

Does European competition law need to take a new approach to zero-price markets in the digital economy? – a study of the application of Article 102 to zero-price markets.

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Abstract**Faculty:** Faculty of law**Degree Programme:** International Business Law**Study track:** International and Comparative Law**Author:** Kate Addiscott**Title:** Does European competition law need to take a new approach to zero-price markets in the digital economy? – a study of the application of Article 102 to zero-price markets.**Level:** Master's thesis**Month and Year:** February 2022**Number of Pages:** 77**Keywords:** competition law, EU law, EU competition law, zero-price markets, Google Search (Shopping), digital markets**Supervisor:** Ville Pönkä**Where deposited:** University of Helsinki library

Abstract: More and more often in the digitalised world, consumers come into contact with undertakings operating within the zero-price market. That is, where the product or service is offered to the consumer at a price of zero. Examples of zero-priced markets are numerous, from shopping malls, to social media and credit cards. This market type is not an insignificant one, with Facebook and Google, two of the largest internet companies offering zero price goods, having a market capitalisation of \$1,645 billion as of June 2020. The topic of data driven digital zero-price markets has been receiving increasing amounts of attention in recent years. The OECD, Commission, national competition law authorities and academics have increasingly been considering this market type. It is often said that the consumer pays to use these digital services with their person data. In online transactions, essentially all transactions require at least some disclosure of the user's personal data. This personal data is highly valuable to undertakings, with companies willing to receive consumers data instead of being paid by them with money.

Overall, the question which I pose is whether EU competition law can deal with the unique characteristics of these digital zero-price markets. The economic and consumer welfare grounding of Article 102 means that it is adaptable to zero-price markets, and the special characteristics of zero-price markets are to an extent already considered in a competition law analysis. This market type is unique and significantly different to the traditional market types that EU competition law has been faced with in the past. For one, these markets operate largely on the digital sphere, meaning that they are characterised by competition for the market, exceedingly fast innovation and unique barriers to entry. These markets are multisided, with consumers, advertisers, merchants and the undertaking all operating on unique parameters but interacting with one-another. Finally, the goods/services are provided at zero-price, which traditional economic analysis struggles to adapt to, whilst consumers are faced with alternative costs through their attention and information (data) and reduction of quality. The *Google Search (Shopping)* case shows these characteristics in action, and demonstrates the challenges which EU competition law faces when applied to this market type. It also shows the current capabilities of the law in dealing with this market type. There are ways that the law can be adapted, utilising new tests which focus on other cost parameters than price, putting more weighting on factors other than monetary price and looking at different competitive parameters such as quality.

This thesis does not seek to criticise EU competition law as a whole. It is limited to considering specifically digital zero-priced markets. It is concluded that more can be done to ensure that its unique characteristics can be included in a competition law analysis. In this respect, the EU can become a leader, laying the groundwork for the future competition law treatment of these undertakings, and ensuring that it is properly recognised that consumers can face competitive harms even if it is not based upon a monetary price.

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TABLE OF ABBREVIATIONS

Bundeskartellamt	Federal Cartel Office (German national competition regulator)
CJEU	Court of Justice of the European Union
Commission	European Commission
EU	European Union
GC	Court of Justice of the European Union General Court
GDPR	General Data Protection Regulation
SCOTUS	Supreme Court of the United States
SPC	Supreme People's Court of the People's Republic of China
SSNDQ	Small but Significant and Non-transitory Decrease in Quality
SSNIC	Small but significant non-transitory increase in (exchanged) <i>costs</i>
SSNIP	Small but significant and non-transitory increase in price (test)
SSNIQ	Small but Significant and Non-transitory Decrease in Quality
TEU	Treat on European Union
TFEU	Treaty on the Functioning of the EU
US	United States of America

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND

Zero-price markets are markets where the price of the goods or services offered by the undertaking to consumers is set at a price of 0. Consumers are more frequently coming across goods or services provided for ‘free’. At least once per day, the consumer will be offered a product for the price of zero.¹ The offering of goods or services for free is not a new concept; historic examples include charity and radio. In a modern context zero-price markets are frequently observed, for example in shopping malls, credit cards and of course online.² Despite the existence of these kinds of markets for some time, as Newman notes “antitrust institutions are, at best, only beginning to wrestle with the unique issues presented by zero-price transactions”.³

The topic of data driven, digital, zero-price markets has been receiving increasing amounts of attention in recent years, receiving traction from important institutions such as the OECD and the Commission, as well as national competition law authorities and academics.⁴ Margrethe Vestager said in her 2018 press release speech regarding the fining of Google, “there ain’t no such thing as a free search”.⁵ In the context of the digital market, the forms and quantity of companies offering zero-price products and services has significantly grown hand in hand with the growth of the internet as well as leaps in software development.⁶ The number of firms providing services at ‘zero-price’ has exploded as well as having grown and diversified in terms of their occurrence and type.⁷ Zero-price firms can be observed on the internet and in significant market positions, for example, Facebook and Google. In the USA, the market capitalisation as of June 2020 of these two internet companies, which are two of the largest internet companies offering zero price goods, was a staggering 1.645 billion dollars.⁸ Globally, seven out of ten of the largest firms in the world are firms which are both operating in the digital market and offering their goods at zero-price.⁹

The provision of a product or service for free on the surface seems counterintuitive in terms of making money. The question is then, how do these undertaking make any money at all?

¹ See: OECD 2018 4; Evans 2011 1; Esayas 2018.

² Evans 2011 4.

³ Newman 2016 51.

⁴ See for example: OECD 2018; Crémer, Yves-Alexandre, and Schweitzer 2019; Autorité de la concurrence and Bundeskartellamt 2016.

⁵ A play on words on the famous saying ‘there aint no such thing as a free lunch’. Vestager 2018.

⁶ Ferro 2014 2.

⁷ Newman 2015 149-206, 151.

⁸ Statista 2020.

⁹ PriceWaterhouseCoopers 2020.

This question can be answered through an understanding of this market. It can be observed that the charging of zero is actually the strategy which makes the undertaking more money than if they charged for it.¹⁰ Logic follows then, that the undertakings must obtain a monetary benefit in some other way. In this respect, just because the consumer receives the good or service at the price of zero, does not mean that they are not paying for it, although not necessarily in monetary format. It is often said that the consumer pays to use these digital services with their person data, i.e., the currency.¹¹ Indeed, in the context of online transactions, it can be observed that essentially all transactions require at least some disclosure of personal data.¹² This personal data is highly valuable to undertakings, so much so that “...many companies are willing to forego monetary payment for their digital services in order to gain access to such data”.¹³ In this regard, the digital zero-price market differs somewhat from traditional markets in terms of what price is paid. For example, it is free to sign up to Facebook or to use Google. Once the user has signed up, the collection and analysis of data begins. Information is collected as the user interacts with the platform. Examples of such information are the location of the user, their interests, what they purchase and which advertisements they interact with.¹⁴ The companies over time build up a detailed profile of the users. A key aspect of this is then providing targeted advertising to the user. These advertisements form a part of the reason these services remain free as the advertisers pay for visibility on the platforms concerned.

Through paying for the ‘free’ content with their data and attention, consumers are potentially suffering serious competitive harms as well as being exposed to significant privacy concerns. For one, firms can exercise their market power in these markets by reducing the level of privacy protection which users have whilst using the product or service.²¹ To this end, Wasastjerna equates the consumers’ loss of privacy as the price paid for the ‘free’ goods in zero-price markets.²² I argue and will argue that this difference in the way competition takes place on zero-price markets as compared to traditional markets, necessitates a difference of approach by competition law. In particular by ensuring that the law captures these alternative competitive parameters of privacy, advertising, attention and data. It should be noted that I do not address the privacy concerns related to zero-price markets within this work due to

¹⁰ Evans 2011 4

¹¹ Wasastjerna 2020 77.

¹² Costa-Cabral and Lynskey 2017 12.

¹³ *ibid.*

¹⁴ Esayas 2018 182.

²¹ *ibid.*

²² Wasastjerna 2020 77.

word limitations. As such, the work is limited only to analysing the competition law issues. Privacy issues are mentioned only as illustrative points in respect to competition law.

The main question of this thesis essentially considers how EU competition law is currently treating zero-price markets. Is the law taking the appropriate approach? Should the law consider these kinds of markets at all, as there is no actual money passing between the hands of the consumer and the undertaking? Does the law have the appropriate tools to deal with these kinds of markets? These questions are more than just theoretical, having hugely significant implications for the market, consumers, undertakings and competition law. If zero-price markets are simply ignored, the law runs the risk of excluding an increasingly popular form of provision of goods and services from the protection of competition law. An entirely unregulated market runs the risk of allowing consumers to be seriously exploited by a monopolist and distorting the market for the zero-priced product, its related markets and the internal market as a whole. In this respect, potential practices indicating the lack of effective competition on the market concerned which may be witnessed could include excessive collection of data, reductions in quality of the product, and extremely high attention and information costs. In this sense, what I aim to argue is that there are differences between traditional markets and digital zero-price markets. This means that the law must be adapted to be inclusive of these differences at every level, to ensure that the law is effective, fair and achieves its aims in the context of zero-priced markets.

1.2 METHODOLOGY

My goal is to present a well-researched legal solution to the issue of zero-priced markets in EU competition law. This should not only present why the current situation is problematic, but also suggest new ways for the law to deal with the legal problems arising from the current situation. I will pay most consideration to EU law. As my focus is on EU competition law, I look to a number of sources, including the TFEU,²³ in particular Article 102. I will consider Commission decisions and CJEU cases. I also consider useful materials such as Commission publications.²⁴ I find it of use to consider national competition laws and policy, such as from the German Bundeskartellamt, and national laws which implement EU law.

The scope of this thesis is exclusively with respect to the EU, but for illustrative purposes references to the US and China will be made. I also look to American legal resources such as journals, and the Sherman Act. Although American and EU competition law have many

²³ Consolidated version of the Treaty on the Functioning of the European Union [2012] OJ 1 326/47 ('TFEU')

²⁴ For example: Cr mer, Yves-Alexandre, and Schweitzer 2019.

similarities, they are altogether quite different from each other in theoretical, economic and legal terms. I will most often use American secondary legal sources, as there is a larger wealth of legal and economic commentary. However, it is of course important to remember that the American approach is not entirely applicable to Europe and caution must be had to direct comparison. I shall also look to the SPC, in particular to a select few of guiding cases. A law and economics approach is utilised throughout this work. In particular, an economic underpinning and understanding of the market in the field of my analysis, that being the digital market, is helpful to understand competitive abuses, their prosecution and their resolution. It is also relevant to consider barriers to entry and expansion, as well as supply and demand. Another important economics concept relevant to my thesis is that of network effects. Network effects are where the users utility of a product increases as the number of users increase. There are several relevant economic concepts that I will make reference to within the scope of my work, including but not limited to, consumer welfare, market failure and the market structures of, perfect competition, monopoly, oligopoly and imperfect competition.²⁵

1.3 SCOPE AND STRUCTURE

The research question of this thesis is as follows:

Does European Competition law need to take a new approach to zero-price markets in the digital economy? – A study of the application of Article 102 to zero-price markets.

This work focuses on the application of Article 102. This is justified by the fact that firms offering zero-price goods or services are largely characterised by being in monopoly like (super) dominant market positions. The examination of other EU competition law provisions, such as Article 101, are out with the scope of this work. Additionally, I focus on multi-sided markets as the undertakings frequently provide two or multisided platforms in this sector and as such the markets are largely characterised by being two or multi-sided. As such this analysis provides, in my opinion, the best overview of the issues in the market concerned. Moreover, I choose to consider the *Google Search (Shopping)* case as it demonstrates EU competition law's treatment of zero-price markets. There are of course other cases which could be considered, but due to wording limitations I have chosen to focus on only one case in detail.

²⁵ Cooter and Ulen 2014 29, 32, 38-42.

Throughout this thesis I will highlight the special characteristics of zero-priced markets which necessitate a modification of the approach taken in competition law. Chapter 1 concerns the introduction to this work. It provides a brief overview of the content of this study, as well as the relevance of it. In Chapter 2, I provide an overview of the workings of Article 102 TFEU. I demonstrate how the law treats ‘traditional’ markets. Chapter 3 considers zero-priced markets in more detail. I address the question of whether Competition law should apply to zero-priced markets at all, different business models of undertakings operating in the zero-priced market, and finally the characteristics of competition in these markets. Chapter 4 looks at the *Google Search (Shopping)* case, simultaneously providing an overview of how EU competition law deals with zero-priced markets in the modern context, whilst also demonstrating the challenges of applying the law to zero-priced markets. Chapter 5 questions whether EU competition law’s tools are appropriate to dealing with these issues, and considers alternative tests and parameters which can be utilised to achieve more accurate results. Finally, Chapter 6 concludes with my answer to the research question.

CHAPTER 2: ARTICLE 102 AND THE APPROACH TO TRADITIONAL MARKETS

2.1 OVERVIEW OF EUROPEAN COMPETITION LAW

In the EU, the TFEU is the main source of competition law. The main provisions are Article 101 (i.e., the anti-cartel provision), Article 102 (i.e., the abuse of dominance provision), and Article 107, as well as the Merger Regulation, Regulation 1/2003,²⁶ and important cases such as *Courage v Crehan*.²⁷ The goal of EU competition law can be found in Protocol No. 27 on the internal market and competition annexed to the Treaties,²⁸ that is a to create “a system ensuring that competition is not distorted”.³⁰

European competition law is without one single aim as such. Instead, it encompasses the aim to protect and benefit consumers directly, as well as through the maintenance of an effective competitive structure in particular via Article 102, the loss of which would be detrimental to consumers.³¹ We can generally understand the benchmark of EU competition law to be that of consumer welfare, although this does refer to the entirety of users of a good or service, encompassing a broad range of users.³² In the context of EU law, the consumer is not just the final consumer. The concept also encompasses intermediate level consumers. For example, an intermediate consumer includes a manufacturer who utilises a product in the manufacturing process as an input.³³ The manufacturer uses the input, for example, wheat, in the manufacturing process to produce another good, for example, bread. Although the manufacturer is not the final consumer of a product (that would be the final consumer who buys the bread), he is the intermediate consumer of the wheat.

The discussion surrounding the digital market and the new economy in particular has led to a resurgence of questioning EU competition law’s goals. In particular, it is questioned how it is interpreted and applied with respect to these goals. Specific questions to consider in this novel context include how the relevant market is defined, methodologies, enforcement, costs of type-1 and type-2 errors,³⁴ market power, competitive harm, how quickly competition law

²⁶ Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty [2003] OJ 2 1/1.

²⁷ Case C-453/99 *Courage v Crehan* [2001] ECR I-06297.

²⁸ TFEU and Consolidated version of the Treaty on European Union [2008] OJ C115/1 (‘TEU’).

³⁰ Protocol No. 27 on the internal market and competition [2008] OJ C115/309.

³¹ Case C-280/08 P *Deutsche Telekom v Commission* [2010] ECR I-09555 para 182.

³² *ibid.*

³³ Crémer, Yves-Alexandre, and Schweitzer 2019 41.

³⁴ A type 1 error is a false positive and a type-2 error is a false negative.

can adapt to industries which develop at an extremely high pace, if competition law policy should adapt to include other public policy goals such as data protection, and if so how.³⁵

Despite the peculiarities of the digital and new economy markets, it is now generally accepted that competition law can and should apply to them. It is, however, debated if competition law should apply to digital markets *in the same way* i.e., should it be altered to accommodate dynamic competition so that incentives to innovate are not hampered by the law? For example, it has been argued that in high-tech markets there is no need for competition law to apply because of the speed of technological process and alleged low barriers to entry making market power precarious.³⁶ However, this is not a view which is shared by the European Commission nor I. Some have argued that digital market should have their own specialised regulation.³⁷ What I argue is due to the significant differences between digital and traditional markets and in the context of the zero-price markets, this requires the law to be adapted and modified in respect of the “concepts, doctrines and methodologies, and competition law enforcement”³⁸ to ensure their appropriateness.

2.2 OVERVIEW OF ARTICLE 102 TFEU

Article 102 TFEU³⁹ is the EU’s abuse of a dominant position provision. The article seeks to ensure that undertakings in a dominant position do not use this position to negatively impact competition in the internal market. Below, I discuss the stages of an Article 102 analysis by the Commission. To summarise, it must first be found if the undertaking is dominant in the relevant market concerned. It should be stressed that the holding of a dominant position is not in itself illegal under Article 102 TFEU. It must then be found whether the undertaking has in fact committed an abuse of the dominant position, which is what Article 102 prohibits. In order, I will describe the five elements which must be established for Article 102 to be applicable. These are “one or more undertakings; a dominant position; the dominant position must be held within the internal market or a substantial part of it; an abuse; and an effect on inter-State trade”.⁴¹ In respect of undertaking an investigation into an undertaking under Article 102, the Commission may decide to act by itself, or upon the receipt of a complaint.⁴²

³⁵ Crémer, Yves-Alexandre, and Schweitzer 2019 39.

³⁶ Jones and Suffrin 2016 50.

³⁷ *ibid.*

³⁸ Crémer, Yves-Alexandre, and Schweitzer 2019 39.

³⁹ Previously Article 82.

⁴¹ Jones and Suffrin 2016 259.

⁴² Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty [2003] OJ 2 1/1 arts 13 and 17.

It should be noted that the aims and application of Article 102 have been criticised in the past, mainly for its apparent use in protecting (inefficient) competitors as opposed to the competitive process. The Commission and the CJEU steadfastly hold that the law is intended to protect competition. Neelie Kroes stated that, “[f]irst, it is competition, and not competitors, that is to be protected. Second, ultimately the aim is to avoid consumers harm”.⁴³ This view is confirmed by the Commission in their Guidance,⁴⁴ as well as by the CJEU who stated in *Deutsche Telekom*⁴⁵ that “Article [102 TFEU] prohibits a dominant undertaking from, inter alia, adopting pricing practices which have an exclusionary effect on its equally efficient actual or potential competitors”.⁴⁶ As such, it can be generally concluded the aim and purpose of Article 102 is to protect the competitive process and consumer welfare.

2.3 DOMINANCE

When undertaking an Article 102 case, the Commission’s first step is to find whether an undertaking is dominant on a certain market. Before this is done, the Commission defines the product and geographical market (and of occasion the temporal market, as discussed below in Section 2.4). The *United Brands*⁴⁷ case defined dominance in EU law under Article 102, with the CJEU stating dominance is when an undertaking has such a position of economic power that it can act independently of consumers and competitors, and has the power to prevent effective competition taking part on the relevant market. In assessing dominance in the EU, typically a dominant position will be found with a market share of over 40%, and a super dominant position with shares of over 70%.⁴⁸ There is a presumption that shares of over 50% in the relevant market indicate dominance, but a share of less than 40% could still indicate dominance in the EU.⁴⁹ It must be stressed that what is illegal is not the holding of a dominant position, but an abuse of it. Dominant undertakings have a special responsibility upon them “to ensure that its conduct does not distort competition”⁵⁰ because of their market power, on both the markets they operate on and related ones. This precludes the dominant firm from certain actions, for example, charging excessive prices. Although

⁴³ Kroes 2005; see also Lowe 2008.

⁴⁴ Communication from the Commission — Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings [2009] OJ 45/7 (hereby ‘Guidance’) para 5-6.

⁴⁵ Case C-280/08 P *Deutsche Telekom v Commission* [2010] ECR I-09555.

⁴⁶ *ibid* para 177.

⁴⁷ Case 27/76 *United Brands v Commission* [1978] ECR II-22.

⁴⁸ Dethmers 2017 147-149.

⁴⁹ Guidance para 14.

⁵⁰ *ibid* para 1.

the Commission considers market share as a good first indication of dominance, they also consider other factors such as barriers to entry and the vertical integration of the undertaking.

2.3.1 Undertaking

The concept of undertaking under Article 102 is understood in the same way as Article 101 TFEU. It applies to any undertaking engaged in an economic activity, this being interpreted broadly and regardless of its legal status and its mode of financing.⁵¹ It is irrelevant if the undertaking concerned has a profit-making goal in mind.⁵² An economic activity is considered “any activity consisting in offering goods or services on a given market”.⁵³

In the context of the zero-price market, an additional distinction must be made with respect to the economic activity criterion. Although it has not been explicitly noted by the CJEU, Ferro argues that it is clear that EU competition law is not applicable to what he calls “truly gratuitous exchanges”.⁵⁴ By gratuitous, a further distinction must be made between those products or services which are gratuitous and funded by a non-commercial activity, such as a charity giving away something for free, and those which are gratuitous but are funded by a commercial activity.⁵⁵ The latter situation would include the multisided platform where the free good is cross subsidised by a paid advertising side.

It would seem that EU competition law is probably not applicable to those situations which are truly gratuitous and funded by a non-commercial activity. In past case law, it has been suggested that a product which is actually paid for in another way, i.e., it is not truly gratuitous, is enough to make competition law apply. For example, in *Microsoft*,⁵⁶ the General Court noted that although “Microsoft does not charge a separate price for Windows Media Player, it cannot be inferred that the media player is provided free of charge”.⁵⁷ Microsoft’s Media player which was integrated into Microsoft computers. As such, even though it was technically free, it was in fact tied to the paid product, enough to incur the application of competition law.

It should be further noted that the supply of goods for free can in fact have some degree of effect on a market and as such on competition, even if it is for a charitable reason.⁵⁸ An

⁵¹ C Case C-41/90 *Höfnér and Elser v Macrotron GmbH* [1991] ECR I-1979 para 21.

⁵² Case C-437/09 *AG2R Prévoyance v Beaudout Père et Fils SARL* [2011] ECR I-00973 paras 40–41.

⁵³ Case 118/85 *Commission v Italy* [1987] EU:C:1987:283 para 7.

⁵⁴ Ferro 2019 259.

⁵⁵ Ferro 2019 258-259

⁵⁶ Case T-201/04 *Microsoft v Commission* [2007] ECR II-03601.

⁵⁷ *ibid* para 968.

⁵⁸ Ferro 2019 260.

example of a charity effecting the market could include: if two charities agreed to boycott certain companies or, in the context of a trade association, the charity could attract liability if it acts as a facilitator of a meeting between competing companies and those companies create an anticompetitive agreement.⁵⁹ Additionally, case law establishes that it is not the “absence of effects on markets, nor lack of profit motive, nor the goal being pursued⁶⁰ (in itself) that justify [the exclusion] from the scope of competition law”.⁶¹ However, an entirely non-commercially subsidised product/service would seem to make the supply of the product/service non-economic and as such not subject to competition law.

2.4 MARKET DEFINITION

It is of key importance that the market concerned be correctly defined when analysing whether there has an infringement of Article 102. The Commission will consider the product and geographical market, and of occasion the temporal market. When considering the relevant market, the Commission consider products or services which are “of the market comprising the totality of the products or services which, with respect to their characteristics, are particularly suitable for satisfying constant needs and are only to a limited extent interchangeable with other products or services”.⁶² The Commission also considers the conditions of competition and of supply and demand in the market concerned as it is useful to consider further than just the objective characteristics of the good/service.⁶³

The next Sections discuss this essential aspect of competition law analysis, the definition of the market. This includes a definition of the product, geographical and temporal market. I consider first the product market, including the general tool to define it, the SSNIP test. This includes reflecting on its challenges, in particular the cellophane fallacy. Then, the geographical and temporal market are discussed. I aim to provide an effective overview of the market definition, a crucial aspect of an Article 102 infringement.

2.4.1 Product Market

The first market the Commission consider under Article 102 is the product market. The relevant product market is considered with respect to interchangeability of products and/or

⁵⁹ Advocates for International Development 2016 4.

⁶⁰ Case C-309/99 *Wouters and others* [2002] ECR I-01577 para 58; Case C-437/09 *AG2R Prévoyance v Beaudout Père et Fils SARL* [2011] ECR I-00973 para 45.

⁶¹ *Ferro* 2019 260.

⁶² Case T-229/94 *Deutsche Bahn v Commission* [1997] ECR II-01689 para 54; Case T-219/99 *British Airways v Commission* [2003] ECR II-05917 para 91; Case C-457/10 P *AstraZeneca v Commission* [2012] EU:C:2012:770 para 31.

⁶³ Case C-322/81 *NV Nederlandsche Banden Industrie Michelin v Commission* [1983] EU:C:1983:313 para 37; Case T-556/08 *Slovenská Pošta v Commission* [2015] EU:T:2015:189 para 112; Commission Notice on the definition of relevant market for the purposes of Community competition law [1997] OJ 372/5 (hereby ‘Commission Notice’) para 5.

services, in particular, all products and/or services which the consumer would consider to be interchangeable or substitutable with the products and/or services concerned. This is with reference to the intended use of the products and/or services, their price and their characteristics.⁶⁴ The Commission Notice and CJEU confirm that the key criterion of the product market assessment is interchangeability.⁶⁵ As such, products and/or services which are considered by the consumer to be interchangeable will be included in the product market. The Commission considers the market with respect to both the supply and demand sides, with “demand substitutability, supply substitutability and potential competition” providing the three forms of competitive constraint on undertakings.⁶⁶ Demand substitutability is considered to be the most immediate form of competitive restraint imposed on the undertaking with respect to an economic viewpoint on defining the relevant market.⁶⁷ On the other hand, supply side substitutability is considered when suppliers can switch the production of a product, without the risk that the supplier will incur large costs with respect to marketing or in respect of a small increase in price.⁶⁹ The Commission consider the extent to which the product or service is distinct as measured by reference to customer demand. They consider multiple factors including: “the nature and technical features of the products or services concerned, the facts observed on the market, the history of the development of the products or services concerned and also the undertaking’s commercial practice”.⁷⁰

It is established law that an economic activity can still be established despite the fact that a product/service is offered at zero price.⁷² In this respect, it is merely a factor which will be included within the assessment of dominance. Finally, the Commission can take a flexible approach and include various evidence and information in their assessment, as well as considering different tools and undertaking an ‘overall’ assessment.⁷³

2.4.1.1 THE SSNIP TEST

The SSNIP test⁷⁴ is a quantitative method of analysis used to measure substitutability and can be used to measure the substitutability of products. It is used in defining the relevant

⁶⁴ Commission Notice para 7.

⁶⁵ *ibid* 5–13.

⁶⁶ Craig and de Burca 2011 1012.

⁶⁷ Commission Notice para 13.

⁶⁹ *ibid* para 20.

⁷⁰ Case T-201/04 *Microsoft v Commission* [2007] ECR II-03601 paras 917, 925.

⁷² Case T-201/04 *Microsoft v Commission* [2007] ECR II-03601 para 966-970; Case T-79/12 *Cisco Systems, Inc. and Messagenet SpA v Commission* [2013] EU:T:2013:635 para 65-74.

⁷³ Case T-342/07 *Ryanair v Commission* [2010] ECR II-03457 para 136; Case T-175/12 *Deutsche Börse v Commission* [2015] EU:T:2015:148 para 133; Case T-699/14 *Topps Europe v Commission* [2017] ECLI:EU:T:2017:2 para 82.

⁷⁴ Also known as ‘the hypothetical monopolist test’

market in EU competition law.⁷⁵ The SSNIP test works by evaluating the reaction of consumers if there is a hypothetical non-transitory small increase of price of product (A), i.e., from 5 to 10% by the hypothetical monopolist. This allows an understanding of the demand-side and supply-side response to this increase in price. The question is whether this increase in price will cause the consumers to switch to a different product (B), showing if the price increase would be unsustainable. If there is a high degree of cross-elasticity, the increase in price will lead to the consumers switching to the alternative product B, and the existence of high-cross elasticity would show that product A and B are in the same market.

Consider the case of *United Brands* where the Commission took a strict view of the product market, defining the product market as only bananas, not fruit generally. This narrow definition was supported by the CJEU. It was concluded that there was only little substitutability between bananas and other kinds of fresh fruits because of the unique characteristics of bananas, including for example, their softness, taste and lack of seeds among other things.⁷⁶ The SSNIP test can also be applied to the geographical market. Essentially, the question is whether the increase in price would lead consumers to switch to alternative supplier in another area. For example, would the increase in price lead the consumers to travel from the Netherlands to Belgium to buy their bananas?

2.4.1.2 THE CELLOPHANE FALLACY

The SSNIP test faces a major drawback in that the test cannot recognise if the price which is currently being charged for product (A) is already a monopoly price as a result of the exercise of market power by the undertaking.⁷⁷ This is known as the ‘cellophane fallacy’. The inherent issue here, is that the profit maximising firm will always seek to put the price for a product as high as possible.⁷⁸ The cellophane fallacy can be demonstrated by the *Du Pont*⁷⁹ case. In *Du Pont*, the SCOTUS erroneously accepted the argument that cellophane was in direct competition with other flexible packaging materials, including aluminium and wax paper. Cellophane was in fact not, due to key differences in product features, i.e., cellophane had the unique property of allowing the consumer to see the product which they were purchasing. The SCOTUS found that other flexible packaging materials competed with cellophane at the price which cellophane was currently sold at, but did not consider whether

⁷⁵ Commission Notice para 15.

⁷⁶ Case 27/76 *United Brands v Commission* [1978] ECR II-22.

⁷⁷ Jones and Suffrin 2016 65.

⁷⁸ *ibid.*

⁷⁹ *United States v El du Pont de Nemours & Co* (1956) 351 US 377.

there was a high degree of cross elasticity because Du Pont was already exercising its market power and charging a very high price for cellophane. Du Pont was charging the monopoly price and receiving the monopoly profit. The price is at this point so high that customers were very willing to switch to another product, even though they were not good substitutes. As such, the cross elasticity is artificially high suggesting a high degree of substitutability and an overly broad market, due to the charging of monopoly price. This has also been recognised as a problem by the Commission Notice. It states that the SNNIP test is not appropriate in the case where the price of the product concerned has been set in a context which is absent of competition.⁸⁰ This is particularly relevant in digital zero-priced markets as many of the undertakings are in positions of super dominance, meaning that they can potentially set a monopoly ‘price’ in absence of any real competition.

2.4.2 Geographical Market

The second market the Commission consider under Article 102 is the geographical market. This concerns the area where the undertakings are participating in the supply and demand of the product and/or service under consideration. This requires that in this area there are homogenous conditions of competition. The area must also have an appreciably different set of competitive conditions to its neighbours, so that the areas can be distinguished on this fact.⁸¹ The Commission's *Notice on the Definition of the Relevant Market* explains in depth how the geographical market is decided. It looks to broad indications based on the distribution of market shares between the undertaking concerned and their competitors, as well as the price and price differences at national, community or EEA level.⁸² The Commission utilises the SSNIP test to determine the geographical market. For example in *United Brands*, the markets of the UK, France and Italy were excluded, and dominance was found in the geographic market of the then remaining 6 Member States.⁸³

The definition of the geographical market in the past has faced some criticisms, particularly in that the market has been defined too narrowly and has not given appropriate weight to the substitutability between different geographical areas. This is particularly relevant in the modern context of digital markets, where it has been argued that continuing globalisation and the internet can potentially make a worldwide market. Commissioner Almunia had considered this issue in the past, noting that the European approach to market definition has

⁸⁰ Jones and Suffrin 2016 66.

⁸¹ Commission Notice para 8.

⁸² *ibid* para 28.

⁸³ Case 27/76 *United Brands v Commission* [1978] ECR II-22 paras 36-38, 40, 47-51.

become “EU-wide if not worldwide”, but that “globalisation [does not make] all markets automatically worldwide”.⁸⁴

2.4.3 Temporal Market

The third market the Commission may consider with respect to market definition under Article 102 is the temporal market. The temporal market does not often feature in the considerations of markets and is not referred to as a separate consideration in the Commission Notice. The temporal market refers to the changes in the market over time. It is often not a feature of a market analysis, and if it is it is usually an inherent feature of the product market.⁸⁵ An example of a temporal market could be that lifeguards are highly requested in European market during the summer, but during the winter demand for them decreases significantly as people are not going swimming.

2.5 MARKET POWER

Following the establishment of the relevant market concerned, the next stage of the Article 102 analysis is to find the extent of the market power of the undertaking concerned. This allows them to determine whether the undertaking is dominant or not. Several things will be considered in the establishment of market power, including market shares, barriers to entry and expansion, and countervailing buyer power among other factors.⁸⁶ It is very rare that an undertaking would have 100% of the shares in the market, essentially only found when a statutory monopoly is present. A high amount of market shares does also not truly say what competitive conditions undertaking face in this market nor if a position which tends towards monopoly is indeed the most efficient form in the market. The following Sections discuss these elements which are present in a Commission analysis of market power. I focus first on the benchmark of market shares, then barriers to entry and expansion, and finally on countervailing market power. The presence of one or even all these elements does not necessarily mean that an undertaking will be found to be dominant. It is a question of both degrees and how these elements interact with each other to either enforce or make contestable an undertakings market power.

⁸⁴ Alumnia 2011.

⁸⁵ Jones and Suffrin 2016 79.

⁸⁶ Jones and Suffrin 2016 321-343; Commission Notice para 12.

2.5.1 Market Share

In EU law, settled case law dictates that an analysis of market power under Article 102 always begins with an assessment of the market share of the undertaking concerned.⁸⁷ The calculation of market share is discussed in the Commission Notice.⁸⁸ The general approach is to calculate, based on the relevant product and geographical market, sales of the product in the relevant area. Additional considerations may be included due to the specifics of the market, as well as reference to both volume and value sales. For example, market share has been found before based on the number of people who were subscribed to an internet provider service.⁸⁹

The EU position is to essentially find a dominant position with a market share of over 40%, and a super dominant position with shares of over 70%.⁹⁰ Additionally, there is a presumption that shares of over 50% in the relevant market indicate dominance.⁹¹ The CJEU has recognised that the importance of market shares will vary depending on the nature of the market, but qualified this statement by noting that when an undertaking holds very high shares over a long time this will show dominance except in “exceptional circumstances”.⁹² The EU position of relying on market share to indicate dominance has been criticised. It is argued market shares alone are not enough to truly indicate if an undertaking is dominant. Economic theory dictates that high market shares can only show dominance in the face of high barriers to entry in the market concerned. Moreover, the definition of the relevant market is crucial to the proper analysis of market share; and market definition is not an exact art. Finally, and important in regards this thesis, market shares are problematic in the context of the new economy because as they are characterised by being dynamically competitive.⁹³ Market shares are arguably an inappropriate measure as they present a static image as opposed to capturing the dynamisms of market power in these markets. As the zero-price markets this thesis focuses on operate in the new economy, this is highly relevant to consider when undertaking a market analysis.

⁸⁷ Case 85/76 *Hoffmann-La Roche & Co AG v Commission* [1979] ECR 461.

⁸⁸ Commission Notice paras 53-55.

⁸⁹ *Wanadoo Interactive* (Case COMP/38.233) Commission Decision [2003] OJ C 289/34.

⁹⁰ Dethmers 2017 149.

⁹¹ Guidance para 40; Case C-250/92 *Gottrup Klim v KLG* [1994] ECR I-5641.

⁹² Case 85/76 *Hoffmann-La Roche & Co AG v Commission* [1979] ECR 461 para 41; Case C-457/10 P *AstraZeneca v Commission* [2012] EU:C:2012:770 para 176.

⁹³ Jones and Suffrin 2016 344.

2.5.2 Barriers To Entry and Expansion

Barriers to entry and expansion are also important when assessing dominance under Article 102. This is because the presence of barriers prevents competitors from entering or from expanding within the market to compete with the incumbent. Examples of barriers to entry and expansion are given in the Commission’s Guidance Paper on Article 82, and include legal barriers, barriers which the incumbent enjoys such as economies of scale and access to technology, network effects, switching costs of consumers and the conduct of the dominant undertaking.⁹⁵ Barriers will also only be considered to potentially effect dominance if they are “likely, timely and significant”.⁹⁶ Some particular barriers which have indicated dominance include: “economies of scale, sunk costs, investment needs, regulatory barriers, intellectual property rights, superior technology, established distribution and sales networks, vertical integration, advertising and reputation and being an unavoidable trading partner”.⁹⁷

2.5.3 Countervailing Buyer Power

The Guidance Paper on Article 82 notes that customers may exert a competitive constraint over a dominant undertaking. This represents the final factor to consider in a market power assessment, countervailing buyer power.⁹⁸ This can be understood with reference to the understanding of a dominant position. An undertaking with the ability to act independently from consumers is indicative of dominance; conversely if a powerful buyer has power over the undertaking it may indicate that it is not dominant.⁹⁹ The strength of the buyer can mean that the undertaking is not successfully able to increase prices or easily switch to an alternative supplier. It must be noted, however, that the buyer must be able to effectively protect competition on the market through their strength. It is not enough that the buyer can merely obtain a favourable deal for themselves with the dominant undertaking.¹⁰⁰

2.6 ABUSIVE CONDUCT

Once it has been established that an undertaking holds a dominant position on the market concerned, it must be assessed if there has been an abuse of this position. Under Article 102 it is not the holding of a dominant position which is illegal, but the abuse of it. In EU law, dominant undertakings have a special responsibility placed upon them “not to allow their

⁹⁵ Guidance para 17.

⁹⁶ *ibid* para 16.

⁹⁷ Jones and Suffrin 2016 337-342.

⁹⁸ Guidance para 18.

⁹⁹ Case 85/76 *Hoffmann-La Roche & Co AG v Commission* [1979] ECR 461 para 38; Case T-228/97 *Irish Sugar* [1999] ECR II-2969 para 97-104.

¹⁰⁰ Guidance para 18; Jones and Suffrin 2016 343.

conduct to impair undistorted competition on the internal market”.¹⁰¹ In *Hoffmann-la Roche* the CJEU discussed abuse as a concept further, noting that this is:

An objective concept relating to the behaviour of an undertaking in a dominant position which is such as to influence the structure of a market... [and that through] recourse to methods different from those which condition normal competition ... has the effect of hindering the maintenance of the degree of competition still existing in the market or the growth of that competition.¹⁰³

This outlines the idea that dominant undertakings must engage in ‘normal competition’, meaning that dominant undertakings should undertake in ‘competition on the merits’ as opposed to abnormal competition not on the merits.¹⁰⁴ Examples of competition on the merits include the offering of better-quality products and lower prices.¹⁰⁵ Moreover, dominant firms have upon them a duty which non-dominant firms do not have. Super dominant firms have an even greater responsibility placed upon them, and are even more likely to be found to have abused their dominant position than merely dominant ones.¹⁰⁶ Super-dominant firms may also be prohibited from undertaking a specific course of conduct which a non-dominant undertaking would be allowed to undertake. This means that due to their market power, they are more limited in the market actions that they can undertake when compared with dominant firms and firms which do not have a position of dominance.¹⁰⁷

Article 102 does not define abuse, there is no complete list of all the potentially abusive conduct nor any formula in either economics or law which is able to determine what is abusive conduct as opposed to a competitive strategy by the undertaking concerned. Abuses can be either exclusionary, where the dominant undertaking restricts competition and seeks to exclude its competitors from the market, or exclusionary, where the undertaking concerned takes advantage of the lack of competition of the market concerned, imposing prices or terms which are unfair.¹⁰⁸ Article 102 provides a non-exhaustive list of conduct which may be considered an abuse, for example “directly or indirectly imposing unfair

¹⁰¹ Case 322/81 *Michelin v Commission* [1983] ECR 3461; Whish and Bailey 2012 192.

¹⁰³ Case 85/76 *Hoffmann-La Roche & Co AG v Commission* [1979] ECR 461 para 91.

¹⁰⁴ Whish and Bailey 2012 198.

¹⁰⁵ Guidance para 5.

¹⁰⁶ Craig and de Burca 2011 184, 1025.

¹⁰⁷ *ibid.*

¹⁰⁸ Temple Lang 2016 243.

purchase or selling prices or other unfair trading conditions”.¹⁰⁹ Abuses have often been found in practices outside this list.¹¹⁰

Finally, it must also be asked if there is an objective justification. If an objective justification is found, Article 102 will not be considered infringed. This defence is rarely successfully invoked.¹¹² Examples of when it has been found to apply include public interest, when non-competitive aims are considered to be more important than that the application of Article 102, or when consumer welfare receives a net benefit from the conduct ‘efficiency’.¹¹³

2.7 CONCLUDING REMARKS

In this chapter, I have sought to provide a brief overview of EU competition law, Article 102 and the elements which must be established for the Article 102 prohibition to be applicable. The stages of an Article 102 analysis by the Commission has many factors, and the establishment of an abuse is by no means an exact science. The Commission must consider many aspects and how they interact with one another, all with potentially differing amounts of influence. No Article 102 case is the same as no undertaking is faced with the same market conditions or market power. Altogether this means that Article 102 has a certain amount of flexibility with how it can be applied. Moreover, the fact that the approach taken is economic means that in theory, Article 102 can adapt to novel market types and abuses by considering factors like barriers to entry and expansion, as opposed to focusing on rigid legal definitions. At the same time, case law and Commission guidance provides a certain amount of predictability to undertakings on the market, at least in traditional cases and in markets where competition law has previously been applied. The question, then, is how do these principles and framework of law work in the context of zero-price markets? Are they able to adapt to create correct legal outcomes? Can they ensure the protection of consumer welfare and competition effectively? Are they able to encompass the relevant market quirks which make these markets different from traditional ones? This is the focus of the following Sections.

¹⁰⁹ TFEU art 102 (a)-(d).

¹¹⁰ See e.g. *AstraZeneca* (Case COMP/A.37.507/F3) Commission Decision 2006/857/EC [2005] OJ L332/24 where the two abuses found were the misuse of the patent system and the abuse of the market authorisation procedure for patents.

¹¹² Fernández 2019 6.

¹¹³ Van de Vijer 2012 1.

CHAPTER 3: STRUCTURE OF THE ZERO-PRICE MARKET

Zero-price markets are quite different from the markets from which competition law which the current law is based upon.¹¹⁴ This discussion involves an analysis of the competitive characteristics of this form of market as well as its challenges. Structurally digital zero-price markets have some distinctive features. Dominance is held by few undertakings in a highly entrenched position due to their ownership of essential gateways. There is strong vertical integration between these firms with companies who engage in the business of monetisation of data.¹¹⁵ Behaviourally these markets can fall foul of effective competition and go towards a dysfunctional market equilibrium as consumers have very little power over the companies, for example, regarding their privacy concerns. This can have knock-on effects regarding the supply of firms which provide, for example, effective privacy protection on the market.

In this Chapter, I first discuss the special characteristics of zero-priced markets. The digital nature of these markets, network effects and the zero-price effect are all factors among others that demonstrate that zero-price markets differ significantly from traditional market types. Then I consider business models which are used in these markets, discussing in detail two and multisided markets. I consider the potential negative competitive practices which occur. I then discuss the theoretical and historical background to the application of competition law to zero-priced markets. This includes a discussion of the nature of competition on these markets, including non-price competition and markets for attention.

3.1 SPECIAL CHARACTERISTICS OF ZERO-PRICE MARKETS AND THEIR IMPLICATIONS

3.1.1 Impact of the Digital Nature of the Market

Many zero-price markets operate within ‘new economy’ markets. Therefore, it is crucial to understand what makes zero-price markets in the digital economy different from the typical markets that competition law deals with. Then the current approach of the law can be assessed in its efficacy and improvements can be made to the future application of the law. The internet and its growth has led to ‘disruptive innovation’ throughout the economy, in particular with respect to media, retail, advertising and communications.¹¹⁸ In general, the markets and business models now made possible thanks to the advent of the internet are characterised by near constant innovation, with new undertakings constantly developing and overtaking current market leaders. Not only this, but new markets can be created in a short

¹¹⁴ Newman 2015 154.

¹¹⁵ Esayas 2018 186.

¹¹⁸ Dolmans and Leyden 2012 1.

time period, thus making old products quickly become irrelevant. As such, it is critical to consider the dynamism of digital markets. This is not to say that the presence of this innovation means that monopoly positions cannot be found, it just must be considered on a case-by-case basis how innovation effects the market concerned.¹¹⁹

Significant supply side and demand side economies of scale are often present due to the network effects, low incremental costs and high upfront costs in production processes in this market type.¹²⁰ Moreover due to the digital nature of these platforms, they are likely to generate high economies of scale. This is because when the platform is set up and brought into operation, there are high fixed costs but low variable costs.¹²¹ Moreover, this effect increases as the firm becomes more specialised and obtains sector specific knowledge as opposed to new firms which have to learn it.¹²² Businesses operating within the digital economy are more and more integrated, increasing direct and indirect network effects as well as externalities.¹²³ Network effects are discussed in detail in Section 3.1.2. The concept of market equilibrium is challenged by the dynamisms of these markets, with positive feedback effects causing significant amplification of changes within them.

Another important aspect in digital zero-price markets is data, which is discussed in further detail in Section 3.3.2.3 below. For now, it is enough to say that the collection of customer data and data of third parties acts as a significant source of information and profit for undertakings operating in this sector.¹²⁴ Data collection, digitalisation and the exploitation of data for products are now a massive sector of the economy, with many products themselves being based exclusively on data. Data can represent market power in the market concerned, in particular due to it potentially representing a barrier to entry,¹²⁵ although it is important to consider the specificities of the market concerned. The German Bundeskartellamt notes that the holding of data does not *per se* indicate market power, but it can be indicative of it. As such, it must be assessed in each case “which data are collected, what their relevance for competition in the market is, whether they can be duplicated and whether it is possible for a business to pool data from different sources and commercialise them.”¹²⁶

¹¹⁹ Bundeskartellamt ‘Working Paper Market Power of Platforms and Networks’ 2016 3.

¹²⁰ Johannes Bauer and Michael Latzer ‘The economics of the Internet: an Overview’ in Bauer and Latzer, 3.

¹²¹ Bundeskartellamt ‘Working Paper Market Power of Platforms and Networks’ 2016 3.

¹²² *ibid.*

¹²³ Johannes Bauer and Michael Latzer ‘The economics of the Internet: an Overview’ in Bauer and Latzer 2016 3.

¹²⁴ Bundeskartellamt ‘Working Paper Market Power of Platforms and Networks’ 2016 3.

¹²⁵ Particularly in markets characterised by network effects. *ibid* 4.

¹²⁶ *ibid* 3.

Then, there are several distinguishing features of the undertakings which operate in the digital market. For one, many of these firms are in a monopoly market position, and the market is distinguished as such.¹²⁷ Consider, for example, Google's dominance as a search engine provider, alongside the existence of other search engines such as Bing and Yahoo!. Search engines are some of the most important webpages on the internet. They are some of the most visited web pages, with users finding large amounts of information with them.¹²⁸ Other well-known forms of zero-price market are social media networks, for example, Facebook and Instagram. Social media as a market form has been evolving over the years, with sites such as Facebook now providing services like the marketplace to sell and purchase goods, as a news source, and an advertising platform for goods and services.

These factors together demonstrate how the digital nature of zero-priced markets makes them significantly different from traditional market types. This has a noteworthy impact on the nature of competition that takes place. Moreover, the growth in number of undertakings in this market, and their increasing market power, demonstrates that it is essential for competition law authorities to take notice and adapt the law to these special market features.

3.1.2 Network Effects and Multi-Sided Markets

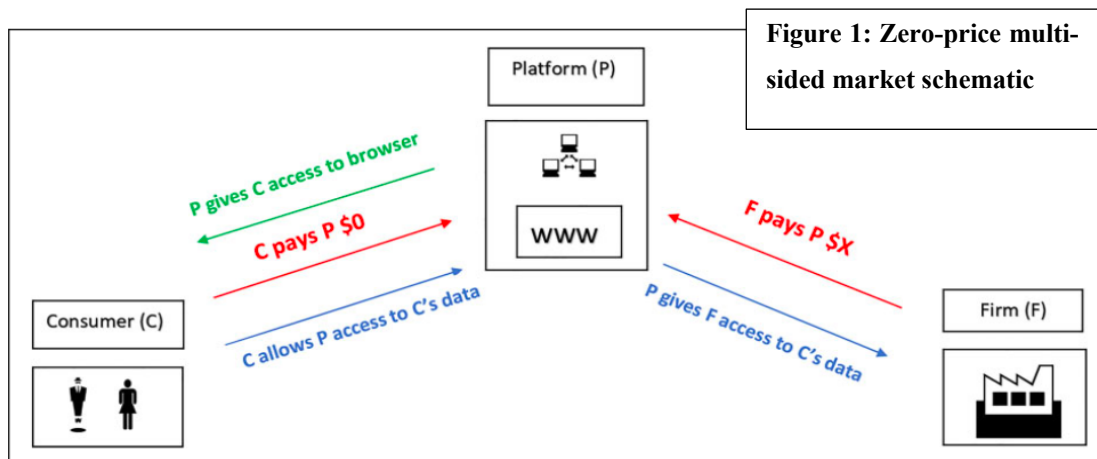
Following on from the impact the digital nature of this market has, I now consider multi-sided markets. Multi-sided markets or markets which are very closely related are a very common feature in the context of the digital zero price market. Generally, a multisided market exists when there are two or more user groups which are distinct, when the value for one of the user groups increases as the alternate user group either increases in number or quality, and finally if it is necessary to have an intermediary platform which internalises the externalities which one user group creates for the other user group.¹²⁹ The workings of a zero-price multi-sided market are presented in Figure 1 below.¹³⁰

¹²⁷ Jarman and Örsal 2014 317.

¹²⁸ Telang and Mukhopadhyay 2004 137–160.

¹²⁹ OECD 2010 17.

¹³⁰ Schematic from Jarman and Örsal 2014 316.



Examples of well-known multi-sided platforms are eBay, Facebook, and Google search. Essentially all of the goods or services provided at zero-price in the digital economy are in the form of a multi-sided market. Multi-sided markets can be transactional, for example, eBay. Here, the platform brings together groups of consumers and allows them to transact with each other directly. These platforms can also be non-transactional, where the groups do not directly transact with one another, for example, Facebook, where the users interact with one another but do not interact with the advertisers using their data directly.¹³¹ The multisided market can be distinguished from traditional single sided markets as its users are interdependent, whereas in traditional single sided markets they are not.¹³² The relationship to be found between the users of the platform can take on essentially any form, for example, being economic or social.¹³³

The zero-price markets can be further distinguished from traditional markets by the network structure which they generate. In the traditional economic model, the value a consumer attributes to a product are in ‘isolation’,¹³⁴ without dependence on other consumers attribution of value to the product. Moreover, the consumer who utilises the product does so to the exclusion of utility of any other consumer using said product. The product supplier then allocates a price of the product based on the independent demand of consumers to obtain this product.¹³⁵ On the other hand, a network market is when a product or service becomes more valuable to a user as the number of other users increases – the value is dependent upon the other users of the product.¹³⁶ The network effect is when “the net value of an action

¹³¹ Jones and Suffrin 2016 49.

¹³² *Microsoft/Yahoo! Search Business* (Case COMP/M.5727) Commission decision [2010] OJ C20/32 para 47.

¹³³ McIntyre and Srinivasan 2016 141–160.

¹³⁴ Katz and Shapiro 1994 93–115.

¹³⁵ Jarman and Örsal 2014 318.

¹³⁶ Whish and Bailey 2015 12.

(consuming a good, subscribing to telephone service) is affected by the number of agents taking equivalent actions".¹³⁷ One example is a payment network, where value increases to consumers as usage increases.

Network effects can be further distinguished by being direct or indirect, and both can be positive and negative. Direct network effects are when the value of the product corresponds to the number of users that it has, as is the case in social media platforms. Direct network effect denote that there is a benefit to users on the same side of the network because of the higher number of users.¹³⁸ On the other hand, indirect network effects are when the value of a complementary product increases as the usage of a product, such as in operating systems and software systems.¹³⁹ This can correspondingly be viewed as users on one side of the network benefitting from users on the other side of the network.¹⁴⁰ Additionally, two or multi-sided markets in the digital economy are largely characterised as having indirect network effects. Companies who are the providers of the market seemingly benefit not from the users of the market, but from the side of the market with the advertising.¹⁴¹

Most of the undertakings which operate in zero-price markets gain huge benefits very easily from positive network effects because of the digital nature of the market concerned. Here it is important to note that if the undertaking is providing such services on the internet, it is basically costless to the undertaking for more users to benefit whilst simultaneously causing the undertakings platform to grow exponentially. In this respect, network effects can represent a positive outcome for consumers and as such for competition because consumers receive more benefits and value as the number of users increases. Network effects can also be positive for new participants in the market in the case that they allow the undertaking to rapidly obtain many new users.¹⁴²

However, network effects can also have negative effects on competition. In particular, they can lead easily to monopoly or oligopoly of the market concerned, causing market concentration and high barriers to entry and expansion. The ability of an undertaking to collect the most data because it has the most users can contribute to the undertaking providing the best goods or services and allowing its market power to increase more and

¹³⁷ Liebowitz and Margolis 1994 135.

¹³⁸ McIntyre and Srinivasan 2016 143.

¹³⁹ Jones and Suffrin 2016 48.

¹⁴⁰ Boudreau and Jeppesen 2015 1763.

¹⁴¹ Stucke and Ezrachi 2016 70.

¹⁴² Autorité de la concurrence and Bundeskartellamt 2016 28.

more.¹⁴³ The “tipping effect” can occur, where all of the customers in the market concerned decide to utilise the goods or services of only one undertaking.¹⁴⁴ As such, whether network effects are good for competition or not depends on various factors.

The presence of network externalities in these markets has significant implications on prices, and as such the definition of the market and of the policy goals of competition law. A complication comes from the fact that value is attributed to these forms of markets in terms of a social benefit which causes difficulty in assessing the consumer welfare impact. To explain social benefit, consider this example. A platform charges €5 to consumer A and 10€ to consumer B to use its service. What social benefit essentially means is that if we consider only the price charged to consumer A, this does not take into account the full value for all consumers. Indeed, this does not take into account the value consumer B gets from consumer A utilising the service.¹⁴⁵ Moreover, in these markets, because of the network effects, it becomes very difficult to determine the true price of consumer value. This is due to the fact that part of the social benefit which consumers get from the platform cannot be seen merely analysis of price, especially as there may indeed be no monetary cost for the platform.¹⁴⁶

Another complication arises when attempting to understand demand in multisided markets when utilising typical methods of statistical analysis. As price and demand are intrinsically linked to assess the demand for a quantity of a good on the demand curve at a certain price requires a value for price. Additionally, the consumer on one side of the platform cares about more than just price as the value of the platform is linked to how many users are on the other side of the platform. Therefore, there is a much larger amount of complexity and mathematical computation required to be able to assess demand in these forms of market.¹⁴⁷

As such, price plays a very different role in the context of multisided markets. This has significant implications for the consumer welfare standard when considered from the context of consumers on either side of the platform. For example, an increase in the quality of the service provided for consumer group A on the platform is indirectly beneficial to consumer group B. Improved quality will mean that more type A consumers will utilise the platform.

There are also important considerations in terms of competition law analysis with respect to concentrations in these markets due to the network effects present in them. This is because

¹⁴³ *ibid.*

¹⁴⁴ Wasastjerna 2020 76.

¹⁴⁵ Crémer, Yves-Alexandre, and Schweitzer 2019 43.

¹⁴⁶ *ibid.*

¹⁴⁷ *ibid.*

in these markets, the presence of network effects mean that large platforms are required to ensure the platform is used efficiently. Therefore, high concentration cannot be understood in the same way as in ‘normal’ markets. One large marketplace may be a more efficient structure due to the reduction of search costs, compared to several smaller markets.¹⁴⁸

3.1.3 Switching Costs, Lock-In Effects and Multi-Homing

I now consider the concepts of switching costs, lock-in effects and multi-homing. Due to the unique monopoly like position of firms in zero-price markets, the power of these undertakings in the dominant position is very difficult to overcome. These kinds of markets are likely to be monopolised as a consequence of network effects (due to the choices of other users in the market) and path dependence (the historical choices of the consumer).¹⁴⁹

Switching costs occurs when a consumer’s ability to switch from one product to another is impeded by the consumer facing a barrier. The presence of switching costs may mean that in an antitrust analysis, two prima facie demand substitutes will not be considered to be in one single product market.¹⁵⁰ Switching costs need not be financial, but can indicate the consumers input of time, learning, and concerns about a new supplier among other factors. These costs can act as a barrier to entry to the market concerned and cement the market power of incumbents in a market. In markets with high transaction and information-gathering costs, switching costs are particularly likely to be found.¹⁵¹ In the context of the zero-price market, two important switching costs need to be considered. First, non-monetary learning costs and set up costs for consumers who wish to switch from one product to another one. Second are data switching costs, where consumers become increasingly locked in with a company as they provide more personal data.¹⁵² The sheer amount of data shared with a company can make it very costly for the consumer to switch to another.¹⁵³

Undertakings providing an alternative platform to the dominant undertaking have to convince consumers to switch. This is difficult to do as the consumer has already expended time, energy, and data with the original platform. Users can suffer from path dependence and become ‘locked-in’ to the platform, where the “consumer’s decisions in networks are path dependent insofar as the economic choices they face are dependent on their historical

¹⁴⁸ Haucap and Stühmeier 2016 185.

¹⁴⁹ Jarman and Örsal 2014 318-319.

¹⁵⁰ Commission Notice 42.

¹⁵¹ Gore and others 2013 276.

¹⁵² Jarman and Örsal 2014 319.

¹⁵³ Christl and Spiekermann 2016 84–85.

choices”.¹⁵⁴ As such, the presence of high switching costs is an important feature to consider in the antitrust analysis of zero-price markets.

Along a similar vein is the ability of the consumer to multi-home. Whether the consumer uses only one platform only (single-homing) as opposed to using multiple (multi-homing) can also be indicative of market power. If the consumer can switch to another platform (multi-home) this can reduce the markets likelihood of undergoing the tipping effect described above. If consumers single-home, barriers to entry and switching costs are higher. How likely consumers are to multi-home is affected by how differentiated each platform is from each other, so this must be considered in a market analysis.¹⁵⁵ The degree of differentiation usually reflects the nature of supply and demand in the market. The more different the platforms in the market from each other, the more likely it is that consumers will multi-home. This indicates less likelihood of monopolisation.¹⁵⁶ It is also important to note that consumer behaviour is not consistent in regard multi-homing, as such the case must be considered on the facts of the market concerned and consumers behaviour.

3.1.4 The Zero Price Effect

In addition to the special characteristics of the zero-priced market discussed above, the phenomena of the ‘zero-price effect’ must be discussed. This effect explains consumer reactions to zero-priced goods, and must also be considered as a special characteristic of zero-priced markets. The zero-price effect is a concept from behavioural economics. It essentially suggests that when faced with a free product or service, traditional models of cost-benefit cannot properly deal with the psychological impact of the offer of a product for free. In traditional economic models, the assumption is of a linear demand curve – meaning that the product or service will be equally attractive to consumers at any price point. Additionally, the consumer is traditionally thought to make a decision on the utility of a product based on the subtraction of the cost of the product from its benefits. The consumer will ultimately choose the product which provides to them the highest level of utility.

The zero-price effect, however, sees the demand for a product or service rise steeply as soon as the price is reduced to zero.¹⁵⁷ This is particularly true in respect to products which are

¹⁵⁴ Jarman and Örsal 2014 318.

¹⁵⁵ Bundeskartellamt, ‘Working Paper Market Power of Platforms and Networks’ 3.

¹⁵⁶ *ibid.*

¹⁵⁷ Shampanier, Mazar, and Ariely 2007 742-757.

hedonic,¹⁵⁸ likely due to a psychological effect called the ‘affect heuristic’.¹⁵⁹ In this respect the consumer views the product priced at zero as having a higher number of benefits merely for it having a price of zero. The zero-price is considered to be ‘special’; the consumer treats it as having an intrinsically higher value and “bending the demand curve – demand shoots up in a very non-linear fashion”.¹⁶⁰ As such, the price of zero cannot be treated as just another price as traditional cost-benefit analysis would do. Instead, it must be treated according to the special psychological impact and as such economic effect which it has. As such, we cannot simply compare a paid and zero-price like-product on their respective qualities as you could when comparing two priced like-products. In this respect, it is essential in competitive analysis to take note of the zero-price effect when undertaking cost-benefit analysis, considering market definition and generally in the analysis of a zero-price product/service. As stated, traditional cost-benefit analysis does not work in this market type. Indeed, if a special approach is not taken, the competition analysis does not reach a correct conclusion, instead being warped by the high demand for a product/service which is merely based upon the fact that it is free.

3.2 BUSINESS MODELS OF ZERO PRICE MARKETS

It is relevant now to consider why an undertaking would choose to provide a good or service at zero-price. There are several forms of business model which are used by undertakings with zero price products or services to make profit. In the modern context, the most common form in digital zero price markets are the two or multi-sided platform, hence why this thesis focuses on the multisided market.¹⁶¹ A central facet of zero-price markets is the “interrelated nature of the relevant products”,¹⁶² i.e., the provision of a product which is interrelated with the product which is provided for free. Due to the digital nature these markets products can be provided for free (or for very low cost) because when supplying goods or services online the marginal cost is very low.¹⁶³ Transactions costs are also significantly reduced by the ease of distributing information online. It can be highly profitable to provide a freemium service, as even a few customers signing up to a paid version of the service would make a profit.¹⁶⁴

¹⁵⁸ Hossain and Saini 2015 457-460.

¹⁵⁹ “A reliance on good or bad feelings experienced in relation to a stimulus. Affect-based judgments occur quickly, automatically” Samson and Voyer 2012 48-71; 64.

¹⁶⁰ Anderson 2009 47.

¹⁶¹ Wasastjerna 2020 76.

¹⁶² Newman 2015 154.

¹⁶³ Rubinfeld and Gal 2016 526.

¹⁶⁴ *ibid.*

There are many examples of zero-price market business strategies. They include but are not limited to, tying, complementary products, pay for premium, free software, and two or multisided platforms.¹⁶⁵ An overview of tying, complementary products, pay for premium, and two or multisided platforms will be given below, although only the two or multisided market is considered in detail. Within these different business models, it is clear that there are problematic practices observed. Some of these are already well known to competition law, for example, tying.¹⁶⁶ However, other harms, such as the ones which occur in zero-priced multi-sided platforms, are not, and require both attention and regulation from the EU so that these anti-competitive consumer and market harming practices do not continue to fall through the net of competition law enforcement.

3.2.1 Tying

The first form of business model which I consider is tying. Tying is not necessarily an anti-competitive practice. There are many ways an undertaking can utilise tying as a strategy, but it essentially means that one product becomes dependent upon another. A good example is printers and ink cartridges, where it is commonplace that the printer does not work well with the competitor's equivalent product. Tying can be split into two forms in this context, contractual tying, which is where two products are only sold together, and technological tying where essentially separate products are integrated together.¹⁶⁷ There are many examples of technological tying to be found. For example, the famous Microsoft case where it was found that Microsoft had abused its dominant position in respect of tying, where it had pre-installed the Windows Media Player when supplying Windows to computer manufacturers.¹⁶⁸

3.2.2 Complementary Products

The understanding that the provision of zero-price products could actually be used to maximise profit was first utilised in antitrust analysis in the 20th century.¹⁶⁹ Products can be understood as complementary when “a decrease in the price of one product increases the price of the other product”.¹⁷⁰ Understanding complementary products and how they can increase profit through the provision of one of them for zero price takes a certain amount of economic analysis. Consider first a monopoly production of widgets and gadgets, which are

¹⁶⁵ Newman 2015 154.

¹⁶⁶ Case T-201/04 *Microsoft v Commission* [2007] ECR II-03601 para 859. Conditions for tying in EU law.

¹⁶⁷ Guidance para 48.

¹⁶⁸ *Microsoft* (Case COMP/C-3/37.792) Commission Decision 2007/53/EC [2004] OJ L 32/23.

¹⁶⁹ See for example: Allen 1938.

¹⁷⁰ Evans 2011 5.

highly complementary products. As the price is raised for widgets, the purchase of gadgets decreases and potentially so does the profit of the monopolist. In the case that there is a high elasticity of demand for the widgets in addition to strong complementariness, the increase of price of widgets will increase sale of widgets but also decrease sales of gadgets.¹⁷¹ If the equilibrium is correct between elasticity of demand and complementariness, it can be that it is profitable for the monopolist to charge zero for the widget and charge a price for gadgets.

This works only in limited circumstances. Evans considers the example of razors and blades. If company X was to give away razors for free, company X could then sell the blades for the razor for a high price, making up the loss for the provision of razor blades for free. The issue here is that company Y could utilise this situation and sell the blades for razor at a lower price. Company Y can take advantage of the provision of free razors by company X as they do not need to make up the loss company X does. At a general level this would not work to achieve profit for company X. If company X wished to make this strategy work, they would need to utilise a strategy of having patents, trademarks, and industrial designs etc to ensure that company Y could not make blades for company X's razors.¹⁷² It is in any case rare to price complementary products at entirely zero. The more common approach is to price the complementary product at a very low price.

3.2.3 Pay for Premium

The pay for premium model is where a firm will offer the basic version of a good/service for a price of 0. The consumer can then pay money to upgrade the service and access a better and higher quality version of the product.¹⁷³ This can be a model where the company utilises two different revenue streams. The first, the zero-price customers, where revenue is earned much in the same way as in the multisided platform, as the group of users on one side of the platform is valuable to the other group of users (i.e., advertising and data gathering). At the same time, the company obtains another stream of revenue from the customers who pay for the product. Online newspapers often use this form of business model. For example, the *Financial Times* gives access to a certain amount of content for readers, but then charges them if they want full access via a subscription. Moreover, the adverts that the readers see whilst they are reading the free content is another source of revenue for the companies, as having many readers is desirable to advertisers. Another example is Spotify. Here, the

¹⁷¹ *ibid.*

¹⁷² Evans 2011 6.

¹⁷³ Newman 2015 157.

consumer will see advertisements and frequently the service provider's adverts for the premium version of the product. Spotify provides a free service with adverts and the option to 'upgrade' to advert free viewing and the ability to download music and listen offline.¹⁷⁴

3.2.4 Two and Multisided Platforms

A two and multisided platform (hereby multisided platform) brings together at least two distinct customer groups on a single platform. A common example is credit card networks, where consumers frequently access the service for free and often with the bonus of rewards and loyalty points. The merchants who utilise the service pay very high fees to be a part of the platform.¹⁷⁵ For this form of market to be successful one of the groups must find it beneficial to be on the same platform as the other group. Significant considerations with respect to how to obtain prices which maximise profit in each group is the "level of demand, the interdependencies between itself and the other group, and possibly the marginal cost of producing the products".¹⁷⁶ This shares similarity with the notion and analysis of complementary products. However, there are important differences between the two forms of business model. In particular, in multisided markets the product which is complementary to one group of users is actually the users of the other group.¹⁷⁷

Zero-price multisided platforms are often supported through the use of advertising revenue, consider for example, television and streaming.¹⁷⁸ A good example of this form of platform is YouTube, where content creators can upload content and place adverts in the video if they are a member of the YouTube Partner Program.¹⁷⁹ The number of views which an advert will get corresponds to the amount of revenue the content creator is paid, among other, less significant factors.¹⁸⁰ The YouTubers pay is dependent upon the amount of views they can get on the video. As such, YouTube represents a multi-sided platform, between viewers, content creators and advertisers.

Although it is technically rare that the profit-maximising cost would be zero, a price of zero is both very frequently found and found throughout a wide range of industries. As such, this implies that even though there is not a proper distribution of cross-dependency and elasticity of demand, undertakings still choose to utilise a price of zero as it is profitable to them.

¹⁷⁴ Spotify 2020.

¹⁷⁵ Newman 2015 156.

¹⁷⁶ Evans 2011 7-8.

¹⁷⁷ *ibid* 8.

¹⁷⁸ Newman 2015 156.

¹⁷⁹ This has several requirements, including a minimum 1000 subscribers. See YouTube Help, 'YouTube Partner Program overview & eligibility' 2020.

¹⁸⁰ YouTube Help, 'How to earn money on YouTube' 2020.

Finally, the difference in consumer groups between multi-sided platforms and in complementary products i.e., that those consumers who benefit from a subsidisation are different, has significant implications for the consumer welfare analysis.¹⁸¹

3.3 SHOULD COMPETITION LAW APPLY TO ZERO-PRICED MARKETS?

The previous section considered the features of zero-price markets, including how various business models can make money despite charging zero-price. Indeed, it is clear that in the modern context, many of the markets we interact with on daily basis are ‘zero-price’ markets. These include card networks, search engines, online shopping websites, social media and so on. The typical form of zero-price market, the multisided market, poses significant challenges to traditional competition law. as discussed in Section 3.1.2.. Many zero-priced markets operate within the ‘new economy’ which refers generally to the industries of communications services, businesses based on the internet, software for computers, social media and aerospace.¹⁸² ‘New economy’ markets are characterised by their reliance on intellectual property, the complementary nature of products or services, technological innovation and sophistication, information and rapid change.¹⁸³ Additionally, these markets are often characterised by a different form of competition, competition for markets as opposed to competition in markets.¹⁸⁴ The zero-price market is clearly different from the traditional markets that competition law is based upon. Therefore, it is essential when undertaking a competition law analysis to take account of its special characteristics. This also means ensuring that undertakings do not escape competition law merely because they provide products/services at zero-price, and accounting for the fact that consumers pay for these services in an alternate fashion – through their data and attention.

I now discuss the theoretical background to the application of the law to zero-price markets. I consider the arguments for and against the laws application, as well as economic justification. Then I move on to a discussion of the nature of competition on this market type, further justifying my argument that the law should apply. In particular, I consider non-price competition on innovation, privacy and quality, markets for attention, and data.

¹⁸¹ Evans 2011 10.

¹⁸² Posner 2001 245; Jones and Suffrin 2016 48.

¹⁸³ Jones and Suffrin 2016 48.

¹⁸⁴ *ibid* 49.

3.3.1 Theoretical Background

Historically, Competition Authorities in the EU as well as the US have been sceptical about whether Competition law should apply to zero-price markets.¹⁸⁵ The traditional antitrust thought in the US considers that “without prices, there can be no welfare harms of the type that antitrust law seeks to prevent”.¹⁸⁶ It is argued that there is no antitrust harm to remedy as there is monopoly overcharge. There is no monopoly overcharge, it is said, because the consumers do not pay for the goods or service in a monetary format. To this day this viewpoint is prevalent in America. For example, the American scholar Robert Bork considered in the context of the competition law investigations into Google by the EU and US that: “Regulators may attempt to develop . . . antitrust complaints against the search engines but they are unsupportable. There is no coherent case for monopolization because a search engine, like Google, is free to consumers”.¹⁸⁷

A frequent argument that zero-priced market companies present is that competition law should not apply to them because the product is free. This is not a point without contention, and there is a long line of discussion and case law throughout various jurisdictions on this issue. This view has been accepted by courts in the past. For example, in the American case *Kinderstart v Google*, SCOTUS partially accepted the argument that antitrust law should not be applicable because the product was free. Additionally, SCOTUS noted that because searching with Google was free, it could not constitute a market for the purpose of antitrust law.¹⁸⁹ This view is shared by some European commentators, most notably Ferro who states that “the ‘costs’ of using these services are virtually imperceptible to users. They often do not perceive them as cost or remuneration”.¹⁹⁰ Ferro in essence argues that EU competition law should not apply to zero-price markets except where they effect a paid market and argues that the exchange of free products should not be considered to be an economic activity which would constitute a market.¹⁹¹

However, as will be argued in this thesis, the preceding viewpoint is incorrect. Evans, for example, is highly critical of this approach towards zero-price markets. He notes that “there is a tendency on part of companies, authorities, and courts to do more hand waving than

¹⁸⁵ *Google/DoubleClick* (Case COMP/M.4731) Commission Decision [2008] OJ C 184/10; *KinderStart.com LLC v. Google, Inc* (2007) WL 831806 N D Cal para 5.

¹⁸⁶ Newman 2015 160.

¹⁸⁷ Bork 2012.

¹⁸⁹ *KinderStart.com LLC v. Google, Inc.*, N.D. Cal., 2007.

¹⁹⁰ Ferro 2014 11.

¹⁹¹ *ibid* 5.

serious analysis when they encounter products and services offered for free.”¹⁹² Evans considers that as antitrust cases increase in their number with respect to products or services offered for free, that it is increasingly important to get antitrust analysis correct. In his view, which I concur with, is that antitrust law not only can but *must* be applied to zero-price markets. He notes that the argument that a good or service is not sold simply because its price is set at zero does not make sense from an economic standpoint. It can be argued that a zero-price product is not a gift, but a product received for a price of zero but with another payment method. This payment method is most often personal data or attention in the modern context.¹⁹³

The undertakings who are providing this good or service for the price of zero must still make decisions on how much they are supplying at this price. Customers must use their resources to consume and obtain these products or services. As such, they must decide how much zero-price product they want to obtain.¹⁹⁴ In this respect, Evans notes that with respect to supply and demand, “or the standard framework for a profit-maximizing firm setting price in the face of a downward sloping demand schedule, a “free price” simply means that the competitive market or the profit-maximizing firm sets a price of zero”.¹⁹⁵ What is zero, he argues, but just a number? Newman’s view also supports the application of competition law to zero-priced markets. He views the presence of market signalling costs as showing that there is trade between parties – even if there are not monetary costs as in traditional markets. Evans argues that the market signalling costs in zero-price markets are instead attention and information costs.¹⁹⁶ It is clear consumers are exchanging *something* for the zero-price goods. Competition authorities have now begun many inquiries into firms and markets with zero-priced goods and services. Perhaps of most note are the recent inquiries into Google. However, there have been significant antitrust enquiries into other zero-priced markets in the past, for example, in the *Microsoft* case of 2004.¹⁹⁷ In this work, the main focus of analysis is on zero-price markets where content is offered to one side of the market free of cost, and in the context of the digital multisided market.

From an economic point of view, economic theory can support the alteration of focus on money, to a price paid in an alternative fashion, such as in attention. In transaction and price

¹⁹² Evans 2011 73.

¹⁹³ Newman 2015 149.

¹⁹⁴ Evans 2011 14.

¹⁹⁵ *ibid.*

¹⁹⁶ Newman 2015 163.

¹⁹⁷ *Microsoft* (Case COMP/C-3/37.792) Commission Decision 2007/53/EC [2004] OJ L 32/23.

theory it is considered that two individuals will only agree to exchange goods if they both feel that they will profit from the exchange. In this respect, when the marginal utility of the good which will be obtained in the exchange is higher than that of the good which will be traded away in the exchange, a voluntary exchange will take place.

Within this exchange a price can be observed. This is expressed with respect to a unit of one of the commodities, being the ratio of exchange of the products which are being exchanged. As Adam Smith discussed with respect to the price of a beaver versus a deer, “[i]f ... it usually costs twice the labour to kill a beaver which it does to kill a deer, one beaver should naturally exchange for or be worth two deer”. As such, the price of one beaver would be the price of two deer.¹⁹⁸ Most commonly we see that the one good being exchanged is money, but this is not a pre-requisite to an economic transaction. Money is simply an easier means to an end, representing an indirect exchange and overcoming the difficulties of matching individuals’ preferences. But the transaction need not be monetary to still be a transaction, as the beaver and deer analogy of Adam Smith demonstrates. As I argue, this same transaction takes place in the zero-price market between consumers with the platform for a non-monetary price of their information and attention. In this respect, Nathan Newman illustrates the point strikingly when he says, “[y]ou are the product, not the customer”.¹⁹⁹ Indeed, he notes that Google, for example, favours the “alternative economic model of selling individual attention and precise information about those users to advertisers”.²⁰⁰

It should be noted that free goods or services often can provide genuine benefits to consumers and should not *prima facie* be considered to be anti-competitive. However, the situation is not quite as simple as merely considering the provision of free good or services in a vacuum. The overall welfare effects must be considered. Although the consumer does not pay a direct monetary price for the zero-priced goods, it can cost them in an indirect manner through their time and attention.²⁰¹ As I discuss below, zero-priced products can be found in a variety of different markets and be provided with various business models. As such, they can have an effect on the direct market they operate in, related markets, and even in markets they are not directly related to, such as in advertising.

¹⁹⁸ Smith 1776 Chapter 6.

¹⁹⁹ Newman 2017.

²⁰⁰ *ibid.*

²⁰¹ Rubinfeld and Gal 2016 523.

3.3.2 The Nature of Competition in Zero-Price Markets

After considering the theory behind the application of the law to zero-price markets in the previous Section, I now outline how competition takes place between undertakings on zero-price markets on a more practical level. This provides a basis to understand how consumers can be harmed by the actions of undertakings engaging in the supply of zero-priced goods and services, as well as outlining important considerations for competition authorities when dealing with this market type. It is worthwhile to discuss in more detail the market signalling costs which Newman discusses. An understanding of these costs provides a further basis to justify the application of competition law to zero-priced markets, provides a basis to analyse how the law has applied to these markets in the past, and how it ideally should apply to them. Newman's argument that consumers are 'paying' for goods with attention or information is somewhat disputed. Another argument which is often presented and widely agreed upon is that the zero-price firms compete on the basis of quality.²⁰² For example, on certain kinds of platforms such as search engines, market position is to be found from users' perception of contents quality, whilst the attention of these users is sold to advertisers.²⁰³

As such, in markets where the price is zero, it is clear that quality is a key parameter of competition.²⁰⁴ In this respect, quality will be decreased for consumers when they receive more advertisements and thus increasing attention costs. Quality will also be decreased when the consumers privacy is reduced and more data is collected by the undertaking, thus increasing information costs. This discussion simultaneously seeks to prove that consumers are 'paying' for zero-priced products with their attention and data. I do this by considering attention and data as parameters of competition and their value to undertakings. There is not total agreement on the 'currencies' discussed here. However, these 'currencies' are continuously seen in the literature which concerns zero-priced markets. It is clear that competition in zero-priced markets takes place within these parameters, although to varying extents. The parameters which I now consider are the non-price competition on innovation, privacy and quality, the market for attention, data and Big Data.

3.3.2.1 NON-PRICE COMPETITION – INNOVATION, PRIVACY, QUALITY

There has been an increasing amount of attention being paid to non-price competition as a potential parameter in competition law analysis. Non-price competition can be generally

²⁰² Stucke and Ezrachi 2015 74.

²⁰³ Crémer, Yves-Alexandre, and Schweitzer 2019.

²⁰⁴ Stucke and Ezrachi 2015 74.

understood as “any type of activity, adjustment or factor other than price that shifts the supply and demand of products and services in the market.”²⁰⁵ Examples could include quality, innovation and privacy, among others. The OECD have stated that in quality competition in zero-price markets, the most important competitive factors are privacy, including data security and advertising. The impact which privacy would have upon quality can be determined by how undertakings utilise consumers data and how much control the consumers have on their data, in particular how much and what kind of data they provide.²⁰⁶

Price theory has traditionally been the main underpinning and focus of competition law. For example, the traditional SSNIP test understands the demand and supply side response of the increase in price by the theoretical monopolist. The SSNIP test is not appropriate to utilise in the zero-price market as the optimal price on one side of the market is zero or below cost. This means that undertakings in these markets will engage in competition on other factors.²⁰⁷ As such, it is argued that it is essential going forward in EU competition law that attention is paid to non-price competition, as traditional price theory is not appropriate in this context. In Europe, it seems that there has been a move to incorporate non-price competition in analysis, but mostly within the context of mergers. For example, in *Microsoft/Skype*²⁰⁸ the Commission noted that quality and innovation are important parameters in competition, in *Hutchison 3G UK/Telefonica Ireland*²⁰⁹ the Commission discussed in detail competition on quality, and in *Microsoft/LinkedIn*²¹⁰ privacy was discussed as non-price competition.

The question then is how competition authorities can utilise an analysis of competition on non-price competition factor? For example, quality as a concept is vague and multidimensional, including many different factors to potentially include. Budzinski questions the unquantifiable nature of these factors of competition, including innovation and quality.²¹¹ Just argues that because of the complexity of these models required to include non-price competition in analysis, it will be quite some time before competition authorities are provided with a truly workable solution.²¹² However, it is essential that these elements are included in competition analysis. There is far more at stake than mere price competition

²⁰⁵ Just 2018 388.

²⁰⁶ OECD 2018 7.

²⁰⁷ Just 2018 388.

²⁰⁸ *Microsoft/Skype* (Case COMP/M.6281) Commission Decision [2011] OJ C 341.

²⁰⁹ Summary of Commission Decision of 28 May 2014 declaring a concentration compatible with the internal market and the EEA Agreement (Case M.6992 — Hutchison 3G UK/Telefónica Ireland) (notified under document C2014 3561 final) [2014] OJ 264/6.

²¹⁰ *Microsoft/LinkedIn* (Case COMP/M.8124) Commission Decision [2016] C 388/4.

²¹¹ Oliver Budzinski, ‘Modern industrial economics: Open problems and possible limits’ in Drexl, Kerber and Podszun 2011, 111–138.

²¹² Just 2018 388.

in the zero-price market, and it is essential that competition authorities do not overlook the alternative ways that competition can take place.

This leads to the question of how the law can seek to remedy infringements which are not necessarily based upon price considerations, for instance, seeking to remedy issues of quality or privacy. The difficulty of finding an appropriate remedy is compounded by the challenge of applying competition law remedies to these zero-price markets which are actually relevant by the time they are implemented. As these markets mainly operate in the New Economy, the rapid nature of technological advancement and market change can mean that a remedy imposed on a firm may quickly become inappropriate. For example, if the undertaking loses market power or the product/service concerned becomes defunct due to development of novel technologies. Just argues what is increasingly likely to be is that the onus to suggest a remedy will be on the undertaking who has committed the offence.²¹³ This was the case in the *Google Search (Shopping)* case, which is discussed in Section 4 below. However, despite its potential benefits, this method has its own challenges. In particular, in respect of legal certainty for the firm concerned and to an extent still runs the risk of becoming inappropriate.

3.3.2.2 MARKETS FOR ATTENTION

It is clear that one dimension of competition in zero-priced markets is attention. As Wu notes, attention is often considered as a resource.²¹⁴ A commonly seen business-type in zero-priced markets is where consumers attention is attracted, translating into profits for the undertaking as more attention means higher advertising revenue. Attention markets are characterised by the consumers who provide their attention, advertisers who pay for it, and the undertaking providing the platform who wishes to attract the most customers and sell to the advertisers.

The advertisements which compete for consumers attention can be seen in a positive, pro-competitive and welfare enhancing light. Adverts can reduce search costs for consumers by providing them with information about goods or services available from various sellers, and the sellers can inform consumers about their products in an effective manner.²¹⁵ Advertisements can also be viewed negatively and anti-competitively, as they can warp consumer demand in a way which is not optimal and is not based on truthful product characteristics like quality. Some have argued that in the modern world where a huge amount

²¹³ Just 2018 389.

²¹⁴ Wu 2016.

²¹⁵ Newman 2015 170.

of information is accessible online immediately, advertisements only function in this persuasive manner and are therefore always anticompetitive.²¹⁶

The question then is whether it can be said that the customer is really paying with their attention for the zero-price good or service. Dependent on this will be the answer to whether we can conclusively say that there is a market here for the purpose of the law. Just states that the two fundamental questions which must be answered are whether there is “...a trade relationship between the supplier of such services and the user provided that there is no monetary payment, and whether user attention in terms of exposure to advertising ... can constitute a form of payment so as to establish a trade relationship”.²¹⁷ Additionally, it is worthwhile to consider the market signalling costs which the consumer can incur, in particular attention costs. Indeed, attention costs are the costs which the consumer incurs when she pays for a zero-priced good/service with her attention, and are very often observed in zero-priced markets. For instance, whilst watching a YouTube video the consumer watches advertisements, or whilst scrolling through Facebook or Instagram the consumer sees advertisements – these adverts allow the consumer to access the free content. Within the multisided platform, this is a main form of profit making that undertakings utilise. It should be noted that this model will also be used simultaneously with the option to pay for an ad-free service, the freemium model, with the consumer therefore being given the option to either pay with their attention or pay with actual money. However, there are problems faced when it comes to the consideration of the value of advertising. Haucap and Stümeier make the point that it is “unclear what ... an increase of advertising exposure ... would mean in practical terms and how it could be measured in a meaningful way”.²¹⁸ Indeed, significant questions are posed in how to effectively calculate the value of the advertisements. This problem is discussed further in Section 5.5.

It is also relevant to discuss how the undertakings providing a platform with a zero-price product compete with one another – in this context, this would be through the attraction of consumer attention. It is important to understand that the undertakings in this market do not compete on price, as there is no price. A related question is why undertakings compete for attention at all. In this regard, Herbert Simon quite clearly articulates the reason:

²¹⁶ Woodcock 2019 51.

²¹⁷ Just 2018 390.

²¹⁸ Justus Haucap and Torben Stümeier, ‘Competition and antitrust in Internet markets’ in Bauer and Latzer 2016, 188.

“[I]n an information-rich world, the wealth of information means a dearth of something else: a scarcity of whatever... that information consumes. What information consumes is rather obvious:... the attention of its recipients. Hence a wealth of information creates a poverty of attention...”²¹⁹

Consumers can only provide a limited amount of attention due to the fact that there are only so many hours in the day, week, month and year.

Indeed, the consumers attention is valuable to the advertiser and zero-price undertaking. Therefore, the market must also be viewed from the two directions which the platform provider must operate on and set prices on. On the consumer attraction side, it is likely the price will be set at zero to attract the widest audience, and on the advertising side it will charge the advertisers based on factors such as how valuable the audience is and what the quality of the consumers attention is.²²⁰ The undertaking providing the platform will want to show a mixture of advertisements and platform generated content to attract users, whilst ensuring the adverts shown do not degrade the platform content itself.²²¹ In this regard, it can be generally understood that the more adverts are shown on the platform, the less high quality the content (i.e., the zero-priced product) actually is. As such, undertakings must make a trade-off between advert generated revenue and not decreasing the quality of the content so much that users do not wish to use the platform. This is analogous to the traditional dynamic of price in a traditional market. If the undertaking raises its price too much, consumers will no longer purchase the product or service. As such, an increase in price leads to increased revenue but decrease in the quantity of product sold.

3.3.2.3 Big Data and User Data

Information costs are the second kind of market signalling costs identified by Newman. The zero-price market is characterised by the collection of data and obtaining an economic benefit from the exploitation of said data. For the consumer, this represents the information, i.e., their personal data, that they ‘pay’ for the zero-priced product or service with. Although there are many different kinds of data, the main focus here is on personal data.²²²

²¹⁹ Herbert Simon, ‘Designing Organizations for an Information-Rich World’ in Greenberger 1971 40-41.

²²⁰ Wu 2016 14.

²²¹ *ibid.*

²²² Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) [2016] OJ 2 119/1 art 4(1).

Big data is frequently defined with reference to the three v's – volume, velocity and variety. There has been a significant increase in the volume of data that is collected, and this is only expected to grow. Companies are able to collect, analyse and process this data at high velocity. Finally, companies are able to obtain a very wide variety of data from consumer habits and shopping preferences to their personal tastes and preferences. By merging, processing and applying this collected data; it is possible to undertake actions such as price discrimination and providing targeted and personalised advertisements to consumers.

Data and how it is used by various companies has been the subject of an increasing amount of attention in recent years. Although these forms of market have been considered in literature for some time, they are only now beginning to be properly considered by Competition authorities. The EU has begun to realise that in the context of such markets, there is some form of contract between the consumer and the provider of the zero-price good. This of course then implies the existence of some form of market, the exchange of the consumers personal data for the product. For example, Directive (EU) 2019/770 states, “[d]igital content or digital services are often supplied also where the consumer does not pay a price but provides personal data to the trader. Such business models are used in different forms in a considerable part of the market.”²²³ The French Autorité de la concurrence German and Bundeskartellamt note that “competition authorities have begun to look at possible competition issues arising from the possession and use of data”.²²⁴ Data, it is said, is the new oil, the world’s most valuable resource.²²⁵ Although it may be disputed to what extent this is true, it is clear that more and more businesses utilise business models which are based on data. Very often this is the personal data of the consumer. As such, information represents a second and important way that undertakings operating in the zero-price market can both compete and make profits.

Data can have multiple applications and add value in many ways to business, especially to digital platforms. It can represent a variety of assets, all differing in terms of their significance for competition and for undertakings.²²⁶ Data can provide a competitive advantage to an undertaking – allowing the undertaking to provide better services compared to its competitors – as well as to trade and to obtain information about the habits and

²²³ Directive (EU) 2019/770 of the European Parliament and of the Council of 20 May 2019 on certain aspects concerning contracts for the supply of digital content and digital services [2019] OJ L 136/1 Recital 24.

²²⁴ Autorité de la concurrence and Bundeskartellamt 2016 3.

²²⁵ Jossen 2017.

²²⁶ Sivinski, Okuliar and Kjolbye 2017 201.

preferences of consumers.²²⁷ Common methods of using such data include targeted advertising and price discrimination. The holding of a large data set, the aggregation of the data and its exploitation and organisation can lead to enormous value for undertakings in this market.²²⁸ For example, Facebook and Google collect the data of the consumers using the platform and then sell it to advertisers who wish to use the data for advertising as well as creating highly personalised content for the users. This is often highly effective as a strategy because the information which can be obtained from the data is personalised to each consumer. Indeed, “[b]oth tech giants generate most of their revenue from advertising... Google’s \$100 billion plus in ad revenue tells you what you need to know”.²²⁹

These data dependent markets are within the New Economy and face certain specific competitive conditions. Big Data markets are characterised by high upfront sunk costs, high economies of scale and scope and strong network effects – all facilitating market concentration. It is initially very expensive to set up the necessary technology to collect, store and obtain data, but once this is done the costs are little. As I have discussed previously, network effects present themselves generally in two forms. The more users there are, the more data can be collected, the better the product is and then more users are attracted. The more data the undertaking has the better adverts it provides, the more money it can make, which can then be re-invested into the product to improve its quality.²³⁰ As such, these markets are highly prone to concentrating, which can be highly problematic for competition, and for privacy and data collection by these firms and in these markets. Incentives to provide better privacy protection and to collect less data decrease as the firm becomes dominant.²³¹

Just formulates the essential questions which must be asked to constitute a market for information as being: “(1) whether there is a trade relationship between the supplier of such services and the user provided that there is no monetary payment, and (2) whether user ... data can constitute a form of payment so as to establish a trade relationship”²³² It is argued that the consumer must evaluate if they are happy to provide their information in return for the supply of the zero-priced products, similarly to in the traditional price-based market.

²²⁷ Shelanski 2013 1678.

²²⁸ Pozzato, 2014 469.

²²⁹ Doffman 2021.

²³⁰ OECD 2016 10.

²³¹ Esayas 2018 187.

²³² Just 2018 390

The Commission consider privacy as an aspect of quality in non-price competition.²³³ However, the presence of the ‘privacy paradox’ has casted doubt on whether privacy should be considered a competitive parameter. The ‘privacy paradox’ is the phenomena that although consumers say that they care about their privacy and data collection practices of firms, in reality they do not actually act on this, blindly accepting privacy notices and providing their information.²³⁴ On the other hand Strandburg notes that the consumer often does not understand how the collection of their data can lead to harms, nor how firms utilise and collect data, nor how the collected data “fits into the data about them that is already flowing in the online ecosystem”.²³⁵ As such, the consumer cannot necessarily evaluate the true cost of providing their data as compared to the traditional price-based assessment.

It is argued that consumers cannot properly punish undertakings for their actions which negatively affect privacy because of the existence of significant information asymmetries between the consumers and undertakings about their privacy. If we return to Just’s definition, it is clear there is a market here due to the established trade relationship, but it is one which is characterised by the market failure due to information asymmetries. This means that consumers cannot properly understand the harms which are being done to them as a consequence of their data provision and as such they do not act on it. This lack of action does not prevent privacy as being a factor of competition, however.

3.4 CONCLUDING REMARKS

This Chapter has considered the structure of zero-price markets. I first considered the special characteristics of this market type. As noted, digital markets are dynamic with near constant innovation, meaning that monopoly cannot be assumed. It is necessary to consider each product/service on case-by-case basis, as products can quickly become irrelevant. Moreover, the market is characterised by the importance of data, which can be viewed as an aspect of market power and as a barrier to entry. Zero-price markets generate a network structure, distinguishing them from traditional markets. The presence of these network effects has a huge impact on competition, as they can prevent competition, concentrating competition and providing huge benefits to the incumbent. Consumers face unique switching costs, non-monetary and data switching which can act as barriers to entry for competition. Consumers easily become locked in in this market type. Additionally, the zero-price effect means that

²³³ *Facebook/Whatsapp* (Case COMP/M.7217) Commission Decision [2014] OJ C 417 para 87.

²³⁴ Barth and de Jong 2017 1039-1040.

²³⁵ Strandburg 2013 133.

traditional cost benefit analysis is ineffective in zero-price markets. A products/service faces a significantly higher demand based purely on the fact that it is provided for zero-cost. This special psychological impact and economic effect must be taken into account.

Business models typically used in zero-priced markets were discussed, explaining how despite charging a price of zero, undertaking can make profit. Multisided platforms were considered in most depth. Perhaps most significantly in this market type is that the profit maximising price is rarely zero, but undertakings choose to use this price anyway. I also discussed whether competition law should apply to zero-priced markets, considering both the historical and modern viewpoint, and cases such as *Kinderstart v Google*. Finally, I considered the economic justification, noting that merely because money does not exchange hands does not mean there is not a transaction. Here, I concluded that despite a product/service being free, the consumer may pay for it in other ways and that free goods may have impacts upon other markets. Further, the nature of competition on zero-priced markets was considered. In traditional market types, we see competition largely on price. However, on zero-price markets there is no monetary price. As such, we see competition on other factors – privacy, innovation, quality, attention and data – demonstrating just how different zero-price markets are and justifying a different approach to them.

CHAPTER 4: THE CHALLENGES OF ARTICLE 102 TO ZERO-PRICE MARKETS – *THE GOOGLE SEARCH (SHOPPING) CASE*

4.1 THE APPLICATION OF ARTICLE 102 IN *THE GOOGLE SEARCH (SHOPPING) CASE*

I now seek to undertake an analysis of case law regarding zero-priced markets in the EU. I consider the *Google Search (shopping)* case, as it is a recent example of the treatment of zero-price markets by the Commission. I also feel it demonstrates well the issues which I have highlighted in previous Chapters as to why zero-price markets require a different treatment to traditional markets. It should be noted that it is outside the scope of this writing to review the merits of the case or to criticise the judgement. Instead, the author seeks to highlight the challenges of the zero-price market by considering key aspects of this judgement which demonstrates the unique features and challenges of this market type.

The *Google Search (Shopping)* case takes place within the framework of the Commission opening cases into large platform undertakings, including into Facebook and Google. The Google cases were *Google Search (Shopping)*, *Google AdSense* and *Google Android*.²³⁶ The *Google Search (Shopping)* case resulted in a fine of €2,42 billion to Google for breaching Article 102 TFEU by placing its comparison shopping service higher on Google search results than its competitor comparison shopping services.²³⁷ It should be noted that Google appealed the decision to the GC.²³⁸ The GC delivered their judgement on 10 November 2021, largely agreeing with the Commission, and upholding the fine imposed.²³⁹ Google may bring another appeal to the CJEU, although at the time of writing this is not confirmed.

Throughout this Chapter I present an analysis of the *Google Search (shopping)* highlighting the unique features of zero-priced market and the difficulties of applying competition law to it. I consider first Google's dominance in the markets for general search services and for comparison shopping services. Then I look to the market definition for Google. After this, I consider market power. This entails consideration of market share, barriers to entry and expansion, multi-homing and countervailing buyer power, and whether the fact that the product was free excluded Google from being dominant. Then I consider the actual abusive conduct by Google, i.e., placing its own comparison shopping service higher than its

²³⁶ There was also a fourth Google merger case under the Merger Regulation with respect to the proposed acquisition of Fitbit, although this merger was approved.

²³⁷ Summary of Commission decision of 27 June 2017 relating to a proceeding under Article 102 of the Treaty on the Functioning of the European Union and Article 54 of the EEA Agreement (Case AT.39740 — *Google Search (Shopping)*) [2017] OJ I C9/08 (hereby 'Summary') para 1.

²³⁸ Case T-612/17 *Google and Alphabet v Commission (Google Shopping)* 2021 ECLI:EU:T:2021:763.

²³⁹ *ibid* para 703-704.

competitors in its general search engine results. Finally, I discuss the remedy imposed. A specific remedy was not implemented; instead, Google was ordered to end the anti-competitive action and provide equal treatment for the rival comparison shopping services in addition to a fine.

4.2 DOMINANCE

The Commission found Google to be dominant in the market of general search services in all EEA countries since 2008, with the exception of the Czech Republic where it held dominance since 2011.²⁴⁰ Market definition is discussed further in Section 4.3 below. The finding of dominance in these markets was based upon several factors, including the high and stable market share of Google, the well-established reputation of Google, its competitors having low market shares, “the existence of barriers to expansion and entry, the infrequency of user multi-homing and the existence of brand effects and the lack of countervailing buyer power”.²⁴¹ These aspects of market power are all discussed further in Section 4.4.

Google argued that because the general service was provided for free, this should preclude a finding of dominance, but this was rejected by the Commission. In refuting Google’s argument, the Commission first noted that it is incorrect to say that users are provided with the service free of charge, instead stating that the users through the contribution of data in the form of a query fund the services monetisation.²⁴² Moreover, the Commission noted that the fact the service was provided for free was only one factor, and that there were other more relevant factors demonstrating Google’s dominance including Google’s market share volume and strength, lack of effective entry of competitors, the existence of both barriers to entry and barriers to expansion, the lack of multi-homing by users, and the brand effects effect on users.²⁴³ In the appeal case, the GC noted Google’s ‘superdominant’ position, its role as a gateway to the internet and the very high barriers to entry on the market for general search services”.²⁴⁴ As such it was “under a stronger obligation not to allow its behaviour to impair genuine, undistorted competition on the related market for specialised comparison shopping search services.”²⁴⁵ This decision is important in confirming that the provision of a product or service for free does not preclude a finding of dominance in EU Competition law. It is also important through the recognition that consumers effectively pay for the free

²⁴⁰ *Google Search (Shopping)* (Case COMP/AT.39740) Commission Decision COM (2017) 4444 final para 271.

²⁴¹ *ibid* para 272.

²⁴² *ibid* para 320.

²⁴³ *ibid* para 319-324.

²⁴⁴ Case T-612/17 *Google and Alphabet v Commission (Google Shopping)* 2021 ECLI:EU:T:2021:763 para 183.

²⁴⁵ *ibid*.

service via the contribution of data. This is a step in the right direction in recognising the unique ‘pricing’ structure of zero-price markets and for the potential competitive harms that consumers may face.

As discussed in previous Chapters, dominance is a challenging topic in digital markets. Google is then interesting in the sense that it would not necessarily be expected to see superdominance in a digital market such as general search. However, as discussed in the previous Sections 3.1.1 - 3.1.3, the digital nature of this market does not always hold it back from being monopolised. Indeed, due to significant network effects, holding significant amounts of data, specialised knowledge, path dependence and high switching costs among other factors, Google found itself in the position of superdominance. This demonstrates that although digital zero-priced markets see dynamism and fast innovation, this does not mean that undertakings cannot become entrenched. Indeed, the presence of such network effects alone can make a market liable to monopolisation. As such, each case must be considered individually to ensure that market power is as strong as it seems *prima facie*, and the specific characteristics of zero-price markets must be considered in that assessment.

4.3 MARKET DEFINITION

In this Section, I consider how the Commission defined the product and geographical market. Defining the relevant market is the first step in any Article 102 case. It faces challenges in zero-priced markets as the structure differs from traditional markets, and traditional market defining tools are unavailable. In *Google Search (Shopping)*, the relevant market was defined as being the market for general search services and for comparison shopping services.²⁴⁸ General search services are considered an economic activity, and the market was considered distinct due to its limited demand and supply-side substitutability with other online services.²⁴⁹ Comparison shopping services were also considered to be a distinct market.²⁵⁰ Geographical markets were national in scope.

Google challenged the Commission’s definition of the product market, in particular “with the fact that that market encompasses only comparison shopping services and does not include merchant platforms which also provide comparison shopping services”.²⁵¹ It was questioned whether the Commission had shown that comparison shopping services differed enough from the comparison shopping services provided by merchant platforms so as to

²⁴⁸ Summary 3.

²⁴⁹ *ibid* 4.

²⁵⁰ *ibid* 5.

²⁵¹ Case T-612/17 *Google and Alphabet v Commission (Google Shopping)* 2021 ECLI:EU:T:2021:763 para 469.

exclude them. The GC noted the market concerned is two-sided and that demand must be considered from two points of view, the online sellers' and internet users'.²⁵² The GC noted that the Commission considered substitutability, demand and actual functional use of the services from both points of view,²⁵³ and found the Commission had properly defined the product market. Indeed, it is essential to consider factors such as demand from the different sides of the market to appropriately define the market concerned in this market type.

Indeed, defining the market in zero-priced markets is challenging for Competition authorities. The SSNIP test cannot be used in its original format as a price of zero renders it mathematically unworkable. In *Google Search (Shopping)*, the Commission chose not to carry out the SSNIP test as Google did not charge for their services. Previous case law establishes the Commission "may also take into account other tools for the purposes of defining the relevant market, such as market studies or an assessment of consumers' and other competitors' points of view".²⁵⁴ For example, in this case to distinguish general and comparison search, the Commission looked to the fact that there were several standalone specialised search providers, and that Google offered their comparison shopping service as a separate entity. The price-oriented approach of competition law clearly faces challenges when the monetary cost is zero and the price of zero remains constant despite the market power of the firm. The focus on price is also problematic in zero-price markets as these markets are generally distinguished by undertakings who can exert market power based on other factors such as the reduction of quality or innovation, reduced variety and service.²⁵⁵

Another difficulty of the zero-price market comes from the fact that it is most often multisided. This business model of a multi-sided platform was recognised in the *Google Search (Shopping)* case with respect to the market for general search.²⁵⁶ The SSNIP test is mainly intended to deal with a single market, and not a market with an "ecosystem with multiple types of non-competing products".²⁵⁷ As such it is not necessarily appropriate to deal with the competitive conditions on the zero-priced products, particularly because the constraints manifest in the market for the companion product.²⁵⁸ This problem has revealed itself in American antitrust law, for example in the *Kinderstart* case where SCOTUS found

²⁵² *ibid* para 473.

²⁵³ *ibid* para 475, 480-486.

²⁵⁴ *Google Search (Shopping)* (Case COMP/AT.39740) Commission Decision COM (2017) 4444 final; Case T-699/14 *Topps Europe v Commission* [2017] ECLI:EU:T:2017:2 para 82.

²⁵⁵ Rubinfeld and Gal 2016 549; US Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines August 19, 2010 § 1.

²⁵⁶ *Google Search (Shopping)* (Case COMP/AT.39740) Commission Decision COM (2017) 4444 final para 159.

²⁵⁷ Rubinfeld and Gal 2016 549; Ferro 2014 10.

²⁵⁸ Rubinfeld and Gal 2016 549.

there could be no market for free goods. It has been argued in the past that the free side of the market should not even be considered a relevant market at all despite the fact that these undertakings compete on factors such as quality instead.²⁵⁹ Thankfully the Commission avoided the fallacy of the *Kinderstart* case.²⁶⁰

4.4 MARKET POWER

I now consider how market power was defined in *Google Search (Shopping)*. In this Section I discuss the parameters upon which market power can be defined upon. Indeed, the Guidance states as assessment comprises of other competitive parameters than just price, including “output, innovation, the variety or the quality of a good or services”.²⁶¹ Then, I consider market share, barriers to entry and expansion, multi-homing and countervailing buyer-power individually as aspects of market power. Finally, I note how Google’s providing the service for free does preclude a finding of dominance.

Evans notes that traditional market power analysis faces difficulties when faced with free goods as it: “often relies on the basic finding that prices tend to equal the marginal costs of production in competitive markets, and that deviations from marginal cost prices indicate market power.”²⁶² Indeed, market power is usually only considered with respect to price. that is, the ability of the undertaking concerned to be able to raise prices to a level above the competitive one. Yet, it is clear that merely because the consumer is not charged a monetary price, this does not mean that market power does not exist for the undertaking providing the platform. Utilising a cost-price difference is not able to provide a proper understanding of market power in the context of a free good; and could even lead to the incorrect conclusion that there is no market power, based on the fact that the price consistently stays below cost.²⁶³

It is therefore necessary when undertaking a competition law analysis in a zero-price market as opposed to a traditional market, that a different parameter be utilised to understand market power and where profit comes from. Parameters which can be considered are attention and information costs, where the undertaking can increase them and reduce quality. For example, market power may be exerted by forcing consumers to view a larger number of adverts, increasing attention costs and decreasing quality. Additionally, the existence of varying strengths of multi-homing, network effect and dynamics of the market mean that no entirely

²⁵⁹ Case T-201/04 *Microsoft v Commission* [2007] ECR II-03601 para 966-970; Case T-79/12 *Cisco Systems, Inc. and Messagenet SpA v Commission* [2013] EU:T:2013:635 para 65-74; Autorité de la concurrence and Bundeskartellamt 27.

²⁶⁰ See S3.3.1.

²⁶¹ Guidance para 11.

²⁶² Evans 2011 82.

²⁶³ Rubinfeld and Gal 2016 552.

universal approach can be elucidated.²⁶⁴ What is clear it that a different approach to market power must be taken, which includes considering the specificities of each case. This also demonstrates well how consumers can face competitive harms in zero-priced markets, albeit not in respect to traditional monetary cost.

4.4.1 Market Share

The first indicator of market power I discuss is market share. Market shares are the main indicator of market power, and are generally calculated by considering the undertakings ratio of sales relative to the total quantity of sales in the relevant market. However, when the market concerned is a zero-price market this method encounters obvious difficulties. In *Google Search (Shopping)* the Commission used the traditional market power benchmark of market share to attempt to find if Google were in a position of market power. Because the search market is a zero-price market, the Commission departed from the usual model of computing market share by value, instead utilising the proxy of shares by volume. The Commission noted that since 1998 Google had been providing general search services in every national market, and had maintained strong, stable markets shares since 2008. Moreover, the Commission noted that since 2008, no competitors had effectively entered into the market.²⁶⁵ This was taken as a good indication that Google indeed held a position of competitive strength on the market concerned.

In *Google Search (Shopping)*, the choice to use shares by volume was reasoned due to the specifics of the general search services market, in particular the difficulty with obtaining the precise and verifiable values with respect to the Revenue Per Search (“RPS”), because consumers are not charged anything when utilising the search services, and because advertisers place their advertisements on search services with respect to usage shares.²⁶⁶ In justifying the position on market shares by volume, the Commission noted that there are several ways to calculate the volume of market shares. This includes the number of queries, the number of users, how many times a page is viewed or the number of sessions. In particular the Commission provided data of Google’s market share in 2016, and at its lowest market share point between 2008 and 2016 in each geographical market.²⁶⁷

²⁶⁴ Autorité de la concurrence and Bundeskartellamt 2016.

²⁶⁵ *Google Search (Shopping)* (Case COMP/AT.39740) Commission Decision COM (2017) 4444 final paras 273-274.

²⁶⁶ *ibid* para 275.

²⁶⁷ *ibid* para 276-284, table 2 and table 3 59-61.

The network externalities, data driven nature of the market and increasing returns of scale present in platform markets make the calculation of market power even more difficult.²⁶⁸ Therefore, a different method must be used; and different methods will likely provide different results regarding market share. This of course creates difficulties for competition authorities; however, it is important to ensure that consumers and the internal market do not face competitive harms due to incorrect outcomes in competition cases. For example, on a social media website potential options for market share assessment could include number of users or the amount of time which a user spends on the platform, whereas in search engines it is appropriate to use share by volume proxy. Moreover, if the market concerned is multi-sided, it is necessary to pay consideration to the competitive constraints which present themselves due to the existence of related markets when considering market power in zero-priced markets.²⁶⁹ Indeed, it is clear that the calculation of market share faces challenges in the context of the zero-priced market. The *Google Search (Shopping)* case demonstrates this fact. Overall, it is necessary for competition authorities to depart from the general method of calculating market share with reference to price, instead considering market specificities and completing this on a case-by-case basis.

4.4.2 Barriers to Entry and Expansion

The second indicator of market power I discuss is barriers to entry and expansion. I have discussed barriers to entry and expansion and network effects in depth in the preceding chapters. It is worth to recap that these markets are characterised by the existence of strong network effects and high sunk costs. As has been noted, network effects can represent both positive and negative effects for consumers and competition, as well as posing challenges to competition law analysis. It is essential to consider network effects on a case by case basis as their importance within each market will differ as well as how they develop, and depends on the service being considered, as the number of customers using the service increases.²⁷⁰ Moreover, because zero-priced markets are most frequently digital markets and are characterised by competition for the market, this also changes the analysis of barriers to entry and expansions. It is essential that the contestability of the market is considered.

In *Google Search (Shopping)* the Commission effectively discussed the significant number of barriers to entry and expansion in the national markets for general search services, taking

²⁶⁸ Crémer, Yves-Alexandre, and Schweitzer 2019 49.

²⁶⁹ Rubinfeld and Gal 2016 36.

²⁷⁰ Autorité de la concurrence and Bundeskartellamt 2016 27-28.

into account many of the specificities of the market. First discussed was the quantity of time and resources necessary to create a search engine capable of general search. It was noted that not only would it take several years to develop a viable search service, but a significant quantity of data was required for the algorithms to function effectively and high costs would be associated with the development of technology.²⁷¹ Additionally, it is difficult to achieve viability as a search engine because this requires a large quantity of queries to improve the search engines capability to respond to them.²⁷² Third, it was noted that a potential general search engine competitor would need to match the massive investments of Google to improve the engine, which would require significant funds – for example, in 2015 Google invested 9,915,000 USD of capital into their search engine.²⁷³ The Commission then went on to discuss in great detail the additional factors supporting the existence of barriers to entry and expansion in the market concerned. In particular, the Commission noted the number of companies who abandoned their general search service technology, inability of small general search service companies to expand, the lack of growth of the second largest competitor Bing’s market share, and the lack of success of any start-ups in general search services.²⁷⁴

The Commission then went on to discuss the presence of positive feedback effects. Positive feedback effects present themselves between the online search advertising shown on a general search service and the number of users of the general search service. As the number of users of the search engine increases, it is more and more likely that the user sees an advert which is applicable to them, encouraging them to purchase the advertised product. Then, the search engine can increase the price that it charges to the advertisers as the number of clicks on their adverts increases. The search engine is then able to put that advertisement revenue into obtaining more users for the platform.²⁷⁵

Then, the Commission discussed direct and indirect network effects. Direct network effects come from the fact that at least some of the users of the general search engine benefit from the advertisements they see.²⁷⁶ Indirect network effects, on the other hand, are to be found from link between how attractive a search engine is as an advertising platform and of the revenue it makes.²⁷⁷ The fact is that the more advertisers are using the online search service to advertise, the higher the revenue of the platform is, and the more revenue the platform can

²⁷¹ *Google Search (Shopping)* (Case COMP/AT.39740) Commission Decision COM (2017) 4444 final para 286.

²⁷² *ibid* para 287.

²⁷³ *ibid* para 291.

²⁷⁴ *ibid* para 297-305.

²⁷⁵ *ibid* para 293.

²⁷⁶ *ibid* para 295.

²⁷⁷ *ibid* para 296.

invest into itself.²⁷⁸ Additionally, the platform can utilise the increasing amount of data it collects about consumers and their habits to improve the search results, advertising and algorithms, thus also strengthening the dominant position of a search engine provider. In this respect, it was positive to see the Commission discuss related markets to that of general search and comparison shopping.

It is essential to consider barriers to entry in not just the zero-priced markets but its related ones as well.²⁷⁹ If there are high barriers to entry in the market for the related good, this will often jeopardise the viability of competitors entering into the market for the free product even if the barriers in the free side of the market are low. Moreover, even if the potential entrant tried to charge a positive price on the free side of the market to recoup the costs related to high barriers to entry, the presence of the “zero-price effect” would mean that a potential new market entrant would likely be unsuccessful.²⁸⁰

It is of course essential to consider the extent of the barriers in any competition law case. However, *Google Search (Shopping)* clearly demonstrates the significance of the unique barriers to entry and expansion in zero-priced markets. Especially in the case of an incumbent undertaking in a zero-price markets, as Google was, barriers may be so significant that it is essentially impossible for competitors to enter the market. This was clear from the fact that even Microsoft, Google’s most close competitor, had only a maximum 10% market share in the search engines market in any of the EEA countries. Moreover, the unique relationship between the different sides of the multisided market clearly must be considered. Indeed, in *Google Search (Shopping)* as the GC noted, the position of Google as the market leader attracted more advertisers to the general search which in turn favoured Google further as market leader. This only add further to the complexity of barriers to entry and expansion as they show themselves across all aspects of the zero-price multisided market and must be considered in the competitive assessment.²⁸¹

4.4.3 Multi-homing and Countervailing Buyer Power

The third indicator of market power I discuss is multi-homing and countervailing buyer power. In the *Google Search (Shopping)* case, the Commission concluded that although it was very much possible for users to multi-home, only very little users actually did multi-home with respect to general search services. A minority of users of Google’s search service

²⁷⁸ *ibid.*

²⁷⁹ Newman 2016 77.

²⁸⁰ *ibid* 78.

²⁸¹ Case T-612/17 *Google and Alphabet v Commission (Google Shopping)* 2021 ECLI:EU:T:2021:763 47.

as their main search service utilised other search services. This lack of multi-homing was further exacerbated by factors such as the consumers trust in the Google brand and brand loyalty – with a large number of users maintaining they would still utilise Google even if there was a decrease in the quality of its search results.²⁸² The Commission also referred to a decrease in quality of the Google general search services – but only with reference to the fact that they did not need to consider how much Google would need to degrade its quality for it to be unprofitable.²⁸³ Of importance was that switching costs were also discussed with reference to the reduction of users capability to multi-home. When considering the countervailing power of buyers over Google, the Commission concluded that each user has effectively no ability to exert power over Google as each user represents such a small fraction of searches.²⁸⁴ Additionally, the Commission noted the irrelevance of whether there was a distinction between whether the search was conducted on a mobile or on static devices.²⁸⁵

Google Search (Shopping) shows the complexity of the issue of multi-homing. Multi-homing is often seen as a factor which can reduce the market power of an undertaking.²⁸⁶ However, it is quite rare that a situation of perfect multi-homing will exist due to switching costs. In those markets that involve data collection switching costs will be especially high. In zero-priced markets, the presence of switching costs limits the consumers ability to multi-home, even though the products or services are provided at no monetary cost. Additionally, the ability of new market entrants to compete is reduced because they are not able to compensate for their lower quality products or services by providing lower prices, as prices are already set at zero. This is problematic as consumers focus on quality in zero-price markets as there is no price comparison to be made as such.²⁸⁷ With respect to data-based market power, the potential to multi-home is not even necessarily that relevant when considering market power. As noted by the Bundeskartallamt and Autorité de la Concurrence, “user-based data may only make a difference if end-users multi-home and use rival providers sufficiently frequently... a tall order when network & experience effects are at stake”.²⁸⁸

As such, it is essential to consider the potential effects of multi-homing on the market concerned and on the market power of the undertaking. This should be assessed on a case-by-case basis and with reference to the specificities of the undertaking concerned. It must be

²⁸² *Google Search (Shopping)* (Case COMP/AT.39740) Commission Decision COM (2017) 4444 final paras 306-315.

²⁸³ *ibid* para 313.

²⁸⁴ *ibid* para 316-318.

²⁸⁵ *ibid* para 325-330.

²⁸⁶ Evans and Schmalensee (2007) 151-179.

²⁸⁷ Autorité de la concurrence and Bundeskartallamt 2016 29.

²⁸⁸ *ibid*.

considered with regards to all sides of a multi-sided market, be it single homing on one side of the market and varying degrees of multi-homing on the other side. Additionally, the data which the consumer has invested must be calculated, as this impacts the consumers multi-homing. Finally, an authority should not overlook the lock-in effect of a product/service merely because it is provided at zero-price. Overall, it is clear that the issue is complex and requires an in-depth analysis of not just the consumers ability to multi-home, but also their desire to do so.

4.5 ABUSIVE CONDUCT

Article 102 TFEU requires that the dominant undertaking commits an abuse to fall foul of the provision, and I now discuss how abuse was found in this case. The potential forms of abuses are very diverse as there is no set list. In the *Google Search (Shopping)* case the Commission found that Google abused its market position in the general internet search market by systematically giving its comparison shopping an illegal advantage, placing its comparison shopping service higher on Google search results than its competitor services, i.e., ‘self-preferencing’. This conduct was abusive for several reasons. Firstly, because this diversion of consumer traffic from Google’s general search results page from competing services to Google’s meant that there was a large increase in traffic to Google’s comparison shopping service and decrease to the competitors. Second, on both the markets for general and comparison search, the Commission argued this conduct would likely have anti-competitive effect.²⁹¹ The GC annulled judgement with respect to general search market, finding that the Commission did not establish that Google’s conduct had even potential anticompetitive effects in this market.²⁹² However, they agreed that Google infringed Article 102 on the comparison search market by abusing its position on the general search market.²⁹³ Some of the Google algorithms frequently reduced the ranking and visibility of the competitor shopping services in Google’s search pages. Google’s shopping services were, on the other hand, not subject to these dedicated algorithms and were placed highly in the search results and in a more prominent manner. Even the competitor comparison shopping providers who were very highly ranked were placed on average on the fourth page of search results; significant because results on the second page receive only 1% of clicks, whilst the

²⁹¹ *Google Search (Shopping)* (Case COMP/AT.39740) Commission Decision COM (2017) 4444 final paras 179-195.

²⁹² Case T-612/17 *Google and Alphabet v Commission (Google Shopping)* 2021 ECLI:EU:T:2021:763 para 703.

²⁹³ *ibid.*

highest ten receive about 95%, and the top result around 35%.²⁹⁴ The rival shopping services could also not access certain advanced features available to Google's shopping services.²⁹⁵

The Commission concluded that Google's conduct was capable of or likely to have anti-competitive effects. Indeed, the conduct could lead to foreclosure on the market for comparison shopping services, and reduce the consumers ability to access the comparison shopping services with most relevance.²⁹⁶ Because of this conduct, Google's obtained very large market shares in comparison shopping services. Google's competitors faced very significant decreases in traffic, whilst Google obtained much higher traffic to its comparison shopping service.²⁹⁷ The Commission noted that Google's conduct could lead to foreclosure in the market if their competitors stopping providing services, which would in turn allow Google to increase fees for merchants, and the merchants would in turn increase product prices for consumers.²⁹⁸ The Commission also noted that this was likely to reduce the incentives to innovate for the competing comparison shopping services. This was in part due to the fact that the competitors would not innovate as they were unable to compete with Google and attract new customers, and due to a reduction in revenue which would lead to less money to spend on innovation.²⁹⁹ In this regard, Google's incentive to improve the quality of its comparison shopping services was also diminished because it was not required to compete on the merits.

As such, it is clear that even though the market for general search services and comparison search services were both zero-price markets, there were real and serious competitive harms taking place on and via them. Google's actions on the general search service market seriously negatively affected the market for comparison search services, stifling competition. As I have argued, in zero-priced market it is clear that harms to competition and consumers are found. They are, however, slightly different iterations of the same price-based harms. As Newman notes, "[a]nticompetitive conduct in zero-price markets may yield higher attention or information costs (i.e., overcharges), reduced output of the zero-price or an interrelated product, lower quality, or less competitive efforts directed toward innovation".³⁰⁰ This can be compared to the traditional competition law harms such as an increase in monetary prices

²⁹⁴ Ingrid Schneider, 'Bringing the state back in Big Data-based capitalism, disruption, and novel regulatory approaches in Europe' in Sætnan, Schneider and Greeneds 2020, 157.

²⁹⁵ Summary 11-13.

²⁹⁶ *Google Search (Shopping)* (Case COMP/AT.39740) Commission Decision COM (2017) 4444 final para 593, 597, 601, 605.

²⁹⁷ *ibid* para 639.

²⁹⁸ *ibid* para 594.

²⁹⁹ *ibid* para 595.

³⁰⁰ Newman 2016 58.

or a decrease in quality, innovation and output. It can be concluded that although the medium which is exchanged between consumers and undertakings is different to traditional positive price markets, consumers still can and do suffer harm in zero-priced markets.

4.6 REMEDY

I now consider the remedy that the Commission imposed after finding that Google breached Article 102. The Commission did not specify a particular remedy, instead requiring Google to provide equal treatment for its rival comparison shopping services and cease the abuse.³⁰¹

In particular, the Commission required Google ensure the rival comparison shopping services are treated in a manner which is no less favourable than how Google treats its own.³⁰²

Google chose to implement an ‘access remedy’ an arms-length auction bidding for ads which will appear on the Google general search result page between Google and rival services.³⁰³

The fine was €2.42 billion. The implications for Google in the future are, however, perhaps the greatest with respect to the alteration that had to be made to their algorithms, as this will in the end be what allows the competitors to compete. It is also interesting to see an open-ended remedy. It is beneficial in some respects to the undertaking concerned, as they have leeway. On the other hand, it causes legal uncertainty for the undertaking as to whether their remedy will be deemed to have satisfied the requirements to end the abuse.³⁰⁴

The trouble with the imposition of remedies in zero-price markets is very much to do with their free nature. For one, imposition of a price on the free side would fall foul of the zero-price effect and cause a mass exodus of customers. The digital nature of these markets also poses challenges in that the markets rapidly change, meaning that a remedy may very quickly become outdated. At the same time, the law must be careful so as not to create a chilling effect. The Commission’s decision to use an open-ended remedy in this case is probably beneficial in providing Google flexibility in a market which it understands and allowing a tailored remedy that appropriately incorporates market specificities. On the other hand, it denotes legal uncertainty, not just for Google but also for other firms in zero-price markets. There may be a move towards more flexible remedies as the law has to deal with novel situations and markets. Although this is not the best for legal certainty, has the benefit of being more tailorable to markets with characteristics different to traditional markets.

³⁰¹ *Google Search (Shopping)* (Case COMP/AT.39740) Commission Decision COM (2017) 4444 final para 699.

³⁰² *ibid.*

³⁰³ Vesterdorf and Fountoukakos 2018 3.

³⁰⁴ *ibid.* 6.

4.7 CONCLUDING REMARKS

This Chapter has considered the *Google Search (Shopping)* case, and has demonstrated how zero-price markets pose significant challenges to competition authorities through their unique features and multifaceted nature. The case was certainly complex, requiring departing from traditional tools of market analysis, consideration of general and comparison search, and of supply and demand from merchants, advertisers, and search and internet users. The Commission and GC were receptive to certain special characteristics of zero-price markets. Utilising a flexible remedy and departing from the SSNIP test are indicators of that. However, in my view the analysis is somewhat lacking in its considerations of alternative costs to consumers, including their attention and information costs, despite the fact it was recognised that consumers can pay for services with their data. Additionally, it lacks a deep enough consideration of non-price competition factors such as innovation, privacy and quality, markets for attention and the significance of data. All in all, this judgement is a step in the right direction for EU competition law and zero-priced markets. However, it does show that there is still work to be done in going deeper into the challenges and features of the market type in a competition law analysis.

CHAPTER 5: ANALYSIS AND SUGGESTIONS FOR CHANGE

5.1 THE STARTING POINT – CURRENT POSITION OF COMPETITION LAW

If the goal of competition law is to maximise welfare through the maintenance of effective competition, the question is whether Article 102 is obtaining these aims in zero-price markets. Moreover, it must be asked if Article 102 and its tools are currently capable of dealing with the special characteristics of zero-priced markets. In the context of a market which is characterised by exchanged monetary costs, effective competition should ensure that the consumer receives the best product for the best monetary price. On the other hand, in zero-priced markets competition should aim to obtain the lowest attention and information costs for consumers whilst simultaneously getting the best quality zero-priced product.³⁰⁵

The question then is whether competition law is able to deal with this fundamental alteration from price-based cost to attention and information costs. In *Google Search (Shopping)*, the Commission noted that competition in respect of general search services takes place on different grounds than in traditional markets, observing that “[it does] not compete on price, there are other parameters of competition between general search services. These include the relevance of results, the speed with which results are provided, the attractiveness of the user interface and the depth of indexing of the web”.³⁰⁶ It is clear that there is an awareness that competition is taking place on different grounds in zero-price markets. However, I argue the Commission’s analysis was not robust enough and not entirely focused on correct parameters. It is argued that it is essential for the EU to develop a robust framework must be formulated that deals with zero-priced markets. This framework must understand that harms to consumer welfare can come from non-monetary costs, as opposed to the superficial analysis of competition in the *Google Search (Shopping)* case. This would include an acknowledgment that in a number of goods or services consumers pay with their data and attention and as such this is the relevant competitive parameters. It is essential to develop further the understanding of how consumers pay for these services with their data and attention and build this analysis into the regulatory framework, including through utilising non-traditional methods of economic analysis, like those which are discussed below in Sections 5.3.1-5.3.2 and 5.5 and EU competition law has the benefit of flexibility and can easily incorporate an understanding of the consumers data and attention as a commodity.³⁰⁷

³⁰⁵ Newman 2015 177.

³⁰⁶ *Google Search (Shopping)* (Case COMP/AT.39740) Commission Decision COM (2017) 4444 final para 160.

³⁰⁷ Jarman and Örsal 2014 338.

The application of the law in the *Google Search (Shopping)* case was significant in demonstrating the Commission moving forward from relying solely on concrete measures of identifiable consumer harm like price. The Commission clearly strove to apply competition law to Google, because the undertaking has such a complicated business model and not necessarily with an obvious link between its various services and the ways it makes money. Google's business model allows them to obtain essentially monopoly prices from user attention and data as well as from advertising revenue.³⁰⁸ This model can be compared to the older *Microsoft* case where the link between the money-making system of Windows and the tied free Media Player was very clear, and as such it was clearer that competition law could apply. In this respect, in the *Google Search (Shopping)* case, the Commission noted that "even though users do not pay a monetary consideration for the use of general search services, they contribute to the monetisation of the service by providing data with each query."³⁰⁹ Moreover, they additionally noted that "data which users agree to allow a general search engine to store and re-use is of value to the provider of the general search service as it is used to improve the relevance of the search service and to show more relevant advertising".³¹⁰ This recognition at EU level that consumers essentially do pay with their data is clearly an important step in recognising that there can be competition law harms to consumers even in markets where they do not pay a positive monetary price.³¹¹ However, it must be more robust and engrained further into the law.

It is apparent that the Commission do not believe that the offering of a zero-price good or service automatically relinquishes an undertaking from the application of competition law. This is clear not just from the recent Google cases, but also from past cases like Microsoft. This case illustrates that the EU has taken a more interventionist approach to zero-price market and has not strayed away from tackling the competitive harms related to them. Although European Competition law is rooted in economic analysis, it is flexible. EU competition law should accept that consumers do not always pay for goods/services in monetary terms, but also through attention and information, and that undertakings compete on quality and for consumers attention and information. It is clearly the view of the Commission that zero-price markets must be regulated by competition law.³¹² Moreover, the goals of EU competition law become clear when the zero-price market cases are considered

³⁰⁸ Newman 2019 1545.

³⁰⁹ *Google Search (Shopping)* (Case COMP/AT.39740) Commission Decision COM (2017) 4444 final para 158.

³¹⁰ *ibid* 158.

³¹¹ Jarman and Örsal 2014 333.

³¹² European Commission 2018.

— ensuring the proper functioning of competition and consumer welfare. Google’s sheer amount of power is seen to be indicative of weak competition on the markets concerned, which has negative effects for competition and the European market.

I now seek to demonstrate and discuss potential ways which the current tools which Article 102 utilises can be adapted to properly incorporate and deal with the specificities of zero-priced markets. First, I undertake an analysis of the current standpoint of the law. Then I consider the potential for a direct regulatory intervention. I consider data and information, and how the Commission and undertakings themselves may be able to provide input. I consider how market definition may be adapted, including two alternative tests to the SSNIP test. I also discuss how multi-sided platforms and the zero-price effect should be included in market definition analysis. Then, I consider how market power analysis may be adapted. Finally, attention and information costs are discussed, in particular, how competition analysis can be altered to be effectively inclusive of these alternate costs to consumers.

5.2 THE POTENTIAL FOR REGULATORY INTERVENTION

At a national level, some Member States have been proactive in addressing some of the issues which present themselves regarding the zero-price market. In particular, the French Autorité de la concurrence and the German Bundeskartellamt have undertaken reports such as the *Working Paper on Competition Law and Data*, or the Bundeskartellamts setting up of the Think Tank which produced the *Joint Paper on Market Power of Platforms and Networks*.³¹⁴ Member States Parliaments have also taken regulatory action to remedy the approach of their national competition laws to zero-price markets. For example, previously in German competition law it was the view that free products could not be regarded as constituting the relevant market. To remedy this, the German GWB³¹⁵ was amended to acknowledge that markets can be constituted by free services/products and now states: “[t]he assumption of a market shall not be invalidated by the fact that a good or service is provided free of charge.”³¹⁶

It could, then, be useful to make such a regulatory amendment at an EU level to ensure that markets for zero-priced goods and services do not escape competition law scrutiny. On the other hand, the trouble with a legislative approach, especially in high tech digital markets, is the potential for regulation to quickly become outdated and inapplicable. It is also essential

³¹⁴ Bundeskartellamt, ‘Working Paper Market Power of Platforms and Networks’ 2016; Autorité de la concurrence and Bundeskartellamt 2016.

³¹⁵ Act against Restraints of Competition (Gesetz gegen Wettbewerbsbeschränkungen) (hereby ‘GWB’).

³¹⁶ GWB §18 (2a) “Der Annahme eines Marktes steht nicht entgegen, dass eine Leistung unentgeltlich erbracht wird”.

to avoid false positives and the penalisation of firms which are not acting anti-competitively. Legislative action can have a chilling effect on innovation, and in the zero-price market this is a significant risk. As such, it can be argued that a sectoral approach which specifically aims to tackle zero-price markets and the issues within them is not necessarily the best action. At the EU level, some work is beginning to be done with respect to zero-price markets and the recognition of the potential interactions with consumers. The Proposal for the Digital Markets Act³¹⁷ seeks to address the problem of large online platforms ‘gatekeepers’. These ‘gatekeepers’ will have obligations placed on them, and the Regulation will better allow the Commission to address unfair competitive behaviour by them. Directive 2019/770 recognises that there are contracts between consumers and undertakings in respect their personal data in zero-price markets.³¹⁸ The GDPR has also been helpful, reducing the information gap between consumers and undertakings and help consumers to understand the potential costs they are incurring with respect to the zero-price good and their data. The GDPR imposes a number of requirements on those who process data. Relevant for this discussion is the imposition of requirement that the processor of the data should state in clear and plain language, “any information and communication relating to the processing of those personal data [and that is should also] be easily accessible and easy to understand”.³²⁰

5.2.1 Data and Information

At the level of the undertakings themselves, there is something to be said for Member States or the Commission obtaining data from the undertakings regarding information and attention costs. In this respect, because the undertakings generate their revenue based upon competition for attention and information, it can be argued that the companies actually have the best knowledge to value data and information. The undertakings sell data and information, so they are more aware of the “value both advertisers and consumers are obtaining in exchange for the company’s (platform’s) service: monetary cost, in the case of advertisers, data and attention in the case of consumers”.³²¹

In this regard, it is essential to ensure the most optimal outcome and reduce the information asymmetry between both consumers and the advertisers who acquire data so that they do not under or over value it. One potential suggestion is a privacy and attention labelling, where it

³¹⁷ Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector (Digital Markets Act) COM 2020 842 final.

³¹⁸ Directive (EU) 2019/770 of the European Parliament and of the Council of 20 May 2019 on certain aspects concerning contracts for the supply of digital content and digital services [2019] OJ L 136/1 Recital 24 and 25.

³²⁰ General Data Protection Regulation Recital 39.

³²¹ Jarman and Örsal 2014 336-337.

would be compulsory on a website to show how invasive the privacy or attention gathering is on the website or app in question.³²² This would certainly help address the issues of information asymmetries and would be particularly useful in zero-price markets so consumers understand that the product is not actually free; they pay in information and attention. As Fox additionally notes, it is essential that there is some form of power shift towards the consumers, decreasing their attention and information costs.³²³ However, it is questionable if this kind of system could actually be implemented in practice.

A potentially desirable outcome would be for the Commission to release some form of guidance regarding zero-priced markets. For example, an amendment could be made to the Commission's *Notice on Defining the Relevant Market*. This could include several elements, including a recognition, like in the German GWB, that zero-priced goods and services can constitute a relevant market in Competition law, how competition law analysis should be taken out on multi-sided markets with respect the interplay between the related markets, how specific features of zero-price markets such as strong network effects should be included in the competition law analysis, harms to attention and to information can occur through overcharge by the undertaking, and generally accept that competition law harm can and does occur from zero-priced goods and services.³²⁴ This is essential not only for consumers but also for undertakings who operate on the European market, so that some form of legal certainty can be obtained.

5.3 MARKET DEFINITION – MOVING AWAY FROM PRICE

It has been shown that in zero-priced markets, the traditional concepts and understandings of market definition face significant challenges. This portion of the discussion seeks to present alternative solutions to market definition in zero-priced markets as the traditional SSNIP loses its functionality when presented with a price of zero. The potential solutions include the SSNIC test and the SSNIQ test. These tests do not significantly alter the aim of the original SSNIP test, instead reframing the test around quality and costs, including attention and information costs which is more appropriate for zero-priced markets.

³²² Kesler, Kummer, and Schulte 2017 3–4.

³²³ Fox (1981) 1156–1157, 1161.

³²⁴ Newman 2019 1560.

5.3.1 SSNIC Test

One potential tool is the SSNIC test,³²⁵ an altered version of the SSNIP test. The use of cost as a parameter gets around the inoperability of SSNIP test at zero price. It can be used to define the market, moving away from the price parameter and instead considering cost with respect to market power. The cost considered in the SSNIC test is not all costs, but information and/or attention costs. Newman gives the example of using this test to determine in a hypothetical a merger, if an increase of five percent in the amount or length of advertisements would cause consumers to switch to an alternative product.³²⁶

There are several difficulties with this method. First, the nature of attention and information costs, in particular their heterogeneity. The analysis of the costs must remain constant, but the heterogeneity inherent within these costs can cause errors. However, heterogeneity also presents itself as a problem in positive price traditional markets where products which may have quite different characteristics are included within a defined market and viewed only with respect to their price differences. Second, there are difficulties in defining the relevant cost unit, whether it is considered to be information or attention or both.³²⁷ The SSNIP test is concerned with how the customer will respond to the increased exchanged cost of the product concerned. In the typical market it is easy for the analyst to come to a conclusion as the price is the representation of the exchange cost. In the zero-price market the situation is different as the customers costs can be an increase of information or attention costs or both. The appropriate unit can change depending upon the undertaking concerned. The appropriate cost must be selected, i.e., that which the hypothetical monopolist is most likely to increase. Thirdly, consumers may perceive information and attention costs in an inaccurate manner. Consumers often do not understand the true costs and benefits of the zero-priced good or service they are being offered. It is noted that “free offers are...used widely as an enticement to get consumers to try a product without realizing its costs”.³²⁸ Consumers are often unaware of how they may be harmed by the collection and use of their data; nor do they easily understand how the platform they are using is potentially exploiting their data.³²⁹ On the other hand, for attention costs there are less difficulties regarding calculation and transparency as consumers are likelier to understand the potential trade-offs.

³²⁵ Newman 2016 66.

³²⁶ *ibid.*

³²⁷ *ibid* para 67.

³²⁸ Hoofnagle and Whittington 2014 613.

³²⁹ Strandburg 2013 132-133; Shelanski 2013 1690.

Finally, the fact that information costs are characterised by their uniqueness possess challenges. Cooper discusses information costs, noting that those who collect and mine the data of consumers face cost from the analysis, collection and storage of data.³³⁰ The increase of information costs to consumers by the undertaking who is collecting their data can be for two reasons, to increase the amount of income from advertising and/or to improve the provided good or service.³³¹ Cooper argues that the fact that an undertaking may increase the quality of the product/service demonstrates that said costs are not an appropriate way to measure market power, questioning how an increase in the quality of a product of service would demonstrate the market power of the undertaking. Newman on the other hand states that information costs are appropriate to measure market power, viewing it from the lens of the undertakings ability to increase income from advertising. He argues that what must be considered is whether the hypothetical monopolist could increase the amount of advertising (and thus information costs) without simultaneously improving said products quality.³³²

5.3.2 SSNIQ/SSNDQ Test

Another potential suggestion has been the SSNIQ test, which looks to a reduction in quality as opposed to price.³³³ Quality as a parameter can include cost, for example privacy costs, as well as an increase in dynamic efficiency.³³⁴ This form of test has been seen in practice in competition law before, in the SPC Guiding case *Beijing Qihu Technology Co., Ltd. v Tencent Technology (Shenzhen) Company Limited and Shenzhen Tencent Computer Systems Company Limited*.³³⁵ Here, the SPC discussed the appropriateness of the SSNIP test in the context of the zero-priced market for online instant messaging. They stated that the SSNDQ test should be used, noting that the nature of zero-priced internet markets means that “[w]hen the benchmark price is zero, if the price is increased by 5% to 10%, the price, after the increase, is still zero”.³³⁶ Clearly the SPC understood the difficulties faced by the SSNIP case when presented with a zero price and avoided the potential misconceptions which could have come from attempting to define a relevant market based on said zero price.

³³⁰ Cooper 2013 1135.

³³¹ *ibid* 1135-1136

³³² Newman 2016 69; Cooper 2013 1136.

³³³ Newman 2016 69; Rubinfeld and Gal 2016 551-552.

³³⁴ Rubinfeld and Gal 2016 551.

³³⁵ *Guiding Case No 78 Beijing Qihu Technology Co Ltd V Tencent Technology (Shenzhen) Company Limited and Shenzhen Tencent Computer Systems Company Limited, A Dispute over Abusing Dominant Market Positions* (指导案例 78 号 北京奇虎科技有限公司诉腾讯科技(深圳)有限公司、深圳市腾讯计算机系统有限公司滥用市场支配地位纠纷案(最高人民法院审判委员会讨论通过 2017 年 3 月 6 日发布)) [hereby ‘Guiding case 78’]

³³⁶ Guiding case 78 6.

Gal and Rubinfeld suggest that the SSNIQ test be used in markets where the goods are all provided for free, and not in the markets where consumers pay with their information or attention. They argue that in these markets, the SSNIC test should be alternatively when the consumer is ‘paying’ for the goods or services with attention or information, and when these costs can be effectively quantified.³³⁷ The SSNIQ test follows similar difficulties to the SSNIC test in the lack of heterogeneity of quality as a concept as well as in the difficulty in quantification and measurement of change in quality. Newman urges caution in using a SSNDQ test, noting that, “[i]n many zero-price markets, product quality is attained primarily via sunk research- and-development costs, while the marginal cost of delivering a high-quality instead of a low-quality product may be minimal.”³³⁸ As such, many undertakings who operate in zero-price markets are unlikely to lower quality as an exercise of their market power. The SSNDQ test finds its value in cases in which marginal costs and quality together considerably fluctuate.³³⁹ When this is not the case it is preferable to use a different test.

5.4 MARKET DEFINITION – RELATED MARKETS IN THE MULTI-SIDED PLATFORM

Without considering the related market in two and multisided markets, an analysis of market definition is bound to face significant analytical errors. Considering price in an isolated manner on only one side of the multisided market will lead to an overly narrowly definition. A price increase which is considered on only one side of the market may indicate that said price rise would be profitable. However, if properly including the other side of market and the reactions of those users, it may be that the price increase would not be profitable at all.³⁴⁰ Haucap and Stühmeier provide the following example:

It may appear profitable for an online shopping platform to increase the commission charged to the sellers listed if the additional revenues generated from the price increase exceed the loss in revenues that results from some sellers leaving the platform. However, the fewer sellers are listed the lower is the platform’s value for buyers and they may switch to a different online platform, making the platform, in turn, less valuable for sellers. Thus, in total, the price increase may be unprofitable once feedback effects are accounted for so that the market needs to be defined more broadly in this example.³⁴¹

³³⁷ Rubinfeld and Gal 2016 551-552.

³³⁸ Newman 2016 70.

³³⁹ *ibid* para 71.

³⁴⁰ Haucap and Stühmeier 2016 9.

³⁴¹ Haucap and Stühmeier 2016 9.

Moreover, the presence of two prices for two different user sets causes additional complications. The question which must be asked is which price is being increased and whether prices would be increased on one side or on both. In the case of asymmetric substitution³⁴² it is even more complicated.³⁴³ An alteration of the SSNIP is necessary to incorporate both sides of a multisided market. It would need to include the multi-sided nature of the market concerned and calculate relevant price-cost margins.³⁴⁴

The calculation of a price structure would be highly complex, posing significant challenges as it is necessary to account for demand estimations on each side of the market as well as interactions taking place between its different sides.³⁴⁵ This is even more intricate in the context of the zero-price market as consumers on one side do not pay with money. The computation of data as a cost suffers from conceptual difficulties as users value their data heterogeneously, in comparison to price which is a consistent value. This would place yet more burden on the competition authority to compute more data and may even be unworkable. Some suggestion solutions are to obtain user surveys, but these do suffer from less reliability than actual observed consumer behaviour.³⁴⁶

5.4.4 Accounting for the Zero-price Effect

Another aspect which much be addressed in competition law analysis is the zero-price effect. It is not so simple as to merely require dominant undertakings operating in zero-price markets to charge a positive price for their product, as “once a product is offered for a price of zero, it can be difficult to charge a positive price afterwards”.³⁴⁷ Moreover, the zero-price effect may also mean that in the case where a positive charge will be applied to the previously zero-priced good, consumers will switch to very distant substitutes. Additionally, it must be recognised that there is little to no substitutability between zero-priced goods and similar goods, but which charge a positive price, and the impact which the zero-price effect has on market power as a consequence of its limited substitutability and barriers to entry and expansion it creates. Therefore, it is highly misguided to rely on price in zero-price markets. As was discussed in Section 3.1.4 the zero-price effect means the demand for the zero-price good will be much higher than would be assumed in a traditional market. As such, if the undertaking who are providing the zero-price good were to suddenly increase the price to a

³⁴² Where one side views the product as more easily substitutable with an alternative than the other user group.

³⁴³ Haucap and Stühmeier 2016 9.

³⁴⁴ Argentesi and Filistrucchi 2007 1248.

³⁴⁵ Haucap and Stühmeier 2016 10.

³⁴⁶ *ibid* 10.

³⁴⁷ OECD 2018 13.

positive price, even if it were small, they would see a large number of customers leaving from the now positively priced good and substituting it with another zero-priced good.³⁴⁸ This problem has been recognised by the SPC who noted that in “...free-of-charge ... services... users have extremely high price sensitivity and thus changing the free-of-charge strategy to charge even a small fee may lead to the loss of a large number of users.”³⁴⁹ This explains why competition in zero-price markets takes place on other competitive parameters, such as quality, privacy and attention. Of course, other undertakings in the market who would potentially offer a competing good will not set a positive price because it would disadvantage them as a potential competitor. As the SPC in Guiding case 78 noted:

...Changing the price from free-of-charge to charging a fee also suggests major changes in the commodity’s special nature and business model, i.e., changing from a free-of-charge commodity to a commodity charging a fee and from an indirect profit model to a direct profit model.³⁵⁰

Newman argues that because of this, it should not be seen that an undertaking who provides a potentially competing good at a positive price is actually a competitor with the undertaking who provides a zero-priced good, and as such the two goods should not be seen as close substitutes.³⁵¹ Therefore, when considering potential substitutability of a zero-price good it is essential to avoid this fallacy and not define a market in competition based on the potential increase of a price from zero to a positive price. This effect is very strong. If we were to imagine that Google suddenly began to charge for their general search services, the practical reality is that many customers would switch to an alternative free service such as Bing.

It is also essential not to fall into the cellophane fallacy nor the reverse cellophane fallacy³⁵² with the view to the zero-priced good as this may mean market power is incorrectly not found. Indeed, in the cellophane fallacy, the false conclusion would be made that zero price indicates a lack of market power. In reality a degree of substitution may be observed as the undertaking providing the zero-price good is already flexing their market power and increasing information and attention costs, causing consumers to switch to a positive price product, or vice versa where positive price consumers switch to zero-price due to an increase in price of positive price product on account of the market power of the undertaking

³⁴⁸ Shampanier, Mazar and Ariely 2007 140-141.

³⁴⁹ Guiding case 78 7.

³⁵⁰ *ibid.*

³⁵¹ Newman 2016 75.

³⁵² See Section 2.4.1.2 above.

providing the positive price product.³⁵³ The reverse cellophane fallacy would occur when a firm provides a product for zero-price on a temporary promotion basis. That fallacy would occur on the basis that observed low substitution rates would be incorrectly assumed to indicate market power.³⁵⁴ The undertaking would utilise the zero-price effect to generate “low demand cross-elasticities vis-à-vis other firms’ products”.³⁵⁵ However, this short-term action does not necessarily mean there will be long term market power.

5.5 MARKET POWER ALTERATIONS

As has been demonstrated, market power in EU competition law is very dependent on price as the main parameter of assessment. This causes difficulty in respect of zero-price markets, as there is no relevant price which an undertaking in a monopoly position would be able to exert competitive power over. This issue was discussed in Sections 3.3.2.1 and 4.3, where I noted that a proper analysis of market power in zero-priced markets must consider alternative factors to just price, for example, considering other factors such as innovation and quality.

The Bundeskartellamt have stated that when undertaking an assessment of market power in the zero-price market, it is essential to include these specific criteria to properly determine market power:

- (a) direct and indirect network effects, (b) economies of scale, (c) the prevailing form of data usage and the degree of differentiation, (d) access to data, and (e) the potential for innovation in digital markets are particularly important when assessing the market position of a company that operates a platform or a network.³⁵⁶

The significance of these factors should not be understated, and it has been demonstrated in the preceding chapter how much they differ in zero-price markets as opposed to traditional markets. As such, I argue that it is essential that these criteria are formally adopted as the essential criterion in market power assessments in Article 102 of the EU competition law. It is important to consider the effect of these criteria in every zero-price market case on the facts of each case and the specificities of the market concerned.

Another important consideration in market power is the zero-price effect, because even if an undertaking is in a dominant position and decided to exert their market power, it is highly unlikely they would do so by deciding to charge a positive price for the product or service.

³⁵³ Newman 2016 76.

³⁵⁴ *ibid* para 77.

³⁵⁵ *ibid*.

³⁵⁶ Bundeskartellamt ‘Paper on Platform Market Power - Results and Recommendations’ 2016.

This will be the case even where an undertaking has a super dominant position and can be observed empirically – consider Facebook and Google – who have maintained a very large market share for many years and have never charged (consumers) for their services.³⁵⁷ In this regard, the undertaking is much more likely to exercise their market power in an alternative fashion; in particular by increasing information and attention costs and decreasing quality, as has been argued throughout this paper. A market power analysis should consider alternative ways that undertakings can compete with one another in zero-price markets, such as quality and on attention and information costs, looking to more parameters than merely price.³⁵⁸ How these costs could potentially be measured is discussed in the following Section.

It is essential to consider the effect of competitive constraints which present themselves as a consequence of the related markets of zero price goods, and these should absolutely be included in an assessment of market power. Barriers to entry and expansion should be considered not just in the market for the zero-price good, but also the ones which exist in the related market for its positive price counterpart. As discussed in Section 3.1.3, the consumers ability to multi-home is another factor which must also be considered with respect to market power, although its effect may not be as much as thought prima facie. Additionally, an assessment of a zero-price market should look to the benefit which the undertaking supplying the zero-price good receives in the market for the free good, as the provision of this good correlates to the undertakings ability to increase cost and barriers in the related market. It is also where the undertaking obtains the revenue to fund the provision of both goods.³⁵⁹

I have also discussed the difficulties with respect to calculating market share in zero-price markets in Section 4.4.1, in particular due to many of these markets being characterised by competition for the market, their frequently digital nature and the lack of a price to base a market share estimation upon. As such, the lack of price necessitates an alternative factor to base a market share calculation upon. The one which is chosen can potentially affect the results and as such produce differing results. For example, in *Google Search (Shopping)*, the Commission utilised a proxy of volume of market shares and noted that this assessment could include factors such as the number of page views and the number of users among others. Others have suggested a different approach, for example by considering the amount of time that a user is spending on a given platform.³⁶⁰ This metric could be particularly

³⁵⁷ StatCounter 2022.

³⁵⁸ Rubinfeld and Gal 2016 552-553.

³⁵⁹ *ibid.*

³⁶⁰ Esayas 2018 193.

useful because of a few different reasons. For one, it better shows “(i) the importance of the application to the end consumer (consumer engagement) and (ii) its potential value either through direct monetization from the consumer or indirectly through advertising”.³⁶¹ Then, this metric can potentially better encapsulate the value of advertisement on the platform on the one side, as well as how much of the consumers data which can be obtained from the other side of the platform, as well as better encapsulating data privacy. This is because, as previous studies have shown, that there is a positive correlation between the amount of time spent on a platform and amount of content which a consumer generates whilst using it. Finally, because the use of a time proxy can more clearly indicate how market power in the market concerned can lead to multi-homing, this can demonstrate better how multi-homing or indeed a lack-of works in the market concerned and be indicative of market power.³⁶²

5.5 ATTENTION AND INFORMATION COSTS

It is essential to properly address the competition in both markets for attention and for information. Concentration in the attention markets by undertakings providing the platform can have anti-competitive effects in the markets for the platforms, on the consumer zero-price side and also on the advertising side. If the platform provider achieves significant market power, they can decrease the number of advertisements they hold on the platform, reducing the number of advertisers who can access the advertising function as the platform can increase the amount of money they charge for the advertisement. The advertiser charges more money for the products to compensate for the additional advertising costs. Consumers then suffer an indirect harm as they pay a higher price for products, a decrease in choice and a direct harm through an increase in attention costs.³⁶³

In markets for information, competition law harms can come from the reinforcement of excessively large market power which comes as a consequence of the undertakings ability to acquire and use large amounts of data, which create data-driven efficiencies and barriers to entry and expansion.³⁶⁴ For example, the undertaking is better able to create targeted advertisements. Significant privacy harms can arise in the market for information. As the market becomes more concentrated and the undertaking collects more and more user data which they use to improve their services in respect to advertising and the actual zero-price service they provide. Undertakings are incentivised to obtain more and more user data,

³⁶¹ *ibid.*

³⁶² *ibid.*

³⁶³ Prat and Valletti (2021); Newman 2015.

³⁶⁴ Llanos 2019 225-253, 250.

including personal data, so that they can keep improving targeted advertising and the zero-price product. This leads to several significant harms which affect the consumers – through the surveillance of the consumers, data breaches and their harmful effects, existence of very large information asymmetries with consumers being completely unaware how the personal data they are ‘paying’ with for the zero-price service is being used, direct discrimination where individuals are ‘scored’ in automated decision making on characteristics such as their ethnicity and education and are not able to access certain products because of this, and the reduction of consumer choice due to “algorithms determining what content or advertisements a user will see when going online”.³⁶⁵

The next question is how attention and information costs can be measured. One potential solution is to measure attention and information costs by looking to what permissions are given to the undertaking by consumers in the terms and conditions of an agreement.³⁶⁶ Information asymmetries are very prevalent between the consumers and undertakings regarding these permissions as the terms and agreements are often extremely long, confusing and not easy to read for the consumer. As such, it is important to reduce this asymmetry because it is indicative that competition is not functioning effectively on the market. Moreover, it is not the case that consumers do not read terms and conditions because they do not care about them – quite the contrary – but consumers do not have the time nor the understanding to comprehend the vast content of these agreements.³⁶⁷ As such, it cannot truly be said how much the consumer values their information and attention from the fact that consumers do not often read terms and conditions. Work is being done at EU level in the field of terms and conditions, but more must be done to properly understand the true cost to consumers with respect to their attention and data, and how attention and information costs can be included in competition law analysis and regulation.

Newman notes that “[a]nalysts may... fail to consider perhaps the most vital aspects of competition in such markets: attention and information”.³⁶⁸ It is essential to properly value the information and attention that the consumer pay with, with respect to understanding this side of the market in the multi-sided zero-price market. As the undertaking who provides the platform is selling the consumers attention and data, the value of this must be properly understood so that antitrust analysis can be undertaken. It must also be compared with the

³⁶⁵ Llanos 2019 228-233

³⁶⁶ Jarman and Örsal 2014 335.

³⁶⁷ Consumers, Health, Agriculture and Food Executive Agency and others 2016 16-17, 21-24.

³⁶⁸ Newman 2019 1560.

platforms costs of providing the service to the consumer.³⁶⁹ Unfortunately, it is indeed “practically rather unclear what such a 5-10 % increase of advertising exposure or data disclosure would mean”.³⁷⁰ Here Jarman and Örsal suggest an alteration of the SSNIP test to measure attention costs. They explain:

Assume platform P charges firm F \$X for 10 seconds of consumer C’s attention. Platform P could increase the price to firm F either by 1) increasing the price for 10 seconds of consumer C’s attention to \$2X, or 2) reducing firm F’s advertising slot time to 5 seconds but holding the price constant at \$X. This principle can be applied the other way around, too: A platform can increase the attention cost to the consumer C by: 1) reducing the price of 10 seconds of consumer C’s attention to \$0.5X (and thereby reducing the consumer’s attention value), or 2) increasing the firm’s advertising slot to 20 seconds but holding the price constant at \$X.³⁷¹

Then, it is argued a SSNIP test could be performed, observing whether the consumer or advertiser would switch to using a different service if the attention cost was increased or if the cost of advertising was increased, thereby understanding the elasticity of demand and attention costs between the advertisers and consumers.³⁷² However, in practice it is tricky to attribute a value to attention. Factors such as the format of the advertisement, whether it is skippable and for how long does it last are all considerations in the valuation of cost. This is even more difficult in the context of data, due to the diversity of kinds of data, each of which corresponds to different value for each business. In this respect, it must be stated that although it will be difficult to undertake the valuation of attention and information, and although it is perhaps not as numerically oriented, it is still necessary to do so or else it will not be possible to properly measure the harm to consumer welfare.³⁷³

5.6 CONCLUDING REMARKS

This Chapter has considered the current position of EU competition law and how it can be adapted to better incorporate the challenges of zero-priced markets. What is clear is that this is not an easy task. The potential for regulatory intervention is limited due to the fast-paced nature of the market type. What is perhaps a more ideal outcome is for the Commission to adapt their competitive analysis, utilising tools such as the SSNIC and SSNIQ/SSNDQ,

³⁶⁹ Haucap and Stühmeier 2015 9.

³⁷⁰ Rubinfeld and Gal 2016 521–522.

³⁷¹ Jarman and Örsal 2014 336.

³⁷² *ibid.*

³⁷³ Newman 2016 66; Newman 2015 179; Jarman and Örsal 2014 336.

including specific criteria for market power, and continuing to adapt to market specificities but providing legal certainty to undertakings in this market. Consumers face real and significant harms in this market through the collection of their data and attention. Undertakings may abuse their dominant position by increasing advertising costs which are passed on to consumers in higher prices, or by collecting more and more data for targeted advertising and leading to data breaches, or even direct discrimination against consumers. It is true that the specific nature of the costs on this market are challenging due to their lack of heterogeneity. However, it is not possible to continue using a price-based metric when the customers in this market are not paying a positive monetary price. It is essential for attention and information costs, and quality, to be computed and included in competition analysis to be inclusive of these alternate costs to consumers, despite the challenge it may pose to competition authorities.

CHAPTER 6: CONCLUSION

This thesis has aimed to answer the question of whether EU Competition law, in particular Article 102 TFEU, needs to take a different approach to zero-priced markets in the digital economy. It is clear that digital zero-priced markets are very different from traditional markets. Although consumers may not face directly price related harms, they face real harms through the collection of their data and attention, and the reduction of quality. This alone means that competition law must adapt to include these different types of harm. The specific features of the market must be taken into account so that market power, market definition and harms to competition can be properly understood.

I have attempted to outline, analyse and produce solutions to the problems of applying Article 102 to zero-price markets. EU competition law has been progressive regarding zero-priced markets, especially when compared to American antitrust law. The cases against Google are regarded by many scholars as a “ground-breaking moment”³⁷⁴ in regard to the regulation of zero-price markets. Important steps have definitely been made towards both understanding the challenges of the zero-price market and incorporating its unique elements in competition law analysis. Concerning the special features of the zero-price market, it is clear that they differ quite significantly from traditional markets, posing difficult challenges to EU competition law. Features of significance which present themselves in zero-price markets are strong network effects, switching costs, lock-in effects, their digital nature and the ‘new economy’ features such as competition for the market.

I have sought to consider the approach of Article 102 with respect to traditional markets. In my overview of Article 102, I discussed the essential components of the provision and how they are applied in traditional cases and in traditional markets. It should be noted that in my discussion, the discussion focused on the Commission’s approach to non-traditional zero-price markets. However, it is often the case that the Commission’s application of Article 102 to traditional markets has faced with significant criticisms. This criticism has however been outside the scope of this thesis. It seems clear that EU competition law is not without fault even in its well-established competition law analysis. In this respect, there is time for the Commission to develop and sculpt their approach to zero-priced markets based on a proper well founded economic basis and with consideration to the special features of these markets.

³⁷⁴ Jarman and Örsal 2014 332.

In this regard, I have summarised the characteristics and nature of competition on zero-priced markets. I considered issues such as how undertakings compete in zero-priced markets, whether consumers can be harmed by zero-priced goods, what is the nature of these harms and how competition actually takes place. The very nature of competition is different in these markets as it is not on price, but, as I have argued, on attention, information and quality parameters. Because the undertakings which function in this market make money in a different way than in traditional markets – that is through advertising revenue and collection of user data, and without charging a positive monetary price – this demonstrates a difference in how competition takes place than on traditional markets. Moreover, my focus has been on the zero-price favoured multi-sided markets. It is noted that the multi-sided nature of them means that it is necessary to consider not just the direct zero-priced product market but the related markets. Finally, the zero-price effect creates a different practical reality to how classical economics understands price and demand to function.

I then undertook an analysis of the recent case of *Google Search (Shopping)*, through which I demonstrated both how EU competition law is dealing with zero-priced markets and the challenges which it must overcome. In *Google Search (Shopping)* the issues which I have discussed regarding the application of EU competition law to zero-price markets clearly came to light. This is not the first zero-priced market case the Commission has dealt with and it will certainly not be the last. As such, it was interesting to see how the Commission in practice has recently dealt with the problems faced by Article 102 when confronted with online multisided zero-price markets, in particular with respect to market definition, market power and remedies. What was clear from this case is that Article 102 and the Commission are able to adapt to the unique nature of zero-priced markets, but more needs to be done to incorporate the specificities of the market type. In particular, more attention has to be paid to information and attention costs, and a more robust analysis and guidelines must be presented by the Commission for the future.

Finally, I considered whether EU Competition law's tools are able to cope with the challenges of zero-priced markets as is, or whether it can be improved and amended by utilising alternative tests and parameters, for example, by considering quality instead of price. I have presented and discussed potential ways forwards which better encompass the specificities of the zero-price market. In the context of market definition, both the SSNIC and SSNIQ/SSNDQ methods have been discussed. These methods suffer from difficulties in practice, not in the least due to the complication in quantification attention and information

costs and quality. However, these tests are more appropriate than a price-based test which can create fallacies and incorrect results especially in conjunction with the zero-price effect. I have discussed the difficulties regarding the quantification of attention and information costs in detail. I have noted the potential competitive harms which could come from competition in attention and information markets if they are allowed to go unregulated and the significant potential harms to consumers, welfare and the market which could occur. In attention markets, it is through a reduction of choice, market concentration and an eventual passing on of higher costs to consumers. In information markets, it is through loss of privacy, market concentrations, information asymmetries and direct consumer discrimination.

In light of the understanding that these markets have special characteristics and can cause serious competitive harms, it is essential that the EU takes the lead in developing a robust framework in dealing with zero-price markets. The EU has taken some steps but more must be done to clarify how consumers face harms, how these harms can be remedied, and how zero-price markets should be regulated. It is clear that Article 102 is capable of dealing with zero-price markets, however, the tools of analysis must be amended to fit the unique parameters of competition in these markets. In particular, competition on other factors than price must be welcomed by the Commission and the CJEU in their analysis of competitive conditions and harms. The current approach could, however, be remedied by the production of effective guidelines on zero-price markets which are inclusive and understanding of their special characteristics. Attention and information costs with respect to the consumer must be accepted as parameters of welfare, of quality and competition. I do not argue that direct regulatory intervention is required, it could be useful for the Commission to publish guidance on how competition law applies to zero-priced markets, including a proper explanation of how attention and information costs can be calculated. Through Commission action in accordance with the guidance, a well-adapted law for zero-price markets could emerge.

For future research, there are many potential avenues that can be explored with respect to zero-price markets and competition law. In particular, an in-depth study of how European merger law can properly incorporate the features of the zero-price market would be informative. Moreover, further work can be done to research and design a proper and robust quantification method for attention and information costs in European competition law, taking in the specificities of these parameters and allowing them to effectively be incorporated into competition law analysis. It could also be interesting to see a comparison between European, American and Chinese approaches to zero-price markets. This is

particularly relevant when considering the increasingly global nature of many undertakings, with many operating without regard to borders across multiple countries and jurisdictions. Although these laws do differ quite significantly, they are all operating in some of the biggest economies in the world and dealing with the similar issue of hugely dominant online undertakings. China has been forward in dealing with zero-priced markets and its online e-commerce giants such as Alibaba.³⁷⁵ In the past EU competition law has learnt a lot from American antitrust law, and it would be interesting to see what can now be learnt from China. The growth of the zero-priced market and the increasing dominance of the few firms operating in this market means that it is no longer appropriate for the law to turn a blind eye. Consumers face harms through the collection of their data and attention and through reductions to quality. The market may face harm due to lack of competition and competition not on the merits. If the law does not adapt to recognise that a zero-price good/service can cause competitive harms, significant harms may take place. The *Google Search (Shopping)* case demonstrated just how real these harms can be. As the world progresses, the law should progress to move past traditional points of view. It must adapt when it is necessary, and it is clear that it must move past the traditional price-based metric which is inappropriate in this market type. The basis of the law is there with Article 102. However, as I have argued, steps must now be taken to adopt a new approach to zero-price markets, to truly take account of its characteristics and appreciating the harms which can be undertaken even in absence of a monetary price.

³⁷⁵ Yang 2021.