- och sjukvårdssystemet samt Finlands system och reglering för koncentrationskontroll. Dessutom diskuteras den allmänna teoretiska bakgrunden, i synnerhet oligopolteorin och analysen av horisontella fusioner. Den teoretiska referensramen för avhandlingen baserar sig dock främst på en teorimodell av Bisceglia et al. (2021), som analyserar välfärdseffekterna av fusioner mellan privata vårdbolag på en marknad där både privata och offentliga leverantörer är verksamma. Teorimodellen visar att de sannolika välfärdseffekterna av en fusion mellan privata vårdbolag beror på den offentliga leverantörens syfte och mål samt prissättnings- och kvalitetsbegränsningar. Enligt studien av Bisceglia et al. (2021) bör således dessa faktorer analyseras för att undvika ett alltför strängt verkställande. Därutöver presenterar avhandlingen resultat från tidigare teoretisk och empirisk forskning, men de tidigare studierna betraktar fusionskontroll inom hälsovårdssektorn främst utifrån andra vinklar än denna avhandling.

Avhandlingen handlar om konkurrenspolitik och kunde beskrivas som en rättsekonomisk studie. Rättsekonomi är ett relativt ungt forskningsområde som tillämpar nationalekonomiska (och i synnerhet mikroekonomiska) analysmetoder och -verktyg för att analysera juridiska (i det här fallet konkurrensrättsliga) frågor, men inte har några klart definierade eller generaliserade forskningsmetoder (Tyc och Schneider, 2019). De mikroekonomiska aspekterna av konkurrensrätt kan dock analyseras både kvantitativt och kvalitativt (Aron och Tenn, 2019; Filistrucchi, 2018), och den här avhandlingens metod kombinerar inslag av både kvantitativ och kvalitativ forskning. Å ena sidan försöker avhandlingens forskningsfrågor hitta orsakssamband mellan KKV:s analys och koncentrationsfallens slutresultat, vilket tyder på en kvantitativ studie. Å andra sidan är avhandlingens datamaterial verbalt, vilket i sin tur tyder på en kvalitativ studie (Muntean Jemna, 2016; Bryman, 2012). Eftersom avhandlingens frågeställning och själva analys är teoribaserade och fokuserar på att undersöka myndighetsbeslut, kunde avhandlingens metod således beskrivas som en kvalitativ teoribaserad innehållsanalys (Sarajärvi och Tuomi, 2018; Bryman, 2012; Hall och Wright, 2008; Salzberger, 2007).

Avhandlingens datamaterial består av KKV:s allmänt tillgängliga koncentrationsbeslut. Avhandlingen fokuserar på fall gällande allmän hälsovård, men även fall gällande tandvård och socialvård analyseras för att bilden av KKV:s koncentrationsanalys skall bli så fullständig som möjligt. Datamaterialet innehåller alla KKV:s horisontella koncentrationsbeslut (sammanlagt 12 beslut) mellan åren 2011 och 2021. Eftersom avhandlingen även utnyttjar omsättningsinformation, har datamaterialet kompletterats med omsättningssiffror till exempel från de samgående parternas årsrapporter, ifall siffrorna har redigerats från KKV:s beslut som affärshemligheter.

Avhandlingens resultat visar att alla beslut som ingår i datamaterialet gör några referenser till den blandade oligopolstrukturen och således till konkurrensen mellan privata och offentliga hälsovårdsleverantörer i Finland, även om detaljnivån varierar kraftigt i besluten. Avhandlingens resultat visar att KKV:s ställning på förekomsten av den blandade oligopolstrukturen på olika hälsovårdsmarknader har ändrats i viss mån under de senaste 10 åren, och riktningen har varit att de olika hälsovårdsmarknaderna inte anses som blandade oligopol. Dessutom visar avhandlingens resultat att KKV har varit mer benäget att anse att de offentliga och privata socialvårdsleverantörerna tillhör samma marknad, än när det gäller hälso- eller tandvård. Detta är relativt oförväntat, för de flesta av de tidigare teoretiska studierna anser att hälsovårdsmarknaden är ett blandat oligopol. En orsak till detta resultat kan vara att KKV:s analys fokuserat på skillnader mellan privata och offentliga vårdleverantörer i stället för de möjliga begränsningarna som de offentliga leverantörerna skapar för de privata aktörernas verksamhet, som betonas i de tidigare teoretiska studierna.

Avhandlingens resultat visar även att det inte finns ett tydligt samband mellan ett falls storlek och om den blandade oligopolstrukturen tas i betraktande i KKV:s beslut, även om KKV har granskat marknadsstrukturen noggrannare ifall parterna har varit viktiga aktörer på vissa orter. På liknande sätt finns det inget tydligt samband mellan den blandade oligopolstrukturen och ett positivt slutresultat (dvs. ovillkorligt godkännande), vilket är relativt förväntat, eftersom KKV kan godkänna en fusion av många olika skäl, till exempel på grund av att parterna inte är nära konkurrenter eller har en låg sammanlagd marknadsandel. I stället visar avhandlingens resultat att det finns ett tydligt samband mellan att inte ta den blandade oligopolstrukturen i

betraktande och ett negativt slutresultat (dvs. villkorligt godkännande eller förbud), för i samtliga fall där KKV har krävt avyttringar, har KKV avsett att de offentliga och privata leverantörerna inte konkurrerar på samma marknad. Även om det kan finnas många skäl till ett förbud eller ett villkorligt godkännande, kan man åtminstone konstatera utifrån resultaten att beslutet att privata hälsovårdstjänster bör betraktas som den relevanta produktmarknaden ökar risken för ett negativt slutresultat för de samgående parterna. Detta överensstämmer även väl med teori och tidigare forskning.

Till sist diskuterar avhandlingen den möjliga framtida utvecklingen av KKV:s fusionskontroll inom social- och hälsovårdssektorn. Tänkbara utvecklingar kan relateras åtminstone till den förkommande social- och hälsovårdsreformen och dess möjliga inverkan på den offentliga och privata leverantörernas roller. Dessutom kan KKV:s ställning påverkas om betydelsen av offentligt ägda vårdföretag (såsom Coxa och Hjärtsjukhuset) ökar, för KKV har varit mer benäget att konstatera dessa som konkurrenter till privata vårdbolag än rent offentliga leverantörer även i de besluten som ingår i avhandlingens datamaterial.

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