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Functional Separation as a Remedy for Anti-Competitive Practices: The Cases of British Telecom and Telecom Italia

Prof. Gianluca Faella

Supervisor

Costanza Gea Fusillo (277521)

Candidate

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Table of Contents

Introduction

Competition has been a topic of discussion for economists since the XVIII century. When competition was considered a force that led firms to perform in a way not to cause harm to other companies. By the end of the XIX century the discussion over competition crossed over to politics and the first antitrust and competition policies were created first in the United States, which were aimed at limiting the power of trusts. Some time later those laws were introduced in Europe as well. The aim of competition policy was to safeguard competition in a market and make sure that companies having a dominant position would not abuse of such position to increase their own profit, and as a consequence would not harm consumers.

The invention of the telephone led to the creation of the first telecommunication companies. Those companies often started as monopolies. By the end of the 1980s it was clear that state owned monopolies that had thus far characterized the service market needed to be liberalized. By allowing new entrants in the sector and having fair competition in the market, it would also benefit consumers as well, as they would have been given more choices for essential services. The liberalization took many years, and finally, reached its peak in 1998, through the introduction of the Full Competition Directive, which obliged the former monopolies and owners of essential infrastructure to grant access to all operators in the market with no discrimination, which meant without favoring their own internal departments.

The introduction of new regulations, however, did not fully stop incumbents from excluding competitors in the market. Through refusal to deal, incumbents were actively hindering competition by not allowing potential competitors to use their fundamental infrastructure. This conduct went against what was established in the directive.

In some countries market regulators decided to apply functional separation as a remedy to the anticompetitive practices adopted by telecommunications companies. By separating the companies' access networks division from their retail division through a different management, accounts, and incentive scheme, the benefits gained through the abuse of their dominant position by not dealing with potential new entrants, were for the most part eradicated, as the company owning the access network infrastructure would gain more independence. In particular the UK and Italy were among the first countries to apply such solution to the formerly state owned monopolies, British Telecom and Telecom Italia.

Through the discussion the thesis seeks to underline differences and similarities between the two cases, and understand whether functional separation does help with the resolution of antitrust complaints specifically in the telecommunication industry. The first chapter of the thesis will recounter briefly the theoretical background behind antitrust and competition regulation, it will also

explain briefly the history behind the introduction of the first antitrust rules and sector-specific regulations in the US and in Europe. Finally, it will focus on the process of liberalization of the telecommunications market following the introduction of new European directives.
The second chapter will recap the notable case of British Telecom in the UK. Through the analysis of Ofcom's strategic reports, the chapter will describe the process which led the British regulatory authority to choose functional separation in 2002, and legal separation in 2018 to enhance the competitive process in the country.
The final chapter of the thesis will explain the separation between Telecom Italia and Open Access. Through the resolution of the Italian antitrust authority the company was first requested to undergo an accounting separation. Later followed by a functional separation, which used as a blueprint the case of British Telecom, that was suggested as remedy for the anticompetitive practices following the formal complaint of Wind, Fastweb, and other Italian telecommunications providers. Concluding with TIM's decision to sell its essential infrastructure to an external investor, which created in Italy for the first time a unique network owned by one company, separate from the incumbent.

Chapter 1: A Brief History of Antitrust Regulations

For the scope of the thesis it is of benefit to begin by outlining briefly the history of economics that led to the modern antitrust and competition policies in the European Union (EU). It is also important to describe the liberalization process that led to the opening of competition in markets which were formerly characterized by state owned monopolies.

1.1 A Theoretical Framework of Antitrust: From Classical Economics to the Chicago School

The aim of antitrust law is to protect the fair competition between firms in a market and to achieve consumer welfare, and therefore in this particular area law and economics meet. Competition is fundamental for companies because it enables them to maximize their profits. One of the first definitions of free competition can be found in Turgot's edict of 1774, drafted by Du Pont de Nemour: in the preamble the scope of the new law is described as aimed "to remove monopoly by shutting out private license in favor of free and full competition".[1]

In 1776, Adam Smith with the famous quote from The Wealth of Nations described competition by using the metaphor of the "invisible hand". Competition is said to be an "invisible force" that guides individuals towards a "general welfare". In some ways the "invisible hand" can be interpreted as the market prices that lead producers to lower their prices to let firms compete for a bigger market share. When the customers look for a good to buy, they will naturally choose, among the many suppliers, the producer selling the desired good at the lowest price possible. At the same time the entrepreneurs will seek a potential buyer, who is willing to pay the highest price for their good. Hence, we see how competition occurs at two levels, between firms, to make sure that nothing is left unsold, and between customers to guarantee that they will be able to purchase the needed commodity without offering a price that is too low in the eyes of the seller. This process surely helps firms to gain and retain customers but in turn also benefits the consumers, thus, it helps to reach economic welfare. [2]

According to classical economics, competition was the rivalry between firms that had the knowledge of market opportunities, and the necessary liberty to behave according to that information. Competition was not considered as a market structure (as it was later theorized by the neoclassical economists through the perfect competition and monopoly model), instead it was the price level which resulted from the intensity of competition between firms. Firms needed to behave independently in the market and there was the need of as many rivals as possible as to impede excessive gains for some market players, to the detriment of others. Adam Smith was one of the first economists to understand that there was a need for a legal framework that would promote competition between producers and

[1] Higgs, H. (2001) pp. 35-36
[2] Roncaglia, A. (2005) pp. 139-145

at the same time stop abuses by dominant firms. This is opposed to the *laissez-faire* principle, that is commonly believed to be the foundation of classical economics, where the only policy that is suggested is the non-interference by authorities and the aim is to leave the market completely free to self-regulate.[3]

The concept of competition changed with the mathematical economists also known as marginalists, such as Cournot, Jevons and Marshall, who were the first to theorize the concept of perfect competition, an economic model in which many firms that sell identical products face many buyers. The marginalist model of competition was static in comparison to the one of classicist economists that saw it as a dynamic process. Together with the concept of perfect competition the definition of market equilibrium was theorized as the final state, where all forces are at rest, and profits are maximized for all firms playing in the market. A Pareto-efficient state, in which no player has an incentive to deviate, as it would disrupt their potential profits, and in which price equals the marginal cost of production, and demand equals supply. Another model which was theorized was the monopoly model, with one firm supplying the entire market, thus a market model with no actual or potential competition. The two static models of competition, however, do not provide a framework of importance for the purpose of antitrust regulations.

In Europe, the school of thought which has influenced the laws favoring competition was the Freiburg School, also known as the "ordo-liberalist" school. The ideas of the school of thought was also used as inspiration for the first European antitrust regulations as its ideas were implemented in German laws after World War II. The creators of the Freiburg School, Walter Eucken and Franz Böhm, were the first to state that economic rules must flow into the legal framework of a country, in order to guarantee the correct functioning of competitive markets. What "ordo-liberalism" wanted to achieve was a system between socialism and capitalism, a so called "social market economy".[4]

John Clark noticed that society was being confronted with two opposing views: one leading towards "chaos and anarchism" and a second one leaning on "centralized control". In contrast to those conflicting views, there were others trying to achieve a society with some degree of economic freedom and democracy, but without the need of a complete unorganized society.[5] Hence, the need of a government which let members of society be as free as possible. One of the ways to achieve a free society was to leave competition unrestrained, and the only direction which government was to give was to utilize economic resources in such a way that would to increase welfare. At the same time a strong government was needed to prevent private power groups from destroying political and social

[3] Van Den Bergh, 2017, pp. 17-20
[4] Erhard L., Wohlstand für Alle, Düsseldorf-Wien, 1957, p. 171, cf. Chapter 1.2.3
[5] Clark J.M. (1948)

institutions. After the Second World War, the views of the Freiburg school were used to develop German competition policies, as well as the European Economic Community (EEC) policies.

American antitrust laws were heavily influenced by the different schools of thought in the USA. For instance, while following the Harvard School, antitrust authorities heeded the Structure-Conduct-Performance (SCP) paradigm by Harvard scholar Edward Mason, who found that buyers and sellers were the main determinants of the performance of the market. While the conduct of buyers and sellers depended on the structure of the market and the structure in turn depended on the supply and demand side of the market (Figure 1).

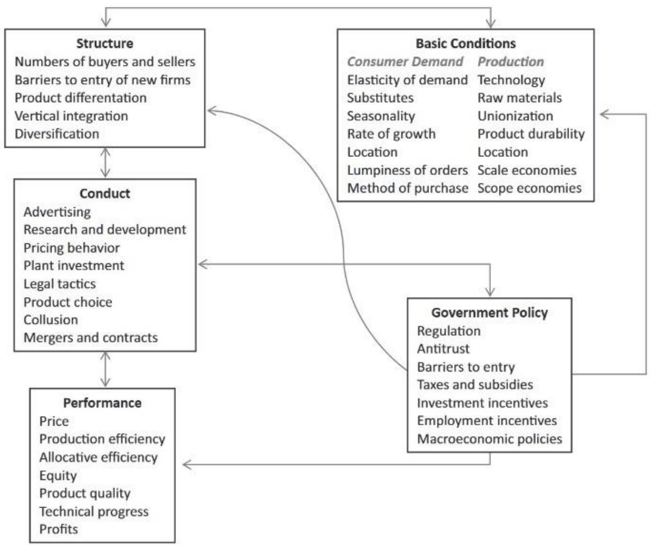

Figure 1: SCP Paradigm (Zibgniew M., 2014, p. 55)

According to Mason, antitrust law could condition the basic structure of the market and the conduct of buyers and sellers, and eventually also the performance of the industry. The aim of Harvard scholars, was to achieve a workable competition. The concept was invented in the 1940’s by John Clark, who deemed perfect competition unachievable, and thus arrived at the conclusion that not all market imperfections needed to be corrected, and that the SCP paradigm was needed to evaluate the extent to which workable competition was present in the market.[6]

In the 1950’s the economist Joe Bain conducted a study through which he found that the more concentrated the industry the tighter the relationship between the firms in a specific industry and the larger their respective market share was. Market concentration can be measured through various tests such as the CR8 and CR4. These are the sum of the market shares of the eight or four biggest firms in one industry. Another measure of market concentration is the Herfindahl-Hirschman Index (HHI),

[6] Van der Bergh et al. (2017), pp. 33-44

which is the sum of the square of the market share of every firm in one industry: in a monopoly the HHI is 100^2, because one firm owns the entire market share for the industry. The less concentrated the industry the smaller the HHI.[7]

From a policy perspective the key takeaways from the Harvard School were firstly that firms were to gain positive economic results, secondly that policies were needed in order to lead companies towards fair competition and conduct, and finally to limit the growth of larger firms.[8] Still taking into consideration barriers to entry which further enhanced market concentrations and anticompetitive behaviors. In the US between the 50's and the 60's the ideas of the scholars Donald Turner and Carl Kaysen became very widespread and were used for the solution to litigation regarding competition, with a focus on those markets which were highly concentrated, as market concentration was detrimental to the competitive conduct of firms. In Europe the SCP paradigm was very well known and remains used to this day, for example according to the Treaty of Rome, the goal of competition policy should also be that of achieving "workable competition".

Among the other schools of economic thought that seeped into antitrust laws, especially during the 1980's, was the Chicago School, whose ideas are still considered today. In the 1970s the economist Aaron Director and lawyer Edward Levi took the axioms of the neoclassical price theory and gave a new view of competition based on efficiency. Through the observation of real markets and the idea that rational firms were seeking to maximize profits, they recognized that the failure to seek a profit increase would be detrimental to the company's survival. Whereas monopolies were considered to be transitional and not durable, as the high profits earned would attract new entrants, which in turn would decrease prices.

On the regulatory aspect any attempt at maximizing profits should be considered legal. While evaluating anti-competitive conduct, attention should be directed on whether it was or not economically efficient. So instead of stopping anti-competitive behaviors altogether, the scope should be to guarantee that the competitive conduct is achieving economic efficiency. Barriers to entry were considered to be nonexistent unless put there by governments. In fact, the high cost to enter one market would have been the same for the firms already existing in the market, thus there would have been no real disadvantage for possible new entrants. Chicago School scholars were influenced by the economist Friedrich Von Hayek, one of the major exponents of the Austrian School of Economics. In his famous book *The Road to Serfdom* of 1944 he stated that the intervention of the State on competition, and thus anything less than a pure laissez-faire economy, would impede prices to adjust according to information present in the market, and stop them from reaching equilibrium. Those ideas

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[7] Besanko D. & Braeutigam R. (2014) pp. 443-445, $\text{HHI} = \sum_{i=1}^{n} s_i^2$ formula for the Herfindahl-Hirshman Index

[8] Turner & Kaysen (1991) pp. 181-192

that were not backed up by evidence were later taken up by Chicagoans and used to develop their own theories, which were rendered more realizable by not accepting a pure laissez-faire state, but rather with a reduced role for the government.[9]

1.2 The history of antitrust and competition policy

1.2.1 The Sherman Act and the Clayton Act in the USA

The United States of America was the first country to introduce antitrust regulations in 1890 with the Sherman Act and later in 1914 with the Clayton Act. At the time the economic scene was undergoing substantial changes in economic thought from the classical economy of Smith and Ricardo to the marginalist revolution of Marshall. Senator Sherman, after whom the act was named, wanted to eliminate agreements and trusts between firms that would "prevent full and free competition". The Sherman Act made cartels illegal *per se*, but companies soon understood that they could achieve similar if not same results through mergers as opposed to cartels, without incurring in any legal prohibition. As a matter of fact the Sherman Act was said to have started many mergers in the years following its approval. It was not until the Clayton Act was passed in 1914 that rules regarding the size of mergers were introduced, and that those legal consolidations could be prohibited if they were proved to be monopolizing, and as such could restrict competition.[10]

1.2.2 Antitrust laws and sector specific regulations

Before proceeding with the historical analysis of antitrust regulations in different European countries it is better to provide the explanation of the distinction between sector specific regulations and antitrust laws. On a superficial level, one can say that they both seek the correct functioning of markets and consumer welfare, hence the areas of the two regulatory systems often time seem to overlap. They are also both implemented in a similar manner, as both use economic analysis as a common starting point.[11]

Antitrust law has as one of its main goals the correct functioning of competition, as well as overall consumer welfare. Mainly it focuses on the prohibition of restrictive agreements and abuse of dominance. It also makes sure that all mergers and acquisitions are compliant with the EU Merger and Control Regulation (EMCR), [12] which therefore require previous approval hereof. The process by which the laws are applied is as follows: first the relevant market of a company is analyzed, than there is the market assessment, and finally remedies may be applied. If necessary those remedies

[9] Glick M. & Bush D. (2023)
[10] Stigler G. J. (1991) pp. 32-38
[11] Larouche P. & de Streel A. (2020)
[12] Regulation n. 139/2004

include fines, damages, nullity of agreements which breach Article 101 of the TFEU, prohibition of M&As which are not compliant with the EMCR; sometimes there may even be some structural modifications imposed to firms in order to overcome the competition concerns. Antitrust laws are usually applied *ex post*.[13]

Sector specific regulations are a set of more precise rules which are relevant to one specific industry. Sector specific regulation may pursue different goals, which also include the prevention of anti-competitive practices by firms. For instance, regulatory authorities may seek to reach objectives such as "promotion of effective competition, the internal market, and the users' interest."[14] Hence, not only do sector specific regulations deal with failures on the supply-side of the market, as competition policies do, but also on the demand-side, for example through consumer protection rules. Additionally, regulations may also include provisions about the conduct that should be adopted by firms in the specific market. Those type of regulations are more detailed compared to competition laws, and for this reason the main focus is also on smaller issues. The solution to issues which involve specific regulatory regimes is mostly behavioral. Sector specific regulations are redacted by Member States directly. The main difference, however, lays in the fact that this type of regulations are applied *ex ante*.[15]

1.2.3 Outlining the History of European Antitrust Laws: The Cases of Austria and Germany and the Introduction of Antitrust Regulations in the European Community

First in Great Britain, through Adam Smith and the other classical economists and later in Austria, at the end of the XIX Century, as stated by David J. Gerber, law professor at the Chicago Kent School of Law, [16] the discussion about competition policy became very fervent. Although the first regulations about anti-competitive behaviors in Europe began only between the two Great Wars, in the first half of the XX Century, discussion about competition in economic terms had already started and was later solidified in Germany in 1947 through the prohibition of cartels. As they were believed to have facilitated the National Socialists to consolidate their power in the 1930s.

At the end of the 1800's, Vienna was the cultural center of Europe. The strong empire of Franz Joseph (emperor since 1848) was the background to a series of conflicts between the different ethnicities, nationalities, and classes within the Austrian population. Among the classes in midst of the debate were the liberals, which not only represented a political ideology, but were also the exponents of the entrepreneurial middle class. The main goal of the liberals was economic freedom and this idea spilled

[13] Larouche P. & de Streel A. (2020)
[14] De Streel (2008) p. 58
[15] Larouche P. & de Streel A. (2020)
[16] Chicago-Kent College of Law (n.d.)

over onto the field of competition. Most of the firms in Austria were privately owned, and restrictive corporate laws on publicly owned company contributed to banks being the main financing tool of companies. At the same time high fares on imported foreign goods made sure that only Austrian goods could be bought and sold in the Austro-Hungarian empire.
In 1860 the political power of the liberals grew, which in turn led to economic growth, which further increased the belief that the best option was to have unrestrained competition. Nevertheless, the economic crisis and the degrowth of production in 1873 made liberals loose popularity, as they were seen as the sole culprits for the economic failure. So the first competition laws were proposed in Austria, as the nation was recovering from the economic crisis. The laws themselves were passed once again by the liberal middle class, with a main focus on cartels, which had been increasing in number all through the 1870s until the 1890s. Cartels sizes grew so much that they could be used by producers to stop the falling prices. With cartels gaining importance the need for newer and more effective rules started to arise. The discontent with cartels and the attempt at stopping them caused damage to the population by means of a rise in prices through the destruction of competition. This induced the legal scholar Adolf Menzel to propose an administrative solution to the problem to stop the abuses.
It was soon understood, that there was a need for the evaluation of cartels, as to not eliminate those that were, in fact, beneficial, so they were not made *per se* illegal, unlike in the United States. The first requirements for cartels was that firms had to register, in order for authorities to gain information, which they would have been unlikely to come by until that point. Secondly, cartels had to be organized into organizations called *Vereine* (associations). A few years later the government accepted Menzel's idea, and added that competition had to be kept free of any restraints. Finally, no cartel could be considered legal unless information about it were made available to the ministry and previously approved by a notary. In addition, decisions about prices had to be communicated within a day. Nevertheless, the parliament never approved the government's proposal, afraid that the law would pose an excuse for the government to dissolve cartels, which were instead beneficial for consumers. Most importantly, however, there was the fear that the vagueness of the act would lead to corruption towards authorities: companies could possibly corrupt government officials, in order for their associations to be approved. Even though the law turned out to be a failure, it is still representative of a discussion about economic freedom which would gain importance and became extremely significant during the next century.[17]
European antitrust law did not directly follow the American Sherman Act; their implementation began later. Germany was the first country in Europe to start introducing restrictions on companies

[17] Gerber D.J. (1998), pp. 43-68

immediately after the First World War. Until WWI cartels and agreements between firms were not seen as an obstacle to competition, but rather as a natural development hereof, and it was commonly believed that lawmakers should not interfere with businesses. At the end of WWI the public started to identify some abuses by cartels, and by the 1930s the Ministry of Economic Affairs was given the right to monitor them. At the same time the rise of the Freiburg School, as discussed above, led to the understanding that, in fact, safeguarding competition was a symbol of political democracy and that markets should not be left free.

After the Second World War, during the American occupation, Ludwig Erhard was elected by the *Deutscher Wirtschaftsrat* (German Economic Council, a sort of Parliament formed by the representatives of the regional parliaments) as the director of the economic administration of the territories occupied by the allies (the equivalent of the modern finance minister). Later he would become Germany's chancellor. Erhard's ideas were influenced by those of the ordo-liberalist school.[18]

Ordo-liberalism was born around the 1930's and the economists and lawyers, who adhered to it, had opposing views to those of the National Socialists and of the Soviet Communists. Their thoughts outlined perfectly the new political thoughts of post-war Germany.[19]

The "social market economy", an idea that came from the Freiburg school, was at the center of Erhard's economic policies. The concept was first theorized by Alfred Müller-Armack, and it was the idea of a "third way" between socialism and liberalism without adhering to any one of them. It also placed great emphasis on to the idea that "benefits of the market be distributed equitably throughout society".[20] Competition Law was part of the social market economy presented by Erhard, which became central to the new post-war German republic. According to Erhard, social market economy allowed entrepreneurs to retain customers through the company's conduct with the other competitors, and not by the sole elimination of cartels. With customers being central to the company's conduct and the market, only price and quality would be playing an important role on the product and would be the only criteria used in product selection by consumers. Hence, both State and cartels would have had a limited role on competition and market structure.[21]

The aims of German competition laws were to: (i) make cartels illegal, (ii) limit the abuses of firms in dominant position, and (iii) prevent concentrations. In 1949 a first draft of a competition law was presented to Erhard, by Paul Josten, the head of a committee of economic policy administration, that saw among its members one of the founders of the Freiburg school, Franz Böhm. The title of the document was "Draft of an Act to Protect Competition Based on Performance and an Act

[18] Quack S. & Djelic M.L. (2003)
[19] Cole M. & Hartmann S. (2023)
[20] Gerber D.J. (1998) p. 237
[21] Ibidem., pp. 236-237

Concentrating the Monopoly Office". The proposition entailed the creation of a monopoly office, which would investigate cartels and firms in dominant positions. It also had the role of impeding mergers which were deemed to be detrimental to competition, as the resulting concentrations would acquire an excessive market power. The idea was for the office to safeguard competition between firms. However, due to the opposition the draft encountered, Erhard finally decided against it. The main reasons for the opposition were that it would curb economic recovery and that the monopoly office would have too much discretion while evaluating a firm's dominance.

After a long discussion over Josten's proposal and after various changes, a new law proposal was made in 1958, based on a draft written by the government. Although the main influence of this draft was the "ordo-liberal school", it did so with a lesser intensity. Again, cartels were made illegal and mergers needed to be verified as to make sure that they would not reduce competition. The new law proposal did not include only laws favoring ordo-liberals ideals, but was also heavily influenced by American antitrust, in order to receive approval from the Americans who, even after the official end of the military occupation in 1949, maintained a decisive economic and political influence on West Germany.

This new Competition Policy called *Gesetz Gegen Wettbewerbsbeschränkungen* (GWB, which translates to Law against Restrictions of Competition) still remains in force today. Often it is called shortly *Kartellgesetz* (Cartel Law).[22] The main provisions of the law dealt with vertical and horizontal restraints as well as abuse of dominance. It relied heavily on a Federal Cartel Office (*Bundeskartellamt*, BKA), whose role was administrative. The BKA had to make sure that the law was applied, as well as guarantee that the system put in place was effective.

When the Social Democratic Party (SPD) acquired a dominant position in the parliament in 1963, some changes to the GWB were proposed, which became effective as of 1973. These changes encompassed also the implementation of merger controls. At that point mergers had replaced cartels for the most part and were, in fact, threatening competition. The reason why German competition law is of historical importance is that it has been of inspiration for the creation of antitrust laws in the rest of Europe. Thanks to the introduction of competition laws in Germany the ordo-liberal ideas of the Freiburg school travelled through the rest of Western Europe. The concept of competition between firms being at the base of economic freedom and consumer welfare became a well spread idea, and it led other countries to adopt their own regulations.

Shortly after the Second World War, with the Treaty of Paris of 1951, that enshrined the formation of the European Coal and Steel Community, in short ECSC,[23] some competition laws were passed.

[22] *Gesetz gegen Wettbewerbsbeschränkungen.*

[23] Carree M., Gunster A. & Schinkel M.P. (2010)

Those laws limited the market power of the largest firms. The Treaty served also to outline the antitrust regulations in the Rome Treaty of 1957, which also established the European Economic Community (EEC). The main object of those antitrust laws was to control anti-competitive behaviors by firms, such as cartels. This, however, sparked some concerns by European countries, as it was believed to be a provision mostly directed against Germany, to stop it from controlling the entirety of the coal and steel industry at the time. By 1958 the Rome Treaty became effective and one of its main goals was to prevent anti-competitive behaviors by larger firms. Agreements between firms were considered lawful only if they promoted consumer welfare, and firms were not allowed to abuse their dominant positions in the market.[24] Articles 81 and 82 of the Rome Treaty[25] were the ones which covered competition. Their aim was to prohibit anti-competitive behaviors in the EC, hence to protect consumer welfare. The first part of the articles regarded all types of agreements between firms, from the legal ones to the illegal ones, e.g. joint ventures, vertical and horizontal agreements, and cartels. While the second was about abuse of dominance.[26]

With the instauration of the European Union in 1992 through the Maastricht Treaty further changes to antitrust laws were made. [27] With the introduction of two treaties, the TEU (Treaty of the European Union) and TFEU (Treaty of the Functioning of the European Union), antitrust laws were again summarized in a few articles. With the TFEU in particular all the same provisions from the previous treaties were taken and transcribed into the articles 101 to 106. In particular the articles 101 and 102 were the previous articles 81 and 82 of the Rome Treaty, hence, the ones prohibiting abuse of dominance.[28] According to article 102, the condition of dominance is, *per se*, not illegal, what is instead forbidden is the abusive conduct which a dominant firm may adopt. Common practices which involve the abuse of a dominant position are for example predatory pricing, price discrimination and refusal to deal. This clashes with the main objective of the European Union which is to guarantee unrestrained competition, and thus to obtain consumer welfare.[29]

The main goals of antitrust policy are as stated by the European Parliament: to "enable the proper functioning of the EU's internal market" and again "competition policy is a key instrument for achieving a free, dynamic and functioning internal market and promoting general economic welfare."[30] The EU defines by consumer welfare either the maximization of consumer surplus or the benefits arising by customer having many choices of potential suppliers for one specific product.[31]

[24] Gerber D. J. (1998) pp. 267-333
[25] The articles were formerly articles 85 and 86 in the Treaty of Paris.
[26] Carree M. et al. (2010)
[27] Treaty on European Union, (n.d.), European Parliament
[28] Scheinert (April 2024)
[29] Van der Bergh R. (2017), pp. 1-3
[30] European Parliament (n.d.) Competition Policy
[31] Van der Bergh et al. (2017), pp. 57-60

By consumer surplus in microeconomics is meant the difference between the price that is charged to the customer by the company and the price that the consumer is willing to pay. The only market structure under which it is minimized is perfect competition.[32]

Today the authority who is in charge of enforcing competition policies in the EU is the European Commission (EC), that is in charge of enforcing the articles 101 and 102 of the TFEU, whose regulations are applied *ex post*. More specifically the organ within the EC that takes care of antitrust cases is the Directorate-General for Competition (DG Competition). The Directorate is divided in Units that are in charge of different sectors. Once a case is presented to them they will then carry on the necessary investigation to check whether a company is violating competition policy. The EC has the possibility to determine the priority of the cases which will be analyzed first based on the their importance. After the case is investigated and checked to make sure that an infringement of antitrust policy is established, the Commission will come to a decision, and remedies will be applied. Companies may choose to reject the Commission's decision and decide to present an appeal regarding the case to the European Court of Justice (ECJ) that may or may not over-rule the Commission's decision.[33]

1.2.4 Competition Policy in the United Kingdom: Past and Present

The path to the creation of a competition policy in the United Kingdom started after the Second World War. In 1948 with the introduction of the Monopolies and Restrictive Practices Act, a first attempt at antitrust laws was made. It was, in fact, believed that monopolies did not help with consumer's welfare, but they were, instead, extremely profitable for firms. Later in 1956 a new act was passed, the Restrictive Trade Practices Act. Under this act firms wanting to enter into an agreement had to sign to a registrar, to confirm that their practices were not disruptive of competition, and therefore illegal.

In the 1970's with the election of the Prime Minister Margaret Thatcher, neo-liberal ideas were introduced into the British way of thinking. In 1978 Great Britain became part of the EC, and thus firms had to comply with the antitrust regulations contained in articles 81 and 82 of the Rome Treaty. Finally, in 1998 the new Competition Act was published, with its main goal being compliance with the regulations of the European Union. For this purpose, the act contained provisions which were a copy of the original laws almost the word by word.

After the British population voted in favor of exiting the European Union in 2017, and with the decision becoming effective as of 2020, the obligation of the UK to follow European regulations falls.

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[32] Colomo P. I. & Kalintiri A. (2020)

[33] European Commission (July 2013)

Therefore, the British Competition & Markets Authority will have full control on firms in the UK, namely for what entails mergers and acquisitions (M&A). When it comes to antitrust laws, the Competition Act of 1998[34] stated in Section 60 that British firms were to follow regulations imposed by the European Commission, contained in the TFEU.[35] In 2021, the British government announced that a few changes would be made in the future to antitrust regulations to further depart from EU antitrust regulations.[36] Already in 2020, the at the time prime minister Boris Johnson stepped away from the declarations made in 2019 by the European Commission and confirmed that British companies needed a different approach to antitrust laws than the one in the EU,[37] although to this day the Companies Act of 1998 remains in force in the UK.[38] The changes to antitrust laws mainly give the Competition and Markets Authority (CMA)[39] and the Digital Markets Unit (DMU) more power when it comes to the investigation over anti-competitive practices of UK's companies.
Concerning sector specific regulations with the Office of Communication Act of 2002,[40] the Office of Communications known as Ofcom was created, and its scope of action was established a year later with the Communications Act. The main purposes of Ofcom are to promote competition and also to make sure that people are equipped with the best broadband, landline and mobile phone services. Outside of an economic regulatory power, Ofcom has also the job to regulate the content which is streamed on TV and the radio. As of recently Ofcom has been also given the power over on-demand video services and postal services.[41]

1.2.5 Italy's Road to Antitrust Policy

The discussion about competition policy and antitrust regulations in Italy started in the 1950's, a little later than in other European countries. At the time, policies about competition were seen as a way to guarantee state intervention on markets, where several monopolies existed on services such as electricity and telephone providers. Nevertheless, the discussion never led to the introduction of competition policies, but it rather made the already existing natural monopolies, into state-owned monopolies, with the government in charge of running those big corporations. Research and development were used as an excuses to justify the decision. State control on big public monopolies

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[34] 1998 c. 41
[35] Mojasevic A. & Stefanovic S., (2021)
[36] Clifford Chance (2021)
[37] McGowan L. (2023)
[38] 1998 c. 41
[39] A non-governative authority that ensures consumers protection against anticompetitive practices, founded in 2013. (GOV UK)
[40] 2002 c. 11
[41] Ofcom (n.d.)

was for many years a big obstacle in the creation of antitrust regulations, that needed to be applied equally to all firms.

At the end of the 1970s the idea of creating antitrust regulations was taken into account again, with the sole purpose of stating that antitrust laws had to be applied to all corporations. By 1978 Guido Carli with *Confindustria* presented a document called *Statuto dell'Impresa,* which contained a proposition for laws similar to the ones of the Treaty of Rome of 1957. With the United State enforcing antitrust regulations with the Sherman Act and dismantling the famous telecommunications monopoly, AT&T, Italy's idea was to follow a similar path to the USA and do the same to their state-owned corporations, in order to limit the government's power. When in 1986 liberal Valerio Zanone was appointed as Minister of Industry and with the help of Alberto Pera, he drafted a first proposition of the law, not without opposition from firm executives. The process never came to an end because of a government crisis, which led to the dissolution of the parliament, which meant that Zanone ceased his mandate as Minister of Industry.

In 1987 the new government's Minster of Industry Adolfo Battaglia , who had as one of the main policy goals the introduction of antitrust regulations, proposed a new draft for the law. The law aimed at complementing and extending the ones already present in the EEC, and was mainly concerned with concentrations, which had to be previously approved by a government elected Commission (*Commissione per la Concorrenza),* and it had to be applicable towards all firms, in the private and public sectors. But the law also provided that those concentrations, which were not accepted by the Commission, could still be allowed by the government, if and when they were deemed to be beneficial for production and retailing. When the law was presented to the government, the minister of Postal Services and Telecommunications requested for the law to not be applicable in the telecommunications sector by adding as a necessary condition for production a ministerial authorization. Battaglia had to accept this condition, as the proposition came from a minister. Finally in 1990 the law was approved as a way to safeguard the provisions in the article 41 of the Constitution.[42] In fact, the Italian Constitution protects economic freedom in article 41 and states that "private economic initiative is free, and it cannot go in contrast to social utility and it cannot attempt at public safety, freedom and dignity".[43]

By that time, it was evident that there was a need for laws that guaranteed that companies or private individuals did not stop others from achieving economic freedom. What differentiates Italy's experience with that of other European countries, is that the discussion never mentioned consumers;

[42] Pera A. (2010)

[43] Art. 41 Codice Civile: "L'iniziativa economica privata è libera. Non può svolgersi in contrasto con l'utilità sociale o in modo da recare danno alla sicurezza, alla libertà, alla dignità umana. La legge determina i programmi e i controlli opportuni perché l'attività economica pubblica e privata possa essere indirizzata e coordinata a fini sociali."

in fact, antitrust regulations were rather aimed at reducing state power on service providing firms, and to devoid other large firms of market power, the consumer being only an indirect beneficiary of the laws.[44]

Today, the enforcement of European antitrust policies and consumer protection falls under the control of the *Autorità Garante della Concorrenza e del Mercato* (AGCM), an agency that acts independently from the government. It was created in 1990 following the law n. 287/1990,[45] as a result of the long debate, that lasted over a decade, over its introduction. Being part of the EU, Italy follows the regulation regarding competition as imposed by the EU, in particular articles 101 and 102 of the TFEU.

The administration which is instead in charge of sector regulations, which are specific to the telecommunications industry is the *Autorità per le Garanzie nelle Comunicazioni* (AGCOM), which was established in 1997 following the law n. 249/1997. It guarantees that on the telecommunications market competition among firms is fair and it protects consumers' welfare. Outside of telecommunication AGCOM deals also with the publishing industry, television, and digital platforms.[46]

1.3 Abuse of Dominance

Article 102 of the TFEU prohibits larger firms, considered to be dominant in their specific market, to abuse of such position[47] by excluding other smaller firms or potential entrants; those are known as exclusionary behaviors.[48] To assess whether a company has a dominant position regulators will look at a firm's market power. Through tests and indexes it may be assessed that a specific corporation is, in fact, the leader of the market. In microeconomics there are several definitions of market power, one of which being the possibility for a company to set prices above those of competition and still be profitable. Another one defines it as the capacity of a firm to have some flexibility over pricing.

According to the ECJ dominance is "a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by giving it the power to behave to an appreciable extent independently of its competitors."[49] Hence, while from a microeconomic point of view, market power is about prices, and possibility to raise them without losing customers, the EU poses, instead, the focus on independence rather than on prices. It also

[44] Pera A. (2010)
[45] AGCM (n.d.)
[46] AGCOM (n.d.)
[47] European Parliament (n.d.) Competition Policy
[48] Van der Bergh et al. (2017) pp. 304-306
[49] ECJ C-27/76 *United Brands Company* February 14th, 1978, n. 65.

focuses on restrictive behaviors from firms, which harm other undertakings, and exclude competition, thus harming economic freedom.

The Lerner index is used in economics to measure the extent of the market power of a firm, by calculating the difference between price and marginal cost. In perfect competition the price a company can charge should be equal to the marginal cost. Firms in perfect competition are price takers, while the more a company tends towards a monopoly, the more it is able to be flexible with pricing. Elasticity of demand determines how flexible firms can be with the prices they charge. The higher the elasticity, the more option customers have for that specific product, hence an increase in price would decrease the amount sold of said product. With inelastic demand producers can raise prices by keeping demand unchanged or almost unchanged, while still making a profit.[50] Another aspect of the definition of market power is whether there are substitute products which could satisfy the consumer's demand.

In reality those measurements are hard to obtain and while creating norms regulators have to come up with market proxies which serve a similar purpose to market power. For example, one of the ways to measure market power is by using the market share criterion. According to article 102 of the TFEU a firm owning 40% to 60% of market shares can be considered to have a dominant position in a certain market. However, depending on a case by case analysis, companies owning a market share lower than 40% may still be deemed to have a dominant position. To define the extent of the dominant position enjoyed by a firm is also important to identify the relevant market in which the firm operates. There is not one unique way of defining the relevant market, as it can be measured while keeping into account the product or even on geographical terms.[51]

The SSNIP test (small but significant and not-transitory increase in price) was invented in 1982, when it was included in the US Merger Guidelines. It is a successful tool in determining what the relevant market of a firm is and to understand whether a market participant must be considered a monopolist.[52] The underlying idea of the test is to measure how a small increase in the price impacts a potential monopolist. If the company is able to maintain the profitable deviation for a substantial amount of time, it means the company has possibly a dominant position in the market.[53]

To reiterate, the aim of competition laws is not to eliminate companies which hold a dominant position, nor to guarantee that markets operate following perfect competition, goal which would be unattainable in the real world. What antitrust regulations seek to do is to maintain a certain level of competition and to make sure that firms do not exclude others from competition by having an

[50] Besanko D. & Braeutigam R.
[51] Van der Bergh et al. (2017), pp. 124-132
[52] Daljord Ø., Sørgard L. & Thomassen Ø. (2007)
[53] Van der Bergh et al. (2017), pp. 142-145

exclusionary conduct in order to increase their sole profits. Regulators, thus, seek for firms to work with an appropriate amount of competition in a market.
Vertically integrated incumbents may incur in many issues that could entail antitrust concerns:

- Margin squeeze
- Predatory pricing
- Price and/or quality discrimination
- Refusal to deal

A company engages in margin squeeze when it sells its product or service, at a price so low, that it does not allow other operators in the market to perform in a profitable manner. An incumbent incurring in such type of behavior might sell products at a price which is just slightly higher than the wholesale price. Thus, other companies may not be able to match that price, and retain customers. In the telecommunications market squeeze may be observed, through incumbents, owning their own access network, charging a price for the service to their customers so low, that companies, who need the incumbent's access network are unable to match. In that case one can consider margin squeeze an exclusionary practice. In fact, it effectively excludes competitors from operating profitably in the same market.[54]
While applying a predatory pricing conduct, the incumbent, which in this specific type of abuse is referred to as predator, charges to its client extremely low prices, even incurring losses in the short-term. The aim of this conduct is to deter other operators to enter the market, or to cause the exit of the firms already in the market. By adopting this type of abuse companies are able to earn extremely high profits in the future.[55]
A different type of abuse is price discrimination. Companies engaging in this type of conduct when they charge different prices for the same product, or the same price for similar products which have different marginal costs. In competition law is important to understand that not all the time this type of behavior will consist of price discrimination, but it may also be due to companies adjusting in well functioning competitive markets. For the conduct to be profitable, companies that engage in it must have a significant market power.[56]
The last anticompetitive and exclusionary practice that companies may adopt is the refusal to deal. Refusal to deal is especially important for the scope of this thesis and it is one of the breaches which regulators have found in the cases of Telecom Italia and British Telecom. Firms are said to participate in refusal to deal when they possess an asset or an infrastructure which is fundamental for other

[54] Maziarz A. (2024)
[55] Van der Bergh et al. (2017) p. 329
[56] Van der Bergh et al. (2017) p. 350

potential undertakings to enter a specific market, but they refuse to provide access to such asset to other existent companies or potential entrants in the market. The conduct forecloses potential competition in a market. One of the main industries where the practice is observed is the telecommunications industry, as will be discussed later in this thesis. The problem with the concept of refusal to deal when it comes to competition policy is that on the one hand it is true that not allowing possible new entrants to gain access to an indispensable infrastructure will lessen competition, while on the other hand it may be also be true that forcing firms to grant that access could be detrimental to innovation. From an economic point of view, instead, prohibiting other companies access to the infrastructure could harm consumers, as the monopolist in the market would be able to charge as high a price as they wanted, thus harming customers.[57] The European Union deals with this problem in article 102 of the TFEU. According to the article companies that engage in the activity will be deemed liable of having an anti-competitive behavior.

In the notable Austrian case *Oscar Bronner GmbH vs. Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co KG*[58] it was determined by the ECJ what an essential infrastructure is. Mainly a facility which is owned by a monopolist, that is fundamental for other potential incumbents and that is impossible to imitate. To engage in refusal to deal the company owning such infrastructure must actively deny access to other entrants, without any legitimate reasons, or only consent access on an unreasonable basis.

1.4 The Liberalization of the Telecommunications Market in Europe

The publication of the Green Paper on the Development of the Common Market for Telecommunications Services of in the European Community opened a conversation over the liberalization of the telecommunication market. In fact, the EC had already understood that information and access to it was key to the development of the economy, but it was also believed that it was essential to improve the position of Europe in the global economy.[59] The ideas of the EC stemmed from the liberal panorama in the UK[60] and the US at the time. The UK was the first country in Europe to liberalize the market in 1984 with the Telecommunications Act,[61] which benchmarked the idea which was later used by the European Commission. The Telecommunications Act put an end to British Telecom owning the sole right as service provider for telecommunications.[62]

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[57] Van der Bergh et al. (2017) p. 304-306, 309-311
[58] ECJ C-7/97 November 26th 1998, *Oscar Bronner GmbH & Co. KG*
[59] Green Paper on the Development of the Common Market for Telecommunications Service and Equipment (1989)
[60] The prime minister of the UK from 1979 until 1990 was Margaret Thatcher, whose political agenda included lower taxation, free markets, privatization of institutionalized industries and restrained governmental role. www.britannica.com
[61] 1984 c. 12
[62] Department of Trade. (2001)

The first step to the elimination of monopolies in the telecommunications market was to remove the legal barriers which at the time protected the natural monopolies in the sector. Legal restraints were starting to become economically ineffective, and there was a need to revolutionize the market. The telecommunications monopolies were starting to lose power and, thusly, becoming cost inefficient. But it was also noted that monopolies had little reasons for innovation,[63] and this went against the ideas of the EC expressed in the Green Paper that contained a program which included many future developments.[64] Other inefficiencies were cost related, such as the deadweight loss given by the lack of customers purchases.

Article 106 of the TFEU states that, In the case of public undertakings and undertakings to which Member States grant special or exclusive rights, EU Member States are not to adopt laws that go against the rules imposed by the Treaties, in particular those contained in article 18, and articles 101 to 109, of the TFEU. This clause was already present in the Treaty of Rome of 1957. The rule is applicable for both private and public enterprises. The same article affirms that "undertakings entrusted with the operation of services of general economic interest or having the character of a revenue-producing monopoly shall be subject to the rules contained in the Treaties, in particular to the rules on competition, in so far as the application of such rules does not obstruct the performance, in law or in fact, of the particular tasks assigned to them. The development of trade must not be affected to such an extent as would be contrary to the interests of the Union."[65] It follows that monopolies heavily present in the telecommunication industry were going against competition policy already in force.

In 1990 through the Open Network Provision[66] another step was taken towards the liberalization of the telecommunications market. The Provision's main goal was to set forward the right provisions to allow other communications providers (CPs) to have access to national telecommunications networks, with no discrimination, and therefore, to allow other companies to compete with the incumbents. In the meantime the competition directive of 1990,[67] and the later amendments of 1996[68], which became known with the name of Full Competition Directive helped to continue the liberalization process. The aim of the two acts was to impede incumbents to provide to national telecommunications operators right of access in a preferential way This practice constituted a barrier to the correct functioning of trade in the telecommunications market.

[63] Manganelli A. & Nicita A. (2020)
[64] Green Paper 1989
[65] Art. 106, TFEU
[66] Council Directive 90/387/EC
[67] Directive 90/388/EC
[68] Directive 96/19/EC

An important stance of the 1996 act was the prohibition of exclusive rights in the landline service. This was, at the time, a very significative stance, as fixed telephony was the center of the industry.[69] The act of 1996 was directed to all member states of the EU and its goal was to complete the liberalization process that had started already with the publication of the Green Paper.[70] On the 1st of January of 1998 the liberalization of the telecommunications market reached its peak with the complete liberalization of all networks and telecommunications services in almost all the countries in the EU,[71] as governments were forced to allow entry in all their telecommunications markets.[72]

Figure 2 shows the liberalization process between 1975 and 2007. The trend steadied itself again after the New Regulatory Framework of 2002 (NRF),[73] once it reached its peak intensity; at the same time the difference in intensity between competition and liberalization was reducing. In the graph the intensity of competition is measured as a weighted average of the market shares of the new entrants in the trunk telephone market, in the international telephone market and in the mobile telephone market. To calculate it, the authors of the graphs subtracted the OECD's indicator of incumbent's market share from its maximum value. It is between 0 and 6, where 0 is the minimum entrant's market share and 6 which is the maximum entrant's market share.

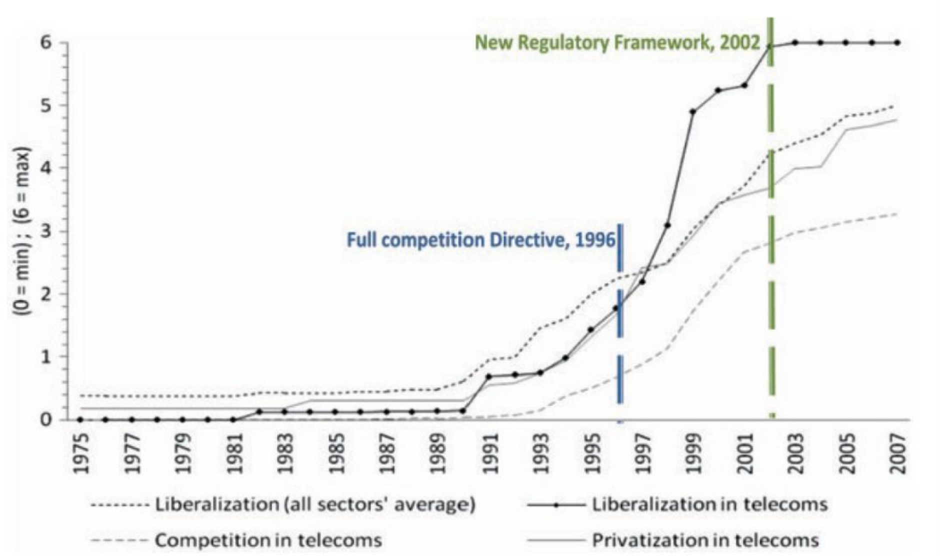

Figure 2: Telecom Liberalization Process (Nicita & Belloc, 2016)

[69] Green Paper (1989)
[70] Parcu & Silvestri (2014)
[71] Agcom Delibera No. 208/07/CONS Allegato B
[72] Cfr. Note 63
[73] Commission Directive 2002/21/EC

Removing or reducing legal barriers to entry was necessary to start the liberalization process in Europe. However, it still was not enough to guarantee complete freedom of entry and exit, since other economic barriers remained, which were harder to eliminate or subdue. For example, high fixed and sunk costs, which would not be recovered even after exiting the industry, acted as a deterrent for new entrants. Another barrier may have also been attributed to network externalities and high switching costs for consumers, which would stop customers to switch to a new telephone provider. Those obstacles were the reason why, although the market was liberalized, market shares still belonged for the majority to state-owned firms. One suggestion in this case would be for regulators to put in place laws, which allow to reach a workable competition by stomping the firm's power, and preventing them from abusing their dominant position. This can be achieved through pro-competitive regulations. The purpose of the regulation in the case of telecommunications would be to have "vertically-integrated state owned firms that faced downstream competition".[74]

As mentioned earlier, the EU in 2002 had introduced the NRF, which added a general authorization regime to the previous laws regarding liberalization, thus, companies did not have to ask for permission on an individual basis. The NRF also initiated a Universal Service Obligation (USO). Regulations made sure that telephone services would be available to everyone, at a fair price, even to the un-profitable areas. To measure the success of such pro-competitive policies one can look at the decreasing price of telephone services in the past as figure 3 suggests, which has also led to an increase in demand. Another successful result of those regulations is increased innovation and competition in the market.

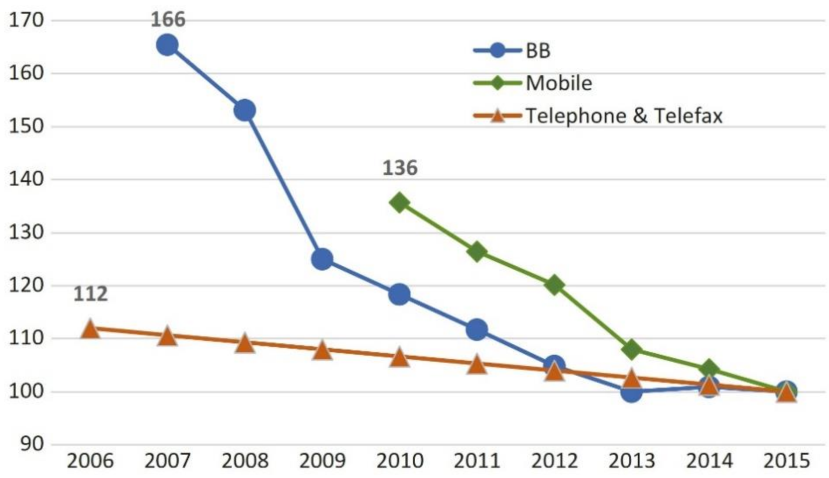

Figure 3: Price Trends in Telecom Markets (Nicita & Belloc, 2016)

[74]Manganelli A. & Nicita A. (2020)

The NRF is still in use today under the name European Electronic Communication Code (EECC) after being revised in 2018, with the primary goal of protecting competition in the interest of all EU citizens. The idea behind NRF first and EECC second, was to promote competition, thus benefitting final customers, as competition would lead prices to adjust in favor of customers, and the many players in the market would lead single firms to increase their investments in Research and Development (R&D). The other main adjustment is that the new regulatory frameworks have led to multiple privately owned companies in the industry, compared to one state-owned firm in charge of the whole market.[75]

The liberalization of the telecommunications market in the early 2000s started a wave of antitrust procedures which involved many countries, to remove the telecom monopolies that had been formed. The first country to start was the United Kingdom, followed by New Zealand, Italy and Sweden which opted for a voluntary separation. The thesis will focus on the cases regarding British Telecom in the United Kingdom and Telecom Italia in Italy, now TIM S.p.A.[76]

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[75] Manganelli A. & Nicita A. (2020)

[76] Pitruzzella G., *Audizione del Presidente dell'AGCM al Senato*

Chapter 2: Functional Separation in the UK: British Telecom and Openreach

After the creation of the Office of Communication, known as Ofcom, in 2001, British Telecom (BT) underwent a review of its operations, aimed at analyzing its position on the market. This chapter will recount briefly the history of the company and then explain the competitive concerns regarding BT's operations which resulted in the creation of Openreach, as well as the latest developments of the case.

2.1 A Timeline of British Telecom

The origins of BT date back to the 19th Century, when it was known as The Electric Telegraph Company (ETC).[77] The ETC became a public corporation under the control of the General Post Office (GPO) through the Telegraph Act of 1868. Two years later the company went under the full ownership of the Government. After the invention of the Telephone by Alexander Graham Bell in 1876, it was determined that phones were covering the same functions of telegrams. Hence, companies willing to provide the same service as the telegraph companies were to ask for a license to operate in the same sector, which would have been awarded by the Post Master General, and it would have had a duration of 31 years.[78]

At the time it was born, the National Telephone Company was the largest private telephone provider. However, it was later taken over by the Post Master General, and became a monopoly, as the only phone provider in the whole of the UK. In 1969, the GPO, that had operated as a department of the government was separated and further split between two distinct divisions, one in charge of the post, and the other in charge of telecommunications. This led to the establishment of the Post Office Corporation.

About a decade later a further split of the company was requested, and to separate officially the Post Office and the Telecommunication Service into two corporations. This was supposed to favor the liberalization of the market. For this reason a bill was passed in 1980, and officially BT was created in October of 1981. Although the company continued its operations as a monopoly, still the act represented a first step towards the introduction of competition into the British telecommunications market. That same year, a report over the liberalization of the telecommunications market was also published, which suggested that BT should lease out its infrastructure to other telephone companies or letting them use it for the electronic transfer of funds or other non-voice services. The proposition led to an opposition from the Home Office, which was concerned over the public security aspect of the strategy. In fact, the Office was a department of the British government in charge of guaranteeing public safety. The dissent from the Home Office led to the establishment of Mercury

[77] BT Group Plc. (n.d.)
[78] Jisc (n.d.)

Communications, a new telephone provider. The two companies formed a duopoly that led the market until 1991. At that time Mercury Communications was merged to its holding company Cable & Wireless, the latter closed down its operation in 2010 and was split into two companies Cable & Wireless Communications plc. and Cable & Wireless Worldwide plc.. In the meantime BT still remained under Government's ownership, which meant that the company underinvested and underperformed. Those were the two main causes of concern that led Thatcher's government to choose to move forward with the privatization of British Telecom.

As the company went public, the shares in the company were first acquired entirely by the State, and successively 50,2% of them were sold to the public.[79] In an article published by *The Guardian* in 1997, it was stated that the Government had sold its remaining shares in BT to allow the company to merge with the American Company MCI.[80] The process paved the way for several other privatizations which happened under Thatcher's government.[81] In 1994 through the British Telecommunications Order, British Telecommunications plc was nominated as the successor of British Telecommunications, which also set forth the dissolution of the latter.[82]

Today the BT Group remains the largest telephone provider in the UK, both in fixed and mobile telephony, and it is the holding company of BT, EE (a mobile telephone network), Plusnet (an internet network provider), and Openreach, which will be analyzed later in the chapter.[83] The shareholders structure of the group is divided between institutions, such as pension funds and insurance companies, which have the majority of the shares (55.5%), private companies (17.1%), general public (13.8%), public companies (12.1%), and lastly Government and employees through the Employee Share Scheme. The company is traded on the London Stock Exchange (LSE).[84]

2.2 Ofcom Strategic Review

After the establishment of Ofcom in 2001, BT underwent a review of its strategy and operations.[85] The main reason for the review were the lack of competition in the telecommunications market. At the time the regulations over the telecommunications market in the UK fell under the European Regulatory Framework, which were included in the Communications Act of 2003. With the review Ofcom wanted also to better implement the European regulatory framework in the UK. The scope of the document, known with the name of 'Final Statement on the Strategic Review of

[79] Jisc (n.d.)
[80] Harrison M. (1997). Government Abandons BT Golden Share. *The Guardian*
[81] Ward J. (2023)
[82] 1994 No. 2162,The British Telecommunications Dissolution Order 1994
[83] BT Group Plc. (n.d.)
[84] Yahoo Finance (Actual percentage information data was from 2021, ownership structure may have changed ever since.)
[85] Ofcom (2005)

Telecommunications', was to present the results of the research over BT's operations both in fixed and mobile telephony. The regulatory institution found that BT had delivered and anti-competitive practices in the field of fixed telephony.

Through customers satisfaction surveys Ofcom[86] found that in 2005 consumers were spending more and more money in telecommunications services. Part of the research was aimed also at understanding the level of customer satisfaction. Although the score for satisfaction for the service was high, BT was still underperforming compared to other service providers such as electricity providers and banks. Ofcom also identified as a problem the low amount of switching between different companies that had occurred up until that point. This was further underlined by the fact that 63% of the customers that had answered the survey did not even know that there even was the possibility for switching. This meant that most people using the service were not aware of other competitors' services, which should not have been the case for a critical service such as telecommunications.

One of the other finding by Ofcom was that BT practices went against what Ofcom believed to be the customers ultimate need, not only cheaper prices, and also a large choice of telephone companies for customers. This was true for both individual customers and for small & medium enterprises (SMEs). Consumers were, in fact, unaware of other operators, but in regards to that, the information gathered by Ofcom was unable to identify whether it was an element of discontent among customers. Ofcom's findings also showed that customers were unable to make price comparisons between brands, due to the fact that they were having difficulties at interpreting and use the information provided to them. What was concluded by Ofcom was that competition in the market, although present, was not behaving as efficiently as it should have, and it was not perceived equally by all consumers.

Ofcom's suggestion regarding a good working telecommunications market was for customers to have many different companies to choose from, but also solutions for the different types of customers (such as enterprises and private individuals), such as: competitive prices, widely available and clear information, and easiness to switch from one provider to the other. Furthermore, the need for an efficient telecommunications system ready to serve all types of customers equally, including the most vulnerable ones was identified. The Office also argued that the benefits of having an efficient market would mostly regard prices, which consumers should have expected to see going down both in the short- and long-term.

From Ofcom's Strategic Review it was determined that leaving the market free to regulate itself was not the best option, since the telecommunication market was a fundamental service for people. To do

[86] The survey was distributed to 6000 customers, which included residential consumers, sole traders, SMEs, and large businesses. (OFCOM, 2005)

business it should rely heavily on delivering correct and comprehensible information to potential customers, to let them know promptly about the possible different solutions offered. Although it is true that providers were making information widely available, however, at the time the review was carried forward it was determined that some groups of customers were unable to understand all information provided to them. Ofcom concluded that this was detrimental for consumers. It was also determined that the role of Ofcom was not to restrict companies' innovation by regulating the different tariffs that could be charged to customers. Hence, contracts would be left to the companies' judgement.

Another problem that was duly underlined by Ofcom was that at the time of the Review BT was in possession of a significant market power (SMP), in regards to the wholesale section, and when it came to provide access to the network services it was failing to do so correctly. BT was, in fact, inconsiderate of the fact that most of the other telephone providers in the British market were relying heavily on BT's infrastructures in order to operate. For this reason it should have supplied wholesale products with no undue discrimination and regulated its price to all competitors that required that service.

The reason why other companies were leaning on BT's infrastructure was the high sunk cost, which prevented the entry of other operators in the market. Moreover, BT had economies of scale advantages by being one of the sole owner of access network facilities (BT was the sole owner of the last "piece" of the connection between customers and the telephone provider) and backhaul network facilities. In particular in regards of the first one, Ofcom had found that BT was engaging in most anti-competitive practices. According to the Office for Fair Trading (OFT) both constituted high barriers of entry in the telecommunications market. Applying this conduct helped BT to eliminate almost completely its competitors in the market. BT was, in fact, favoring its own business to the detriment of other competitors. The Local Loop Unbundling (LLU), was provided at extremely high prices, and was "prohibitively expensive, not industrialised, and not fit for-purpose, therefore entirely unsuitable for mass market take-up".[87] Which again resulted in a lack of competition.[88]

Other concerns were exposed by Ofcom, which were also identified as anti-competitive behavior of BT. For example BT was vertically integrated in the retail division of the company and as such its own retail division had access to information before other companies. In addition, the retail division could influence the wholesale division and vice-versa. Another main concern was a discriminatory practice towards those retailers that did not belong to BT. Even the prices charged to its own retail section were lower compared to the ones charged to those companies which BT did not control. The

[87] Ofcom (Strategic Review of Telecoms Phase 2), found in BEREC (2011) p.
[88] BEREC Guidance for Functional Separation (2011)

result of the malpractices carried forward by BT were that the economic growth of competitors for the past twenty years had been slowed down by a lack of information and a wholesale product which was not up to par to the one provided to BT Retail. This was cause of harm to customers and it also showed how BT practices did not stimulate enough competition in the market.

In the course of the report Ofcom identified the different levels of competition possible in the fixed telephony market. The levels being: (i) each company using their own end-to-end network, (ii) using infrastructures that belong in part to their own company and in part to another company, and (iii) by relying completely in another company and only offering the part that entailed billing, pricing, service design and marketing, in brief its upstream services. It is on the third type of competition that Ofcom believed that the most competition could be achieved. For this reason the suggestion was to: "promote competition at the deepest level of infrastructure where it will be efficient and sustainable; and create scope for market entry that could, over time, remove economic bottlenecks".[89] And in particular with regards to the fixed telephony Ofcom's proposition was to: "Focus regulation to deliver equality of access beyond the levels of infrastructure where competition will be effective and sustainable".[90]

The only way to achieve such proposition was trough equality of access, which could be achieved by BT by offering the same wholesale service that it offered to itself to other companies, but also through managerial and structural changes. Equality of access was meant to be at the product level, through equivalence of input, which needed to be shared and applied to full metallic path facility (MPF), wholesale line rental (WLR), backhaul extension service (BES), WAN extension services (WES), and IPStream. For this reason the implementation a division named Access Service (AS) that would have been in charge of the sale of the products which were found to have the most economic bottlenecks was suggested. This division needed to be kept independent from BT. Simultaneously within BT changes needed to occur to allow for an easier flow of information. Hence, it was found that BT was, in fact, restricting competition "in markets for the supply of wholesale access and backhaul services in the United Kingdom, and in directly related downstream retail markets". [91]

As a matter of fact BT was operating as a vertically integrated company and as such it was possible for them to "discriminate against its downstream competitors",[92] this was also true because of its large market share. Ofcom, however, found that price and non-price discriminations were not always cause of anti-competitive concerns. The group's vertical integration was identified by the fact that: "it provides services in both the upstream wholesale markets for access and backhaul network services in which it has market power, and also in those directly related downstream markets in which it

[89] Ofcom (2005), p. 18
[90] Ofcom (2005), p. 19
[91] Ofcom (2005), p. 46
[92] Ofcom (2005), p. 46

competes with its upstream customers."[93] This benefitted BT, by reducing its cost and also to help form strategic synergies. What Ofcom identified as a concern for competition was its behaviors towards other downstream competitors.

Among the problems identified was the refusal to supply some of the wholesale products either by telling the other operators that they were not needed or by undergoing a process of negotiation that led to "irreconcilable disagreement". Other times BT chose, instead, to offer to its competitors a product that was of lower quality than the one that it was using, which made the products offered by other companies inferior. The lesser quality included also insufficient maintenance when it came to the lines provided to downstream competitors. Already in 1999, BT was asked to resolve such issues by Oftel,[94] but after five years BT had not taken any action towards their resolution of those problems. Ofcom also believed that the result of the fact that BT was operating as a vertically integrated firm, and that it owned a significant market power, deterred other competitors to invest in upstream markets. Although this may not have been a voluntary behavior from BT, it was still the result of its position in the market.

To sum up, with its analysis Ofcom presented its concerns over BT's practices. These had as a result the restriction of competition in the downstream markets, namely, by not providing the same upstream product it provided to its own retail division. Economies of scale and the requirement of large investments by incumbents also led to the actual impossibility for other companies to invest in their own infrastructure. The main problem, however, was that as a result of BT's malpractices, other companies were offering a product which was by far inferior to the one offered by BT, making them an inferior choice for customers.

Because of the aforementioned concerns over BT's practices towards potential competitors, some speculations were made over the possible resolutions. Some stakeholders suggested that to achieve equality of access there was the necessity of a full break-up of BT in to two different companies, with BT being the holding, or parent, company. Others suggested that it would be enough to create a different division within the company, and found the first option to be too extreme and to be adopted only in the case of failure of this second option. Ofcom agreed with the formation of a new division, and did not suggest to BT a full legal separation, which anyways could have been imposed only by the Competition Commission.[95]

[93]Ofcom (2005), p. 70 (Notice Under Section 155 (1) of the Enterprise Act)

[94] Oftel was substituted by Ofcom, but it covered the similar role of making sure that there was smooth competition in the telecommunications market, in 2003 it was merged together with the Office of Communications. www.gov.uk

[95] The Competition Commission ceased its activities in 2014 and the role is now covered by the Competition and Markets Authority (CMA). https://www.gov.uk/

In response to the Strategic Review, BT presented Ofcom with a set of undertakings in accordance to the Enterprise Act 2002. *The Undertakings* were subsequently accepted by the Office. The document specified that Ofcom under section 131 of the Enterprise Act, had the right to investigate anti-competitive practices of BT and refer them to the Competition Commission. The last step was, however, avoided by presenting *the Undertakings* directly to Ofcom.[96]

To summarize, the main points which were presented by BT were the Equivalence of Inputs (EoI), which would, finally, make the products offered to BT and to third parties identical in all aspects. EoI would have been applied to local access products and other services. Another offer from BT was the establishment of the Access Service Division (ASD), which would have had a separate management from BT. It also would have been in charge of the physical network and would have provided it equally to other telephone providers, as well as BT itself.[97] In addition, the ASD would have had a different CEO from BT, who would have, however, reported to the CEO of the BT group. The two divisions would have also had different accounts. The offices of the two companies would have been in two different locations and their performance would have been evaluated separately. Another suggestion proposed was to operate under a different name to further underline the independence of the two divisions. Another aspect on which *the Undertakings* focused was the implementation of the Next Generation Networks (NGN), which would have been offered to all companies in the industry. Furthermore, BT suggested the introduction of the Equality of Access Board (EAB) a board made up of a majority of independent members, whose main purpose would have been to report all elements of incompliance of BT with *the Undertakings.*[98]

To conclude, after a long process of research and evaluation of the company, Ofcom ordered BT to create a new division, which would guarantee equivalence of inputs, and as a result increase and stimulate a growth of competition within the telecommunications market. The new division took the name of Openreach and started its activities in 2006. The next sections analyzes more in detail the process of functional separation and will describe the creation of Openreach.

2.3 Functional Separation

Before continuing with the separation of BT and Openreach it is important to better define the concept of company separation. In the Better Regulation Directive[99] functional separation is described as the process by which a vertically integrated company "is required to establish operationally separate

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[96] BEREC (2011)
[97] BT identified the following products and services that ASD would have provided: Local access products ((i) wholesale line rental, (ii) local loop unbundling, (iii) wholesale extension service and (iv) partial private circuits) and Other products ((i) backhaul extension service and (ii) other products when they are provided in the future). OFCOM (2005)
[98] OFCOM (2005)
[99] Directive 2009 140/EC

business entities, is to ensure the provision of fully equivalent access products to all downstream operators, including the operator's own vertically integrated downstream divisions."[100] Separation as a remedy for dominance in the telecommunications system was first applied in 1984 in the US with the famous case that led to the break-up of the Bell System and AT&T. In 2006 professor and economist Martin Cave published an article in which he explained the different degrees of separation that a company could adopt. But before making this distinction it is also important to notice that separation can happen at different points of the value chain, namely between wholesale and retail and between access and non-access services.[101]

When choosing to which degree to order the separation of a company, regulators can choose among different levels which are described in detail below in table 1:

Ownership separation (in whole or in part)
6- Legal separation (separate legal entities under the same ownership)
5- Business separation with separate governance arrangements
4- Business separation with localized incentives
3- Business separation (BS) or Functional Separation
2-Virtual separation
1- Creation of a wholesale division
Accounting separation

Table 1: Degrees of separation (Cave M., 2006)

In broader terms separation can consists of three different types: (i) structural separation, (ii) functional (or operational) separation, and (iii) accounting separation. Where the latter means that a company is to separate only the accounting of the different levels, making each of them responsible for their own profits and losses. The level of independence between two units in this case is very weak and in the case of BT it would have not been able to guarantee equivalence of access. Cave assigns to this option the degree "zero", further underlying that this type of separation is not strong. The process can be intensified by the creation of a whole new division, with separate management, but again with no real equivalence of access. With this form of separation, at the wholesale level of the company, there would have still been the temptation to favor its own retail department and thus there would still be an advantage given to the wholesale division. Nonetheless, at the time of writing it was noted that it was the preferred route of action in the EU.

The second level, is the first to introduce a form of equivalence of access, as internal (the companies' retail department) and external customers (other companies willing to use the leader's infrastructure),

[100]Better Regulation Directive of the European Parliament art. 61
[101] Cave M. (2006)

would have had to be treated equally. The wholesale division must apply to everyone the same quality of service and the same pricing scheme. The third degree of separation, business or functional separation, requires a further physical separation of both business and assets. Together with level 4 and 5 it is one of the different forms that functional separation can take. At level 4 there is the addition of the different management incentives, which are not measured with the performance of the whole company in mind, but only with the specific new division in mind. This guarantees a further level of independence as managers have no longer an incentive to favor the main company. While at level 5 there is, as well, the addition of a separate non-executive board.

Finally at the sixth degree there is the creation of two different entities, with the same ownership, which strengthens the independence between retailer and wholesaler. Hence, the company will become the holding company of the other unit, which in turn becomes its subsidiary. Lastly, a full separation can be requested, which requires different ownership as well. Figure 4 puts in relation the level of non-discrimination, at each degree of separation with the level of intervention required for the adoption of the different separation principles. In fact, the stronger the independence achieved, the more intervention from regulators is needed.[102]

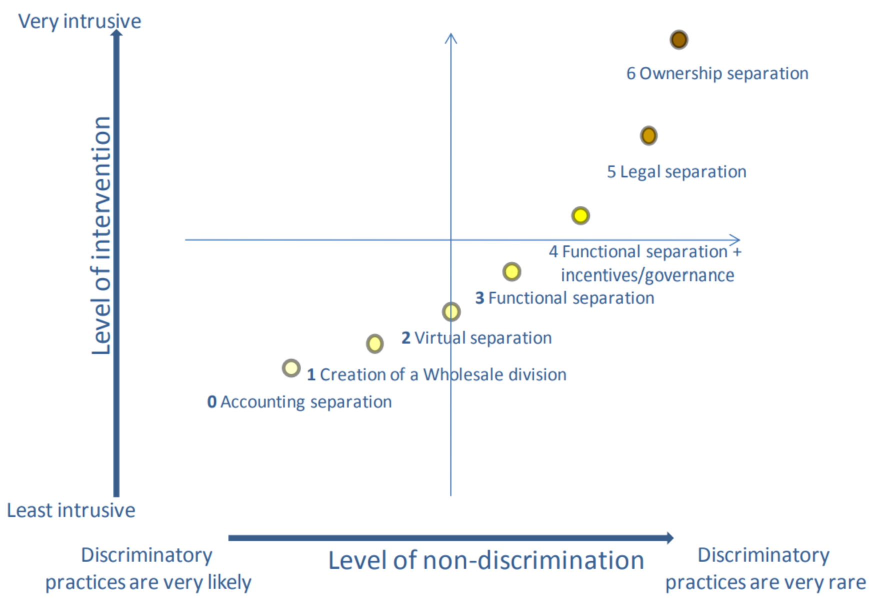

Figure 4: Level of intervention and level of non-discrimination (BEREC, 2011)

Functional separation has the main goal of reaching a full equivalence of access. Equivalence of access can be further split into: equivalence of inputs (EoI) and equivalence of outputs (EoO). By EoI is meant that service (in the case of BT) and/or information provided to third parties and to the retail

[102] BEREC (2011)

division of their own company at the same price and quality. To provide service to other operator the incumbent must also apply the same processes and systems, with no discrimination. While the latter means that access products offered by an operator must be of the same quality and price, independently to whom it is provided to, but it can be provided through different processes and systems. Therefore, EoO is a weaker form of equivalence of access.

According to Cave functional separation is beneficial in cases that involve the concept of discrimination, which can be observed when a company adopts a conduct which favors one of its own departments, to the detriment of other companies, it can revolve around price or not. This type of conduct diminishes competition in the market from other possible operators that are willing to use the downstream infrastructure of the company. According to European regulation, access to downstream infrastructure has to be granted to all other operators at a reasonable price and free of any type of discrimination. As previously mentioned in most cases the remedy applied in cases which involve price discrimination is virtual separation.

2.4 The creation of Openreach

Ofcom accepted BT's *Undertakings* on the basis that they were compliant to the Competition Act of 1998, and also to the *ex ante* regulations of the industry, which were included in the Communications Act of 2003. By identifying that BT, in fact, had significant market power (SMP), at some level of its value chain and after Ofcom had accepted BT's *Undertakings*, Ofcom's decision was to apply the fourth level of separation: "business separation with local incentives".[103] The split thus led to the creation of the separate unit, known as Openreach, whose job was to provide local access and backhaul products.

Simply put Openreach owned all the infrastructure that provided broadband to all customers relying on broadband services. In *the Undertakings* Openreach was defined by BT as ASD.[104] After the split, Openreach and BT held two separate accounts as well as separate physical offices. With the physical separation of offices the idea was to build a figurative "Chinese wall", which would stop sensible information to be shared between the two divisions. Additionally by incentives not being linked to the performance of BT further autonomy would have been guaranteed to Openreach. Another remedy which was requested from BT was EoI for which BT was requested to provide "the same product or service to all Communications Providers (CPs) (including BT) on the same timescales, terms and conditions (including price and service levels) by means of the same systems and processes and with the same degree of reliability and performance."[105] In regards of its governance the changes which

[103] Whalley J. & Curwen P. (2008)
[104] Cf. Chapter 2.2
[105] Ofcom (2015), p. 178

were made within BT was not only the creation of Openreach as a separate business, but also the application of rules applied to BT wholesale service that needed to be separated accordingly with SMP or non-SMP activities.

Finally another solution was to introduce the Equivalence of Access Board (EAB). The EAB had the main task to help the Equivalence of Access Office by monitoring, reporting and advising BT and to make sure that BT's conduct was in accordance to *the Undertakings*. The EAB was composed of five members, three of which were independent from BT, and the others were instead internal to BT. Another task which was assigned to the EAB was to refer to Ofcom any infringement of *the Undertakings.* Figure 5 better represent the change in BT's governance, at the time of the first implementation, although through the years some changes were made to that structure.

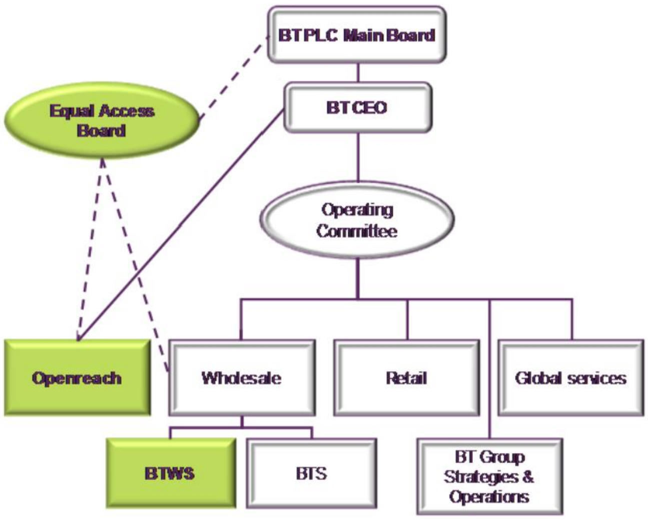

Figure 5: BT's organizational structure as presented in "The Undertakings" (BEREC 2011)

As of 2011 the Body of European Regulation for Exchange Communications in a report duly noted that splitting Openreach from BT had been a successful maneuver. What followed the functional separation was a substantial decrease in the price of LLU and Broadband. This was also accompanied by an increase in performance and market penetration for the telecommunications sector. With the increased level of competition in the market, SMP for BT accounted for only 21,7% in the UK broadband access market. At the time of writing however, it was also noticed the overall quality of Openreach had diminished, in the years following the business separation. The main problem which was encountered involved the timing of the delivery of service.[106]

[106] BEREC (2011)

2.5 Further criticism of Openreach

In the past ten years it became clear that the functional separation between BT and Openreach was not enough to guarantee enough competition in the telecommunications market. Some concerns over the independence of BT were expressed. After all Openreach remained in full control of BT, as it was only a separate division, and even though the EAB was implemented, the fact that the board responded to BT's CEO, was not enough to guarantee full independence and transparency. Criticism over the division had already been exposed since the functional separation was first ordered. The main stakeholders were already voicing their concerns over the legal separation between BT and Openreach. A drastic type of separation was considered to be the only way to grant that there would have not been any incentives to favor BT's retail department over other companies, and to allow information to be disclosed in a preferred way to BT's executives first.

In 2014 a study was conducted to understand whether the business separation did, in fact, benefit consumers. The finding showed that although in the short-term the price decrease was evident. In the long-run there was no evidence of increased competition in the market. BT was also lagging behind other European countries concerning telecom's innovation.

In addition, the study showed that compared to Virgin Media, founded in 2007, which at the time was operating as a vertically integrated fixed-line service provider in the UK, had a far better customer service than the separated BT. Which led to better timing on the resolution of issues on the telephone line. The conclusion was that the brief benefit of the decrease in price was not enough to show that the functional separation which had occurred was justified and it actually could have even made consumers worst off. As they could not benefit of the same implementation of better services which customers in other countries were facing. [107]

In 2015 Ofcom published a new Strategic Review[108] this time revolving around digital communications, with the intent to describe the changes in the telecommunications market after ten years, after several new innovations had been brought to the market. In the report it was written that thanks to the increased competition that had been introduced in the market, consumer had experienced a time of better service and decreased prices. The new Strategic Review again started its analysis from customer surveys where it was shown that all in all customer satisfaction had increased over the past ten years. According to Ofcom the increase in satisfaction was a direct result of increased competition in the market.

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[107] Sidak J.G. & Vassallo P. (2015)

[108] OFCOM (2015). Strategic Review of Digital Communications

However, what was also found was that the quality of Openreach services was still not up to par to what would have been expected a decade after the implementation of the functional separation. For example maintenance work quality had declined between 2009 and 2012. In regards of LLU, after 2005 only a few other firms entered the market, some which exited the market shortly after, and at the time of writing only Sky and TalkTalk remained. Yet competition to BT still seemed irrelevant and BT maintained overall its dominant position in the market. Between 2006 and 2010 Cable & Wireless (C&W) had merged with Energis and Thus, and finally in 2012 C&W was merged into Vodafone, leading to high extent consolidation in the market.
When it came to SMEs instead, BT was the leader in the market by owning 49% of the revenue market share compared to its competitors, followed by Virgin Media, Daisy, Talk Talk, and KCOM which respectively owned 9%,7%,6%, and 5%. In terms of fixed broadband services instead Openreach was still the leader having the major capital expenditures, although slowly decreasing (Figure 6). As opposed to the Mobile networks operators where the four major companies shared similar capex.

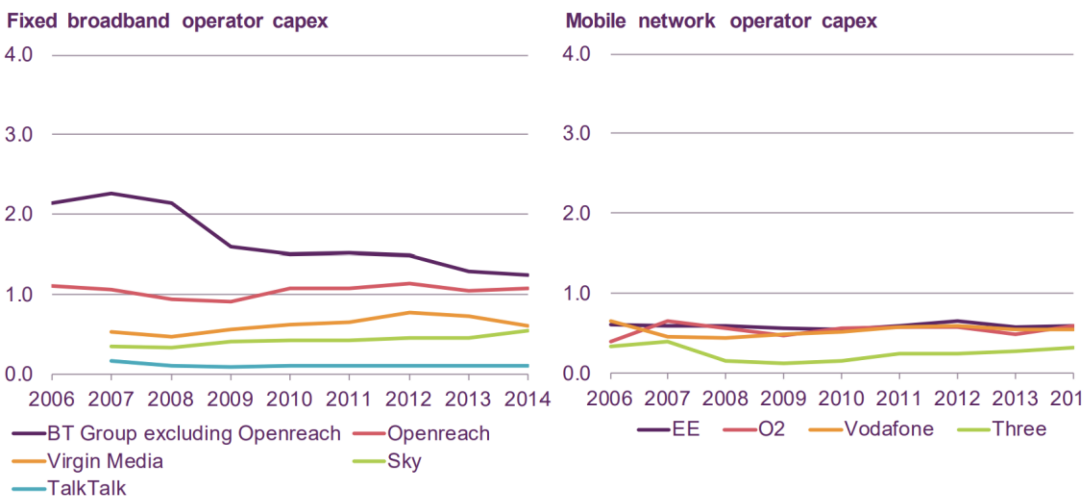

Figure 6: CAPEX by company in fixed broadband and mobile network. (Ofcom, 2015)

By 2015 more concern over the split was made known, quality of service had further deteriorated, as exacerbated by the Ofcom Strategic Review of 2015. Additionally, BT had made only little investments in the copper needed for the cables, which was indeed profitable for them, but it did not benefit customers. Therefore, Ofcom intervened again and by publishing a Strategic Review of Digital Communications, where it underlined the need for all companies providing telecommunications services the requirement to increase the quality of service. Something that was noted in the review was that by being a division of BT, Openreach still offered a preferential service to BT, thus discriminating towards all other service providers which relied fully on Openreach's infrastructure.[109]

Another problem which was presented was the need to increase Openreach's independence from BT. The option which was taken into consideration to achieve such independence was a legal separation of Openreach from BT. Hence, the request was to let Openreach be a wholly owned subsidiary of BT, this was subsequently ordered in 2018. With such change there would not have been anymore a direct line between Openreach and BT, which until that point had made the passing of preferred information between the two very easy. Openreach with the separation would have had absolute control over its assets, budget and employees. The formal request from Ofcom arrived in November of 2016. In March of 2017 BT accepted to let Openreach become its own separate company. In the request Ofcom stated that legally separating BT and Openreach would be the fastest solution to end the independence concerns. With BT being the sole owner of Openreach Limited, and thus, its parent or holding company.

Similarly to *The Undertakings* published by BT after the request of the functional separation between BT and Openreach, in 2017 BT published *The Commitments*. They were a set of "promises" made to Ofcom, which are still valid to this day. The scope was to finally propose a long-term solution to the competition problems found by Ofcom. The main goals being: (i) "to provide widespread availability of more fiber based broadband networks", (ii) "to ensure that decent broadband connectivity is available for all UK consumer and businesses", (iii) "to drive continued improvement in quality of service".[110]

To achieve those goals it meant that Openreach would have had to enhance its quality of service and engage efficiently with all its customers. Additionally, BT also promised to be more open and transparent in the way they communicated with each other to not raise further concerns, and they also set in place monitoring practices to make sure that no further breach were made. With regards to EoI BT's and Openreach's Commitment was to provide service: "on the same timescale, at the same price, with the same contractual terms, on the same service levels, and via the same systems and processes."[111] And added to it the promise of Equal Treatment, which further stretched EoI, as to include all possible services provided by Openreach, even future ones, especially in non-SMP-markets.[112]

To make sure that the separation was happening effectively Ofcom instituted the Openreach Monitoring Unit (OMU), that belonged to Ofcom as part of its Legal and Enforcement Group. The

[109] Whalley J. & Curwen P. (2017)
[110] BT Group Plc. (2021)
[111] BT Group Plc. (2021)
[112] BT Group Plc. (2021)

OMU's main tasks were to implement the new arrangements, to make sure that the separation was going according to the new regulations set out, and to determine whether the new separation would allow full independence of Openreach from BT.
Even though the government in 2018, with the Future Telecoms Infrastructure Review, presented its full support over the legal split . It was also stated in the same report that Openreach had further failed to deliver an equal service to all incumbents that availed of its infrastructure. For this reason further measures would have been needed to be put in place, to guarantee an EoI for all companies in the market.[113] By October 2018 Ofcom officially raised BT from the obligations set in *the Undertakings.* Shortly after the separation had been completed, Ofcom declared to be satisfied thus far with the proceedings. The separation had, in fact, strengthened Openreach's independence, to which it was also noted that there was an added transparency in the way the two companies were interacting between each other. Customer support had also increased, although some adjustments were still needed in terms of speed of Duct and Pole Access (DPA). Lastly it was also suggested that Openreach should have had to invest in a faster broadband network, to guarantee an overall better service countrywide.[114]
Since the legal separation between BT and Openreach, Ofcom has published every year a document called Openreach Monitoring Report.[115] The aim of the report is to communicate the findings of OMU in regards of Openreach's conduct towards its customers and competitors. The last review was published on the 27th of June of 2023.[116] OMU's main task is to make sure that Openreach is maintaining a strategic independence from BT and to ensure that it does not in any way advantage BT and its brands, to the detriment of other CPs. Thus far, Ofcom believed that Openreach's conduct was meeting all expectations, and had only minor reasons of complaint. For which Ofcom believed that there was no reason to proceed. OMU's task after the legal separation was to make sure that BT and Openreach were behaving in compliance to the BT's Commitments. In figure 7 the Commitment compliance and its interactions are schematized.

[113] Department for Digital, Culture, Media & Sport. (2018)
[114] Hutton G. (2019)
[115] Ofcom. (2023)
[116] Ibid.

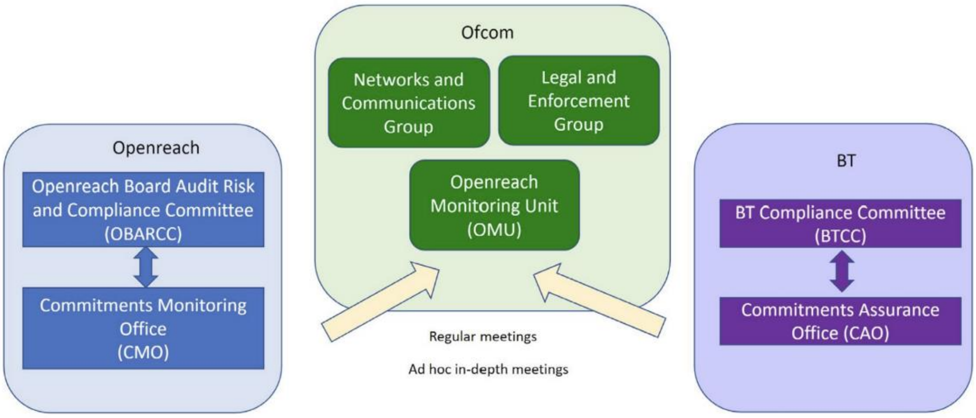

Figure 7: Interaction between BT, Ofcom and Openreach (OFCOM, 2023)

The OMU holds meeting on a regular basis with the Commitments Monitoring Office of Openreach (CMO) and with the Commitments Assurance Board (CAB) of BT, the meetings with the two committees are held separately. Usually the discussion revolves around the breeches and issues found by Ofcom. OMU is also required to participate sometimes in the meetings held by the Openreach Board Audit Risk and Compliance Committee (OBARCC) and BT Compliance Committee (BTCC). The report explains also how the interaction between BT and Openreach works. In fact, BT is a customer to Openreach as it uses Openreach's services, just as other providers do. BT is, however, also Openreach's supplier, in fact, Openreach supplies payroll, HR and billing services directly from BT. Lastly, BT is also a parent company to Openreach, and as such it has to gain the needed information to carry through with its legal obligations.

The OMU had found only one breach which consisted in some confidential information shared between Openreach and BT's executives. Investigations revealed that the information shared with BT's senior management, was not bringing harm to other competitors, as it did not contain anything from which BT's Retail department could have benefitted. Another area of concern, since BT is the holding company of Openreach revolves around financial services, in fact, the group sets out strategies for all of its holding companies. Which means, that BT could find ways to harm the independence obtained through the legal separation, by setting some type of incentives and objectives in a way that could hinder the independence of Openreach. But Ofcom had not found any infringement, and so far Openreach had not offered benefits to BT for its services. Hence, Openreach's and BT's conduct in the market were satisfactory and did not provide causes of concerns that needed to be addressed.

The roles of the OMU was extended as of 2023 and the monitoring unit is now also in charge of making sure that the goals set forward in the "Wholesale Fixed Telecoms Market Review 2021-2026", abbreviated WFTMR, are met. Openreach plays a major role in the competition of the fixed telephone market. As it is crucial for the smooth functioning of competition, in fact, the conduct of Openreach must not in any way restrict the use of its network. It is on the access to its infrastructures that non-vertically integrated companies rely. Which means that Openreach has to offer to all the companies its services equally and with identical quality. Since the legal separation of the two companies full-fiber services have reached 48% of British homes, large growth since 2021, when it was installed only in 21% of homes, there was also a significant growth in terms Fiber to the Premises (FTTP), where it had reached 10.3 million premises. One aspect on which Ofcom is focusing closely is also the Quality of Service (QoS), as it is in this aspect where Openreach and BT were found lacking in the two reports by Ofcom of 2005 and 2015. Thus, Ofcom through the OMU is making sure that there is no difference in QoS in the delivery of its service to BT and other CPs.
In addition, Openreach has to meet some QoS standards set by Ofcom and in case of incompliance it will face sanctions. In the years of 2020/21 and 2021/22 there had been no need to use the sanctions as Openreach had exceeded all expectations. However in 2022/23 the standards were set higher, and Openreach did not meet them, for which Ofcom has decided to open an investigation, to choose whether to apply or not the sanctions. The decision is still in progress, no further detail has been shared in the 2023 report.
Stakeholders and Ofcom have found that Openreach may have adopted a conduct which could have harmed competition in the past years. Namely, Openreach had not been sharing properly all its information regarding the physical infrastructure access with all the companies that use such access. For this reason Openreach, following Ofcom's request, created a new process to convey all necessary data and information to CPs which use its physical infrastructure.
Another problem identified, was that Openreach was found to "overbuild" where other competitors have also built their own infrastructures. The overbuilding which could hinder competitors' ability to increase their own area of service. However, Ofcom realized also that Openreach is willing to bring fiber to almost 80% of homes by the end of 2026 the result would have necessarily led to building infrastructure in the same places as other competitors did as well. It was also determined that it would have been worst for Openreach to sporadically build infrastructure, and it could have also been worst overall for competition, and deterred it completely. Furthermore, Openreach's major competitors had not the same goals, hence, the action taken was not considered being an anti-competitive conduct.
In regards to FTTP, CityFibre raised a complaint to Ofcom in regards to the programs Equinox 1 and Equinox 2 by Openreach. The programs proposed a price cut for Internet Service Providers (ISPs).

Which meant that providers using the company's FFTP broadband as a default for their customers, would get a discounted price. Stating that they believed that the pricing strategies for the two programs would eventually restrict competition. But no investigation by Ofcom was opened concerning CityFibre's complaint. It was dismissed with the promise that the OMU would have kept a closer look at Openreach's developments around those programs. The dismissal was due to the idea that the consumers would have benefitted from the introduction of the discount prices and that Openreach should have been allowed to innovate just as other players in the market.[117]

The British Telecom case paved the way to the application of functional separation as a solution to the refusal to grant access in particular in cases that involved the telecommunications market. The next chapter will focus on the case of Telecom Italia.

[117] BBC (2021)

Chapter 3: Functional Separation in Italy: Telecom Italia and Open Access

Following UK's steps with functional separation in the telecommunication industry, other countries in Europe applied the same remedy to overcome anti-competitive concerns. This chapter will analyze closely the functional separation between Telecom Italia and Open Access, as well as describing the later developments of the case.

3.1 Telecom Italia Historic Background

The telephone arrived in Italy in 1877 one year after its invention by Bell, and by the last two decades of the XIX century the first telephone companies appeared. The ownership of the first telecommunications company was for the most part private, but following the economic crisis of 1929 the ownership went entirely to the Italian Government. Telecom Italia (TI) was founded in Turin in 1925, when it was known with the name of *Società Telefonica Interregionale Piemontese e Lombarda* (STIPEL), covering mainly the northern regions of Italy. Central Italy telephone connection was covered by the companies Timo and Teti, while the south was covered by the company Set. By 1964 STIPEL was merged with the other four existing telephone companies which were active in other parts of Italy, and so the *Società Italiana per l'Esercizio Telefonico* (SIP) was created.

After the creation of SIP the company underwent a process of innovation that led the company to grow consistently all through the 80s. In 1994 SIP was merged with the companies Iritel, Telespazio, Italcable, and Sirm, forming the new company Telecom Italia. In the same year Tim, a subsidiary, was founded with the scope of covering the mobile telephony market.[118] A couple years later, after a further merger with the company Stet, the company was privatized and 35,26% of shares were sold. Moreover, the Treasury stepped out almost completely from the ownership of the company, by selling its shares.

By the end of the 1990's the company Tecnost, that was owned by Olivetti after a take-over bid bought 51% of the shares in Telecom Italia. Tecnost was later merged into Olivetti and therefore Olivetti was effectively controlling Telecom Italia. In 2001 Marco Tronchetti Provera became president of Telecom Italia, and 2 years later TI was merged, like previously it had happened to Tecnost, with Olivetti. In 2005 it bought the mobile telephony company Tim. With the privatization of Telecom Italia other telephone service providers in Italy started their activities. Furthermore, the liberalization of the Italian telecommunications market, led to the entry of new CPs in the market, which meant that

[118] Telecom Italia officially changed its name to Tim in 2016 for all markets covered by the brand (fixed telephony, mobile telephony and internet) (La Repubblica)

TI was no longer a monopoly, but it still remained the leader of the Italian telecommunications market.[119]

3.2 AGCOM's Resolution 152/02/CONS

Already in 2002 AGCOM found TI's conduct in the market to be restrictive to competition and adopted some measure to stop TI from abusing of its dominant position. In particular, the resolution.152/02/CONS stated that there was the need to apply measures which had the aim to promote equality of treatment to both internal and external customers from those firms which had a dominant position in the fixed telephony market.[120] The goal of the latter regulation was to guarantee a non-discriminatory access to networks infrastructures owned by TI. The measure should have promoted competition in the Italian market. The resolution was accepted after an inquiry which was urged also by other CPs in the market.

Equality of treatment and non-discrimination were already discussed in article 82 of the Treaty of Rome and were at the base of competition. Without those two pillars achieving competition in any sector would have been impossible. With the goal of making sure that those principle were applied correctly also by the incumbent, AGCOM requested the accounting separation of TI.[121] The accounting separation ordered by AGCOM required the separation between the two units in charge of the management of the network and the one which was in charge of the retail of the telephone services to the final customer. In particular the measures applied by the Italian antitrust authority entailed:

1. The transparency of the information regarding the internal contracts of the company.
2. The same level of service in the supply and in the maintenance services to both the company and to other CPs, which additionally needed to be monitored through semiannual reports.
3. The separation between the personnel in charge of the access network infrastructure and wholesale units, and the ones in charge of the retail aspect of the company.
4. The requirement to stop the spread of information internally to the company, in order to not favor TI over other CPs.
5. The official reporting of all internal transfers between access network units and retail units, which must be backed up by the underlying costs.

By providing a detailed description of the underlying costs that the company was incurring with its access networks infrastructures, the company could have, in fact, demonstrated that it was applying

[119] Corriere Comunicazioni (2013)

[120] "Misure atte a garantire la piena applicazione del principio di parità di trattamento interna ed esterna da parte degli operatori aventi notevole forza di mercato nella telefonia fissa". AGCOM resolution n. 152/02/CONS

[121] In Italian the separation is referred to as "*separazione amministrativa*".

a fair price to other CPs willing to use its facilities. The consequence of a correct cost allocation for the internal and external processes would have guaranteed that the company was not behaving in a discriminatory and anti-competitive manner.

In addition, through the obligation to redact a report regarding this matter, AGCOM would have had the possibility to reduce the asymmetry of information in the market. Another step which the antitrust authority applied was a network cap on the prices, this measure was accompanied by a price increase plan for the following years, in order to give to other CPs certainty over the prices evolution in the future. Furthermore, TI was requested as a preventative measure to communicate all retail prices to the Antitrust authority. This would allow the incumbent to demonstrate that the prices charged did follow the request of transparency of information, non-discrimination, and fairness.

AGCOM's reasoning behind this decision was that by applying an accounting separation, TI would have had greater fairness in the allocation of joint costs of the different services, thereby also mitigating the information asymmetry. Furthermore, such separation would have also eliminated the incentive to engage in anti-competitive behaviors. In fact, the two separate entities would have had different business goals to achieve, thus, the hope was for them to interact less with each other.[122]

3.3 Telecom Italia Competitive Environment in 2007

The dominant position of Telecom Italia, in terms of fixed line telephony was reconfirmed in 2007 by AGCOM with the resolution No. 208/07/CONS. The telecommunications environment in Italy was characterized by one copper infrastructure which was fully owned by TI itself, and was spread in the entirety of the Italian territory. Moreover, the vertically integrated structure of Telecom, did not benefit the telecommunications market. The main problems which resulted from its dominant position were: (i) a reduced overall competition, (ii) the existence of bottlenecks which could negatively interfere with the service, and (iii) and a digital divide, meaning that in some areas in the market broadband connection could have been provided only at very high costs or through satellite technology.

There was a difficulty, however, in resolving those problems, as building new infrastructure in Italy was not a possibility at the time. In fact, TI's copper cables were already installed and in some cases, building new infrastructures would have meant that cables of a different company would even have had to pass in the same places as the original Telecom's ones. Thus, building new infrastructure in the short- and medium-term would have been quite difficult. This alone was enough to guarantee that TI could have negative effects on the telecommunications market. Moreover, in the medium- and long-run with the spread of broadband services the network would have eventually become

[122] AGCOM Delibera n. 208/07/CONS Allegato B

overloaded. This in turn could have created some bottlenecks, that would have made the supply of telephone services difficult in some urban areas. AGCOM believed that it would have been better for companies to compete at the upstream levels, and not at the wholesale level. The most plausible solution at the time seemed to be to have TI provide with no discrimination access to its infrastructure to other CPs.

The Italian competitive situation regarding fixed telephony operators is described below in table 2. It is clear that the Italian market was highly concentrated. In 2005 and 2006 only 35 operators were present in Italy, this was very similar to the amount of operators in France, which was similar to Italy in terms of number of inhabitants, but other countries such as Germany or the UK had a less concentrated market.

Operatori Attivi (unità)	**2002**	**2003**	**2004**	**2005**	**2006**
Francia	24	18	24	34	43
Germania	38	46	94	122	132
Italia	75	42	28	35	35
Regno Unito	107	113	118	127	122
Paesi Bassi	32	76	129	106	106

Table 2: Fixed Telephony Operators 2002-2006 (source: European Commission)

Tables 3 and 4[123] show the ways with which other operators got access from the incumbent to provide telephone services themselves. Previously the operators gained access mostly through carrier preselection. While later the preferred way to get access was through full unbundling, and shared access became more frequent. Also bitstream was developed between 2001 and 2006, those were used mainly by smaller operators to gain broadband access and VoIP.[124]

[123] In table 4 the in the column corresponding to 2006 all values written consider in consideration the time until the 30th of September 2006, while the one in cursive only refer to the time until the 30th of June 2006.
[124] VoIP, Voice over Internet Protocol

Linee in full unbundling (migliaia)	2002	2003	2004	2005	2006 (3)
Francia	1,4	3,8	95,2	597,9	1.584,9
Germania	944,9	1.349,8	1.958,3	3.250,0	4.300,0
Italia	131,7	538,8	839,8	1.341,6	1.826,0
Regno Unito	2,2	5,4	10,9	99,0	*163,1**
Paesi Bassi	25,5	33,9	48,5	68,9	*214,3*
Linee in shared access (migliaia)					
Francia	5,4	272,9	1.495,5	2.229,0	1.928,3
Germania	0,1	0,1	2,7	6,0	43,0
Italia	0,0	0,0	29,9	159,6	342,0
Regno Unito	0,1	2,8	16,9	93,0	*417,1**
Paesi Bassi	25,3	174,2	413,7	588,2	*550,0*
Linee *bitstream* (migliaia)					
Francia	0	159,6	1.634,2	1.939,9	1.617,0
Germania	0	0,0	0,0	1,5	1,3
Italia	350	536,0	895,0	890,0	1.075,0
Regno Unito	0	65,0	341,9	876,0	*1.010,7*
Paesi Bassi	0	0	0	0	*0*

Table 3: Full unbundling, shared access and bitstream networks (source: European Commission "CoCom Broadband Report")

Linee di accesso (migliaia)	2001	2002	2003	2004	2005
Francia	29.248	28.980	28.673	28.502	28.186
Germania	30.500	29.100	27.837	26.986	26.340
Italia	22.244	21.943	23.000	22.400	21.725
Regno Unito	31.060	30.141	29.903	29.685	29.329
Paesi Bassi	6.569	6.316	6.120	5.922	4.518

Table 4: PTSN access networks (source: OECD, Communication Outlook)

Table 5 and 6 shows a slight decrease in using PTSN[125] as access network which was due to the switch to mobile telephony which was ongoing at the time. At the same time the wholesale of bandwidth services was growing.

Carrier Preselection (migliaia)	2001	2002	2003	2004	2005
Francia	2.770,7	6.420,5	7.514,0	7.676,0	8.199,0
Germania	3.899,0	4.141,0	4.900,0	6.000,0	6.300,0
Italia	1.962,0	3.370,0	3.600,0	4.017,0	4.085,0
Regno Unito	11,0	638,0	2.598,0	4.571,0	5.781,0

Table 5: Carrier Preselection (in thousands), (source: OECD, Communications Outlook)

[125] Public Switched Telephone Network

Linee *broadband* (migliaia)	2002	2003	2004	2005	2006 (3)
Francia	1.656	3.657	6.793	9.951	11.921
Germania	3.244	4.667	6.905	10.558	13.486
Italia	976	2.402	4.701	6.783	8.011
Regno Unito	1.333	3.172	6.137	9.889	*11.623*
Paesi Bassi	1.214	1.908	3.085	4.186	*4.742*

Table 6: Broadband access networks, (source: European Commission "CoCom Broadband Report")

Table 7 shows that between 2002 and 2005 TI's market share remained stable. AGCOM concluded that the reason for this stabilization was that competitors had exhausted their role in the retail of telephone services and failed to maintain a sufficient level of competition in the market. The table also shows that outside of the UK, the other countries followed similar patterns to Italy. In fact, the dominant firms held a privileged position in the market of broadband connections.

Quote di mercato in termini di ricavi	2002	2003	2004	2005
Francia	75,1	74,2	71,5	70,5
Germania	68,0	68,0	57,0	55,0
Italia	69,0	68,0	65,9	67,4
Regno Unito	60,8	63,7	50,8	51,9
Paesi Bassi	75,0	n.d.	65,0	75,0
Quote di mercato in termini di traffico	**2002**	**2003**	**2004**	**2005**
Francia	74,6	71,5	67,1	65,3
Germania	64,0	66,0	48,0	44,0
Italia	n.d	n.d	62,3	66,1
Regno Unito	62,2	68,4	56,8	52,7
Paesi Bassi	n.d.	n.d.	65,0	65,0

Table 7: TI market share in voice telephony services (European Commission, IX, X, and XII Report)

Table 8 shows that regarding fixed telephone lines TI lost some percentage points in the wholesale of broadband telephone lines between 2005 and 2006. As mentioned in the annual reports of AGCOM TI maintained a 95% of market share in the non-business narrowband market and 93% in the business narrowband market.[126]

Linee broadband	2002	2003	2004	2005	2006 (3)
Francia	70,2	58,9	46,6	47,5	51,0
Germania	94,2	91,1	82,7	61,7	50,0
Italia	75,4	76,5	77,5	74,4	70,0
Regno Unito	50,7	46,2	36,6	33,7	33,0
Paesi Bassi	87,7	79,4	75,5	71,8	73,0

Table 8: TI's market share in broadband access network (source: European Commission, XII Report)

Since the beginning of the 1990s the communications market had changed deeply, due to the innovation that had been going on. The other reason for the changes in the market was due to the

[126] For 2006 the data only dates to October 6th.

regulations which were being redacted at the time. Italy underwent a process of privatization first, and liberalization second. As mentioned in section 3.1 TI became first a public company (S.p.A, *Società per Azioni*), and later its control passed to private individuals.

The liberalization of the telecommunications market reached its peak on the 1st of January 1998, with the opening of the fixed voice telephone markets to the public, through introduction of *ex ante* regulations aimed at opening up the market and promote competition for networks and electronic communications services. The ensemble of all those things helped in lowering prices as figure 8 shows. In the graph the blue line represents the telephone prices index while the pink line represents the consumer price index (CPI). The graph shows that while the CPI increased by circa 20%, telephone prices decreased by 15%.

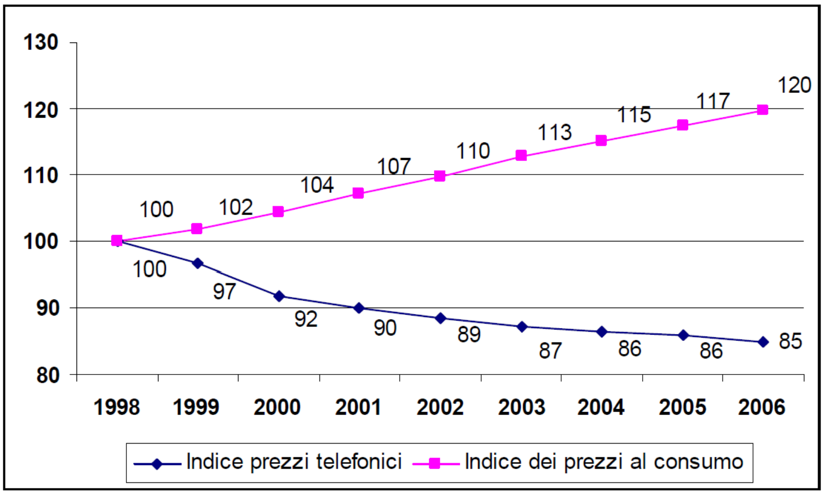

Figure 8: CPI and Telephone Price Index (source: ministry of economics and finances & ISTAT)

AGCOM noticed that the best way to determine the level of competition in a market would have been through customers' satisfaction (similarly to what had happened in the UK, where Ofcom based its research on customers survey). However, it lacked sufficient data to make actual suggestion based on that aspect. Nonetheless, the data collected regarding the liberalization of the market showed that for example regarding maintenance of the network, TI was not up to par with other European countries, especially regarding speed of the reparation. Which clearly showed that at the time there was the need to improve maintenance services.

In terms of investments, AGCOM noted that in the period following the liberalization of 1998 until 2002, the market experienced a slow increase of 2,17% yearly in investments, among the incumbent and the new entrants, which were the ones that contributed mostly to this increase. In the time from 2003 until 2006 there was instead a decrease in investments, both for TI and for the other operators. The decrease happened due to the competitive pressure in the market. It is interesting to notice that a joint study conducted by Eurostat, OECD, ITU and London Economics found that the investments trends which were observed in Italy, followed the same patterns as the ones in other European countries, such as the UK, Spain, France and Germany. In the same study it was mentioned that in all the 25 member states of the EU investments in the fixed telephony market were less in 2004 than they were in 2001. The incumbent contributed more than other operators to the decrease.[127]

3.4 Competition concerns and AGCOM's resolution 208/07/CONS

Given the competitive environment of Italy, where TI was dominant, some concerns over the regulatory aspect were made, which still carried through from the resolution of 2002. TI, in fact, had been found dominant in both the wholesale and the retail market for fixed telephony.[128] The incumbent also maintained a large market share in the supply of broadband network. Broadband was also still not supplied as vastly as it should have, and the digital divide concerned a wide area in Italy. AGCOM also found that it could have been possible to open competition in the market through wireless broadband and through the unbundling (LLU) of the copper cables. Both options were widely used and successful in other countries, such as the Netherlands, where competition was observed also in the different ways of providing access technologies. According to the regulators, the absence of competition on the access level, led the incumbent dominate the market with a market share of over 50%. The solution suggested in the resolution 208/07/CONS by the authorities, in the absence of the possibility to increase and differentiate the access technologies, was to compete at the retail level. The same solution is also suggested in the NRF of 2002 as a remedy for dominant firms in a highly concentrated telecommunications markets.

A new inquiry found that in the time frame from 2001 to 2003, TI applied a margin squeeze strategy and abused of its dominant position. Subsequently the Council of State[129] requested AGCOM to provide a new regulatory framework to safeguard the non-discrimination principle. At the same time Milan's Court of Appeal found that TI had applied abusive practices by using privileged information, which were acquired by breaching legal and regulatory requirements. Hence, the incumbent used information coming from the access network department, which were given to them following a preferential route. Those information were then used to apply aggressive strategies of win-back and retention towards its customers. The court determined that those strategies were inappropriate as they used information that were not given to all other CPs, and by doing so it actively hindered competition in the market. Between 2001 and 2004 in a litigation between TI and Fastweb (an Italian communication's provider), it was also found that TI refused to provide access to its infrastructure more than 10'000 times. And again it was determined that this particular conduct hindered

[127] Agcom Delibera No. 208/07/CONS Allegato B
[128] Cf. section 3.2
[129] *Consiglio di Stato*, Italy's supreme administrative court.

competition. Thus, it was clear that some areas of concerns remained, and that the Equality of Access which AGCM and AGCOM were striving for was not yet achieved.

In particular the main problems which arose were related to: (i) the access to local networks, (ii) the management of information owned by the incumbent, which were not communicated to all other entrants, and (iii) the non-discrimination principle, which was not being respected by the company.

The absence of infrastructures in the fixed telephony market led authorities to believe that after the unavoidable implementation of the Next Generation Networks (NGN), a new concentration of the market would have happened. This would have further reduced the competition. However, the problem, would have been fully resolved through non-discrimination, and by treating all CPs equally, hence by including new companies in the market, which would in turn increase competition. To guarantee the increase of competition it was necessary to have a clear and stable regulatory framework, and that the increase in investment in the telecommunications market would have happened as expected by the market.

After a thorough analysis of the telecommunications market in Italy AGCOM realized that to better guarantee the non-discrimination principle, given that Telecom Italia still maintained the monopoly on the access facilities, the best option would have been to intervene on the structure of the company. At the time of the investigation over TI's competitive position, Italian regulators had to offer a solution which would have been compatible with the impossibility of building new infrastructure. The solution fell on local loop unbundling. Therefore, the incumbent would have kept its monopoly position over infrastructure, and would have granted access on the wholesale level to other companies. With the further order to TI to offer such access with no undue discrimination.

Because of the solution proposed by AGCOM, it was evident that a further separation within the company was needed. The separation would have further guaranteed independence between the wholesale and retail department. This had already been implemented in 2002 through the resolution 152/02/CONS, with the accounting separation. However, the sole results of this operation were not enough, and TI maintained a dominant position in Italy's telecommunications market. Hence, there was the need for a stronger type of separation. For the purpose of further reducing the market share of TI, new regulations had to be put in place, as the one of 2002 where clearly not enough. The new regulatory framework would have needed to include equality of access for all other CPs.

Given the premises AGCOM's suggestion was, similarly to what had been ordered a few years prior to BT, to do a functional separation. Such separation would have obliged the vertically-integrated TI to separate the different departments in charge of management, development, and wholesale of the access services. The separation between the department would have been needed to guarantee the

EoO.[130] For such purpose AGCOM used as benchmark BT's Openreach. AGCOM analyzed Openreach and described some fundamental best practices which were achieved since its creation:

1. Regulations aimed at ensuring that the operations are organized in such a way that the fixed assets needed for network access are given to different divisions, to avoid favoring the internal processes over external ones.
2. The new separate division must be given the exclusive responsibility for the development, management, and maintenance of the access network.
3. The separate division has the responsibility for the wholesale of the access network, and it has to be provided to all operators under the conditions of perfect EoI. The division is also forbidden to sell the retail product to end customers.
4. The name of the brand of the two division must be evidently different, to avoid confusion between the two divisions.
5. Employees must be different for the two division, and the two division must operate in different locations
6. The incentives system for management and employees of Openreach must depend solely on the performance of the separate division, and not of BT as a whole.
7. Information must not be passed in a preferential manner between the two divisions.
8. Communications between the separate division and the company must be recorded.
9. Accounting, auditing and management of the separate division must be different from the ones of the main company. It must also maintain financial autonomy.
10. The company and the separate Openreach should have different objectives, as well as a different investment plan.
11. The separate division operations must be supervised by a board which has to be appointed by the authorities. The committee must ensure that the business is complying to the conditions of the separation and EoI. The committee has the power to inspect to verify that all conditions are met, and reports back to the Authorities.
12. If there is a breach of the commitments or provisions fines may be imposed by the Authorities.
13. The separate division must be subject to an annual external audit from an external company. The audit must be publicly available and it has to be shown to the Authorities.

However, the separation between the access networks, does not exclude the fact that also the wholesale and the retail department of the company need some level of separation between them. Hence, one could say that there needs to be three-way division of the activities performed by the

[130] Cf. section 2.2

incumbent: (i) the access network has to be completely divided by rest of the company, (ii) the wholesale products, which are not included in the access network must be functionally separated from the retail department, and (iii) the rest of the activities, in particular the retail division. Hence, the different division should have been divided by a figurative *Chinese Wall*, which would effectively separate the incumbent's activities.

According to AGCOM the functional separation between the access network facilities and the rest of the company would have led to several benefits, including increased competition and transparency. The same benefits that the UK had experienced through the functional separation between BT and Openreach. It would have also led to increased clarity of the regulations, which in turn would have led to increased investments in the new generations networks. In fact, the solution would have averted the risk of the formation of a new monopoly in the access network.

In addition, to telling the benefits of the possible functional separation, AGCOM also stated that the implementation of the new project could have led to an increase in transaction costs. The cost increase could have in turn led to the increase in the wholesale price, which would have been translated into a higher final price for customers. However, AGCOM determined that the increased price would have been counterbalanced by: (i) an efficient wholesale service, (ii) a more competitive market, and (iii) the possibility of the liberalization of the market through the equality of access.

The liberalization of the market, would have led eventually, similarly as in the UK, to open up competition. Which in turn would have resulted to the easing of the regulation regarding retail, and also to remove the control on prices and the prohibition of bundling, which are now imposed to TI. Therefore, the whole process would liberalize the market and bring the market to equality of access. But it would also remodel the fixed telephony regulations to focus only to the points of the value chain characterized by the presence of bottlenecks, namely regarding the essential infrastructures. Which meant that the main liberalization of the market would have happened at the retail level of the value chain.

Another important aspect mentioned by AGCOM was the increase in investment, which would have been a consequence of the increased certainty of the regulation in the market. Which, together with a reduction of the regulations in the near future and a decrease of litigation between the CPs would have influenced positively investments. In the medium and long term the stability of the new regulation framework, thus, would have had many benefits. The liberalization would have also led the authorities to eliminate the price cap on access facilities.

AGCOM, however, noted that the operation would have also had potential risks, such as the creation of a new monopoly in the access network facilities.[131] The problem had already been observed in

[131] In the original document this phenomenon is referred to as *Rimonopolizzazione dell'incumbent*.

other industrialized countries, which had already gone through a process of innovation. Because other companies would have been disincentivized to invest in newer forms of access facilities such as fiber optic[132] and VDSL.[133] Potentially, due to the obligations for firms to share access facilities with other operators in the market.

Another problem, which companies could have faced was that due to the high investments needed for the innovation, smaller companies, with smaller revenues, could have potentially not been able to incur sufficient costs for the developments. Which could have meant that, eventually, companies would have needed government intervention to fund the innovation. However, government help in funding NGNs, would not have been needed, if companies decided to pool investments among themselves. But AGCOM was unclear whether this would have actually breached previous non-competitive regulations. In fact, the functional separation between TI and the access network facilities should have been taken into consideration for all future investment plans. The new separate division, would have been subject to the control of the main company, and, thus, should have sought for its approval before proceeding with any investment. However, to ease the possibility of the new division to attract investments in the access network, the separation must not only be internal, but be at the company level.[134]AGCOM made clear in the resolution that its main goal was to offer a solution to the competition process, which would have promoted R&D in the whole sector.

Another option which AGCOM assessed was the possibility of forbearance, hence, the abstention to intervene through a change in regulations in regards to broadband networks (high speed networks), which could be permanent or temporary. However, this option seemed to be only applicable in the case of a market where end-to-end competition was already present at the infrastructure level.

The third option would be the equality of access to the new generation network and equivalence of input at the company's wholesale level, in addition to a progressive liberalization of the retail offers. Regarding the last option AGCOM convened that it was the one most similar to the one adopted in the UK by Ofcom in regards to the BT case. Thus, from AGCOM's analysis it appeared to be the most convenient solution to be applied to the TI case. In particular, in the case of Italy it seemed to be the easier one to implement because of the difficulty to achieve a sufficient end-to-end competition. In particular, because companies relied on the incumbent, TI, to have access to the infrastructures. Furthermore, the impossibility to build new infrastructures on the Italian territory constituted a

[132] "Fiber optics, the science of transmitting data, voice, and images by the passage of light through thin, transparent fibers. In telecommunications, fiber optic technology has virtually replaced copper wire in long-distance telephone lines, and it is used to link computers within local area networks.", Britannica

[133] VDSL stands for very-high-bit-rate digital subscriber line, similarly to the previous DSL (Digital Subscriber Line) it is "a technology that provides high speed internet connections over conventional telephone lines" (Britannica), it is delivered through copper cables (techterms.com)

[134] The company and the division must be divided into two different companies, with TI being the parent company to the company being the parent company to the company in charge of the access network facilities.

structural bottleneck, as they are not replicable and cannot be substituted by other infrastructures. At the equality of access level AGCOM found different hierarchical levels of network, both in terms of the existing infrastructure and in terms of the NGN to which apply the new regulatory framework.
A last suggestion made by AGCOM's was legal separation, hence the creation of a new company in charge of the access facilities. However, the newly created company, would have fallen under full control of TI. According to AGCOM such separation, would have helped to achieve fully the conditions 1 to 13, previously mentioned. That way, getting investors for the access network company would have been easier, eliminating completely the above mentioned problems. Finally, the decision fell on functional separation. [135]

3.5 TI's Undertakings and the Creation of Open Access

Following the resolution by AGCOM, TI put forward some undertakings (called *impegni* in the original version in Italian), to solve the problems which were identified by the Regulatory Authority in 2006. Those commitments were added to the Decision by AGCOM 718/08/CONS and became binding as of December of 2008. Simultaneously, TI also created a new unit with the name of Open Access, which was in charge of planning, managing, and developing the access network, the new unit was, however, not mentioned in the undertakings.
The separation that was applied to TI, according to BEREC, could fall either under level 3 ("functional separation") or under level 4 ("functional separation with localized incentives and/or separate governance arrangements") based off Cave's scale.[136] Open Access was already created in September of 2008 by TI, which had its own personnel, information systems, and investment budget all different from TI.
The newly created division had the responsibility over the access network infrastructures, including the roles of managing all the maintenance work of the access lines and managing the process of the supply of access networks for the clientele of TI and other licensed operators (OLOs) alike.[137] While TI developed a wholesale division which would provide access service to other CPs directly. This meant that OLOs could only ask for service through TI's wholesale, specifically through the National Wholesale Services (NWS) division. Thus, Open Access had to refer to both TI's retail and wholesale department (figure 9). The solution was less than ideal, because it would not allow full cost transparency as requested by AGCM in the resolution of 2002.

[135] Agcom Delibera No. 208/07/CONS Allegato A
[136] BEREC (2011)
[137] OdV (Telecom Italia, 2010)

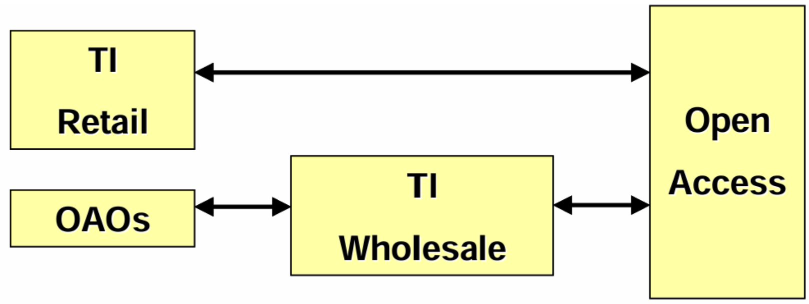

Figure 9: Open Access's managing chain. (BEREC, 2011)

Moreover, since Open Access supplied the copper networks for both wholesale and retail service, the unit provided also full service of bitstream and terminating segments of leased lines, which used copper and other network segments. This made calculating the effective cost of copper infrastructures quite difficult. Which made Open Access more prone to price discrimination than with the accounting separation in place from 2002. In fact, the costs of Open Access were attributed from an accounting perspective completely to the other operators and the costs which were attributed to TI's wholesale division were split equally. To reach full non-discrimination of prices it would have been better to allocate the costs of the wholesale division and the OLOs to all services produced.[138]

Open Access's model and the Undertakings, focused on a model of EoO, where the equivalence had only to be approached on the output level, hence, the process by which the service was delivered were not important to the end result.[139] According to Franco Bernabè, TI's CEO from 1998 until 1999 and then again from 2007 until 2013, the new governance of the company would have helped to manage autonomously and separate the access network. This would have further helped the company to reach its efficiency, transparency, and it ultimately would have also benefitted the customer.[140]

In the undertakings TI committed to supporting the functional separation. The commitments where drafted in accordance with the resolutions 208/07/CONS and 626/07/CONS. Their main goal was reinforce what the Italian Regulatory Authority had already stated in the resolution 152/02/CONS. Those provisions can be summarized in fourteen major groups:

- Group of undertakings 1: Orders will be addressed on a "first come first served" basis. They will also be divided by type of service and difficulty. If a service is not available the CPs can request an other way of processing. TI created a Customer Relationship Management Wholesale (CRM wholesale) with the role of managing the relationship between TI's wholesale division and the OLOs, on a commercial and a technical level.[141]

[138] Nucciarelli & Sadowski (2010)
[139] OdV. (n.d.)
[140] Corriere della Sera (2008)
[141] Nucciarelli & Sadowski (2010)

- Group of undertakings 2: this group of undertakings deals with the company's incentives structure. They will now be based on the separate performance of TI and Open Access. Each unit has to separately achieve targets of equality of access, customer satisfaction, quality, and efficiency of the access networks. In addition, in the same group the commitments expand to further line out a conduct code to be followed by the employees of both divisions. Personnel has also to undergo thorough training regarding the undertakings.[142]
- Group of undertakings 3: Open Access's and TI's performance is monitored constantly through setting key performance indicators (KPI) and key performance objectives (KPO).
- Group of undertakings 4: TI delivers reports on its performance to an internal board, while compiling the reports it has to keep into account the KPIs.[143]
- Group of undertakings 5 and 6: TI has to communicate regularly with AGCOM, OLOs and the newly created supervisory board regarding transparency of technical plans and development of fixed access network.[144]
- Group of undertakings 7: An *Organo di Vigilanza* (supervisory board, OdV) will be created. The supervisory body will be constituted by five members, three of which are nominated by AGCOM while the last two are chosen by TI itself, the mandate for the supervisory board is of three years, and after that all five members will be newly appointed, but the position is not renewable.[145] The supervisory board's main role is to promote the undertaking, and to make sure that they are being applied correctly. The board was instituted on the 1st of April of 2009, and has since published its quarterly and yearly reports over TI's performance.[146]
- Group of undertakings 8: this group deals with accounting and transfer charges. TI will be in charge of proposing to AGCOM the criteria with which it wants to deal with transfer charges internally.
- Group of Undertakings 9: TI takes on the responsibility of determining the rules regarding NGNs. [147]
- Group of Undertakings 10: TI creates a unit that has the task of resolving all technical and operational complaints in terms of provisioning of the network. The office was created in March of 2009 and took the name of OTA.

[142] BEREC (2011)
[143] Nucciarelli & Sadowski (2010)
[144] Nucciarelli & Sadowski (2010)
[145] BEREC (2011)
[146] Organo di Vigilanza (n.d.)
[147] Nucciarelli & Sadowski (2010)

- Group of Undertakings 11: with which Open Access accepts that it could not sell any SMP services nor retail services to final customers.
- Group of Undertakings 12: the Supervisory Board will be obliged to inform Open Access in case non requested services are activated to customers
- Group of Undertakings 13: TI will have to stop the procedure of deactivating carrier pre-selection (CPS) once the clients communicates to OLOs if they have changed their mind in its regard.
- Group of Undertakings 14: TI will have to solve quickly and efficiently any dispute with its clients and consumers, especially in terms of non requested services and overpricing.[148]

The solution adopted by Telecom Italia did spark some criticism. For example the fact that OLO's orders had to go through CRM Wholesale while the ones coming internally from TI would have been placed directly to Open Access. This would have brought some confusion over cost allocation. While on a positive note the code of conduct would have made sure that the staff was trained on the set of commitments, it was also true that AGCOM did not contribute to the draft. However, its contribution would have been fundamental for OLOs as a further guarantee of the non-discrimination principle and equality of treatment. The creation of new KPIs and KPOs would have not solved completely the problem of the asymmetrical information between AGCOM and TI. The supervisory board's monitoring would have dealt only on the performance of Open Access, which would have not given any indication on the equality of treatment by TI.[149]

After its introduction, the supervisory board received some complaints from TI's clients and also from other licensed companies, specifically Fastweb and Wind, two Italian telephone operators. Given the extent of the claim the OdV decided to open an inquiry in regards of the complaints of the OLOs. In particular, in June of 2009 Fastweb complained about TI's SMP wholesale services. Specifically the problem that the company encountered was that Open Access was rejecting many activation requests, stating as problems: (i) final client's indisposition, and (ii) unavailability of network resources. The OdV found no irregularities in Open Access's conduct and closed the case stating that it did not find any breach of the new undertakings. Nevertheless, it also approved TI's decision to create a digital platform, which was named SWAP, to facilitate the communication between Open Access and the OLOs to prevent the rejection of request for causes attributable to the client. With the help of SWAP, OLOs were able to contact the client back and understand the reasons of the cancellation of the request.

[148] OdV (Telecom Italia, 2010)
[149] Nucciarelli & Sadowski (2010)

In July of 2009 a joint complaint arrived to OdV from Fastweb and Wind. The companies found that TI had breached the second group of undertakings. According to the OLOs the conduct adopted by TI was not in line with the new code of conduct. More precisely, the two companies claimed that TI and Open Access were not respecting the principle of non-discrimination between external and internal clients. In particular, Open Access and TI were exchanging information in regards of clients' switch between operators and the auto-generation of the switching code (in Italian *codice di migrazione*). The OdV found that TI's conduct was not violating the code of conduct, but it also added to the conduct a procedure to allow OLOs to access the information.[150]

3.6 Wind & Fastweb and the new antitrust complaints

In February of 2010 AGCM received complaints from one of the OLOs, Wind, regarding TI's conduct. The company found in TI's behavior, anticompetitive practices in two different areas. First of all Wind complained that TI was signaling many of the request by the OLOs as "KO" (meaning that the requests were denied either for technical reasons or for reasons attributable to the clients themselves). In addition, TI had also applied heavy discounts to their business customers, which the other operators were unable to match, as it would have led to negative profits. Lastly, the company claimed that TI was artificially raising their costs to access the network.

In April of 2010, the same complaints reached AGCM by Fastweb. This led the AGCM to open an inquiry[151] about the abuses, stating that TI's conduct was breaching article 102 of the TFEU. In fact, TI was said to be purposedly harming the competition in the market through its behavior. Once the inquiry was opened other OLOs requested to participate in the procedure. Those companies were Vodafone, *Associazione Italian Internet Provider* (AIIP), Opitel (TeleTu), British Telecom, Colt, Siportal, and Teleunit. As they were all deemed to have an active interest in the case, their participation request was accepted.

On the 11th of December 2012, the result of the inquiry was published. TI was said to have hindered competition through the access network services for the fixed telephone line, for voice telephony, and access to broadband internet connection. TI did so through two distinct conducts: by refusing too many connection requests by the OLOs and by applying large discounts to business clients. AGCM deemed those two behaviors as a refusal to deal, the first one, and margin squeeze, the second, both of which are a breach of article 102 of the TFEU.

The markets which AGCM analyzed to come to its conclusions were:

1. The wholesale market for access networks for fixed line telephony,

[150] OdV (Telecom Italia, 2010)
[151] AGCM Resolution A 428 (9th of May 2013)

2. The wholesale market for broadband access network,
3. The retail market for access services to public fixed telephone network, for business and non-business customers,
4. The retail market for voice telephony, for residential and non-residential customers,
5. The retail market for broadband internet access services.

In regards to the first market, the access network input was needed by OLOs to provide their services to final customers. In fact, because they did not own their own infrastructures, most OLOs relied completely on TI's ones in order to operate in the market. The Antitrust Authority also found that from a geographical aspect TI was providing the network on the whole Italian territory, as they were the sole owners of the copper cable network. Some other operators were self-producing their own access network (e.g. fiber optics), which alone were not deemed able to create some new sub-markets. The infrastructure for the access networks were owned completely by TI which meant that it maintained a 90%-100% market share in the wholesale market for access networks for fixed line telephony between 2008 and 2011(Table 9). This left OLOs with a market share of approximately 0%-10% for the same time period. The change of market share in those years for TI was so small to be completely neglectable.

Anno	Telecom Italia	OLO
2008	*[90-100]%*	*[0-10]%*
2009	*[90-100]%*	*[0-10]%*
2010	*[90-100]%*	*[0-10]%*
2011	*[90-100]%*	*[0-10]%*

Table 9: TI's and OLO's market share for the wholesale market of access networks. (Source: AGCOM & Telecom Italia)

In regards to the second point AGCM noticed that on a national scale the broadband services were mostly offered by TI. Some OLOs used their own self-produced network. Similarly to what happened with the access network market the presence of alternative networks such a fiber optic where not enough to guarantee the creation of a new sub-market in Italy. Again the market share for TI in this market was of 90%-100%, while for OLOs it was of 0%-10% (Table 10).

Anno	Telecom	OLO
2008	*[90-100]%*	*[0-10]%*
2009	*[90-100]%*	*[0-10]%*
2010	*[90-100]%*	*[0-10]%*
2011	*[90-100]%*	*[0-10]%*

Table 10: TI's and OLO's market share in the wholesale market for broadband access networks. (Source: AGCOM &TI)

For what concerns the third market again TI was dominant, as it owned the only infrastructure capable of offering such service. Table 11 shows TI's market share compared to the one of the OLOs, however, even considered the small decrease through the years the market share remained still extremely high. As in fact, it remained around 60%-70%, which could entail a dominant position. The reason for the decrease was because other OLOs were able to provide such service either through buying the access network from TI or through self-owned networks.

Anno	Telecom	OLO
2008	78,8%	21,2%
2009	71,5%	28,5%
2010	68,6%	31,4%
2011	66,7%	33,3%

Table 11: TI and OLO's market share in the retail market for access services of fixed telephony. (Source: AGCOM, Annual Reports).

Concerning the retail market of voice telephony operators were able to provide such service to customers through direct and indirect access. With the first operators provide the service through their own infrastructures, while in the latter case they needed to use LLU provided in this case by TI. Voice telephony was offered in Italy quite uniformly by all different operators in the market. Table 12 and 13 show how the market share is spread among TI and OLOs for business and residential clients. Again one can observe that TI maintains a larger market share than the other companies.

Anno	Telecom	OLO
2008	[70-80]%	[20-30]%
2009	[70-80]%	[20-30]%
2010	[60-70]%	[30-40]%
2011	[60-70]%	[30-40]%

Table 12: Market share for the retail market for voice telephony for residential clients. (Source: Telecom Italia)

Anno	Telecom	OLO
2008	[70-80]%	[20-30]%
2009	[70-80]%	[20-30]%
2010	[70-80]%	[20-30]%
2011	[60-70]%	[30-40]%

Table 13: Market share for the retail market for voice telephony for business clients. (Source: Telecom Italia)

From a regulatory aspect in 2009 AGCOM with the resolution n. 731/09/CONS had already imposed to TI the obligation to provide access to other operators to its copper access network and to bitstream services (both through copper infrastructures and fiber optic ones). In addition, to the obligation to provide access to OLOs, AGCOM also imposed to TI the obligations to not discriminate, transparency, accounting separation, cost accounting, and prices control. The reason that led the regulatory authority to such resolution was that the TI was found dominant in the telecommunications market.[152]

As stated previously one of the reasons why Wind and Fastweb decided to present an official complaint to AGCM was because TI was refusing many of the service activation requests. This problem had already been signaled to TI in the course of 2009 by the same two companies, but the OdV had not found any irregularities with the incumbent's conduct. OLOs could only provide service to their customers through wholesale line rental (WLR), a wholesale resale service that allowed the operators to sell telephone access and other associated benefits. Hence, OLO's were reselling the access services provided by TI. For OLOs to be able to activate a request for their clients they needed to pass through the NWS, which would then request the service from Open Access. The requests from

[152] AGCM Resolution A428 pp. 6-11

the OLOs could either have a positive response from Open Access, or a negative one, where on the base of some premises the request was denied, those refusal were also known as "KO".
The refusals from TI could be due to different reasons, some could be attributed to the clients directly, while others where due to technical errors. To sum up, AGCM divided the "KO" into five groups (A, B, C, D, and E):[153]

A. Those type of errors refer to the ones which are due to mistakes in the provided information, or due to the absence of information.
B. This group refers to the cases in which the client requesting the service does not have the predisposition to the access networks.
C. This type of error refers to the case in which the infrastructure is not compatible with the request.
D. In this case the KO is due to technical errors.
E. Finally this error is to problems with the client or the OLO (i.e. the client is not home, or refuses the service.)

Some of the type E KOs where artificially created by TI. In fact, the company would tell customers, that to change operator (from TI itself to the chosen OLO) it would have taken an extremely long time. In the period of the migration process, the client would have been without any telephone service. However, had the customer chosen to stay with the incumbent, they would have not incurred any disservice.
Because of the extra passage of going through NWS, the processes which TI was adopting internally and the ones which it was adopting externally were asymmetrical. When dealing with OLO's requests, the NWS before sending the request to Open Access would make sure whether the information and the order was correct, and whether there was the correct technical predisposition for the network. The OdV found that the internal process of the delivery of service was better than the external one. In regards to the quantity of KO, internally the company was worse off, even though the other operators had to go through the added extra step.
For what concerns the discount prices offered by TI to business customers, the practice led to margin squeeze, as due to the wholesale prices charged to OLOs, it would have been impossible for them to replicate TI's offer to their own customers. The discounts were applicable only for clients which respected two conditions: firstly they had to have access to LLU and secondly they needed to qualify through a provider selection process or had to win a competitive bidding process.[154] The application

[153] AGCM Resolution A428, pp. 19-23
[154] *Gara pubblica* in the original document.

of the discounts was verified in the course of the inquiry by checking contracts, and it was also verified that those discounts were higher than the ones allowed by the guidelines. It was also found the some of the costs that TI incurred for offering the LLU service to its customers was not replicable by the OLOs, which could have been a cause for abuse.

AGCM heard briefs from all the OLOs involved in the case, as well as from TI for both of the main areas of concerns. Wind stated that a correct conduct for the provisioning of the service from TI's side was fundamental to the functioning of competition in the market. Wind also complained that having to pass through the NWS added extra steps of control, which TI had not to go through which led to having more refusals. Moreover, TI's delays in the services led the OLO to have to re-process all their orders, which according to Wind also constituted an antitrust concern. The total amount of refusal due to causes re-conductible to the dominant firm were 22% for bitstream services and 35% for LLU services. Which according to Wind was evidence of the fact that TI had purposedly delayed and refused the activations of the operator's contracts to actively hinder competition in the market.

The refusal had several impacts on the OLO: (i) having to re-process all their activation requests increased Wind's costs, (ii) the company would loose some of the revenues, due to delay in the activation of the service, (iii) the loss of revenues due to the fact that sometime clients would walk out completely from the contract, and (iv) it would also damage the OLO's image with future potential clients. TI's exclusionary practices hindered the performance of the OLOs. TI managed to counter the contraction trend in the market. During the time between 2009 and 2011 TI reduced the number of lost contract, and by doing so managed to decrease the amount of contracts activated by its competitors instead. This new trend was also accompanied by an increase in revenues. Not only were TI's actions deteriorating competition in the market, but it also constituted a problem for consumers, which were required to wait more time for the activation of its services.

Fastweb in its briefs stated that TI's delivery services were enough to hinder the liberalization of the market which was ongoing in the sector. The company believed that the most of the refusals that TI was giving to Fastweb were illicit, as they were not accompanied by sufficient information, in regards to the reasons of the refusal. While the refusal given from TI to itself were always accompanied by sufficient justifications and were less than the ones given to the OLOs. Therefore, Fastweb's conclusion was that TI was boycotting its competitors to perform better in the market.

The other operators which participated in the inquiry reported similar injustices as the ones given by Fastweb and Wind. Vodafone added that TI used the area left out by the regulations to its own benefit, to detriment competitors. Moreover, it stated that the fact that the internal and external processes for TI led to asymmetrical conduct and discrimination from TI.

In its defense briefs TI stated that the refusals were in line with the non-discrimination and the equal treatment principles. In fact the provisioning of access networks were given keeping in mind that the functional separation required them to offer EoO, hence the way the service was delivered could differ externally and internally. Because the incumbent believed that the conduct was in line with the regulations its defense proceeded to say that they were impeded to understand *ex ante* the extent of its abuses. Moreover, TI believed that in this specific case it would have been fair to apply the *ne bis in idem*[155] principle. In fact, AGCM evaluation of the facts was superimposing to the one of AGCOM. In regards to the inquiry, TI believed that the timing of the services had not been defined, had they, in fact, compared this particular aspect they would have found that services were delivered with similar time frame. In addition, TI noted that for the most part refusals were given automatically from the system, hence, TI's actions were not its primary cause. While, in regards to technical boycotting TI thought that at the time the number of refusals were less than expected, that internally it was receiving more KO than it was giving to OLOs, and numbers were progressively reducing through the years.
For what entails the margin squeeze and the discounts offered to business clients Wind believed that this conduct resulted in two main discriminations. Firstly it was a discrimination between TI's clients themselves, as the offer was only for business customers and secondly it was a geographical discrimination due to the fact that it could only be applied in areas were LLU was present.
Fastweb believed that the large discounts applied by TI had the purpose to exclude competition in the market, because there was no technical issue behind them, they just had the aim to acquire a larger business clientele. This conduct showed clear abuse of dominance, as those discounts could not have been replicated by the OLOs. TI's defense assured that those discounts could easily be replicated by other companies, and they were not constituting any kind of abuse.
In conclusion, the inquiry found that TI's conduct hindered the growth of the OLOs by refusing the activation of a large number of requests, and by applying discounts to business customers which could have not been replicated by other companies. For the first abuse, AGCM stated that TI was using the reasons for refusals inappropriately. For example while rejecting an activation for technical reasons to the OLO, it would later proceed to activate the same service to the same client, without incurring in any difficulties. Furthermore, by having OLOs interact with the NWS instead of directly with Open Access made the process more difficult and gave way to more rejections in the activation process. Those practices were found discriminatory and anticompetitive. In regards to the margin squeeze concern the Antitrust authority confirmed that those discounts were not replicable and, thus, constituted an abuse. For none of the two concerns the *ne bis in idem* clause could be applied, as

[155] According to this principle companies may not be prosecuted for the same reason twice in administrative proceedings. (Enciclopedia Treccani)

AGCOM and AGCM, while still protecting customers and competition, considered different aspects of the behaviors. Furthermore, the regulatory authority applied the rules *ex ante*, while the antitrust authority evaluated abuses *ex post*.

TI had a dominant position in the market. Although, some alternative networks were starting to exist in Italy, it was found, that in the short- and medium-term most of the access networks infrastructure would still be owned by TI. Hence, TI would have continued to face no competition at the wholesale level of the value chain. According to AGCM TI was abusing of its dominant position through refusal to deal, at the wholesale level, and through margin squeeze, at the retail level. It was found that the discounts offered by TI to its business customers were capable of having exclusionary effects. Due to the abuses TI was requested to pay fines for over 100 million euros.[156]

In addition, in 2014 and in the subsequent years, AGCOM, OdV, and TI held that, in order to respect the non-discrimination principle, it would have been better to apply EoI. However, it was determined that applying it to the copper cables infrastructure would have been too difficult, as it would have needed system modifications. Nevertheless, in the case of fiber optic it would have been ideal, as for the most part the infrastructure still had to be built.[157]

3.7 The creation of FiberCop and further developments for TIM

In August of 2020, TIM[158], KKR (through its subsidiary company Teemo Bidco of which KKR held full control), and Fastweb[159] created FiberCop. A new company, which would have taken ownership of the whole sub-loop network and the fiber-optic network.[160] As figure 10 shows, the sub-loop is the set of cables that goes from the cabinets on the streets to the final customers premises. These networks were initially owned by Flash Fiber, a joint venture which had the participation of Fastweb of 20% and of TIM of 80%.[161] At the time of its creation FiberCop was owned 58 % by TIM, 37,5% by Teemo, and 4,5% by Fastweb. In September of 2020 TIM notified to the AGCOM its project of voluntary network separation. As this was the first case in Europe where a company decided to undergo a voluntary separation, the analysis by AGCM and AGCOM that followed was extremely thorough. According to TIM, the voluntary separation would have further helped with the issues of discrimination and equivalence that had arisen through previous inquiries, [162] as well as being beneficial for a faster development of fiber optics and Very High Capacity Networks (VHCN).[163]

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[156] AGCM Resolution A428, pp. 109-111
[157] OdV (2014)
[158] Hereafter TI will be referred to with the acronym TIM, as the company officially changed its name to TIM in 2016.
[159] Kohlberg Kravis Roberts & Co. L.P.
[160] In Italian *rete secondaria*
[161] AGCM Resolution I850
[162] OdV (2022) p. 7
[163] OdV (2024) p. 25

Figure 10: Local Loop Unbundling (AGCM, 2020)

In December of 2020 the Italian Antitrust Authority, published the resolution I850 with the purpose of regulating the contractual agreements between all parties involved. The contracts which had already been stipulated had the objective: (i) to transfer the indefeasible right of use from TIM to FiberCop, (ii) to organize the construction and maintenance of the network, (iii) to transfer Flash Fiber's shares to TIM, Fastweb, and FiberCop, and (iv) to set forth a Memorandum of Understanding between TIM and Tiscali, in order to describe the rules by which Tiscali could access the network. The resolution was the result of an inquiry that was needed to assess whether the creation of FiberCop, born from an agreement between firms, could potentially infringe article 101 of the TFEU.

The first step in the analysis of AGCM was the description of FiberCop's relevant market. Through the analysis AGCM found that TIM was still the company with the majority of market share in terms of access network. In fact, as of 2018 TIM owned 90% of the market share for the wholesale of broadband access services. For what entailed the retail of broadband services, TIM was leading with 42,2% of market share, followed by Vodafone, Fastweb, and Wind Tre (respectively with 16,6%, 15,1%, and 14%), the rest was shared between other operators.

Another aspect the inquiry by the Authority focused upon was the contractual agreement itself. TIM declared that the reason behind the creation of FiberCop was to build in a swift and timely manner an ultra-broadband network, using fiber-optic cables as technology. However, the agreement would not have set the dissolution of TIM wholesale, as a branch of the Telecom Italia Group. Rather it would have focused on passive services, such as the access service to the sub-loop network, and the backhauling of the P2P fiber connection. Finally the contract between TIM and FiberCop dealt with: (i) a minimum purchased (calculated on revenues), (ii) clauses that established a preference of wholesale provider, and (iii) a discount scheme, which would have limited the competitiveness of Fastweb in wholesale markets.

The AGCM found a positive goal in the scope of the transaction, meaning that it did agree that modernizing and bettering the network was needed. However, the Authority also believed that some aspects of the contracts could limit overall competition. One of those aspects was the purchase constraints of the wholesale services provided by TIM-FiberCop. The long contractual obligations were thought to affect negatively demand but were not justified by higher gains, thus, by economic efficiency. Another aspect on which the Authority's inquiry focused was the reduced incentive to invest in fiber-optics. In fact, fiber-optics was rather e a passive infrastructure, while the agreement itself focused, however, on active services such as VULA and Bitstream, which were still provided by TIM. By not removing the areas in which TIM was exerting more anti-competitive pressure the agreement would have discouraged competition in the wholesale of access networks.

The contract between Tim and KKR (through Teemo Bidco) would have seen TIM passing over to FiberCop all of the branches and contracts related to its sub-loop network, all of the cabinets in the streets and its shares in Flash Fiber. By maintaining the same network structure as TIM, FiberCop would, however, have faced the same anti-competitive constraints as TIM. Since FiberCop would have owned solely the sub-loop network, telecommunications providers would have had to buy the primary network from TIM regardless.

Fastweb, FiberCop and Teemo entered into a contract that stated that the 20% of shares that Fastweb' held in Flash Fiber would have been transferred to FiberCop, in return Fastweb would have obtained 4,5% of shares in FiberCop. Secondly, the agreement also established a guaranteed minimum quantity of active lines. AGCM believed that the contract would worsen Fastweb's operations as retailer and wholesaler of fixed telephony lines. Additionally, by selling its shares in Flash Fiber it seemed as if Fastweb was giving up on building its own access network infrastructure. AGCM did not approve of the agreement between Fastweb and FiberCop. The authority believed that Fastweb, by entering into the contract, would not have had any decisional power, and would have gone from being a independent operator in the telecommunications market to being a buyer of passive and active fiber-optics infrastructure.

AGCM did not approve of the agreements as set down, and requested all the parties involved to review the creation of FiberCop. In response to AGCM's observations the parties submitted a series of commitments.[164] In the resolution I850 B the Antitrust reviewed the companies' commitments and requested further changes in areas that were still considered to be non-compliant with antitrust laws. The main concern was that TIM's contracts were reducing competition, by mostly favoring its own operations through the use of active services (namely VULA and Bitstream NGA). However, after the companies reviewed their Undertakings, they were deemed to improve infrastructural competition in the fixed telecommunications markets. The undertakings, in fact, took care of swift building of new telecommunications' infrastructure. The commitments also removed the obligation of co-investment by the parties involved in the transaction, leading to other operators to be able to invest in

[164] AGCM Resolution I850

the project. Additionally, the contractual obligation to buy the primary line from TIM fell through, meaning that operators would have been able to buy from FiberCop only the access to the sub-loop network, without having to purchase at the same time the primary line from TIM. The minimum guaranteed purchase by Fastweb was another clause which needed to be improved, and for this reason it was expanded.

The AGCM believed that the transaction, as reviewed, would have increased the numbered of OLOs in the market that could gain access to fiber-optics infrastructure. In the course of the inquiry I850 B the Italian Regulatory Authority (AGCOM) intervened, by stating that the undertakings could eventually better the Italian competitive environment in the telecommunications industry. Eventually, in January of 2022 AGCM accepted the co-investment project.[165]

In the time following the transaction, TIM reviewed again its organization and decided to abandon completely its vertically integrated structure, willing to move forward towards a unique network project, this would have been the first case in Europe. This meant that TIM's objective was to have a separate company that would have owned the entirety of the Italian Telecommunication Network. Thus, TIM would have maintained its role as retailer, and a new company (NetCo) would have owned the unbundling of local loop. The company's reasoning behind this transaction was to guarantee innovation by favoring the development of fiber-optics networks and Very High Capacity Networks (VHCN), which would in turn also favor economic growth. The transaction was valued at €18,8 billion dollars.[166]

In June of 2023 TIM received offers to sell shares in NetCo by KKR, and by CdP Equity and Macquaire. In August of the same year TIM, the Ministry of Finance[167], and KKR signed an agreement. With the sale of NetCo, KKR also purchased TIM's shares in FiberCop. The transaction, finally, was closed at €22 billion.[168]As of 2025 FiberCop is owned for 37,8% by KKR, 17,5% by the Canadian Pension Fund CPPIB, 17,5% by the Abu Dhabi Investment Authority, 16% by the Italian Ministry of Economics and Finance, and 16% by the Italian infrastructural fund F2i.[169] The activities performed by Open Access, with the difference that since the creation of FiberCop they do not operate any longer on behalf of TIM, but on behalf of FiberCop.

The new company configuration led FiberCop first and TIM second to request AGCM to review the contents of the resolution I850B of 2022. By selling its network to KKR, TIM ceased to be vertically integrated, and was no longer a wholesaler of network access. This made the commitments between

[165] AGCM Resolution I850B
[166] OdV (2024)
[167] *Ministero dell'Economia e Finanza*
[168] Celesti, A., Forbes (2024).
[169] FiberCop (n.d.)

TIM and FiberCop redundant. TIM's reasoning behind the request was that the demerger would have made it impossible for the company to follow the undertakings. AGCM accepted the companies' requests, and TIM and FiberCop were freed from their undertakings as of December of 2024. By stepping out of the co-investment project, in fact, the main scope at the base of AGCM's inquiry became irrelevant.[170]

[170] AGCM, Bolletino 49, of the 23rd of December 2024

Conclusion

Antitrust policy is one example of the interaction between economic laws and legal framework. First started by Adam Smith at the end of the XVIII century it is based on the idea that policies should prohibit firms to abuse of their dominant position in the market thereby hindering competition and harming the interests of the consumers. In other words, the firms' profit motive may be distorted towards a situation where the most successful entrepreneur is not the one that serves the consumers selling the best product at the least price but the firm that succeeds in dominating a sector eliminating competitors and managing to reap monopoly benefits. To avoid such market distortion the proponents of antitrust legislation considered state intervention necessary.

Ordo-liberalism was the school that influenced the first antitrust regulations in Europe. Ordo-liberalists, in fact, wanted a rather small government intervention that would hinder dominant firms from abusing of their position. The Harvard school and the Chicago school, instead, influenced heavily the American antitrust policies. The first one believed that authorities could influence the structure of a market, and by doing so they could influence the conduct and performance of firms. The latter, instead, believed that whereas companies' attempts to gain more profits should have been considered fair, the focus should have shifted towards the economic efficiency of the conduct. While it is true that reaching perfect competition in the market is impossible, it is also true that regulators and antitrust authorities should seek to have a well-functioning competition in the market, with no company trying to overpower the other ones in order to retain more customers.

The Sherman Act was the first attempt at antitrust and focused mainly on cartels. In Europe the first antitrust regulations were tried to be introduced in Austrian law at the end of the 1800's, but failed to be approved. They were enacted successfully by Erhard in Germany after the Second World War. Laws of competition were introduced in the ECSC, first with the Treaty of Paris of 1947, and later in the EEC with the Treaty of Rome of 1957. Those rules translated in 1992 into the ones contained in the TFEU. The main goal of competition is to reach economic welfare, through competitive markets. Following the introduction of antitrust policies in the ECSC countries such as the UK and Italy, decided to create their own.

After the introduction of antitrust policies in Europe it was evident that services markets, such as the telecommunications one were largely concentrated. Through the help of the introduction of new directives and regulatory frameworks, legislators were finally able to liberalize the market in 1998. At that point, the prohibition of the exclusive rights to access networks led to the entrance of new operators in those markets. However, as the cases of the UK and Italy demonstrate, the solution was not sufficient to guarantee the correct functioning of competition in the telecommunications market. Owing to the fact that the former public monopolist retained control over the physical network of the telephone landlines. Therefore, they could engage in various anti-competitive behaviors preventing new firms from entering the market or making the conditions of entry detrimental to the interests of the consumers that could not choose between different operators and hereby exercise a downward pressure on the prices.

In the UK, the telecommunications regulatory authority, Ofcom, decided that it wanted to better implement the NRF into the British market. Through the distribution of customer surveys it was able to assess that BT was deterring competition in the market. Around the same time in Italy, the AGCOM took the first step towards the reduction of TI's market power, by ordering the accounting separation between the access network unit and its retail department. Ofcom instead decided to apply from the start a stronger type of separation and chose directly functional separation.

Italy's antitrust authorities requested for the offices in which the two units operated to be separated and requested for transparency in the sharing of information between the two departments. However, the accounting separation proved itself to be very weak and after a few years the AGCOM, taking into account BT's functional separation from Openreach, decided to suggest the same solution to the issue. Since the AGCOM used the BT and Openreach case as a benchmark, the functional separation between the two companies have many similarities. For example both used different incentives schemes for the two divisions. Better transparency of information, to avoid the inappropriate sharing of information between the two units, and finally the establishment of monitoring boards, with some independent members, that would supervise the activity of Openreach and the Italian Open Access to make sure that the commitments which the companies made were being respected.

One of the main difference was that both countries chose to apply different routes to achieve the goal of equivalence of access for the operators in the telecommunications market. Ofcom wanted Openreach to use Equivalence of Input while providing access network services whereas AGCOM only requested for TI to utilize Equivalence of Output. Although through both type of equivalence the goal is the same that is to provide equivalent services to OLOs and to the retail department of the incumbent, the differences in the processes could inevitably lead to some form of discrimination. Hence, one could say that EoI is a stronger form of discrimination than EoO.

The companies in both countries encountered new antitrust complaints which eventually led BT to legally separate from Openreach. In Italy instead, following official complaints by the OLOs in the telecommunications market, TI was requested to pay fines. The new breaches from the companies arrived, however, at the different moments. Fastweb and Wind presented to the AGCM their first complaints in 2010, and in 2013 TI was requested to pay fines. While in the UK, the legal separation between Openreach and BT became binding in 2018, and the strategic report, which led Ofcom to request the further split was carried out in 2015. The main complaint in Italy being that the processes which were applied to the provision of access networks, which were different internally and externally, led to discrimination towards OLOs. Hence, it is safe to assume that EoI proved to be a stronger concept compared to EoO. This is further underlined by the fact that in 2015 the main issue that Ofcom found was a lower quality in the service than expected, and because it found that compared to mobile telephony, where all companies in the market had a similar market share, it believed that in fixed telephony BT was still dominating the market. Another major difference between the British and the Italian case was that while the UK only saw the involvement of the market regulatory authorities, in Italy the issue was covered first by the antitrust authority, later by the regulatory authority, only to be passed again to the AGCM in 2010.

As of 2024 TIM removed all of its anticompetitive concerns by creating NetCo which flowed into the previously created FiberCop. This company took ownership of the whole access network owned by TIM; in 2024 said company was sold to the American company KKR, and without the participation of TIM. By creating a new company TIM ceased its activity as a vertically integrated operator and only kept its activities as a retailer. Hence, now TIM will be at the same level as other operators in the market, hence, KKR through FiberCop will have the possibility to provide service by following the principle of EoI, without falling into discrimination. The case of FiberCop is the first in Europe which resulted in the creation of a unique network without maintaining any form control from the former vertically integrated incumbent.

Both approaches led to similar solutions, and after a long development a market sector that was once dominated by a single public operator opened to competition. This in turn led to an acceleration in innovation and to a lowering of the consumer process. Hence, although the market dominance of the public operators can be traced back not so much to the operation of the free market, but to government intervention, antitrust regulations and policies in the sector of telecommunications may be considered an important example to confirm the correctness of the approaches initiated by classical liberal economies that highlighted the necessity to protect free competition as an essential feature of well-functioning markets.

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