3. Old and new media: the interactions of merger control and plurality regulation

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1 INTRODUCTION

Over the last decade a trend of consolidation has swept through many industries, including media, raising concern among policy makers, antitrust community and public at large about its impact on the economy and consumer welfare.[1] Most typically, competition authorities have been examining the impact of proposed transactions on price and output, while the impact on innovation has started featuring as a concern on a more regular basis only recently. Mergers involving media, however, require special consideration that goes far beyond the risk of higher prices, lower output or reduced innovation. As stressed by Grunes, "when you are dealing with media, you've got to look more carefully at the impact than with other commodities. … it has an impact on democracy and what the public discourse is". Pluralistic and independent media are necessary for democracies to thrive and for the fundamental right of freedom of expression to be exercised. The European Union's commitment to protecting media pluralism and freedom of expression is well reflected in Article 11 of the Charter of Fundamental Rights, and in Article 10 of the European Convention for the Protection of Human Rights. Likewise, the European Court of Human Rights recognizes that "there can be no democracy without pluralism". As noted by Ofcom,[2] media plurality contributes to a well-functioning democratic society through "informed citizens who are able to access and consume a wide range of view-points across a variety of platforms and media owners, and preventing too much influence over the political process being exercised by any one media owner". The media sector is expected to contribute to the promotion of pluralism, which is seen as "a basic general rule of European media policy", and which includes the notions of diversity and plurality.

Whether economic incentives are sufficient to provide a pluralistic information is a key issue. Media markets exhibit features that are conducive to concentration. First, given high initial production costs but very low marginal costs of distributing media content, media companies seek to exploit the economies of scale. Second, the fixed costs of contents are endogenously determined by competition for talent among media operators, what makes media markets an example of natural oligopoly.[3] Third, through multi-product production operators can also exploit economies of scope across media. Finally, media companies provide information which has features of a public good: it is non-rival and non-excludable (i.e. consumption by one person does not preclude or affect consumption by another one). Hence, media firms

[1] OECD, *Market Concentration* (Directorate for Financial and Enterprise Affairs, Competition Committee, 2018).

[2] Ofcom, *Measurement Framework for Media Plurality* (2015).

[3] See Massimo Motta, 'Concentration and Public Policy in the Broadcasting Industry' (1997) 25 Economic Policy 295.

will seek to boost the dissemination of a specific product or service, once they have incurred production costs.

The digital economy has further made these problems more complex and more acute. In particular, digital platforms pose a significant threat to the business model of traditional media players, many of whom struggle to survive financially and have experienced a strong drift to consolidation in the last ten years. The threat is particularly severe for traditional newspapers, that have been considered as the watchdogs of politics and the main source of investigative journalism.[4] As a result, the number of newspapers has shrunk dramatically over the years.

It is not obvious that digital platforms have strong incentives to promote quality journalism and quality content, and to limit, or at least flag false information. Digital platforms' main goal is to maximize users' engagement, which unfortunately seems to be more easily achieved through controversial and divisive content. Moreover, the use of algorithms that make it possible to personalize the news each viewer receives also seems to augment the fragmentation and polarization of societies through the so-called news bubbles and eco chambers.

The increase in concentration in media markets is then the result of three interrelated phenomena: the exit of small operators, in particular local newspapers, whose business model is no more viable, the dramatic increase in the supply of on-line contents and the change in market hierarchies caused by the Internet revolution, and new waves of mergers. Mergers in the media industry are by no means a new phenomenon. What may have changed, though, is different motivation behind the current consolidation trend. Media outlets have always sought higher revenues through economies of scale, and they continue to do so today. However, while in the past the scarcity of distribution channels in a highly regulated, analogue environment, made it rather simple for media outlets to construct a viable business, the affluence of offers in the digital world has dramatically changed the condition in which media operate today. This has turned mergers into an important survival tool that allows merged entities to share resources in a challenging and evolving media environment in which changes in media consumption habits have direct consequences for the structure of the market.

All these new phenomena pose serious challenges to public policies in media markets. There is today a better understanding of the specific features of media operators and markets. It is widely recognized that old and new media share the nature of multi-sided platforms that attract users through content and services and offer their attention to advertisers. Multi-sidedness, in turn, requires a much more complex analysis of industry dynamics when identifying the competitors and analyzing their strategies. New media active in the digital environment have added to the traditional business models novel functionalities and an unprecedented pace of innovations. Competition between old and new media and the rapid change in market hierarchies have come along with large concentration operations. Merger control is one of the key battlefronts. The variety of operations, involving platforms active in apparently different

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[4] Investigative journalism plays a particularly important role at the local level: whereas major national newspapers may have the resources to pursue national stories, insufficient revenues for local newspapers or their closure means that local abuses of power become less exposed to the risk of being uncovered. The difficulties and gradual disappearance of local newspapers may lead to particular problems. As pointed out by Mike Gibson, ex editor of the Brigton Argus, "whole areas of life that should be public and debated and questioned are now in danger of disappearing from public consciousness". PressGazzette (2017), *'Council bosses rest easier now PRs outnumber journalists on their patch' warns ex Argus editor*, available at: <www.pressgazette.co.uk/council-bosses-rest-easier-now-prs-outnumber-journalists-on-their-patch-warns-ex-argus-editor/>.

markets, characterized by an on-line or off-line nature, or located in different stages of the vertical chain, has required to address new issues and to adapt the traditional tools to these environments.

This chapter analyzes how competition policy in merger control has evolved, addressing the challenges of old and new media, and how the parallel task of ensuring media plurality developed. We first look at the distinctive features that characterize old and new media and how they should be considered in the assessment of a merger in a competition policy perspective. We observe that multi-sidedness makes the task of defining the relevant markets quite complex, mixing this phase of the competitive assessment with the evaluation of market power and competitive dynamics. Moreover, when new media are involved the intense pace of innovation in services, the rapid change of business models and the role of data as a barrier to entry enter the picture.

Turning to media plurality we argue that a useful starting point is the assessment of the relative importance of the different sources of information used by citizens, what are labeled as attention shares. Market concentration or concentration in attention shares then establish a common starting point in the analysis of competition and pluralism. Recording high values in these measures raises concern under both perspectives. In this sense, antitrust enforcement and the defense of media plurality act as complementary actions in merger control.

We argue however that this alignment leaves many issues still open. If concentration may lead to a common concern under an antitrust and a media plurality perspective, the further steps in the two assessments rely on different arguments and set of tools. The evaluation of a merger proposal indeed requires something more than a simple observation that a market is concentrated and needs to develop a precise assessment of the conditions that make the competitive or pluralism concern too serious to grant an approval. Which arguments can we provide to claim, just to suggest an example, that concentration is too high? On the antitrust side, the theoretical background of oligopoly theory offers a precise link between concentration, market power and welfare measures. Turning to media plurality, a similar set of general results on how and to what extent concentration in the information provided to citizens affects the political process is instead still lacking.

These differences make the intersections between antitrust and media plurality enforcement a very interesting and complex issue, that we discuss in detail in the chapter. We start in Section 2 with a brief summary of the mail economic tools adopted in an antitrust perspective, looking and the static and dynamic effects of a merger. We then consider how these arguments should be adapted and would be able to capture the specific features of old and new media markets. In Section 3 we consider the issues related to assessing media plurality and pluralism, focusing on the computation of attention shares, and discussing the different implications of a fragmented media market in an economic and in a pluralism perspective. In Section 4 we draw some tentative conclusions.

2 THE ANTITRUST ASSESSMENT OF MERGERS: HINTS FROM ECONOMIC ANALYSIS

Merger control is one of the main activities of competition authorities and over decades has reached a stable and consistent approach in the assessment of the likely effects of a merger. We can distinguish first between unilateral and coordinated effects. The former is focused on

the impact of the merger on market equilibria keeping unchanged the kind of behavior that pre-merger characterizes the behavior of oligopolists. Coordinated effects, instead, analyze the likelihood that post-merger the market moves from some sort of oligopolistic competition to a collusive behavior. In our discussion we shall look at the unilateral effects of a merger.

Along these lines the economic analysis and antitrust practice have distinguished between static effects of a merger on market equilibrium (prices, quantities, consumers surplus and welfare) and dynamic effects that look at the impact of the merger on the incentives to innovate. In the following sections we shall review the main findings of the economic analysis on the static and dynamic effects of a merger. These arguments refer to the general approach that is followed by competition authorities when examining a merger project and should be characterized case by case with the empirical features of the particular industry examined. The cases of old and new media represent something more than a simple variation within a common set of tools and require to examine more closely the specific features that characterize platform markets. We discuss therefore how merger analysis should be adapted to media in a specific section.

2.1 Static Effects of Mergers

The economic analysis of unilateral effects of a merger is based on a robust set of theoretical results that predict the impact on prices, quantities, consumers surplus, profits of insiders and outsiders and total welfare.[5] These results are derived considering different market environments in terms of products, homogeneous or differentiated, and strategic variables, quantities or prices, covering the main families of oligopoly models and types of oligopolistic competition. Despite the significant differences of the industries, it is notable that the main predictions remain the same, offering to practitioners and antitrust authorities a robust set of results as a background to the enforcement activity.

A merger is viewed as a change in the perimeter of assets (plants, product lines and varieties, know how, patents, etc.) under control of a single firm: those assets, that before the merger were managed by different and independent firms, are run after the concentration in a coordinated way. The first impact of the merger, known as the *internalization* effect, derives from a change in the strategies to take into account how managing this enlarged set of assets affects the profits generated by each of them. The effects that before the merger were external, meaning that they affected the profits generated by assets of competitors, become now internal as long as they refer to the profits from assets that the insiders have brought to the new merged entity. If, for instance, an expansion in the production of one plant would have caused before the merger a drop in market price and a reduction in rivals' profits, now this effect is taken into account for the profits generated by the other plants that jointly belong to the new entity, with a downward adjustment in output after the merger. Similarly, if firms compete in differentiated products, each firm would increase rivals' demand and profits by raising its price. After the merger, this adjustment would benefit also the varieties of the new entity, leading to an upward shift in prices.

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[5] See Massimo Motta, *Competition Policy: Theory and Practice* (CUP 2004) ch 5; Joseph Farrel and Carl Shapiro, 'Horizontal Mergers: An Equilibrium Analysis' (1990) 80 The American Economic Review 107.

This initial adjustment is followed by the *reaction* of the outsiders, that may depend on the nature of competition. Oligopoly models distinguish between strategic complementarity, when strategies adjust in the same direction, and strategic substitutability, when one's adjustment triggers a rivals' change in the opposite direction. The final market outcome comes out from the joint contribution of the internalization and reaction effects.

In general, the sign of the overall adjustment is determined by the sign of the internalization effect, that in absolute terms prevails on the reaction one. Although the details of oligopoly models differ significantly, the predictions of a very large class of models are remarkably similar. The overall adjustment goes in the same direction of the internalization effect and calls for a contraction in output and an increase in price(s). The amplitude of this adjustment depends on the combined size of the internalization and reaction effects, which in turn are related to how large is the set of assets commanded by the new entity and those of the outsiders. A merger between two firms that own a substantial part of the industry assets, i.e. of large firms, increases significantly their market power and drives the market towards a strong increase in price(s), a contraction in the traded quantities, a fall in consumers' surplus and total welfare despite the increase in insiders and outsiders profits. Similarly, the elasticity of demand, entry conditions and buyer power can affect the amplitude of the effects.

The third ingredient that economic analysis brings to antitrust practice is the impact of the merger on the internal production and organization processes of the new entity, that may benefit from a more efficient combination of assets and the rationalization in the usage of indivisible assets. This class of phenomena, usually defined as *synergies* or economies of scope, may turn the effect of a merger the other way around. If the new entity may benefit from significant reductions in variable and marginal costs, the initial adjustment is the result of the interaction of two opposite components. The internalization effect commented above drives toward a contraction in output and an increase in price(s), but the synergies push the new entity to an expansion in output and a cut in prices. If this latter effect is sufficiently strong, the initial adjustment and the overall effect of the merger lead to lower prices, higher output, consumers surplus and welfare. The insiders increase their profits while the losers are the outsiders, whose profits fall down.

The take-away for antitrust practice is therefore clear: absent synergies a merger reduces consumers surplus and total welfare and should be viewed with concern under either of these two classical goals of competition policy. The concern should be more and more serious the more the structural conditions suggest a large impact of the merger. This negative presumption can be turned around only in case of cost savings sufficiently large to overcome the negative effect.

This set of predictions has been translated through Guidelines[6] or precedents by the practice into a set of procedural rules that are manageable and resource-saving. The starting point is that assessing merger-related cost savings is a hard exercise for a competition authority, since these effects cannot be observed, being not yet realized at the time of the assessment and given the informational asymmetry of the enforcer on the internal processes of the firms. To overcome this difficulty the practice has designed a smart approach, based on the reasonable assumption that large cost savings are harder and less likely to realize than smaller ones. Then,

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[6] See European Commission, *Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings* (Official Journal C31, 2004) and Department of Justice, *Horizontal Mergers Guidelines* (2010).

assessing the impact of a merger absent synergies, considering only the internalization and reaction effects, can highlight whether the negative effect of the project would be large or negligible. In the former case only substantial, and presumably unlikely, synergies would turn the effect into a positive one, whereas in the latter case it is probable that limited cost savings will materialize, neutralizing the otherwise (small but) negative effect of the merger.

The antitrust practice then has developed a set of tools and techniques to assess the unilateral effects absent synergies, starting with market shares and concentration indexes and, in case the results are not clear-cut, proceeding with an analysis of demand elasticity, entry conditions, buyer power, supply substitutability. The empirical techniques adopted to quantify these effects have greatly improved in the last ten to twenty years, including the estimate of upward price pressure and demand systems and the calibration of simulation models. The assessment of synergies, instead, is left to the insiders, that have to provide convincing empirical evidence of the cost savings expected from the merger.

2.2 Dynamic Effects of Mergers

Beyond the short term impact on welfare and consumer surplus for given technologies and set of products, a merger is likely to affect in the medium term also the incentives to innovate in production techniques and products offered. Merger control has traditionally devoted a minor role to these effects. The focus has been mainly on the likely impact of a concentration on the incentive to develop new products or processes that, before the merger, were already in a mature phase, what in the jargon are called pipeline innovations. The analysis used to assess the static effects, then, has been extended to those innovations that are almost ready for adoption. The key point investigated in this approach is whether after the merger the new entity will slow down the adoption of these new products or processes.

In a recent case involving two large chemical conglomerates, Dow and DuPont, the European Commission[7] has extended the scope of the analysis of the impact of mergers on innovation moving from the restrictive pipeline perspective to a wider concept of innovation space. The concern is that a merger may reduce the incentives of the new entity to invest in innovations far beyond the set of new technologies almost ready for adoption, and that this effect may take place even when the static effect of the merger is negligible. This new approach, sometimes called the Innovation Theory of Harm,[8] has inspired a hot debate and stimulated new developments in the economic analysis of innovations and mergers.

We can distinguish several effects that are potentially relevant and that may exert a negative or a positive effect on the incentives to innovate after a merger. The logic of the internalization effect has been borrowed from the static analysis and applied to the incentives to innovate by observing that when two independent firms run similar research projects they exert a negative externality on each other. Indeed, a more intense research effort by one firm increases its likelihood of discovery, reducing the expected profits of the rival from its research investment. This negative externality is internalized after the merger, leading the new entity to reduce the

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[7] See Case M.7932 *Dow/DuPont* [2017] OJ C353.

[8] See Vincenzo Denicolò and Michele Polo, 'The Innovation Theory of Harm: an Appraisal' (2019) 82 Antitrust Law Journal 921.

innovation effort to avoid wasteful duplication.[9] This *cannibalization* effect suggests therefore a negative impact of the merger on innovative activity.

It has been however observed that a contraction in the innovative investment after the merger is not the only way in which the new entity may reduce wasteful duplication of effort. Alternatively, after the merger the new entity may concentrate most or all the research investment in one lab, rather than maintaining the two former labs active on similar projects. When the value of the innovation is large, this *rationalization* effect may lead to an overall larger investment after the merger.[10]

A second line of arguments focusses on the relationship between the output of the firm and its incentives to innovate. A process innovation that reduces costs can indeed be applied to the output produced, and it is therefore more profitable the larger the quantity realized by the firm. If the static effect of the merger leads to a contraction in output, the returns to process innovation are reduced after the merger. Static and dynamic effects of the merger then go hand in hand, with the negative impact on innovation reinforcing the negative impact on output.[11]

The negative effect given by output contraction can however be reversed if the new technologies can be applied to all the assets of the new entity. Consider for example the case of a market with differentiated products and cost reducing innovations. The static effect of the merger leads, as discussed above, to a contraction in sales on each of the varieties marketed by the new entity. If the cost reducing innovations are specific to each variety produced, then the contraction in output on each variety after the merger cuts the incentives to invest in innovations that reduce the cost of production of each specific variety. If, however, the innovations can be applied to all the varieties of the new entity, the wider product line enhances rather than reduces the incentives to innovate. This *innovation sharing* effect of innovation can be so strong to increase the research investments after the merger.[12] The idea that innovation can be applied at least to some extent to different products and production processes is quite general and, in some sense, motivates the patent and intellectual property rights protection regulations. The fact that in general after the merger the new entity controls a wider set of assets makes innovation sharing a relevant phenomenon and its positive impact on innovation an empirically relevant argument.

The debate triggered by the Dow/DuPont decision has proposed additional argument that may suggest a positive impact of mergers on research when innovations expand potential demand[13] and when combining different groups of researchers increases their productivity, a case of synergies in research.[14]

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9 See Giulio Federico, Gregor Langus and Tommaso Valletti, ‘A Simple Model of Mergers and Innovation’ (2017) 157 Economics Letters 136; and Giulio Federico, Gregor Langus and Tommaso Valletti, ‘Horizontal Mergers and Product Innovation’ (2018) 59 International Journal of Industrial Organization 1.

10 See Vincenzo Denicolò and Michele Polo, ‘Duplicative Research, Mergers and Innovation’ (2018a) 166 Economics Letters 56.

11 See Massimo Motta and Emanuele Tarantino, ‘The Effects of Horizontal Mergers When Firms Compete in Prices and Investment’ (2017) Economics Working Papers from the Department of Economics and Business, Universitat Pompeu Fabra.

12 See Vincenzo Denicolò and Michele Polo, ‘Mergers and Innovation Sharing’ (2021) Economics Letters 202.

13 See Marc Bourreau and Bruno Jullien, ‘Mergers, Investment and Demand Expansion’ 167 Economics Letters 136.

14 See Federico, Langus and Valletti, *supra* note 9; and Motta and Tarantino, *supra* note 11.

The new contributions have offered a more articulated set of arguments to assess the effect of mergers on innovations. On the enforcement side,[15] we may argue in favor of a case by case analysis with no a-priori presumption on the impact of the merger on innovation. The different effects can be assessed empirically selecting those that in a specific case are more relevant.

2.3 What Changes in Platform Markets

In the previous sections we have summarized the main findings of economic analysis on the static and dynamic effects of mergers and how they have been used to shape manageable enforcement rules by competition authorities. The lines of intervention are relevant also for old and new media markets, since merger control cannot follow completely different lines of enforcement in specific markets. Hence, we expect that also a merger case involving media operators would require an assessment of the internalization and reaction effects, and the impact of this concentration on the incentive to invest in innovative services would be part of the analysis. At the same time, it is important to highlight the specificities of old and new media markets and the effects that take place in these environments to adapt the general tools to the feature of competition in these industries.

A first, well recognized characteristic of media markets is the nature of firms as multi-sided platforms[16] that facilitate the interaction among different groups of agents characterized by cross-side externalities. Cross-side externalities mean that the utility of an agent on side one depends (positively or negatively) on the number and characteristics of the agents on the other side. More precisely, media operators can be qualified as attention platforms that offer the eyeballs or ears of their users, interested in the content provided, to advertisers. This general feature applies to old and new media. Traditional newspapers insert advertising messages within the pages together with articles that the readers look for. Similarly, radio stations offer to advertisers the attention of their listeners introducing commercials within the programs. Free-to-air broadcasters interrupt regular programming to expose the viewers to advertising messages, collecting money from the advertisers. Internet websites and social media use the new opportunities offered to provide personalized advertising to their visitors. Despite differences, in all cases advertisers are willing to pay more the larger and more targeted is the group of consumers reached, whereas these latter in most cases do not like content to be mixed with advertising. Hence, a positive and a negative cross-side externality characterizes most media markets.

This sketchy and incomplete list of examples allows to appreciate the variety of business models that we encounter in media markets both in terms of who pays and referring to the kind of content and services that are provided. Readers pay for the copy of a traditional newspaper but not for the free press, a free-to-air TV is financed entirely by advertisers while a pay-TV charges viewers with a subscription for access. Attention platforms in the digital ecosystem differ in terms of services provided to their users, often for free, while they all rely on advertising money.

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[15] See Pierre Regibeau and Katharine E Rockett, 'Mergers and Innovation' (2019) 64 The Antitrust Bulletin 31.

[16] See Simon P Anderson and Bruno Jullien, 'The Advertising-Financed Business Model in Two-Sided Media Markets' (2016), TSE Working Paper n.16, 632.

Multi-sidedness and the variety of business models make the assessment of the relevant market, the first step in any merger case, a very complex and unconventional task. A first issue is whether a competition authority should define the relevant market referring to the entire set of services that the platform provides to the sides served, according to a single-market approach, or instead should define different markets for the different services, a multi-market perspective. For instance, a trading platform that hosts buyers and sellers easing the interaction and trade between the two groups could be classified as belonging to the market of trading platforms (single-market) or could be analysed distinguishing the buying service offered to buyers and the selling service provided to sellers. If we proceed with a single-market approach we should distinguish the trading platform from, for instance, the on-line retail website run by a given seller, that provides buying services to customers but not selling services to other companies. In the latter case, instead, according to the multi-market approach, the trading platform should be considered as a competitor of the on-line website of a seller for what concerns the buying services offered to customers.[17]

The case of attention platforms, that includes most media markets, requires a multi-market approach in which each platform is classified according to the services provided to the different sides. For instance, a TV operator provides content to viewers and advertising space to advertisers, being active in these two markets. Once adopted this view, however, a complex set of additional issues arise.

The assessment of multiple relevant markets in itself is not a novelty in antitrust, and mergers between large multi-product or conglomerate firms typically require this kind of exercise, focused on identifying areas of overlapping between substitute products and subsets of complementary products. What is peculiar of mergers in platform markets, instead, is that sides and services are linked by relevant cross-side externalities that should be taken into account even when proceeding market by market. Continuing with the example of broadcasting, viewers dislike commercials and advertisers look for viewers' eyeballs. Hence, the two markets cannot be analysed in isolation. Consider, for example, the exercise of running the SSNIP test on advertising price, considering the effects of a significant and non-transitory increase in the price of commercials. We should take into account that the resulting contraction in advertising following the increase in ads price would increase the number of viewers, making advertising more attractive. This secondary effect reduces therefore the initial negative impact. Conversely, if viewers would pay a subscription, an increase of the fee would cut the number of viewers making advertising less attractive and reducing the number of commercials. This adjustment would prompt an increase in viewers' participation. Hence, neglecting the cross-side effects would over-estimate in both cases the impact of the price increase.

At the same time, following a multi-market approach requires to reconstruct demand substitutability including also operators that overlap on one side only. Broadcasters offer video content to their viewers, quite differently from newspapers or radio stations but similarly to

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[17] Filistrucchi *et al.* argue in favour of a single market approach for transaction or matching platforms (Lapo Filistrucchi et al., 'Market Definition in Two-Sided Markets: Theory and Practice' (2014) 10 Journal of Competition Law and Practice 293). Franck and Peitz instead, convincingly argue that a multi-market approach is more flexible and less biased even for matching and transaction platforms (Jens-Uwe Franck and Martin Peitz, 'Market Definition and Market Power in the Platform Economy' (Cerre Report, May 2019), <www.cerre.eu/sites/cerre/files/2019_cerre_market_definition_market_power_platform_economy.pdf> accessed 18 April 2020.

social networks as YouTube, but compete for advertising money with all these other media. Hence, it is quite common that partial overlapping among operators of very different nature occur in specific markets.

A further issue refers to the difference in business models. Continuing with the broadcasting example, should we include free-to-air and pay-TV operators in the same relevant market? The traditional answer is negative, arguing that free-to-air broadcasters collect money from advertisers while pay-TV competes for subscribers' fees, with no direct competition for the same revenues.[18] This view, however, disregards the fact that the observed business models are shaped by competitive forces. More precisely, two ex-ante identical broadcasters may end up adopting opposite business models for strategic reasons. When competing with a free-to-air broadcaster, a TV station may find it more convenient offering to subscribers contents free of commercials at a positive fee rather than competing for the same advertising money with the rival platform. Similarly, a broadcaster facing a pay-TV may find it more profitable to offer advertising space in a monopoly position rather than targeting viewers' subscriptions.[19]

This discussion leads us to the issue of market definition when prices are zero. Traditionally competition authorities argued that a market entails an economic transaction and this latter requires a positive price. Markets therefore could not be defined when services are provided for free. Two-sided markets have completely changed this view by highlighting that what matters is the joint determination of prices on all sides that matters, what is called the price structure, and that zero, or even negative prices may be the profit maximizing choice when they boost participation on that side, allowing to cash in profits on the other side thanks to the cross side externalities. In this perspective, a free-to-air TV maximizes audience and advertising fees by offering for free its content.

Another subtle point refers to the behavior of the agents with respect to the platforms. To illustrate this point, suppose that (at least some) viewers patronize a single TV station, which is called single-homing, whereas advertisers place their commercials on several media, that is, they multi-home. Since each broadcaster has (some) exclusive viewers, the only way for advertisers to reach those eyeballs is by buying advertising space on that TV station. In other words, each broadcaster is a gatekeeper on the eyeballs of its single-homing viewers and acts therefore as a monopolist with respect to the advertisers. In this case we should define a relevant advertising market for each broadcaster, referred to its single-homing viewers.

Our discussion suggests a relevant point for enforcers. Merger control in conventional (one-sided) markets has been organized with a clear and separate sequence of steps, in which

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[18] For instance, in the merger cases BSkyB/Kirch Pay-TV (Case COMP/JV.37 *BSkyB/Kirch Pay TV* [2000] OJ C 7/5) and News Corporation/Premiere (Case COMP/M.5121 *News Corporation/Premiere* [2008] OJ C 219) the European Commission has ruled that Free-to-Air and Pay-TV operators belong to separate product markets. The German Bundeskartellamt reached similar conclusions examining the Springer/ProSieben/Sat1 case (BKartA v. 19.1.2006, B6 – 103/05, Axel Springer AG/ProSiebenSat.1 Media AG) To the best of our knowledge BSkyB/ITV is the only case in which an authority (the UK Competition Commission) has taken a different position, recognizing that "in two-sided markets suppliers can compete with one another at different price points, given the ability to generate revenues in two separate markets. For instance, FTA services may compete directly for viewers with pay services, with higher viewing figures indirectly generating higher advertising revenues" (Competition Commission (2007), para 4.6).

[19] See on this point Emilio Calvano and Michele Polo, 'Strategic Differentiation by Business Models: Free-to-Air vs Pay-TV, (2019) 130 Economic Journal 50-64.

market definition comes first and the assessment of market power and the analysis of competitive constraints follows.[20] Platform markets seem quite resistant to this rigid distinction. The pattern of demand substitutability depends on a very rich set of ingredients and strategies. Many issues that allow to identify competitors in the different markets require from the very beginning to consider and analyze the competitive constraints they place on the platforms. In other words, it seems quite hard to try and identify first the competitors and then the nature of the competitive constraints, while the competitive interactions quite naturally allow to reconstruct which, and in which markets, are the competitors of the platforms. Hence, it seems convenient that the market definition and the competitive assessment are run together.[21]

When assessing market power there is a specific issue that characterizes new media compared with its more traditional off-line competitors. The main new issue refers to the role of data collected by digital platforms and new media when interacting with their users and the ability to reconstruct their preferences and characteristics. This wide and detailed set of information, then, is used by digital platforms to offer more profiled services and more targeted advertising to users. The pricing scheme that we observe envisages the provision of services for free, with revenues raised on the advertising side.

The debate on whether big data represents a barrier to entry, preserving the dominant role of incumbents, is heated and ongoing. Economies of scale and scope in data collection may trigger a rich-gets-richer loop in which a large platform, having access to more data, can better profile its users and target advertising, raising more money and investing in further improvements of the services provided for free to its users. A small competitor has no chance to upgrade in this race and market tipping is the likely outcome. On the opposite front, it is argued that economies of scale and scope exhaust at a size that is available also to new entrants and data can also be purchased on the market. Hence, according to this view, big data does not

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[20] This approach was justified in Europe before the reform of 2004, when a merger was assessed according to Regulation 4064/89. According to Art. 2(3), "a concentration *which creates or strengthens a dominant position* as a result of which effective competition would be significantly impeded in the common market or in a substantial part of it shall be declared incompatible with the common market". Hence, the procedure was structured by defining the relevant market, verifying the existence of a dominant position and then looking at the effects on competition. After the reform of 2004 (Council Regulation (EC) 139/2004 on the control of concentrations between undertakings (EC Merger Regulation [2004] OJ L24/1) a comprehensive analysis of the ability of a merger to "substantially lessen competition" was introduced. However, a preliminary inspection of the boundaries of the relevant market where competition should be analysed is still the standard approach.

[21] This claim refers to antitrust enforcement. The issue of market definition may find potentially a different answer when we consider ex-ante regulation of digital operators. It is usually required that regulatory power is related to general and clear rules that identify the markets and operators subject to intervention, in order to guarantee legal certainty to firms and avoid excessive discretion of the regulator. The European Electronic Communication Framework for telecommunication services, for instance, has required to define ex-ante a set of relevant markets and then to assess if any operator had significant market power. At the end of the process, then, those operators where subject to regulatory constraints. It is not obvious how this rigid protocol could be adapted to the more complex and rapidly changing digital ecosystem guaranteeing effectiveness of the intervention and legal certainty for firms. The 2020 Digital Markets Act issued by the European Commission moves from this rigid framework to a more flexible procedure that directly identifies "gatekeepers" and imposes constraints (do's ad dont's) on their behaviour.

represent a barrier to entry and digital markets remain contestable when new operators offer new and better services.[22]

While the role of big data as a competitive advantage in digital ecosystem is an open question, a much clearer answer can be given when we consider competition between traditional media, like a broadcaster or a newspaper, and its digital counterpart, that may be a video website or an online news operator. Comparing these two kinds of platforms it is quite evident that the ability to collect and use big data to profile preferences and characteristics of their users is incomparably larger for digital operators. Traditional broadcasters or newspapers can hardly identify the individual choices of their viewers or readers (which program or article they choose), and the analysis of their preferences can be at most based on consumer surveys. Moreover, traditional media cannot personalize services and advertising supplied to individual users. These advantages are reflected in the massive migration of advertising spending from traditional to on-line platforms in the last decade.

A second component of competition in digital markets refers to the intense rate of innovation in the services provided. In the perspective of merger control two seem the relevant issues. First, in digital markets the concern that a merger can slow down the rate of innovation seems particularly important. Indeed, quite often the services provided by digital platforms have the features of a network good, that is a product or service whose utility increases with the number of users. Network goods, in other words, display own-side externalities that add up to the cross-side externality already mentioned when discussing the nature of multi-sided platforms. The simplest example is social media, whose attractiveness for a new user depends not only on the intrinsic quality of the service but also on how many other users are on the same platform. A large platform, then, can rely on a large base of clients and be preferred to a new and innovative operator even if this latter has developed a better service. Mergers, by expanding the base of clients, reinforce this mechanism and can reduce the need to improve the services of the new entity. At the same time, smaller competitors, in order to overcome the increased advantage of the new entity, should increase the quality of their services even more, a challenge that may be too hard to sustain.

Still related to the intense pace of innovation, when assessing the likely effects of a merger the enforcer considers the set of services and the business model of the platforms involved in the project. It may be that the overlapping in the services currently offered is quite limited, suggesting a lenient decision. However, the ability to introduce substantial innovations and to integrate the services across platforms may allow the new entity to drastically change the nature of the services provided in a relatively short time. The case of Facebook, WhatsApp and Instagram is quite telling in this respect. The nature of the services at the time of the merger was in all cases quite different, being a social network, a messaging service and a video and photo website the main characteristics of the original platforms. Instagram then became more and more similar to a social network while the integration with WhatsApp will enrich the set of complementary services provided. All these developments might be imagined at the time of the merger, together with many other alternative patterns. But it is not clear how an enforcer

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[22] See for a discussion of these issues Calvano and Polo, Market Power, Competition and Innovation in Digital Markets: a Survey (with E.Calvano), *Information Economics and Policy,* 2020; and Jacques Crémer, Yves-Alexander de Montjoye and Heike Schweitzer, 'Competition Policy for the Digital Era' (European Commission, Directorate-General for Competition, 2019).

should identify the more likely scenarios and base its decision on these additional, rather speculative elements.

The evaluation of how business models may evolve in the assessment of mergers is required also when traditional media expand into new services provided in the digital world or vice-versa: traditional newspapers providing new online services, publishing groups supplying broadcasting, radio and press services and expanding into their online counterparts can be frequently observed as a reaction of the off-line world to the threats coming from their digital rivals. The take-over of the Washington Post by Amazon is instead a relevant example of a digital operator penetrating the off-line world. A similar challenge for antitrust enforcers comes from vertical concentrations of large operators active in the content segment and those that provide distribution services. An important part of the exercise requires to identify the business models that will emerge and the operators and markets in which the new entity will operate.

3 MERGERS IN MEDIA MARKETS AND PLURALISM

In the previous section we have discussed several issues related to the antitrust assessment of mergers in media markets, involving both off-line and on-line operators. The analysis is driven by the traditional goals of competition policy referred to consumers' surplus or total welfare and their relationship with competition. Media markets, however, are relevant also in a different perspective since their well-functioning is crucial to ensure media plurality and a lively democratic process, a further and fundamental goal of public policies.

Given the importance of pluralism for a well-functioning democracy, different types of measures are used to protect and promote it. Defensive measures seek to prevent a reduction in media plurality while proactive measures seek to promote it through public broadcasting policy. Considering that the concentration of media ownership can have a negative impact on pluralism explains why most countries also put in place media ownership rules for TV, radio and newspapers.[23] Such rules seek to prevent media concentrations, largely ignoring however the fact that effective assessment of the pre- and post-transaction concentration levels require transparency of media ownership, which to date remains far from satisfactory.[24]

The double scrutiny according to economic efficiency and pluralism poses the question of whether the two assessments can be run, up to a point, with similar tools.[25] Concentration in media markets is typically seen as a threat to media pluralism. Such view finds its expla-

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[23] Most countries have adopted media-specific ownership rules, which are based on the market share thresholds, and under which it is presumed that a market share above a certain level implies opinion forming power. Often, the level of such thresholds resembles the thresholds that under competition law create a rebuttable presumption of firms having the ability and incentive to distort competition. Despite such a general trend, the Netherlands has recently replaced media-specific ownership rules with the assessment of media mergers under the general rules of competition law.

[24] While the need for transparency of media ownership and/or control is widely acknowledged, existing frameworks either do not go beyond non-binding recommendations or are based upon inadequate or incomplete provisions. See Open Society Foundation, *Transparency of Media Ownership in Europe*, A Report for the High-Level Group on Media Freedom and Pluralism.

[25] There is additionally an issue of institutional design related to which public body or bodies should take care of these two assessments. We do not discuss in this chapter this issue.

nation in the belief that a single media outlet expresses just one view on any reported issue. From this perspective, consolidation and consequential reduction in the number of outlets must inevitably lead to the loss of diversity. However, concentration in the media markets does not automatically imply lack of pluralism just as the existence of many media outlets in a fragmented market does not necessarily guarantee pluralism.[26] Media pluralism can in fact exist at the level of a single outlet when it offers diversified portfolio of viewpoints (internal pluralism). Consequently, any assessment of the effects of a media merger should consider its impact on both internal pluralism within one media outlet as well as external pluralism offered within a broader market context.

3.1 How to Measure Media Plurality and Pluralism

We start our discussion by looking at possible ways to measure pluralism looking at media market equilibria. Ofcom[27] identifies two major contributions of media plurality in a well-functioning democracy through:

- *informed citizens* who are able to access and consume a wide range of viewpoints across TV, radio, online and print media from a variety of organizations;
- *preventing too much influence* over the political process being exercised by any one media owner.

A first candidate to assess citizens' information is the availability of different media sources, measured for instance by counting the number of operators by segment. A larger number of media sources in this perspective should be interpreted as good news for media plurality. It is quite evident that the mere existence of a large number of sources says nothing on media plurality if we do not consider their consumption. Hence, the natural perspective is to use as a primal the choices of citizens regarding the sources of information they use, moving from availability to consumption.

Recording citizens' choices may be done in a strict sense by looking at the sources of news they refer to or, more broadly, at the overall supply of content of the media sources followed. This broader perspective may be justified according to the following argument. Although the reference of media plurality is to the formation of public opinion, it may be restrictive to limit the attention to the contents strictly related to news and politics, since at least in part the cultural traits that are reflected into explicit political choices of the citizens are formed through and come from a wide range of sources and contents.[28] Hence, we would like to consider in parallel the provision and consumption of news and the overall supply of content of the different media and the demand of these contents by citizens.

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[26] In *Centro Europa 7 S.r.l. and Di Stefano v Italy*, Application No 38433/09, the European Court of Human Rights (2012) held: "to ensure true pluralism in the audiovisual sector in a democratic society, it is not sufficient to provide for the existence of several channels or the theoretical possibility for potential operators to access the audiovisual market. It is necessary in addition to allow effectives access to the market so as to guarantee diversity of overall programme content, reflecting as far as possible the variety of opinion encountered in the society at which the programmes are aimed".

[27] Ofcom, *supra* note 2, at 4.

[28] See Durante, Pinotti and Tesei on the effects of the diffusion of commercial Tv in Italy on the political orientation of Italian voters. Ruben Durante, Paolo Pinotti and Andrea Tesei, 'The Political Legacy of Entertainment TV' (2019) 109 American Economic Review 2497.

Secondly, most citizens typically receive content and information from a plurality of media, both within a given media segment (newspapers, magazines, radio, TV, websites and social networks) and across them. In the jargon of platform markets, citizens multi-home as a norm. Most of the analysis has analysed concentration by segment, looking for instance at how the broadcasting market is dominated by few large operators or, instead, fragmented among a large set of channels. This platform-centric perspective, however, is unsatisfactory because it completely misses the importance of a given type of media in the overall exposure of citizens to multiple sources. Consider the following example, drawn from Kennedy and Prat:[29] there is a country with 15 million voters and three media; a television, a newspaper and a website. Moreover, we know that five million read the newspaper, five million watch the TV channel and five million follow the Internet website. This information does not allow to make any assessment of pluralism since it may be consistent with a balanced pattern in which each source covers one third of the electorate but also with the opposite landscape in which one third is over-informed and two thirds receive no information at all. We have therefore to move to a person-centric approach that, starting from the multi-homing behavior of citizens, reconstructs which sources are used, and possibly the intensity in their consumption, by the different citizens.

Prat[30] and Kennedy and Prat[31] have proposed a very natural way to use attention patterns and obtain a significant picture of concentration in information sources.[32] It is based on the construction of a media consumption matrix. We start by describing how ideally we would like to construct it and then move to an estimate that is operational but still informative. Consider this very simple example. There is a country with ten citizens each spending 100 minutes a day following media and three kinds of media – television, press and websites – each offered by two operators. The following matrix in Table 3.1 describes the minutes spent on each media source by each citizen, giving a detailed picture of the usage and intensity of each information source.

We can observe that although WS1 is much more popular that the rival, implying a strong concentration in the online segment, still its role in the formation of public opinion is relatively small, covering only 14 per cent of the total time spent on media by the citizens. TV1 instead obtains the largest attention share, capturing 36 per cent of the minutes spent on media by the citizens, due both to its high sectoral market share (71 per cent) and the predominant role of television in media consumption (51 per cent of total time). This example confirms that any evaluation of pluralism that analyses separately each media segment cannot provide the right answer.

Collecting all the information presented in Table 3.1 is clearly very demanding in a real world exercise, although Ofcom[33] has applied a similar methodology to the UK media markets starting from consumers' surveys. From an operational point of view Kennedy and Prat suggest a simplified version that could be manageable by enforcers. In particular, it is quite

[29] Patrick J. Kennedy and Andrea Prat, 'Where Do Citizens Get Their News' (2019) 34 Economic Policy 5.

[30] Andrea Prat, 'Media Power' (2018) 126 Journal of Political Economy 1747.

[31] Kennedy and Prat, *supra* note 29.

[32] A similar approach has been developed by Ofcom (*supra* note 2) with the "Share of Reference" scheme.

[33] Ofcom, *supra* note 2.

Table 3.1 The media consumption matrix

Citizen	Television		Press		Website	
.	TV1	TV2	NP1	NP2	WS1	WS2
1	100					
2		40	20		40	
3	30	40		30		
4			35	35		30
5	100					
6	30	35		35		
7		30	30		40	
8			30	20	30	20
9	100					
10			20	20	30	30
Attention share	36%	15%	14%	14%	14%	8%
Market shares by segment	71%	29%	49%	51%	64%	36%

Table 3.2 A manageable estimate of the media consumption matrix

Groups	Share on total population	Television		Press		Website	
		TV1	TV2	NP1	NP2	WS1	WS2
A	30%	1	0	0	0	0	0
B	20%	0	1	1	0	1	0
C	20%	1	1	0	1	0	0
D	10%	0	0	1	1	0	1
E	20%	0	0	1	1	1	1
Reach	-	50%	40%	50%	50%	40%	30%
Attention share	-	37%	13%	15%	15%	12%	8%

hard to collect precise data on the time spent on each individual source by each (group of similar) citizen. An acceptable simplification is to assume that each citizen allocates the total time spent on media evenly on each of his sources. Secondly, we can notice that our example clearly shows similar patterns of information collection across citizens, with a first group (A: voters 1, 5 and 9), retrieving all the information from TV1, a second group (B: voters 2 and 7) visiting TV2, NP1 and WP1, a third group (C: voters 3 and 6) watching both televisions and reading NP2, voter 4 (group D) patronizing both newspapers and WP2 and a fifth group (E: voters 8 and 10) following both newspapers and websites. Beyond this over-simplified example, since media are in a much smaller number than citizens it is certainly true that we can sort voters in a smaller number of groups by similar patterns of access to information based on a combination of the different sources.

Then, following our sketchy example we can redefine an attention matrix for these five groups under the assumption that each group allocates evenly the total time spent on media across the selected sources. In Table 3.2 we show the estimate of the media consumption matrix corresponding to the distribution of time on sources presented in Table 3.1. We enter 1 if a source is followed and 0 otherwise.

We first compute the reach of each source, corresponding to the fraction of the population that follows it. If, for instance, TV1 is watched by group A and C, 50 per cent of the population, corresponding to the sum of the shares of these two groups, is reached by TV1. The next step

to estimate the attention share spent on each source is to divide the reach by the number of sources that each group follows and add them up. For instance, TV1 is the unique source for group A, that represents 30 per cent of the population, and it is also one out of the three sources followed by group C, that includes 20 per cent of the voters. Then the attention share of TV1 is approximately 37%=30%+(20%/3).

Comparing the true attention shares in the population in Table 3.1 and the estimates in Table 3.2 we can observe that they are pretty similar. Obviously the precision of the estimate depends on whether the true distribution of time across sources in each group of consumers is close to uniform: this is true for the example in Table 3.1 and explains the good fit obtained in Table 3.2. If there is a very biased distribution of time across sources within a given group, this information should be collected and properly used to correct the bias in the estimates.

Attention shares play an important role in assessing whether the provision of information to citizens is concentrated, and the relative importance of the different media and sources. The information gathered can be used in several policy exercises. First, they offer a tool to assess how, after a merger between two media operators, the allocation of attention changes. By adding up the attention shares of the merging parties we can assess the position of the new entity as a source of information.

Secondly, beyond mergers and acquisitions, the media consumption matrix allows to evaluate the impact of partial ownership of different media by a single media operator: as long as control allows to influence the type of contents supplied, the owner of different media can coordinate their policies and reach a larger influence over the public opinion.[34]

Third, the links across operators and their associated shares of attention can be exploited also to assess how the production of news by a subset of larger media and their distribution by minor operators can be accounted for to assess the concentration in the supply side of contents. If, for instance, going back to our sketchy example, TV1 is also the main source of news used by NP2 and WS2 their shares could be combined to take into account of this supply side links.

There is a valuable feature of the media consumption matrix that we highlight. It is constructed similarly to the traditional metrics based on output market shares that is used in antitrust and regulation as a first assessment of market power. This similarity allows to develop in parallel an analysis of market power and an assessment of media plurality comparing similar measures.

3.2 From Media Concentration to Media Power

There is however a further step from concentration to power that distinguishes the status of the two assessments. The use of concentration measures in antitrust enforcement, for instance the Herfindahl Index, to assess market power is justified in oligopoly theory by precise analytical results.[35] It is well known that the equilibrium mark-up in a Cournot oligopoly is a function of the Herfindahl index and (inversely) of the elasticity of demand. Hence, the Herfindahl index

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34 This issue, and the use of the Share of Reference scheme, a technique similar to the media consumption matrix, has been considered by Ofcom to assess the acquisition by 21st Century Fox of 100 per cent of the shares of Sky plc. See Steven Barnett, Martin Moore and Damian Tambini, ‘Media plurality, the Fox-Sky bid, and the case for referral to Ofcom’ (LSE Media Policy Brief 18, 2017).

35 See for instance Yossi Spiegel, ‘The Herfindahl-Hirshman Index and the Distribution of Surplus’ (CEPR Discussion Papers n. 13925, 2019).

is a proper measure of market power in this setting and not simply a measure of concentration. This precise relationship allows to fix criteria to determine when a market is "sufficiently concentrated" to justify raising competitive concerns, leading to a rejection of the project or to a more articulated analysis. For instance, thresholds in the value of the Herfindahl index adopted in the US Horizontal Mergers Guidelines are justified by the anchoring of those values to market equilibria sufficiently far from the efficient ones.

The attention shares, by measuring the distribution of time spent on the different sources by citizens, is a very relevant information but not yet a measure of the power of media operators. To close the gap between attention shares and media power, additional steps are needed. In other words, oligopoly models in merger analysis highlight a precise link between concentration, the competitive process, the market outcomes and measures of welfare. A similar relationship in the assessment of pluralism would require a model of the political process that links voters' information, electoral outcomes and policies, evaluated according to some criteria on the well-functioning of the democratic process. To the best of our knowledge, a generally accepted analytical framework of the political processes that bridges attention concentration and political power is not yet fully developed.

Prat[36] offers an interesting attempt in this direction relating media power to the ability to affect the electoral outcome by manipulating voters' behavior. Media power then may depend on several elements that refer to the demand for information by voters, the supply of information by media and the institutional framework of the political process.

A first issue on the supply side refers to the possibility that different media are differently effective in informing the citizens and shaping their opinions. Our construction of the media consumption matrix implicitly assumes that a minute spent watching a TV program is as informative as one minute devoted to reading an article or browsing the web. A refinement in the measure of attention shares, then, may consider the possibility of weighting the time spent by its effectiveness. This issue, labelled as "impact", is recognized in Ofcom.[37]

Secondly, moving to the demand side it is the attitude of citizens towards the media followed that may differ. Naïve citizens may trust the information received, easing the possibility of manipulation by media. Moreover, partisan citizens, characterized by confirmation bias, may select the sources that confirm their prior beliefs, disregarding the value of an objective and balanced information.

Third, turning to institutional issues, the characteristics of the electoral system, that map votes into electoral outcomes, matter in determining the media power. In a first-past-the-post two party system a party wins the elections if it collects 50 per cent +1 votes. The power to affect this electoral outcome can then be computed given the share of naïve voters that can be manipulated and the attention share of a media. Prat[38] proposes a Power Index that corresponds to the size of the vote gap of a candidate that a media supporting the weak candidate can close by manipulating the voters given its attention share. This measure corresponds to the worst case scenario when all voters are naïve and sets an upper bound to the Power Index.[39]

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[36] Prat, *supra* note 30.
[37] Ofcom, *supra* note 2.
[38] Prat, *supra* note 30.
[39] *Id*. In case of a proportional electoral system the consequences of vote manipulation would be different.

Kennedy and Prat[40] apply these measures to a panel of 36 countries and interestingly show that traditional media, with television at the top, still represent the more influential source of information. Restricting the attention to the three more powerful organizations in each country, 72 out of 88 specialize mainly in television broadcasting. The perceived growing importance of the Internet does not yet emerge in this picture.

Our discussion suggests some relevant implications for the enforcement of public policies on pluralism. First, there is a predominant dimension that has to be considered to measure concentration in media markets in this perspective, referred to the distribution of attention across different media. The difficulties discussed in defining the relevant market in an antitrust perspective seem much less relevant when looking at pluralism. Here there is a clear and single dimension that matters, the relative important of information sources, no matter what is the technological support and the kind of platform used to reach the citizens. All sources should be included in the same relevant market.

Consequently, there is a natural metrics to start with, what we have called attention shares, that the enforcer can estimate and measure. This metrics is comparable to the market shares on other dimensions, as output or revenues, that are traditionally collected in an antitrust assessment. Hence, merger evaluation in competition policy and in pluralism policy may share a similar approach. This point is important, since many commentators on the limits of the approach to antitrust based on consumers surplus and economic efficiency have recently claimed that the political dimensions of market power should require to move back to the Brandeis tradition, rejecting the tools and concepts that economists have introduced in competition policy. We argue that this conclusion might be hasty.

At the same time we recognize that theoretical work is still needed to link concentration in attention shares to the ability of media operators to affect the public opinion and the electoral outcomes. The Power Index approach seems a promising avenue in this perspective. The influence of media operators on politics, however, is not limited to the ability to manipulate the information provided to citizens. As long as they have an impact on voters, large media have the ability to influence also decision makers, political parties and governments. How these important elements could be included into a rigorous analysis is beyond the scope of this chapter. However, we can stress that there is a natural conjecture that a larger attention share will enhance the ability of a media operator to affect and distort the political process.

Finally, if concentration of media markets suggests a negative presumption, it is not obvious that more competition always favors pluralism. When comparing the virtues of competition in an economic/efficiency perspective and in the case of pluralism we have to mention a difference that seems hard to remove. Consider the effect of free entry in a product market with differentiated products. When the fixed costs of entry vanish we expect in a free entry equilibrium a very large set of varieties offered. Each consumer then chooses a product that is (almost) coincident with his preferred version. Consumers surplus then is maximized by (almost) eliminating the mismatch between preferences and choices. In other words, when we consider efficiency more competition would always increase welfare.

Consider then a similar problem in a media market where voters have different opinions and media operators enter the political spectrum and choose their positioning. If entry costs are negligible, as it happens now with the Internet, we may expect a very large number of different

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[40] Kennedy and Prat, *supra* note 29.

digital media each patronizing a political niche. All voters, then, would find a source that corresponds to their preferred view, and many of them would choose it. Moreover, this matching between news consumed and political view of the voter does not need to be realized through a balanced and truthful representation of facts, and it is the main driver in the provision of fake news and the consolidation of the post-truth politics.[41] At the same time, the very large number of media sources makes regulation of the content provided a very hard task.[42]

It is not obvious that this equilibrium, characterized by competitive entry and no concentration, would be the preferable outcome. Pluralism in a healthy political system should prevent false representations and expose voters to different views, promoting voters' mobility to enhance government's accountability. A very large number of partisan media may easily escape regulatory standards and entrench voters, enhancing the role of ideology.

We find here a potential conflict between the criteria adopted to evaluate competition in an antitrust and in a pluralism perspective. The difference arises due to the different nature of externalities that are relevant in the two dimensions. In antitrust the competitive process requires that the direct impact of individual behavior on other agents' utilities, what we call economic externalities, vanishes. If this condition realizes then welfare is maximized. This general framework motivates the desirability of competition and the negative effect of market power as the main source of externalities on the supply side.

In the analysis of the political process, instead, externalities may derive from the distorted information of voters, affecting the good functioning of democracy. The distortion may derive from the predominant role of large media operators that influence significant portions of the electorate, aligning economic and political externalities and making market power and political power overlapping. This was the typical issue in the pre-digital world. What the Internet has introduced as a new phenomenon is the possibility that the negative informational externalities of voters on the political process could emerge from the combined effect of a multitude of small distorted media sources. The manipulation of voters, then, would arise both when media concentration is high and when we face a fragmented environment. This latter competitive scenario creates a wedge between economic and political desirability of fragmented media markets. This conjecture needs further analytical work, but the possibility that the relationship between competition and pluralism be non-monotonic is worth further discussion.

4 CONCLUSIONS

This chapter discusses in parallel the evaluation of mergers in media markets according to an antitrust and a media plurality perspective. Although the antitrust assessment of a media merger has to rely on common principles and tools we argue that the specificities of media

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[41] See Josef Drexl, 'Economic Efficiency versus Democracy: on the Potential Role of Competition Policy in Regulating Digital Markets in Times of Post-Truth Policies' (Max Plank Institute for Innovation and Competition RP n. 16, 2017). I found a different reference for this: Josef Drexl, 'Economic Efficiency versus Democracy: on the Potential Role of Competition Policy in Regulating Digital Markets in Times of Post-Truth Policies' in Damien Gerard and Ioannis Lianos (eds), *Reconciling Efficiency and Equity – A Global Challenge for Competition Policy* (CUP 2019).

[42] On regulation for pluralism in media markets see Michele Polo, 'Regulation for Pluralism in the Media Markets' in Paul Seabright and Jurgen von Hagen (eds), *Regulation of Media Markets* (CUP 2005).

markets deriving from their multi-sided nature and the competitive interactions between off-line and on-line media require some adaptations. In particular, the usual sequence that starts with market definition and then proceeds with the analysis of competitive interactions and constraints seems hard to apply to multi-sided markets. Indeed, market definition can be hardly distinguished from the analysis of market strategies and the multiple overlapping of services and functionalities among operators. The tasks of identifying the boundaries of rivalry and the associated competitive constraints is then better achieved through a unified assessment of the lessening of competition. Moreover, the intense rate of product innovation that we observe in old and new media and the flexibility of adaptation to new business models make the assessment of the dynamic effects of mergers paramount. Finally, the role of big data in profiling media users introduces new issues that merger evaluation has to consider.

Mergers in media markets are relevant, in a public policy perspective, also for their impact on media plurality and pluralism. An articulated set of media markets with no dominant position makes the provision of information to citizens less subject to manipulation, ensuring a balanced democratic process. We argue that the antitrust and media plurality assessments of a merger share similar tools when they look at concentration. This exercise is much more complex in an antitrust perspective, due to the multiple overlapping among operators and the large set of services and relevant markets to consider. When instead the analysis is developed to assess media plurality the focus is on the different sources that citizens use to receive information and content from media operators. It is the citizens' allocation of attention across different sources that allows to measure concentration. Therefore, the analysis in the two perspectives share similar tools to start with, looking at concentration in media markets.

The next step, however, requires to assess whether and to what extent concentration exerts a negative impact on economic efficiency or media plurality. At this stage the two analysis reveal a different status. In an antitrust perspective, oligopoly theory offers a rich set of tools to highlight the links between market concentration and economic efficiency, allowing to measure the impact of dominance on welfare and to set quantitative thresholds that trigger anticompetitive concerns. The links between media concentration, media power and the distortions in the political process seem to rely on less general and robust analytical results. Although a concentrated media market suggests threats to pluralism, it is hard to find generally recognized criteria to identify when concentration is too high and which distortions are more likely to occur. Moreover, while in an economic perspective a more fragmented market is conducive to a higher welfare, an excessively fragmented media market may weaken a rich and balanced information of voters by favoring segmentation, partisanship and fake news.