

Research Network Economics of Media Bias

Marcel Garz, Hamburg Media School and University of Hamburg

August 2015

Summary

Over the past decade, economists have been working increasingly on media bias; its forms, its causes, and its consequences, particularly in the ambit of news markets. Political slant is considered the most prominent form of media bias, but the literature also addresses biases related to advertising, newsworthiness, accessibility, and negativity. The origins of such biases can be found in the supply and demand side of the news market. Examples for supply-driven bias relate to the influence of lobbies, interest groups, advertisers, newsmakers, or technological conditions. Demand-driven bias is usually caused by the preferences and beliefs of the audience, which media companies cater to in order to maximize profits. The literature has also been investigating the consequences of media bias, such as effects on welfare, voting behavior, and political decision makers.

The network encourages its members to address research gaps in this area. An important goal is the support and integration of young researchers by connecting them with more experienced economists, both within Germany and internationally. As one of its main activities, the network organizes annual workshops at alternating locations.

Topic of the Network and State of the Art

Types and Measurement of Media Bias

Of the various forms of media bias recognized by the economic literature, the most important ones can be classified into *political bias*, describing a situation in which news coverage favors one or another side of the political spectrum; *advertiser bias*, occurring when media outlets change their news coverage to favor their advertising clients; *newsworthiness bias*, referring to the crowding out of certain coverage due to a congestion in the news agenda; *accessibility bias*, relating to media effects caused by varying access to media; and *negativity*, referring to situations in which media disproportionately focus on bad economic developments and events.¹ The main mechanisms, in the process of news production, behind most forms of bias are the selective omission of information, the selection of issues and agendas, and the linguistic, visual, and contextual framing of issues and actors (Prat and Strömberg, 2013; Sobbrío, 2013; Gentzkow, Shapiro, and Stone, 2015).

¹ This proposal focuses on the forms of media bias that are most commonly addressed in the economic literature. Communication, media, and political sciences often consider further types of bias, which are not discussed explicitly in this proposal. Examples of further biases relate to violence, sensation, scandal, mainstream, or elites (see, for instance, the meta-analysis in D'Alessio and Allen, 2000).

In the empirical literature, *political bias* has been measured by exploiting the dichotomy of the US two-party system. Observable differences between Democratic and Republican politicians and policies are used as a reference point, which is compared to corresponding news coverage. For example, Groseclose and Milyo (2005) determine the frequency with which Democratic and Republican members of US congress cite ideological think tanks and interest groups. The authors then compare these frequencies with the number of times the same groups are cited by the media to calculate ideological scores for different media outlets. Based on these scores, they are able to provide a conservative-liberal ranking of media outlets. Other approaches compare characteristic phrases (Gentzkow and Shapiro, 2010; Greenstein and Zhu, 2012) or core topics (Larcinese, Puglisi, and Snyder, 2011; Puglisi, 2011) of Democratic and Republican politicians with those used by newspapers.

Empirical studies on *advertiser bias* evaluate the amount and valence of news coverage about companies or institutions that are simultaneously advertising clients. For instance, Reuter and Zitzewitz (2006) compare investment companies' advertising expenditures in US financial media, with the recommendations of their products, published by these outlets. The authors find a positive relationship, which suggests that the media outlets under consideration are more likely to recommend the products of their advertising clients over those of other investment companies. Gurun and Butler (2012) find a similar relationship between local media and local firms, by which media coverage of advertising clients includes negative terms less often. Dewenter and Heimeshoff (2014, 2015) show that car manufacturers are more likely to be reviewed by German car magazines if they are advertising clients, with their reviews being more favorable. According to Focke, Niessen-Ruenzi, and Ruenzi (2015), US newspapers not only report more positively about their advertising clients, but also more frequently and in longer formats. Gambaro and Puglisi (2015) are able to quantify this relationship for the Italian press. Their estimates suggest that an increase in monthly advertising of 75,000 euro is associated with eight additional articles about the corresponding company. Di Tella and Franceschelli (2011) show that advertiser bias is also possible in the case of public advertising clients. Their findings indicate that the likelihood of Argentine newspapers to report government corruption is negatively correlated with the amount of government advertising in these newspapers.

News coverage can be subject to *newsworthiness bias*. The corresponding literature addresses situations in which the amounts of reports on identical events vary, depending on the availability of other newsworthy material. In their seminal paper, Eisensee and Strömberg (2007) show that news coverage of natural disasters is crowded out when the news agenda is congested. During the Olympic Games, for instance, the likelihood that a disaster is covered decreases, compared to that of an identical disaster occurring at a different time. Other examples of this kind of bias relate to the impact of news pressure on coverage of military conflicts (Durante and Zhuravskaya, 2015) and election campaigns (Garcia-Jimeno and Yildirim, 2015).

The literature that refers to *accessibility bias* addresses differences in the access to certain media. That is, bias is captured by comparing population groups that have access to groups that are excluded from the consumption of news. This kind of bias can be observed when new media are introduced and geographical or technological reasons cause variation in the access to the new technology. For in-

stance, between the 1920s and 40s, the successive introduction of radio allowed some people to consume information of a new quantity and quality earlier than others (Strömberg, 2004a). The same phenomenon could be observed regarding the expansion of newspapers (Gentzkow, Shapiro, and Sinkinson, 2011), television (Gentzkow, 2006; Baker and George, 2010; Campante and Hojman, 2013), and high-speed Internet (Falck, Gold, and Heblich, 2014).

Empirical studies on *negativity* consider media bias by comparing economic news coverage with actual economic events or developments. This strand of literature suggests that reports on the economy are often disproportionately negative. For example, a rise in the German unemployment rate by 1 percentage point causes more reports about increasing unemployment than an equivalent decline induces positive articles (Garz, 2013, 2014). Similar evidence exists regarding the inflation rate (Soroka, 2006), the foreign exchange rate (Taborda, 2013), as well as job creation and destruction (Friebel and Heinz, 2014; Heinz and Swinnen, 2015).

Causes and Consequences of Media Bias

Media bias can be caused both in the supply and in the demand side of the news market; in the first case, modeled as the result of personal views and interests of journalists, editors, and media owners (Baron, 2006; Anderson and McLaren, 2012). Other supply-driven models consider external factors, such as the government and lobbies (Baron, 2005; Besley and Prat, 2006; Sobbrío, 2011). Moreover, bias might be caused in the supply side if media omit or emphasize certain information according to the preferences of their advertising clients (Ellman and Germano, 2009; Blasco and Sobbrío, 2012; Petrova, 2012; Germano and Meier, 2013; Guo and Lai, 2014).

Models of demand-driven bias consider media outlets that slant contents towards the prior beliefs and preferences of their audiences, as a means of profit maximization (Mullainathan and Shleifer, 2005; Gentzkow and Shapiro, 2006; Chan and Suen, 2008). For example, newspapers with a conservative audience will report more favorably about Republican politics, while newspapers with a liberal audience slant their coverage towards Democratic views (Gentzkow and Shapiro, 2010). Models of demand-driven bias can also explain negativity, because negative reports usually have a greater news value to the audience than neutral or positive coverage (Arango-Kure, Garz, and Rott, 2014).

Various consequences of media bias have been discussed in the economic literature. For instance, biased news coverage is assumed to affect economic perceptions and expectations (Soroka, 2006; Garz, 2013), news consumption patterns (Alaoui and Germano, 2014), and consumer welfare in general (Chan and Suen, 2008; Chan and Stone, 2013; Gentzkow, Shapiro, and Sinkinson, 2014). Biased reporting might also influence elections and political outcomes (Strömberg, 2004b; Besley and Prat, 2006; Bernhardt, Krassa, and Polborn, 2008; Chiang and Knight, 2011). As a recent study by Prat (2014) suggests, each of the three major US news conglomerates – which are known for their slanted coverage – has the potential power to swing a presidential election.

However, the main challenge of empirical research is the credible identification of cause and effect. The relationship between real world events and news coverage is theoretically ambiguous. It is not

clear a priori, whether media bias changes attitudes and behaviors, or whether beliefs and preferences result in biased coverage. Convincing identification strategies that use exogenous sources of variation can be classified as follows:

- *Unpredictable and predictable news events*: Eisensee and Strömberg (2007) show that US relief for natural disasters depends on the availability of other newsworthy, exogenous events. The random crowding out of disaster coverage leads to random differences in US relief for equivalent disasters. Durante and Zhuravskaya (2015) show that Israeli attacks in the Israeli-Palestinian conflict are more likely to occur when the US news agenda is expected to be dominated by other important events. Garcia-Jimeno and Yildirim (2015) use the occurrence of sports events as exogenous variation in newspapers' capacity to cover election campaigns, which allows the authors to study cause and effect in the strategic interaction between candidates and media.
- *Natural and field experiments*: DellaVigna and Kaplan (2007) and Schroeder and Stone (2015) use the successive but random entry of Fox News into US cable markets to investigate the effects of political bias on electoral outcomes and political knowledge, respectively. Other studies provide evidence of causal effects on people's attitudes and voting behavior by using variation in the geographical availability of radio or TV signals (Enikolopov, Petrova, and Zhuravskaya, 2011; DellaVigna et al., 2014; Adena et al., 2015). Durante and Knight (2012) show how an exogenous switch in the political bias of Italian public television affected the viewing patterns of news consumers. Finally, Gerber, Karlan, and Bergan (2009) identify media effects in a controlled field experiment.
- *Random technological conditions*: Falck, Gold, and Heblich (2014) use random differences in the roll-out of high-speed Internet in Germany to show that Internet availability had negative effects on voter turnout, due to changes in the consumption of hard and soft news. Martin and Yurukoglu (2014) use the default order of channel positions as provided by cable networks to identify considerable effects of watching biased news on voting intentions.
- *Congruence between media markets and political/judicial districts*: To identify media effects on political accountability, Snyder and Strömberg (2010) evaluate how well local news markets match US congressional districts. Local news markets that exhibit a high geographical congruence with a congressional district are characterized by larger amounts of political news, which leads to better informed voters, greater degrees of political accountability, and superior policies. Lim (2015) and Lim, Snyder, and Strömberg (2015) use the congruence between news markets and judicial districts to identify media effects on sentences and damage awards.
- *Exogenous consumer characteristics*: Gentzkow and Shapiro (2010) use the religious affiliation of news consumers as an instrument for political attitudes to show that political bias in local newspaper markets is driven by the demand side. Garz (2015) considers biological, evolutionary, and socio-cultural factors that cause news consumers to differ in information-processing predispositions to explain the consumption of opinionated versus balanced coverage.

Members

- Maja Adena (Berlin Social Science Center)
- Marcel Garz (Hamburg Media School)
- Matthias Heinz (University of Cologne)
- Anna Kerkhof (University of Cologne)
- Deborah Kistler (University of Lausanne)
- Martin A. Leroch (Johannes Gutenberg University Mainz)
- Gregory J. Martin (Emory University)
- Johannes Münster (University of Cologne)
- Andrea Prat (Mentor, Columbia University)
- Bei Qin (Hong Kong University)
- Armin Rott (Mentor, University of Hamburg)
- Jil Sörensen (Hamburg Media School)
- Christian-Mathias Wellbrock (University of Hamburg)

Bibliography

- Adena, M., Enikolopov, R., Petrova, M., Santarosa, V., & Zhuravskaya, E. (2015). Radio and the rise of the Nazis in prewar Germany. *Quarterly Journal of Economics*, forthcoming.
- Alaoui, L., & Germano, F. (2014). Time scarcity and the market for news. Working Paper, Barcelona GSE.
- Anderson, S. P., & McLaren, J. (2012). Media mergers and media bias with rational consumers. *Journal of the European Economic Association*, 10, 831–859.
- Arango-Kure, M., Garz, M., & Rott, A. (2014). Bad news sells: The demand for news magazines and the tone of their covers. *Journal of Media Economics*, 27, 199–214.
- Baker, M. J., & George, L. M. (2010). The role of television in household debt: Evidence from the 1950's. *B.E. Journal of Economic Analysis & Policy*, 10, 1–36.
- Baron, D. P. (2005). Competing for the public through the news media. *Journal of Economics & Management Strategy*, 14, 339–376.
- Baron, D. P. (2006). Persistent media bias. *Journal of Public Economics*, 90, 1–36.
- Bernhardt, D., Krasa, S., & Polborn, M. (2008). Political polarization and the electoral effects of media bias. *Journal of Public Economics*, 92, 1092–1104.
- Besley, T., & Prat, A. (2006). Handcuffs for the grabbing hand? Media capture and government accountability. *American Economic Review*, 96, 720–736.
- Blasco, A., & Sobbrío, F. (2012). Competition and commercial media bias. *Telecommunications Policy*, 36, 434–447.
- Budak, C., Goel, S., & Rao, J. M. (2014). Fair and balanced? Quantifying media bias through crowdsourced content analysis. Working Paper, Microsoft Research.
- Campante, F. R., & Hojman, D. A. (2013). Media and polarization: Evidence from the introduction of broadcast TV in the United States. *Journal of Public Economics*, 100, 79–92.
- Chan, J., & Stone, D. F. (2013). Media proliferation and partisan selective exposure. *Public Choice*, 156, 467–490.

- Chan, J., & Suen, W. (2008). A spatial theory of news consumption and electoral competition. *Review of Economic Studies*, 75, 699–728.
- Chiang, C., & Knight, B. (2011). Media bias and influence: Evidence from newspaper endorsements. *Review of Economic Studies*, 78, 795–820.
- D'Alessio, D., & Allen, M. (2000). Media bias in presidential elections: A meta-analysis. *Journal of Communication*, 50, 133–156.
- DellaVigna, S., Enikolopov, R., Mironova, V., Petrova, M., & Zhuravskaya, E. (2014). Cross-border media and nationalism: Evidence from Serbian radio in Croatia. *American Economic Journal: Applied Economics*, 6, 103–132.
- DellaVigna, S., & Kaplan, E. (2007). The Fox News effect: Media bias and voting. *Quarterly Journal of Economics*, 122, 1187–1234.
- Dewenter, R., & Heimeshoff, U. (2014). Media Bias and advertising: Evidence from a German car magazine. *Review of Economics*, 65, 77–94.
- Dewenter, R., & Heimeshoff, U. (2015). More ads more revs: A note on media bias in review likelihood. *Economic Modelling*, 44, 156–161.
- Di Tella, R., & Franceschelli, I. (2011). Government advertising and media coverage of corruption scandals. *American Economic Journal: Applied Economics*, 3, 119–151.
- Durante, R., & Knight, B. (2012). Partisan control, media bias, and viewer responses: Evidence from Berlusconi's Italy. *Journal of the European Economic Association*, 10, 451–481.
- Durante, R., & Zhuravskaya, E. (2015). Attack when the world is not watching? International media and the Israeli-Palestinian conflict. Working Paper, Sciences Po.
- Eisensee, T., & Strömberg, D. (2007). News droughts, news floods, and U.S. disaster relief. *Quarterly Journal of Economics*, 122, 693–728.
- Ellman, M., & Germano, F. (2009). What do the papers sell? A model of advertising and media bias. *Economic Journal*, 119, 680–704.
- Enikolopov, R., Petrova, M., & Zhuravskaya, E. (2011). Media and political persuasion: Evidence from Russia. *American Economic Review*, 101, 3253–3285.
- Falck, O., Gold, R., & Heblich, S. (2014). E-lelections: Voting behavior and the Internet. *American Economic Review*, 104, 2238–2265.
- Focke, F., Niessen-Ruenzi, A., & Ruenzi, S. (2015). A friendly turn: Advertising bias in the news media. Working Paper, University of Mannheim.
- Friebel, G., & Heinz, M. (2014). Media slant against foreign owners: Downsizing. *Journal of Public Economics*, 120, 97–106.
- Gambaro, M., & Puglisi, R. (2015). What do ads buy? Daily coverage of listed companies on the Italian press. *European Journal of Political Economy*, 39, 41–57.
- Garcia-Jimeno, C., & Yildirim, P. (2015). Matching pennies on the campaign trail: An empirical study of senate elections and media coverage. Working Paper, University of Pennsylvania.
- Garz, M. (2013). Unemployment expectations, excessive pessimism, and news coverage. *Journal of Economic Psychology*, 34, 156–168.
- Garz, M. (2014). Good news and bad news: Evidence of media bias in unemployment reports. *Public Choice*, 161, 499–515.
- Garz, M. (2015). The heuristic value of opinions in the market for news. Working Paper, Hamburg Media School.
- Gentzkow, M. (2006). Television and voter turnout. *Quarterly Journal of Economics*, 121, 931–972.
- Gentzkow, M., & Shapiro, J. M. (2006). Media Bias and reputation. *Journal of Political Economy*, 114, 280–316.
- Gentzkow, M., & Shapiro, J. M. (2010). What drives media slant? Evidence from U.S. daily newspapers. *Econometrica*, 78, 35–71.

- Gentzkow, M., Shapiro, J. M., & Sinkinson, M. (2011). The effect of newspaper entry and exit on electoral politics. *American Economic Review*, 101, 2980–3018.
- Gentzkow, M., Shapiro, J. M., & Sinkinson, M. (2014). Competition and ideological diversity: Historical evidence from US newspapers. *American Economic Review*, 104, 3073–3114.
- Gentzkow, M., Shapiro, J. M., & Stone, D. F. (2015). Media bias in the marketplace: Theory. In S. Anderson, D. Strömberg, & J. Waldfogel (eds.): *Handbook of Media Economics*. North Holland, forthcoming.
- Gerber, A. S., Karlan, D., & Bergan, D. (2009). Does the media matter? A field experiment measuring the effect of newspapers on voting behavior and political opinions. *American Economic Journal: Applied Economics*, 1, 35–52.
- Germano, F., & Meier, M. (2013). Concentration and self-censorship in commercial media. *Journal of Public Economics*, 97, 117–130.
- Greenstein, S., & Zhu, F. (2012). Is Wikipedia biased? *American Economic Review: Papers & Proceedings*, 120: 343–348.
- Groseclose, T., & Milyo, J. (2005). A measure of media bias. *Quarterly Journal of Economics*, 120, 1191–1237.
- Guo, W.-C., & Lai, F.-C. (2014). Media bias when advertisers have bargaining power. *Journal of Media Economics*, 27, 120–136.
- Gurun, U. G., & Butler, A. W. (2012). Don't believe the hype: Local media slant, local advertising, and firm value. *Journal of Finance*, 67, 561–598.
- Heinz, M. (2015). Are media a watchdog against wasteful public spending? Working Paper, University of Cologne.
- Heinz, M., & Swinnen, J. (2015). Media slant in economic news: A factor 20. *Economics Letters*, 18–20.
- Kerkhof, A., & Münster, J. (2015). Quantity restriction on advertising, commercial media bias, and welfare. Working Paper, University of Cologne.
- Larcinese, V., Puglisi, R., & Snyder Jr., J. M. (2011). Partisan bias in economic news: Evidence on the agenda-setting behavior of U.S. newspapers. *Journal of Public Economics*, 95, 1178–1189.
- Leroch, M. A., & Wellbrock, C.-M. (2011). Saving newspapers with public grants: The effects of press subsidies on the provision of journalistic quality. *Information Economics and Policy*, 23, 281–286.
- Lim, C. S. H. (2015). Media influence on courts: Evidence from civil case adjudication. *American Law and Economics Review*, 17, 87–126.
- Lim, C. S. H., Snyder Jr., J. M., & Strömberg, D. (2015). The judge, the politician, and the press: Newspaper coverage and criminal sentencing across electoral systems. *American Economic Journal: Applied Economics*, forthcoming.
- Martin, G. J., & Yurukoglu, A. (2014). Bias in cable news: Real effects and polarization. Working Paper, Stanford University.
- May, F. C., & Münster, J. (2013). Centralized bargaining in press wholesale. Working Paper, University of Cologne.
- Mullainathan, S., & Shleifer, A. (2005). The market for news. *American Economic Review*, 95, 1031–1053.
- Petrova, M. (2012). Mass media and special interest groups. *Journal of Economic Behavior & Organization*, 84, 17–38.
- Prat, A. (2014). Media power. Working Paper, Centre for Economic Policy Research.
- Prat, A., & Strömberg, D. (2013). The political economy of mass media. In D. Acemoglu, M. Arellano, & E. Dekel (eds.): *Advances in Economics and Econometrics: Tenth World Congress, Volume II: Applied Economics* (pp. 135–187). Cambridge: Cambridge University Press.

- Puglisi, R. (2011). Being The New York Times: The political behavior of a newspaper. *B.E. Journal of Economic Analysis & Policy*, 11, 1–32.
- Reuter, J., & Zitzewitz, E. (2006). Do ads influence editors? Advertising and bias in the financial media. *Quarterly Journal of Economics*, 121, 197–227.
- Schroeder, E., & Stone, D. (2015). Fox News and political knowledge. *Journal of Public Economics*, 126, 52–63.
- Snyder Jr., J. M., & Strömberg, D. (2010). Press coverage and political accountability. *Journal of Political Economy*, 118, 355–408.
- Sobbrio, F. (2011). Indirect lobbying and media bias. *Quarterly Journal of Political Science*, 6, 235–274.
- Sobbrio, F. (2013). The political economy of news media: Theory, evidence and open issues. In F. Forte, R. Mudambi, & P. M. Navarra (eds.): *A Handbook of Alternative Theories of Public Economics* (pp. 278–320). Cheltenham: Edward Elgar.
- Soroka, S. N. (2006). Good news and bad news: Asymmetric responses to economic information. *Journal of Politics*, 68, 372–385.
- Strömberg, D. (2004a). Radio's impact on public spending. *Quarterly Journal of Economics*, 119, 189–221.
- Strömberg, D. (2004b). Mass media competition, political competition, and public policy. *Review of Economic Studies*, 71, 265–284.
- Taborda, R. (2013). Bias in economic news: The reporting of nominal exchange rate behavior in Colombia. *Economía*, 14, 103–153.