Mass Media in Economics:
Origins and Subsequent Contributions

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Abstract

The literature on the mass media and its political impact experienced a great boom in the last decade and is nowadays the focus of many academics. Despite this current trend, the first economic contributions to this literature lagged slightly behind other fields, such as Sociology or Communication Theory. Some cutting-edge economists were the exception and took the initiative to open debate and contribute with their analysis to this literature ahead of the general trend. This paper reviews the literature with a special focus on these meritorious early studies which, in some cases, have been subsequently relegated to a second row in the literature.

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"Neither Gutenberg with the press, nor Watt with the steam engine, nor Ford with the automobile, were aware of the computer revolution, the industrial revolution or the transport revolution that they were causing. Just as neither of the pioneers of the broadcasting technology had any premonition of the political revolution that they were going to cause". Theodore H. White

Over the last decade, special emphasis has been focused on studying the mass media and its influence on public policies. However, academic interest among the economic literature in this area has lagged slightly behind other fields, such as Sociology or Communication Theory, where the first studies were published in the early decades of the 20th Century. From then onwards, contributions have fuelled and enhanced the intensity of the debate regarding the impact of the mass media on public opinion and, thus, on public policies. From the work of Lasswell (1927), who argued that “Propaganda is one of the most powerful instrumentalities in the modern world”, to Lazarsfeld et al., (1948) who, in a study for the 1940 US Presidential Campaign, found that “...the main effect of media was to reinforce people in their already existing attitudes, rather than produce new ones” and, more recently, to McCombs (1997): “To a considerable degree, the news media literally create in our heads the pictures of many public issues”; these contributions put into different words the arguments that showcased the powerful instrument that the media is.

The silence of economists regarding the effect of this important institution on voter turnout and public policies was surprisingly protracted. This was first noted by Orr (1987) who put forward reasonable arguments in an academic essay to raise awareness of the study of the media-politics synergy portrayed in his work. Inspired or not by Orr’s thoughts, economists began to turn their sights on this interesting topic in the late 1990s, with the new millennium marking an unexpected bloom in this literature.

This paper seeks to provide an overview of the economic contributions to this literature over the last decades, with particular emphasis on its origins and the subsequent contributions. A common feature to some of those early papers was their inability to attract the attention of their peers. Some were even considered not to have been sufficiently rigorous in later paper. In my opinion, their merit lies in their being the first studies that sought to analyze such specific and interesting issues. As for the latest contributions and the current debate in the literature, the reader is referred to Gentzkow and Shapiro (2008) and Prat and Strömberg (2010), who provide highly interesting reviews of the most influential contributions to this literature over recent years as well as discussing the determinants that make the mass media such a special industry.

The issues that attracted our attention

From the classical setting of Lazarsfeld et al., (1948) to the present, numerous studies have established the influence of the mass media on voter turnout and public policies. Within the economic literature, Besley and Burgess (2002) and Strömberg (2004a) were the first studies to provide conclusive evidence of the influence of media penetration on government spending.
However, this relation had been previously briefly referred to by Sen (1984). More recent works, such as Gentzkow (2006), Della Vigna and Kaplan (2007) or Enikolopov et al. (2009), incorporate further data to this now well documented fact. Theoretical analysis had in parallel contributed to establishing this common perception that media influences voting behavior (Andina-Díaz, 2007, and Duggan and Martinelli, 2011), public policies (Strömberg, 2001 and 2004b, Andina-Díaz, 2006 and 2009b, and Chan and Suen, 2008 and 2009) or political accountability (Adserà et al., 2003, and Andina-Díaz, 2009a).

This general consensus regarding the impact of the media on the political sphere is in striking contrast with the lively debate that currently tries to throw light upon media bias. The initial studies in this regard take the common approach of explaining media bias as a result of what has been called “supply-side arguments”, such as ownership or advertising dependency. This explanation of media bias posits that the bias is a result of the owners’ political opinions, which are transferred to the media in order to influence readers. Recent trends, however, point to a different direction. Thus, the majority of current contributions designate the “demand-side arguments”, such as reputation or like-minded readers, as the most convincing source of media bias. In contrast to previous opinions, demand-side explanations assume that readers hold beliefs they like to see confirmed, then media bias simply reflects consumers’ preferences. This differentiation between “demand-side arguments” and “supply-side arguments” was first proposed by Sutter (2001), although it would not gain in popularity until Mullainathan and Shleifer used it in their influential work (Mullainathan and Shleifer, 2005).

We use this well-known classification to help us structure this review which, as already mentioned, places specific emphasis on the early contributions to this literature.

Supply-side arguments:

Advertising

One of the arguments most recurrently used in past decades to explain media bias is its advertising dependency. Even though the current economic crisis had led to a general downturn in the amount of adverts in the media (“It’s Official: 2009 Was Worst Year for the Newspaper Business in Decades” The New York Times, 03/24/2010), the media industry is still strongly dependant on advertising as one of its main sources of revenue. This raises interesting questions concerning the power of advertising firms in shaping the editorial lines or the news distributed by media outlets. There is abundant evidence in this regard, as documented by Backer (1994), Bagdikian (1997) or Herman and Chomsky (1988), who describe a number of situations where information serves the goals of publishers. In the same vein,

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3 In 2009, U.S. newspapers generate 73% of total revenue from advertising whereas worldwide advertising makes up 57% of overall newspaper revenues (“The Evolution of News and the Internet 2010”, Organization for Economic Co-operation and Development, OECD).

4 Among other interesting stories, Backer (1994) describes how NBC lost all the Coca Cola network billings in 1970, after depicting the working conditions of Coca Cola laborers in the Florida citrus industry. Moreover, he writes that “NBC had not... produced a documentary on a controversial domestic issue involving an important advertiser since”. Similar stories are expounded in Bagdikian (1997). For
Bagdikian (1997) writes: "The basic strategy in designing programs on commercial television and cable is not primarily what is perceived as the highest needs and wants of the audience, but what is perceived as the most likely to attract advertising." Nonetheless, reference should also be made to the existence of works that oppose the general view of advertising influencing reporting (see Sutter, 2002).

Based on the general evidence, the economic contributions to this literature has historically posed interesting questions such as the relevance of advertising revenues in determining the news that is distributed or the political orientation of media outlets.

The extent to which advertising influences media content was first analyzed by Steiner (1952). He considers a finite number of radio stations that choose its (type of) programming in order to maximize listeners, who are divided into groups according to the program type sought. Although Steiner does not elaborate on the issue of advertising, this aspect is in the model as radio stations are assumed to compete for audience (advertising revenues). The analysis of the model determines that competition among private radio broadcasters can lead to insufficient program diversity, due to the search for audience. In other words, popular programs can be excessively duplicated, which means that competition between radio stations is far from maximizing the satisfaction criterion.5

Steiner’s argument did not convince Beebe, who contributes to this literature (Beebe, 1977). Among other aspects, he enriches Steiner’s model by introducing a second program option for viewers that can choose to watch if their first option is not available (instead of turning-off the TV, as in Steiner, 1952). Assuming that TV platforms compete for audience (advertising revenues), Beebe finds that under general conditions, competition among providers is likely to produce more program diversity than monopoly. In parallel to this work, Spence and Owen (1977) compare the program choices of advertiser-supported TV platforms versus a subscription TV media industry, and obtain that the advertiser-supported media industry presents a bias in favor of popular TV programs (large audiences), which is not the case in the subscription TV industry.

None of these seminal papers deal, however, with the political consequences of the control exerted by advertisers. The first paper to explore this issue is Gabszewicz et al. (2001). They consider two newspapers that compete for readers, who are distributed according to their ideology. The newspapers compete simultaneously à la Hotelling in a three-stage game, in which editors select sequentially their political orientation, the price of their newspaper and the advertising tariff they impose to the advertisers. Since advertisers want to advertise their product in newspapers with a high circulation, they show that if the unit receipt from

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5 Steiner defines a person as satisfied if he finds a program to which he will listen to.
advertising is high and the readers have weak political preferences, newspapers moderate their political opinions, as compared to the political messages they would have displayed to their readers otherwise (in the case of strong political preferences and low unit advertising revenues). The reason being that, in order to sell a larger audience to advertisers, editors have to sell tasteless political messages.

The argument of advertising influencing news has not lost relevance over time, as evidenced by the important number of recent contributions. The interested reader is referred to Gabszewicz et al. (2004), Hamilton (2004), Strömbärg (2004b), Reuter and Zitzewitz (2006), Anderson and Gabszewicz (2006), Ellman and Germano (2009), Reuter (2009), Blasco et al. (2010), Gambaro and Puglisi (2010) or Petrova (2010), among others.

**Media ownership**

Another important argument used to explain media bias is that of media ownership. Mass media is meant to expose the public to information, which confers the media the power to create opinion, build consensus or shape political preferences.\(^6\) Governments, political parties and major corporation have recognized this great power of the media from its origins, as described by Riddle (1998): “In Britain, in the 19th century and the early decades of this century, a number of multitude of daily and evening papers were directly subsidized by the parties. The press barons of the first half of this century, […], sought to exercise direct political influences.” Nowadays, there is widespread concern regarding the pernicious effect of media control in democratic life, as supported by the empirical works of La Porta et al. (1999), Adserà et al. (2003), Brunetti and Weder (2003) or Djankov et al. (2003), who find evidence of a relationship between press freedom and corruption for a variety of countries.\(^7\) Even so, press freedom is still an issue where countries have underperformed in the last decades. The reason being the extremely high non-financial benefits, such as influence or fame, associated to the media control, as already pointed out by Demsetz and Lehn (1985) and Demsetz (1989) in the 1980s.

Surprisingly, this extremely relevant aspect of the media control was not formally analyzed until Noam (1987). Interested and somewhat surprised by the lack of enthusiasm of economists regarding the study of the mass media, Noam (1987) expanded the existing line of research on program diversity (Steiner, 1952), by introducing the issue of media control. Noam’s particular interest relies on the aspects of program diversity and audience share and

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\(^6\) McCombs and Shaw (1972) concludes that “the evidence in this study that voters tend to share the media’s composite definition of what is important strongly suggests an agenda-setting function of the mass-media”, while McCombs (1997) enumerates a number of studies showing evidence of public consensus as a result of public exposure to the media.

\(^7\) Djankov et al. (2003) find that “Government ownership of the media is higher in countries that are poorer, have more autocratic regimes, and higher overall state ownership in the economy” and that “Government ownership of the press typically has a negative effect on citizens’ rights, government effectiveness, and corruption”; while Adserà et al. (2003) show that “The presence of a well-informed electorate in a democratic setting explains between one half and two thirds of the variance in the levels of governmental performance and corruption.”
how media ownership and media regulation affects the diversity. In particular, he analyzes how governmental control may affect media behavior, considering for this purpose governments with different objective functions. From a government that wants to maximize audience (which results in popular TV programming), to a government that aims to please his followers (whose outcome is TV programming biased in favor of governmental supporters), or one that uses media as a propaganda tool (which again results in popular TV programming, as neutrality provides the government with the opportunity to reach its political non supporters). Noam’s contribution was immediately contested by Garber (1987), who although disappointed with some aspects of Noam’s theoretical analysis, recognizes that “The paper by Noam tackles a very difficult, interesting, and important set of positive issues”, and that “perhaps the lack of theoretical literature in this area can be traced directly to the difficulty of developing plausible models that can be analyzed rigorously”.

Garber’s words act as an incentive to Schulz and Weimann (1989), who immediately contribute to this literature with a model that stresses the interdependence between political parties and mass media. In their words, “politicians will have an incentive to have a close relation to the one of the newspapers with the most similar point of view, because then they can be confident that their release of information is well transmitted to the relevant public”. In this scenario, they analyze the location choices of two political parties and two media outlets, each serving an ideology, and establish the existence of equilibria that exhibit some intermediate degree of differentiation.

More recently, the issue of the media control has attracted the attention of many economists. A number of contributions focus on the issue of media mergers and the corresponding exacerbation of media bias. This is a very current debate given the present trend towards media concentration.8 Corneo (2006), Anderson and McLaren (2009) or Balan et al. (2009) are examples of this line of research.

**Media captured**

The issue of media captured, that is to say, the possibility of governments influencing the content of privately owned media outlets, either through bribes or non-monetary payments, is related to the previous section. Evidence of this cozy relationship between governmental authorities and the media industry can be found around the world, from Venezuela and Morocco to Russia or China (Freedom House)9.

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8 Bagdikian (1997) describes how at the end of the World War II, 80% of the daily newspapers in the US were independently owned, a feature that only 20% of the newspapers fulfilled in 1989. In addition, he writes that “In 1981 twenty corporations controlled most of the business of the country’s 11,000 magazines, but only seven years later that number had shrunk to three corporations”.

9 The methodology used by Freedom House to construct the Freedom of the Press Annual Survey includes, within the category of economic environment, the impact of corruption and bribery on media content.
The economic literature on this topic is quite recent, with the first works dating back to half way through the last decade. Besley and Prat (2006) present the most influential contribution on media capture. They propose a model in which a government can bribe the media and buy its silence. The outcome is that the presence of media capture reduces political turnover. Additionally, they obtain that independent ownership and media competition is a form of assurance against capture.

Although similar in spirit and contemporary in time, the contributions of Puglisi (2004) and Vaidya (2005) are often overlooked in the literature. Puglisi (2004) builds a model of electoral competition in which the government can spin the media to publish favorable news and the result of the spin activity is that the incumbent increases its reelection probability. Furthermore, he establishes conditions under which spin activity is beneficial to the government. Vaidya (2005) analyzes the incentives of a government to enroll in corruption and that of the media to be silent about these practices. He shows that the existence of an independent media is not sufficient to deter corruption and that corruption deterrence is threatened when media capture occurs. Additional and more recent contributions to this literature are Vaidya (2006), Gehlbach and Sonin (2008) and Egorov et al. (2011), among others.

Not as relevant in terms of the number of contributions but equally influential given the current echo of their debates, the last decade saw the emergence of new supply-side arguments to account for media bias. These include Strömberg (2001 and 2004b), who introduces the feature of increasing returns to scale in the media industry, which makes it optimal for media outlets to report news that target large and sufficiently affluent groups; Bovitz et al. (2002), who consider the whole set of actors that work within news organizations (owners, editors, reporters, advertisers, etc) and analyze under which conditions they can shape the political discourse to its own ideological purposes; or Baron (2006), who explains media bias as a consequence of journalists’ career concerns.

**Demand-side arguments**

Although economists have historically placed greater emphasis on supply-side arguments, a recent trend that explains media bias by means of arguments that account for the consumers’ preferences has earned an important position in the literature. This camp of the literature, pioneered by Mullainathan and Shleifer (2005), considers that readers hold preferences they like to see confirmed, which affects media reports inducing a bias towards confirmatory news. The meritorious contribution of Gentzkow and Shapiro (2010), who find evidence of the ideological positions of U.S. newspapers being mainly driven by readers’ preferences and far less by the ideological positions of media owners, has finally earned the peer recognition for this strand of the literature.

Despite its novelty, the attractiveness of this argument appears to be overwhelming given the abundant number of contributions relying on consumers’ preferences as the driving force of media slant. The inspiration for this literature could be traced back to Lazarsfeldt et al. (1948),
who find evidence of consumers’ selective exposure to information.\textsuperscript{10} Gabszewicz et al. (2004) and Andina-Diaz (2007) first consider viewers that have preferences they like to see confirmed and that self expose to the media so as to minimize the ideological dissonance between their opinions and that observed in the TV outlets. They thus interpret the self selection of audience as an instrument for consumers to avoid unpleasant information. Interestingly, Chan and Suen (2008) consider rational readers and obtain that, as a result of information coarsening, readers consume news from the media outlet whose position is closest to theirs.

With a similar concern to previous contributions, Mullainathan and Shleifer (2005) and subsequent studies depart from the previous literature in considering media outlets, and not consumers, that react to this viewers’ feature. In a setting in which readers demand a certain type of content and media outlets can slant stories towards these preferences, they first obtain media bias as a result of consumers’ preferences. In particular, they show that media outlets will support the dominant view on issues where there is consensus, irrespective of the number of media outlets in the industry. Accuracy in news can only be achieved when consumers’ preferences are heterogeneous, in which case media outlets will segment the market and cater to extreme positions. In this case, viewers exposed to various media could obtain an objective picture of the issue at hand.

Another interesting argument is proposed by Gentzkow and Shapiro (2006), who obtain media bias in a world in which readers are rational. They consider a media outlet with career concerns, whose continuation payoff is an increasing function of the probability assigned to the media of being high-quality. In a setup in which news quality is difficult to observed, media has an incentive to herd on the consumers’ prior beliefs, which improves its reputation and thus increases its future revenues. Contrary to Mullainathan and Shleifer (2005), they obtain that competition between the media can reduce the bias, as with a higher number of outlets readers can access different pieces of information, which reduces the incentives of an outlet to strategically misrepresent the truth.

In keeping with both Mullainathan and Shleifer (2005) and Gentzkow and Shapiro (2006), Burke (2008) proposes a model in which rational agents choose between two media outlets that may slant reports so as to maximize profits. In line with previous research, he obtains that biased consumers acquire all their information from the outlet that best fits their prior beliefs. More interestingly, he shows that, in a dynamic setting, unbiased viewers choose biased sources.

Some additional contributions to this literature are Bernhardt et al. (2008), Ashworth and Shotts (2008), Panova (2009) or Gasper (2009).

\textsuperscript{10} Lazarsfeld et al. (1954) express: "Most individuals expose themselves most of the time to the kind of material with which they agree to begin with". This empirical finding has been called Self Selection of Audience Theory (see Cotton, 1985).
Some concluding words

The reader will surely remember Garber’s words who, in that comment to Noam’s paper writes: “In his introduction Noam reports that it is “somewhat surprising to note how little interest academic economists have taken in the study of the medium, and particularly in the more theoretical aspects of program diversity.” Perhaps the lack of theoretical literature in this area can be traced directly to the difficulty of developing plausible model that can be analyzed rigorously.”

One can wonder whether or not the silence of economists was related to Garber’s words, yet a review of the literature shows that it was not was until two decades later that the extraordinary boom in this literature occurred. It can be traced back to just after the publication of a handful papers over a two year period that subsequently proved to set the basis for the current lively and active research in this field. We are clearly referring to Strömberg (2004a and 2004b), Mullainathan and Shleifer (2005), Besley and Prat (2006) and Gentzkow and Shapiro (2006).

The appearance of these interesting works inspired economists to cutting-edge research in a field which had previously been overlooked. Yet, even though those early remarkable exceptions had been unable to attract the attention of their peers, their value has to be recognized as courageous attempts to open up discussion in an inexistent field.

This review seeks to raise awareness of these first contributions which, after the wave of the aforementioned influential papers, have often been thoughtlessly relegated to a second row in the literature. We can only hope that this brief survey helps to bring them back to the fore.

References


