

NBER WORKING PAPER SERIES

PARTISAN CONTROL, MEDIA BIAS, AND VIEWER RESPONSES:
EVIDENCE FROM BERLUSCONI'S ITALY

Ruben Durante
Brian Knight

Working Paper 14762
<http://www.nber.org/papers/w14762>

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
March 2009

We thank Constanca Esteves, Andrew Foster, Matt Gentzkow and Riccardo Puglisi for helpful comments. We are also grateful to seminar participants at Brown University and participants to the 6th Workshop on Media Economics for helpful discussion. We are grateful to the Italian Nation Election Studies group and to the Osservatorio di Pavia for providing part of the data used in this study. The views expressed herein are those of the author(s) and do not necessarily reflect the views of the National Bureau of Economic Research.

NBER working papers are circulated for discussion and comment purposes. They have not been peer-reviewed or been subject to the review by the NBER Board of Directors that accompanies official NBER publications.

© 2009 by Ruben Durante and Brian Knight. All rights reserved. Short sections of text, not to exceed two paragraphs, may be quoted without explicit permission provided that full credit, including © notice, is given to the source.

Partisan Control, Media Bias, and Viewer Responses: Evidence from Berlusconi's Italy
Ruben Durante and Brian Knight
NBER Working Paper No. 14762
March 2009
JEL No. D7,H0

ABSTRACT

This paper examines the impact of partisan control of the media on news content and viewership by consumers with differing ideologies. We use data from Italy, where the main private television network is owned by Silvio Berlusconi, the leader of the center-right coalition, and the public television corporation is largely controlled by the ruling coalition. Our first finding is that when, following the 2001 national elections, the control of the government switched from the center-left to the center-right, news content on public television shifted to the right. Second, we find evidence that viewers responded to these changes by modifying their choice of news programs. Right-leaning viewers increased their propensity to watch public channels which, even after the change, remained to the left of private channels. Furthermore, some left-wing viewers reacted by switching from the main public channel to another public channel that was controlled by the left during both periods. In line with these shifts in viewership, we also find evidence of an increase in trust in public television among right-wing viewers and a corresponding decrease among left-wing ones. Finally, we show that this behavioral response, which tended to shift ideological exposure to the left, significantly, though only partially, offset the movement of public news content to the right.

Ruben Durante
Brown University
Department of Economics, Box B
64 Waterman Street
Providence, RI 02912
Ruben_Durante@brown.edu

Brian Knight
Brown University
Department of Economics, Box B
64 Waterman Street
Providence, RI 02912
and NBER
Brian_Knight@brown.edu

I. INTRODUCTION

Since the introduction of newspapers, there has been substantial concern over partisan control of the media. Some observers worry that impressionable voters may be influenced by an ideological media and that this may result in an electoral advantage for the favored party. According to this view, an overtly partisan media may lead to the election of low quality candidates and to the enactment of poor policies.

This argument rests upon two key assumptions. First, it assumes that ideological control of the media will lead to biased news content. The opposing view is that, under private ownership of the media, market forces, and viewers' ideology in particular, are sufficiently strong such that the profit motive will dominate any influence motive. If the media is publicly owned, by contrast, then the profit motive may be less of a driving force. The second key assumption is that consumers will not respond to ideological control of the media by shifting to outlets more in line with their own ideology, a behavioral response that will only be possible with a sufficiently pluralistic media sector.

In this paper, we investigate these issues in the context of the television industry in Italy, where a single politician with easily identified ideology, Silvio Berlusconi, owns the main private television network, and where the public television corporation is traditionally controlled by the ruling political coalition. In particular, we examine news content and viewership of the six top national television channels before and after the 2001 elections, which shifted control of the government, and hence of the public television corporation from the center-left coalition to the Berlusconi-led center-right coalition.

Our empirical analysis addresses three related questions. First, does partisan control of the media affect news content? To address this question, we first develop an absolute, but time invariant, measure of station ideology. We find that Berlusconi's private network provided more speaking time to the right during the period in which the right was in power than to the left during the period in which the left was in power. Based upon this finding of an asymmetry, we conclude that Berlusconi's private network is biased towards the right. We then develop a relative, but time varying, measure of station ideology. Based upon this measure, we find that the public network shifted to the right, relative to the private network, following the change in control of the public network from the left to the right.

Our second question concerns behavioral responses by viewers to changes in media control. Given our finding that the public network shifted to the right on the ideological spectrum following the change in its control from the left to the right party, did viewers respond to the change in content by switching to a channel with an ideological leaning closer to their own? To answer this question, we develop an econometric model of viewer's choice of media outlets. In the model, viewers have incomplete information and thus potentially benefit from media reports. This benefit, however, is larger when the ideology of the station is closer to that of the voter. We then estimate this model using panel data on viewership and ideology before and after the shift in control. Our primary finding is that, after the change in control of the public network from the left to the right, right-leaning viewers become much more likely to watch news on public television channels. We also find that some left-wing viewers reacted to this change in control by switching from the main public channel to another public channel that was controlled by the left even after

the change in government. Supporting this evidence of a behavioral response, we show that, after the shift in control, trust in news on public televisions increased among right-leaning viewers, relative to left-leaning viewers. By contrast, the relationship between ideology and trust in the news on private channels is fairly stable during the same period.

Our third and final question builds upon the first two. Given that: 1) the ideological content of public channels moved to the right but remained to the left of the private channels, and 2) that viewers responded to this change by switching to more like-minded channels, what is the net change in the ideological exposure of viewers with differing political ideologies? We find that, while those viewers who continued to watch public channels were eventually exposed to a more right-leaning news coverage, this effect is offset in part by an opposite effect on those viewers who switched channels and ended up being exposed to a more left-leaning coverage. In fact, for one group of viewers we find that, on average, overall ideological exposure was largely unchanged following the shift in control and content to the right. This finding suggests that, under certain conditions, for a station attempting to manipulate public opinion, increasing the ideological content of news may be not have the intended effect.

II. LITERATURE REVIEW

Our paper is related to a literature on the relationship between ideological control of the media and media content. In terms of private media ownership, Besley and Prat (2006) theoretically examine the case for government capture of the media sector in the context of a political agency model. They find that capture is less likely when voters have access to a wide variety of outlets and when ownership is independent in the sense that it is costly for the government to provide transfers to the media. They also find that media capture affects political outcomes. Snyder and Stromberg (2008) empirically examine this relationship between media coverage and political accountability based upon a measure of the geographic congruence between media markets and Congressional districts. In a theoretical contribution, Baron (2004) demonstrates that media bias can persist even in competitive markets environments due to the incentives for career-oriented journalists to write sensationalized stories.

Several empirical studies provide support for the notion that control of the media matters for media content as well as other outcomes. Djankov et al. (2003) examine control of the media in a variety of countries and find that government control of the broadcast media is pervasive and that this public control is associated with poor government outcomes. Gentzkow et al. (2006) document the movement from a partisan to an informative press in the United States between 1880 and 1920. They argue that this shift is largely driven by reductions in marginal costs of production and the associated increases in readership along with heightened competition in the marketplace. In a case study of coverage of Gary Hart's 1988 Presidential campaign by the newspaper chain Glasser et al. (1989) demonstrate that private group ownership of newspapers led to more uniform coverage across newspapers in this instance. Pritchard (2002) examines the role of private group ownership of newspapers in the United States on coverage of the 2000 Presidential campaign. Finally, Puglisi and Snyder (2008) find that bias in news coverage of political scandals is related to a newspapers' ideological leaning as measured by editorial endorsements.¹

¹There is also a larger literature on media bias and its effects on voters. See Groseclose and Milyo (2005), Della

An alternative view is that reader preferences are the dominant factor in driving news coverage. Mullainathan and Shleifer (2005) and Gentzkow and Shapiro (2006a) formalize this argument and demonstrate that viewers choose media outlets with content conforming to their own ideology. Gentzkow and Shapiro (2006b) empirically examine this issue in the U.S. newspaper industry and show that newspaper content is closely related to the prevailing ideology of readers in the marketplace. They argue that reader ideology, rather than private owner ideology, is the key driver of newspaper slant.

III. ON ITALY

Over the course of the last decade the Italian political system has been characterized by the presence of a fairly large number of political parties aggregated into two main political coalitions: the center-left and the center-right.² Despite considerable within-coalition ideological differences and attrition, these alliances have not experienced major transformations over the period under examination (2001-2007). It seems therefore appropriate for the period under examination to treat these coalitions as the key players in the Italian political arena.

The Italian broadcast television industry is composed of two main national networks - one public and one private - and a smaller national network along with a multitude of regional and local channels.³ The Italian public service broadcaster (RAI), is controlled by the Ministry of Economy and Finance and operates three national terrestrial channels: RAI 1, RAI 2 and RAI 3 (labeled respectively P1, P2, and P3 henceforth, where P refers to public). RAI's main competitor is Mediaset, the main Italian commercial television network, founded and controlled by Silvio Berlusconi through his family's holding Fininvest, which also broadcast three national channels: Canale 5, Italia 1, and Rete 4 (respectively B1, B2 and B3 henceforth, where B refers to Berlusconi). Taken together RAI and Mediaset account for approximately 85-90% of the average TV viewership, and for a similar share of the market total advertising revenue.⁴ This *de facto* duopoly, which has remained substantially unchanged over the last twenty years, is due to the lack of a compelling regulation limiting market concentration in the television industry.^{5,6} The issue of concentration in the television market is potentially even more problematic for political pluralism given that television represents the main source of political information for the vast

Vigna and Kaplan (2007), George and Waldfogel (2006), and Gerber et. al. (2008).

²A comprehensive list of the main Italian political parties represented in the national Parliament between 1996 and 2007 - with relative coalition of affiliation - is reported in the Appendix.

³The other private national network is *La7* (previously TMC), which is currently owned by Telecom Italia Media, the media branch of Telecom Italia, the largest Italian telecommunications company. *La7* is fairly small relative to the two other networks and only represents about 3% of the market.

⁴The average daily audience share of RAI and Mediaset combined was 90.4% in 2001, 89.6% in 2002, 89.0% in 2003, 87.5% in 2004, 85.5% in 2005, 83.9% in 2006, and 82.7% in 2007. The data come from Auditel, the research company responsible for television audience measurement in Italy. Founded in 1984, Auditel corresponds to the so-called "joint industry committee" scheme. It is a private company operating through a board of directors and a technical committee composed of representatives of the TV stations, media buyers and advertisers.

⁵This situation is even more conspicuous in view of the limited diffusion of satellite and cable television in Italy (around 5% of the total audience in 2006).

⁶The new law of telecommunications, approved in 2004 by the center-right majority has not improved this situation. Quite on the contrary, it has further relaxed the requirements imposed by the previous legislation.

majority of the Italian population.⁷

The relationship between the political system and the media industry in Italy is particularly close and, for many reasons, unique. On the one hand, the leader of one of the two main political coalitions is the owner of the top private media conglomerate (the so-called “Berlusconi’s anomaly”). This issue has generated debate both about the possibility that Berlusconi’s use of his group’s media could give him an advantage in the political arena, and about the opportunity to introduce norms to regulate this kind of conflict of interest. On the other hand rests the controversial question of the influence of political majorities on public television, and the potential consequences for media freedom and political pluralism. Indeed, the Italian law includes no mechanism to insulate public television from political pressures. Traditionally, in fact, the executive body of the Italian public broadcasting corporation has been representative of the ruling political coalition.⁸ These two situations - Berlusconi’s control over private television and the strong influence of the ruling coalition on public television - may each cause concern in their own right. When both are at work at the same time, however, the potential impact on political pluralism may be of even greater concern. Indeed, this was the case between 2001 and 2006, when Silvio Berlusconi was also the head of the ruling coalition and hence in the position to exert influence on public television.

Despite the undeniable influence of the majority, the opposition is generally granted control of one of the three public channels; this has therefore traditionally assured some degree of ideological heterogeneity across public channels. During the period 2001-2007, P3 news remained within the sphere of influence of the left-wing coalition, whereas P2 news directors were closer to the center-right parties. Over the same period however, the news director of P1 - the most viewed and influential of the three - was replaced twice following the shifts in political majorities (Table 1).

IV. NEWS COVERAGE

In this section, we investigate differences in news content between and within RAI and Mediaset and across time. We use data on coverage of political actors (parties, government, etc.) as well as information on coverage of specific issues (economics, world affairs, etc).

⁷According to a recent survey by Diamanti et al. (2007), for example, broadcast television represents one of the principle sources of information for 94% of the population. Other surveys present similar results (ISTAT, 2006; CENSIS, 2006). Furthermore, for a significant segment of the population, broadcast television represents the only source of news.

⁸RAI is governed by a nine-member administrative council. Seven members are elected by a parliamentary committee while the remaining two, including the president, are nominated by the largest shareholder - the Ministry of Economy and Finance. The council appoints the director-general, the channels’ directors, and the directors of each channel news service. The latter are very influential figures since they are responsible for setting the news program editorial line and agenda, therefore influencing which issues or events are covered. These appointments are made according to a long-standing system of political quotas (*lottizzazione*). In fact, most of the time those appointed to these positions can be linked to one political coalition or even to a specific political party according to previous political or professional experience.

A. *Measures of station ideology*

Our main measures of station ideology are based upon data on news content. Monthly data on the distribution of news airtime among political actors for national TV networks are available from the Italian Communications Regulatory Authority (AGCOM), which is responsible for the monitoring and safeguard of political pluralism in the Italian media.⁹ Data are available for the top six national channels and cover the period between January 2001 and September 2007 (73 months), for a total of 438 observations. AGCOM reports the airtime devoted to the following categories of actors: a) members of political parties and movements represented in the Italian Parliament (excluding those involved in the government); b) the Prime Minister (PM); c) other members of the government; d) the Speaker of the House of Representatives; e) the Speaker of the Senate; f) the President of the Republic; g) the European Union. Three alternative measures of airtime are available: 1) speaking time: airtime in which each political actor speaks directly to the public (statements, interviews, etc.); 2) news time: airtime devoted to the coverage of issues and/or events related to a political actor; 3) broadcasting time: the sum of speaking time and news time. Unlike news time, which may include both positive and negative reports, speaking time measures the opportunity for a political actor to communicate its views to the audience without any mediation. Since more visibility is likely to favor a political figure, we restrict our attention to speaking time. To calculate the total monthly speaking time devoted to each coalition, we aggregate the speaking time of the affiliate parties. For the coalition in power, we also include the time assigned to the government (PM and other members) and to the Speakers of the two Houses, since both are representative of the ruling coalition.¹⁰

We begin by developing an absolute, but time-invariant, measure of station ideology based upon these data on speaking time. In particular, we examine how speaking time on each station is distributed between the majority and the opposition between January 2001 and September 2007. This measure of station ideology is based upon a test for symmetry. If a channel provides equal coverage of the right when the right is in power and the left when the left is in power, we conclude that this channel is unbiased. Deviations from symmetry provide evidence of bias in one direction or another.

When plotting the share of total speaking time allocated respectively to the majority and opposition on Berlusconi's channels (Figure 1a), we notice that, throughout the entire period, the right receives more extensive coverage than the left, even when the latter is in power. Thus, we find evidence that Berlusconi's network is biased to the right. The same pattern does not apply to public channels (Figure 1b) which, on aggregate, devote a fairly stable fraction of time to the majority, regardless of who is in power. With regard to differences between Mediaset channels (Figure 2), while news coverage on B2 and B3 is more favorable to the right throughout the entire period, B1 covers the two coalitions in a rather more balanced way, devoting more time to the left when this is in power. Nevertheless, on B1 also, the gap between majority and opposition

⁹The status and the functions of the Italian Communications Regulatory Authority (www.agcom.it) are established by Law n. 249 of 31 July 1997.

¹⁰We do not consider the time devoted to the President of the Republic since this figure cannot be associated with any of the coalitions. We also disregard the time devoted to the European Union, and to those parties not affiliated with any of the two major coalitions.

is much larger when Berlusconi is in power. Turning to public television (Figure 3), all three channels devote on average a larger fraction of time to the ruling coalition. However, on P2 the gap between majority and opposition is larger during Berlusconi's government. The opposite is true for P3 which provides particularly favorable coverage of the left-wing coalition when it is in the opposition. P1 is characterized by the most regular pattern. Over the period analyzed, in fact, time is distributed in a fairly stable fashion between majority and opposition.

To further test these patterns we regress our dependent variable - the share of total speaking time devoted to the majority - on group dummies (*Public Channels* and *Berlusconi's Channels*), and on their interaction terms with a dummy for Berlusconi being in power (*Berlusconi_Gov*).¹¹ The coefficient on this interaction term provides a summary measure of the degree of bias towards the right. As shown in column 1 of Table 2, public channels taken together tend to devote about two-thirds of the total speaking time to the majority regardless of which coalition is in power. The coefficient on the interaction term for Berlusconi's channels, by contrast, is large, positive and statistically significant (+34.6%), confirming a much more favorable coverage of the majority when the right is in power. As depicted in column 2, this result is more pronounced for B2 and B3, but the difference is also large and significant for B1 (+14.4%). Turning to public channels, the coefficient on the interaction term for P2 is large positive and significant (+12.7%), confirming a clear bias in favor of the right-wing coalition. In contrast, coverage on P3 is more favorable to the left-wing majority than to the right-wing majority (-16.4%). Finally, P1 tends to devote a fairly stable share of speaking time to the majority, with a slight difference in favor of the right coalition (+3.8%).

This measure of station ideology is based upon the assumption that an unbiased station provides equal coverage to the majority coalition regardless of its political leanings. This allows us to construct an absolute measure of ideology. Even without this assumption, however, one can compare coverage across stations in order to measure the relative positions of the stations on the ideological spectrum. According to this comparison, which is based upon the coefficients on the interactions terms in Table 2, we can order the stations from left to right as follows: P3, P1, P2, B1, B2, and B3. Thus, the public stations all lie to the left of the private stations, and the public station controlled by the left throughout the sample (P3) is at the extreme left.

One limitation of these two measures of station ideology is that they do not account for changes over time in the party controlling the main public channel (P1), which will be the key source of variation in the behavioral responses section to follow. To examine the role of changes in control, we next develop a time-varying, but relative, measure of station ideology. This measure gauges the change in content on the public network following changes in ideological control, relative to the change in content on the private network, which was controlled by Berlusconi for the entire sample.

In order to implement this relative measure, we use the fraction of speaking time devoted to the right party rather than the fraction of speaking time devoted to the majority. We again regress speaking time on group dummies (*Public Channels* and *Berlusconi's Channels*), and on their

¹¹Some members of the majority coalition may be particularly exposed to the media during certain periods of the year (e.g. the Ministry of Economy during the discussion of the budget law). To control for possible seasonal variations in the coverage of the majority, regressions in Table 2 and 3 include calendar month fixed effects.

interaction terms with a dummy for Berlusconi being in power (*Berlusconi_Gov*). The coefficient on this interaction term provides a measure of how each channel shifted their coverage of the right after Berlusconi's party is in control. We also include an overall constant and an indicator for Berlusconi being in power since we would expect all channels to devote more coverage to the right when the Berlusconi is in power. Thus, we must omit the key coefficients for one channel, and all results should be interpreted as relative to this omitted category. Thus, this measure captures changes in the relative positions of stations on the ideological spectrum but cannot measure whether a particular station or the sector as a whole is biased to the left or to the right.

As shown in column 3, we find that the private network devoted less coverage to the right (-3.5 percent), relative to the public network, during the period in which Berlusconi was in government and hence controlled the public network. Thus, relative to the private network, the public network shifted to the right after control of the network switched from the left to the right. Importantly, however, the shift is not large enough to offset the positive coefficient on Berlusconi's channels (+19%), and the public network, when controlled by the right, thus remained to the left of the private network. Taken together, these findings suggest that the public network shifted towards, but stayed to the left of, the private network during periods in which the public network was controlled by the center-right party.

We next examine heterogeneity in coverage within the public and private networks. As shown in column 4 of Table 2, where channel P1 is the omitted category, we find that, relative to each of the five other channels, the main public network (P1) moved to the right during the periods in which the center-right was in control. These results are statistically significant for channel P1 relative to channels B1, B3, P2, and P3. In terms of comparing the two largest channels, B1 and P1, we can say that P1 remained to the left of B1 in all periods but that these ideological differences between the two were smaller when the right was in power. In terms of comparing P3 and P1, we conclude that P1 was to the right of P3 in all periods and that these ideological differences between the two were larger when the right was in power. Taken together, we thus conclude that P1 was a less extreme version of P3 when the left was in power and a less extreme version of B1 when the right was in power.

B. Additional Evidence on Speaking Time

Returning to our measure based upon speaking time devoted to the majority, another question of interest is how this time is distributed among different members of the ruling coalition (i.e. prime minister, other members of the government, majority parties' congressmen, Speakers of the House and the Senate), and whether the distribution changes depending on who is in power. One way to address this issue is by looking at the time assigned to different members of the ruling coalition as a fraction of the total time devoted to the majority (Table 3). We estimate separate regressions for: i) the government; ii) the Prime Minister; iii) other members of the cabinet; iv) congressmen affiliated with majority parties; v) Speakers. The results show that when Berlusconi is in power his channels tend to cover the government disproportionately more. Interestingly, this result is mostly driven by a steady increase in the coverage of the Prime Minister himself (+10.7% on B1, +16.9% on B2, and +40% on B3). On the contrary, the shares of time assigned to members

of the majority in Parliament and to the Speakers tend to remain stable or to decrease. We do not observe the same pattern for public channels. Although P1 and P2 provide a larger coverage of the government, in none of the public channels do we observe an increased coverage of the Prime Minister.

C. Coverage of News Categories

In this section we test whether there are systematic differences in news category coverage across Italian television channels. Each channel's choice of categories may depend on the characteristics of its viewers. For example, individuals with more liberal views tend to attach more importance to topics such as world affairs, labor and social issues; conservative viewers tend to be more concerned with issues related to law and order, immigration, and security. Daily data on news coverage by issue for national TV networks are available from the *Osservatorio dei Media di Pavia*, which monitors and analyzes the content of day and prime time news programs.¹² For each piece of news, the following information is reported: order of appearance, content summary, duration, and macro issue.¹³ Data are only available from January 2003 through March 2006, a period which falls entirely under the right-wing government. Hence, we can only provide a description of the differences across channels in this specific political environment.

Our dependent variable is the share of total weekly coverage devoted to different news categories. We primarily focus on three macro categories characterized by fairly clear ideological connotations: i) World News, ii) Labor & Social Issues, iii) Crime & Security.^{14,15} We begin by examining the differences in the share of weekly news reports in each category between Rai and Mediaset.¹⁶ As shown in Table 4, the results suggest that, overall, public channels tend to provide significantly broader coverage of *World News*, and *Labor & Social Issues*.¹⁷ On the contrary, the coefficient on *RAI* is negative and highly significant for *Crime & Security*. Berlusconi's channels also devote a smaller fraction of time to *Politics*.

We then compare coverage across individual channels (Table 5). We use B1 as the base outcome of our regressions in order to facilitate the comparison of public channels with the most

¹²Founded in 1994, the *Osservatorio* is an independent non-profit organization specialized in monitoring and analyzing mass media political communication. The *Osservatorio* has long cooperated with the Italian national broadcasting corporation for which it has carried out media monitoring since 1994.

¹³News reports are grouped in macro categories: arts, culture and entertainment; business and finance; chronicles; crime news; criminality (organized crime); defense and security; education; farming, fishing and food production; food and drink; gossip; health; justice; labor issues; media and telecommunications; nature and environment; politics; science and technology; religion; social issues; fashion and style; sports; transportation; world news. Residual categories include: unclassified (advertisement, titles), other, public service information (weather forecast, traffic conditions, etc.).

¹⁴The macro category *Labor & Social Issues* results from the combination of two of the categories originally used for news coding: *Labor Issues*; and *Social Issues*.

¹⁵The macro category *Crime & Security* results from the combination of three of the categories originally used for news coding: *Criminality (Organized Crime)*; *Chronicle*; and *Crime News*.

¹⁶Two measures of coverage are available: the number of news reports in each category, and the total time devoted to them. Since the two measures are highly correlated (0.97), and the results obtained using one or the other are very similar, we only report the results based on the number of news reports.

¹⁷Note that these regressions also include calendar week fixed effects.

viewed of Berlusconi’s channels. Interestingly, all three public channels devote proportionally more airtime to *World News*, *Labor & Social Issues*, and *Politics* than does B1, and proportionally less to *Crime & Security*. P3, in particular, displays the largest coefficient in all regressions, followed by P1 and P2. These findings are broadly consistent with the political coverage results discussed above. When turning to the private channels, we observe mixed results. Relative to B1, coverage on B2 tends to favor *Crime & Security* at the expense of *World News* and *Labor & Social Issues*, and *Politics*. Coverage on B3, by contrast, resembles public channels, especially with regard to coverage of *Politics*, *Labor & Social Issues*, and *Crime & Security*. This is surprising given our conclusion following the speaking time analysis that B3 was biased to the right.

D. Summary

We have found that the Italian television market for news appears to be segmented along different lines. On the one hand lies the crucial distinction between private (Berlusconi’s) and public channels. Overall, Berlusconi’s channels provide a more favorable coverage of the right-wing coalition relative to public channels. In particular, they tend to devote a much larger share of time to the majority than to the opposition when Berlusconi is in power. Furthermore, during this period, the distribution of time within the majority is much more skewed in favor of the executive and, especially, of the Prime Minister himself. On the other hand, we also find evidence of substantial heterogeneity within Berlusconi’s channels with B2 and B3 offering a more unbalanced coverage than B1. Public channels display an even larger degree of heterogeneity based on political affiliation with P2 leaning towards the right, and P3 toward the left. Unlike the other public channels, P1 is not characterized by a particular left-right bias. Rather, it generally favors the ruling coalition over the opposition, regardless of the color of the majority. As a consequence, the placement of P1 in the political spectrum - and consequently its relative distance from other channels - is not firm but changes depending on which coalition is in power. We also observe similar patterns in terms of issue coverage. In particular, we find that public channels devote a larger share of coverage to political events, foreign affairs, labor and social issues, and significantly less to crime and security.

V. BEHAVIORAL RESPONSES

In this section, we examine how viewers altered their viewing habits in response to the changes in media ownership and content documented above. We begin by deriving a theoretical model of consumer choice of media outlets. The model is based upon a media sector that provides potentially valuable information to imperfectly informed consumers. We then use the theoretical model to generate an empirical specification of the choice of media outlet by viewers of differing ideologies.

A. Theoretical Setup

Society must choose between two policy alternatives ($p \in \{L, R\}$). These options could be interpreted in a variety of ways, including an election featuring two parties, a decision over whether to go to war, or proposed changes to immigration policy. There is a set of individual voters,

indexed by v , and a set of news stations, indexed by s . Voter's payoffs from each policy option depend upon two factors. First, each voter's judgment of the policy options is affected by a certain ideological position. Thus, left-leaning voters are predisposed to the left-wing option and likewise for right-wing voters. In addition to this ideological dimension, we assume that there is a payoff that is common to all voters. We refer to this payoff as the quality of the policy option, and the options thus can be interpreted as 'good policy' or 'bad policy'. In the electoral context, this quality dimension can be interpreted as the experience or integrity of the candidates. In the conflict context, the common payoff would depend upon the degree of the threat posed by the hostile nation.

More formally, we assume that voter v receives the following payoff from policy options p :

$$U_{vp} = q_p - \tau(i_v - i_p)^2 \quad (1)$$

where q_p represents the quality of p , i_v represents voter ideology, i_p represents the policy's position in the ideological spectrum, and τ represents the relative importance of the ideological dimension. We assume that $i_L < i_R$ so that increases in ideology are associated with movements to the right. Defining relative utility as $\Delta_v = U_{vL} - U_{vR}$, we have that:

$$\Delta_v = q + \alpha - \beta i_v \quad (2)$$

where $q = q_L - q_R$ represents relative quality, $\alpha = \tau(i_R^2 - i_L^2)$ is a constant, and $\beta = 2\tau(i_R - i_L)$ represents the coefficient on voter ideology.

We assume that voters know the ideological positions of the policy options (i_L, i_R) but are uncertain over quality. Priors over relative quality ($q = q_L - q_R$) are unbiased and normally distributed with variance σ_q^2 . Voters potentially observe a news report (n_s) from station s . Before observing any news, voter v supports L if his ideology is below a threshold:

$$E(\Delta_v) > 0 \Leftrightarrow i_v < \frac{\alpha}{\beta} \quad (3)$$

After observing a report, voter v supports L if his ideology is below a quality-adjusted threshold:

$$E(\Delta_v|n_s) > 0 \Leftrightarrow i_v < \frac{\alpha + E(q|n_s)}{\beta} \quad (4)$$

Thus, if voters update favorably with respect to L upon observing report n_s , then $E(q|n_s) > 0$, and the threshold thus shifts to the right. This convinces some voters who supported R ex-ante to now support L . Similarly, if voters update favorably with respect to R , then $E(q|n_s) < 0$, and the threshold thus shifts to the left. In order to understand how voters update their beliefs following news reports, we next present a framework for news station coverage choices.

Similarly to voters, stations can be characterized by their ideology (i_s). News stations are assumed to have better information than voters about the quality of the policy options and may provide valuable guidance. In particular, we assume that station s receives an unbiased signal

over the relative quality of the two options:

$$\theta_s = q + \varepsilon_s \quad (5)$$

where ε_s is the noise in the signal and is assumed to be normally distributed with mean zero and variance σ_ε^2 . Given this information, stations update over quality as follows:

$$E(q|\theta_s) = \omega\theta_s \quad (6)$$

where the weight on the signal is given by $\omega = \sigma_q^2 / (\sigma_q^2 + \sigma_\varepsilon^2)$.

Following the literature, we assume that news reports are ‘coarse’ in the sense that news organizations cannot feasibly provide all of their information gathered during their investigations in a single news report.¹⁸ As a simplification of this idea that news reports are coarse, we assume that news stations provide binary reports, which are favorable to one of the two policy options. That is, voters observe a news report from station n favoring either the left policy option ($n_s = L$) or favoring the right option ($n_s = R$).

Given these assumptions, station s thus provides a report supportive of L if the signal exceeds a station-specific threshold:

$$n_s = L \text{ if } \theta_s \geq \frac{\beta i_s - \alpha}{\omega} \quad (7)$$

where the threshold is increasing in the ideology of the owner. If the signal does not exceed this threshold, the station provides a report supportive of R .

B. Value of an Informative Media

Readers attempt to learn about quality from these news reports but this inference is potentially complicated by the ideological position of stations. The value of information from station s thus depends upon the preferences of the voter. For a left-leaning voter [$\alpha - \beta i_v > 0$], the value of information (W) is the possibility of a report favoring R :

$$W = \Pr(R)E(-\Delta|n_s = R) \quad (8)$$

Using the properties of the censored normal distribution, this value can be re-written as follows:

$$W = \Phi\left(\frac{\beta i_s - \alpha}{\sqrt{\omega}\sigma_q}\right) (\beta i_v - \alpha) + \sqrt{\omega}\sigma_q\phi\left(\frac{\beta i_s - \alpha}{\sqrt{\omega}\sigma_q}\right) \quad (9)$$

The first term is negative and represents the cost of voting against one’s prior. The second term is positive and represents the value of information. This second term is maximized at $i_s = \alpha/\beta$, which can be interpreted as the ideology of an unbiased station, and is thus declining in the degree of bias. For a right-leaning voter [$\alpha - \beta i_v < 0$], the value of information is the possibility of a

¹⁸See, for example, Suen (2004) and Baron (2006).

report favoring L :

$$\begin{aligned} W &= \Pr(L)E(\Delta|n_s = L) \\ &= \left[1 - \Phi\left(\frac{\beta i_s - \alpha}{\sqrt{\omega}\sigma_q}\right) \right] (\alpha - \beta i_v) + \sqrt{\omega}\sigma_q\phi\left(\frac{\beta i_s - \alpha}{\sqrt{\omega}\sigma_q}\right) \end{aligned} \quad (10)$$

Combining these two measures into a single expression for the value of news to consumers, we have that:

$$W = \min(\alpha - \beta i_v, 0) + \Phi\left(\frac{\beta i_s - \alpha}{\sqrt{\omega}\sigma_q}\right) (\beta i_v - \alpha) + \sqrt{\omega}\sigma_q\phi\left(\frac{\beta i_s - \alpha}{\sqrt{\omega}\sigma_q}\right) \quad (11)$$

The first and second terms combined are negative for both left-leaning and right-leaning voters and again represent the cost associated with voting against one's prior. The final term, by contrast, is positive and represents the value of information to the voter. We next use this derived value of an informative media in order to understand the choice of news stations by viewers of differing ideologies.

C. Analysis of Choice of Outlet

As a benchmark, consider the case in which voters with differing ideologies can directly choose the ideology of the station (i_s^*). Using the fact that $\phi'(z) = -z\phi(z)$, we can show that the relevant first-order condition is given by:

$$\frac{\partial W}{\partial i_s} = \phi\left(\frac{\beta i_s - \alpha}{\sqrt{\omega}\sigma_q}\right) \left(\frac{i_v - i_s}{\sqrt{\omega}\sigma_q}\right) = 0 \quad (12)$$

Thus, readers prefer a station with ideology equal to their own ($i_s^* = i_v$). This result is similar to Suen (2004), who examined a similar model but with binary signals and binary payoffs.

As a first step towards generating an empirical specification of the choice of media outlets, suppose next that voters cannot choose station ideology directly. Instead, each chooses to watch one station from a limited menu of $S + 1$ outlets, which are indexed by $s = \{0, 1, 2, \dots, S\}$. In order to make this choice probabilistic, we next assume that, in addition to the deterministic payoff in equation 11, voter v receives an idiosyncratic payoff from station s equal to $\varepsilon_{v,s}$. We can then write the payoff to voter v from watching station s as follows:

$$W_{v,s} = \theta_v + \theta_s + \lambda_s i_v + \varepsilon_{v,s} \quad (13)$$

where $\theta_v = \min(\alpha - \beta i_v, 0)$, $\theta_s = \sqrt{\omega}\sigma_q\phi\left(\frac{\beta i_s - \alpha}{\sqrt{\omega}\sigma_q}\right) - \alpha\Phi\left(\frac{\beta i_s - \alpha}{\sqrt{\omega}\sigma_q}\right)$, and $\lambda_s = \beta\Phi\left(\frac{\beta i_s - \alpha}{\sqrt{\omega}\sigma_q}\right)$. Thus, the station-specific coefficient on voter ideology (λ_s) is related to the ideological leanings of the network. Assuming that $\varepsilon_{v,s}$ is distributed type-I extreme value and normalizing the payoff from

station 0 to equal zero, viewership probabilities are given by:

$$\Pr(v \text{ chooses } s) = \frac{\exp(\theta_s + \lambda_s i_v)}{1 + \sum_{t=1}^S \exp(\theta_t + \lambda_t i_v)} \quad (14)$$

Thus, a multinomial logit model of the choice of station by viewers of differing ideology allows for identification of the channel-specific parameters (λ_s), which, as shown above, are closely related to the ideology of the station owner.

D. Empirical Analysis

In this section, we estimate a model of the individual choice of channel before and after the 2001 change in government. This model suggests that viewers may switch to like-minded outlets following a change in control of the government from center-left to center-right. Given the findings of the content analysis, we hypothesize that left-leaning voters may switch from channel P1 to channel P3. Correspondingly, we hypothesize that right-leaning voters may switch from channel B1 to channel P1.

To test these hypotheses, we use survey data on political attitudes and electoral behavior from the Italian National Election Study series (ITANES), which includes a set of novel questions on individual media and news consumption.¹⁹ For the purposes of our analysis, the first wave was conducted in the weeks following the May 2001 national elections and involved 3209 individuals. 1882 of these (58.6% of the original sample) were re-interviewed in the second wave, which was conducted between April and June of 2004. A complete description of the questions used is provided in the Appendix.

Before turning to the econometric results, we first present trends in viewership between 2001 and 2004 for viewers of differing ideologies. As shown in Figure 4, there was no reduction among left-leaning viewers, defined as those with self-reported political ideology equal to 1 or 2 on a 5-point scale in 2001, in the propensity to view news on channel B1, which remained low in both periods. There is a noticeable increase, however, in viewership of channel P3, which was controlled by the center-left coalition both before and after the elections. This increase was associated primarily with a reduction in viewership of channel P1. Among centrists, defined as those with political ideology equal to 3 on a 5-point scale, there was a small increase in viewership of channel P3 news. The more prevalent factor, however, is a significant shift in viewership away from channel B1, the most popular channel of the private network, to channel P1, the most popular channel of the public network. As shown in the bottom panel, the shift from channel B1 to channel P1 is even stronger among right-wing voters, defined as those with a self-reported political ideology equal to 4 or 5 on a 5-point scale. Taken together, these results

¹⁹The Italian National Election Study (ITANES) is a long-term research project on electoral behavior established in the early nineties by the Istituto Carlo Cattaneo Research Foundation (www.cattaneo.org). Several pre- and post-electoral survey studies have been conducted in the context of the ITANES project over the course of the last fourteen years (1994, 1996, 2001, and 2006). In many aspects the questions included in the ITANES surveys are analogous to those used in the surveys of the American National Election Study (ANES).

suggest that right-leaning viewers responded to the shift in control and content of channel P1 to the right by increasing their consumption of this channel and that left-leaning viewers responded by increasing their propensity to consume news from the left-leaning channel P3. We investigate these patterns more completely next in an econometric model of viewer choice of news channel.

Our econometric analysis begins with a simple analysis of the choice between public and private channels in which public is the omitted category. As shown in the first column of Table 6, as voter ideology moves to the right, viewers are more likely to watch private channels, relative to public channels, in 2001. More interestingly, however, is the coefficient on the interaction between voter ideology and the time period in which Berlusconi controls public television. As shown, right-wing viewers, relative to left-wing viewers, are more likely to watch public channels, relative to private channels, after Berlusconi is in control. This is consistent with the content analysis above, which documented increased coverage of politicians from the center-right coalition on public channels after Berlusconi is in control and provides evidence that viewers do have preferences to watch news content with ideology similar to their own.

We next extend the analysis to investigate potential heterogeneity within the public and private networks. In particular, the final five columns of Table 6 presents results from a multinomial logit choice model in which channel P1, which has the largest viewership of the public channels in both periods and whose control shifted from the center-left to the center-right, is the omitted category. Thus, these results can be interpreted as relative to P1. As shown, right-wing voters were much more likely to watch any of the private channels relative to channel P1, prior to Berlusconi taking control of the public channels. Within the public channels, left-wing voters were more likely to watch P3 than P1 even prior to Berlusconi taking control. Most interestingly, however, is the interaction between viewer ideology and Berlusconi controlling the public channels. As shown, the ideological gap between B1 and P1 shrinks, but remains positive, after Berlusconi takes control of P1. The ideological gap between P1 and P3, however, increases as P1 becomes less of a substitute for P3 among left-leaning viewers. Taken together, these results are consistent with the content analysis, which demonstrated that channel P1 was a less-extreme version of P3 when under center-left control but was a less-extreme version of B1 when under center-right control.

E. Offset measures

Taken together, the above results provide significant evidence that viewers responded to the changes in content by shifting to channels with ideological content similar to their own ideology. Importantly, however, both the content analysis and this revealed preference analysis suggest that the ideology of channel P1, the public channel controlled by the center-right in 2004, remained to the left of the private channels even after the change in control. These results, combined with the shifting of right-wing viewers to channel P1 and the shifting of left-wing viewers to P3, suggests that the ideological exposure of some viewers actually moved to the *left* following the shift in public control and content to the *right*. This behavioral response and the associated unanticipated effect of exposure moving to the left may substantially offset the direct effect of moving ideological content to the right following the change in partisan control of the public media.

To explore this issue more formally, we define expected ideological consumption for voter v

as follows:

$$E(C_v) = \sum_{s=0}^S \Pr(v \text{ chooses } s) \times \Pr(s \text{ reports } R) \quad (15)$$

Thus, holding viewership probabilities fixed, increases in right-leaning content are associated with increases in expected ideological consumption. Also, we define the percent offset measure, which is fraction of the change in ideological consumption associated with a partisan shift in content that is offset by the behavioral response, as follows:

$$O_v = 1 - \frac{E(C_{v,2004}) - E(C_{v,2001})}{E(C_{v,2004}^{\text{no switch}}) - E(C_{v,2001})} \quad (16)$$

where $E(C_{v,2004}^{\text{no switch}})$ uses 2004 station ideology but 2001 choice probabilities. To interpret this percent offset measure, consider two extreme cases. First, if there is no behavioral response, then, $E(C_{v,2004}^{\text{no switch}}) = E(C_{v,2001})$ and percent offset will equal 0. On the other hand, if the behavioral response is complete in the sense that ideological exposure does not change, then $E(C_{v,2004}) = E(C_{v,2001})$ and percent offset will thus equal 1.

In terms of measuring $E(C_v)$, we use 2001 and 2004 predicted probabilities from the multinomial logit in order to estimate viewership probabilities for each channel. Also, using the fact that $\Pr(s \text{ reports } R) = \Phi\left(\frac{i_s - \mu}{\sqrt{\alpha\sigma_q}}\right) = \lambda_s/\beta$, we can estimate reporting probabilities up to a scale by the channel-specific coefficients from the multinomial logit.²⁰

Figure 5 provides the results from this analysis separately by viewer ideology. As shown, the offset is sizable for left-wing viewers, reflecting the shift from P1 to P3 for many of these viewers. While significant, the offset is incomplete since many left-wing viewers watched P1 in both 2001 and 2004, following its shift to the right. The percent offset, by contrast, is small for center-left voters. This reflects the fact that fewer of these viewers shifted from P1 to P3. Comparing center-left to center, however, the percent offset increases, reflecting the fact that more of these viewers were watching B1 prior to 2004 and switched to P1 in 2004. For center-right and right-wing voters, the effects associated with the shift from B1 to P1 are very significant. For the extreme right, this shift almost completely offset the change in content on channel P1. In addition to the shifting from B1 to P1, this large offset also reflects the fact that relatively few of these viewers were watching P1 in 2001 and thus the direct effect of moving content to the right was relatively small.

F. Trust analysis

To provide further support for our assumption that viewer choice of like-minded news stations is based upon receiving better information, we next analyze questions in the survey regarding media credibility and trust in the media. In particular, we investigate the relationship between political ideology in 2001 and trust in public and private television in both 2001 and 2004. As shown in the top panel of Figure 6, trust in public television is higher in 2001 than in 2004 among left-of-center voters, those whose self-reported ideology in 2001 was 1 or 2 on a 5-point scale. For

²⁰This scaling parameter disappears when computing our percentage offset measures given by O_v .

centrist viewers, trust in public television is similar in 2001 and 2004. For right-of-center voters, by contrast, trust in public television is higher in 2004 than in 2001. These patterns are consistent with the content analysis, which documented a shift to the right in public news content in 2004, and with the choice analysis, which documented an increase in public viewership among right-leaning viewers in 2004. As shown in the bottom panel, overall trust in Berlusconi's channels fell between 2001 and 2004. The relationship between ideology and trust in Berlusconi's channels, however, was relatively stable in 2001 and 2004, with trust increasing as ideology moves to the right. If anything, the documented decline in trust was strongest among right-leaning voters.

To test for the statistical significance of these results, Table 7 provides results from a regression of trust on political ideology in which the coefficient is allowed to vary between 2001 and 2004. As shown in the first column, trust in the public channels is decreasing in ideology in 2001 but this effect disappears in 2004, a period in which there was little or no relationship between trust in the media and political ideology. As shown in the second column, the interaction between political ideology and trust in the private channels is positive in both 2001 and 2004. Finally, the third column demonstrates that trust in public, relative to private, increased significantly for right-leaning viewers, relative to left-leaning viewers. Taken together, these results provide additional support for our informational interpretation of the changes in viewership following shifts in partisan control of media content.

VI. CONCLUSION

This paper investigates partisan control of the media in the context of Berlusconi's Italy. We find that a shift in control of the public media from the center-left coalition to the center-right coalition led to a shift in ideological content, as expressed in speaking time devoted to politicians from different parties, from the left to the right. We also find that viewers responded to these changes in a variety of ways. First, many viewers changed their choice of news program in response. Right-wing viewers switched to public television, which moved to the right despite remaining to the left of private television in terms of ideological content. Some left-wing viewers, by contrast, abandoned the majority-controlled channel P1 and switched to the left-leaning channel P3. The degree of this shifting was sufficiently strong that the ideological consumption of news among some groups of viewers was little changed following the change in control of channel P1. Second, left-leaning viewers reduced their trust in public television, while right-leaning increased their trust. Taken together, these results demonstrate that partisan control of the media does lead to biased coverage but that viewers are sufficiently sophisticated that they respond to these changes in a variety of ways, thereby offsetting, at least in part, the direct effect of the manipulation of the news by the majority party.

APPENDIX

Major Italian Political Parties (2001-2007)

Party	Coalition
Forza Italia	Center-Right
Alleanza Nazionale	Center-Right
Unione di Centro ¹	Center-Right
Lega Nord	Center-Right
Movimento per l'Autonomia	Center-Right
Nuova Democrazia Cristiana	Center-Right
Nuovo Partito Socialista Italiano	Center-Right
Partito Repubblicano Italiano	Center-Right
Democratici di Sinistra ²	Center-Left
La Margherita ^{3,4}	Center-Left
Rifondazione Comunista	Center-Left
Partito dei Comunisti Italiani	Center-Left
Verdi	Center-Left
Italia dei Valori ⁵	Center-Left
La Rosa nel Pugno	Center-Left
Sinistra Democratica	Center-Left
Socialisti Democratici Italiani ⁶	Center-Left
UDEUR	Center-Left
Socialisti Craxi	Center-Left
Südtiroler Volkspartei	Center-Left
Alternativa Sociale	Independent
Azione Sociale	Independent
MSI Fiamma Tricolore	Independent
Democrazia Europea	Independent ⁷
I Radicali ⁸	Independent
Partito dei Pensionati	Variable ⁹

¹ Previously Centro Cristiano Democratico (CCD), Cristiano Democratici Uniti (CDU).

² From October 2007 merged into Partito Democratico

³ Previously Partito Popolare Italiano (PPI), "I Democratici", and Rinnovamento Italiano.

⁴ From October 2007 merged into Partito Democratico.

⁵ Previously "Lista Occhetto-Di Pietro".

⁶ From November 2006 merged into the "Rosa nel Pugno".

⁷ Not affiliated with any major political coalition until December 2006 when it merged into the UDC.

⁸ From November 2006 merged into the "Rosa nel Pugno".

⁹ Part of the Center-Left coalition from February 2006 to November 2007 when it joined the Center-Right coalition.

ITANES 2001-04 Panel Survey – Relevant Questions

Politica Self-Identification

Question: In political matters people talk of “the left” and “the right”. In this card there is a row of cells going from the left to the right. Thinking about your political opinions, where would you place yourself?

Left									Right
A	B	C	D	E	F	G	H	I	L

Does not want to place him/herself

Don't know

No answer

TV News Consumption

Q.: Do you usually watch news programs? If so, how often?

No, never

Less than once a week

1 day a week

2 days a week

3 days a week

4 days a week

5 days a week

6 days a week

Every day

No answer

Favorite TV News Program

Q.: Which news program do you usually watch most?

Tg1 (RAI1)

Tg2 (RAI2)

Tg3 (RAI3)

Tg4 (Rete 4)

Tg5 (Canale 5)

Studio Aperto (Italia 1)

TMC News

Local news program

Other news program

Trust

Q.: Please tell me how much you trust each of the following institutions (i.e. very much, some what, little, not at all)

		Very much	Somewhat	A little	Not at all	Don't know	No answer
1	Parliament	1	2	3	4	9	-1
2	Political Parties	1	2	3	4	9	-1
3	President of the Republic	1	2	3	4	9	-1
4	Catholic Church	1	2	3	4	9	-1
5	Armed Forces	1	2	3	4	9	-1
6	Judiciary	1	2	3	4	9	-1
7	Press	1	2	3	4	9	-1
8	RAI-TV	1	2	3	4	9	-1
9	Mediaset TV Stations (Canale5, Rete4, Italia1)	1	2	3	4	9	-1
10	Trade Unions	1	2	3	4	9	-1
11	Police and Carabinieri	1	2	3	4	9	-1
12	Public Administration	1	2	3	4	9	-1
13	Confindustria (Business' union)	1	2	3	4	9	-1
14	European Union	1	2	3	4	9	-1

Perception of partisan bias

Q.: Have you had the impression that the news program you watch the most is in favor of one of the political coalitions?

Yes

No

Don't know

If yes

Q.: In favor of which one?

Center-Left

Center-Right

REFERENCES

- Baron, D. P., *Persistent Media Bias*, Journal of Public Economics, January 2006, vol. 90, n.1-2, pp.1-36.
- Besley, T., Prat, A., *Handcuffs for the Grabbing Hand? Media Capture and Government Accountability*, American Economic Review, June 2006, vol. 96, n.3, pp. 720-736.
- Centro Studi Investimenti Sociali (CENSIS), *Le diete mediatiche degli italiani nello scenario europeo*, Sesto Rapporto Censis-Ucsi sulla comunicazione in Italia, October 2006.
- Della Vigna,S., Kaplan, E., *The Fox News Effect: Media Bias and Voting*, Quarterly Journal of Economics, 2007, vol. 122, n. 3, pp. 1187-1234.
- Diamanti, I., Bordignon, F., Ceccarini, L., *Gli italiani e l'informazione.*, XVI Osservatorio sul Capitale Sociale degli Italiani, November 2007.
- Djankov,S., McLiesh, C., Nenova,T., Shleifer,A., *Who Owns the Media?*, The Journal of Law and Economics, 2003, vol. 46, n.2, pp. 341-382.
- Gentzkow, M., Shapiro, J. M., *What Drives Media Slant? Evidence from U.S. Daily Newspapers*, NBER Working Papers #12707, November 2006
- Gentzkow, M., Shapiro, J. M., *Media Bias and Reputation*, Journal of Political Economy, 2006, vol. 114, n.2, pp. 280-316.
- Gentzkow, M., Glaeser, E. L., Goldin, C.,*The Rise of the Fourth Estate: How Newspapers Became Informative and Why It Mattered*, NBER Working Papers #10791, September 2004.
- George, L. M., Waldfogel, J., *The New York Times and the Market for Local Newspapers*, American Economic Review, 2006, vol. 96, n. 1, pp. 435-447.
- Gerber, A., Karlan, D. S., Bergan, D., *Does the Media Matter? A Field Experiment Measuring the Effect of Newspapers on Voting Behavior and Political Opinions*, American Economic Journal: Applied Economics, forthcoming..
- Glasser, T.L. Allen, D.S., Banks, S.E., The Influence of Chain Ownership on News Play: A Case Study, Journalism Quarterly, 1989, vol. 66, n. 3, pp.607-614.
- Groseclose,T., Milyo,J., *A Measure of Media Bias*, Quarterly Journal of Economics, 2005, vol. 120, n. 4, pp. 1191-1237.
- Istituto Nazionale di Statistica (ISTAT), *L'uso dei media e del cellulare in Italia*, Informazioni, 2008, n.2.

Mullainathan, S., Shleifer, A., *The Market for News*, American Economic Review, September 2005, vol. 95, n. 4, pp. 1031-1053.

Prat, A., Strömberg, D., *Commercial Television and Voter Information*, CEPR Discussion Paper # 4989, April 2005.

Pritchard, D., *Viewpoint Diversity in Cross-Owned Newspapers and Television Stations: A Study of News Coverage of the 2000 Presidential Campaign*”, FCC Report, Media Ownership Working Group Study n. 2, 2002.

Puglisi, R., Snyder, J., *Media Coverage of Political Scandals*, NBER Working Papers #14598, December 2008.

J., Reuter, J., Zitzewitz, E., *Do Ads Influence Editors? Advertising and Bias in the Financial Media*, Quarterly Journal of Economics, 2006, vol. 121, n. 1, pp. 197-227.

Snyder, J., Stromberg, D., *Press Coverage and Political Accountability*, NBER Working Papers #13878, March 2008.

Suen, W., *The Self-Perpetuation of Biased Beliefs*, The Economic Journal, 2004, vol. 114, April, pp. 377–396.

Figure 1. Majority vs. Opposition Share of Total Speaking Time by Group

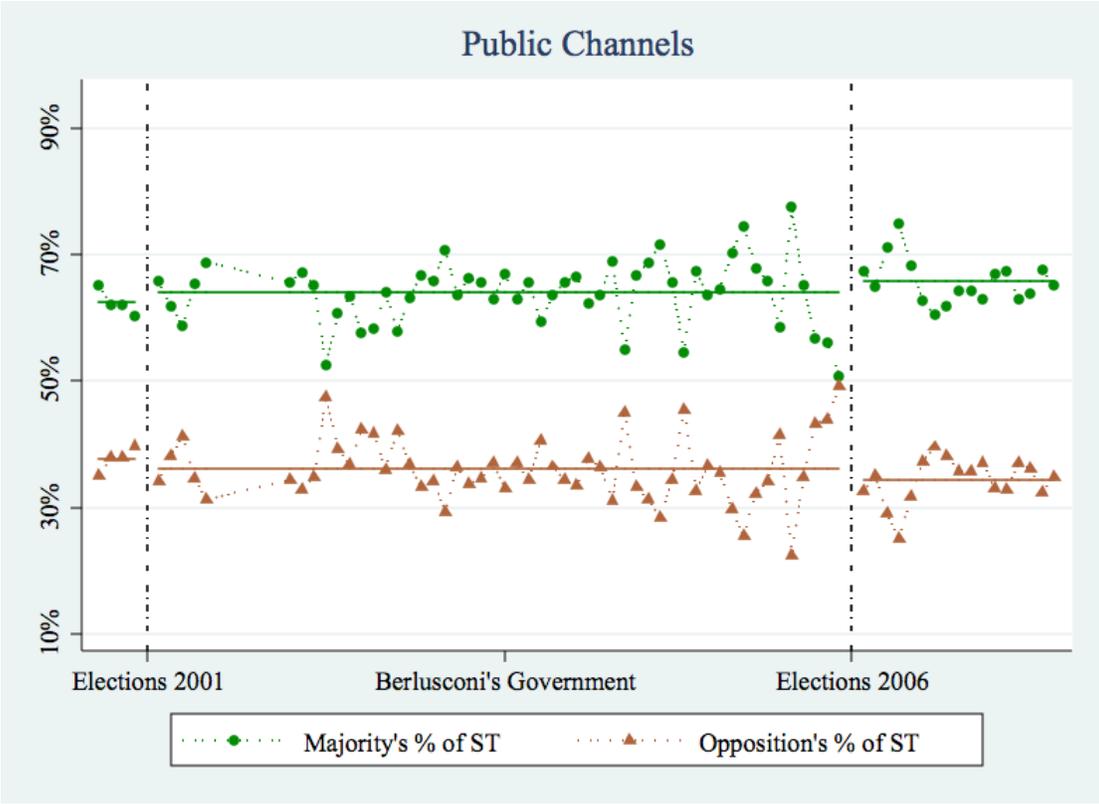
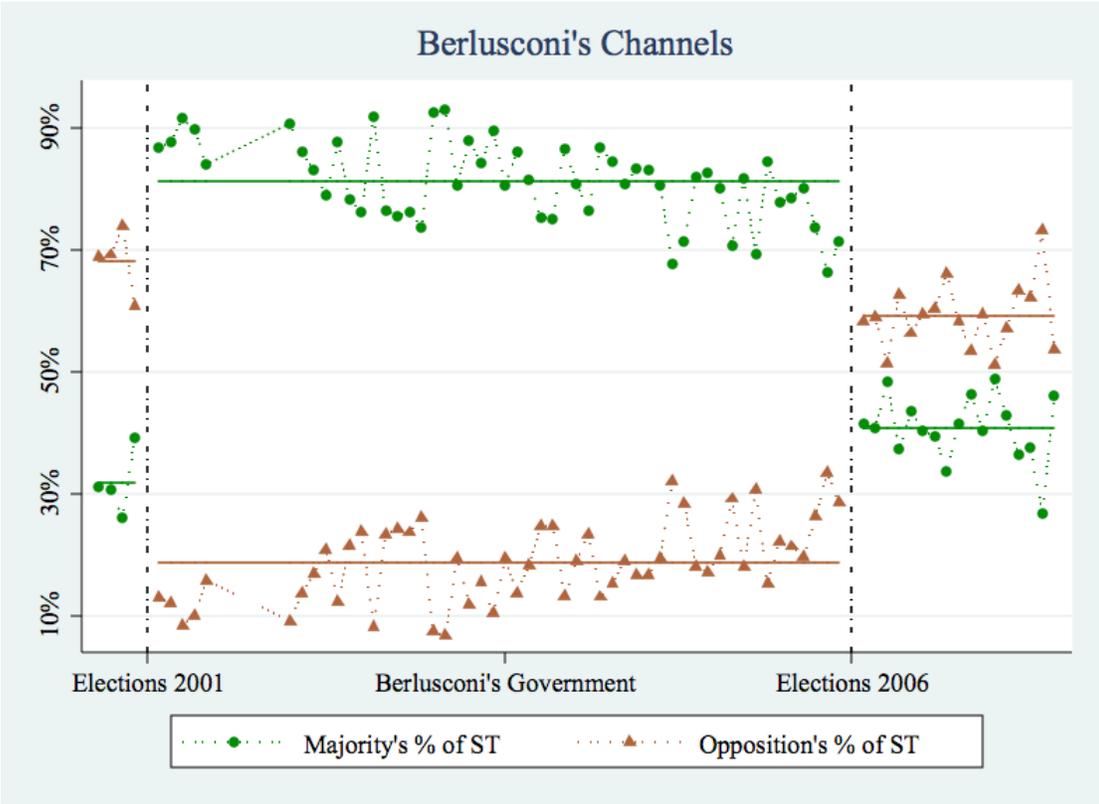


Figure 2. Majority vs. Opposition Share of Total ST by Channel (Mediaset)

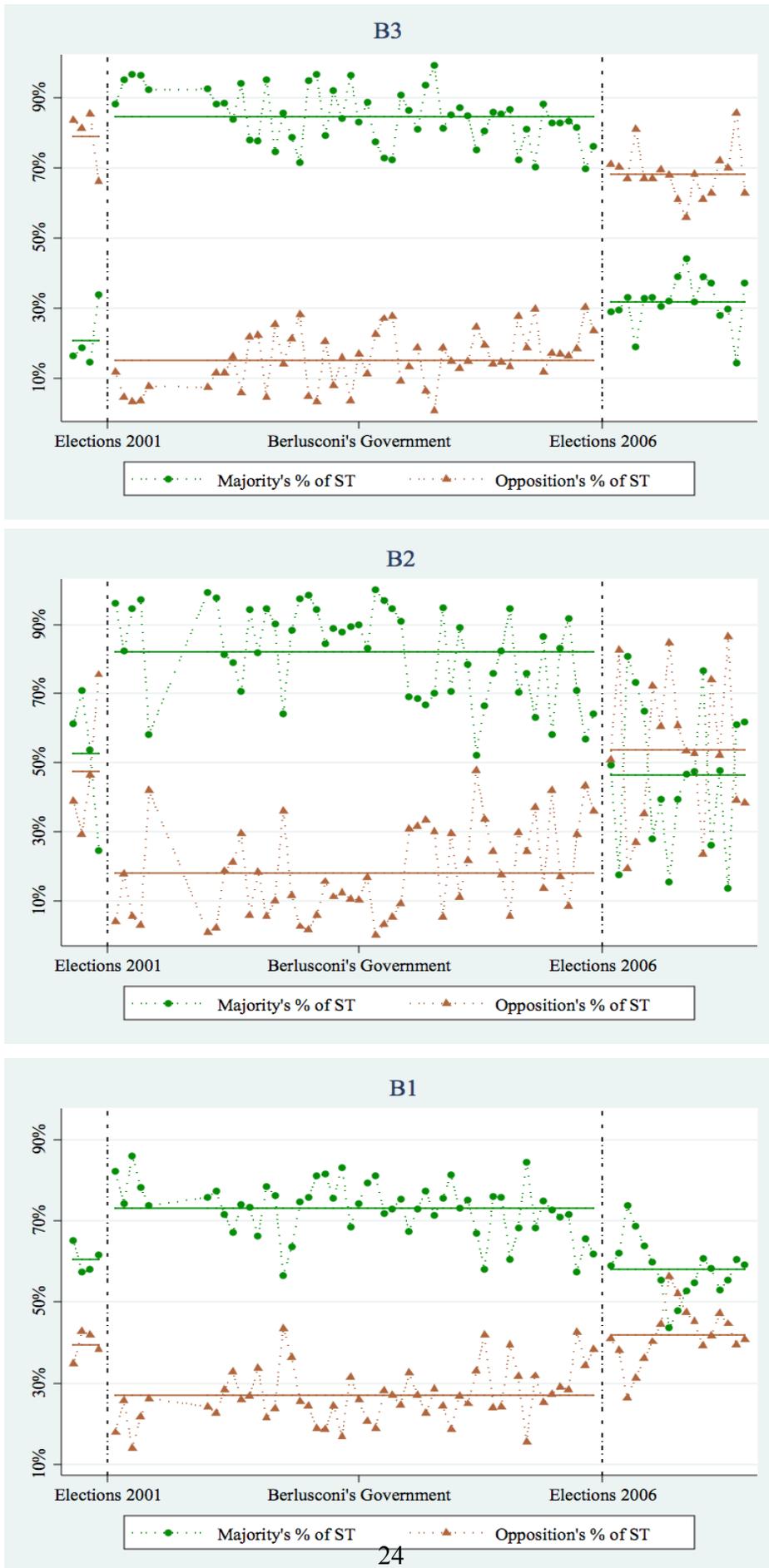
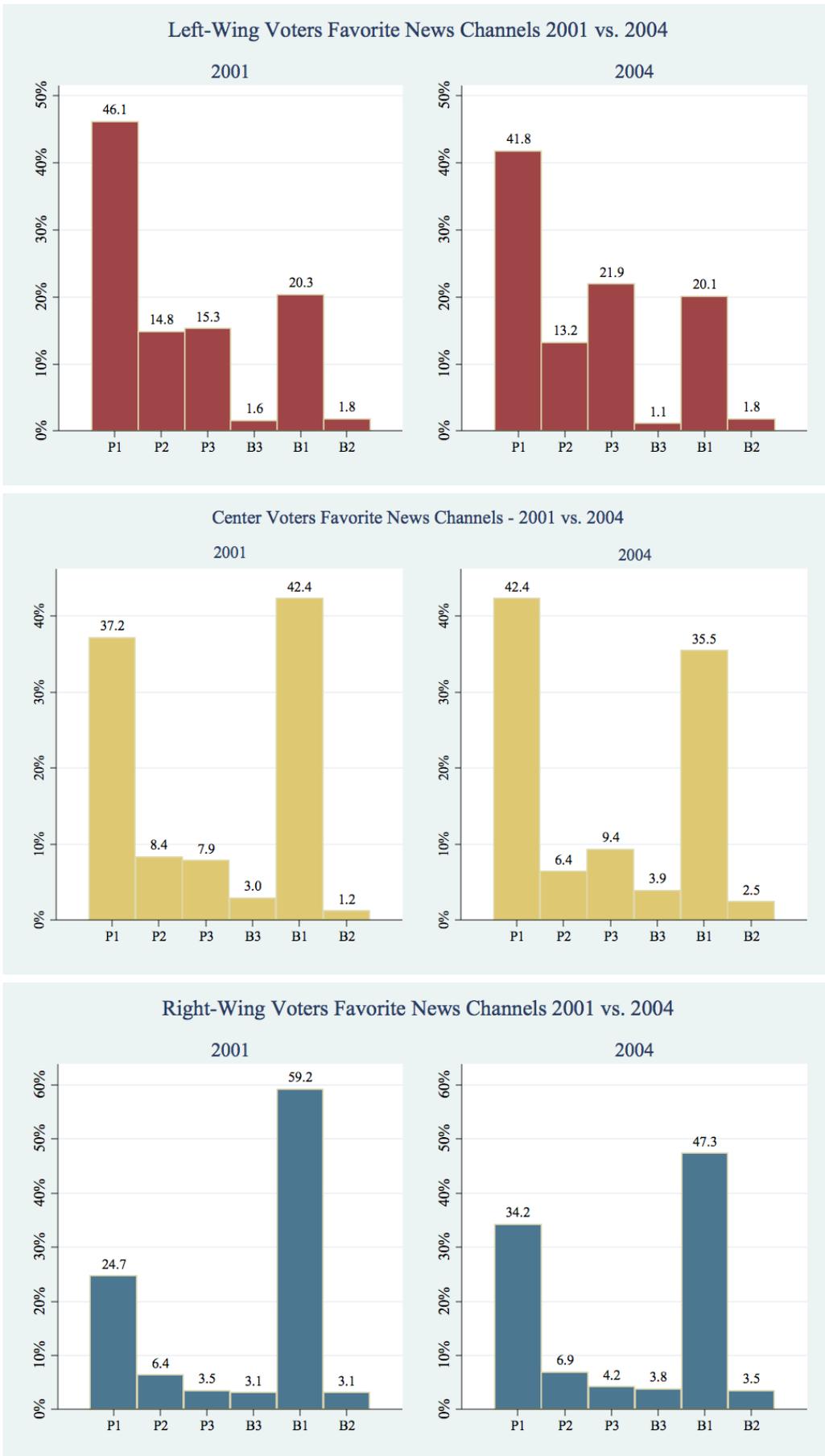


Figure 3. Majority vs. Opposition Share of Total ST by Channel (RAI)



Figure 4. Favorite News Channel by Political ID (2001-2004)



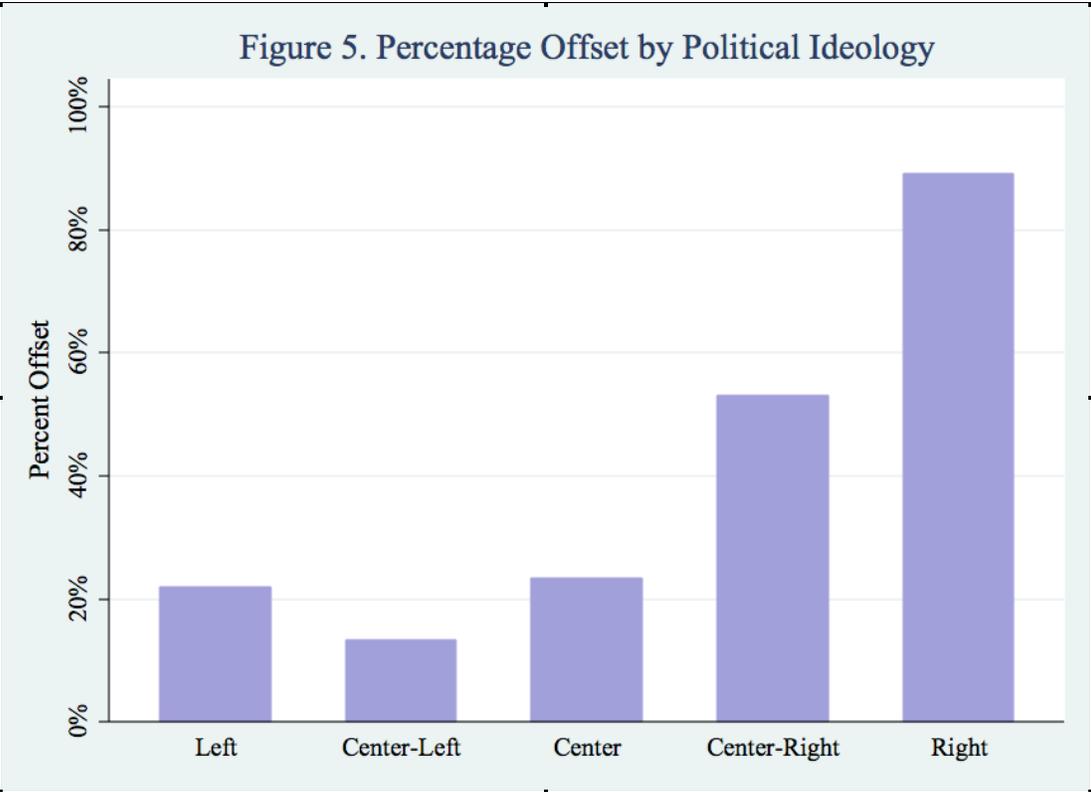


Figure 6. Trust in Public and Berlusconi's Channels by Political ID (2001-2004)

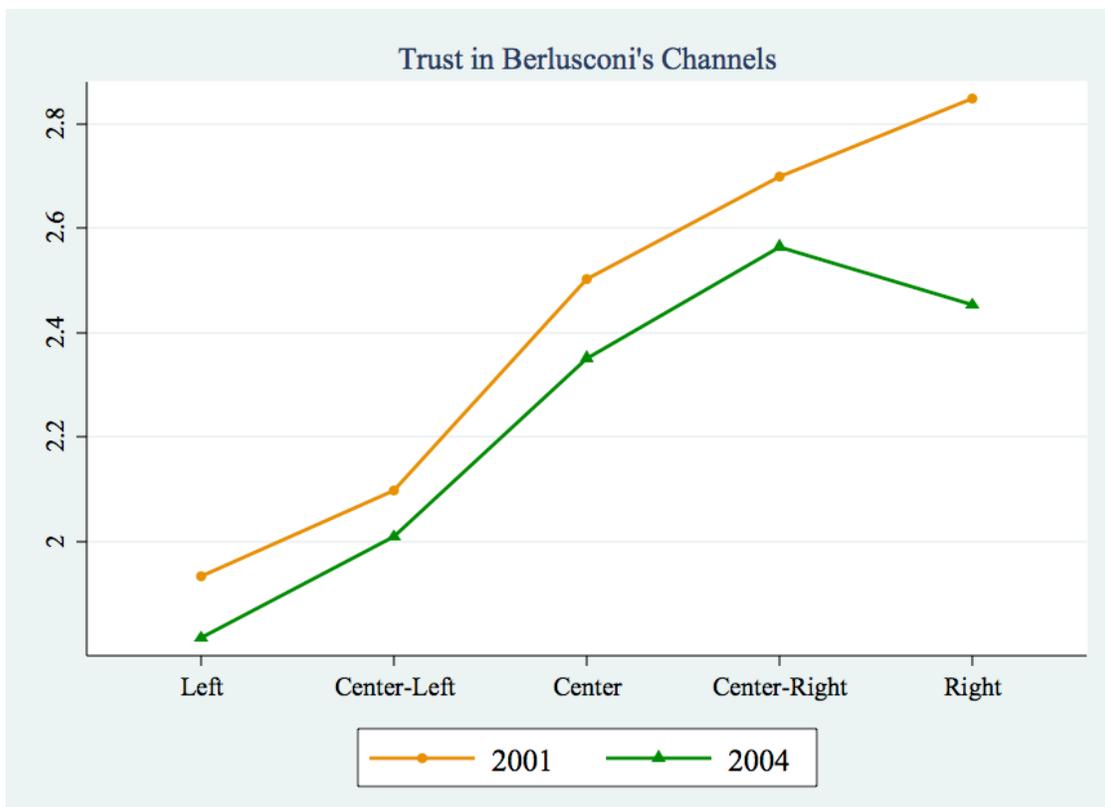
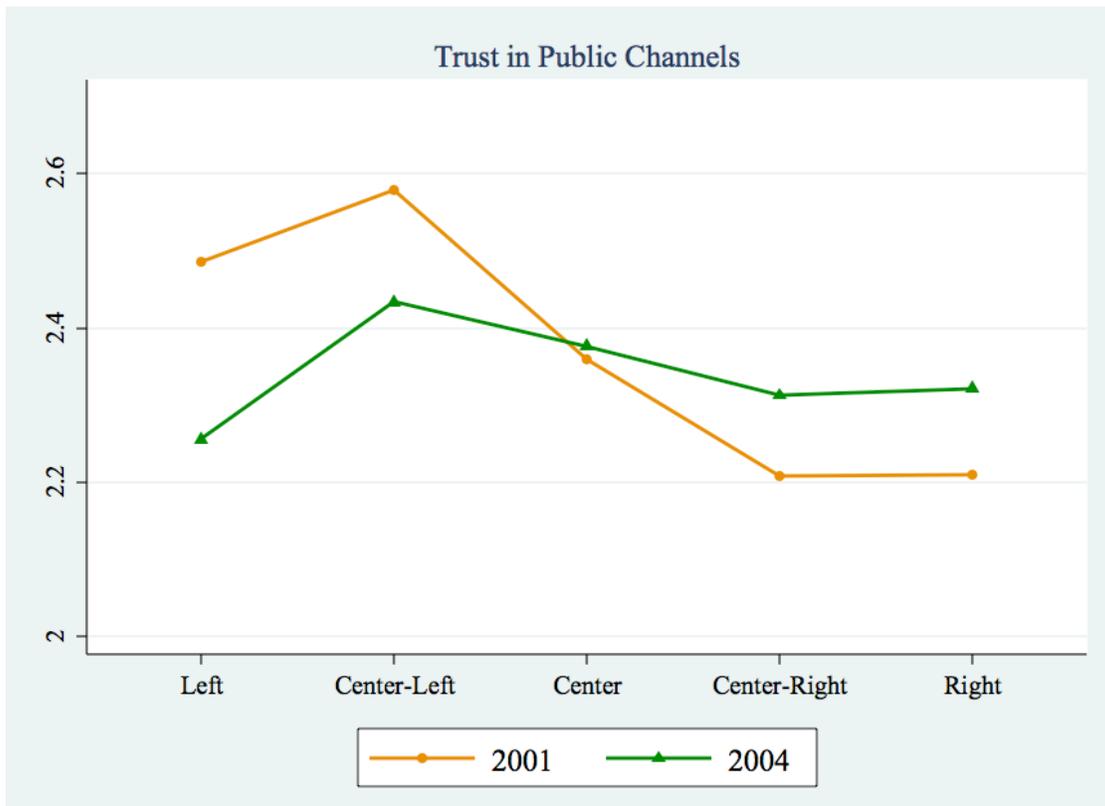


Table 1. Public TV - News Directors (2000-2007)

P1 (Channel 1)	
<i>June 2000</i>	G. Lerner (Center-Left)
<i>October 2000</i>	A. Longhi (Center-Left)
<i>2001 Elections</i>	
<i>April 2002</i>	C.Mimum (Center-Right)*
<i>2006 Elections</i>	
<i>September 2006</i>	G. Riotta (Center)
P2 (Channel 2)	
<i>1994-2002</i>	C.Mimum (Center-Right)*
<i>April 2002</i>	M. Mazza (Center-Right)
P3 (Channel 3)	
<i>1998-2000</i>	E. Chiodi (Center-Left)
<i>June 2000</i>	A. Rizzo Nervo (Center-Left)
<i>July 2001</i>	A. Di Bella (Center-Left)

* From 1991 to 1994 and after July 2007 served respectively as deputy director and director of Berlusconi's Channel 5 News.

Table 2. Distribution of Total Speaking Time by Group and Channel

Dependent variables: Share of Total Monthly Speaking Time

	Majority	Majority	Right	Right
<i>Berlusconi_Gov</i>			0.284*** [0.019]	0.340*** [0.013]
<i>Public Channels</i>	0.661*** [0.019]			
<i>Berlusconi_Gov * P. Channels</i>	0.000 [0.009]			
<i>Berlusconi's Channels</i>	0.471*** [0.026]		0.191*** (0.014)	
<i>Berlusconi_Gov * B.'s Channels</i>	0.346*** [0.020]		-0.035** (0.017)	
<i>B1</i>		0.604*** [0.020]		0.066*** (0.010)
<i>Berlusconi_Gov * B1</i>		0.144*** [0.017]		-0.027** (0.013)
<i>B2</i>		0.493*** [0.052]		0.177*** (0.042)
<i>Berlusconi_Gov * B2</i>		0.345*** [0.050]		-0.048 (0.045)
<i>B3</i>		0.315*** [0.027]		0.355*** (0.022)
<i>Berlusconi_Gov * B3</i>		0.549*** [0.021]		-0.199*** (0.025)
<i>P1</i>		0.671*** [0.020]		
<i>Berlusconi_Gov * P1</i>		0.038*** [0.012]		
<i>P2</i>		0.605*** [0.020]		0.066*** (0.007)
<i>Berlusconi_Gov * P2</i>		0.127*** [0.012]		-0.042*** (0.010)
<i>P3</i>		0.709*** [0.019]		-0.038*** (0.006)
<i>Berlusconi_Gov * P3</i>		-0.164*** [0.011]		-0.126*** (0.011)
<i>Constant</i>			0.554*** [0.028]	0.354*** (0.022)
Observations	438	438	438	438
R-squared	0.974	0.986	0.644	0.808

Calendar month fixed effects included. Public Channels is the base outcome in Column 3; P1 (Channel 1) is the base outcome in column 4. Robust standard errors in brackets; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 3. Distribution of Majority Speaking Time among Different Members of the Ruling Coalition

Dependent Variables: Share of Majority Speaking Time

	Government	Prime Minister	Others in Government	Majority Parties MPs	Speakers
B1	0.528*** [0.058]	0.117*** [0.037]	0.399*** [0.039]	0.439*** [0.056]	0.036*** [0.010]
Berlusconi_Gov * B1	0.085** [0.036]	0.107*** [0.026]	-0.010 [0.030]	-0.083** [0.036]	-0.008 [0.007]
B2	0.487*** [0.065]	0.170*** [0.055]	0.321*** [0.054]	0.467*** [0.058]	0.050*** [0.019]
Berlusconi_Gov * B2	0.109* [0.056]	0.169*** [0.054]	-0.066 [0.057]	-0.067 [0.052]	-0.049*** [0.016]
B3	0.180*** [0.052]	0.011 [0.032]	0.178*** [0.037]	0.816*** [0.052]	0.004 [0.009]
Berlusconi_Gov * B3	0.493*** [0.030]	0.400*** [0.029]	0.079*** [0.027]	-0.482*** [0.031]	-0.014** [0.007]
P1	0.467*** [0.053]	0.139*** [0.033]	0.329*** [0.036]	0.491*** [0.053]	0.047*** [0.010]
Berlusconi_Gov * P1	0.063** [0.026]	-0.026 [0.018]	0.086*** [0.022]	-0.097*** [0.027]	0.028*** [0.008]
P2	0.397*** [0.054]	0.130*** [0.034]	0.274*** [0.037]	0.570*** [0.053]	0.036*** [0.009]
Berlusconi_Gov * P2	0.114*** [0.031]	-0.028 [0.020]	0.133*** [0.025]	-0.142*** [0.033]	0.022*** [0.007]
P3	0.448*** [0.052]	0.128*** [0.035]	0.332*** [0.035]	0.511*** [0.052]	0.046*** [0.009]
Berlusconi_Gov * P3	0.017 [0.030]	-0.023 [0.020]	0.025 [0.022]	-0.044 [0.031]	0.020** [0.008]
Observations	438	414	414	438	426
R-squared	0.947	0.820	0.884	0.890	0.792

Calendar month fixed effects included. Robust standard errors in brackets; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 4. Distribution of Coverage across News Categories (by Group)

Dependent Variable: Share of Total Weekly News Reports

	World News	Labor & Social Issues	Crime & Security	Politics
Public	0.062*** [0.002]	0.015*** [0.001]	-0.033*** [0.002]	0.028*** [0.001]
Constant	0.133*** [0.001]	0.034*** [0.001]	0.185*** [0.001]	0.049*** [0.001]
Observations	340	340	340	340
Number of weeks	170	170	170	170
R-squared	0.860	0.550	0.540	0.730

Base outcome: Berlusconi's Channels. Robust standard errors in brackets; *** $p < 0.01$, ** $p < 0.05$, * $p < 0$.

Table 5. Distribution of Coverage across News Categories (by Channel)

Dependent Variable: Share of Total Weekly News Reports

	World News	Labor & Social Issues	Crime & Security	Politics
B2	-0.047*** [0.003]	-0.010*** [0.001]	0.065*** [0.004]	-0.021*** [0.001]
B3	-0.001 [0.003]	0.006*** [0.002]	-0.031*** [0.004]	0.021*** [0.002]
P1	0.039*** [0.002]	0.006*** [0.001]	-0.012*** [0.003]	0.028*** [0.002]
P2	0.033*** [0.003]	0.006*** [0.001]	-0.012*** [0.003]	0.019*** [0.001]
P3	0.071*** [0.003]	0.029*** [0.002]	-0.046*** [0.003]	0.037*** [0.002]
Constant	0.150*** [0.002]	0.035*** [0.001]	0.175*** [0.002]	0.049*** [0.001]
Observations	983	983	983	983
Number of weeks	170	170	170	170
R-squared	0.700	0.420	0.610	0.580

Base outcome: B1 (Channel 5). Robust standard errors in brackets; *** $p < 0.01$, ** $p < 0.05$, * $p < 0$.

Table 6. Favorite News Channel by Political Ideology (2001 vs. 2004)

Dependent variable: Favorite News Channel

	Private Channels	B1	P3	P2	B2	B3
Political Ideology	0.708*** [0.059]	0.641*** [0.064]	-0.347*** [0.105]	-0.100 [0.098]	0.529** [0.207]	0.537*** [0.184]
2004*Political Id.	-0.173*** [0.061]	-0.223*** [0.071]	-0.223* [0.123]	-0.060 [0.116]	-0.135 [0.231]	-0.070 [0.201]
Observations	2756	2756	2756	2756	2756	2756
Log Likelihood	-1603	-3288	-3288	-3288	-3288	-3288
Pseudo-R square	0.147	0.134	0.134	0.134	0.134	0.134

Column 1 base outcome: Public channels. Other columns base outcome: P1 (Channel 1).

The following controls and their respective interaction with the 2004 dummy are included: gender, education, age, occupational status, social class, church attendance, index of political knowledge, TV exposure, regional fixed effects.

Robust standard errors in brackets; * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 7. Trust in Public and Berlusconi's TV (2001 vs. 2004)

Dependent variable: Self-Reported Level of Trust (1-4)

	Trust Public	Trust Berlusconi	Trust Public - Trust Berlusconi
Political Self-ID	-0.125*** [0.016]	0.229*** [0.017]	-0.355*** [0.021]
2004*Political Self-ID	0.102*** [0.021]	-0.032 [0.021]	0.135*** [0.026]
Observations	2721	2701	2701
R-squared	0.069	0.183	0.177

The following controls and their respective interaction with the 2004 dummy are included in the regressions : gender, education, age, occupational status, social class, church attendance, index of political knowledge, TV exposure, regional fixed effects.

Robust standard errors in brackets; * significant at 10% ; ** significant at 5% ; *** significant at 1% .