National Content and Local Political Consequences: Evidence from Public and Private Television [†]

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We examine the impact of public versus private television content on political engagement and accountability during the initial rollout of Canada's television network in the early 1950s. A policy prohibiting market competition restricted districts to receiving either public or private programming, but never both. While both station types aired the public broadcaster's national service, private stations bundled this content with local news. We find that exposure to the public broadcaster reduced voter turnout by 2.1 percentage points relative to districts without television, while engagement in private television districts remained indistinguishable from pre-television levels. This lack of engagement weakened re-election incentives and increased the incumbency advantage. Consequently, incumbents in public districts spoke less about their constituencies in parliament and demonstrated greater party loyalty in roll-call votes—results consistent with a significant reduction in political accountability.

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1 Introduction

Before the arrival of television, newspapers were the primary medium for political news, offering locally focused, information-rich content that fostered political engagement and accountability (e.g., Snyder and Strömberg, 2010; Gentzkow et al., 2011; Drago et al., 2014). Television disrupted this model by nationalizing news coverage and reducing the overall volume of informational content, in part by shifting emphasis toward entertainment (Hopkins, 2018; Angelucci et al., 2024). This dual transformation—the nationalization of media content and the decline of information-rich content—led to a sharp drop in political participation following the advent of television (Gentzkow, 2006; Campante and Hojman, 2013; Ellingsen and Hernæs, 2018). While the political consequences of these combined changes in television content are well understood, isolating the effects of each remains an empirical challenge crucial for identifying the causal mechanisms behind political participation.

In this paper, we focus our analysis on Canada, where television first went to air in September 1952. Within just two years, 75 percent of the population lived within range of a television signal, and by 1958, more than 90 percent of Canadians had access to the nationwide television network (Peers, 1979; Cole, 2002). The remarkable rate of this coast-to-coast expansion was made possible by two key aspects of the institutional environment: a shared network of public and private broadcasters, and a "single-station policy" that prevented the expansion of both public and private television into the same market. This institutional arrangement ensured that television reached new markets before competition was introduced, implying that citizens received either public or private television—but never both.

Importantly for our empirical design, public and private stations aired distinct informational content. The public broadcaster's mandate was to provide a national service fostering a shared Canadian consciousness and showcasing domestic talent. Consequently, programming was centrally produced in Toronto or Montreal for nationwide distribution during the early development of the national service. By contrast, private stations aired locally produced news and imported third-party programming alongside a mandated minimum of the national service (Royal Commission on Broadcasting, 1957).

This institutional environment provides a unique opportunity to isolate the effects of media content by comparing citizens with access to the same medium—television—but exposed to only a public or a private broadcaster. We leverage television reception contours estimated from archival transmitter records and newly digitized electoral maps to evaluate two main domains: voter turnout and the responsiveness of elected members of Parliament (MPs).

First, we find that exposure to public television is associated with lower voter engagement and a reduced local orientation in parliamentary discourse among elected representatives. We estimate that exposure to the public broadcaster reduced voter turnout by 2.1 percentage points, while engagement levels in districts with private television remained indistinguishable from pre-television levels. This local disengagement among the electorate is mirrored by the behavior of their representatives. Text analysis of the universe of floor speeches shows that MPs in public but not private districts shifted their focus away from local constituency issues. Together, these findings reveal divergent political effects of public and private television, consistent with informational content playing a central role.

These divergent outcomes may reflect the relative scarcity of local political information on public television, which raised the costs of local engagement for voters. Individual-level survey data from the

Canadian Election Study support this mechanism: respondents in public television districts were significantly less likely to discuss politics with others, campaign for local candidates or contact constituency representatives compared to those in private districts. This divergence suggests that locally oriented programming helped preserve engagement levels that were otherwise eroded by the arrival of the medium.

We acknowledge that the distinction between public and private broadcasters necessarily represents a bundle of institutional treatments. However, the historical record indicates that the geographic orientation of news content was the primary distinction between the two. Consistent with this institutional history, we systematically evaluate several alternative channels established in the literature. We find that total airtime devoted to information, political slant and the local newspaper environment remain balanced across broadcaster types. While these checks point to geographic orientation as our preferred explanation, we cannot rule out other latent factors inherent to the public-private divide that may also contribute to the observed differential such as differences in broadcasting style.

Next, we test whether the observed shifts in MP rhetoric reflect a genuine change in political accountability or merely cheap talk by analyzing legislative voting behavior. In parliamentary systems, MPs face strong incentives to support the party line even at the expense of constituency interests. We find that MPs elected in districts served by public television were significantly more likely to vote along party lines than those in private districts with an effect size of approximately one standard deviation. This suggests that the withdrawal of the electorate in public television districts diminished the electoral incentives for representatives to remain responsive to local concerns.

Finally, we investigate this weakened alignment between constituents and their representatives by examining electoral competitiveness. We find that television increased the value of incumbency only in districts served by the public broadcaster. This is consistent with a reduction in competition where nationalized content lowered voter knowledge of local challengers. Notably, our findings on MP behavior are robust to specifications leveraging within-incumbent variation. This suggests that the selection of different "types" of politicians is unlikely to be the primary explanation and that incumbent MPs appear to respond to diminished re-election incentives by prioritizing party loyalty over constituency service. Ultimately, this broader pattern of divergence suggests that the political effects of television are shaped by the content of its broadcast.

To interpret these findings as causal, we overcome two key empirical challenges. The first challenge results from the non-random expansion of the television network: factors that determine the timing and location of television transmitter installations (e.g., population density) may correlate with our political outcomes of interest. We account for the non-random timing of a district's exposure to television with a measure of expected signal strength. Based on the insights of Borusyak and Hull (2023), we model the data generating process of the television network expansion, accounting for the correct number of active transmitters and their sampling probability in a given election year. The result is a new distribution of television reception contours based on the expectation of a signal, which closely, but not exactly, matches the distribution of actual signal strength. We generate 500 of these counterfactual networks and calculate the average value of a district's non-randomness in television exposure—its expected signal strength—and include this as a control variable in our empirical model. The intuition of this solution is straightforward: the variation relied on in a regression is the difference between the actual and counterfactual network—signal strength above or below what is expected—and thus an outcome of chance.

The second challenge results from a district's selection into public or private television, where the decision to do so might correlate with regional characteristics that also shape political behavior. We address this issue with electoral district fixed effects and by controlling for district characteristics that we flexibly allow to vary across election cycles. Most importantly, we confirm that, among districts receiving any television signal, both the factors that influenced where stations were built and baseline political outcomes are balanced between those served by public versus private television. This balance is not surprising given the rapid network expansion, which triggered a scramble for private licenses rather than calculated placement based on political prospects. Consistent with this, our estimates for public and private television are insensitive to various subsamples that exclude major cities, capital cities, and densely populated districts—i.e., the locations most likely to be targeted for politically strategic station placement. We also document that most private television stations were licensed to private radio station owners, who upgraded pre-existing radio infrastructure rather than building entirely new transmitters. Any selection into private radio broadcasting prior to our sample period is absorbed by district fixed effects, and our results remain unchanged when we control for the number of private radio stations in a district interacted with election-year fixed effects. Altogether, these findings support our interpretation that the treatment effect of interest is not a by-product of selection.

Related Literature Our findings shed new light on how national media content shapes political behavior, contributing to a broader literature on the political effects of new media technologies.[1] We build on the seminal work of Gentzkow (2006), who shows that the introduction of television in the United States reduced voter turnout by crowding out political information. He argues that, by substituting away from other media with more extensive local political coverage, television reduced the total amount of political information voters received, and shifted attention from local to national content.[2] Angelucci et al. (2024) provide further evidence of this transition, documenting the substitution away from newspapers that followed the entry of television in the U.S., including the nationalization of news content that followed. Related studies on the entry and exit of local newspapers underscore the value of local political coverage for engagement (Gentzkow et al., 2011; Drago et al., 2014), although increased media competition can have the opposite effect if local coverage declines as outlets compete for readership (George and Waldfogel, 2006; Cagé, 2020).

What these studies have in common is that one medium substitutes for another, implying a combined shift in content that poses an identification challenge: television differs from other media not only in its greater focus on entertainment programming, but also in the broader, national orientation of its

[1] For example, television tends to reduce voter turnout (Gentzkow, 2006; Althaus and Trautman, 2008; Campante and Hojman, 2013; Ellingsen and Hernæs, 2018; Angelucci et al., 2024) and shape political allegiance (DellaVigna and Kaplan, 2007; Enikolopov et al., 2011; Martin and Yurukoglu, 2017; Durante et al., 2019; Ash et al., 2024; Firoozi, 2024). The Internet similarly has depressive effects on voter responsiveness (Falck et al., 2014; Gavazza et al., 2019), although the evidence is mixed depending on the context (Miner, 2015; Campante et al., 2018; Donati, 2023), and in some cases elicits participation in the form of protests (Fergusson and Molina, 2019; Enikolopov et al., 2020; Manacorda and Tesei, 2020; Amorim et al., 2022; Enikolopov et al., 2023). Another strand highlights the positive impact of new media technologies on political behavior, particularly from newspapers and radio (Strömberg, 2004b; Snyder and Strömberg, 2010; Gentzkow et al., 2011; Drago et al., 2014; Wang, 2025). This large body of research is supported theoretically by the notion that media matters because it transmits information to voters (Strömberg, 2004a; Chiang and Knight, 2011; Prat and Strömberg, 2013; Abramson and Montero, 2023). The geographic scope of content also has broader implications for democratic accountability, influencing not only political engagement but also outcomes in areas like policing (Mastrorocco and Ornaghi, 2025), social norms (González-Torres, 2023), or the economic fallout experienced by communities following a mass shootings (Brodeur and Yousaf, 2025).

[2] This substitution effect also extends beyond the political realm (see DellaVigna and Ferrara, 2015; Campante et al., 2022).

coverage. These combined changes confound the effect of receiving less *information* with the effect of receiving less *local information*. Our contribution is to isolate the distinct role of local content by leveraging variation among television viewers rather than across media types, providing evidence consistent with Gentzkow's (2006) proposed channel: the crowding out of local political information. As a by-product of this design, we offer generalizable results for both voters and politicians that speak to the nationalization of media content, rather than an effect specific to the entry of television.

Other quasi-experimental studies isolate similar variation in media content. Snyder and Strömberg (2010) leverage differences in local newspaper coverage across U.S. congressional districts, illustrating the value of local information from which the effects of nationalized news can be inferred. Oberholzer-Gee and Waldfogel (2009) exploit the expansion of Spanish-language local news in the U.S. to identify increased participation among Hispanic-Americans, although their results may reflect both the political and cultural relevance of the content to that specific subgroup. Relatedly, Ellingsen and Hernæs (2018) find that adding private television stations to Norway's public network increased news consumption yet crowded out overall political information. While these studies provide important benchmarks, they rely on demographic subgroups or the marginal addition of stations to an existing network. In contrast, the nationwide expansion of the Canadian television network provides a setting characterized by the exclusive exposure to either public or private television. This offers a unique vantage point to study how the orientation of content may impact the general population.[3]

We also build on a strand of literature that links media content to political accountability. Mass media connects voters and politicians through the information it provides, allowing citizens to evaluate political competence and act on that knowledge at the ballot box (Strömberg, 2015). When national news shifts the attention of voters away from their local candidates, the resulting disengagement weakens accountability by distorting how voters perceive and respond to politician performance. While some studies attribute these patterns to a voter selection mechanism (Ferraz and Finan, 2008; Snyder and Strömberg, 2010; Larreguy et al., 2020), our findings suggest a complementary disincentive effect. When voters are exposed to the public broadcaster's nationalized content, their representatives face weaker re-election incentives and become less responsive to their constituents (Besley and Burgess, 2002; Snyder and Strömberg, 2010; Drago et al., 2014; Le Pennec, 2024).[4] Our analysis offers a new lens on political accountability by linking the nationalization of media content to the localism of legislative speech, a pattern we trace through to legislative behavior of MPs, where reduced localism in speech is accompanied by greater party loyalty in roll call voting.

Interestingly, our evidence that nationalized television content amplifies the incumbency advantage contrasts with evidence from the United States, where the nationalization of politics has largely eroded the electoral advantage of incumbents.[5] We attribute this divergence to the parliamentary structure: since national leadership is determined by the aggregate of local contests, nationalized news focuses on

[3] Durante et al. (2019) and Bursztyn et al. (2023) similarly study media content effects by comparing outcomes among television viewers, though in settings where the geographic orientation of content does not vary.

[4] Sustaining re-election incentives may require dynamic monitoring (Bobonis et al., 2016), and with the rise of digital media, some incumbents rely on social media to maintain support among loyal constituencies rather than responding to offline incentives (Bessone et al., 2022).

[5] In the U.S., the nationalization of politics—driven by media consolidation and the substitution of national coverage for local news—limits the ability of voters to evaluate candidates independently of party narratives, thereby encouraging straight-ticket voting (Abramowitz and Webster, 2016; Martin and McCrain, 2019; Moskowitz, 2021; Angelucci et al., 2024).

party leaders at the expense of local candidates. In this environment, the scarcity of local information may leave voters with few ways to evaluate challengers, leading them to default to the incumbent as a familiar heuristic (Prior, 2006; Dal Bó et al., 2009; Jankowski and Müller, 2021). These patterns suggest that nationalized media may undermine political accountability by weakening the informational link between constituents and their representatives.

Finally, we address the non-random placement of television transmitters by developing a measure of expected signal strength. Traditional approaches typically rely on free-space signal decay models, which assume smooth inverse-square distance decay over flat terrain (see Olken, 2009; Enikolopov et al., 2011; Yanagizawa-Drott, 2014; DellaVigna et al., 2014; Adena et al., 2015; Bursztyn and Cantoni, 2016; Wang, 2021, among others). This approach is problematic in our context for two reasons. First, the flat-terrain assumption is likely violated, as transmitters are strategically placed on elevated ground to maximize coverage. Second, free-space models do not account for the fact that transmitters were prioritized near large economic centers, confounding exposure with non-random proximity. Based on the insights of Borusyak and Hull (2023), our expected signal strength measure accounts for this non-random timing of exposure. This allows us to isolate the impact of television reception without relying on restrictive assumptions about the Canadian topography or the endogenous proximity of districts to urban centers.

2 Background

2.1 History of Canadian Broadcasting

Canadian broadcasting developed as a hybrid system, combining elements of the British Broadcasting Corporation's public service model with the commercially driven, market-oriented approach dominant in the United States. This institutional design reflected a strategic response by the federal government to two core challenges: Canada's geographically dispersed population and the cultural influence of American media. Since the earliest days of radio, these challenges featured prominently in parliamentary debates and became central to how the state designed and regulated the national television system. Understanding the context behind television's entry into Canada therefore requires attention to the structural constraints that policymakers faced.

Challenges Canada's vast geography and uneven population distribution posed a fundamental challenge to the development of a cohesive national broadcasting system. Given the high fixed costs of building stations, early private radio broadcasters concentrated in large urban centers where dense audiences promised higher advertising revenues (Royal Commission on Broadcasting, 1957). In contrast, sparsely populated rural areas remained largely underserved due to weak commercial incentives. The profit motive of private broadcasters also tethered Canada culturally to the United States: popular American programs drew larger audiences and higher advertising returns and the cost of licensing American programs was typically less than the cost of producing original Canadian content (Rutherford, 1990).

As legislators confronted these challenges in developing a nationwide television network, Canada's cultural adolescence further stoked fears of American influence, placing national identity squarely in the government spotlight (Armstrong, 2010). Policymakers worried that unregulated television development would replicate the failings of radio broadcasting: a fragmented system that lacked nationwide coverage and relied heavily on American programming. The government concluded that only a publicly led, centrally coordinated system could ensure both rapid national expansion and the sustained production of Canadian programming.[6]

Structure and Policy When the federal government announced its television broadcasting plan in 1949, it emphasized continuity by maintaining the same structural relationship between public and private stations which had governed radio broadcasting (Weir, 1965; Peers, 1979). This relationship was first legislated by the 1932 *Radio Broadcasting Act*, which defined broadcasting in Canada as a public service rather than merely a commercial enterprise and allowed private participation under conditions of public oversight. The 1936 *Broadcasting Act* further institutionalized this mixed public-private model by creating the Canadian Broadcasting Corporation (CBC)—Canada's public broadcaster. The CBC was mandated both to deliver a national programming service and to oversee the broader broadcasting system as its regulator. Privately owned stations were licensed as affiliates of the CBC within this national network, although they retained substantial autonomy.[7] This institutional arrangement remained in place until the passage of the 1958 *Broadcasting Act*, which came just five months after the last election covered in our empirical analysis.

Shortly after announcing its intention to develop a nationwide television network, the federal government appointed the Royal Commission on National Development in the Arts, Letters and Sciences—commonly known as the Massey Commission—to assess the country's cultural needs and recommend principles for regulating radio and television broadcasting (Royal Commission on National Development in the Arts, Letters and Sciences, 1951, p. xii). After two years of extensive public consultation, the Commission's 1951 report warned against permanent dependence on American programming and called for state-sponsored development of Canadian television (Rutherford, 1990). Prime Minister Louis St. Laurent embraced these recommendations, adopting the report as a blueprint for Canadian television policy. The federal government affirmed that broadcasting was a public service essential for national unity and cultural development, mandating the CBC to develop a national programming service as an expression of Canadian identity, a tool for national cohesion and a bulwark against the commercial interests of private broadcasters.

The Single-Station Policy A key innovation in television policy—and central to our empirical design—was the implementation of the single-station policy. Designed in response to the tendency of private radio broadcasters to cluster in densely populated markets, the policy limited each market to a single television station. In a December 1952 address to Parliament, Minister of National Revenue J. J. McCann outlined the government's vision to make a national service available "as widely throughout Canada as is practicable" through cooperation between public and private enterprise. To achieve this rapid expan-

[6]The Minister of Transport Lionel Chevrier explained to the 1953 Special Committee on Broadcasting that American programs were welcome in Canada but it must remain an objective of the government that a substantial portion of television programming be about Canada and produced by Canadians. He underscored this point in defense of the state-sanctioned, national system: "It is perfect nonsense for anyone to suggest that private enterprise in Canada, left to itself, will provide Canadian programs. People who invest their money [. . .] will certainly invest it where it will make the most profit—by importing American programs" (Chevrier, 1953, p. 3011).

[7]Despite their formal affiliation with the CBC, private stations exercised considerable control over programming. The CBC "imposed little control on its affiliates" (Filion, 1996, p. 455). Rutherford (1990) reiterates, "[The CBC] had proved an exceedingly lenient, and generous, master of private television." (p. 60) In fact, an early criticism of the CBC's regulatory authority was an apparent lack of control over the content aired on private stations (Raboy, 1990).

sion without duplicating resources, McCann declared that "no two stations will be licensed at the present to serve the same area" (McCann, 1952, p. 409). The policy's purpose was to extend coverage to as many communities as possible rather than duplicating service in larger cities. Recognizing the substantial cost of establishing a nationwide network, the government also viewed the policy as a means to coordinate the actions of the public broadcaster and its private affiliates. For all the challenges previously discussed, this joint effort was viewed as essential for delivering Canadian content to a truly national audience. The single-station policy similarly remained in place until its repeal by the 1958 *Broadcasting Act*.

2.2 A Nationwide Television Network Expansion

Television broadcasting began in Canada in September 1952, with two public stations launched in Montreal and Toronto under the direction of the CBC. In line with the Massey Commission's recommendations, the federal government prioritized a phased and public-led rollout while also beginning to welcome applications from private broadcasters.

In the months following the announcement, a flood of applications poured in from private interests—mostly radio and newspaper owners (Ellis, 1979). Although the CBC Board of Governors exercised regulatory oversight, it did not have exclusive authority over where public or private stations could be located (Peers, 1979). Reflecting this limited control, private stations ultimately served six of ten provincial capitals during the single-station era despite the CBC's locational advantages in Toronto and Montreal. Licensing procedures for private stations followed norms established in radio: applications were screened for technical feasibility by the Department of Transport, published in the Canada Gazette and subject to public hearings before the CBC Board. The Board's recommendations were then forwarded to the Minister of Transport and finalized by the Governor in Council (Royal Commission on Broadcasting, 1957).

The single-station policy served its intended purpose, leading to rapid, nationwide television expansion. Within two years, television reached 75 percent of Canadian households (Peers, 1979). By 1958, a full coast-to-coast network had been established, reaching approximately 90 percent of Canadians and becoming, at the time, the world's largest television network in geographic coverage (Rutherford, 1990; Cole, 2002). In just six years, a national network took shape comprising 58 transmitter and rebroadcasting towers (12 public and 46 private). Audience growth was equally remarkable. Canadians purchased 82,000 television sets in September 1954 alone (Rutherford, 1990), and by 1955, Canadians had spent an estimated half billion dollars on television sets and Canada ranked second only to the United States in the number of stations, coverage area, sets per capita and program production (Raboy, 1990). By early 1958, more than three million receivers were in use (DBS, 1959), households were watching nearly five hours of television daily (DBS, 1961) and the rate of television uptake was nearly double that of the United States (Weir, 1965).

2.3 Public and Private Television Content

To interpret the findings of our empirical analysis, we assume that public and private television stations differed primarily in the geographic focus of their informational content. In this section, we summarize evidence supporting this claim. Drawing from parliamentary transcripts (i.e., Hansard), programming schedules and the historical record, we document that public stations adhered closely to the national programming service, while private stations, shaped by commercial and regulatory incentives, bundled required national content with programming tailored to local audiences.

National Programming Service In the early days of Canadian television, the national programming service was produced by the CBC and distributed across the country. Mandated to showcase Canadian talent and address national issues, network programming aimed to unify the country's diverse population through a shared national consciousness. To this end, the national service featured not only news and political affairs but also dramatized entertainment, educational shows, children's programming and more. Meeting this broad cultural mandate demanded substantial content volume, which proved increasingly costly for the public broadcaster. Moreover, many standard production costs were effectively doubled by the need to produce separate English- and French-language services. To manage these financial pressures, the CBC concentrated television production in Montreal and Toronto throughout the 1950s (Rutherford, 1990). This centralized model—rooted in radio practices dating back to at least the 1940s (Raboy, 1990)—offered a cost-efficient means of fulfilling national service obligations, but it inevitably skewed content production toward national rather than local concerns.[8]

All television stations carried some portion of the national service, but programming records indicate that the CBC relied on national programming substantially more than private stations in both languages of service (Smythe, 1957). This divergence—where the CBC relied more heavily on national programming and private stations more on local content—reflected both the structural role assigned to private stations and the financial incentives they faced to produce locally relevant material.

Local Content Development Private stations routinely packaged the national programming service with local newscasts, farm reports, community-interest shows and other programming designed to appeal to local audiences. The need to carry a portion of the national service each week was part of the public service obligation outlined in their licensing agreements (Armstrong, 2010). To balance this obligation with their commercial viability, "private stations concentrated on local production, happy to leave the expensive evening shows to the CBC" (Rutherford, 1990, p. 86). Indeed, only 2 percent of the national programming service was non-CBC produced in the late 1950s (Rutherford, 1990). By relying on advertising revenue from local businesses, private stations had a direct financial stake in appealing to the tastes and interests of their surrounding communities, since retaining local viewership was essential to securing advertising dollars and remaining profitable. This financial incentive, coupled with the centralized production model of the CBC, left local content production largely to private stations, who were better positioned to serve regional audiences. The report of the Royal Commission on Broadcasting speaks directly to this comparative advantage in local content production:

> "*Knowledge of local conditions and adaptability to local needs can best be provided by having a number of independent local units in the system. This is one of the principal reasons why we are strongly of the opinion that the continued presence of private elements in the system should be recognized and placed beyond uncertainty and doubt.*" (Royal Commission on Broadcasting, 1957, p. 147)

[8] For instance, the CBC's daily national newscast, launched in 1953, focused on national and international affairs and aired coast to coast. Local bulletins such as CBC Toronto's *Metro News* and CBC Montreal's *Edition Métropolitain* did not appear until the late 1950s (Rutherford, 1990).

The divergence in public and private television content also stemmed from the government's structural priorities. When the CBC was established, it was tasked with delivering national programming, effectively prioritizing national interests over local ones (Weir, 1965). This conception of the public broadcaster's role ceded local concerns to private stations, which were cast in a supporting role. Over time, this public/national versus private/local distinction became institutionalized in both policy and practice. Parliamentary debates and government discourse from the period often reinforced this dichotomy.[9] Summarizing its two-year investigation of the public-private system, the 1957 Royal Commission concluded that "a large majority of witnesses, even including some ardent champions of public broadcasting, agreed that there was a place in Canada for the private broadcaster, even though many felt that place should be restricted to the local level" (Royal Commission on Broadcasting, 1957, p. 42).

Quantifying the Divergence in Content What matters most for our analysis is the extent to which public and private television content diverged in two key respects: (i) the relative emphasis on informational versus entertainment programming, and (ii) the degree to which informational content reflected local rather than national concerns. To shed light on this, we draw on Appendix XIV of the Royal Commission on Broadcasting Report (Smythe, 1957), the most comprehensive study of early Canadian television programming. All evidence summarized here is drawn solely from this source.[10]

The balance of informational and entertainment programming was broadly similar across public and private stations (Table 1). Informational content accounted for about 26 percent of total airtime across all stations and viewing hours, with *news and weather* and *political and public affairs* (hereafter jointly referred to as *news and politics*) comprising 7.3 percent of all programming, or roughly 28 percent of informational content (Table A.1). Public stations devoted 29 percent of airtime to informational programming, compared to 25 percent on private stations (Table A.2, Panel A). This small difference is driven almost entirely by public stations on the French-language network (Panel C), where a 7 percentage-point gap reflects the gap in *youth educational programming*—content that neither targets nor informs voters. If anything, this difference would bias against our findings, though we view it as inconsequential. Disaggregated by audience type, public stations allocated a greater share to informational content during general audience hours, while private stations devoted slightly more during adult audience hours. But neither is particularly large, and on net the opposing patterns effectively cancel each other out. Consistent with this, the Commission's report speaks to both station types devoting comparable airtime to *news and politics* during these periods, with no such programming during hours aimed at children or daytime audiences. Overall, informational content, including *news and politics*, aired at similar times and in similar amounts across public and private stations.

By contrast, the extent to which informational content reflected local concerns varied sharply by station type. About 63 percent of informational programming originated from the CBC's national *network* service, while 29 percent was produced as *local* live content (Table A.1). Disaggregating by station type reveals a substantial divergence: on English-language stations, public broadcasters aired nearly ten times

[9] At a public hearing of the Massey Commission, counsel noted that every parliamentary committee on broadcasting had endorsed a nationally-owned radio system [with] full and complete national control over all broadcasting," while acknowledging that private stations served the particular needs of community areas" (Raboy, 1990, p. 96). Davidson Dunton, then-chair of the CBC Board of Governors, similarly stated: "our field is in national network broadcasting, whereas their [private] field is local community broadcasting" (Raboy, 1990, p. 97).

[10] The report's analysis is based on the week of January 15-21, 1956, selected as representative because no major events disrupted normal programming.

as much *network* content as *local* content, whereas private stations aired less than four times as much (Table 1). The relative share of *network*-to-*local* content on public stations was about 2.5 times greater than on private stations, underscoring the stark difference in the geographic focus of programming. The contrast was especially pronounced on the French-language network, where the public broadcaster produced no *local* live content (Table A.3). Because program logs did not distinguish between *recorded* content that was locally produced and that which was imported, the comparison of *local* live and *network* programming likely understates the true divergence in local content between private and public stations(Table A.3).

These records indicate that public and private stations primarily differed in the geographic focus of their content rather than in the quantity or timing of informational programming. While the data reflect a single week, they align with both the broader historical record and the policy intentions of the period. This 1956 cross-section represents the most detailed comparative evidence available for our sample period and provides a credible foundation for analyzing systematic content differences between station types. Given the absence of major policy or structural changes, we expect these patterns to remain representative of the years immediately before and after the 1956 benchmark.[11] On this basis we proceed under the assumption that public television content was distinctly national in character relative to the more local focus of private broadcasters.

3 Data

In this section, we describe the main variables used in our empirical analysis. For a comprehensive discussion of data sources and construction methods for all variables, refer to Appendix Section E.

3.1 Sample Construction and Spatial Units

Throughout the analysis, the federal electoral district serves as our primary spatial unit of observation. As a parliamentary democracy, Canada's federal elections provide an appropriate setting for this study because both local and national news coverage are relevant to voters. While the act of voting is local, the implications of a vote are national. National media coverage bridges this gap by informing voters of the broader stakes of their local choice, while local news provides relevance by linking national issues to constituency-specific contexts and profiling local candidates. A well-informed voter is thus an individual who is discerning about both the local candidates in their district and the political party they wish to form the federal government.

To account for the redrawing of electoral districts in 1947, 1952, and 1966, we digitize four sets of district maps covering our extended 1935–1968 sample period. To maintain a consistent spatial unit, we crosswalk these maps following the procedure in Eckert et al. (2020). We use the 1952 distribution as our reference map—coinciding with the arrival of television—and re-aggregate all other reporting maps to this distribution.

The 1952 redistribution consists of 265 electoral districts, of which 263 can be matched to signal strength data. Our main estimating sample spans the establishment of the CBC to the end of the single-

[11]In Appendix D we provide supplementary longitudinal evidence for this assumption using two newly collected datasets spanning our baseline and extended sample periods: over 70,000 public television program listings (1958–1966) and narrative histories for 281 television stations (1954–1970). Our analysis of these records indicates that the divergence between national public programming and local private content remained a persistent structural feature of the broadcasting system.

station policy (1935–1958), covering seven general election cycles (four pre-treatment and three post-treatment). This yields a potential panel of 1,841 observations for the 263 districts. Accounting for occasional gaps in the historical record for voter turnout, the sample is reduced to 1,795 district-election-year observations (97.5 percent of possible observations). For our main estimating sample, missing district characteristics further reduce the sample to 1,764 observations across 252 districts once covariates are included in a specification (95.8 percent of possible observations). We do not include by-elections in the analysis.[12]

3.2 Television Exposure and Signal Strength

We gathered archival records of television transmitter installations from Library and Archives Canada. This information comes from three distinct collections, which allow us to reconstruct the complete set of transmitter installations between 1952 and 1968. For each station, we identify the call sign, coordinates, and opening date, as well as ownership status (public or private) and technical features such as transmitter height and service power. In our main sample, this yields a total of 58 transmitter and rebroadcasting towers: 12 public and 46 private.

To obtain an accurate estimate of television signal strength at the district level, we follow a two-step procedure of estimation and aggregation. First, we use the Irregular Terrain Model (ITM) to estimate the attenuation of signal strength across space. This model incorporates the elevation profile between the transmitter and receiver to adjust for topographic interruptions of the signal. See Figure A.1 for an example of the ITM output.

Second, we aggregate these signal strength contours to our unit of observation. We first aggregate ITM estimates to the census subdivision (CSD), the smallest available statistical area in Canada. Using the 1951 CSD map, which comprises 4,987 non-overlapping units, we match 1951 census population data to use as weights for the final aggregation to electoral districts. This procedure ensures that even in geographically large districts, our estimates accurately reflect the signal strength received by the electorate, as densely populated subdivisions are up-weighted while sparsely populated areas are down-weighted.

The level of signal strength indicates whether residents in a district can watch television without noise. In our main specification, we apply a minimum threshold for a district's average signal strength of 50 dBμV/m.[13] Signal strength increases continuously for values above 50 dBμV/m and is set to zero otherwise. Applying this criterion to the 252 districts that constitute our main estimating sample, Table 2 shows that 105 received public and 79 received private television coverage by the end of our sample period.

[12] In the 1935–1968 extended sample, we add data for four additional general elections, implying a total of 2,893 potential observations for the 263 districts. We match voter turnout data for 2,832 observations (97.9 percent), or 2,764 observations (95.5 percent) for the main estimating sample that includes the full set of covariates.

[13] The unit dBμV/m measures the field strength of an electromagnetic signal in decibels relative to one microvolt per meter. We use a threshold of 50 dBμV/m, based on the Government of Canada's Grade B service contour minimum of 47 dBμV/m. This level is deemed "adequate, in the absence of man-made noise or interference from other stations, to provide a picture which the median observer would classify as of satisfactory quality" (ISED, 2016, p. 12). Figure A.8 demonstrates the robustness of our results at different thresholds.

3.3 Outcome Variables and Controls

Electoral Outcomes Our main measure of citizen engagement is voter turnout. We source data from Election Canada's *Report of the Chief Electoral Officer* for each federal election between 1935 and 1968, although for most of the analysis we truncate our panel at 1958. For every election, Election Canada's *Report* summarizes results by electoral districts, including the total votes cast and the size of the electorate. We calculate voter turnout as the ratio of votes cast relative to the size of the electorate. Over the sample period (1935–1958), Table 2 indicates that turnout rose by 2.32 percentage points in public television districts, compared to a 6.11 percentage point increase in private television districts. We construct several additional voting outcomes using data scraped from the Parliament of Canada's Parlinfo website, including vote shares by political party and incumbent margins of victory.

Speech Localization Index We construct an index of political responsiveness based on the geographic orientation of speeches delivered by MPs in the House of Commons. This requires combining digitized transcripts of all floor speeches (Beelen et al., 2017) with latitude and longitude coordinates for all populated places in Canada (CGNDB, 2021). We apply a Named Entity Recognition algorithm to the full text of every speech to identify mentioned locations and calculate their distance from the MP's electoral district centroid.

We use this algorithm to develop three measures of speech localization, detailed in Appendix E. We capture the extensive margin of local representation using two variables: *mention local*, an indicator for whether an MP ever mentions their district in a session; and *speech locality*, the fraction of speeches mentioning any populated place that reference a location within the MP's own district. We capture the intensive margin using *place locality*, defined as the average share of geographic references in a speech that fall within the MP's own district.

Finally, to summarize these distinct dimensions of local focus, we combine the three measures into a single *Speech Localization Index*. Following Anderson (2008), we standardize each variable and aggregate them using inverse-covariance weighting. The resulting index captures the local orientation of an MP's parliamentary speeches, serving as our primary proxy for their willingness to advocate for the constituents they represent. Descriptive trends in Table 2 highlight a divergence between 1935 and 1958 consistent with our empirical findings: while the index decreased by 0.254 standard deviations in public television districts, it increased by 0.066 standard deviations in districts served by private stations.

Party Dissent Index We construct a measure of political accountability based on an MP's willingness to deviate from party-line voting, using roll-call data from Godbout and Høyland (2017). We capture the extensive margin of dissent using *any dissent*, a binary indicator for whether an MP casts at least one vote against the party majority in a session. We capture the intensive margin using *vote count dissent*, defined as the inverse hyperbolic sine of the total number of dissenting votes. We combine these measures into a standardized *Party Dissent Index* following Anderson (2008). This index serves as a proxy for legislative accountability—specifically, an MP's willingness to prioritize constituency interests over party loyalty (Snyder and Strömberg, 2010).

Newspaper Circulation We digitize circulation data for daily and weekly newspapers from 1945 to 1958, drawing on multiple editions of the *Canada Year Book*—an official statistical almanac of social and economic conditions. The sample includes 36 cities for daily newspapers and 28 cities for weeklies.[14] The sample covers 93 percent of total daily newspaper circulation in 1950, as well as 61 percent of English-language and 80 percent of French-language weekly circulation (DBS, 1950). Because these data are observed at the city level, we assign each city the television signal strength of the electoral district in which it is located. We construct five outcomes: (i) log number of newspapers, (ii) log total circulation, (iii) log average circulation, (iv) circulation per capita, and (v) circulation per household. Per capita and per household figures are derived using linear interpolation of city populations from the 1941, 1951, and 1961 Censuses.

District Controls We include district-level controls to account for baseline differences in development and demographics. Population density is calculated from 1931 counts in Elections Canada's *Report of the Chief Electoral Officer* and district land areas. To capture deeper historical differences, we use the 1911 Census—the most recent fully digitized decennial census—to calculate average earnings, age, literacy and urbanization rates across districts. These data are aggregated from the CSD level to the electoral district and treated as time-invariant initial conditions, which we interact with year fixed effects to allow their influence to evolve over time.

Civic Engagement Outcomes We leverage individual-level survey data from the 1974 *Canadian Election Study* to measure broader civic behavior beyond voter turnout, developing standardized indices for all eight *Group Electoral Activities* to serve as civic engagement outcomes.[15] For each of these eight behaviors, we construct a composite index by averaging the respondent's reported frequency across four distinct contexts: the most recent federal election at the time of survey, federal elections in general, provincial elections, and local elections (Anderson, 2008). This aggregation allows us to capture persistent patterns of engagement in the immediate political environment—a margin of participation that depends heavily on the availability of local information.

4 Empirical Design

Standard approaches to estimating the political effects of media often treat media exposure as a homogeneous treatment. In this section, we outline an empirical framework designed to disentangle the aggregate effect of television's entry from the specific effects of broadcaster type. By distinguishing between public and private signal reception, we test whether the political consequences of television depend on distinct broadcaster attributes (e.g., content). However, this setting raises two key identification challenges: the non-random rollout of the network and potential selection into public or private coverage. We describe below our strategies for addressing these challenges.

[14]The resulting panel is unbalanced, as the *Canada Year Book* reported circulation for urban centers with populations above 20,000 until 1954, after which the threshold rose to 30,000.

[15]*Group Electoral Activities* encompass eight distinct behaviors, measured by the frequency with which a respondent (1) reads about politics in newspapers, (2) discusses politics with others, (3) attempts to convince others how to vote, (4) works with community members to solve local problems, (5) attends a political meeting or rally, (6) contacts public officials or politicians, (7) works for a political party or candidate, and (8) displays a campaign sticker or election sign.

4.1 Two-Way Fixed-Effects Framework

To motivate our empirical strategy, we begin by outlining a standard two-way fixed-effects (TWFE) specification conventionally used to estimate the aggregate effect of television access, ignoring broadcaster type. In this model, electoral districts receive a continuous treatment across different election years:

$$Y_{d,t} = \alpha_d + \alpha_t + \beta\, signal_{d,t} + \Phi\left(\boldsymbol{X_d} \times t\right) + \epsilon_{d,t}. \quad (1)$$

Here, $Y_{d,t}$ denotes a political outcome of interest in electoral district d for election-year t, and the treatment variable, $signal_{d,t}$, is a measure of television signal strength in district d for election-year t. The vector $\boldsymbol{X_d}$ includes initial conditions of each electoral district d that are interacted with an election-year fixed effect, thereby absorbing any unobserved variation that correlates with the arrival of television and these initial conditions.[16] District fixed effects (α_d) capture time-invariant characteristics of an electoral district, and election-year fixed effects (α_t) capture any variation common to all districts for each election cycle. To account for serial dependence, standard errors are clustered at the district level.[17]

The parameter of interest, β, captures the reduced-form estimate of television exposure in an electoral district. The fixed effects included in equation (1) imply that β is identified from variation in signal strength within each district over time—relative to other districts in the same election year—if the parallel trends assumption holds, and treatment effects are homogeneous over time and across districts (De Chaisemartin and D'Haultfœuille, 2020; Goodman-Bacon, 2021).

Yet even if treatment is conditionally random, the estimate $\hat{\beta}$ may be biased if the *timing* of exposure to treatment is non-random (Borusyak and Hull, 2023). For example, suppose two districts (*A* and *B*), both sparsely populated and unlikely early adopters of television, yet *A* is located near Toronto and *B* is relatively remote. In any counterfactual scenario, Toronto would be an early adopter of television, where the relative timing of treatment for *A* and *B* is predictable in a non-random way, based on the proximity of each district to Toronto or any other major economic or population center. An unbiased estimator of β thus requires the assumption that districts near the economic centers of the country do not differ in any relevant, time-varying way from more remote districts (e.g., political indifference or civic mindedness).

4.2 Expected Signal Strength

We forego this strong assumption and instead establish unbiasedness by accounting for a district's expected signal strength—a measure of the non-random and predictable variation in signal strength that results from the economic geography of the country. We provide a detailed discussion of the approach in Appendix B, which closely follows the insights of Borusyak and Hull (2023), who establish a generalized solution to this identification challenge.

The intuition of our application is straightforward: the observed distribution of television signal strength is an outcome of the underlying data-generating process, which can be modeled and used to draw counterfactual distributions in such a way that they might as well have occurred. Each permu-

[16] These district-level characteristics include population density, earnings, age, literacy rates and urbanization rates.

[17] We cluster standard errors at the electoral district level to account for serial correlation within our primary unit of observation. While clustering by station coverage area could theoretically account for broader spatial shocks, it introduces the methodological problem of grouping all untreated districts across Canada into a single, geographically disparate cluster. Nonetheless, we show in Table A.11 that all core findings remain highly robust to station-level clustering.

tation is thus one realization of the underlying data-generating process. By permuting the television network many times, we can construct an average of the counterfactual realizations for each electoral district—i.e., a district's expected signal strength. In a regression, including *expected* signal strength as a control variable recenters an estimate of *actual* signal strength, effectively purging the non-random—and thus biased—component of our treatment effect. The variation we exploit is the difference between the observed and counterfactual network—signal strength above or below what is expected—and thus an outcome of chance.

Modeling Expected Signal Strength The set of transmitters that receive activation in a simulation are modeled as a function of (i) cross-sectional variation—i.e., each transmitter's sampling probability—and (ii) temporal variation—i.e., how many transmitters are actually active in a given year.

We generate the cross-sectional probability of sampling transmitter s as $(\bar{t} - t_s)/(\bar{t} - \underline{t})$, where $\underline{t}$ and $\bar{t}$ respectively denote the first and last year of all observed transmitter installations, while t_s denotes the commencement year that the station transmitter s becomes operational.[18] This probability linearly decays as a function of a station's commencement year, where transmitters established early receive a higher probability of activation than late-established transmitters.

To introduce temporal variation, we activate the correct number of transmitters for a given year, choosing transmitters with the highest cross-sectional probability in each permutation. Let $(1/a_t)$ be the probability any station is sampled in year t, where a_t be the correct number of activated transmitters for that year. This formulation implies that the probability of a station being activated is decreasing in years where many transmitters are activated. The combined cross-sectional and temporal probability implies that station s is sampled in each permutation of year t as follows:

$$\Pr_{s,t} = \frac{\bar{t} - t_s}{\bar{t} - \underline{t}} + \frac{1}{a_t} + \epsilon_{s,t}. \tag{2}$$

In our simulation we permute the television network 500 times, drawing a distribution of expected signal strength based on equation (2) each time. The inclusion of a normally distributed shock $\epsilon_{s,t}$ introduces stochastic variation in the set of active transmitters across network permutations and election years.[19] We derive our final measure of expected signal strength by averaging across all permutations at the electoral district level, following the same aggregation procedure described in Section 3 for actual signal strength.

Model Validation Because the true data-generating process is unknown, we evaluate our approach using two testable criteria (Borusyak and Hull, 2023). First, if expected signal strength captures non-random variation, it should correlate with the residuals from a model that excludes it. Second, conditional on expected signal strength, actual signal strength should be orthogonal to any determinant of treatment, such as population density. We confirm that our measure of expected signal strength meets both conditions (Appendix B.1).

Given the flexibility inherent in our simulation procedure, we also examine 23 alternative models of

[18] In our data, $\underline{t} = 1952$ and $\bar{t} = 1968$. We rely on the complete set of transmitter installations throughout this time period as our set of potential activation locations.

[19] For this measure of expected signal strength, ϵ is drawn from a normal distribution with a mean of zero and a standard deviation equal to the standard deviation of the sampling probability in equation (2).

expected signal strength alongside the conventional free-space approach (Appendix Table B.1). While the free-space model does not satisfy the validation criteria in our setting, eight of the alternative simulations do (Appendix Figures B.1 & B.2). Importantly, our benchmark estimates are stable across all validated specifications (Appendix Figure B.3), suggesting that the results are not a byproduct of specific modeling choices.

4.3 Identification Strategy

Our empirical object of interest is the *relative change* in political behavior among citizens and politicians following the introduction of public versus private television. We identify this change using the following specification:

$$Y_{d,t} = \alpha_d + \alpha_t + \beta^{pvt}\left(signal_{d,t} \times private_{d,t}\right) + \beta^{pub} signal_{d,t} + \gamma private_{d,t} + f(\mu_{d,t}) + \Phi(\boldsymbol{X_d} \times t) + \epsilon_{d,t}. \quad (3)$$

Model (3) extends model (1) in two important ways. First, it includes an indicator variable, $private_{d,t}$, equal to one if district d receives a private television signal exceeding 50 dBμV/m in election year t. The interaction $signal_{d,t} \times private_{d,t}$ thus distinguishes districts with private television access from districts with public television access. Second, the function $f(\mu_{d,t})$ includes both the measure of expected signal strength, $\mu_{d,t}$, as well as its interaction with $private_{d,t}$, allowing us to isolate deviations from predicted reception quality. This adjustment recenters the variation used to estimate β^{pvt} and β^{pub} around quasi-random differences between actual versus expected signal strength.

The coefficient β^{pub} captures the average change in political behavior in districts that received public television, relative to those without any television coverage. We interpret this as the effect of public television's introduction. By crowding out local newspapers and radio, this exposure both reduced the overall volume of political information and shifted the geographic focus of content toward national concerns. A negative estimate of β^{pub} would be consistent with earlier work on television's political effects (e.g., Gentzkow, 2006); however, as in those studies, this estimate does not allow us disentangle the effect of reduced political information characteristic of television in general from the effect of nationalized coverage specific to public television in particular.

Our main parameter of interest, β^{pvt}, captures the differential effect of private versus public television in districts where television was available. This comparison holds constant the general decline in political information associated with television's rise and instead isolates the impact of divergent attributes between broadcasters—particularly the documented shift toward national programming on public television. In doing so, we exploit variation in broadcaster type *conditional* on access to television. Identification thus relies on the assumption that, controlling for expected signal strength and fixed effects, the broadcaster type received in a district was plausibly exogenous.

Selection into Private Television The principal threat to our identifying assumption is that a time-varying district characteristic unaccounted for in our model might be correlated with both political behavior and the licensing of a private station. To assess this threat, we estimate model (3) in the initial treatment period ($t = 1953$), regressing pre-treatment conditions of a district on $signal_{d,1953}$ (*selection into television access*) and the interaction term $signal_{d,1953} \times private_{d,1953}$ (*selection into private television access*). Figure 1 presents the results, where all covariates are standardized for comparability, and the reported coefficients are conditional on expected signal strength and provincial fixed effects.[20]

We find that selection into television access is generally balanced, with a few exceptions: population density, urbanization, and average age all correlate with the signal strength treatment. However, these covariates are conditionally balanced with respect to private television access. This suggests that β^{pvt} is identified from plausibly exogenous variation in private station assignment, supporting a causal interpretation. Further, our primary outcome variables—voter turnout, political responsiveness, and accountability—are balanced across private and public districts in the pre-treatment period.

As a baseline safeguard against selection bias, all specifications include electoral district fixed effects, which absorb time-invariant confounders. By interacting baseline economic characteristics with time fixed effects, we explicitly control for the possibility that initially more prosperous or urbanized areas followed different political or economic trajectories over the sample period. To address residual concerns about time-varying unobservables, we later show that our estimates are robust to excluding major cities, capital cities, and densely populated districts—locations where political or economic incentives for station placement are strongest. The insensitivity of our findings to these subsamples reinforces the credibility of a causal interpretation.

Another potential source of selection arises from patterns of media ownership. Using data from the 1957 Royal Commission on Broadcasting, we match private radio and television station owners and find that 64 percent of private television licenses went to existing radio proprietors (see Figure A.4). In these cases, private television infrastructure was built atop pre-existing radio operations, lowering the cost of entry in districts with prior radio presence. Importantly, the radio network was established well before the post-war economic boom, meaning their location decisions were uncorrelated with the specific future growth trajectories of the television era. Selection into private radio broadcasting predating our sample period is absorbed by electoral district fixed effects, and we further show that our results are robust to including a pre-treatment cross-sectional measure of nearby radio stations interacted with election-year fixed effects. This suggests that private station entry was driven more so by infrastructure inertia rather than strategic speculation on future economic growth.

Finally, the CBC's Board of Governors retained some discretion over private license allocations, raising the possibility that public authorities may have blocked private stations from entering desirable markets. If anything, this institutional hierarchy biases against the concern that private operators self-selected into high-growth regions. Even critics of the single-station policy recognized that substantial Canadian content production required the public broadcaster to secure stations in large, economically robust cities like Montreal and Toronto (Peers, 1979). Private licensees were subsequently left to fill coverage gaps in unserved areas—a constraint that limited their ability to strategically target districts based on forecasted economic performance. The balance of pre-treatment political outcomes across districts with private versus public television (Figure 1), along with the path dependence between private radio and television ownership (Figure A.4), reinforces the view that private television expansion was not politically or economically targeted.

Taken together, our selection tests align with the historical record and provide no evidence that selection into private versus public television biases our estimates. These findings support our identifying

[20] Appendix Figure A.3 replicates this balance test for 1958. The results indicate that all covariates and pre-treatment political outcomes remained conditionally balanced between private and public districts as the network expanded.

assumption: conditional on television access and expected signal strength, district assignment to private treatment is plausibly exogenous.

5 Results

In this section, we document that private and public television had diverging effects on political engagement and the behavior of elected representatives. Whereas public television depressed engagement and local responsiveness, private television maintained them. To build this argument, we first use an event-study framework to establish parallel pre-treatment trends. With our empirical design validated, we use our baseline regression model to show that the average effect of television's arrival masks important heterogeneity.

5.1 Baseline Evidence

Electorate We begin by validating our empirical design and examining the dynamic effect of television on voter turnout. Figure 2 (left panel) presents event-study estimates focusing on districts where television's arrival is observed within our sample period. We find no evidence of differential pre-trends: treated and untreated districts follow parallel paths across the elections preceding television's arrival. Following the introduction of a signal at $t = 0$, voter turnout exhibits a clear dynamic decline through $t + 2$. This gradually compounding effect is consistent with the steady adoption of television sets and the cumulative displacement of other information sources over time.

To quantify the average effect of television's entry, Table 3 presents ordinary least squares (OLS) estimates of equation (3). All reported estimates are conditional on district and election-year fixed effects, and control for expected signal strength—alongside its interaction with the private indicator when examining heterogeneity. Throughout this section, we interpret predicted effects at the minimum satisfactory reception threshold of 50 dBμV/m. Column (1) reports the average impact across all station types, estimating a 2.8 percentage point decline in turnout, which represents a 3.8 percent decline relative to the pre-treatment baseline mean. This magnitude mirrors the depressive effect observed following television's introduction in the United States (Gentzkow, 2006).

However, analyzing television as a homogeneous treatment masks substantial heterogeneity based on broadcaster type. Columns (2) and (3) reveal that this disengagement in Canada is exclusive to districts served by the public broadcaster. By introducing an interaction term, we isolate the relative effect of private versus public television while holding the medium constant. Our preferred specification in column (3)—which conditions on the full suite of fixed effects, expected signal strength and pre-treatment district controls—indicates that public television exposure led to a 2.1 percentage point decline in turnout relative to districts without television. In contrast, the interaction coefficient for private television is positive and significant at 2.9 percentage points, effectively offsetting this baseline decline. Reflecting this, the net effect of private television's entry—bundling the medium's displacement of print news with the distinct attributes of private broadcasting, such as its local content orientation—is statistically indistinguishable from zero (p-value $= 0.875$). This suggests that the political impact of television is driven by the content it delivers rather than the medium itself.[21]

[21] Appendix Figure A.8 confirms our findings are robust to the signal strength cutoff, with estimates remaining stable as the

Members of Parliament (MP) Because voters in public television districts became less engaged, we test whether their representatives responded to these weakened electoral incentives by shifting their parliamentary rhetoric. We first assess the average dynamic effect of television on our speech localization index. As shown in the right panel of Figure 2, the event-study estimates confirm parallel pre-trends prior to television's arrival. In the post-treatment period, the average effect of television on speech localization is statistically indistinguishable from zero.

As with voter turnout, this average null effect conceals substantial underlying heterogeneity. Table 3 presents the corresponding OLS estimates in columns (4)–(6). Column (4) confirms the absence of an average effect, but columns (5) and (6) decompose this aggregate result by broadcaster type. Our preferred specification in column (6) indicates that exposure to a public television signal reduces the local orientation of parliamentary speech by 29 percent of a standard deviation. This point estimate is statistically significant and suggests a substantial shift in the focus of legislative floor speeches. To put this magnitude in perspective, such a shift would move a representative with median levels of local rhetoric down to the 30th percentile of the distribution. As with our turnout results, the interaction term for private television districts is positive and significant, representing a relative increase of 78 percent of a standard deviation. While this positive coefficient nominally exceeds the baseline public decline, the net effect of private television's entry on the speech localization index is statistically indistinguishable from zero (p-value $= 0.361$). This strong offsetting effect explains why, unlike the clear average decline observed in voter turnout, the unconditional event-study estimates for speech localization exhibit a null average effect. These results indicate that the observed decline in the local orientation of parliamentary rhetoric is concentrated in public television districts, rather than a general effect of television's introduction.[22]

Discussion These results support the interpretation that nationally oriented media content weakens the informational link between voters and their local representatives. The observed decline in voter turnout and local references from MPs in public districts is consistent with the sharp differences in programming: compared to private stations, public broadcasters aired less than half the volume of locally produced content (Table 1), prioritizing national-level information instead (Table A.2). We interpret the confinement of these empirical patterns to public television districts as evidence that the geographic focus of informational content—rather than the technology of television itself—shapes both citizen engagement and representative behavior.

5.2 Alternative Interpretations

Although we attribute the political effects of television to differences in the geographic orientation of media content, we consider three alternative interpretations of our baseline evidence here.

Language of Service We begin by considering heterogeneity by language of service (Appendix Table A.4). While statistically significant effects are concentrated in English-language districts, this distinction appears driven by sample limitations rather than fundamental differences in political behavior. While the French-language network was mostly nascent during our study period, the point estimates

threshold for television exposure is varied from 25 to 75 dBμV/m.

[22] To ensure our composite measures are not driven by a single outlier variable, Appendix Figure A.5 verifies that these patterns hold consistently across the individual extensive and intensive margin components of the speech localization index.

for French districts remain directionally consistent with our baseline findings: public television exposure correlates with reduced turnout and localization, while private television does not.

The more muted results are consistent with the unique content constraints of French television. Unlike English stations, which frequently imported American entertainment, French broadcasters faced a language barrier that necessitated a higher reliance on domestic production. Consequently, during the early years of television expansion, the public French network functioned more as a regional broadcaster focused on Quebec rather than a purely national service (Raboy, 1990).

Political Slant of Content A second possibility is that the political slant of the public broadcaster discouraged participation among certain partisan groups in a way that private broadcasters did not.[23] If politically misaligned voters responded by choosing apathy over swing voting, such bias could explain lower turnout in public television districts.

While data limitations preclude direct measurement of political slant throughout the 1950s, we can still test whether perceived bias disproportionately alienated specific voting blocs by investigating differences in vote shares by political party and across the ideological spectrum. As shown in Appendix Table A.5, we find no evidence that public television differentially impacted the vote shares of major parties, minor parties or broader ideological coalitions. These null results point to a general reduction in engagement across the political spectrum, making it unlikely that differences in political slant explain our main findings.

Substitution Effect When television replaces newspapers, the overall volume of political information typically declines, and what remains focuses more on national than local concerns (Martin and McCrain, 2019; Moskowitz, 2021; Angelucci et al., 2024). The public broadcaster devoted an additional 4.2 percent of weekly airtime to informational content (Table 1), which suggests that our estimates may be conservative; an increase in informational airtime would, if anything, be expected to bolster engagement, biasing our estimated negative effect toward zero. However, for our interpretation to hold, other key sources of information for voters—notably newspapers—must not change systematically across public and private television districts in either their availability or consumption.

We test this assumption by examining whether newspaper availability and consumption were balanced across public and private television districts. We measure availability by the number of newspapers in circulation, and consumption by total circulation, average circulation per newspaper, and per-capita and per-household rates. Appendix Table A.6 presents our findings, based on an empirical specification similar to model (3), but with cities as the unit of observation and a yearly panel from 1945 to 1958. Accordingly, we replace electoral district fixed effects with city fixed effects, and election-year fixed effects with year fixed effects.

The entry of private or public television has no differential effect on newspaper availability or consumption during the sample period. The strongest evidence comes from daily newspapers: our panel of 36 cities—accounting for 93 percent of total daily circulation at the time—shows no systematic differ-

[23]This would align with a well-established literature on the effects of biased media content on voter behavior (see DellaVigna and Kaplan, 2007; Enikolopov et al., 2011; Chiang and Knight, 2011; Martin and Yurukoglu, 2017; Durante et al., 2019; Ash et al., 2024, among others). In the Canadian context, the CBC has faced criticism for adopting a center-left position for as long as the public broadcaster has existed (Rutherford, 1990). This view of the CBC continues to fuel debate among Canadians. For example, on 27 June 2017, Peter Mansbridge, the chief correspondent for CBC News from 1988-2017, addressed this issue on air during an episode of *The National*, CBC's flagship nightly news program.

ences between district types. While television's entry led to a general reduction in newspaper circulation, these estimates indicate that the arrival of a signal did not differentially alter access to information based on the type of broadcaster serving the district. Consequently, the observed divergence in political engagement cannot be attributed to a relative shift in newspaper availability or consumption between public and private television districts.[24]

Latent Broadcaster Differences Beyond news content, public and private stations differed along dimensions we cannot directly test. Private stations, as for-profit enterprises, faced stronger incentives to attract viewers through higher production values, more appealing entertainment and advertising that may itself have carried locally relevant information. Public stations operated under a legislative mandate that constrained programming choices in ways that extended well beyond the newscast. Any of these differences could, in principle, contribute to the divergence in political engagement we document.

We cannot fully decompose these channels with the data available. However, several features of our subsequent analysis point toward the geographic orientation of information as the primary mechanism. The incumbency advantage rises only in public districts, consistent with an information gap that disproportionately harms challengers who lack name recognition (Section 7). The within-politician estimates in the same section indicate that individual incumbents adjust their behavior in response to broadcaster type, a pattern more naturally explained by shifts in the informational environment than by differences in entertainment quality. And the cross-sectional evidence on non-voting political activities (Section 6) shows reduced engagement specifically in behaviors that depend on local political knowledge. While we interpret the geographic orientation of content as the most plausible mechanism, we acknowledge that other institutional attributes of public versus private broadcasting may reinforce or complement this channel.

6 Robustness

In this section, we summarize a variety of additional tests used to verify the stability of our main empirical findings and the plausibility of our preferred interpretation.

6.1 Selection and Station Allocation

Selection into Media Ownership A potential concern is that the non-random assignment of station types may be confounded by pre-existing media markets. During the initial rollout, most private licenses were granted to existing radio proprietors (Figure A.4). If the placement of these stations was influenced by pre-existing radio markets, our results might reflect selection bias rather than the impact of television per se. To explore this, we augment model (3) with controls for the number of radio stations within $\chi \in \{50\text{km}, 100\text{km}\}$ of each district centroid, interacted with election-year fixed effects. This specification flexibly accounts for time-varying selection based on the maturity of local radio markets. As reported in Table A.7, the coefficients for public and private television remain stable in both magnitude and significance. These results provide some assurance that our findings are not primarily driven

[24] Prior work finds that ideological shifts in television content do not significantly displace newspaper consumption (Durante and Knight, 2012), lending plausibility to the absence of a clear substitution effect in our setting. The short post-treatment period may also have been insufficient to detect meaningful changes in newspaper circulation across all outcomes.

by the underlying geography of the radio industry.

Non-Random Station Allocation One threat to identification is that private operators may have made a stronger effort to enter areas expected to grow or perform well, which could also correlate with political turnout. Although observable covariates appear balanced (Figure 1), unobserved, time-varying characteristics could still influence the non-random assignment of station types. We explore the sensitivity of our estimates by systematically excluding districts where economic incentives for station placement were likely most salient. Specifically, we drop high-density districts and those containing major or capital cities—markets that possessed the greatest expected growth trajectories. As shown in Figure A.6, the point estimates remain qualitatively similar across these sample restrictions. While the smaller sample size naturally reduces statistical precision, the stability of the coefficients suggests that our results are not merely driven by unobserved factors unique to these high-growth areas.

Alternative Identification Strategy We compare our expected signal strength model to a conventional free-space signal model (e.g., Olken, 2009) and a two-way fixed effects model without identifying controls. As shown in Table A.8, all three models yield qualitatively similar coefficients. However, the free-space estimates are generally larger in magnitude but less precise. Figure B.1 shows that the free-space model fails to balance population density in the cross section, which likely explains this loss of precision and further supports our use of the expected signal strength approach.

6.2 Specification and Sample Sensitivity

Parallel Trends and Staggered Adoption We evaluate the validity of the parallel trends assumption through several event-study specifications (Appendix C). Standard event-study plots show no evidence of divergent pre-trends, suggesting that districts were on comparable trajectories prior to television's entry (Figure C.1). To address concerns that staggered adoption might bias our estimates through negative weighting (De Chaisemartin and D'Haultfœuille, 2020; Borusyak et al., 2024), we perform a Goodman-Bacon (2021) decomposition (Figure C.3). This exercise reveals that our results are primarily identified from clean "treated-versus-never-treated" comparisons. Additionally, results using the Sun and Abraham (2021) interaction-weighted estimator remain stable, suggesting the aggregate effects are not artifacts of treatment timing (Figure C.4).

Extended and Restricted Panel Tests To ensure our findings are not driven by the specific time period of analysis, we replicate our baseline estimates using an extended panel from 1935 to 1968 (Table A.9). Despite the transition away from the single-station policy in 1958, the results remain stable (columns 2 and 4), suggesting the findings are not specific to the initial rollout phase. We also re-estimate the model on the original 1935–1958 sample but truncate each district's observation period at the end of its initial treatment year, thereby excluding the possibility of treatment effects evolving over time (columns 3 and 6). Across these specifications, the estimated coefficients remain consistent with our baseline results, which provides some assurance that the findings are not artifacts of the sample period or driven by cohort-specific dynamics. We verify these findings using an event-study design in Appendix C.2.

Influential Observations and Dual Treatment To ensure our results are not driven by a small number of influential districts, we conduct a leave-one-out sensitivity analysis by systematically re-estimating model (3) while dropping one electoral district at a time. Figure A.7 plots the distribution of these resulting point estimates, expressed relative to our full-sample benchmark. The distribution is clustered around one, suggesting that no single district—or specific local idiosyncratic shock—is the primary driver of our results. Furthermore, we address the fifteen districts in our sample that exhibit signal coverage for both public and private broadcasters. While the single-station policy was designed to limit each market to a single broadcaster, electoral district boundaries and signal coverage areas do not always perfectly align. Excluding these "dual-treated" districts results in slightly larger effect sizes (Table A.10), suggesting that their inclusion in the full sample may introduce measurement error that, if anything, attenuates our baseline estimates toward zero.

Alternative Clustering To address concerns regarding potential spatial correlation of error terms within a broadcaster's market, we test the sensitivity of our inference to alternative clustering specifications. While we cluster standard errors at the electoral district level in our baseline model, unobserved shocks may be correlated across districts that share the same television station coverage area. In Table A.11, we re-estimate our main specifications and report standard errors clustered at the station level. As shown in square brackets, accounting for this higher level of variation yields standard errors that are highly comparable in magnitude to our baseline estimates. For the interaction term—our coefficient of interest—the estimate for voter turnout is now significant at the 1 percent level rather than the 5 percent level at baseline, while the remaining outcomes maintain the same level of significance. This confirms that our core findings are robust to broader geographic definitions of the error structure and are not artifacts of an overstatement of precision.

6.3 Non-Voting Political Activities

To supplement our primary analysis of voter turnout, we examine whether broadcaster type influences other dimensions of civic engagement that similarly rely on the availability of local information. These tests also serve as a robustness check on the plausibility of our conjectured mechanism by focusing on activities highly sensitive to the local political environment. Because these cross-sectional data from the 1974 *Canadian Election Study* postdate the single-station policy, we define $public_d$ and $private_d$ as indicators for districts where 1969 signal strength reached at least 50 dBμV/m for the respective broadcaster types. Appendix Figure A.9 plots coefficient estimates for these indicators, conditional on expected signal strengths and a comprehensive set of individual and geographic controls.

The results show that respondents in public television districts were significantly less likely to engage in political discussion, campaign for a politician, display a political sign, contact a politician or attempt to persuade others how to vote. In contrast, associations for private television districts are generally null or marginally positive. While these cross-sectional findings preclude our primary identification strategy and warrant cautious interpretation, they are consistent with the view that broadcaster type influences political behaviors that depend on the availability of local information.

7 Mechanism

To explain the divergence in political outcomes between public and private television districts, we draw on models linking media information to political accountability (see Strömberg, 2015). The core premise is that *relevance* governs voter engagement: citizens are more likely to participate when media content helps them evaluate their specific electoral options. In the Canadian context, the national newscasts prioritized by the public broadcaster provided minimal coverage of local candidates. This information gap was particularly acute during our sample period because Canadian ballots prior to 1970 omitted party affiliations (Sevi, 2025). Without party labels, candidate-specific information served as a critical input for voter decision-making.

While our estimates capture the differential effect of public versus private television, we argue that this *local information gap* serves as a primary mechanism driving our results. To the extent that newspapers historically anchored local reporting, television's displacement of newspaper circulation (see Section 5.2) suggests a net loss of local information in public districts under the single-station policy (see Table 1). Conversely, the relative abundance of local reporting on private stations likely muted the impact of this media substitution. We hypothesize that this loss of relevant information in public districts disengaged voters, insulated incumbents from electoral competition and weakened the re-election incentives necessary to sustain local accountability.

In the remainder of this section, we test this sequence of events. We first assess whether public versus private television insulated incumbents differently from electoral competition, testing our hypothesis by quantifying shifts in the incumbency advantage. We then isolate within-politician variation to determine whether the subsequent decline in accountability stems from individual incumbents responding to these weakened incentives (an incentive effect) or from a shift in the underlying quality of elected officials (a selection effect).

Electoral Competition To start, we estimate model (3) using the incumbent's margin of victory as our measure of electoral competition. If a specific broadcaster type increases this margin, it effectively insulates the politician from electoral pressure and weakens their re-election incentives. Table 4 presents these results.

In column (1), we exclude the interaction term to capture the aggregate effect of television. The arrival of television corresponds to a statistically significant average increase of 3.7 percentage points in the victory margin, representing approximately 19 percent of a standard deviation. Columns (2) and (3) include the interaction term to distinguish between broadcaster types. These estimates reveal that the aggregate rise in the incumbency advantage is driven almost entirely by districts with public television access. Based on the benchmark estimates in column (3), the entry of public television raises the value of incumbency by roughly 11 percent. By contrast, the estimated advantage in private television districts is significantly lower than in public districts and the net effect of private television's entry is statistically zero (p-value $= 0.898$).[25]

These patterns align with our proposed mechanism regarding information relevance. Private television maintained the existing incumbency advantage—a result we attribute to its relative abundance of local content. Conversely, the voter disengagement associated with public television access appears to strengthen the electoral benefit for incumbents. This shift is theoretically sound: incumbents typically enjoy a baseline advantage through greater name recognition (Prior, 2006; Dal Bó et al., 2009; Jankowski and Müller, 2021), a factor likely heightened when ballots omitted party affiliations (Sevi, 2025). The national newscasts of the public broadcaster provided minimal coverage of local challengers, denying them the visibility required to offset this advantage. While we cannot rule out other institutional differ-

[25] All magnitudes are calculated by multiplying signal strength coefficient estimates by 50 dBμV/m.

ences between broadcasters, the consistency of these results suggests that district-specific information mediates electoral competitiveness. If the loss of local content raises the cost of voter engagement, it insulates incumbents who would otherwise face competitive electoral pressure.

Selection Versus Incentive Effects We next examine how this weakened competitive environment translates into lower political accountability. We ask whether diminished re-election incentives allow incumbents to behave less accountably once in office (an incentive effect) or if reduced electoral pressure facilitates the election of lower-quality representatives (a selection effect). To isolate these channels, we augment model (3) with MP $\times$ district fixed effects to restrict our analysis to variation within the same politician and district over time. If the decline in accountability stems primarily from the selection of different representatives, these fixed effects should absorb the observed impact. Alternatively, if individual incumbents respond to the diminished re-election incentives of a less competitive environment, the estimated effect should persist within-politician.

Table 5 reports results for two legislative outcomes: the speech localization index, which measures an MP's effort to signal responsiveness to their constituency, and the party dissent index, a proxy for an MP's willingness to prioritize local interests over party discipline. Focusing on the interaction term, a comparison of the benchmark estimates in the odd columns to the restricted estimates in the even columns reveals that the differential effect of private television persists. This persistence suggests that the relative stability of accountability under private television is driven not by selection but by within-politician changes in behavior. Individual incumbents appear to actively maintain their responsiveness when operating in the competitive electoral environments sustained by private broadcasting.

However, the estimates for public television point to a different dynamic. For speech localization, the point estimate attenuates and loses statistical significance once we introduce MP $\times$ district fixed effects (column 2). For the party dissent index, the point estimate remains relatively stable in magnitude but loses statistical significance due to larger standard errors (column 4). Together, these patterns provide suggestive evidence that the selection effect may play a more prominent role in the public television context. Theoretically, this divergence suggests that while the stability of electoral competition under private television maintains incumbent re-election incentives, the voter disengagement associated with public television may degrade the electorate's ability to screen candidate quality. Because these two channels can coexist, the lack of within-politician significance in public districts suggests that selection may be the dominant driver, though we interpret these results cautiously due to the loss of statistical power. Furthermore, because the public television estimates capture the average effect relative to no television coverage, they may conflate the impact of receiving less political information overall with the impact of reduced information relevance (i.e., the lack of local content). While these results are consistent with a selection-driven decline in accountability in public districts, we cannot definitively isolate the specific informational channel responsible for this shift.

Interpretation of Evidence Collectively, these findings suggest that re-election incentives are a primary mechanism linking broadcaster type to political accountability. We recognize that the results for public television point toward a more complex dynamic, potentially involving candidate selection alongside diminished incentives. However, the core divergence documented throughout this study is identified by the interaction term capturing the relative difference between private and public television: for this parameter, we find evidence of an incentive effect. Our empirical checks and the historical record—

which identify geographic orientation as a primary difference between broadcasters—suggest that the local informational content provided by private stations explains these findings. On this basis, while broadcaster type encompasses a range of institutional attributes, we interpret the geographic orientation of information as the most plausible channel through which local content shapes the competitive environment required to enforce political accountability.

8 Concluding Remarks

Understanding the informational role of media is vital to a healthy democracy. Prior research shows that the political effects of media often hinge on the medium itself. Different media types strike different balances between information and entertainment—an extensive-margin insight encapsulated by McLuhan's (1964) dictum that *the medium is the message*. Our study shifts attention to the intensive margin: the geographic orientation of content within a single medium. By distinguishing between locally and nationally focused content, we emphasize the importance of informational relevance to voters, suggesting that *the message is the message too*.

Our focus on Canada provides a unique opportunity to test this dynamic empirically. The country's public–private television system and single-station policy allow us to isolate the political effects of broadcaster type holding the medium of television constant. Although Canada's policy setting was distinctive, the rollout of television mirrored that of other countries and the average aggregate effect aligns with evidence from the United States (Gentzkow, 2006), reinforcing the external validity of our findings.

Exploiting this institutional arrangement, our findings illustrate how public and private television drove divergent political outcomes. We interpret this contrast as evidence that the geographic orientation of media content plays a primary role in shaping political behavior and legislative performance. By delivering locally oriented programming, private television maintained the informational relevance required to preserve voter engagement and electoral competition. This sustained the re-election incentives necessary for accountable behavior. In contrast, the public broadcaster's national focus combined with the substitution away from other local media disrupted this local accountability by reducing voter engagement and weakening legislative responsiveness.

Viewed in historical context, our results highlight an unintended consequence of the federal government's effort to promote national unity and a collective consciousness through broadcasting. By mandating centrally produced, nationally focused content, policymakers inadvertently weakened the local accountability that underpins parliamentary representation. This points to a deeper tension in parliamentary democracies between the goal of forging national identity through mass media and the need to sustain robust local representation.

If history offers a cautionary tale, it also furnishes a framework for rethinking the role of media in sustaining democratic accountability in the digital age—particularly as national news continues to displace local reporting (Martin and McCrain, 2019; Angelucci et al., 2024). During the broadcast era, accountability often depended on journalists to speak out against misconduct or inaction by elected officials. Today, social media lowers the barrier to civic participation, giving citizens a direct voice and new tools to hold politicians to account. This shift has the potential to revive the accountability-enhancing effects of local information by enabling voters to engage their representatives in ways that were previously impossible.

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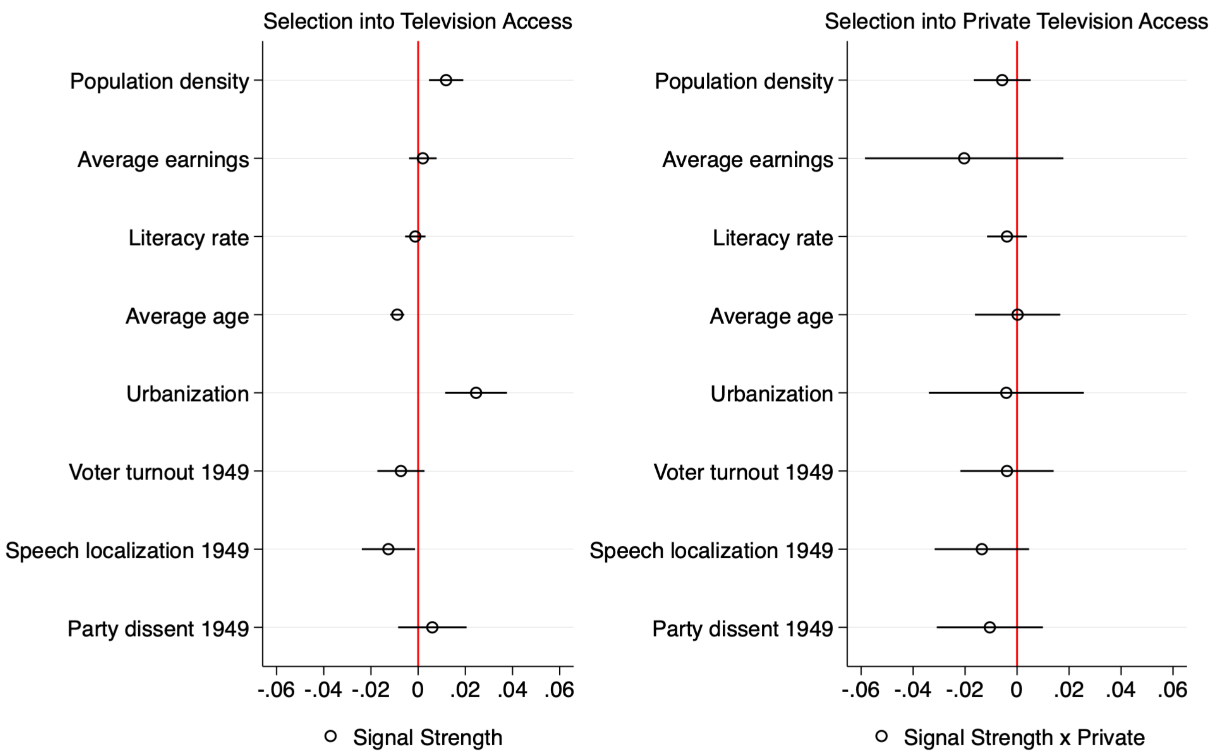
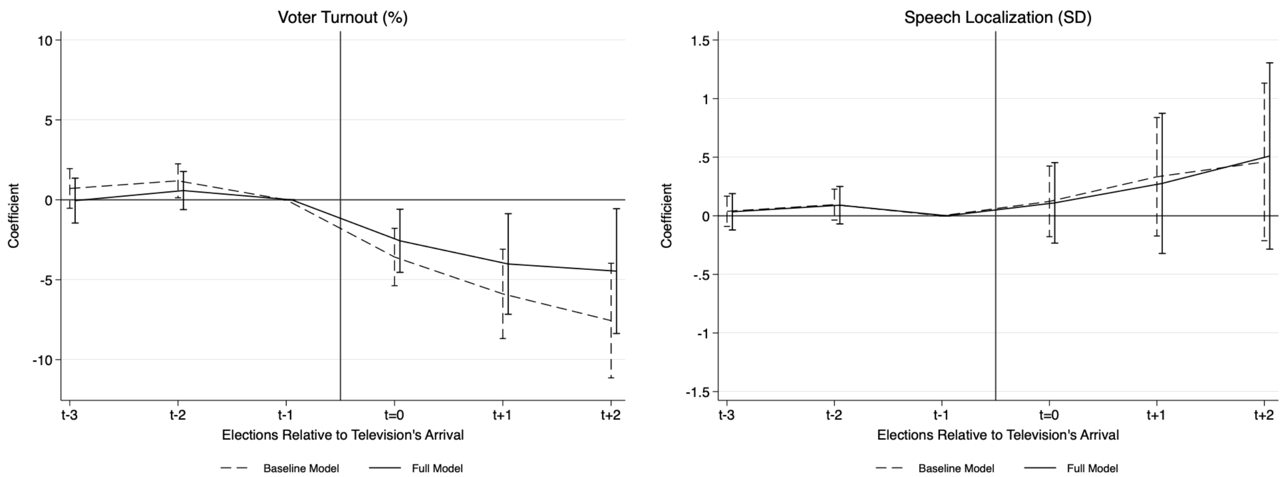
Figures and Tables

Figure 1: Covariate Balance by Signal Strength and Ownership Type



Notes: The figure presents coefficient estimates documenting the balance of baseline characteristics across electoral districts during the initial expansion of the television network. Specifically, it tests for differences between districts with public and private television access based on pre-treatment demographics and political outcomes. Observations are at the electoral district level. The y-axis lists standardized, pre-treatment outcome variables defined in Appendix E. The first six outcomes are historical census demographics, while the political outcomes include *Voter turnout* (total votes cast divided by the electorate size), as well as *Speech localization* (the local orientation of MP parliamentary speeches) and *Party dissent* (an MP's willingness to prioritize local interests over party discipline), both measured over the entire 21st Canadian Parliament (1949–1953). Each outcome is regressed on 1953 signal strength ($signal_{d,1953}$) and its interaction with an indicator for private television ($signal_{d,1953} \times private_{d,1953}$). All specifications include province fixed effects and expected signal strength. The left panel plots coefficient estimates for $signal_{d,1953}$ (selection into television access), while the right panel plots estimates for $signal_{d,1953} \times private_{d,1953}$ (selection into private television access). The right panel estimates are conditional on television access, and thus reflect the balance of covariates and pre-treatment outcomes between private and public television districts. Intervals reflect 95% confidence based on robust standard errors.

Figure 2: Event-Study Estimates and Parallel Trends for the Arrival of Television



Notes: The figure presents event-study estimates of the overall impact of television on voter turnout and speech localization for the sample period 1935–1958. Observations are at the electoral district level. *Voter Turnout* is defined as total votes cast divided by the electorate size, and *Speech Localization* is an index capturing the local orientation of MP parliamentary speeches. The treatment variable is an indicator for *Signal Strength* $\geq$ 50 dBμV/m (the threshold for satisfactory reception). The x-axis represents election years relative to the introduction of television, where $t = 0$ denotes the first election year a district had television, while $t - 1$ serves as the omitted reference period. The left panel plots the overall effect of television's arrival on voter turnout, while the right panel plots the effect on speech localization. Both panels compare two specifications: the *Baseline Model* (dashed lines, $n = 1{,}200$ for turnout and $n = 1{,}105$ for localization) includes expected signal strength alongside district and election-year fixed effects, while the *Full Model* (solid lines, $n = 1{,}190$ for turnout and $n = 1{,}098$ for localization) additionally controls for pre-treatment demographic characteristics—including population density, earnings, age, literacy and urbanization—interacted with election-year fixed effects. Intervals reflect 95% confidence based on robust standard errors, clustered at the electoral district level.

Table 1: Content Difference Across Private and Public Stations

	Share of Weekly Airtime		*Geographic Origin of Content*			
	Entertainment	**Information**	**Recorded**	**Network**	**Local**	**Network / Local**
Public Stations	70.8%	29.2%	24.6%	68.3%	7.1%	9.62
Private Stations	75.0%	25.0%	31.2%	54.5%	14.3%	3.81
Public / Private Ratio	**0.94**	**1.17**	**0.79**	**1.25**	**0.50**	**2.52**

Notes: This table reports differences in television programming content between public and private stations based on a comprehensive audit by the Royal Commission on Broadcasting (1957). Observations cover all stations in operation during the week of January 15–21, 1956 (34 private stations and 8 public stations). *Share of Weekly Airtime* columns represent percentage shares of weekly broadcasting time by content type. Programming content is classified by its geographic origin as *Recorded* (pre-recorded material), *Network* (national CBC service), or *Local* (live, locally produced content). The *Network / Local* ratio is calculated within station types, while the *Public / Private Ratio* divides the public station value by the private station value for each category. Data reflect all viewing hours on English-language stations, while Table A.3 reports the *Geographic Origin of Content* for French-language stations.

Table 2: Summary Statistics for Main Variables (1935 and 1958)

	Pre-Expansion (1935)	**Post-Expansion (1958)**	**Difference (1958−1935)**
Panel A: District Count by Television Status:			
Districts with no television access	252	68	−184
Districts with public signal	0	105	105
Districts with private signal	0	79	79
Panel B: Voter Turnout (percentage points):			
Districts with no television access	72.87	80.62	7.75
Districts with public signal	73.21	75.53	2.32
Districts with private signal	75.52	81.63	6.11
Panel C: Speech Localization Index (standard deviations):			
Districts with no television access	0.150	0.687	0.537
Districts with public signal	−0.148	−0.406	−0.258
Districts with private signal	−0.114	−0.050	0.064

Notes: This table reports summary statistics for the 252 electoral districts that constitute the main estimating sample during the period 1935–1958 (n = 1,764 district-year observations). *District Television Status* is defined by signal reception at the time of the 1958 federal election. Districts are thus categorized by their eventual treatment status, with 1935 values representing initial means for treatment and control groups. *Voter Turnout* is measured as total votes cast divided by the electorate size. *Speech Localization* is a summary index capturing the local orientation of MP parliamentary speeches.

Table 3: The Effect of Public and Private Television on Voter Turnout and MP Speech Localization

	Voter Turnout			**Speech Localization**		
	(1)	(2)	(3)	(4)	(5)	(6)
Signal Strength	-0.054***	-0.053***	-0.042***	-0.001	-0.004**	-0.005**
	(0.010)	(0.012)	(0.013)	(0.002)	(0.002)	(0.002)
Signal Strength $\times$ Private		0.052**	0.058**		0.012**	0.014**
		(0.023)	(0.024)		(0.005)	(0.005)
Private		0.182	-0.957		-0.510	-0.620*
		(1.569)	(1.635)		(0.357)	(0.362)
Covariates	No	No	Yes	No	No	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes
Election-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,795	1,795	1,764	1,674	1,674	1,646
Baseline Mean	74.060	74.060	74.052	0.029	0.029	0.030
Net Effect Private TV (p-value)		0.878	0.875		0.647	0.361

Notes: This table reports OLS estimates of model (3) for the sample period 1935–1958. Observations are at the electoral district level. Dependent variables are *Voter Turnout*, measured as total votes cast relative to the electorate size, and *Speech Localization*, an index capturing the local orientation of MP parliamentary speeches. The main independent variable is *Signal Strength*, which increases continuously for values above 50 dBμV/m (the threshold for satisfactory reception) and is zero otherwise. The *Private* indicator is equal to one if a private television signal is viewable in a district in a given year. Its interaction with signal strength captures the marginal effect of private relative to public television among districts where a signal was present. All specifications include district and election-year fixed effects and are conditional on expected signal strength and its interaction with a private station indicator. When included, district-level controls—including population density, earnings, age, literacy and urbanization—are interacted with election-year fixed effects to allow for flexible trends. Baseline mean denotes the average value of the dependent variable across all pre-treatment observations. The reported p-value reflects a test of the null hypothesis that the overall effect of private television is zero at the 50 dBμV/m satisfactory reception threshold. Robust standard errors, clustered at the electoral district level, are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 4: The Effect of Public and Private Television on Electoral Competition

	Incumbent Margin of Victory		
	(1)	(2)	(3)
Signal Strength	0.075**	0.205***	0.220***
	(0.035)	(0.041)	(0.049)
Signal Strength × Private		-0.241**	-0.265**
		(0.114)	(0.119)
Private		-2.370	2.914
		(8.852)	(9.290)
Covariates	No	No	Yes
District FE	Yes	Yes	Yes
Election-Year FE	Yes	Yes	Yes
Observations	1,794	1,794	1,763
Baseline Mean	9.962	9.962	10.016
Net Effect Private TV (p-value)		0.402	0.898

Notes: This table reports OLS estimates of model (3) for the sample period 1935–1958. Observations are at the electoral district level. The dependent variable is *Incumbent Margin of Victory*, calculated as the difference between the incumbent's vote share and that of the strongest opposing candidate. The primary independent variable is *Signal Strength*, which increases continuously for values above 50 dBμV/m (the threshold for satisfactory reception) and is zero otherwise. The *Private* indicator is equal to one if a private television signal is viewable in a district in a given year. Its interaction with signal strength captures the marginal effect of private relative to public television among districts where a signal was present. All specifications include district and election-year fixed effects and are conditional on expected signal strength and its interaction with a private station indicator. When included, district-level controls—including population density and Census measures of earnings, age, literacy, and urbanization—are interacted with election-year fixed effects to allow for flexible trends. Baseline mean denotes the average value of the dependent variable across all pre-treatment observations. The reported p-value reflects a test of the null hypothesis that the overall effect of private television is zero at the 50 dBμV/m satisfactory reception threshold. Robust standard errors, clustered at the district level, are shown in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 5: The Effect of Public and Private Television on Political Behavior

	Speech Localization		**Party Dissent**	
	(1)	(2)	(3)	(4)
Signal Strength	-0.005**	-0.002	-0.006**	-0.007
	(0.002)	(0.002)	(0.003)	(0.005)
Signal Strength × Private	0.014**	0.018**	0.011**	0.019*
	(0.005)	(0.008)	(0.006)	(0.010)
Private	-0.620*	-1.241**	-0.100	-0.298
	(0.362)	(0.530)	(0.283)	(0.749)
Covariates	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes
Election-Year FE	Yes	Yes	Yes	Yes
MP × District FE	No	Yes	No	Yes
Observations	1,646	1,145	1,509	979
Baseline Mean	0.030	0.048	0.201	0.195
Net Effect Private TV (p-value)	0.361	0.098	0.365	0.370

Notes: This table reports OLS estimates of model (3) for the sample period 1935–1958. Observations are at the electoral district level. The outcomes are *Speech Localization*, which captures the local orientation of MP parliamentary speeches, and *Party Dissent*, defined by how often MPs break from party-line votes in Parliament. The primary independent variable is *Signal Strength*, which increases continuously for values above 50 dBμV/m (the threshold for satisfactory reception) and is zero otherwise. The *Private* indicator is equal to one if a private television signal is viewable in a district in a given year. Its interaction with signal strength captures the marginal effect of private relative to public television among districts where a signal was present. All estimates are conditional on expected signal strength and its interaction with the private station indicator. Pre-treatment covariates—population density, earnings, age, literacy, and urbanization—are interacted with year fixed effects. Baseline mean denotes the average value of the dependent variable across all pre-treatment observations. The reported p-value reflects a test of the null hypothesis that the overall effect of private television is zero at the 50 dBμV/m satisfactory reception threshold. Robust standard errors, clustered at the district level, are shown in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

National Content and Local Political Consequences: Evidence from Public and Private Television

ONLINE APPENDIX

This Online Appendix provides additional evidence for the differential effect of public versus private television content on voters and politicians. We also present results supporting our claim that the balance of national versus local content across broadcaster types is a salient mechanism driving these effects. Appendix A documents several robustness checks while Appendix B summarizes the Borusyak and Hull (2023) method and shows that alternative models for expected signal strength yield results consistent with our baseline. In Appendix C we provide evidence supporting the parallel trends assumption and show that treatment effect heterogeneity does not bias our results. Appendix D provides supplementary evidence confirming the persistence of content divergence between public and private broadcasters from 1954 to 1970. Finally, Appendix E describes the data construction and sources.

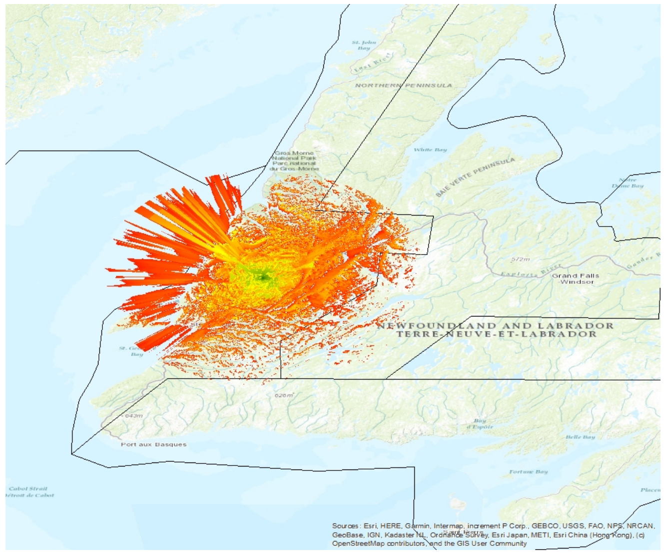
A Additional Empirical Evidence

In this section, we provide figures and tables that are supplementary to our main findings, including various robustness checks. We conclude that our estimates are robust to various alternative specifications and subsamples.

Appendix Figures

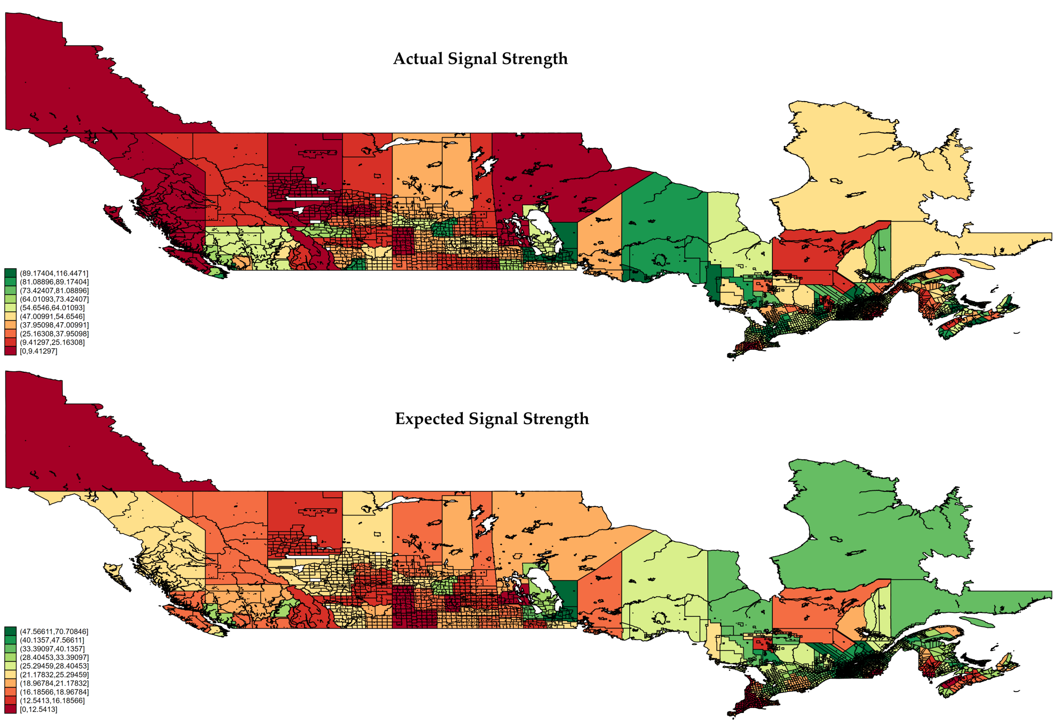
Appendix Tables

Figure A.1: Example ITM Signal Strength Estimate



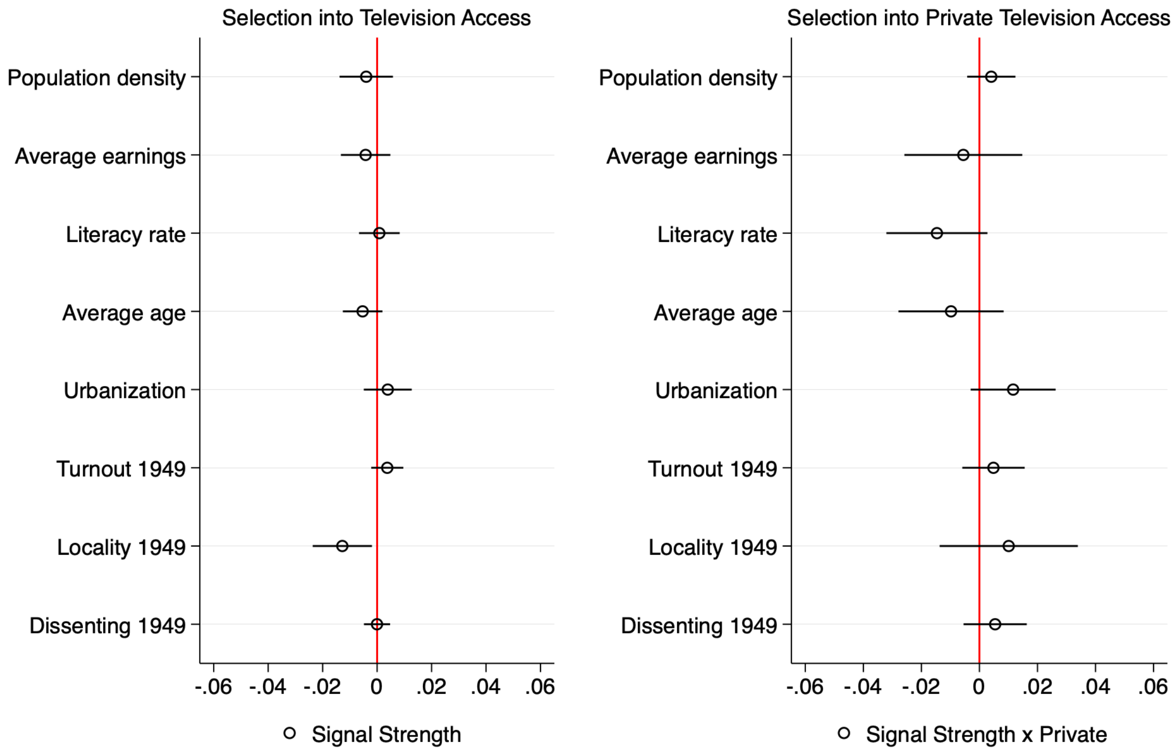
Notes: Irregular Terrain Model (ITM) estimates for the CBYT station in Corner Brook, Newfoundland. The color gradient represents predicted signal strength, ranging from the strongest reception (green) to maximum attenuation (red). Black lines denote electoral district boundaries. CBYT is located within the Humber–St. George's district.

Figure A.2: Example of Actual and Expected Signal Strength Estimates by Electoral Districts



Notes: This figure compares actual and expected signal strength for public television across electoral districts in 1958. Actual signal strength is estimated using the Irregular Terrain Model (ITM) to account for topographical interference. Expected signal strength is a simulated counterfactual average derived from permutations of transmitter activation sequences to account for the non-random timing of network expansion. Green indicates high signal intensity and red indicates low intensity. Details regarding the estimation, simulation and aggregation procedures are provided in Appendix B and E.

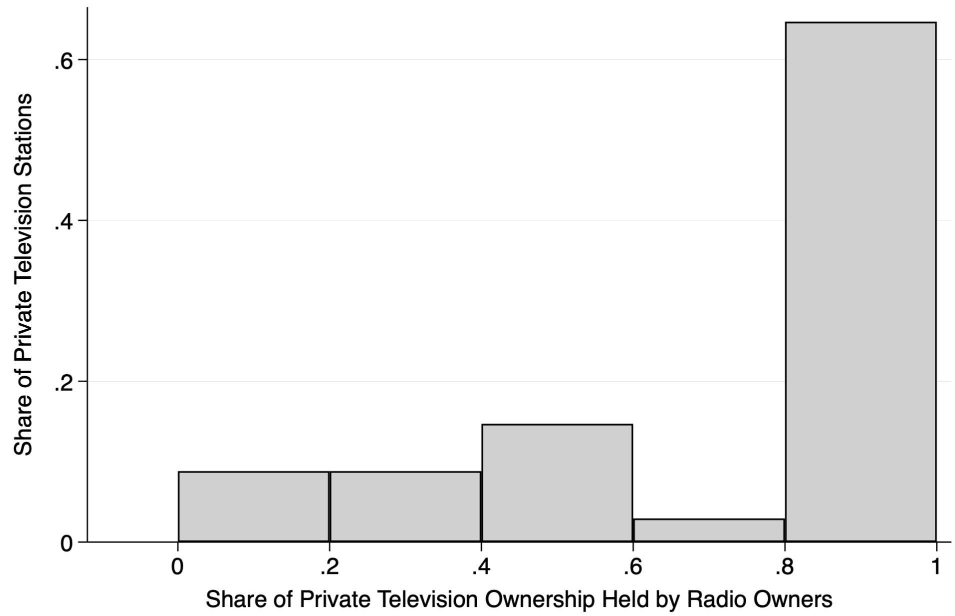
Figure A.3: Covariate Balance by Signal Strength and Ownership Type (1958)



Notes: The figure presents coefficient estimates documenting the balance of baseline characteristics across electoral districts in the final treatment period. Specifically, it tests for differences between districts with public and private television access based on pre-treatment demographics and political outcomes. Observations are at the electoral district level. The y-axis lists standardized, pre-treatment outcome variables defined in Appendix E. The first six outcomes are historical census demographics, while the political outcomes include *Voter turnout* (total votes cast divided by the electorate size), as well as *Speech localization* (the local orientation of MP parliamentary speeches) and *Party dissent* (an MP's willingness to prioritize local interests over party discipline), both measured over the entire 21st Canadian Parliament (1949–1953). Each outcome is regressed on 1958 signal strength ($signal_{d,1958}$) and its interaction with an indicator for private television ($signal_{d,1958} \times private_{d,1958}$). All specifications include province fixed effects and expected signal strength. The left panel plots coefficient estimates for $signal_{d,1958}$ (selection into television access), while the right panel plots estimates for $signal_{d,1958} \times private_{d,1958}$ (selection into private television access). The right panel estimates are conditional on television access, and thus reflect the balance of covariates and pre-treatment outcomes between private and public television districts. Intervals reflect 95% confidence based on robust standard errors.

Covariate Balance in the Final Treatment Period In Section 4.3, we establish that our core identifying assumption holds during the initial rollout of the network in 1953. To ensure this assumption is not violated by unobserved time-varying confounders as the network expanded, Figure A.3 replicates our balance test for the final treatment period in 1958. We find no evidence of targeted selection by broadcasters during this extended time frame. Importantly, model covariates remain conditionally balanced with respect to private television access (right panel). Crucially, all pre-treatment political outcomes—including voter turnout and our measures of parliamentary speech—are statistically indistinguishable between private and public television districts in this final year. The persistence of covariate balance through the end of the single-station policy era reinforces our causal interpretation and confirms that the gradual expansion of private stations did not systematically capture districts on divergent trajectories.

Figure A.4: Distribution of Joint Private Television and Radio Ownership



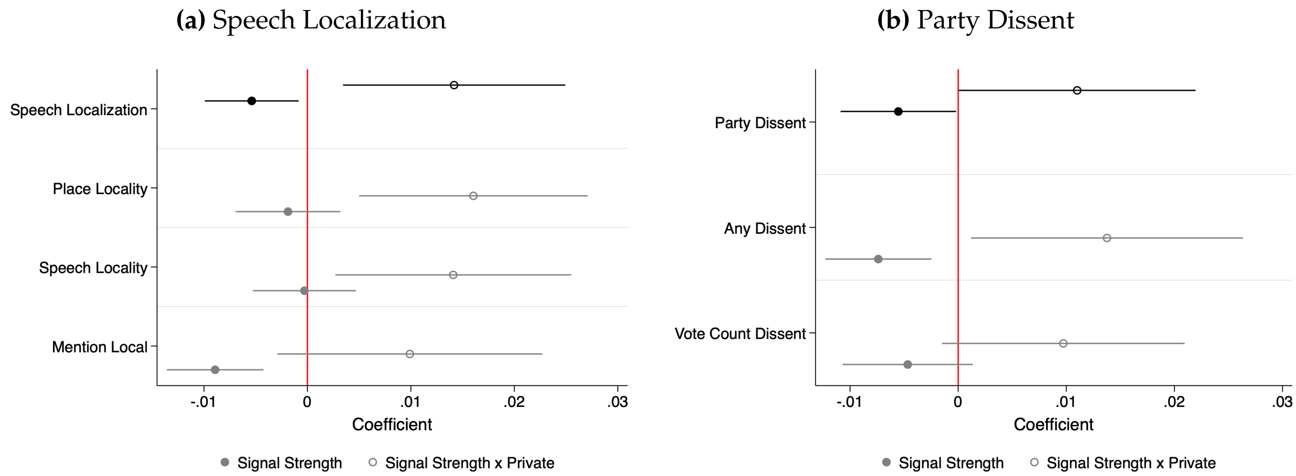
Notes: This histogram shows the distribution of private television stations by their degree of cross-media ownership with private radio broadcasters. For each station, we calculate the product of each owner's share in the television and radio stations and sum these values across all owners to capture joint ownership intensity, as defined by the equation in the text. Values are based on a complete list of private television stations in 1956 (Royal Commission on Broadcasting, 1957, Appendix VIII).

Joint Private Television and Radio Ownership We compile a complete list of private radio and television stations in 1956, including their individual owners and ownership shares. For each private television station, we calculate a cross-media intensity measure ($Joint\_Ownership_s$) as follows:

$$Joint\_Ownership_s = \sum_{i \in Owners_s} (Share_i^{TV} \times Share_i^{Radio})$$

where $Share_i^{TV}$ is the ownership stake of individual i in private television station s and $Share_i^{Radio}$ is their stake in any affiliated private radio stations. This measure reflects the extent to which private television ownership is tied to the radio industry at the station level. As shown in Figure A.3, these links are prevalent across our sample of 34 private television stations and 58 distinct owners. Specifically, 64% of all private television owners also own a radio station. Among the 80% of owners who hold shares in only one private television station, 76% also own a radio station. At the station level, 21 private television stations (62%) are entirely owned by radio interests, while just 3 private stations have no ownership links to radio. These patterns suggest that private television infrastructure was frequently built atop pre-existing radio operations, which lowered entry costs in districts with a prior radio presence. Because the radio network was established well before the television era, these results indicate that the majority of private television station entry was driven by infrastructure inertia rather than strategic speculation on future economic growth.

Figure A.5: Individual Component Estimates for the Speech Localization Index and Party Dissent Index



Notes: This figure documents the robustness of our results by reporting OLS estimates of equation (3) for the individual components of the *Speech Localization* and *Party Dissent* indices. Observations are at the electoral district level for federal elections between 1935 and 1958. The baseline *Signal Strength* coefficient identifies the impact of public television exposure relative to districts without television. The *Private* indicator is equal to one if a private television signal is viewable in a district in a given year. Its interaction with signal strength captures the marginal effect of private relative to public television among districts where a signal was present. The left panel reports effects on the three constituent parts of the speech index: (1) *Mention local*, (2) *Speech locality* and (3) *Place locality*. The right panel reports estimates for the components of the dissent index: (1) *Any dissent* and (2) *Vote Count Dissent*. All estimates are conditional on expected signal strength and its interaction with the private indicator. Specifications include electoral district and year fixed effects along with pre-treatment covariates—population density, earnings, age, literacy and urbanization—interacted with year fixed effects. All variables are standardized to mean zero and unit variance for comparability. Intervals reflect 95% confidence based on robust standard errors clustered at the district level.

Robustness Across Index Components To ensure the observed shifts in parliamentary behavior are not driven by a single outlier measure, we report estimates for each constituent component of our composite indices. As shown in Figure A.5, the patterns of heterogeneity found in the main results are consistent across both the extensive and intensive margins of the *Speech Localization Index*. Specifically, the coefficient for signal strength—which identifies the impact of public television exposure—is associated with a significant decline in *Mention local*, an extensive-margin indicator of whether an MP refers to their district at all. We find similar, although slightly weaker, depressive effects for *Speech locality* and *Place locality*, which capture the intensive margins of local orientation by measuring the share of local locations mentioned per speech.

The results for the *Party Dissent Index* follow an identical pattern of broadcaster heterogeneity. The impact of public television is robust across both *Any dissent*, a binary indicator of whether an MP broke party ranks, and *Vote Count Dissent*, which uses a transformed count of dissenting votes to address the skewed distribution of legislative deviation.

Across all individual measures, the interaction term for private television districts is positive and significant (*Mention Local* and *Vote Count Dissent* are significant at the 10 percent level). This interaction captures the marginal effect of private relative to public television among districts where a signal was present, effectively offsetting the baseline public effect.

These results confirm that the observed shifts in legislative accountability and rhetoric are a specific consequence of public television content rather than an artifact of index construction.

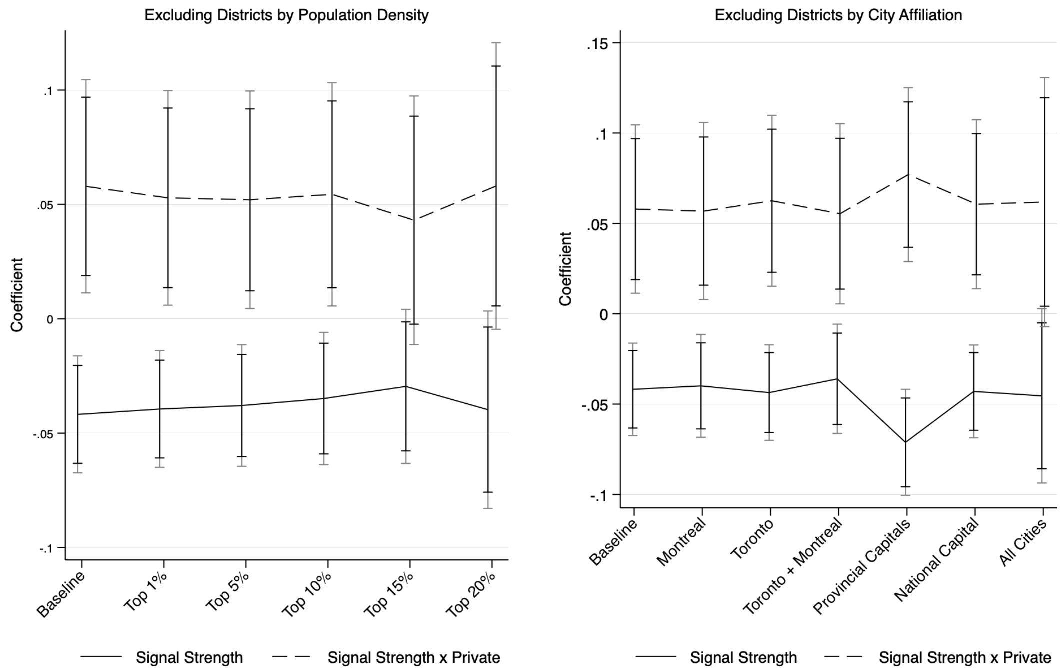
Additional Sensitivity Analyses To confirm the robustness of our baseline findings, we conduct three supplementary sensitivity exercises. First, to address concerns regarding non-random station allocation, Figure A.6 plots estimates after systematically excluding high-density districts and major cities. These areas possessed the greatest expected growth trajectories and the strongest economic incentives for private station placement. The point estimates remain qualitatively stable across these sample restrictions, indicating that unobserved factors unique to high-growth markets do not drive our results.

Second, Figure A.7 presents a leave-one-out analysis that re-estimates our primary model while dropping one electoral district at a time. The resulting distribution of point estimates clusters tightly around our full-sample benchmark, confirming that our findings are not an artifact of a single influential district or an idiosyncratic local shock.

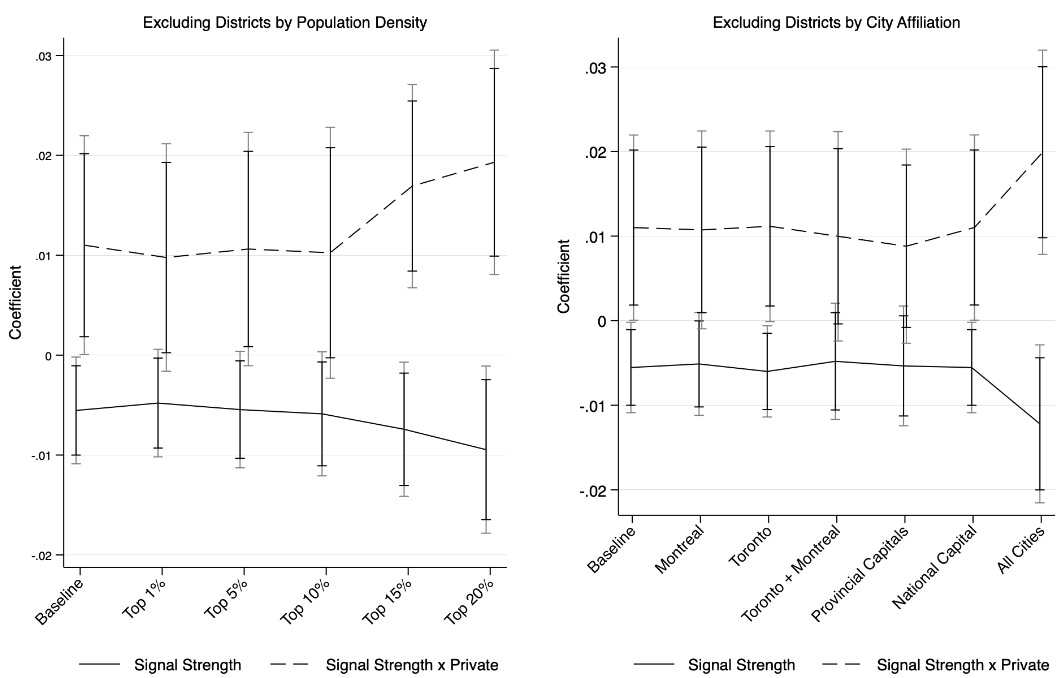
Finally, Figure A.8 demonstrates the stability of our estimates across alternative definitions of television exposure. While our baseline model uses a 50 dBμV/m threshold to capture a satisfactory reception quality, varying this cutoff between 25 and 75 dBμV/m yields consistent evidence of broadcaster heterogeneity.

Figure A.6: Robustness to Sample Selection: Excluding Major Markets

Voter Turnout

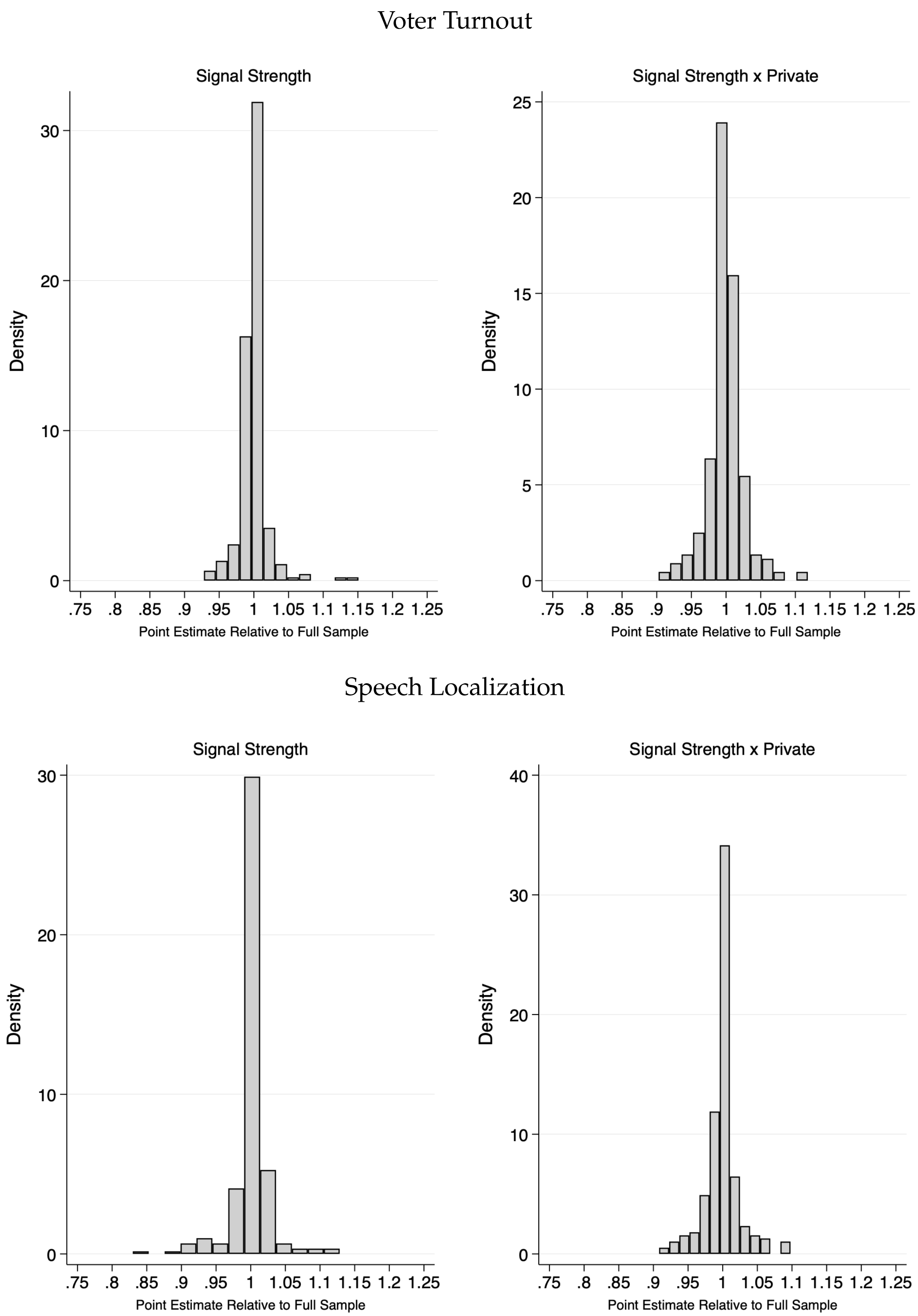


Speech Localization



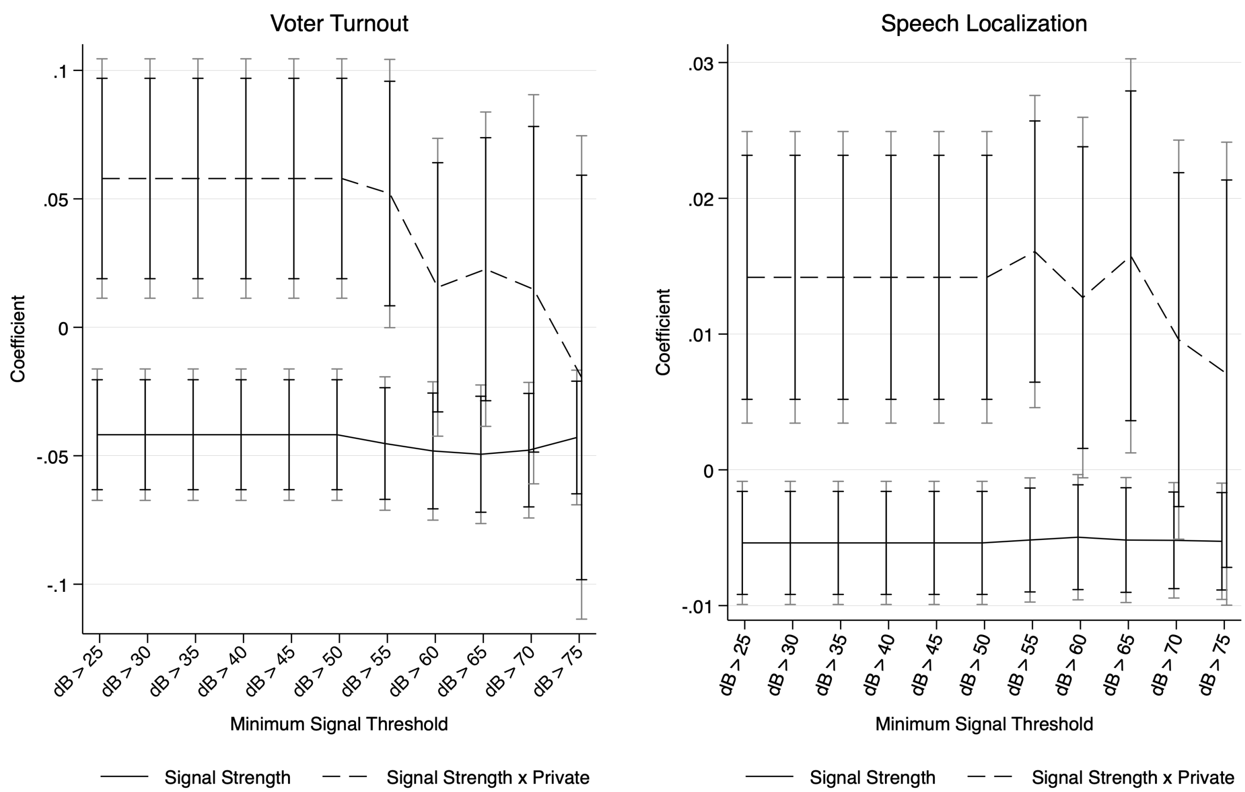
Notes: This figure documents the robustness of our results by reporting OLS estimates of equation (3) after systematically excluding population-dense and politically influential districts. Observations are at the electoral district level for federal elections between 1935 and 1958. The outcomes include *Voter Turnout* (top panel), measured as total votes cast relative to the electorate size, and *Speech Localization* (bottom panel), an index capturing the local orientation of MP parliamentary speeches. The baseline *Signal Strength* coefficient identifies the impact of public television exposure relative to districts without television. The *Private* interaction captures the marginal effect of private relative to public television among districts where a signal was present. The left panels plot estimates excluding districts by population density percentile. The right panels exclude districts based on city affiliation, where provincial capitals include Victoria, Edmonton, Regina, Winnipeg, Toronto, Quebec City, St. John's, Fredericton, Halifax and Charlottetown. The national capital is Ottawa. All estimates are conditional on expected signal strength and include electoral district and election-year fixed effects along with pre-treatment covariates—population density, earnings, age, literacy and urbanization—interacted with election-year fixed effects. Intervals reflect 90% (light grey) and 95% (black) confidence based on robust standard errors clustered at the district level.

Figure A.7: Robustness to Influential Observations: Leave-One-Out Estimates



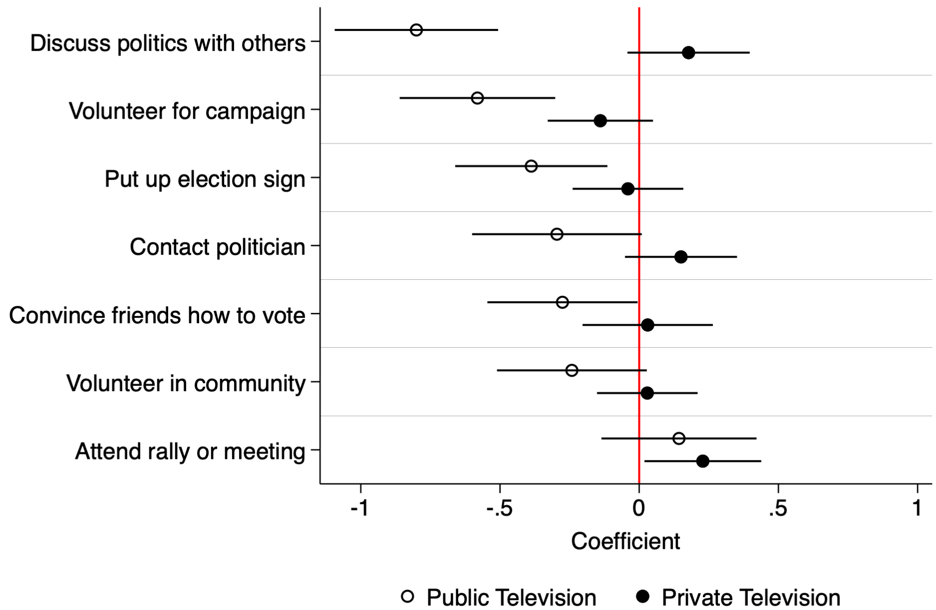
Notes: This figure documents the robustness of our results by reporting OLS estimates of equation (3) after systematically excluding one electoral district at a time. Observations are at the electoral district level for federal elections between 1935 and 1958. The outcomes include *Voter Turnout* (top panels) and *Speech Localization* (bottom panels). Within each outcome, we plot the distribution of estimates for the baseline *Signal Strength* coefficient (identifying the public television effect) and the *Private* interaction (capturing the marginal effect of private television relative to public). All estimates are expressed relative to the full-sample benchmark, where a value of 1 indicates that the exclusion of a specific district had no impact on the estimated treatment effect. Specifications include electoral district and election-year fixed effects along with pre-treatment covariates—population density, earnings, age, literacy and urbanization—interacted with election-year fixed effects. Robust standard errors are clustered at the district level.

Figure A.8: Robustness to Treatment Definition: Alternative Signal Thresholds



Notes: This figure documents the robustness of our results by reporting OLS estimates of equation (3) across a range of minimum signal strength thresholds. Observations are at the electoral district level for federal elections between 1935 and 1958. The outcomes include *Voter Turnout* (left panel), measured as total votes cast relative to the electorate size, and *Speech Localization* (right panel), an index capturing the local orientation of MP parliamentary speeches. The *Signal Strength* coefficient identifies the impact of public television exposure relative to districts without television. The *Private* interaction captures the marginal effect of private relative to public television among districts where a signal was present. Each specification adjusts the minimum threshold for television exposure, ranging from 25 to 75 dBμV/m. All estimates are conditional on expected signal strength and include electoral district and election-year fixed effects along with pre-treatment covariates—population density, earnings, age, literacy and urbanization—interacted with election-year fixed effects. Intervals reflect 90% (light grey) and 95% (black) confidence based on robust standard errors clustered at the district level.

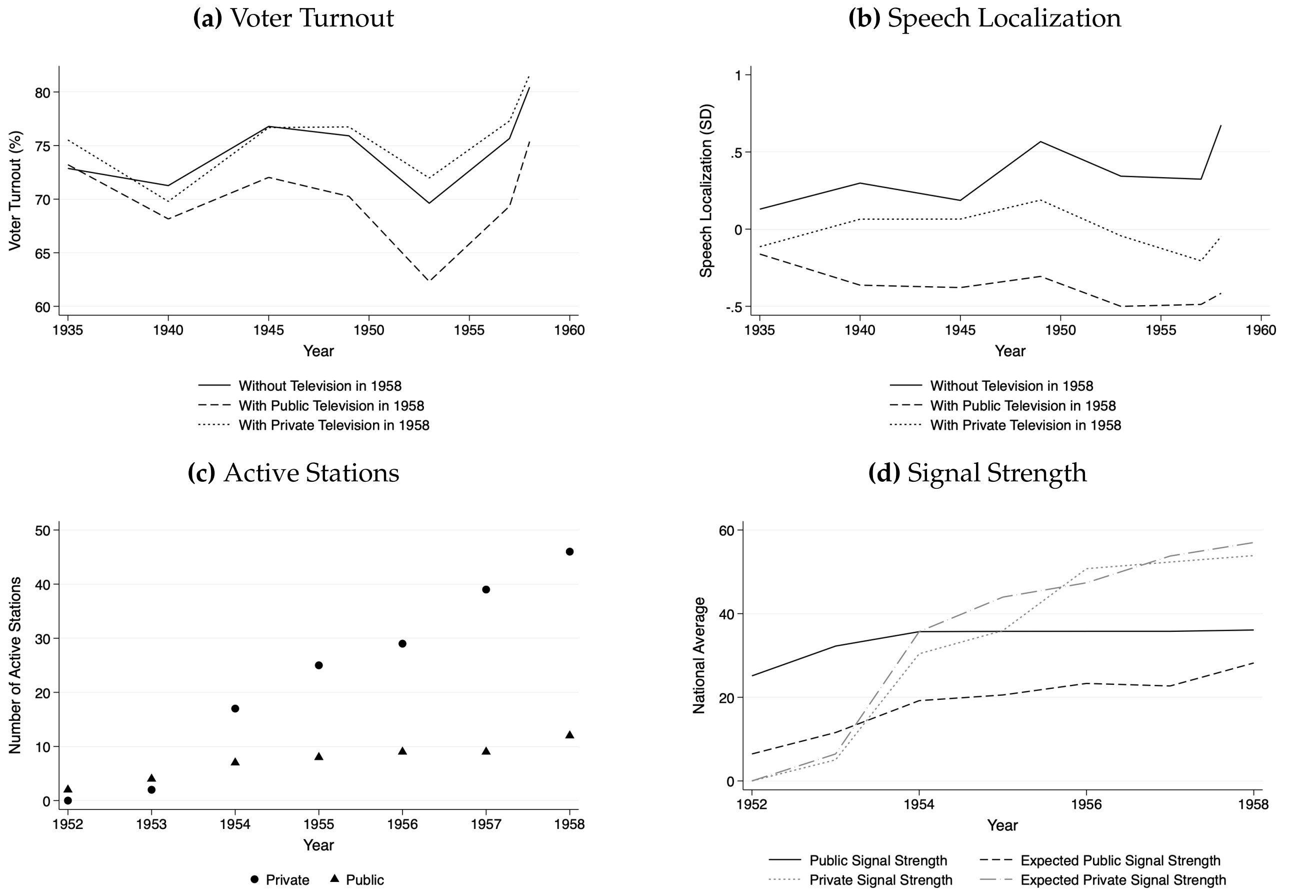
Figure A.9: Survey Evidence: The Effect of Public and Private Television on Civic Engagement



Notes: This figure reports OLS estimates of the relationship between broadcaster type and civic engagement using individual-level data from the 1974 *Canadian Election Study*. Each respondent i resides in electoral district d in province p. The dependent variables are standardized indices for eight non-voting political activities (listed along the y-axis). The variables $public_d$ and $private_d$ are binary indicators for districts where the 1969 signal strength reached at least 50 dBμV/m for the respective broadcaster type. We estimate δ^{pub} and δ^{pvt} from the model: $y_{i(d,p)} = \alpha_p + \delta^{pub} public_d + \delta^{pvt} private_d + \gamma \mathbf{x}_i + \epsilon_i$. All specifications include district-level controls for public and private expected signal strength, along with individual-level controls for income, years of education, gender, age, age squared, and fixed effects for ethnicity, community size, country of birth and province. Intervals reflect 95% confidence based on robust standard errors clustered at the electoral district level.

Survey Evidence on Civic Engagement To supplement our primary analysis of voter turnout, Figure A.9 reports estimates of the relationship between broadcaster type and broader dimensions of civic engagement. Using individual-level data from the 1974 Canadian Election Study, we examine eight non-voting political activities that similarly rely on the availability of local information. The results show that respondents in districts with public television access were significantly less likely to engage in activities such as discussing politics with others, volunteering for a campaign or contacting a politician. In contrast, the estimates for private television districts are generally null or marginally positive. While these cross-sectional findings postdate the single-station policy, they remain consistent with the view that the local information gap between broadcaster types influences a wide range of political behaviors

Figure A.10: Evolution of Political Outcomes and Television Signal Strength



Notes: This figure plots the evolution of political outcomes, station infrastructure and signal strength across the 1935–1958 sample period. Panel (a) plots the unadjusted average of voter turnout and panel (b) plots the unadjusted average of the speech localization index. For these two panels, the sample is divided into three groups based on an electoral district's exposure status by 1958: districts that never received television coverage (solid line), districts that eventually received public television (dashed line) and districts that eventually received private television (dotted line). Panel (c) reports the cumulative number of active public and private television stations operating in a given year. Panel (d) traces the evolution of both actual and expected signal strength separately for public and private stations, where expected signal strength is derived from permutations of transmitter activation sequences to account for non-random network expansion.

Evolution of Political Outcomes and Television Signal Strength Figure A.10 plots the evolution of primary political outcomes by eventual television exposure status. Panel (a) traces voter turnout and panel (b) traces the speech localization index across the sample period. These unadjusted trends align with our formal regression results. Following the 1952 television rollout, public districts exhibit the weakest turnout growth and the sharpest localization decline relative to private and untreated districts. While these averages visually demonstrate the divergence between public and private broadcasting, we prioritize the main text's event-study and fixed-effects models to rigorously account for non-random expansion and time-varying characteristics. Panel (c) documents the rapid proliferation of active stations to provide context. While the public broadcaster initiated the network in 1952, private stations quickly outpaced them in volume. Panel (d) plots the evolution of nationwide signal strength. Actual signal strength closely tracks our simulated measure for both broadcaster types, reinforcing our identification strategy.

Table A.1: Programming Categories by Weekly Airtime and Origin of Content

Content Category	Share of Weekly Airtime	*Geographic Origin of Content* Recorded	Network	Local	Network / Local
Panel A: Informational Programming					
News and Weather	5.8%	2.3%	39.8%	57.9%	0.69
Family Living and Shopping	4.2%	7.6%	21.8%	70.6%	0.31
Canadian Activities and Heritage	3.6%	6.3%	78.8%	14.9%	5.29
Youth Educational Programs	3.1%	3.2%	96.4%	0.4%	241.00
Religion	2.1%	12.4%	76.3%	11.3%	6.75
Foreign Lands and Peoples	1.6%	29.3%	68.5%	2.2%	31.14
Political and Public Affairs	1.5%	0.0%	95.4%	4.6%	20.74
Social and Human Relations	1.5%	2.0%	94.4%	3.6%	26.22
Nature and Science	0.9%	18.1%	80.2%	1.7%	47.18
Agriculture, Fisheries, etc.	0.8%	1.6%	85.0%	13.4%	6.34
Miscellaneous Information	0.7%	18.4%	76.2%	5.4%	14.11
Programme Promotions	0.3%	11.2%	39.0%	49.8%	0.78
All Informational Programming	26.1%	7.2%	63.5%	29.3%	2.17
Panel B: Entertainment Programming					
Drama Programs	42.6%	–	–	–	–
Variety	12.0%	–	–	–	–
Music Programs	7.4%	–	–	–	–
Sports Programs	7.3%	–	–	–	–
Quiz, Games and Contests	1.8%	–	–	–	–
Personalities	1.3%	–	–	–	–
Other Children Programs	0.7%	–	–	–	–
Fine Arts, Literature, etc.	0.6%	–	–	–	–
Dance	0.3%	–	–	–	–
All Entertainment Programming	73.9%	34.9%	59.0%	6.1%	9.64
All Programming	100%	27.5%	60.2%	12.3%	4.89

Notes: This table reports differences in television programming content based on a comprehensive audit by the Royal Commission on Broadcasting (1957). Observations cover all stations in operation during the week of January 15–21, 1956 ($n = 42$, comprising 34 private stations and 8 public stations). *Share of Weekly Airtime* represents the percentage of total weekly broadcasting time dedicated to each *Content Category*. Programming content is classified by its geographic origin as *Recorded* (pre-recorded material), *Network* (national CBC service) or *Local* (live, locally produced content). The *Network / Local* column reports the ratio of network to local programming for each category. Dashes in Panel B indicate where granular geographic origin data were not reported for specific entertainment subcategories in the original audit. Data reflect all viewing hours on English-language stations, while Table A.3 reports the *Geographic Origin of Content* for French-language stations. Source: Smythe (1957, p. 59, 65 & 80).

Table A.2: Informational & Entertainment Content by Type, Language of Service & Time Slot

	Share of Weekly Airtime	
Class of Station and Time Slot	**Entertainment**	**Information**
Panel A: All Stations		
All Hours		
Public Stations	70.8%	29.2%
Private Stations	75.0%	25.0%
Public / Private Ratio	**0.94**	**1.17**
Panel B: English-Language Stations		
All Hours		
Public Stations	73.9%	26.1%
Private Stations	75.5%	24.5%
Public / Private Ratio	**0.98**	**1.07**
General Audience Hours		
Public Stations	65.0%	35.0%
Private Stations	73.4%	26.6%
Public / Private Ratio	**0.89**	**1.32**
Adult Audience Hours		
Public Stations	82.9%	17.1%
Private Stations	81.3%	18.7%
Public / Private Ratio	**1.02**	**0.91**
Panel C: French-Language Stations		
All Hours		
Public Stations	61.5%	38.5%
Private Stations	68.8%	31.2%
Public / Private Ratio	**0.89**	**1.23**
General Audience Hours		
Public Stations	51.0%	49.0%
Private Stations	63.9%	36.1%
Public / Private Ratio	**0.80**	**1.35**
Adult Audience Hours		
Public Stations	82.1%	17.9%
Private Stations	77.8%	22.2%
Public / Private Ratio	**1.06**	**0.81**

Notes: This table reports differences in television programming content based on an audit by the Royal Commission on Broadcasting (1957). Observations cover all stations in operation during the week of January 15–21, 1956 ($n = 42$). Panel A aggregates data for all stations, while Panels B and C separate the sample into English-language and French-language stations respectively. *Share of Weekly Airtime* denotes the proportion of weekly airtime allocated to each content type relative to total airtime across stations in that panel. The *Public / Private Ratio* is calculated by dividing the public station share by the private station share for each content category. *General Audience Hours* are Monday to Friday from 18:30 to 21:00 and from sign-on to 21:00 on weekends. *Adult Audience Hours* span 21:00 to sign-off seven days a week. Source: Smythe (1957, p. 46, 95 & 107).

Table A.3: Content Origin by Station Type, Language of Service and Audience Time Slot

	Geographic Origin of Content			
Class of Station and Time	**Recorded**	**Network**	**Local**	**Network / Local**
Panel A: English-Language Stations				
All Hours – Information & Entertainment				
Public Stations	24.6%	68.3%	7.1%	9.62
Private Stations	31.2%	54.5%	14.3%	3.81
Public / Private Ratio	**0.79**	**1.25**	**0.50**	**2.52**
General Audience Hours – Information Only				
Public Stations	6.8%	76.8%	16.4%	4.68
Private Stations	10.7%	59.9%	29.4%	2.04
Public / Private Ratio	**0.64**	**1.28**	**0.56**	**2.30**
Adult Audience Hours – Information Only				
Public Stations	3.7%	84.8%	11.5%	7.37
Private Stations	8.6%	70.4%	21.0%	3.35
Public / Private Ratio	**0.43**	**1.20**	**0.55**	**2.20**
Panel B: French-Language Stations				
All Hours – Information & Entertainment				
Public Stations	1.4%	98.6%	0.0%	∞
Private Stations	18.5%	64.2%	17.3%	3.71
Public / Private Ratio	**0.08**	**1.54**	**0.00**	–
General Audience Hours – Information Only				
Public Stations	2.9%	97.1%	0.0%	∞
Private Stations	8.0%	74.9%	17.1%	4.38
Public / Private Ratio	**0.36**	**1.30**	**0.00**	–
Adult Audience Hours – Information Only				
Public Stations	0.0%	100.0%	0.0%	∞
Private Stations	2.0%	77.6%	20.4%	3.80
Public / Private Ratio	**0.00**	**1.29**	**0.00**	–

Notes: This table reports the geographic origin of television content based on an audit by the Royal Commission on Broadcasting (1957). Observations cover all stations in operation during the week of January 15–21, 1956 ($n = 42$). Panels A and B separate the sample into English-language and French-language stations respectively. *Geographic Origin of Content* is categorized as *Recorded* (pre-recorded material), *Network* (national CBC service) or *Local* (live, locally produced content). The *Network / Local* column reports the ratio of network to local programming. The *Public / Private Ratio* is calculated by dividing the public station share by the private station share for each respective category. *General Audience Hours* are Monday to Friday from 18:30 to 21:00 and from sign-on to 21:00 on weekends. *Adult Audience Hours* span 21:00 to sign-off seven days a week. Source: Smythe (1957, p. 76 & 122).

Heterogeneity by Language of Service In this section, we extend our baseline analysis by distinguishing between public and private stations according to their language of service. As a bilingual country, Canada required television programming in both English and French to fulfill the publicly defined role of broadcasting as a unifying force—a means of fostering national identity and cohesion among its diverse population. However, for the era of the single-station policy, the French-language network was substantially smaller and more regionally concentrated: by 1958, it comprised only nine stations, all located in Quebec except for a single CBC outlet in Ottawa.

Table A.4 presents our findings by language of service. In our benchmark specification (column 2), the differential effects of public and private television on voter turnout appear only in districts with English-language service. We find little-to-no significant changes in engagement following the entry of French-language television, whether public or private. Column (4) reports estimates of the benchmark specification using the speech localization index as the outcome. While the estimates are less precise, the pattern remains: any significant effects are confined to English-language districts. These results suggest that the political effects of early Canadian television were concentrated among electoral districts with English-language programming.

The evidence by language of service is consistent with our baseline interpretation that political behavior responds to the geographic orientation of media content. While the effects differ across English- and French-language stations, the contrast between public and private broadcasters follows a consistent pattern for each language of service: political disengagement is concentrated in districts served by the nationally oriented public broadcaster, with no comparable effect in districts with private television access.

The muted effect in French-language districts likely reflects both the limited departure of French television content from existing local media and the restricted variation in our sample, each of which weakens our ability to detect a treatment effect. Both public and private French-language broadcasters had few options for importing recorded entertainment, as American programming was exclusively in English. As a result, they relied more heavily on domestic production and devoted a greater share of airtime to informational programming—one-third versus one-quarter on English-language stations (Table A.2). While the CBC aimed to offer a national service in both languages, its French division functioned in practice as a regional broadcaster. As late as 1977, the CBC president acknowledged the need to expand French-language services beyond the region, emphasizing that these services should reflect "the full diversity of the nation" and not just Quebec (quoted in Raboy, 1990, p. 250). These features—limited importable content and a regionally focused information service—meant that French-language television more closely resembled the local media it replaced. Moreover, our empirical design focuses on the single-station policy period, which necessarily limits identifying variation: by 1958, our final year of observation, only two public and seven private French-language stations were operating.

Table A.4: The Effect of Public and Private Television by Language of Service

	Voter Turnout		Speech Localization	
	(1)	(2)	(3)	(4)
Signal Strength (E)	-0.043***	-0.027**	-0.002*	-0.002
	(0.009)	(0.011)	(0.001)	(0.002)
Signal Strength (E) × Private (E)	0.046**	0.046*	0.014***	0.013**
	(0.023)	(0.024)	(0.005)	(0.005)
Signal Strength (F)	-0.041***	-0.022*	0.002	0.002
	(0.010)	(0.013)	(0.002)	(0.002)
Signal Strength (F) × Private (F)	0.040	0.047	-0.010	-0.009
	(0.046)	(0.049)	(0.008)	(0.008)
Private (E)	-0.686	-1.423	-1.065***	-1.032***
	(1.797)	(1.833)	(0.381)	(0.387)
Private (F)	-3.197	-5.131	0.954	0.872
	(3.941)	(4.255)	(0.628)	(0.592)
Covariates	No	Yes	No	Yes
District FE	Yes	Yes	Yes	Yes
Election-Year FE	Yes	Yes	Yes	Yes
Observations	1,795	1,764	1,674	1,646

Notes: This table reports OLS estimates of model (3) for a panel of electoral districts observed in federal election years between 1935 and 1958. The outcomes are *Voter Turnout*, measured as total votes cast relative to the electorate size, and *Speech Localization*, an index capturing the local orientation of MP parliamentary speeches. The main independent variable is *Signal Strength*, which increases continuously for values above 50 dBμV/m (the threshold for satisfactory reception) and is zero otherwise. Labels (E) and (F) denote signals from English-language and French-language stations respectively. The *Private* indicator is equal to one if a private television signal is viewable in a district in a given year. Its interaction with signal strength captures the marginal effect of private relative to public television among districts where a signal was present. All specifications include district and election-year fixed effects and are conditional on expected signal strength and its interaction with a private station indicator. Pre-treatment covariates—including population density, earnings, age, literacy and urbanization—are interacted with election-year fixed effects. Robust standard errors, clustered at the electoral district level, are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A.5: The Effect of Public and Private Television on Vote Shares by Political Party and Ideology

	Liberal Vote Share	**Conservative Vote Share**	**Non-Major Vote Share**	**Left Vote Share**	**Right Vote Share**
	(1)	(2)	(3)	(4)	(5)
Signal Strength	-0.009	-0.029	0.038	-0.023	0.028
	(0.024)	(0.024)	(0.031)	(0.024)	(0.028)
Signal Strength × Private	-0.011	0.058	-0.047	0.031	-0.009
	(0.045)	(0.053)	(0.055)	(0.053)	(0.054)
Private	5.269*	-2.389	-2.880	2.248	-4.635
	(2.911)	(3.282)	(3.613)	(3.150)	(3.139)
Covariates	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes
Election-Year FE	Yes	Yes	Yes	Yes	Yes
Observations	1,764	1,764	1,764	1,764	1,764

Notes: This table reports OLS estimates of model (3) for a panel of electoral districts observed in federal election years between 1935 and 1958. The outcomes are the vote shares cast for the *Liberal Party*, the *Conservative Party* and all other political parties (*Non-Major* parties), along with combined shares for *Left* and *Right* party alignments. The main independent variable is *Signal Strength*, which increases continuously for values above 50 dBμV/m (the threshold for satisfactory reception) and is zero otherwise. The *Private* indicator is equal to one if a private television signal is viewable in a district in a given year. Its interaction with signal strength captures the marginal effect of private relative to public television among districts where a signal was present. All specifications include district and election-year fixed effects and are conditional on expected signal strength and its interaction with a private station indicator. Pre-treatment covariates—including population density, earnings, age, literacy and urbanization—are interacted with election-year fixed effects. Robust standard errors, clustered at the electoral district level, are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Vote Shares by Political Party and Ideology In Table A.5, we investigate whether the perceived political slant of the public broadcaster disproportionately alienated specific voting blocs. Columns (1) and (2) report estimates showing no differential impact on vote shares for the Liberal or Conservative parties—Canada's two major parties and the only ones to have ever formed a federal government. Column (3) reports estimates for the vote share for all non-major parties, which also indicate no differential impact. When aggregating these shares into broader left-leaning and right-leaning ideological alignments, we similarly find no significant effect across the ideological spectrum (columns 4 and 5). Altogether, these findings imply a general reduction in engagement across the ideological spectrum, so it seems unlikely that any difference in the political slant of public and private broadcasters can explain our findings.

We estimate the differential impact of television exposure on vote shares for the Liberal and Conservative parties as well as all other non-major parties combined. We also aggregate these shares into broader left-leaning and right-leaning ideological alignments. Across all specifications, we find no significant differential impact on vote shares. This implies a general reduction in engagement across the ideological spectrum rather than a partisan response to biased media content.

Table A.6: The Effect of Public and Private Television on Newspaper Availability and Consumption

	Log # of Newspapers	Log Circulation	Log Average Circulation	Per Capita Circulation	Per Household Circulation
	(1)	(2)	(3)	(4)	(5)
Panel A: Daily Newspapers					
Signal Strength	-0.001	-0.002*	-0.001*	-0.001	-0.005
	(0.001)	(0.001)	(0.001)	(0.001)	(0.006)
Signal Strength × Private	-0.000	-0.000	0.000	0.001	0.000
	(0.003)	(0.003)	(0.002)	(0.003)	(0.012)
Private	0.082	0.175	0.079	0.047	0.573
	(0.322)	(0.190)	(0.259)	(0.159)	(0.751)
Covariates	Yes	Yes	Yes	Yes	Yes
City FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Observations	455	453	453	453	442
Panel B: Weekly Newspapers					
Signal Strength	0.005	0.002	-0.003	0.001	0.006
	(0.003)	(0.007)	(0.005)	(0.003)	(0.013)
Signal Strength × Private	-0.001	0.008	0.009	-0.000	-0.004
	(0.009)	(0.014)	(0.009)	(0.004)	(0.017)
Private	-0.303	-0.079	0.224	0.174	0.763
	(0.935)	(1.115)	(0.503)	(0.301)	(1.160)
Covariates	Yes	Yes	Yes	Yes	Yes
City FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Observations	258	258	258	258	252

Notes: This table reports OLS estimates of model (3) for a panel of cities observed annually from 1945 to 1958. Panel A reports results for daily newspapers and Panel B for weekly newspapers. Outcomes are the *Log # of Newspapers* (count of unique titles) in column (1), *Log Circulation* (total annual copies) in column (2), *Log Average Circulation* (copies per title) in column (3), *Per Capita Circulation* in column (4) and *Per Household Circulation* in column (5). Per capita and per household figures are derived using linear interpolation of city populations and households from the 1941, 1951 and 1961 Censuses. The main independent variable is *Signal Strength*, which increases continuously for values above 50 dBμV/m (the threshold for satisfactory reception) and is zero otherwise. The *Private* indicator is equal to one if a private television signal is viewable in a city in a given year. Its interaction with signal strength captures the marginal effect of private relative to public television among cities where a signal was present. All specifications include city and year fixed effects and are conditional on expected signal strength and its interaction with a private station indicator. Pre-treatment covariates—including population density, earnings, age, literacy and urbanization—are interacted with year fixed effects. Robust standard errors, clustered at the city level, are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Newspaper Availability and Consumption Table A.6 tests whether television's arrival differentially altered access to print media based on broadcaster type. Using a panel of cities from 1945 to 1958, we estimate the effect of public and private television entry on the availability and consumption of daily and weekly newspapers. While the estimates for daily newspapers in columns (2) and (3) show a significant reduction in total and average circulation following television's entry, the interaction term is insignificant. This suggests that this decline was statistically indistinguishable across public and private districts (Panel A). We also report estimates for weekly newspapers based on a panel of 28 cities in Panel B, where the interaction term for private television remains insignificant across all outcomes. Altogether, these results indicate that the observed divergence in political engagement cannot be attributed to a relative shift in newspaper consumption between public and private television districts.

Table A.7: Robustness to Selection Bias: Controlling for Pre-Existing Radio Markets

	Voter Turnout		**Speech Localization**	
	(1)	(2)	(3)	(4)
Panel A: Radio stations within 50km				
Signal Strength	-0.042***	-0.056***	-0.005**	-0.006**
	(0.013)	(0.014)	(0.002)	(0.002)
Signal Strength × Private	0.058**	0.059**	0.014**	0.014**
	(0.024)	(0.024)	(0.005)	(0.005)
Private	-0.957	-1.288	-0.620*	-0.636*
	(1.635)	(1.640)	(0.362)	(0.364)
Panel B: Radio Stations within 100km				
Signal Strength	-0.042***	-0.038***	-0.005**	-0.005**
	(0.013)	(0.013)	(0.002)	(0.002)
Signal Strength × Private	0.058**	0.051**	0.014**	0.014**
	(0.024)	(0.024)	(0.005)	(0.006)
Private	-0.957	-1.103	-0.620*	-0.642*
	(1.635)	(1.620)	(0.362)	(0.363)
# Radio Stations × Election-Year FE	No	Yes	No	Yes
Covariates	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes
Election-Year FE	Yes	Yes	Yes	Yes
Observations	1,764	1,764	1,646	1,646

Notes: This table reports OLS estimates of model (3) for a panel of electoral districts observed in federal election years between 1935 and 1958. The outcomes are *Voter Turnout*, measured as total votes cast relative to the electorate size, and *Speech Localization*, an index capturing the local orientation of MP parliamentary speeches. The main independent variable is *Signal Strength*, which increases continuously for values above 50 dBμV/m (the threshold for satisfactory reception) and is zero otherwise. The *Private* indicator is equal to one if a private television signal is viewable in a district in a given year. Its interaction with signal strength captures the marginal effect of private relative to public television among districts where a signal was present. To test for selection into private broadcasting, columns (2) and (4) are conditional on the number of pre-television radio stations within a radius of $\chi \in \{50\text{km}, 100\text{km}\}$ of a district, interacted with election-year fixed effects. All specifications include district and election-year fixed effects. Pre-treatment covariates—including population density, earnings, age, literacy and urbanization—are interacted with election-year fixed effects. Robust standard errors, clustered at the electoral district level, are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Pre-Television Radio Coverage We measure pre-treatment, cross-sectional variation in radio coverage using 1941 records of radio towers and call signs sourced from *Library and Archives Canada*. Because these records do not report precise tower locations, we supplement them with a 1971 archival document listing radio tower frequencies and coordinates. By cross-referencing call signs and cities, we match 72 radio stations to their exact towers since these stations continued operating through 1971. For the remaining 13 stations, we assign each to the primary radio tower in its host city. Finally, we calculate the number of radio stations within a χ-kilometer radius of each electoral district, where $\chi \in \{50, 100\}$. This yields a cross-sectional measure of pre-treatment radio station coverage for each district.

Table A.8: Robustness to Identification Strategy: Alternative Identifying Controls

	Two-Way FE		**Free-Space Signal**		**Expected Signal**	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Voter Turnout						
Signal Strength	-0.043***	-0.031***	-0.050***	-0.042***	-0.053***	-0.042***
	(0.007)	(0.008)	(0.007)	(0.009)	(0.012)	(0.013)
Signal Strength × Private	0.038*	0.042**	0.066	0.048	0.052**	0.058**
	(0.019)	(0.020)	(0.056)	(0.058)	(0.023)	(0.024)
Private	0.068	-0.894	3.858	0.752	0.182	-0.957
	(1.566)	(1.638)	(6.650)	(6.860)	(1.569)	(1.635)
Observations	1,795	1,764	1,795	1,764	1,795	1,764
Panel B: Speech Localization Index						
Signal Strength	-0.002*	-0.002	-0.002	-0.002	-0.004**	-0.005**
	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)
Signal Strength × Private	0.005	0.007	0.024**	0.022*	0.012**	0.014**
	(0.004)	(0.005)	(0.012)	(0.011)	(0.005)	(0.005)
Private	-0.526	-0.609*	1.828	1.275	-0.510	-0.620*
	(0.360)	(0.363)	(1.469)	(1.369)	(0.357)	(0.362)
Observations	1,674	1,646	1,674	1,646	1,674	1,646
Covariates	No	Yes	No	Yes	No	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes
Election-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1674	1646	1674	1646	1674	1646

Notes: This table reports OLS estimates of model (3) for a panel of electoral districts observed in federal election years between 1935 and 1958. The outcome in Panel A is *Voter Turnout*, measured as total votes cast relative to the electorate size. The outcome in Panel B is *Speech Localization*, an index capturing the local orientation of MP parliamentary speeches. The main independent variable is *Signal Strength*, which increases continuously for values above 50 dBμV/m (the threshold for satisfactory reception) and is zero otherwise. The *Private* indicator is equal to one if a private television signal is viewable in a district in a given year. Its interaction with signal strength captures the marginal effect of private relative to public television among districts where a signal was present. To test the robustness of the identification strategy, we vary the controls used to account for endogenous station placement. Columns (1) and (2) report estimates from a two-way fixed effects specification without additional identifying controls. Columns (3) and (4) condition on a conventional free-space signal model, while columns (5) and (6) replicate the baseline estimates by conditioning on expected signal strength. All specifications include district and election-year fixed effects. When included, pre-treatment covariates—including population density, earnings, age, literacy and urbanization—are interacted with election-year fixed effects. Robust standard errors, clustered at the electoral district level, are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Alternative Identifying Controls Table A.8 compares our preferred expected signal strength approach against alternative identification strategies. Columns 1 and 2 report estimates from a standard two-way fixed effects model without additional identifying controls, while columns 3 and 4 condition on a conventional free-space signal model. All models yield qualitatively similar coefficients, demonstrating that our findings are robust to the choice of identification strategy.

Table A.9: Robustness to Sample Period: Extended and Restricted Panel Estimates

	Voter Turnout			Speech Localization		
	(1)	(2)	(3)	(4)	(5)	(6)
Signal Strength	-0.042***	-0.046***	-0.058***	-0.005**	-0.004**	-0.003
	(0.013)	(0.010)	(0.017)	(0.002)	(0.002)	(0.004)
Signal Strength × Private	0.058**	0.055***	0.067**	0.014***	0.009**	0.017**
	(0.024)	(0.019)	(0.030)	(0.005)	(0.004)	(0.007)
Private	-0.957	-0.568	0.574	-0.679*	-0.458**	-1.263**
	(1.635)	(1.297)	(2.194)	(0.362)	(0.222)	(0.504)
Sample Years	1935-1958	1935-1968	1935-1958	1935-1958	1935-1968	1935-1958
First Treatment Only	No	No	Yes	No	No	Yes
Covariates	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes
Election-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,764	2,764	1,489	1,646	2,534	1,401

Notes: This table reports OLS estimates of model (3) for a panel of electoral districts observed in federal election years as noted in the table. The panel years vary across specifications as noted in the table. The outcomes are *Voter Turnout*, measured as total votes cast relative to the electorate size, and *Speech Localization*, an index capturing the local orientation of MP parliamentary speeches. The main independent variable is *Signal Strength*, which increases continuously for values above 50 dBμV/m (the threshold for satisfactory reception) and is zero otherwise. The *Private* indicator is equal to one if a private television signal is viewable in a district in a given year. Its interaction with signal strength captures the marginal effect of private relative to public television among districts where a signal was present. Columns (1) and (4) report baseline estimates for the 1935–1958 period. To ensure findings are not driven by the specific sample period, columns (2) and (5) extend the panel to include elections up to 1968. To account for potentially heterogeneous treatment effects over time, columns (3) and (6) estimate the effect for the first treatment period only by excluding observations from treated districts after the initial treatment occurs. All specifications include district and election-year fixed effects. Pre-treatment covariates—including population density, earnings, age, literacy and urbanization—are interacted with election-year fixed effects. Robust standard errors, clustered at the electoral district level, are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Extended and Restricted Panel Estimates Table A.9 replicates our baseline estimates using an extended panel from 1935 to 1968 and a restricted sample that isolates the first treatment period. The stability of these estimates across both the extended timeframe and the first-treatment-only subsample indicates that our results are not artifacts of the specific 1935-1958 sample period.

Table A.10: Robustness to Overlapping Coverage: Excluding Dual-Treated Districts

	Voter Turnout		Speech Localization	
	(1)	(2)	(3)	(4)
Signal Strength	-0.042***	-0.043***	-0.005**	-0.006**
	(0.013)	(0.013)	(0.002)	(0.002)
Signal Strength × Private	0.058**	0.066***	0.014**	0.015***
	(0.024)	(0.024)	(0.005)	(0.006)
Private	-0.957	-1.545	-0.620*	-0.627*
	(1.635)	(1.685)	(0.362)	(0.360)
Drop Dual Treatments	No	Yes	No	Yes
Covariates	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes
Election-Year FE	Yes	Yes	Yes	Yes
Observations	1,764	1,660	1,646	1,549

Notes: This table reports OLS estimates of model (3) for a panel of electoral districts observed in federal election years between 1935 and 1958. The outcomes are *Voter Turnout*, measured as total votes cast relative to the electorate size, and *Speech Localization*, an index capturing the local orientation of MP parliamentary speeches. The main independent variable is *Signal Strength*, which increases continuously for values above 50 dBμV/m (the threshold for satisfactory reception) and is zero otherwise. The *Private* indicator is equal to one if a private television signal is viewable in a district in a given year. Its interaction with signal strength captures the marginal effect of private relative to public television among districts where a signal was present. Columns (1) and (3) report baseline estimates for comparison. Because media market boundaries do not perfectly align with electoral districts, columns (2) and (4) report estimates from a subsample that excludes 15 "dual-treated" districts where signal coverage from both public and private broadcasters is present. This specification ensures the results are not driven by districts with overlapping coverage areas. All specifications include district and election-year fixed effects. Pre-treatment covariates—including population density, earnings, age, literacy and urbanization—are interacted with election-year fixed effects. Robust standard errors, clustered at the electoral district level, are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Excluding Dual-Treated Districts Table A.10 reports estimates from a subsample that excludes "dual-treated" districts where signal coverage from both public and private broadcasters overlaps. Because media market boundaries do not perfectly align with electoral districts, excluding these overlapping areas ensures our results are cleanly identified. This restriction yields slightly larger effect sizes, confirming that our baseline results are not driven by markets with overlapping coverage.

Table A.11: Robustness to Alternative Clustering: Station-Level Standard Errors

	Voter Turnout	Speech Localization	Party Dissent	Incumbent Margin of Victory
	(1)	(2)	(3)	(4)
Signal Strength	-0.042	-0.005	-0.006	0.220
	(0.013)***	(0.002)**	(0.003)**	(0.049)***
	[0.014]***	[0.003]*	[0.003]*	[0.089]**
Signal Strength × Private	0.058	0.014	0.011	-0.265
	(0.024)**	(0.005)**	(0.006)**	(0.119)**
	[0.020]***	[0.006]**	[0.005]**	[0.121]**
Private	-0.957	-0.620	-0.100	2.914
	(1.635)	(0.362)*	(0.283)	(9.290)
	[1.152]	[0.311]*	[0.266]	[8.150]
Covariates	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes
Election-Year FE	Yes	Yes	Yes	Yes
Observations	1,764	1,646	1,509	1,763
Baseline Mean	74.052	0.030	0.201	10.016
Net Effect Private TV (p-value)	0.875	0.361	0.365	0.898

Notes: This table reports OLS estimates of model (3) for a panel of electoral districts observed in federal election years between 1935 and 1958. The outcomes are *Voter Turnout*, measured as total votes cast relative to the electorate size, *Speech Localization*, an index capturing the local orientation of MP parliamentary speeches, *Party Dissent*, defined by how often MPs break from party-line votes in Parliament, and *Incumbent Margin of Victory*, calculated as the difference between the incumbent's vote share and that of the strongest opposing candidate. The main independent variable is *Signal Strength*, which increases continuously for values above 50 dBμV/m (the threshold for satisfactory reception) and is zero otherwise. The *Private* indicator is equal to one if a private television signal is viewable in a district in a given year. Its interaction with signal strength captures the marginal effect of private relative to public television among districts where a signal was present. All specifications include district and election-year fixed effects. Pre-treatment covariates—including population density, earnings, age, literacy and urbanization—are interacted with election-year fixed effects. Robust standard errors, clustered at the electoral district level, are reported in parentheses, while those clustered at the station level are reported in square brackets. For the latter, all districts without television reception are assigned to a single cluster.

Alternative Clustering Table A.11 tests the sensitivity of our inference to alternative clustering specifications to account for potential spatial correlation of error terms within a broadcaster's market. While we cluster standard errors at the electoral district level in our baseline model, unobserved shocks may be correlated across districts that share the same television station coverage area. We re-estimate our main specifications and report standard errors clustered at the station level in square brackets. Accounting for this higher level of variation yields standard errors that are highly comparable in magnitude to our baseline estimates (reported in parentheses). For the interaction term, the estimate for voter turnout is now significant at the 1 percent level, rather than the 5 percent level at baseline, while the remaining outcomes maintain the same level of significance. This confirms that our core findings are robust to broader geographic definitions of the error structure.

Table A.12: Political Parties in the Parlinfo Database by Left-Right Assignment

Political Spectrum	Political Party Name in Parlinfo
Left-Leaning	Liberal Party of Canada, New Democratic Party, Green Party of Canada, Progressive, Co-operative Commonwealth Federation, Independent Liberal, Liberal Progressive, Labour, Liberal Labour Party, Unionist (Liberal), Independent Progressive, Labor-Progressive Party, Nationalist Liberal, Independent Co-operative Commonwealth Federation, Bloc Québécois, Patrons of Industry, Independent Labour, United Farmers of Alberta, United Farmers of Ontario, United Farmers of Ontario-Labour, United Farmers, United Reform Movement, Unity, Labor-Progressive Party, Bloc populaire canadien, New Party, Rhinoceros Party, Rhinoceros Party of Canada, Marxist-Leninist Party of Canada, Canadian Action Party, Marijuana Party, Natural Law Party of Canada, Party for the Commonwealth of Canada, Union Populaire, Animal Protection Party of Canada, Communist Party of Canada, Independent Liberal Progressive, Liberal Labour Progressive, Liberal Protectionist, National Labour, National Unity, Opposition-Labour, Progressive Canadian Party, United Farmers-Labour, Radical Chrétien, Socialist, United Reform, Opposition, Farmer, Farmer Labour, Labour Farmer, Non-Partisan League, National Liberal Progressive, National Party of Canada, Parti Ouvrier Canadien, Protectionist, Trades Union, United Progressive, Verdun, Socialist Labour, Canadian Labour, Christian Liberal, Farmer-United Labour, National Socialist, Ouvrier Indépendant, Strength in Democracy, Animal Alliance, Environment Voters Party of Canada, First Peoples National Party of Canada, Ouvrier indépendent, Progressive Workers Movement, Work Less Party
Right-Leaning	Progressive Conservative Party, Conservative (1867-1942), Conservative Party of Canada, Social Credit Party of Canada, Liberal-Conservative, Conservative Party of Canada, Social Credit Party of Canada, Reform Party of Canada, Canadian Reform Conservative Alliance, Independent Conservative, Nationalist Conservative, Independent Progressive Conservative, New Democracy, Ralliement des créditistes, Unionist, McCarthyite, Nationalist, Reconstruction Party, Independent Reconstruction Party, Confederation of Regions Western Party, Social Credit Party of Canada, Libertarian Party of Canada, Abolitionist Party of Canada, Canadian Party, Candidate of the Electors, Conservative-Labour, Independent Nationalist, People's Party of Canada, People's Party of Canada, Union of Electors, National Liberal and Conservative Party (1921), Reform, Protestant Protective Association, Unité nationale, National Government, Parti Nationaliste du Québec, Candidat libéral des électeurs, Christian Heritage Party of Canada, Independent Social Credit, Maverick Party, Social Credit-National Unity, Democratic Advancement Party of Canada, Liberal Conservative Coalition, New Capitalist Party, Newfoundland and Labrador First Party, Prohibitionist, Technocrat, Free Party Canada, Canada Party, Western Block Party, Canadian Nationalist Party, National Citizens Alliance of Canada, Parti pour l'Indépendance du Québec

Notes: This table documents the assignment of political parties to the left and right of the political spectrum. Each party name is listed exactly as it appears in the Parlinfo database and is affiliated with at least one politician in our sample.

Political Parties by Left-Right Assignment Table A.12 documents the assignment of political parties to the left and right of the political spectrum. This classification is used to construct the ideological vote share outcomes analyzed in Table A.5. Each party name corresponds to its exact listing in the Parlinfo database and is affiliated with at least one politician in our sample.

B Modeling Expected Signal Strength

Our empirical design compares outcomes across districts exposed to either public or private television. A key challenge in this comparison is the non-random expansion of the television network, as factors determining the location and timing of transmitter installations may correlate with our political outcomes of interest.

In this appendix, we address this challenge by adopting a solution from Borusyak and Hull (2023), who demonstrate that even if a treatment is conditionally random, non-random *timing* of exposure can still introduce bias. To resolve this, we control for a time-varying measure of expected signal strength. Specifically, we simulate the network's rollout hundreds of times based on historical activation probabilities to calculate a district's expected exposure. Controlling for this expectation recenters the observed network around plausible counterfactuals, isolating the quasi-random variation where actual signal strength was stronger or weaker than predicted.

Omitted Variable Bias (OVB) Example Toronto and Montreal received television first because they represented the largest markets in the country. Nearby districts then gained access earlier than expected due to their geographic proximity to these hubs. This pattern suggests that any district near a major economic or population center was more highly exposed to the network's early expansion than a peripheral district. Under these conditions, a standard two-way fixed effects model may fail to identify the parameter of interest unless we assume that central and peripheral districts do not differ in any relevant time-varying way. Such an assumption is overly strong as it implies districts are homogeneous regarding political discontent, civic mindedness or other unobserved political dynamics.

Stylized Model Assume the model $y_i = \beta x_i + \varepsilon_i$, where the realized treatment $x_i = f_i(g_s, w_i)$ combines variation in shocks g_s from the installation of television transmitter s with predetermined variables w_i according to a known function $f(\cdot)$. Borusyak and Hull (2023) show that if shocks to g are exogenous to ε conditional on predetermined variables w and the conditional distribution $G(g|w)$ is known, then an expected treatment variable can be constructed to address the OVB problem.

Result Expected treatment $\mu_i = E[f_i(g_s, w_i)|w_i]$ acts as the sole confounder of the realized treatment x_i. We can demonstrate this within the stylized model by examining the correlation between model residuals and the realized treatment:

$$E\left[\frac{1}{N}\sum_i x_i\varepsilon_i\right] = E\left[\frac{1}{N}\sum_i E\left[f_i(g_s, w_i)\varepsilon_i|w_i\right]\right] \tag{B.1}$$

$$= E\left[\frac{1}{N}\sum_i \mu_i E\left[\varepsilon_i|w_i\right]\right] \tag{B.2}$$

$$= E\left[\frac{1}{N}\sum_i \mu_i\varepsilon_i\right] \tag{B.3}$$

Recentering the treatment variable around its expectation addresses the OVB problem. The recentered treatment $\tilde{x}_i = x_i - \mu_i$ is uncorrelated with residuals ε_i by construction. In practice, adding the expected treatment as a control variable in the stylized model provides an unbiased and consistent estimate of β. For our empirical strategy, the realized treatment x_i is the television signal strength at the electoral district level ($signal_{d,t}$) and the expected treatment μ_i is the expected signal strength ($\mu_{d,t}$) representing the district's non-random exposure to the network expansion.

B.1 Criteria for a Valid Measure of Expected Signal Strength

To compute expected treatment, we must specify the data-generating process of our realized treatment. In our setting, the function $f(\cdot)$ combines pre-determined variables with the distribution of shocks to g. This function is represented by the Irregular Terrain Model, which is the radio propagation model we use to estimate the attenuation of signal strength across space (see Section 3 for details). While the true distribution of shocks to g is exogenous, it is unknown in observational data and must be modeled by specifying an assignment process.

Modeling the distribution of these shocks requires simulating the activation timing for the complete network of television transmitters. We assign each transmitter a probability of activation in year t and construct an average expected signal strength based on 500 permutations of this network expansion for each election year. Given the flexibility of this simulation approach, we validate our final measure against three criteria:

(1) In each simulation, transmitters with an early realized activation date receive a higher probability of activation than transmitters activated later.

(2) Expected signal strength $\mu_{d,t}$ must correlate with the model residuals from the following two-way fixed effects specification:

$$Y_{d,t} = \alpha_d + \alpha_t + \beta signal_{d,t} + \epsilon_{d,t}.$$

(3) Expected signal strength $\mu_{d,t}$ should capture the predictive variation of the realized treatment on any observable pre-determinant of treatment (such as a district's baseline population density in 1931). This is equivalent to the slope coefficient δ being statistically indistinguishable from zero when regressing a pre-determinant on actual and expected signal strength:

$$Pop_{d,1931} = \delta signal_{d,1953} + \gamma \mu_{d,1953} + \epsilon_d.$$

B.1.1 Alternative Shock Distributions

In this subsection, we outline 23 alternative shock distributions that satisfy criterion (1) in Section B.1. These serve as robustness checks against our baseline distribution from Section 4.2, ensuring that our results are not sensitive to the specific functional form used to model transmitter activation probabilities. Table B.1 summarizes the mechanics of each alternative, detailing the sequence of activation steps, the modeled probability of transmitter activation, the ranking metric, the distribution of the random shock and the final selection criteria for the active transmitters.

Simulation Example To illustrate this process, consider the sampling probability for the Toronto and Montreal transmitters under alternative 1. We rank the activation of our complete set of installations by months spanning a total duration of 204 months. Both the Toronto and Montreal transmitters were

Table B.1: Alternative Shock Distributions

Alt.	Step	Probability of Transmitter Activation	Activation Rank	Randomness	Selection Criteria
1		$\Pr = 1 - \frac{Dur. - min(Dur.)}{max(Dur.) - min(Dur.)} + \frac{1}{\#\ towers\ activated_t}$	Months	$g \sim Normal(\Pr, sd(\Pr))$	Highest g
2	i	LPM: $activated_t = f(Population,\ TransmittersActivated)_t$	-	$Active \sim Binomial(1, \hat{activated_t})$	Active = 1
	ii			$g \sim Normal(\hat{activated_t}, sd(\hat{activated_t}))$	Highest g
3		$\Pr = \frac{\#\ towers\ active_t}{\#towers}$	-	$Active \sim Binomial(1, \Pr)$	Active=1
4		$\Pr = 1 - \frac{Dur. - min(Dur.)}{max(Dur.) - min(Dur.)}$	Months	$g \sim Normal(\Pr, sd(\Pr))$	Highest g
5	i	$\Pr = 1 - \frac{Dur. - min(Dur.)}{max(Dur.) - min(Dur.)}$	Months	$Active \sim Binomial(1, \Pr)$	Active = 1
	ii			$g \sim Normal(\Pr, sd(\Pr))$	Highest g
6		$\Pr = 1 - \frac{Year - min(Year)}{max(Year) - min(Year)}$	Years	$g \sim Normal(\Pr, sd(\Pr))$	Highest g
7		$\Pr = \frac{1}{Duration}$	Years	$g \sim Normal(\Pr, sd(\Pr))$	Highest g
8		Lasso: $activated_t = f(Population,\ TransmittersActivated,\ Lat,\ Lon)_t$	-	$g \sim Normal(\hat{activated_t}, sd(\hat{activated_t}))$	Highest g
9		Lasso: $activated_t = f(Population,\ TransmittersActivated,\ Lat,\ Lon)_t$	-	$activated_t \sim Binomial(1, \hat{activated_t})$	Active = 1
10		$\Pr = 1 - \frac{Dur. - min(Dur.)}{max(Dur.) - min(Dur.)}$	Months	$g \sim Normal(\Pr, 2 * sd(\Pr))$	Highest g
11		$\Pr = \frac{\#\ towers\ active_t}{\#towers}$	-	$g \sim Normal(\Pr, 1)$	Highest g
12		$\Pr = 1 - \frac{Year - min(Year)}{max(Year) - min(Year)} + \frac{1}{\#\ towers\ activated_t}$	Years	$g \sim Normal(\Pr, sd(\Pr))$	Highest g
13		$\Pr = 1 - \frac{Dist(Toronto) - min(Dist(Toronto))}{max(Dist(Toronto)) - min(Dist(Toronto))}$	Distance	$g \sim Normal(\Pr, sd(\Pr))$	Highest g
14	i	$\Pr = 1 - \frac{Dist(Toronto) - min(Dist(Toronto))}{max(Dist(Toronto)) - min(Dist(Toronto))}$	Distance	$activated_t \sim Binomial(1, \Pr)$	Active = 1
	ii	$\Pr = 1 - \frac{Dur. - min(Dur.)}{max(Dur.) - min(Dur.)}$	Months	$g \sim Normal(\Pr, sd(\Pr))$	Highest g
15	i	$\Pr = 1 - \frac{Dist(Toronto) - min(Dist(Toronto))}{max(Dist(Toronto)) - min(Dist(Toronto))}$	Distance	$g \sim Normal(\Pr, sd(\Pr))$	
	ii	$\Pr = 1 - \frac{Dur. - min(Dur.)}{max(Dur.) - min(Dur.)}$	Months	$g \sim Normal(\Pr, sd(\Pr))$	
	iii			randomly select step i) or ii)	Highest g
16		$\Pr = 1 - \frac{Pop. - min(Pop.)}{max(Pop.) - min(Pop.)}$	Population	$g \sim Normal(\Pr, sd(\Pr))$	Highest g
17		$\Pr = 1 - \frac{Rank(Pop.) - min(Rank(Pop.))}{max(Rank(Pop.)) - min(Rank(Pop.))}$	Ranked Population	$g \sim Normal(\Pr, sd(\Pr))$	Highest g
18		$\Pr = \frac{1}{Rank(Pop.)}$	Ranked Population	$g \sim Normal(\Pr, sd(\Pr))$	Highest g
19		$\Pr = 1 - \frac{Dur. - min(Dur.)}{max(Dur.) - min(Dur.)}$	Months	$g \sim Normal(\Pr, sd(\sqrt{\Pr}))$	Highest g
20		$\Pr = 1 - \frac{Dur. - min(Dur.)}{max(Dur.) - min(Dur.)}$	Months	$g \sim Normal(\Pr, sd(\Pr^2))$	Highest g
21		$\Pr = \left(1 - \frac{Dur. - min(Dur.)}{max(Dur.) - min(Dur.)}\right) \times \left(1 - \frac{1}{\#\ towers\ activated_t}\right)$	Months	$g \sim Normal(\Pr, sd(\Pr)$	Highest g
22		-	Years	$g \sim Normal\left(Year, 1 - \frac{1}{\#\ towers\ activated_t}\right)$	Highest g
23		$\Pr = 1 - \frac{Dur. - min(Dur.)}{max(Dur.) - min(Dur.)} + \frac{1}{\#\ towers\ activated_t}$	Months	$g \sim Normal(\Pr, sd(\Pr))$	Highest g w/ no overlap

Notes: This table outlines 23 alternative data-generating processes used to simulate the expected television network expansion. *Alt.* indicates the reference number for the alternative shock distribution. *Step* outlines the order of operations for activation processes involving multiple steps (alternatives 2, 5, 14 and 15). *Probability of Transmitter Activation* defines the modeled probability (Pr) that a transmitter is activated in year t. Within these formulas, *Dur.* represents the duration since the first transmitter was opened, which is measured in either months or years as specified by the *Activation Rank* column. *Dist.* implies transmitters are ranked by distance and *Rank* indicates ranking by population. *LPM* and *Lasso* refer to linear probability and lasso regression models. *Randomness* describes how each probability is transformed into a shock by drawing from either a normal or binomial distribution. *Selection Criteria* defines how the s number of transmitters active in year t are selected: *Highest g* sorts the random shock realizations (g) and selects the top values until the simulated active count matches the historical count for year t while *Active = 1* selects any transmitter with a binary shock realization of 1.

installed in September 1952 making them the first two transmitters built in the network. Based on alternative 1, we assign the probability of activating either transmitter as $\Pr = 1 - \frac{0-0}{204-0} + 1/2 = 1.5$. Here the duration and minimum duration are 0, the maximum duration is 204 and $s = 2$ because only two transmitters were historically activated in 1952.

We truncate any probability values greater than one to exactly one. We then assume a random shock according to the distribution $g \sim Normal(\Pr, sd(\Pr))$ to guarantee a non-deterministic distribution of active transmitters in each permutation. We repeat this randomization process 500 times for every post-treatment year in our sample (annually from 1952 to 1958). To derive our final measure of expected signal strength, we first average across all permutations at the census subdivision (CSD) level. Then, following the exact procedure described in Section 3, we use 1951 CSD population data as weights for the final aggregation to electoral districts. The result is $\mu^A_{d,t}$, representing the average expected signal strength for district d in year t based on alternative model $A \in \{1, \ldots, 23\}$.

Modeling Variations While most alternatives model the activation probability as a concave function of duration (alt 1), years (alt 6), distance (alt 13) or population (alt 16), we depart from this functional form in several specifications to test the sensitivity of the simulation:

- **Altered Concavity:** To increase concavity and heavily penalize late-activated transmitters, we calculate the probability as $^1/_{\text{Duration}}$ (alt 7), $^1/_{\text{Population rank}}$ (alt 18) or use the squared probability (alt 20). Conversely, alternative 19 decreases concavity by taking the square root of the calculated probability.
- **Uniform Probabilities:** Alternatives 3 and 11 assign every transmitter an identical probability of activation calculated purely as a fraction of the historical transmitters activated in year t.
- **Data-Driven Predictions:** Alternative 2 uses a linear probability model while alternatives 8 and 9 employ a lasso model selection algorithm to predict activation based on geographic and demographic covariates.
- **Geographic Constraints:** Alternative 23 mirrors alternative 1 but enforces a no-overlap condition to prevent multiple transmitters from serving the same market in a single permutation.
- **Alternative Stochasticity and Ranking:** The remaining models address technical variations in the data-generating process. Alternatives 4, 5, 10, 12, and 21 vary the distribution and variance of the random shocks applied to duration-based probabilities. Alternatives 14, 15, 17, and 22 explore different ranking hierarchies, such as population-based ranking or distance-based activation steps.

B.1.2 Evaluating the Alternative Shock Distributions

We now evaluate the 23 alternative simulations, alongside the free-space signal strength (FSS) model and our baseline expected signal strength (ESS) measure, against criteria (2) and (3) defined in Section B.1. Alternatives $\mu^A_{d,t}$ that satisfy *both* criteria represent valid data-generating processes. In the final step of this appendix, we will substitute these validated measures into our main specification to assess the stability of our estimated treatment effect (β) and establish bounds on television's impact on voter turnout.

Criterion 2: Correlation of Expected Signal Strength with Residuals We first test which expected signal strength measures correlate with the unadjusted model residuals. We extract the residuals $\hat{\epsilon}_{d,t}$ from the baseline two-way fixed effects regression predicting voter turnout ($Y_{d,t}$):

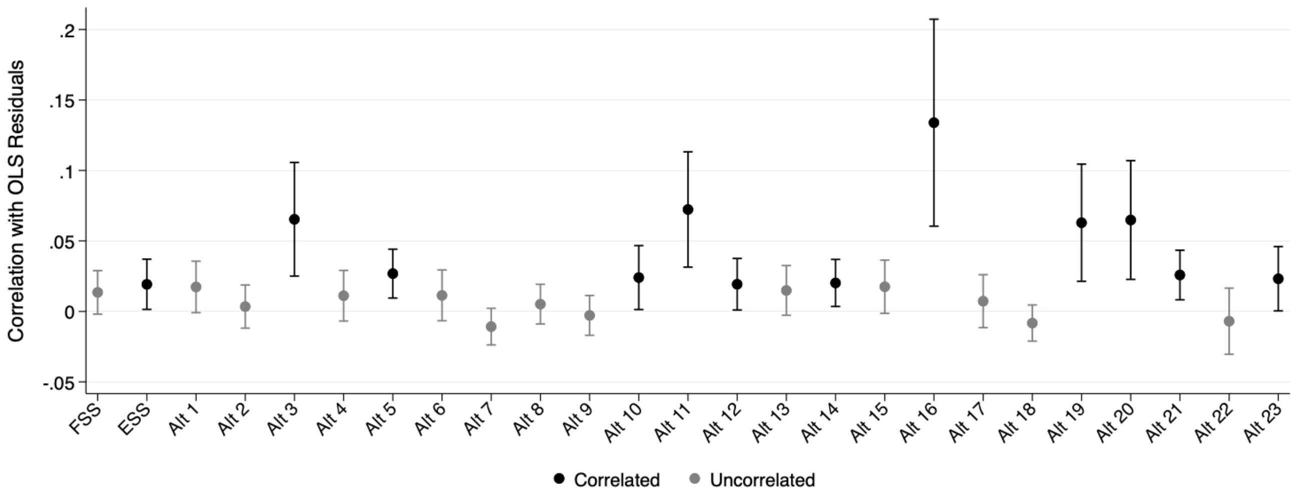
$$Y_{d,t} = \alpha_d + \alpha_t + \beta\, signal_{d,t} + \epsilon_{d,t}.$$

For each alternative simulation A, we then regress these residuals on the corresponding expected signal strength:

$$\hat{\epsilon}_{d,t} = \alpha_d + \alpha_t + \eta^A \mu^A_{d,t} + \nu_{d,t}.$$

Figure B.1 plots the resulting estimates for η^A. Free-space signal strength (FSS) is uncorrelated with the residuals, failing criterion (2). Conversely, our baseline expected signal strength (ESS) correlates strongly

Figure B.1: Correlation of Expected Signal Strength with Residuals



Notes: This figure reports the estimated coefficients ($\widehat{\eta}^A$) from regressing the unadjusted OLS residuals for voter turnout on the free-space method (FSS), our baseline expected signal strength (ESS) and the 23 alternatives outlined in Table B.1. Intervals reflect 95% confidence based on robust standard errors clustered at the electoral district level. Black markers indicate point estimates that are significantly different from zero at the 5% level, satisfying criterion (2), while gray markers indicate insignificant estimates.

with the residuals, satisfying the condition. Eleven of the alternative measures also satisfy criterion (2) at the 5 percent level (indicated by the black markers). The estimated correlation is particularly large for alternative 16, where the probability of tower activation depends strictly on population rank. The mechanism here is intuitive: because historical transmitters were strategically located near large population centers, expected signal strength models that explicitly rely on population density correlate highly with the residuals by design.

Criterion 3: Correlation of Signal Strength with Population Density Next, we evaluate whether conditional exogeneity holds for each alternative. Specifically, actual signal strength must be orthogonal to initial population density—a primary determinant of treatment timing (as shown in Figure 1)—once expected signal strength is controlled for. We estimate the following cross-sectional regression for 1953:

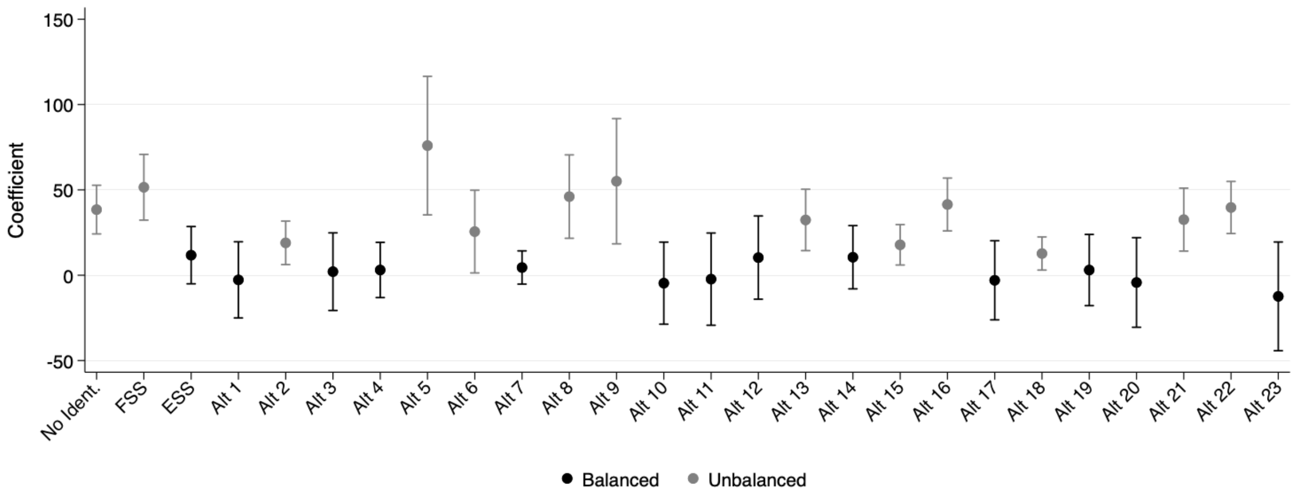
$$Pop_{d,1931} = \beta^A signal_{d,1953} + \eta^A \mu^A_{d,1953} + \epsilon_d.$$

Figure B.2 plots the point estimates for β^A. By design, this tests whether recentering actual signal strength around expected exposure $\mu^A_{d,1953}$ successfully balances the sample.

Neither the unadjusted specification (No Ident.) nor the free-space control (FSS) balances the sample. However, our baseline expected signal strength (ESS) successfully eliminates the correlation. Twelve of the proposed alternatives also achieve balance at the 5 percent level (indicated by black markers), thus satisfying criterion (3).

Stability of the Treatment Effect To assess the stability of our estimated treatment effects, we substitute the valid alternative expected signal strength measures into our main empirical specification. As detailed

Figure B.2: Correlation of Signal Strength with Population Density in 1931



Notes: This figure reports the coefficient β^A from the cross-sectional regression $Pop_{d,1931} = \beta^A signal_{d,1953} + \eta^A \mu^A_{d,1953} + \epsilon_d$, evaluating the two-way fixed effect specification (No Ident.), the free-space method (FSS), our baseline (ESS) and the 23 alternatives. Intervals reflect 95% confidence based on robust standard errors. Black markers denote point estimates that are *not* statistically different from zero at the 5% level, indicating the sample is balanced and satisfies criterion (3), while gray markers indicate estimates that are significantly different from zero.

in Section 4 of the main text, our primary estimating equation is:

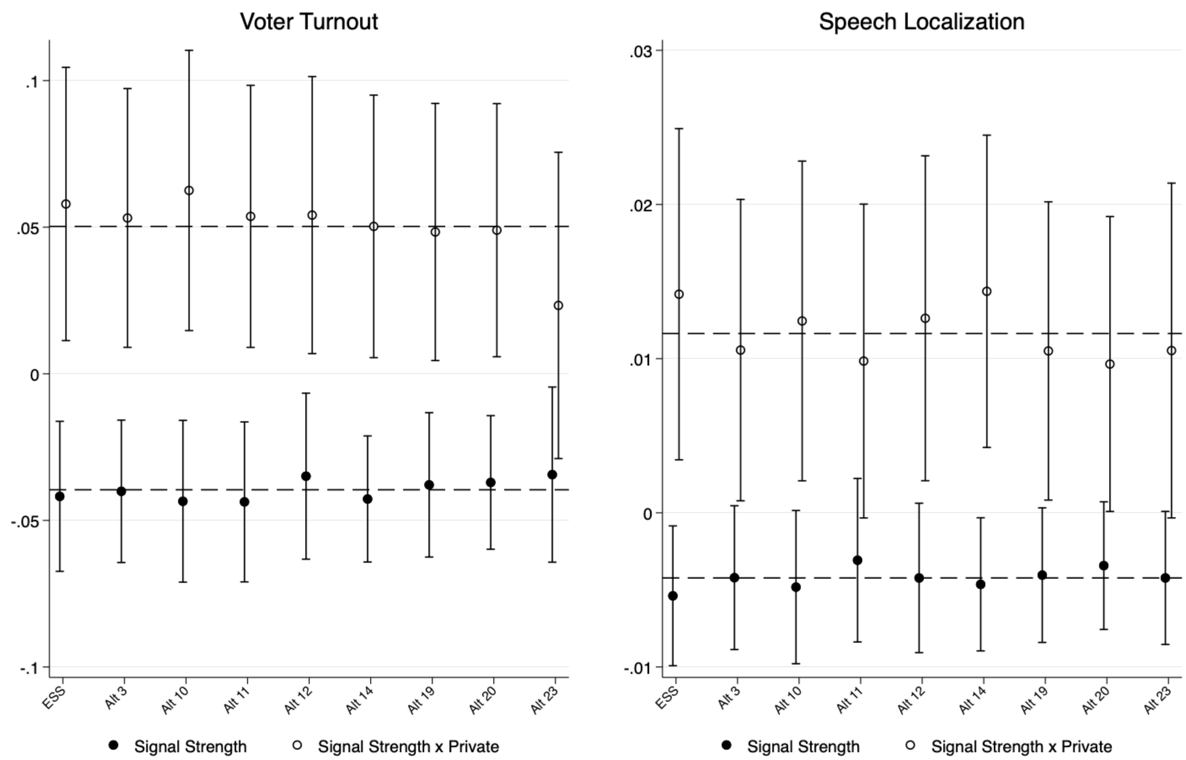
$$Y_{d,t} = \alpha_d + \alpha_t + \beta^{pvt} \left(signal_{d,t} \times private_{d,t}\right) + \beta^{pub} signal_{d,t} + \gamma private_{d,t} + f(\mu_{d,t}) + \Phi(\boldsymbol{X_d} \times t) + \epsilon_{d,t}.$$

Here, $Y_{d,t}$ represents voter turnout and speech localization, and $signal_{d,t}$ measures the actual television signal strength received in district d during election year t. The variable $private_{d,t}$ is an indicator equal to one if district d receives a private television signal exceeding 50 dBμV/m in election year t. The function $f(\mu_{d,t})$ controls for expected signal strength and its interaction with the private indicator, recentering the variation to isolate quasi-random differences in actual exposure. Our main parameter of interest, β^{pvt}, captures the differential effect of private versus public television, while β^{pub} captures the baseline effect of public television relative to no coverage. We refer the reader to Section 4.3 for a complete discussion of this identification strategy and its underlying assumptions.

We use the set of alternatives that satisfy both validation criteria to obtain an upper and lower bound on television's impact on voter turnout and speech localization based on these valid alternatives. In particular, alternatives 3, 10, 11, 12, 14, 19, 20 and 23 satisfy criteria (2) and (3) from Section B.1 and thus theoretically yield unbiased and consistent estimates of our treatment effect. Moreover, all point estimates for the private television interaction term are significantly different from their public television counterparts.

The point estimates in both panels of Figure B.3 are remarkably stable and show a clear difference between private and public stations, despite the assumed differences in the modeled shock distribution. For example, at baseline we model the shock distribution of expected signal strength as a concave function of a transmitter's duration, and similarly do so for alternatives 12, 19 and 20. Alternative 14 is modeled as a function of distance to Toronto, while alternatives 3 and 11 are simply random. Plugging these probabilities into a normal or binomial distribution similarly does not alter the point estimate.

Figure B.3: Treatment Effect Stability Across Alternative Network Simulations



Notes: This figure reports regression estimates of our main empirical specification to assess the stability of our treatment effects across different simulated networks. We benchmark these estimates against ESS, our baseline measure of expected signal strength, alongside the 8 alternative shock distributions from Table B.1 that satisfy the necessary criteria (2) and (3). The outcomes include *Voter Turnout* (left panel), measured as total votes cast relative to the electorate size, and *Speech Localization* (right panel), an index capturing the local orientation of MP parliamentary speeches. The main independent variable is *Signal Strength*, which increases continuously for values above 50 dBμV/m (the threshold for satisfactory reception) and is zero otherwise. The *Private* indicator is equal to one if a private television signal is viewable in a district in a given election year. Its interaction with signal strength captures the marginal effect of private relative to public television among districts where a signal was present. The dashed lines indicate the average point estimates across the 8 specified alternatives. All estimates are conditional on expected signal strength and include electoral district and election-year fixed effects along with pre-treatment covariates—population density, earnings, age, literacy and urbanization—interacted with election-year fixed effects. Intervals reflect 95% confidence based on robust standard errors clustered at the district level.

For voter turnout, estimates of the baseline signal strength coefficient (β^{pub}) consistently lie within the interval $[-0.044, -0.034]$. In each instance, these are significantly different from the coefficient on the private interaction term (β^{pvt}), which is consistently estimated to lie within the interval $[0.023, 0.063]$. A similar pattern holds for speech localization, where the public television estimates remain stable within $[-0.003, -0.005]$ and the private television estimates range from $[0.010, 0.014]$. The stability of the coefficient estimates across the eight validated measures of expected signal strength provides strong evidence for a causal interpretation of our baseline specification.

Concluding Remarks We believe that the evidence in this section provides (i) strong support for our research design and (ii) a clear indication that our estimates are not sensitive to changes in modeling signal strength. We adopt the approach of Borusyak and Hull (2023) in our own context, laying out a set of criteria that a candidate measure of expected signal strength must satisfy for a valid research design. We show that our preferred measure of expected signal strength not only satisfies these criteria but that many of the alternatives do as well. Importantly, we benchmark our preferred measure against all the alternative measures that satisfy these criteria and show that the estimated treatment effect that each alternative yields is remarkably similar to our preferred measure. This body of evidence, alongside the absence of pre-trends that we document in Appendix C, provides strong support for our research design.

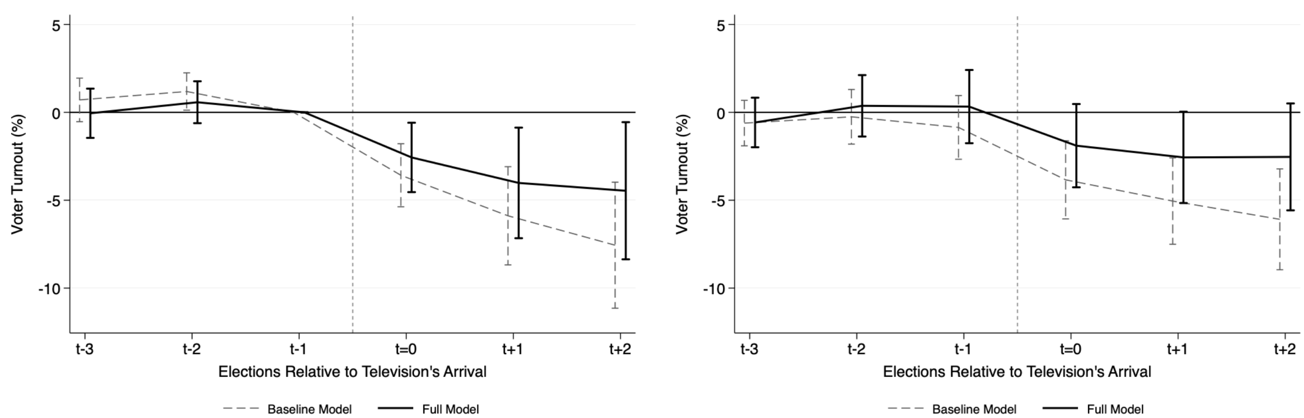
C Alternative Event-Study Designs and Parallel Trends

Our main estimating equation (3) relies on a two-way fixed effects model. In the main text, we use an event-study framework to establish parallel pre-treatment trends for the average effect of television's arrival (Figure 2). Because the timing of this treatment varies across electoral districts, recent econometric literature highlights potential challenges regarding treatment effect heterogeneity and the validity of the parallel trends assumption.[26]

In this appendix, we formally demonstrate that the assumptions of parallel trends and homogeneous treatment effects hold in our context. We evaluate the average treatment effect using recent diagnostic tools before exploring alternative panel lengths. Evaluating the average effect allows us to explicitly test for treatment effect heterogeneity using methodologies proposed by Goodman-Bacon (2021) and Sun and Abraham (2021) which do not straightforwardly accommodate complex interaction terms. Contextually, the empirical findings conform to our expectations: the expansion and adoption of television was almost immediate in Canada, and there is little reason to believe that our treatment effect should be growing over time. For example, somewhere between 75 percent (Peers, 1979) and 90 percent (Cole, 2002) of Canadians had access to television by our second observed treatment period.[27]

Figure C.1: Event-Study Estimates With and Without Never-Treated Districts

(a) Excluding Never-Treated **(b)** Including Never-Treated

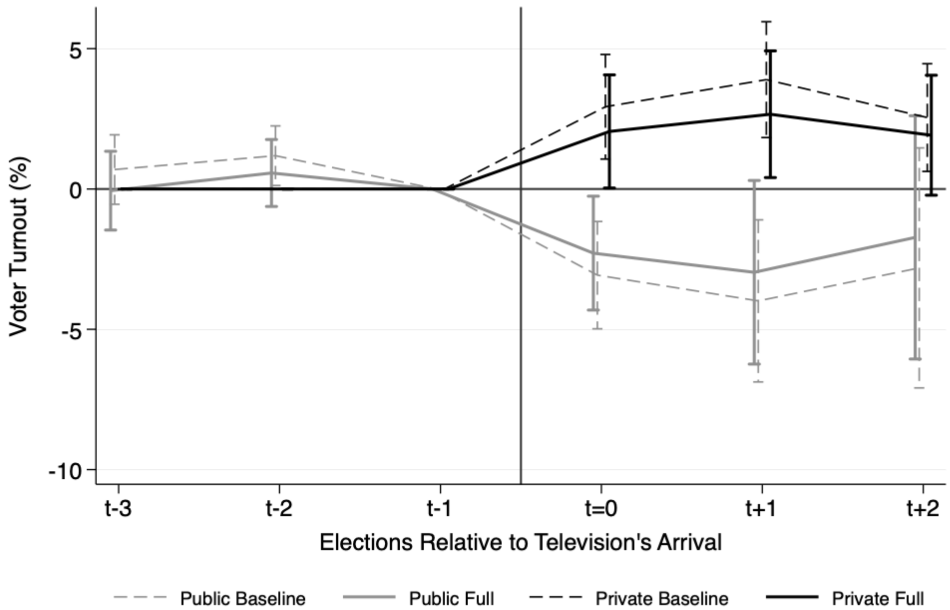


Notes: The figure presents event-study estimates of the impact of television on voter turnout. Observations are at the electoral district level for federal elections between 1935 and 1958. *Voter Turnout* is defined as total votes cast divided by the electorate size. The treatment variable is an indicator for *Signal Strength* $\geq$ 50 dBμV/m (the threshold for satisfactory reception). The x-axis represents election years relative to the introduction of television, where $t = 0$ denotes the first election year a district had television, while $t - 1$ serves as the omitted reference period. Panel (a) excludes electoral districts that never receive television in our sample, while Panel (b) includes them at period $t - 1$. Both panels compare two specifications: the *Baseline Model* (dashed lines) includes expected signal strength alongside district and election-year fixed effects, while the *Full Model* (solid lines) additionally controls for pre-treatment demographic characteristics—population density, earnings, age, literacy and urbanization—interacted with election-year fixed effects. Confidence intervals reflect 95% confidence based on robust standard errors clustered at the electoral district level.

[26]These concerns reflect the burgeoning literature on the interpretability of two-way fixed effects models and event-study designs. The main insights that we have in mind here come from De Chaisemartin and D'Haultfœuille (2020); Goodman-Bacon (2021); Sun and Abraham (2021); Borusyak et al. (2024) and more.

[27]Throughout this section, we discretize our treatment variable to equal one for signal strength values greater than 50 dBμV/m.

Figure C.2: Event-Study Estimates by Broadcaster Type



Notes: The figure presents event-study estimates of the impact of television on voter turnout, decomposed by broadcaster type: public (gray) versus private (black). Observations are at the electoral district level. *Voter Turnout* is defined as total votes cast divided by the electorate size. The treatment variable is an indicator for *Signal Strength* ≥ 50 dBμV/m (the threshold for satisfactory reception). The x-axis represents election years relative to the introduction of television, where $t = 0$ denotes the first election year a district had television, while $t - 1$ serves as the omitted reference period. We identify the differential impact of private television relative to the public baseline by interacting the treatment variable with *Private*, an indicator for private television districts. The figure compares two specifications: the *Baseline Model* (dashed lines) includes expected signal strength alongside district and election-year fixed effects, while the *Full Model* (solid lines) additionally controls for pre-treatment demographic characteristics—population density, earnings, age, literacy and urbanization—interacted with election-year fixed effects. Confidence intervals reflect 95% confidence based on robust standard errors clustered at the electoral district level.

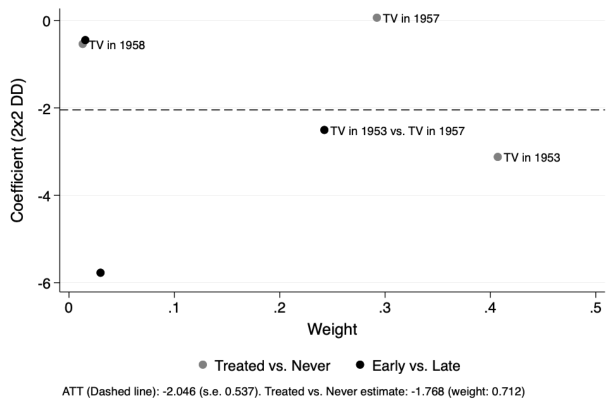
Motivating Evidence of Parallel Trends We first plot our average event study in Panel (a) of Figure C.1. Here, we rely on a standard trimmed event-study plot to present estimates from both our *Baseline Model* and *Full Model* as described in the figure notes. In Panel (b), we reproduce this plot but add the never-treated from the trimmed sample as a comparison group in the last period before treatment.

The inclusion of the never-treated serves two purposes. First, it enables more efficient estimation of the leads and lags by reducing the size of our estimated standard errors. Second, it alters the composition of the control groups and allows us to gauge the effect of different treatment-control comparisons. While Panel (a) only compares early- to late-treated districts, Panel (b) adds the comparison of early-control to late-control. If the inclusion of the never-treated significantly changes either the leads or lags, it would provide evidence of treatment effect heterogeneity across groups (Sun and Abraham, 2021). The absence of any meaningful change in estimates across Panel (a) and Panel (b) provides strong evidence in favor of our empirical design.

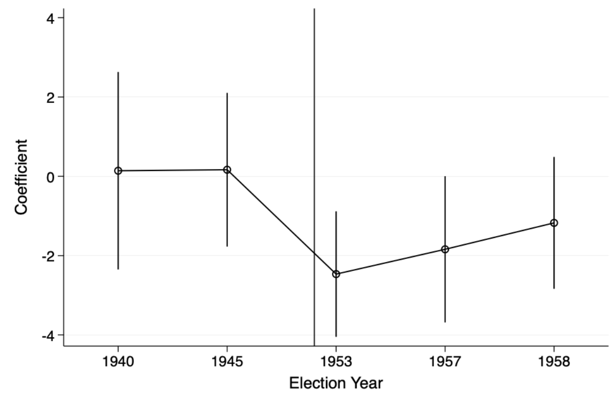
While our primary analysis of heterogeneity relies on the baseline regression model (3), we also present an exploratory event-study graph by broadcaster type for completeness in Figure C.2. Documenting parallel trends for an interaction term is not straightforward. A comparison between "ever private" and "never private" districts fails to account for the *conditional on receiving television* aspect of our identifying assumption, while a comparison between "ever private" and "ever television" fails to

Figure C.3: Decomposition of Cohort Effects and 1953 Treatment Dynamics

(a) Goodman-Bacon (2021) Decomposition



(b) Pre-trends for 1953 treatment cohort



Notes: The figure presents two approaches to evaluate the staggered rollout of television across electoral districts. Observations are at the electoral district level. The outcome variable *Voter Turnout* is defined as total votes cast divided by the electorate size. The treatment variable is an indicator for *Signal Strength* ≥ 50 dBμV/m. Panel (a) reports the Goodman-Bacon (2021) decomposition weights and point estimates associated with the three treatment cohorts: 1953, 1957 and 1958. Comparisons relative to never-treated districts are color-coded in gray, while early-treated versus late-treated comparisons are in black. The dashed horizontal line represents the average treatment effect on the treated (-2.046, s.e. 0.537). Panel (b) abstracts from multiple treatment periods, plotting the leads and lags exclusively for the 1953 treatment cohort compared to never-treated units for the baseline model. Confidence intervals reflect 95% confidence based on robust standard errors clustered at the electoral district level.

account for the time dimension of our panel. Without an established rule on how to construct an event-study graph for a dynamic interaction model, we proceed by comparing private television districts to public television districts in the same "lag" relative to all district values prior to receiving television. Figure C.2 demonstrates that the negative engagement effects are driven by the public broadcaster with a distinct positive offset in private television districts. Importantly, this exploratory figure provides dynamic evidence of parallel trends that mirrors our main interaction estimates.

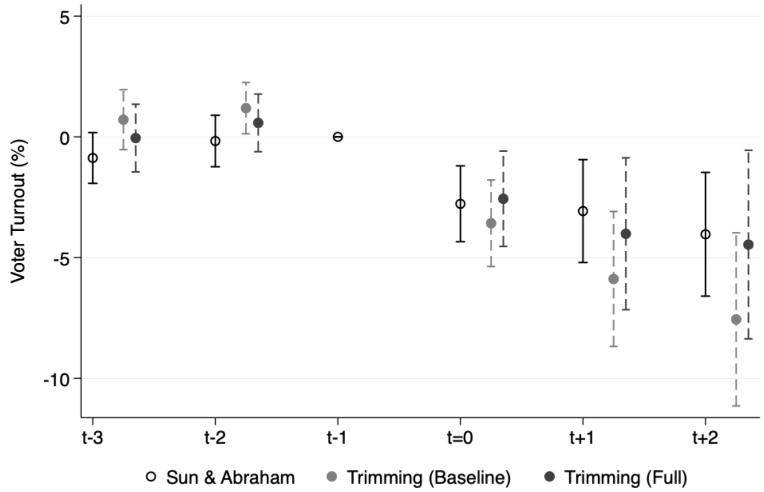
C.1 Decomposition of Treatment Cohorts

Our panel of electoral districts includes three potential treatment cohorts based on the timing of Canadian federal elections: 1953, 1957 and 1958. Because districts receive television at different times, our staggered adoption design implies that the same district may serve as both a control and a treated unit depending on the election year. Recent research shows that in a setting similar to ours, the staggered introduction of treatment can put negative weights on cohort treatment effects (De Chaisemartin and D'Haultfœuille, 2020; Borusyak et al., 2024). In principle, this could switch the sign of the estimate if the treatment effect grows over time (Goodman-Bacon, 2021).

We thus proceed by decomposing our estimate into cohort treatment effects, as suggested by Goodman-Bacon (2021), to assess the weights associated with each treatment comparison. Panel (a) of Figure C.3 plots our findings from this decomposition, where we color-code cohort treatment effects relative to never-treated districts in gray and early-treated versus late-treated cohort comparisons in black. The dashed horizontal line represents the average treatment effect on the treated (-2.046, s.e. 0.537) which we estimate using the Goodman-Bacon (2021) decomposition.

The largest weights are for the 1953 cohort—the earliest treatment cohort. We estimate a treatment

Figure C.4: Event Study with Sun and Abraham's (2021) IW Estimator



Notes: The figure presents event-study estimates using the Sun and Abraham's (2021) interaction-weighted (IW) estimator based on a panel of electoral districts (1935–1958). The outcome variable *Voter Turnout* is defined as total votes cast divided by the electorate size. The treatment variable is an indicator for *Signal Strength* ≥ 50 dBμV/m. The plot compares the IW estimator to the *Baseline Model* (including expected signal strength and fixed effects) and the *Full Model* (additionally including pre-treatment demographic characteristics interacted with election-year fixed effects). Confidence intervals reflect 95% confidence based on robust standard errors clustered at the electoral district level.

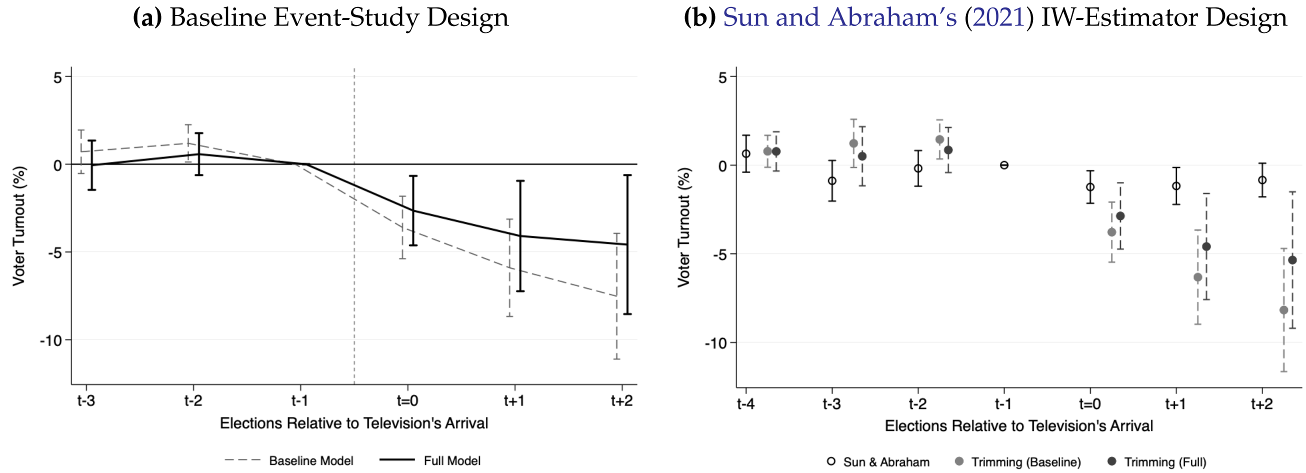
effect of -3.122 for the 1953 cohort relative to the never-treated and -2.510 relative to the 1957 cohort—the second treatment cohort. In total, these two treatment effects make up 65 percent of the variation in the average treatment effect on the treated. If we abstract from early-late comparisons and focus only on the comparison of the treated versus never-treated, we find a slightly smaller coefficient of -1.768. In this instance, the 1953 cohort weights make up 71 percent of the estimated treatment effect alone, indicating a valid research design.

In Panel (b) of Figure C.3, we make a similar point in a different way. We abstract from multiple treatment periods—focusing exclusively on the 1953 treatment cohort—in a simple difference-in-differences setting where we document near-perfect evidence of parallel trends prior to television's arrival and a dynamic effect similar to our average event-study estimates in Figure C.1.

Next, we compare the Sun and Abraham's (2021) interaction-weighted (IW) estimator to our traditional trimming estimator using both our *Baseline* and *Full* specifications. The IW estimator accounts for treatment effect heterogeneity by weighting treatment cohort effects by their sample shares. Thus, comparing these estimates to the traditional trimming estimator allows us to draw inferences about treatment effect homogeneity (Sun and Abraham, 2021, Proposition 4, Equation 19). Figure C.4 plots an event study and includes estimates from (i) the Sun and Abraham's (2021) IW estimator, (ii) the *Baseline Model* and (iii) the *Full Model*. All three estimators produce no evidence of a concerning pre-trend, suggesting that in terms of our outcome—voter turnout—electoral districts exhibit parallel trends prior to treatment. All estimators also estimate the same immediate treatment effect when television is introduced (period 0). This is especially true when comparing the IW estimator to the *Full Model* where we observe almost no difference in treatment effects over time.

In summary, we believe that our research design is valid. The IW estimator provides no evidence of treatment effect heterogeneity across time, and the weighted average of cohort treatment effects that we

Figure C.5: Extended Panel Event-Study Designs (1935-1968)



Notes: The figure presents event-study designs for an extended panel of electoral districts (1935–1968), fixing each district to its 1958 treatment status. The outcome variable *Voter Turnout* is defined as total votes cast divided by the electorate size. The treatment variable is an indicator for *Signal Strength* $\geq$ 50 dBμV/m. Panel (a) reports estimates from the baseline event-study design using the extended panel. Panel (b) compares estimates for the extended panel based on the Sun and Abraham (2021) interaction-weighted (IW) estimator and two alternative trimming estimators (*Baseline* and *Full Model*). This extended design addresses panel truncation in the baseline sample, enabling the observation of post-treatment periods for all treatment cohorts. Intervals reflect 95% confidence based on robust standard errors clustered at the electoral district level.

estimate at baseline is largely derived from the early adopters of television. Negative weights are also unlikely to affect our estimator for two reasons: the rapid expansion and uptake of television suggest there is little reason to believe that our treatment effect should be growing over time, and this intuition is validated by the decomposition of our estimate into weights where our treatment effect is mainly derived from a clean comparison of the treated to the never-treated cohort (Goodman-Bacon, 2021).

C.2 Extended Panel Event-Study Design

Our main sample period is defined by the single-station policy that remained in effect between 1952 and 1958, with federal elections—and thus treatment cohorts—occurring in 1953, 1957 and 1958.[28] At the time of the 1953 election, 98 out of 263 electoral districts had received treatment. By the 1957 election, 83 additional districts were treated, followed by 6 more in 1958. However, the need to truncate the data in 1958 implies that the final lag of our event-study specification is only estimated from the 1953 treatment cohort.

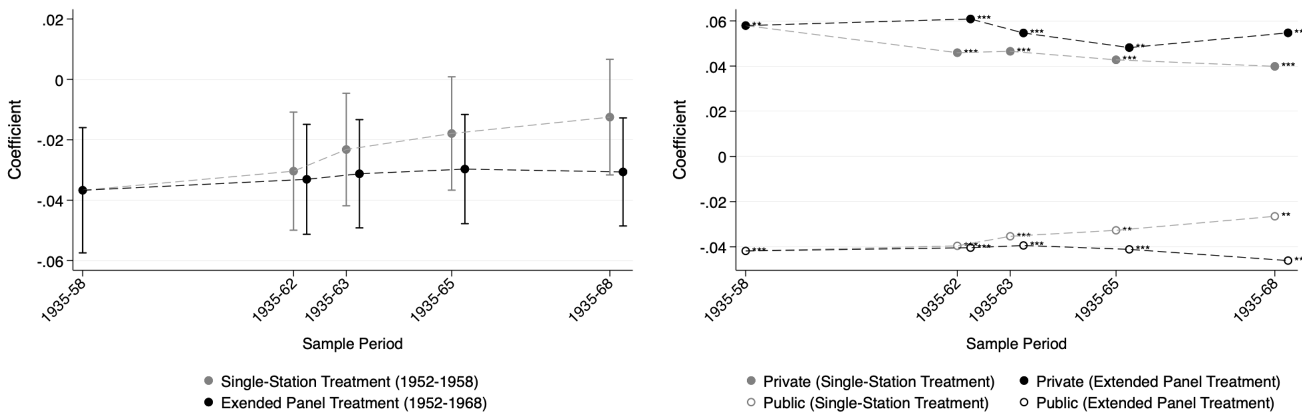
In this section, we extend our panel to 1968, which includes four additional election years: 1962, 1963, 1965 and 1968. We fix each district to its 1958 treatment status, allowing us to observe the post-treatment periods for *all* cohorts—something that is not possible for the 1957 and 1958 treatment cohorts in our baseline sample. Panel (a) of Figure C.5 plots the event study for this extended panel. While a comparison to Figure C.1 shows a slight improvement in the precision of the pre- and post-period estimates, the differences are negligible. In Panel (b), we again observe no differential pre-trends prior to treatment and a significant post-treatment decline in voter turnout after the arrival of television.

The extended panel also allows us to trace the effects of the single-station policy to later elections.

[28] Refer to Section 2 in the main text for details of the policy.

Figure C.6: Comparison of Treatment Effects Across Alternative Sample Periods

(a) Average Effect (All Districts) **(b)** Heterogeneity by Broadcaster Type



Notes: The figure presents event-study estimates across various sample periods (1935–1958 through 1935–1968). The outcome variable *Voter Turnout* is defined as total votes cast relative to the size of the electorate. The treatment variable is an indicator for *Signal Strength* $\geq$ 50 dBμV/m. Panel (a) reports estimates from the *Full Model* specification, comparing strategy (i) holding the 1958 treatment status fixed (*Single-Station Treatment*) with strategy (ii) using the complete set of treatments after 1958 (*Extended Panel Treatment*). Panel (b) reports the interaction model to isolate the differential impact of private television relative to the public baseline over the same sample periods. Intervals reflect 95% confidence based on robust standard errors clustered at the electoral district level.

We consider two alternative but related estimation strategies: (i) holding the 1958 treatment status fixed (*Single-Station Treatment*) and (ii) using the complete set of treatments after 1958, despite the fact that any subsequent transmitter installations were influenced by market forces between 1959 and 1968 (*Extended Panel Treatment*). In Panel (a) of Figure C.6, we compare these strategies and find that point estimates remain stable across comparisons. These findings suggest that the single-station policy continued to affect turnout in later elections in a similar manner. Moreover, the fraction of never-treated observations decreases to only 12 percent in strategy (ii), as many previously never-treated districts become not-yet-treated. This provides evidence against heterogeneous treatment effects across cohorts.

Finally, in Panel (b) of Figure C.6, we report treatment heterogeneity by broadcaster type. As in our primary regression analysis, we identify the differential impact of private television relative to the public baseline by interacting the treatment variable with *Private*, an indicator for private television districts. The results indicate that the single-station policy continued to exert a significant negative impact on turnout in later years. Crucially, the interaction coefficient remains remarkably stable across the extended panel, suggesting that the divergent effects of public and private broadcasters persist well beyond the initial adoption period.

Concluding Remarks The evidence presented in this section supports the validity of our research design, specifically regarding the absence of differential trends and heterogeneous treatment effects. Our ability to replicate the negative engagement effects documented in other contexts further validates our empirical approach within the Canadian setting.

D Multi-Year Evidence on Content Divergence (1954–1970)

Our systematic evaluation of television content in Section 2 is grounded in both the broader historical record and a single week of 1956 programming logs detailed in Appendix XIV of the Royal Commission on Broadcasting Report (Smythe, 1957). While historical accounts clearly indicate that enduring institutional and commercial incentives drove the divergence between national public programming and local private content, we provide multi-year empirical evidence in this appendix to quantitatively confirm that this geographic split extended well beyond the 1956 benchmark.

To overcome the lack of structured programming data across both our baseline sample period ending in 1958 and the extended sample period ending in 1968 used for robustness checks, we develop a zero-shot text extraction and classification pipeline powered by a large language model. Acting as an algorithmic coder, the model applies a standardized rubric to classify unstructured archival text without prior training on a labeled dataset. We apply this pipeline to two independently collected historical corpuses: a rich database of public broadcasting schedules and a comprehensive collection of station-level narrative histories.

The resulting multi-year data strongly corroborate the cross-sectional benchmark established by the 1956 Royal Commission programming logs (Smythe, 1957). The evidence confirms that the national orientation of the public broadcaster and the local orientation of private broadcasters were not temporary artifacts of the network's early development. Rather, they were persistent structural features of the Canadian television system that spanned both our baseline and extended sample periods.

D.1 Public Broadcasting Schedules (1958–1966)

To evaluate the balance of information and entertainment programming we compile a comprehensive dataset of over 70,000 individual television program entries. We extract these entries from digitized archival PDFs of the *CBC Times*, which served as the official weekly schedule guide for the public broadcaster—the Canadian Broadcasting Corporation (CBC).[29]

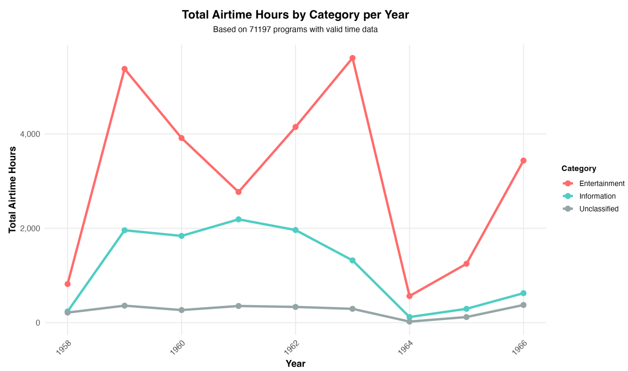
After downloading the archival documents we prompt the language model to extract structured schedule components including the broadcast day, date, time, station, program title and program description. We merge these extracted files to create a master schedule covering 353 station-days across 499 calendar days. Relying on the extracted program descriptions the model then classifies each program along two dimensions: category (entertainment versus information) and origin (Canadian-produced versus imported). Finally we calculate aggregate airtime shares based on total broadcast hours rather than raw program counts.

We validate this automated coding approach by comparing our aggregated results against the hand-coded 1956 benchmark from the Royal Commission on Broadcasting (Smythe, 1957). Our zero-shot classification yields an aggregate split of 71 percent entertainment and 29 percent information for the public broadcaster. This closely matches the historical benchmark of 70.8 percent and 29.2 percent respectively (see Table 1). This precise alignment provides confidence that the automated classification pipeline accurately captures the aggregate distribution of television content.

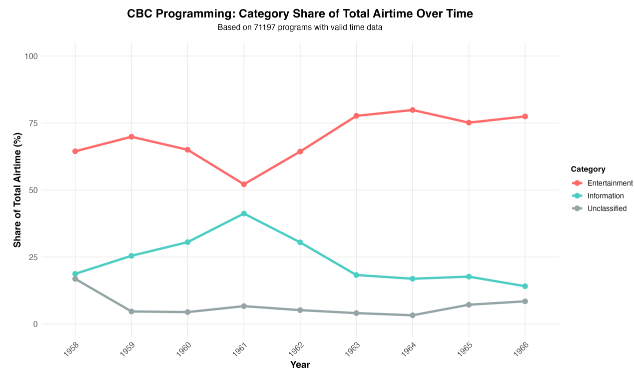
[29] Source: `https://www.worldradiohistory.com/CBC-Times.htm`.

Figure D.1: Evolution of Public Broadcasting Content (1958–1966)

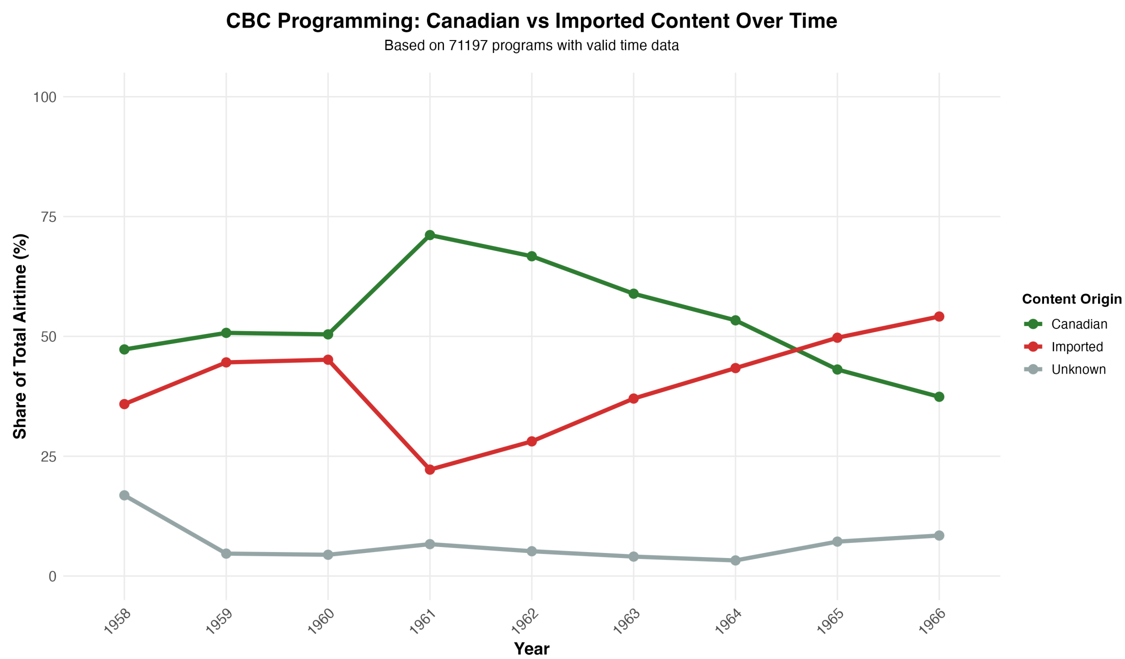
(a) Total Airtime by Category



(b) Share of Airtime by Category



(c) Share of Airtime by Origin (Canadian vs. Imported)

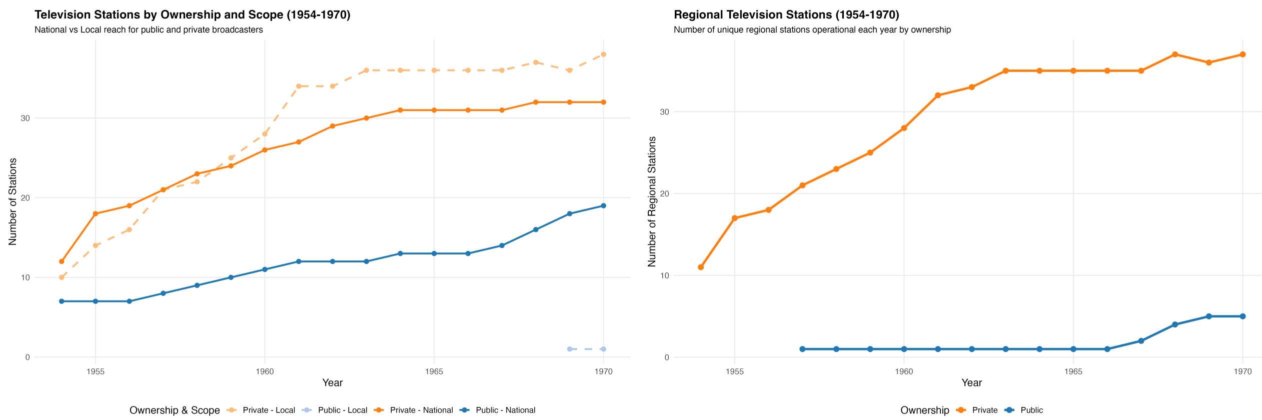


Notes: This figure plots the evolution of programming content across public television stations operated by the Canadian Broadcasting Corporation (CBC) during the 1958–1966 sample period. Data derive from 71,197 program listings with valid time data extracted from digitized historical *CBC Times* program guides. Panel (a) plots the total annual broadcast hours allocated to entertainment and informational programming. Panel (b) plots the share of total airtime allocated to these two primary content categories. Panel (c) plots the share of total airtime based on geographic origin to distinguish between Canadian-produced and imported content. A small residual category of unclassified or unknown programming is also plotted across all panels. Programs were classified using a zero-shot large language model pipeline based on their title and published description. All calculations are weighted by total broadcast hours rather than raw program counts.

Figure D.1 plots the resulting time series for the public broadcaster. Panel A shows total airtime by content category. Entertainment programming dominated, reaching approximately 6,000 hours per year during 1958–1966 while informational programming averaged roughly 2,000 hours annually. Panel B reports shares of airtime and visually confirms the relatively stable entertainment share. Panel C shows that Canadian-produced content—the primary vehicle for national discourse—constituted a stable and

Figure D.2: Evolution of Broadcasting Market Structure (1954–1970)

(a) Station by Ownership and Geographic Scope **(b)** Station by Target Audience



Notes: This figure plots the evolution of the Canadian television market structure from 1954 to 1970. Data are derived from the narrative histories of 281 public and private television stations sourced from the Canadian Communications Foundation broadcasting database. Panel (a) plots the total number of active stations in a given year categorized jointly by ownership type and geographic scope. Panel (b) plots the total number of active regional stations in a given year categorized by ownership type. Station characteristics including scope and target audience were extracted and classified from unstructured historical text using a zero-shot large language model pipeline.

dominant share of airtime relative to imports. While the geographic orientation of the "unknown" category cannot be definitively classified, it accounts for a very small share of total airtime that drops to near zero by the end of the sample period. Even if we assume this residual category consists entirely of local programming, it represents a trivially small portion of the overall schedule. These patterns confirm that the public network maintained its national and informational mandate throughout the sample period we analyze.

D.2 Station-Level Evidence (1954–1970)

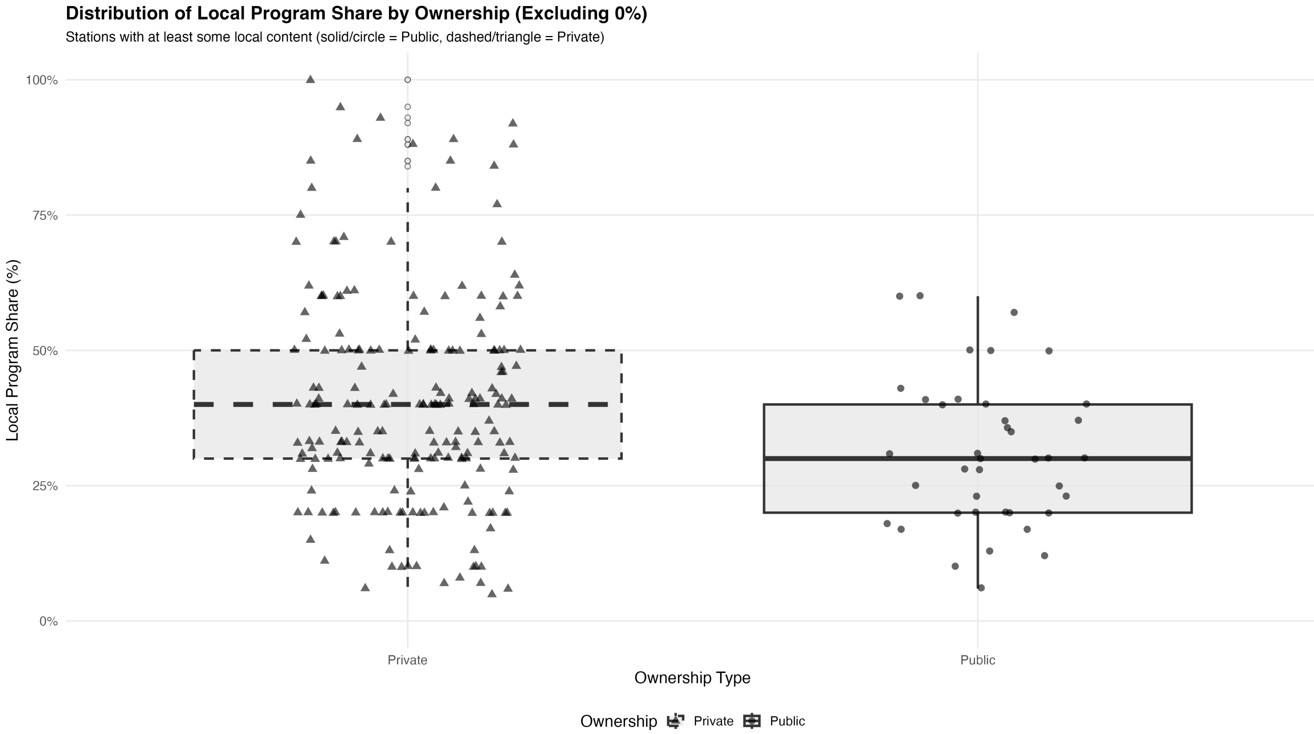
Comprehensive longitudinal station-level data are difficult to acquire for our sample period. No single repository exists for private television schedules and many early stations have long since folded leaving little record of their daily programming. Furthermore the first private television network did not emerge until the 1960s leaving little connectivity or standardization between individual stations. Because granular programming schedules are unavailable for private broadcasters we supplement the public scheduling analysis with a second dataset comprising the narrative histories of 281 Canadian television stations sourced from the Canadian Communications Foundation's broadcasting history database.[30]

Applying a similar zero-shot classification pipeline the model parses the narrative text for each station to identify its ownership type (public or private), its geographic scope (national or local), its target audience and an estimated share of locally produced content. Because quantifying local content from historical text inherently relies on narratives that may be incomplete we treat these estimates strictly as supplementary evidence. Nevertheless these data indicate that the structural differences in local programming focus between public and private operators persisted throughout the period we study.

Figure D.2 documents the structural divergence between public and private broadcasters. Panel A

[30]Source: `https://broadcasting-history.ca/television/television-stations/`.

Figure D.3: Distribution of Local Programming Share by Ownership Type



Notes: This figure plots the distribution of estimated local programming shares categorized by ownership type for the 1954–1970 sample period. The vertical axis represents the estimated percentage of a station's schedule devoted to locally produced content. The sample is restricted to stations that aired at least some local content. The box plots display the median and interquartile range for public and private stations while the overlaid points represent individual station estimates. Program shares were estimated by prompting a zero-shot large language model to identify and classify representative programs from station narrative histories sourced from the Canadian Communications Foundation broadcasting database.

shows that virtually no public station operated at the local level before 1970. Throughout the 1950s and 1960s the expansion of the television network was driven by private stations operating at the local level while the public broadcaster maintained an exclusively national orientation. The number of private-local stations grew from roughly 15 in 1954 to over 35 by 1970 whereas public-local stations did not appear until the end of this sample period. Panel B confirms that where target audiences are identifiable private stations served regional and general audiences while public stations served a national general audience.

Figure D.3 plots the distribution of local programming shares separately by ownership type. Private stations exhibit a wide range of local programming shares with a median around 45 percent and several stations devoting upwards of 75 percent of their schedule to locally produced content. Public stations cluster at the lower end. The median local share for the public broadcaster is approximately 28 percent and no public station exceeds 60 percent. This pattern is consistent with the institutional incentives described in Section 2: private stations depended on local advertising revenue and had a commercial stake in producing content that resonated with their surrounding communities while the public broadcaster fulfilled a centralized national mandate.

E Data Description and Sources

Federal Electoral District Maps: We digitized federal electoral district (FED) maps for all years relevant to our extended sample period, 1935-1968. Over this sample period, FED boundaries were redrawn three times, so we collected and digitized the following set of FED boundaries:

- The Representation Order of 1933-1947
- The Representation Order of 1947-1952
- The Representation Order of 1952-1966
- The Representation Order of 1966-1976

For each Representation Order, we digitize FED boundaries from scanned maps using ArcGIS. We crosswalk these maps using the procedure outlined in Eckert et al. (2020), thus giving us a consistent spatial unit of observation for the sample period. We use the 1952 distribution as our "reference map" because this is the same year television arrives, and all other distributions as our "reporting maps," which we re-aggregate to the reference map.

Source: Scanned maps of the 1933 Representation Order were acquired from two sources, the University of Toronto's *Map and Data Library* and the University of Alberta's *Digital Repository and Data Services*. Scanned maps of the 1947 Representation Order are from Western University's *Map and Data Centre* as well as University of Alberta's *Digital Repository and Data Services*. Scanned maps for both the 1952 and 1966 Representation Orders were acquired directly from *Library and Archives Canada*.

Television Signal Strength: We require a variety of information on television transmitters before we can estimate signal strength. In addition to the installation date of a transmitter, we require information on the height and service power of each transmitter, as well as their latitude and longitude coordinates. We piece these data together from three archival documents located at *Library and Archives Canada*.

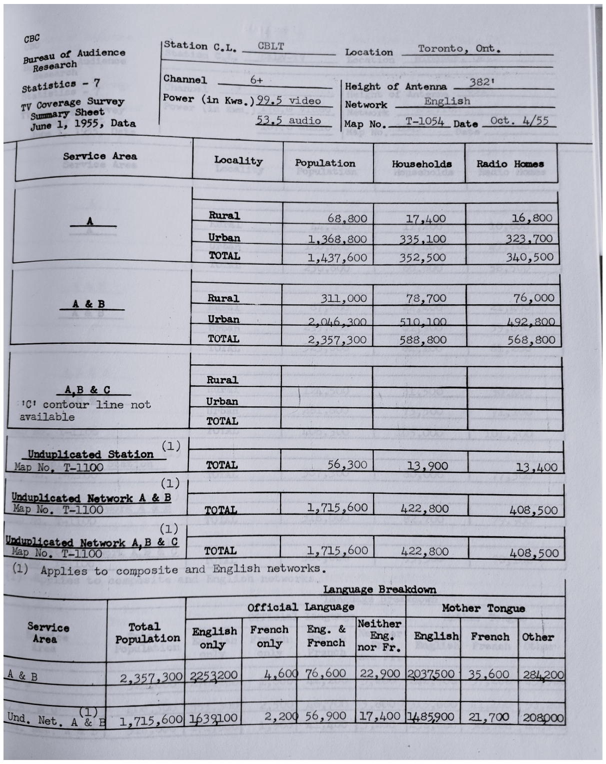
1. *List of Television Stations in Canada*: This set of records was produced by the Stations Relations division of the CBC and is the starting point of our data. It documents basic information about every television transmitter installed between 1952-1969, including station call signs, public or private ownership, service power of the transmitter and its opening date, among other details. This gives us information on all 323 transmitters and rebroadcasters installed by 1969.

2. *Television Coverage in Canada*: This set of records was produced by the Statistics Division of the Bureau of Audience Research at the CBC, and includes additional details for television transmitters, including antenna height, channel number and network information. Panel (a) of Figure E.1 provides an example from this set of records for CBLT Toronto.

3. *List of Broadcasting Stations in Canada*: This set of records was produced by the Canadian Radio-Television Commission, and includes information on latitude and longitude coordinates for radio broadcast stations, among other details. Especially in the early days of television, radio and television signals were broadcast from the same transmitters, allowing us to deduce the location coordinates for each television station. Panel (b) of Figure E.1 provides an example from this set of

records, where CBC station CBL (radio) was broadcast from the same transmitter as CBC station CBLT (television).

Figure E.1: Example Archival Records



CBC
Bureau of Audience Research
Statistics - 7
TV Coverage Survey Summary Sheet
June 1, 1955, Data

Station C.L. CBLT Location Toronto, Ont.
Channel 6+ Height of Antenna 382'
Power (in Kws.) 99.5 video, 53.5 audio Network English
Map No. T-1054 Date Oct. 4/55

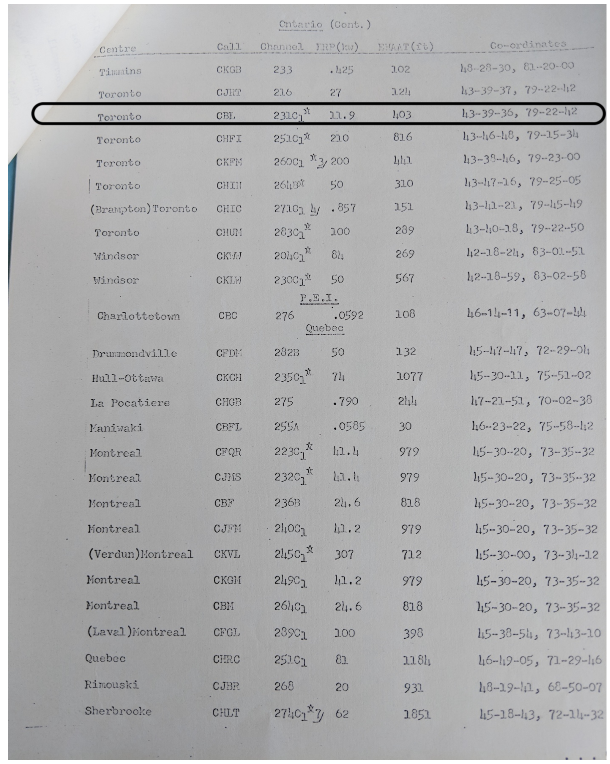
Service Area	Locality	Population	Households	Radio Homes
A	Rural	68,800	17,400	16,800
	Urban	1,368,800	335,100	323,700
	TOTAL	1,437,600	352,500	340,500
A & B	Rural	311,000	78,700	76,000
	Urban	2,046,300	510,100	492,800
	TOTAL	2,357,300	588,800	568,800
A,B & C 'C' contour line not available	Rural			
	Urban			
	TOTAL			
Unduplicated Station (1) Map No. T-1100	TOTAL	56,300	13,900	13,400
Unduplicated Network A & B (1) Map No. T-1100	TOTAL	1,715,600	422,800	408,500
Unduplicated Network A,B & C (1) Map No. T-1100	TOTAL	1,715,600	422,800	408,500

(1) Applies to composite and English networks.

Language Breakdown

Service Area	Total Population	Official Language				Mother Tongue		
		English only	French only	Eng. & French	Neither Eng. nor Fr.	English	French	Other
A & B	2,357,300	2253200	4,600	76,600	22,900	2037500	35,600	284,200
Und. Net. A & B (1)	1,715,600	1639100	2,200	56,900	17,400	1485900	21,700	208000

(a) CBLT Transmitter Details



Ontario (Cont.)

Centre	Call	Channel	ERP(kw)	EHAAT(ft)	Co-ordinates
Timmins	CKGB	233	.425	102	48-28-30, 81-20-00
Toronto	CJRT	216	27	124	43-39-37, 79-22-42
Toronto	CBL	231C_1*	11.9	403	43-39-36, 79-22-42
Toronto	CHFI	251C_1*	210	816	43-46-48, 79-15-34
Toronto	CKFM	260C_1 *3/	200	441	43-38-46, 79-23-00
Toronto	CHIN	264B*	50	310	43-47-16, 79-25-05
(Brampton)Toronto	CHIC	271C_1 4/	.857	151	43-41-21, 79-45-49
Toronto	CHUM	283C_1*	100	289	43-40-18, 79-22-50
Windsor	CKWW	204C_1*	84	269	42-18-24, 83-01-51
Windsor	CKLW	230C_1*	50	567	42-18-59, 83-02-58
P.E.I.					
Charlottetown	CBC	276	.0592	108	46-14-11, 63-07-44
Quebec					
Drummondville	CFDM	282B	50	132	45-47-47, 72-29-04
Hull-Ottawa	CKCH	235C_1*	74	1077	45-30-11, 75-51-02
La Pocatiere	CHGB	275	.790	244	47-21-51, 70-02-38
Maniwaki	CBFL	255A	.0585	30	46-23-22, 75-58-42
Montreal	CFQR	223C_1*	41.4	979	45-30-20, 73-35-32
Montreal	CJMS	232C_1*	41.4	979	45-30-20, 73-35-32
Montreal	CBF	236B	24.6	818	45-30-20, 73-35-32
Montreal	CJFM	240C_1	41.2	979	45-30-20, 73-35-32
(Verdun)Montreal	CKVL	245C_1*	307	712	45-30-00, 73-34-12
Montreal	CKGM	249C_1	41.2	979	45-30-20, 73-35-32
Montreal	CBM	264C_1	24.6	818	45-30-20, 73-35-32
(Laval)Montreal	CFGL	289C_1	100	398	45-38-54, 73-43-10
Quebec	CHRC	251C_1	81	1184	46-49-05, 71-29-46
Rimouski	CJBR	268	20	931	48-19-41, 68-50-07
Sherbrooke	CHLT	274C_1*7/	62	1851	45-18-43, 72-14-32

(b) CBLT Transmitter Location

Notes: These example documents provide insight into how we piece together the necessary information for each television station in our data. Panel (a) includes information for CBLT Toronto, including the service power, antenna height and more. Panel (b) includes information about CBL—the radio station affiliate of CBLT—with latitude and longitude coordinates for the transmitter that broadcast CBL's radio signal and CBLT's television signal. Together with the *List of Television Stations in Canada* document, these two documents provide the information needed to estimate signal strength with the Irregular Terrain Model.

We use the Irregular Terrain Model (ITM) to estimate the attenuation of signal strength across space, based on the timing and location of television transmitter installation. The ITM approach takes into account the elevation profile between a transmitter and its surrounding region, adjusting estimates for any topographic interruption of a signal. Television signal strength is thus an outcome of a transmitter's features, net of topographic interruptions. We use CloudRF to make these ITM estimates, a cloud-based service for modeling signal propagation across space.

Our extended sample runs until 1968, which includes the following election years after television's arrival: 1953, 1957, 1958, 1962, 1963, 1965 and 1968. Based on our ITM estimates and the timing of a transmitter's installation, we can determine the spatial coverage of television signal strength in any given election year. We map these data onto electoral districts using the digitized maps described above to construct an average measure of district signal strength.

Source: The *List of Television Stations in Canada* is available from the *Library and Archives Canada* as a standalone file, with reference number RG41-B-II-2, Volume number: 590, File number: 236, File part: 1.

Whereas both *Television Coverage in Canada* and *List of Broadcasting Stations in Canada* come from a series of textual records titled *Canadian Broadcasting Corporation (C.B.C.)*, with reference number R2551-1-6-E, MG30-E273.

Aggregating Signal Strength to Electoral Districts: An average measure of signal strength can introduce measurement error for large districts with few people living across large swathes of land. Districts of this type are common in a large country like Canada, where outside of major cities the size of a district is quite large. We overcome this aggregation problem using a population-weighted method, where we first aggregate our ITM estimates to the smallest available statistical area in Canada: the census subdivision (CSD). We match 1951 census population data to these CSDs to use as weights when aggregating from CSDs to electoral districts. We successfully match 1951 population data to 92.4 percent of CSDs, and supplant missing values with the last available year, starting with 1941, then 1931 if 1941 is not available, and so on. This procedure guarantees that even in large electoral districts we obtain accurate estimates of the signal strength received by the electorate, as densely populated CSDs are up-weighted in the aggregation, while sparsely populated CSDs are down-weighted. This procedure gives us a measure of television signal strength at the electoral district level, which varies across election years in accordance with the building of new television transmitters over our sample period.

Because television markets do not necessarily overlap with electoral districts, some districts are assigned a value of signal strength well below what any viewer would deem of satisfactory quality, and in some instances simply unwatchable. At baseline, we apply a minimum threshold for a district's average signal strength of 50 dBμV/m. This threshold is based on the Government of Canada's minimum requirement of 47 dBμV/m for a Grade B service contour, which by definition is a signal level the Government of Canada deems "to be adequate, in the absence of man-made noise or interference from other stations, to provide a picture which the median observer would classify as of satisfactory quality." (ISED, 2016, p. 12) With this transformation, signal strength increases continuously for values greater than 50 dBμV/m and is set to zero otherwise.

Source: The harmonized decennial census population data we match to CSDs are at `https://borealisdata.ca/file.xhtml?fileId=277432&version=2.10`.

Voter Turnout: We calculate voter turnout as the ratio of total votes cast in electoral district relative to the size of the electorate, for every district d in election year t. We do not include by-elections.

Source: Election Canada's Report of the Chief Electoral Officer, Table 5, Summary of General Election Results by Electoral District.

Political Party Vote Shares: We calculate party vote shares as the votes cast for a given party divided by all votes cast, for each electoral district d in election year t. In our analysis, we report results based on two different shares:

1. Liberal party vote share.
2. Conservative party vote share.

3. Non-major party vote shares; i.e., the aggregate vote share for all parties excluding the Liberal and Conservative parties.

Source: Information on candidates, party affiliation and total votes was scraped from Parliament of Canada's Parlinfo website, https://lop.parl.ca/sites/ParlInfo/default/en_CA/.

Vote Shares for Politically Left and Right Parties: We calculate the share of votes for left-leaning and right-leaning political parties as a fraction of all votes cast, for each electoral district d in election year t. We assign political parties as "left" or "right" through a variety of methods. Institutional knowledge of the Canadian political system makes the assignment of some parties non-controversial, particularly the parties that receive most of the votes; e.g., the Liberal party is left-leaning and the Conservative party is right-leaning. For lesser-known fringe parties, we use party websites, and various online sources such as Wikipedia to deduce the political alignment. Any possible measurement error introduced here is assumed to be minimal, since these fringe parties make up a tiny portion of the total votes cast, and typically only have a candidate on the ballot in only a few districts in a given election year.

Source: Information on candidates, party affiliation and total votes was scraped from Parliament of Canada's Parlinfo website, https://lop.parl.ca/sites/ParlInfo/default/en_CA/.

Incumbent Win Margin: We calculate an incumbent's win margin in district d in election year t based on vote shares from the 1953 and 1957 elections. We focus on the 1953 and 1957 elections because the majority of the television network expansion occurred between these election years. To account for Canada's multiparty system, we compare vote shares between the 1953 incumbent and the strongest opposing party in each district. If the incumbent was re-elected in 1957, we use the same comparison; if not, we compare the incumbent's 1957 vote share to that of the new winner. While the opponent is defined by party affiliation, the incumbent is identified by prior electoral success, regardless of party. This approach thus captures an individual incumbency effect, not a party effect.

Source: Information on candidates, party affiliation and total votes was scraped from Parliament of Canada's Parlinfo website, https://lop.parl.ca/sites/ParlInfo/default/en_CA/.

Speech Localization Index: We construct an index capturing the local orientation of speeches delivered by Members of Parliament (MPs) in the House of Commons, based on three related measures. These measures, derived from the full universe of floor speeches over our sample period, quantify the frequency and intensity with which MPs refer to geographic locations within their own electoral districts.

Our starting point is the Canadian Geographical Names Database, which provides latitude and longitude coordinates for all named locations in Canada. Using the *Generic Category* variable, we retain only entries classified as populated places—i.e., locations with permanent human settlements. From this list, we build a dictionary of place names and implement a Named Entity Recognition algorithm to identify every populated place mentioned in a given speech. For each extracted reference, the algorithm calculates the distance between the mentioned location and the centroid of the speaker's electoral district. This process yields the following information, which varies across MPs and parliamentary sessions:

(i) The number of speeches in which an MP mentions any populated place;

(ii) The number of speeches in which an MP mentions a populated place within their own district.

From this, we construct two extensive-margin measures:

(1) *Mention local*: an indicator equal to one if an MP ever mentions a populated place within their district during a parliamentary session, and zero otherwise (i.e., when (ii) > 0).

(2) *Speech locality*: the share of place-based speeches that mention a location within the MP's own district, calculated as (ii) divided by (i).

In addition, for each speech, we extract:

(iii) The total number of populated places mentioned;

(iv) The number of those places located within the MP's district.

Using this, we define one intensive-margin measure:

(3) *Place locality*: the share of within-district places mentioned in a speech, averaged across all speeches by an MP that mention any populated place. This is computed as the average ratio of (iv) to (iii) for each speech.

Finally, we combine these three measures into a composite index following the procedure of Anderson (2008). Each variable is standardized to have mean zero and unit variance, then combined using the inverse of the covariance matrix of the standardized variables to produce a single index. This *speech localization index* captures the extent to which an MP's speeches focus on the geographic communities they represent.

Source: Parliamentary speech transcripts are obtained from Beelen et al. (2017). The Canadian Geographical Names Database is available at `https://natural-resources.canada.ca/earth-sciences/geography/download-geographical-names-data/9245`.

Party Dissent Index: We construct a measure of political accountability based on an MP's willingness to deviate from party-line voting in the House of Commons. Using roll-call vote records for all parliamentary divisions during our sample period (Godbout and Høyland, 2017), we derive two related measures of legislative dissent.

The first measure, *vote count dissent*, records the total number of times an MP votes against the majority of their party in a given parliamentary session. To address the skewed distribution and prevalence of zeros, we apply the inverse hyperbolic sine transformation. The second measure, *any dissent*, is a binary indicator equal to one if an MP casts at least one such vote during the session, and zero otherwise.

We combine these two measures into a single index using the procedure outlined in Anderson (2008). Each variable is standardized to have mean zero and unit variance, and we aggregate them by weighting each component with the inverse of the covariance matrix of the standardized variables. The resulting composite measure, which we refer to as the *party dissent index*, captures the extent to which an MP breaks with party ranks during legislative votes.

Source: Roll-call voting records are from Godbout and Høyland (2017).

Population Density: We measure population density as the ratio of an electoral districts total population divided by area. Electoral district population is based on 1931 data from the decennial census.

Source: Election Canada's 1935 Report of the Chief Electoral Officer, Table 5, Summary of General Election Results by Electoral District.

Earnings: We construct a measure of district-level earnings, based on a five percent sample of the 1911 decennial census. The census contains two variables, EARNINGS_AT_CHIEF_OCC and EARNINGS_AT_OTHER_OCC, which are measures of the total amount of money earned by the person being enumerated at their chief occupation and other occupation, respectively. From these, we construct an aggregate measure of total earnings of each enumerated individual in the census, and then calculate the average total earnings at the CSD level, based on census ID variable CCRIUID_CSD_1911. We then intersect our digitized CSD and electoral district maps in ArcGIS to determine the share of area for a CSD that corresponds to an FED, and aggregate our earnings measure up to the electoral district level using the shares as weights. This gives us our final measure of average district-level earnings.

Source: Census of Population, 1911, https://doi.org/10.5683/SP3/MDTWGJ, Borealis, V2.

Average Age: We construct a measure of district-level average age, based on a five percent sample of the 1911 decennial census. The census contains a variable, DERIVED_AGE, which measures the age of the enumerated individual. We calculate the average age at the CSD level, based on census ID variable CCRIUID_CSD_1911. We then intersect our digitized CSD and electoral district maps in ArcGIS to determine the share of area for a CSD that corresponds to an FED, and aggregate our age measure up to the electoral district level using the shares as weights. This gives us our final measure of the average age in a district.

Source: Census of Population, 1911, https://doi.org/10.5683/SP3/MDTWGJ, Borealis, V2.

Literacy Rates: We construct a measure of district-level literacy rates, based on a five percent sample of the 1911 decennial census. The census contains two variables, CAN_READ and CAN_WRITE, which are both indicators equal to 1 if the enumerated individual can read or write, respectively. From these, we construct a literacy variable equal to one if an individual can read or write, and zero otherwise, and then calculate average literacy at the CSD level, based on census ID variable CCRIUID_CSD_1911. This approach yields the percent of literate enumerated individuals. We then intersect our digitized CSD and electoral district maps in ArcGIS to determine the share of area for a CSD that corresponds to an FED, and aggregate our literacy measure up to the electoral district level using the shares as weights. This gives us our final measure of a district's literacy rate.

Source: Census of Population, 1911, https://doi.org/10.5683/SP3/MDTWGJ, Borealis, V2.

Urbanization Rates: We construct a measure of district-level literacy rates, based on a five percent sample of the 1911 decennial census. The census contains a variable, CCRI_URBAN_RURAL_1911, which indicates if the geographic location where an enumerated individual lives is classified as urban or rural. We assign a new variable equal to one if urban, and zero otherwise, and then calculate average urbanization at the CSD level, based on census ID variable CCRIUID_CSD_1911. This approach yields the percent of enumerated individuals living in an urban area. We then intersect our digitized CSD and electoral district maps in ArcGIS to determine the share of area for a CSD that corresponds to an FED, and aggregate our urbanization measure up to the electoral district level using the shares as weights. This gives us our final measure of a district's urbanization rate.

Source: Census of Population, 1911, `https://doi.org/10.5683/SP3/MDTWGJ`, Borealis, V2.

Newspaper Circulation: We digitize circulation data for daily and weekly newspapers from 1945 to 1958, drawing on multiple editions of the *Canada Year Book*, an official statistical almanac of Canadian social and economic conditions. The Year Book reports circulation figures for urban centers with populations of at least 20,000 until the 1954 edition, after which the threshold rises to 30,000. We assemble these data into panels covering 36 cities[31] for daily newspapers and 28 cities[32] for weekly newspapers, including both English- and French-language publications. The included cities account for 93 percent of total daily newspaper circulation in 1950, and for 61 percent and 80 percent of total English- and French-language weekly circulation, respectively (DBS, 1950).

We construct five outcomes from these data, separately for daily and weekly newspapers: (i) the log number of newspapers, (ii) the log of total circulation, (iii) the log of average circulation per newspaper, (iv) circulation per capita, and (v) circulation per household. To calculate per capita and per household measures, we use population estimates from the *Canada Year Book*, based on the 1941, 1951, and 1961 decennial censuses, and interpolate values for intervening years. The underlying circulation figures are reported in different years across Year Book editions, which we piece together to form a panel covering 1945 to 1958. A small number of urban centers drop out in early or late years due to the change in population threshold, but the majority appear throughout the panel.

Source: The 1947, 1950, 1951, 1954, 1956, 1957, 1959, and 1960 editions of the *Canada Year Book*.

Content Differences Across Public and Private Stations: Here we describe the data used to construct Table 1. Quantitative information on content differences across station types is drawn from a comprehensive study by the Royal Commission on Broadcasting. The underlying data cover the full broadcast week of January 15–21, 1956, and include all public and private stations then in operation. This specific week was selected "because it was in the winter season when programming is generally of better quality than in summertime and because it contained no unusual events which would make it unrepresentative of the normal broadcast fare" (Royal Commission on Broadcasting, 1957, p. 40).

We examine two categories of content characteristics. *Share of Weekly Airtime* refers to the proportion of total weekly broadcast time allocated to entertainment or informational programming, calculated relative to overall airtime across all English- and French-language stations. *Geographic Origin of Content*

[31] Including Brantford, Calgary, Edmonton, Fort William, Guelph, Halifax, Hamilton, Kingston, Kitchener, London, Moncton, Montreal, Moose Jaw, New Westminster, Niagara Falls, Oshawa, Ottawa, Peterborough, Port Arthur, Quebec, Regina, Saint John, Sarnia, Saskatoon, Sault Ste. Marie, Sherbrooke, St. Catharines, Sudbury, Sydney, Three Rivers, Timmins, Toronto, Vancouver, Victoria, Windsor and Winnipeg.

[32] Including Calgary, Edmonton, Hamilton, Hull, Kingston, Lachine, Moncton, Montreal, Moose Jaw, New Westminster, Oshawa, Ottawa, Peterborough, Quebec, Regina, Saint John, Sarnia, Shawinigan Falls, Sherbrooke, St. Laurent, Sudbury, Three Rivers, Timmins, Toronto, Vancouver, Verdun, Victoria and Winnipeg.

captures the geographic origin of programming. Within this category, *Recorded* refers to all pre-recorded material, regardless of its source, due to limitations in program logs that did not distinguish between locally recorded and externally acquired content. *Network* refers to programming sourced from the CBC's national service, while *Local* includes all live, locally produced content.

We construct two summary ratios. The *Public / Private* ratio divides the value for public stations by that for private stations within each content category. The *Network / Local* ratio compares the share of *network* content to *local* live content separately by station type.

Source: *Canadian Television and Sound Radio Programs*, Appendix XIV, Royal Commission on Broadcasting (1957) (Smythe, 1957). Data on *Share of Weekly Airtime* are reported on p. 46; data on *Geographic Origin of Content* are on p. 76.

Pre-Television Radio Coverage: To capture cross-sectional variation in media access prior to the expansion of television, we construct a measure of radio coverage based on records of operating radio towers and their call signs in 1941, obtained from *Library and Archives Canada*. As these historical records do not include precise geographic coordinates, we supplement them with a 1971 archival document listing the locations and frequencies of operating radio towers. By cross-referencing call signs and cities of operation, we successfully match 72 of the original 85 radio stations to exact tower locations, leveraging the fact that these stations remained active in 1971. For the remaining 13 stations, we assign location based on the main radio tower in the corresponding city of operation.

Using these locations, we construct a cross-sectional measure of radio coverage for each electoral district. Specifically, we count the number of radio towers within a given distance of the district centroid, where coverage radii are defined as $\chi \in \{50\text{ km}, 100\text{ km}\}$. This results in a pre-treatment measure of media exposure that varies by distance threshold.

Source: The *Categories of Input Data - Radio and Television Broadcasting Stations* is available from the *Library and Archives Canada*, with reference number RG57, Accession number: 1989-90/212 GAD, Box number: 11, File number: 1653-3-BCA, File part: 1.

Joint Radio and Television Ownership: We compile a comprehensive list of private radio and television stations operating in 1956, including all identified owners and their associated ownership shares, as reported in Appendix VIII of the Royal Commission on Broadcasting (Royal Commission on Broadcasting, 1957). For each television station, we calculate a cross-media ownership score by summing the product of each owner's share in the television and radio station. This measure reflects the intensity of joint ownership between radio and television media at the station level.

Figure A.4 presents the distribution of cross-media ownership across the 34 private television stations in our sample. These stations are collectively owned by 58 distinct proprietors, 64% of whom also own a radio station. Most owners (80%) are affiliated with only one television station, and among these, 76% also own a radio outlet. For 62% of private television stations, all ownership shares are held by proprietors who also control radio stations; only three stations lack any ownership links to radio broadcasting.

Source: *Radio and Television Stations in Canada*, Appendix VIII, Report of the Royal Commission on Broadcasting (Royal Commission on Broadcasting, 1957).

Civic Engagement Outcomes: We use survey data from the 1974 *Canadian Election Study* to measure individual-level political behaviors that extend beyond voter turnout. We develop standardized indices for eight distinct *Group Electoral Activities*: (1) reading about politics in newspapers, (2) discussing politics with others, (3) attempting to persuade others how to vote, (4) working with community members to solve local problems, (5) attending a political meeting or rally, (6) contacting public officials or politicians, (7) working for a political party or candidate, and (8) displaying a campaign sticker or election sign.

For each of these eight behaviors, we construct a composite index by averaging the respondent's reported frequency across four distinct political contexts: the most recent federal election at the time of survey (variables $v25$–$v32$), federal elections in general ($v33$–$v40$), provincial elections ($v41$–$v48$), and local elections ($v49$–$v56$). Following Anderson (2008), each component is standardized to have a mean of zero and unit variance before aggregation.

Because the data postdates the single-station policy period, we match survey respondents to their respective federal electoral districts using the 1952 reference map. We then define television treatment ($public_d$ and $private_d$) based on whether a district's estimated signal strength in 1969 reached the 50 dBμV/m threshold for each broadcaster type.

Source: Clarke, Harold, Jane Jenson, Lawrence LeDuc, and Jon Pammett. *Canadian Election Study, 1974-1980*. Data distributed by the Institute for Social Research (ISR), York University, and available through the Canadian Opinion Research Archive (CORA).