Stockholm School of Economics
Department of Economics
BE551 - Degree Project in Economics
Fall 2024

From Backlash to Normalization? The Effect of Populist Radical Right Incumbency on News Media Sentiment

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Abstract

The rise of populist radical right parties in Europe and beyond motivates the study of their future trajectories. While governing may grant these parties greater legitimacy and power, it can also expose their weaknesses and turn voters off their policies. Recognizing the media as an important factor for understanding the populist radical right and its recent success, we study the way in which news media functions as a channel for incumbency effects for these parties, focusing on the case of the Sweden Democrats in Swedish municipal elections. Using large language model-based sentiment analysis, and difference-in-differences and synthetic difference-in-differences econometric methods we identify the causal effect of the Sweden Democrats' inclusion in municipal government on local news media sentiment about the party. Our findings reveal that, contrary to previous research in the Swedish context, there is no discernible media backlash against Sweden Democrat rule. Moreover, we find evidence that, following a national political scandal, local media scrutinizes the party less severely in municipalities where the Sweden Democrats are part of the governing coalition. We theorize that a possible explanation for these findings is a normalization effect of populist radical right officeholding. Our findings demonstrate the role of the media in the mainstreaming of the radical right and contribute to the literature on the media channel of incumbency effects, sentiment analysis of political news and the normalization of the populist radical right.

Keywords: Populist radical right, Incumbency, News media, Political scandal, Textual Analysis

JEL: D72, P19

Supervisor: Ruiqing Cao
Date submitted: 2 December 2024
Date examined: 19 December 2024
Discussants: Fabian Hribsek and Lovisa Andersson
Examiner: Johanna Wallenius

Acknowledgements

We would like to express our deepest gratitude to our supervisor Ruiqing (Sam) Cao for guiding us through our first research project. We also want to thank Jaakko Meriläinen for sharing his knowledge on the Sweden Democrats in the municipal setting and providing us with literature recommendations.

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1 Introduction

The twenty-first century has seen a dramatic rise in populist politics. In the European context, the rise of populism is dominated by right-wing nationalistic parties (Guriev and Papaioannou 2022), with examples like the Front National, Golden Dawn, Alternative for Germany, and the Sweden Democrats. The recent success of this party family, referred to as populist radical right parties, PRRPs, (Mudde 2007) has lead scholars to study the underlying reasons for this development such as economic shocks (Dal Bó et al. 2023), immigration (Edo et al. 2019) and mass media (Ellinas 2010).

Populist radical right parties are often linked to democratic, economic, and social costs. They challenge the foundational principles of liberal democracy (Mudde 2007), contribute to economic instability and disintegration (Funke, Schularick, and Trebesch 2023), and enable the normalization of previously stigmatized views, such as xenophobia (Bursztyn, Egorov, and Fiorin 2020). This motivates research into the future of the populist radical right. Are these parties likely to succeed long term in government, or can we expect factors such as their radicalness and political inexperience to limit their growth? The developments of the last few decades have made researchers question the idea that populist radical right parties are doomed for "success in opposition but failure in government" (Mudde 2013; Albertazzi and McDonnell 2015). However, we still lack reliable estimates of the causal effect of populist radical right entrance into office on subsequent electoral outcomes, and explanations of the channels for these effects.

Media has been established as a key factor contributing to the rise of PRRPs, as ample media coverage has been given to "newsworthy" far right parties, contributing to legitimization and name recognition (Ellinas 2010). However, in the context of the Sweden Democrats (SD) in the 2006 and 2010 Swedish municipal elections, Carlsson, Dahl, and Rooth (2021) find a positive and significant causal effect of electoral performance on the quantity of newspaper articles about the SD in conjunction with negative words such as racism and xenophobia. This indicates that, at least in 2006 and 2010, SD electoral success led to a backlash in attitudes toward the party in news media reporting.

Departing from the literature on the normalization of the (previously) stigmatized radical right (Valentim 2024), and the potentially mainstreaming effect of media reporting (Ellinas 2018), we set out to quantitatively investigate how electoral success of the SD in the 2022 municipal election impacts local news media reporting about the party.

Since the SD, until recently, has been excluded from taking part in municipal governing coalitions, and it has been theorized that governing can have a legitimizing effect on radical parties (Enrique Perilla Garcia 2024; Valentim 2024), we specifically estimate the effect of entering into governing coalitions on the quantity and sentiment of local news media articles. We hypothesize that while a backlash effect has existed for the SD previously, it will be absent once the SD enters office in a given municipality.

To answer our research question, we construct our own panel dataset following 65 Swedish municipalities around the most recent election in 2022, collecting data on their governing coalitions, and the volume and sentiment of local news media reporting. In contrast with previous literature (Carlsson, Dahl, and Rooth 2021), we use a large language model to analyze news articles, extracting their sentiment toward the SD, rather than simply measuring the frequency of select words. Using a difference-in-differences (DiD) and synthetic DiD methodology, we estimate the effect of the SD being part of a municipal coalition on local

news media sentiment about the party.

Analyzing news reporting around the 2022 election, we find no evidence for a significant causal effect of the SD entering a governing coalition on the volume and sentiment of articles about the party. However, we estimate a positive causal effect of SD participation in a governing coalition on the net sentiment of news reporting about the party in the context of a political scandal. Our findings rule out the existence of a media backlash effect to SD inclusion in municipal governments and provide suggestive evidence of an overall normalizing effect. An implication of our findings is that we cannot expect news media to automatically counteract the rise of the populist radical right in the future.

The paper is structured as follows. In section 2 we review the literature more thoroughly. Section 3 defines our research question, presents a framework based on the synthesis of previous literature through which we form our hypothesis, and summarize our contribution. In section 4, we define our setting including the SD party, Swedish municipal-level politics and the two events we study, as well as introduce our datasets. Section 5 presents our empirical strategy, including sentiment analysis, difference-in-differences and synthetic difference-in-differences, and in section 6 we estimate the effect of incumbency for the SD on the quantity and sentiment of local news media coverage about the party. Section 7 discusses our results and their limitations. Section 8 concludes.

2 Literature Review

2.1 The Populist Radical Right: Conceptualization and terminology

Given the recent surge in populist and right-wing radical politics, and the academic interest that has followed, there is unsurprisingly a lot of divergence in the terminology used to denote these parties. For clarity and consistency, we here present a commonly accepted conceptualization, which we use throughout this paper.

To describe the intended family of parties, we apply the definition presented in Mudde (2007) of populist radical-right parties (PRRPs), which uses the three core dimensions of nativism, authoritarianism, and populism. The "minimum definition" of PRRPs is nativism, and refers to "an ideology, which holds that states should be inhabited exclusively by members of the native group ("the nation") and that nonnative elements (persons and ideas) are fundamentally threatening to the homogeneous nation-state" (19). Mudde's "maximum definition" adds the dimensions of authoritarianism and populism. Authoritarianism means "the belief in a strictly ordered society, in which infringements of authority are to be punished severely", manifested through a focus on increased law and order (23). The final core feature, populism, is defined by anti-elitism and anti-pluralism, or more precisely it is "an ideology that considers society to be ultimately separated into two homogeneous and antagonistic groups, 'the pure people' versus 'the corrupt elite', and which argues that politics should be an expression of the volonté générale (general will) of the people" (Mudde 2004, 543).[1].

The above terminology is commonly used in the literature, notably in recent years, for example Ekström, Patrona, and Thornborrow (2020), Dal Bó et al. (2023), and Dennison and Kustov (2023). Nevertheless, it is important to note, along the lines of Mudde (2007), that diverse and inconsistent use of conceptualization and terminology is very common in

1. This is also the preferred base definition for populism of Guriev and Papaioannou (2020)

the literature. This means that surveying the literature on our intended family of political parties necessarily also includes literature which uses other terminology than the one we have committed to. Some of the terminology used in the literature includes both the radical right aspect and the populist aspect, but makes use of different wording, such as "nationalist and populist radical right" (Elgenius and Rydgren 2024), "extreme right-wing populism" (Rydgren 2005), "radical right-wing populism" (Rydgren 2010), as well as "anti-immigrant populism" (Boomgaarden and Vliegenthart 2007). Another large share of the literature uses terminology which does not emphasize the populist feature, even though the same group of parties is generally intended, for example "extreme right" (Ignazi 2005), "far-right" (Carlsson, Dahl, and Rooth 2021) and "radical right" (Valentim 2024). Furthermore, we also draw from the literature which focuses on the broader field of populism in general, including Mudde and Kaltwasser (2012), Guriev and Papaioannou (2022), and Funke, Schularick, and Trebesch (2023).

2.2 The Rise of the Populist Radical Right and Implications

2.2.1 Explaining the Rise of the Populist Radical Right

Taking stock of different attempts at quantifying the global rise of populist parties in the twenty-first century, Guriev and Papaioannou (2022) report that there has been a rise in populist support by $10 - 15$ percentage points of the vote, which implies that these parties have doubled their vote share during the period. They also find that "nationalist, right-wing and authoritarian" populist parties in advanced economies have been the main drivers of this development (Guriev and Papaioannou 2022).

What underlies the success of these parties? An extensive body of research aims to answer this question and explain the rise of the populist radical right. One possible explanation is that voters' preferences have changed, such that the demand for anti-immigrant, and anti-establishment options and policies has been strengthened. Some factors which have been suggested and studied as potentially underlying the demand for radical right populism are financial austerity and welfare cuts (Fetzer 2019; Dal Bó et al. 2023), immigration (Edo et al. 2019), globalization (Colantone and Stanig 2018), media (Ellinas 2018, 2010), social media and the internet (Schaub and Morisi 2020) or as a counter-reaction to liberal attitudes and policies (Norris and Inglehart 2019). Other studies stress the supply-side importance of political positioning and messaging vis-à-vis the more established parties (Rydgren 2010; Lochocki 2018). A third avenue of research highlights social norms, departing from the idea that radical policies tend to be stigmatized, and that increased support can be attributed either to eroding social norms, triggered by exogenous shocks like terrorist attacks or crises (Valentim 2024), or to the parties themselves successfully re-framing their stances to become more palatable to voters (Elgenius and Rydgren 2024).

2.2.2 Implications

Democracy The recent electoral success of populists and the populist radical right is often described as a threat to liberal democracy. By definition, populist radical right parties are in tension with the fundamental principles of liberal democracy (Mudde 2007). Supporting this, Albertazzi and Mueller (2013) demonstrate that populist parties in Austria, Italy, Poland and Switzerland consistently pursued policies incompatible with liberal democracy, contributing to what the authors call the "unrelenting erosion of the liberal consensus" (365). At the same time,

the existence of populist parties might in some instances foster democratic health by acting as a voice for marginalized groups. Through a number of empirical case studies, Mudde and Kaltwasser (2012) show that on the one hand, populists in opposition can have a positive effect on democratic quality by providing representation for groups that otherwise feel marginalized by the political establishment, while on the other, populists in office, especially in more fragile democracies, can threaten democratic quality. In a similar vein, Dal Bó et al. (2023) find that politicians of the Swedish PRRP the SD over-represent social and economic outsiders in the population, who are under-represented by other parties' politicians, but that this comes at a cost of lower competence, which risks adversely impacting government function.

Economic outcomes Work on the economic consequences of populist governance generally shows that populism is bad for the economy (Guriev and Papaioannou 2022). For instance, employing a large dataset of 51 populist regimes in 60 large countries spanning from 1900-2020, Funke, Schularick, and Trebesch (2023) report that the economic costs of populism are high: GDP per capita is 10% lower 15 years after populists enter government, compared to a non-populist synthetic control. The authors attributed this result to the economic disintegration and erosion of institutions that often accompany populist rule.

Norms, views and policy positions There are also non-economic consequences of PRRP rule. Some previously published research suggests that populist radical right electoral success might normalize previously stigmatized views. For example, Bursztyn, Egorov, and Fiorin (2020) show that Donald Trump's victory in the US 2016 presidential election increased individuals' willingness to express xenophobic views publicly. This is in line with Valentim (2021) who demonstrates that the parliamentary representation of the radical right can make individuals more disposed to publicly express support for this party family. These studies point to the normalizing effects of the electoral success of PRRPs. In addition, PRRP success has been shown to increase the salience of immigration issues, both for voters (Loxbo 2024) and for mainstream parties, shifting their policy positions toward a more anti-immigrant stance when radical right parties enter parliament (Abou-Chadi and Krause 2020).

2.3 The Future of the Populist Radical Right

Concluding from the literature that there are potentially large democratic, economic and social costs to PRRP rule, it is relevant to ask whether these parties are likely to succeed in government long-term.

Much of the earlier literature concerning the future prospects of PRRPs questioned their ability to succeed in government (Albertazzi and McDonnell 2015). Heinisch (2003) argued that the populist aspect of right-wing populist parties makes them especially successful in opposition, but renders long-term success in office difficult. This is believed to be due to, for example, political inexperience and pressure to moderate their radicalness, ultimately hindering them from delivering on their promises.

However, contemporary research suggests that populists can indeed succeed in office, much like any other party family (Albertazzi and McDonnell 2015; Mudde 2013). Moreover, populists do not necessarily get voted out quickly even if they do not perform as expected, but historically rather hold office longer than non-populists, on average (Funke, Schularick, and Trebesch 2023).

Thus the question arises: is there long-term cause for concern? Does granting radical right populists power strengthen their future prospects, or does it lead them to eventually

implode? This is the question of incumbency effects of the populist radical right.

2.3.1 Incumbency Effects

Incumbency effects, or incumbency (dis)advantages, refer to the effect of current incumbency status on future electoral success. If there are incumbency advantages, this means that an incumbent party or candidate will be more likely to win the next election, than a challenger that is otherwise similar[2]. While the exact mechanisms are not certain, proposed channels for incumbency effects include campaign financing (Put, Maddens, and Muyters 2023), reputation effects (Bernhardt and Ingerman 1985), candidate quality or experience (Carson, Engstrom, and Roberts 2007) and media visibility (Goidel and Shields 1994; Bräuninger, Däubler, and Pilet 2024).

2.3.2 Incumbency Effects for the Populist Radical Right

If incumbency effects are positive for PRRPs, then we would expect these parties to continue to grow in a "virtuous cycle". Conversely, if they are negative, then this would suggest that the democratic process in and of itself will limit their growth (Enrique Perilla Garcia 2024). Here, we survey the recent literature on the effect of electoral success of the radical party family on subsequent electoral outcomes and policy attitudes.

No incumbency advantages, Backlash In a recent study, Carlsson, Dahl, and Rooth (2021) found negative or near-zero, but insignificant, incumbency effects for the Swedish PRRP the SD on the municipal level between the years 2002 to 2012, using both a multivariate and univariate regression discontinuity design (RDD). This is despite the fact that other small parties exhibited incumbency advantages. Furthermore, the main finding of Carlsson, Dahl, and Rooth (2021) was that the SD winning an additional seat in local municipal elections caused a strong backlash in policy attitudes, as measured through survey responses, such that negative views on immigration weakened. The authors proposed two possible mechanisms for these results: i) inability to fill municipal council seats and high politician turnover, as well as ii) increased local media coverage of the party featuring negative content. Similar results, suggesting a backlash in attitudes toward immigration, have been found by Dennison and Kustov (2023), using a dataset spanning 30 years across 24 European countries. Overall, these studies suggest that the electoral success of PRRPs might turn voters off their radical policies, moving them in the opposite direction.

Incumbency advantages, Normalization Are these results generalizable? In his job market paper, Enrique Perilla Garcia (2024) reproduced the incumbency effect results found by Carlsson, Dahl, and Rooth (2021) using a similar RDD on more recent data. Although the results of Enrique Perilla Garcia (2024) pointed in the same direction, indicating negative incumbency effects on municipal election results from 2006 to 2022 for the SD party, he showed that these results are not generalizable to radical parties in other country settings, which instead generally display positive and comparable effects to non-radical parties. Enrique Perilla Garcia also disagreed with the claim of Carlsson, Dahl, and Rooth (2021) that municipal governance could not be driving the negative incumbency effect found, since the SD had not participated in any coalitions during the years they studied. Instead, he conjected that the

2. In proportional representation systems, number of seats held by the party can be used to measure "incumbency status", see for example Enrique Perilla Garcia (2024)

nonparticipation in coalitions of the SD was a determinant of the effect size and direction: "Why would being part of the governing coalition provide parties a positive impact on their vote share in the next election? Individuals may value competence and be averse to voting for other parties because they are familiar with the parties currently elected. Additionally, for radical parties, being part of a governing coalition may provide a normalizing effect that makes voters perceive them as less radical" (36), motivating this conjecture with the observation that taking part in a governing coalition in municipalities has created a positive incumbency effect for a radical-right party in Finland, among radical parties in other countries. As such, Enrique Perilla Garcia's proposal aligns with Valentim (2024) and the idea that radical right parties' entrance into parliament or government has a normalizing effect, making the parties' policies appear more legitimate. According to Valentim (2024) such normalization may serve to strengthen radical right success in the future through supply and demand dynamics, as when more voters are willing to publicly express their support for radical right policies, the parties themselves have an easier time finding competent politicians, which is expected to increase legitimacy further.

2.4 The Importance of the Media

In this section, we discuss the relationship between the populist radical right and the media, and present previous research on media incumbency effects.

2.4.1 Media and the Populist Radical Right

Populist radical right parties can be said to have a complicated relationship with the media. Populists and radicals will often include the media in the idea of the corrupt elite they oppose, and blame them for under- and misrepresentation of their views (Ellinas 2018). In populist discourse, the system, created and upheld by the establishment, is rigged against "the people" (whom the populists represent), and the media is one of the culprits.

Even so, the media has been identified as one of the factors contributing to the rise of populist radical right parties. Firstly, the "mediatization" of politics can be argued to be especially important for this family of parties. Ellinas (2010) reports that commercial interests can push the media into a "symbiotic relationship" with the far right, as they search for actors that can be considered newsworthy and will generate public interest. Furthermore, Boomgaarden and Vliegenthart (2007) show that news content can also be seen as an important contextual factor, shaping the political agenda in a way which may favor parties with an anti-immigration platform. Qualitative analyses of news content can also shed light on the role of the media as contributing either to the close scrutiny or to the normalization of PRRPs. Analyzing news interviews with the PRRP the SD in different settings (routine news events, political scandals, live two-party interviews, and set piece interviews), Ekström, Patrona, and Thornborrow (2020) and Ekström and Patrona (2024) conclude that due to the journalistic norm of impartiality, journalists often fail to scrutinize the radical right, revealing a tendency for media reporting to contribute to the normalization and legitimization of the party's views and language. As Ekström and Patrona (2024, 133) write, "(T)he ensuing normalization and legitimization are politically consequential, and certainly so in the context of the ongoing political mainstreaming of the far right." In fact, political scandals which are events that put norm-breach into focus and where the media's role is to scrutinize and judge (Ekström,

Patrona, and Thornborrow 2020), might be especially suitable for assessing the media's role in the mainstreaming of the far right.

Taken together, this evidence suggests that studying news media, and its content, is important for understanding the trajectory of radical right populists. At the same time, this field of study remains largely unexplored (Manucci 2019). To understand the role played by media-PRRP interactions in the shaping of the future of these parties, we suggest placing this discussion within the framework of incumbency effects.

2.4.2 Media Incumbency Effects

In general, media exposure is one of the most extensively studied aspects in the analysis of political news. Almost as well-documented is the "incumbency bonus"—the fact that electoral success generally leads to more media attention (Hopmann, Van Aelst, and Legnante 2012). This result is established for individual politicians in preference-list proportional systems (Bräuninger, Däubler, and Pilet 2024) and for political parties in countries such as Denmark (Hopmann, Vreese, and Albæk 2011) and Germany (Schoenbach, De Ridder, and Lauf 2001), among others.

While journalists often consider incumbent politicians to be more newsworthy, this increased media coverage should not necessarily be seen as an advantage. Powerful politicians tend to feature more frequently in negative news, as this so-called "incumbency burden" stems from news norms that focus heavily on highlighting problems and holding those in office and with policy responsibility accountable (Thesen, Green-Pedersen, and Mortensen 2024). The incumbency burden has been shown, by Thesen, Green-Pedersen, and Mortensen (2024) to translate into immediate and accumulated negative effects on voter support in the United Kingdom, Denmark, Norway and the Netherlands.

With regards to the populist radical right specifically, Carlsson, Dahl, and Rooth (2021) tentatively examine how local media reporting responded to the electoral success of the SD within the period 2002-2012. The authors find a positive causal effect on the amount of local newspaper articles mentioning the SD in general, as well as mentioning the party in conjunction with negative terms such as racism and xenophobia. This is interpreted as a media backlash to electoral success, indicating that an incumbency burden existed for the party during their studied period. However, it remains unclear whether similar results would be observed when analyzing sentiment toward the SD, rather than focusing solely on the frequency of articles or word usage. Furthermore, the dataset used in Carlsson, Dahl, and Rooth (2021) does not include SD participation in municipal governments, leaving uncertainty about whether this relationship still applies even after the SD have gained access to office.

2.5 Taking Stock

Evidence points to concerning implications of the surge of populist radical right parties, given their overall negative impacts on democratic strength and economic outcomes. This motivates further study of the incumbency effects of PRRPs to understand the future trajectory of these parties and our political system at large. An important aspect contributing to the rise of PRRPs has been the mediatization of politics, with the media sometimes acting as a platform enabling the populist radical right to gain visibility and legitimacy (Ellinas 2010). However, radical views are by nature stigmatized, such that increased attention may result in

a backlash effect in the media and among voters. The key question that arises is: how does populist radical right incumbency influence media reactions to these parties? Can we expect the media to counteract the success of the populist radical right, or to function as a platform that continues to amplify their rise?

Studying the SD party around the 2022 election provides a case study for examining the effects of incumbency on media reporting for a populist radical right party. This election marked the first time the party entered governing coalitions in a significant number of municipalities, providing a unique context to analyze how media coverage—whether through backlash or normalization—play out when a PRRP transitions from challenger to incumbent.

3 Research Question, Hypotheses and Contribution

3.1 Research Question

Our overarching aim is to study the media channel of incumbency effects for the PRRP the SD around the 2022 municipal election, investigating whether a backlash effect or a normalization effect dominates. Our main research question is thus as follows: What is the effect of Sweden Democrat incumbency after the 2022 municipal election on the quantity and sentiment of local news reporting?

3.2 Hypothesis Formulation

Our review of the literature on PRRPs, media incumbency effects, and the interaction between the news media and the populist radical right suggests two competing regimes for understanding media reactions to PRRP electoral success.

The first regime is the media backlash effect. Building on the well-documented incumbency bonus—where governing parties receive more media attention than those in opposition—this increased exposure can lead to greater scrutiny (Thesen, Green-Pedersen, and Mortensen 2024). In the specific context of PRRPs, Carlsson, Dahl, and Rooth (2021) argue that this incumbency-related increase in media coverage tends to spotlight their stigmatized policies and values, leading to heightened media criticism and scrutiny. Figure 1 shows a visual representation of how this relationship may look, given our interpretation of previous research.

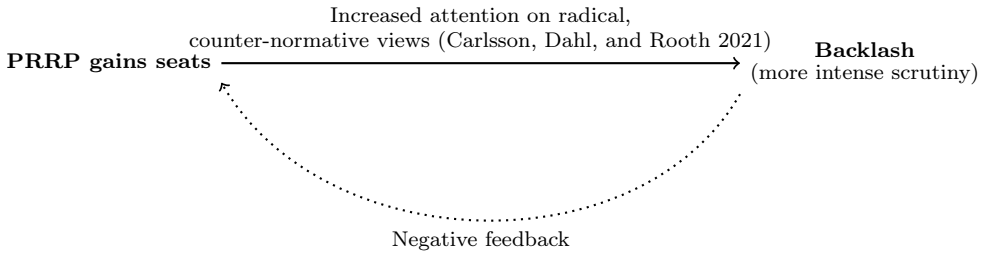


Figure 1: Backlash Regime

The second regime is the normalization effect of PRRP incumbency. The integration of populist radical right parties into municipal governments can signal that previously controversial views and behaviors are now part of the political mainstream, shifting societal

norms (Valentim 2024, 163). Being part of a governing coalition may also confer additional advantages, such as improving the perception of the party's competence and fostering familiarity, important in the municipal setting where party politics are especially relationship driven (Leander 2024). For populist radical right parties, participation in office may soften their perceived radicalness, making them appear more legitimate over time (Enrique Perilla Garcia 2024). Figure 2 shows graphically how PRRP entrance into government may relate to a normalization effect.

Note that both Figures 1 and 2 also show the "feedback mechanism" through which backlash and normalization, respectively, would be expected to impact future electoral performance. As briefly described in section 2.3.2, supply and demand dynamics would predict that stigmatization of PRRPs makes it difficult for these parties to attract high-quality politicians, further increasing the perceived illegitimacy and stigma, whereas the opposite would be true once normalization is at play (Valentim 2024). In this paper, however, we do not investigate this feedback mechanism, but rather focus on understanding the relationship between incumbency and the nature of media coverage empirically.

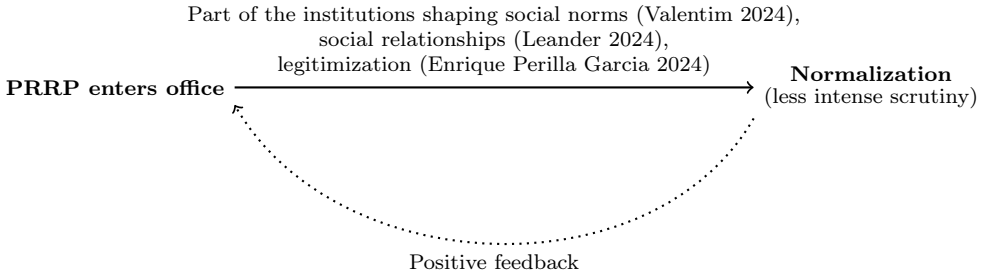


Figure 2: Normalization Regime

We propose an integration of these two regimes into one unified framework. Both the backlash and normalization effects depart from a theory of social norms and the stigmatization of radical views. Positing that a backlash effect exists when a populist radical right party is excluded from governing, gaining access to office may allow the normalization process to be set in motion, eroding the stigma associated with the party, thus removing the backlash effect. This interpretation suggests that we should expect to no longer find a media backlash effect when studying SD inclusion in municipal governments. Instead we expect the news media sentiment about the party to improve once they enter office. We also expect a lower level of media scrutiny when the party commits norm-breaching behavior, such as in the context of a political scandal.

3.3 Our Contribution

We believe we make the following contributions to the literature. Firstly, we add to the literature on the incumbency effects of populist radical right parties. To do this, we use recent data surrounding the 2022 election, which includes the SD taking part in local governments. Secondly, we focus on the media channel which is both important for understanding PRRPs and understudied in political economics. Thirdly, we use a large political scandal to quantitatively assess how incumbency impacts the level of media scrutiny—an approach which we

have not found elsewhere in the literature. Lastly, we use a more contextually rich sentiment analysis method than found in previous literature, rather than looking only at the frequency of specific words. As such we add to the literature on large language model use in political economics.

4 Setting and Data

4.1 The Sweden Democrats

We examine the case of the Swedish populist radical right party the Sweden Democrats, which has increasingly gained power over the last two decades.

History and trajectory The SD was founded in 1988. The party started as a part of the Swedish fascist movement, but since the mid-90s, it has gone through a gradual moderation, expelling its most extreme faction and denouncing nazism in 2001 (Rooduijn et al. 2023). The current party leader, Jimmie Åkesson also sped up the process toward presenting a more "respectable façade" after his election in 2005 (Rydgren and Meiden 2019). Still, mainly because of its fascist past and connections to neo-nazi movements and individuals, mainstream parties established a "cordon sanitaire" against the SD, refusing to cooperate with them at all levels of government (Rooduijn et al. 2023).

The party gained very minimal representation in local, regional and national politics in its early existence, but has increased their support steadily since the early 2000s. In 2010, the SD entered the national parliament for the first time, crossing the "threshold of relevance" in the public debate (Hellström, Nilsson, and Stoltz 2012). In the subsequent election, 2014, the party became the third largest party at the national level. In the 2022 elections, the party increased its vote share to 20.5%, becoming the second largest party, and is now a support party to the government.[3] The positive development of seat shares in municipal councils and vote shares in parliament from 2006 and 2022 for the SD is shown in figure 3. Furthermore, at the local level, the SD has gone from governing in zero municipal coalitions before the 2018 election, to ruling four (1.4% of municipalities) from 2018 to 2022, to ruling 37 (12.8%) from the 2022 election onward[4].

Party Platform The SD is often classified as radical right or populist radical right in the literature (see for example Mudde (2007), Guriev and Papaioannou (2022), and Rydgren (2010)). The PopuList[5] categorizes the party as a far-right populist party with the far-right label being valid since its inception, and the populist label being added in 2001 (Rooduijn et al. 2023). As such, it is the only party currently represented in the Swedish national parliament, labeled as populist radical right.

Immigration has been the central issue for the SD since the outset (Widfeldt 2018). According to the party's website as of December 1st 2024, its four core policy issues are immigration and repatriation, the welfare system, fighting crime and lowering fuel prices (SD

3. The sitting government is made up of the Moderates (Moderaterna, M), the Liberal Party (Liberalerna, L) and the Christian Democrats (Kristdemokraterna, KD), with support from SD (not formally part of the coalition government). The terms of the agreements between these four parties are detailed in what is called the "Tidö Treaty", announced on October 14 2022.

4. Data source: Swedish Association of Local Authorities and Regions, see section 4.4.1.

5. The PopuList is a database of populist, far left, and/or far right parties from 31 European countries. For insight into the classification methodology and the experts behind the database, consult Rooduijn et al. (2024).

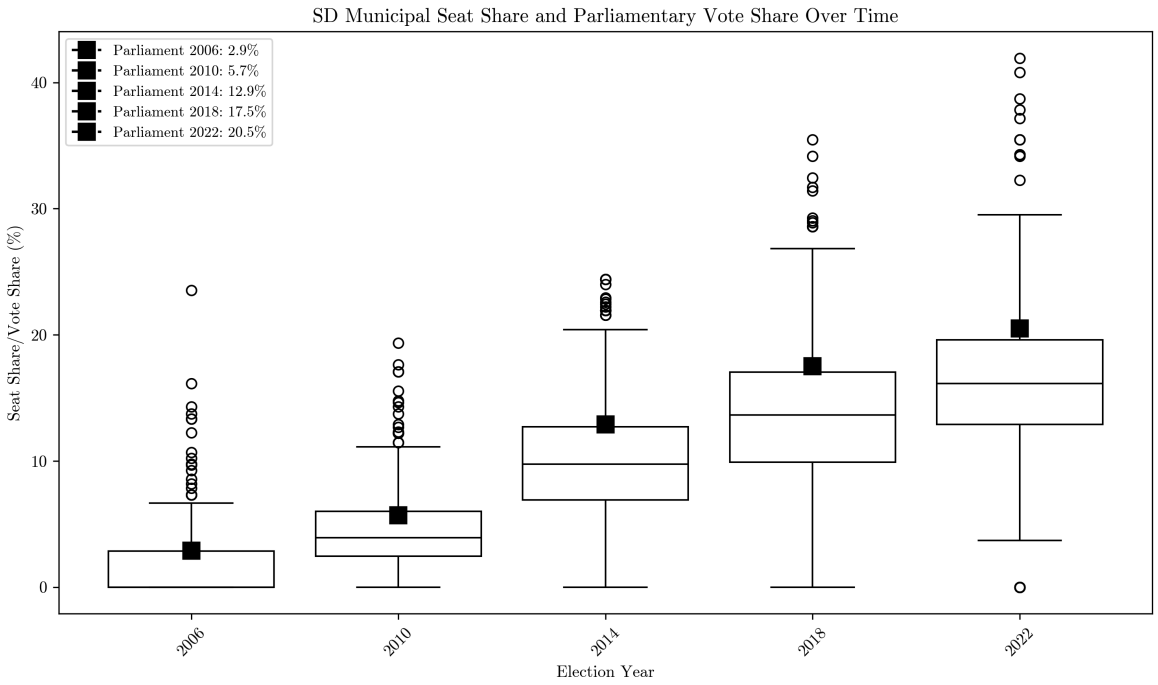


Figure 3: SD Municipal Seat Shares and Parliamentary Vote Share Over Time
Data for municipal seat shares is from the Swedish Association of Local Authorities and Regions. Data for parliamentary vote share is from Statistics Sweden.

2024), and the party describes itself as a "social conservative party with a nationalist basic outlook"[6]. Despite belonging to the right wing of politics, the SD supports a generous welfare state (Jungar and Jupskås 2014), to be financed through decreased immigration and foreign aid, as well as limiting access to the welfare system for non-citizens (SD 2024). A markedly larger share of voters and politicians of the SD, in comparison with voters and politicians of other parties, have anti-establishment attitudes (measured by distrust in the parliament) and anti-immigration attitudes (measured by support for stricter immigration policies) (Dal Bó et al. 2023).

4.2 Swedish Municipalities

4.2.1 Municipal councils and local governments

There are currently 290 municipalities in Sweden. The self-government of municipalities is written into the Swedish constitution (the Instrument of Government) and they provide a significant share of public services, such as schooling, social services and child- and elderly care. In order to provide these services, municipalities levy and collect local taxes (SKR 2024).

Swedish municipalities are governed by elected assemblies, municipal councils ("kommunfullmäktige"), which are the highest decision-making body at the local level. The municipal council is directly elected in municipal elections held every four years using a proportional representation system. In the 2022 municipal council election, barely 8.2 million people were entitled to vote and the voter turnout was 80.5% (Source: Statistics Sweden). The number of municipal council seats to be filled varies between municipalities depending on population size, from 21 (Bjurholm) to 101 (Stockholm).

4.2.2 Coalition formation in Swedish municipalities

Each municipality also has an executive committee ("kommunstyrelse"), and optionally a number of specialized committees ("nämnder"), all appointed by the municipal council. The executive committee is the highest executive body within a municipality. The composition of the executive committee is determined by proportional representation in the municipal council, rather than by a majority vote[7]. However, the heads of the committees are, since the end of the 1960s, elected by majority confidence from the council, meaning the system can be qualified as "quasi-parliamentary" (Bäck 2006). The coalitions are in this way informal rather than formal, although they are still salient to voters (Kärnä, Meriläinen, and Norell 2024).

In the 2022 election, the eight main political parties in any given municipality were the same as those represented in the national parliament [8], alongside a number of mainly local "other parties" with no national representation.

6. Authors' own translation.

7. This is relevant for the SD since it means that they are likely to be included in coalitions provided that they gain enough representation in municipal council.

8. The eight major parties, also represented in national parliament, are the Social Democrats (Socialdemokraterna, S), Moderates (Moderaterna, M), Center Party (Centerpartiet, C), Liberal Party (Liberalerna, L), Left Party (Vänsterpartiet, V), Christian Democrats (Kristdemokraterna, KD), Green Party (Miljöpartiet, MP), and Sweden Democrats (Sverigedemokraterna, SD). S and M are traditionally the two largest parties, both on the national, regional and local level, although the SD surpassed M in the 2022 national election, becoming the second-largest party.

Following the latest municipal reform in 1971, coalition formation in Swedish municipalities was long dominated by two "blocs" fighting for municipal council majority (Wångmar 2006): the left bloc centered around the Social Democrats, and the right bloc centered around the Moderate Party; however, since the late 90s and early 2000s, the political landscape has changed dramatically, with minority governance and cross-bloc coalitions becoming more and more common (Wänström 2019). Wänström (2019) attributed this evolution to the increasing popularity of local parties and the Green Party, and most importantly, the rise of the SD in the municipal setting.

In Figure 4, we show the distribution of different types of municipal governments (Right-bloc, left-bloc, cross-bloc, SD, and other)[9] over time, from 1994 to 2022, using data on governing coalitions from the Swedish Association of Local Authorities and Regions (SKR). A number of interesting trends can be discerned from the figure. Firstly, we note that the share of cross-bloc governments has increased over time, notably between 2010-2014 and onward. Secondly, pure left-bloc governments have declined as a share of the total number of municipal governments, while the share of governments that are pure right-bloc seems to remain fairly steady over time, peaking between 2006 and 2010. Finally, the SD has gone from not governing in any municipality, to governing in some after 2018 and in a sizable share after 2022. Overall, the figure suggests the breaking down of the dominance of traditional within-bloc coalitions. After the 2022 election, a majority of municipalities are instead governed by mixed coalitions, or right-bloc coalitions that include the SD.

Parties' considerations underlying coalition formation decisions in the local setting can differ from those in the national setting. Notably, qualitative interview-based studies on coalition formation under these new political circumstances in Swedish municipalities find that social relations, such as established familiarity and trust, matter when coalitions are formed at the local level—especially for cross-bloc coalitions (Wänström 2019) and coalitions including the SD (Leander 2024). Leander (2024) argued that this is a possible difference between the local context compared to the national one, where office-, vote- and policy-seeking aspirations are more often emphasized. For example, one of Leander's interviews with an official from a party who cooperated with the SD after the 2018 election, revealed that an important consideration was personal familiarity with the SD's national party leader and his family, and the observation that he "is like any other person" (14).

4.3 Our events

In this paper, we study the effect of SD incumbency on local news media reporting, both following the 2022 election itself, and following a major political scandal which happened during the same term, in May of 2024. Thus, the first event we study is the most recent Swedish municipal election, held on September 11, 2022. The second event—the "Troll Factory scandal"—warrants a more thorough description.

9. Right-bloc governments include one or several of the parties M, L, C and KD. Left-bloc governments include one or several of S, V and MP. SD governments are any governments that include the SD, although they always govern with a combination of the right bloc, with the exception of the municipalities Hörby and Bromölla where, after the 2018 election, the SD formed single-party governments. In other words, the SD has never governed with any left-bloc party. Cross-bloc governments include some combination of parties from both the right and left bloc. "Other" denotes governments that do not include any of the eight parties represented in national parliament, such as when local parties govern alone.

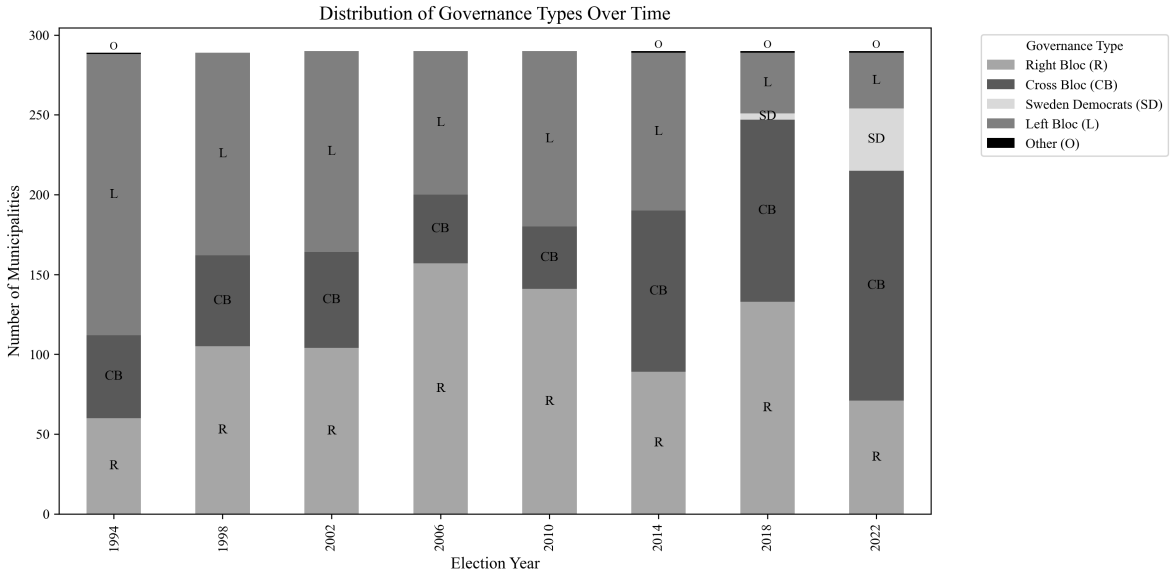


Figure 4: Municipal Coalition Types Over Time
Data is sourced from SKR

4.3.1 Case Description: The Troll Factory Scandal

We use the case of the Troll Factory scandal to test our hypothesis that local media scrutinize the SD less intensely in municipalities where they are incumbent compared to those where they are challengers. A political scandal is an event during which the media are given the opportunity to explicitly challenge the legitimacy of the views and actions of political actors (Ekström, Patrona, and Thornborrow 2020). Therefore, we argue that it is a relevant setting for investigating media scrutiny. Scandals involving populist parties are relatively common[10] and have been analyzed in communication studies and discourse analysis, for example (Herkman 2018; Karv and Strandberg 2022), but not to the same extent in political economics.

In May 2024, the Swedish investigative journalism show "Kalla Fakta" ("Cold Hard Facts") from the channel TV4, published an investigation entitled "Undercover in the troll factory". During a total of 5 months, a journalist from Kalla Fakta worked undercover, first at the SD-funded media channel Riks, and later at the communications department of the party itself. The first chapter of the two-part investigation, published on May 7, revealed that the party had salaried workers running anonymous fake accounts used to spread misleading information and political propaganda on TikTok and other similar platforms. The accounts posted content in the form of memes with xenophobic messages and attacks on other politicians. In the second chapter of the investigation, published on May 14, the party's head of communication Joakim Wallerstein commented on the revelation in an interview where he admitted to using anonymous accounts, but denied any existence of a troll factory, adding: "I do not think that I have managed so-called troll pages, the simple reason being that I have

10. For example, one fifth of the national scandals which occurred in Sweden between 2005-2015 were linked to the SD (Herkman 2018). Note that during the majority of this period, the SD was a relatively small party, with a vote share of between 1.4% (2002) to 12.9% (2014).

not spread any information which was inaccurate"[11] (TV4 2024).

While allegations of troll farms had been made toward the SD before (Sköld 2024), the Kalla Fakta investigation re-actualized these allegations and led to a big scandal after airing. The party leader, Jimmie Åkesson, initially denied the allegations, and then confronted them again in an address on May 14th, calling Kalla Fakta's investigation "pure desinformation" and a "huge influence operation from the leftist liberal establishment"[12] (Gustafsson 2024). This in turn led journalists, experts and other-party officials to respond with even more criticism[13] Furthermore, as some of the content shared via the troll accounts spoke negatively about the Tidö Treaty parties and their leaders, these government parties responded with stark criticism, claiming that the SD had broken the Tidö Treaty (Klittmar 2024). In national media, the affair led to intense negative media attention for the SD. Figures 12 and 13 in section A.3.3 present Google Trends searches for the Swedish words for "Sweden Democrats" and "troll factory" respectively, to illustrate the magnitude of the public's interest in this scandal. In these figures, we observe that i) public interest is concentrated in a relatively short period of around 1-2 months, and ii) the searches made for the Sweden Democrats during this period far outmeasure any other peak in searches for the party during the last year.

This scandal can be interpreted as a natural experiment influencing media reporting on the SD at the national level. As an extension of our study of the 2022 municipal council election, we therefore propose looking at how local media reporting responded to this scandal in the municipalities where the SD is part of a governing coalition, compared to municipalities where the SD is a challenger party. However, it should be noted that the scandal was national rather than local, and so is expected to have hit all municipalities equally. In a traditional natural experiment, we would have only the treatment group be subjected to some form of intervention. In this sense, the effect we are estimating in the Troll Factory scandal case is not the effect of the scandal on news tone, but rather the effect of SD incumbency on news tone reactions to the scandal.

4.4 Data collection

4.4.1 Election Data

To measure the electoral success and incumbency status of the SD following the 2022 election, we obtain election results for the 2018 and 2022 municipal elections from Statistics Sweden (SCB), as well as data on the governing coalitions formed after the 2022 election from SKR.

4.4.2 News Articles

For the datasets analyzing the 2022 election and the Troll Factory scandal, we use a Selenium-based web scraping algorithm to extract the full text and metadata (including newspaper name, headline, and publication date) of 47,480 articles from the Retriever Research database. These articles contain mentions of either "Sverigedemokraterna"[14] or "SD" with terms truncated to capture possessive and other variants. The dataset includes all local newspaper articles in Retriever's archive mentioning the SD from 2020-01-01 to 2024-10-10, where "local" is defined

11. Authors' own translation.
12. Authors' own translation.
13. See for example Stein and Fernqvist (2024) and Willander and Kristoffersson (2024).
14. Swedish for the Sweden Democrats.

by Retriever's own classification criteria. The sentiment toward the SD in these articles is analyzed by use of a GPT-model with the methodology described in section 5.1.

To establish a baseline for how news sentiment about the SD has changed over time and compares to other parties, we collect an additional 425,960 articles published between 2008-01-01 and 2024-10-10. These articles reference the full name of one or more of the eight Swedish parliamentary parties, and party names are similarly truncated to allow for variations. We determine the sentiment toward all parties in these articles by use of a Swedish translated VADER lexicon, also described in section 5.1.

For all sets of articles we manually match the local newspapers to the municipalities they cover in their geographical distribution. Most newspapers define their distribution and intended readership as encompassing one or a couple of specific municipalities. As shown in figure 8 in section A.3.1, a large majority of local newspapers in the Retriever Research database are associated with only one municipality. 48 newspapers from Retriever's sample of 339 local papers in print in the Swedish language are removed because they encompass an entire region, are not attributable to any specific geographical area or do not have any articles available for download. This leaves us with a sample of 291 local newspapers before data cleaning. Figure 9 in section A.3.1 illustrates the distribution of the number of municipalities associated with each newspaper. The municipalities with the highest number of newspapers in our dataset, in descending order are Stockholm, Gothenburg, and Malmö.

The articles, originally reported on a daily frequency in the Retriever Research database, are aggregated to a quarterly frequency for both the 2020-2024 and 2008-2024 datasets. Since scandals typically produce shorter-term spikes in media attention, which we saw was the case for the Troll Factory scandal (see figures 12 and 13 in section A.3.3), the 2020-2024 dataset is also aggregated to a monthly frequency to provide increased granularity for the analysis of the scandal.

4.5 Our Datasets

For the analysis of the 2022 election and the subsequent Troll Factory scandal, we analyze the articles from the 2020–2024 period using GPT-3.5 Turbo. This approach yields discrete sentiment values—positive, negative, and neutral—toward the SD for each article. To ensure consistency in time period length and symmetry relative to the 2022 election (held on 11 September 2022), sentiment counts are aggregated into 90-day "quarters" prior, and subsequent, to the election date, as shown in table 1. Aggregating the articles to the municipal level, this process produces a panel dataset capturing the counts of positive, neutral, and negative articles about the SD for each municipality in each quarter.

Municipalities with no articles in one or more quarters are excluded to enable the calculation of the net sentiment proportion[15], which requires non-zero total article counts. Additionally, municipalities that have over 99% correlation in sentiment counts are cleaned from the dataset, avoiding municipalities that (almost) completely shared newspaper coverage. The resulting dataset includes 65 municipalities, of which 13 constitute the treatment group, having seen the SD join governing coalitions after the 2022 election[16]. These municipalities are

15. This is one of our outcome variables, defined in section 5.2. The net sentiment proportion is defined as the number of positive less negative articles as a proportion of the number of total articles.

16. None of the four municipalities for which the SD were part of a governing coalition after the 2018 election are part of our dataset.

visualized in figure 5. Summary statistics for the treatment and control groups are presented in table 5 in section A.4.1.

Table 5 reveals that the distributions of the dependent variables number of total, positive, neutral, and negative articles are heavily right-skewed. For instance, the variable "total number of articles" ranges from a minimum of 1 to a maximum of 403, with a median of 27 articles. In figures 14 through 18 in section A.2.6 we present histograms of these distributions. While the net sentiment proportion is bounded between -1 and 1 and approximately normally distributed around a mean of zero, the other dependent variables exhibit significant skewness with a few extreme upper-end values. This raises concerns that outliers may influence the results of our future difference-in-differences regressions and the evaluation of the parallel trends assumption. We address this concern in sections 5-6 using natural logarithm and inverse hyperbolic sine transformations.

For the Troll Factory scandal, more granular data is required. Articles are aggregated into 30-day "months" around the scandal date (May 7 2024) using a similar method as for the 2022 election dataset. The resulting month intervals are displayed in table 1. Given that removing municipalities with no articles in at least one month would significantly reduce our sample size, net sentiment proportion as a dependent variable is replaced with net sentiment[17]. This adjustment enables broader dataset coverage, as visualized in figure 10 in section A.3.2. To reduce the influence of the 2022 election in our regressions and visual representations of parallel trends, pre-treatment periods are limited to 18 months. Summary statistics for control and treatment groups are provided in table 6 in section A.4.1 and they display the same general characteristics as the 2022 election dataset, with net sentiment being approximately normally distributed around a mean of zero, albeit with some outliers in the lower and upper ends of the distribution.

Our baseline dataset for assessing how news sentiment toward the SD compares to other parties and develops over time spans 2008–2024. After assigning newspapers to municipalities, sentiment scores are determined using a lexicon method and aggregated to the quarterly level. Excluding municipalities lacking articles for any quarter during the 2008–2024 period leaves us with 51 municipalities, visualized in figure 11 in section A.4.1.

5 Empirical Strategy

In this section, we present our sentiment analysis methods, specify our econometric models and discuss the assumptions necessary for valid inference.

5.1 Sentiment Analysis

To assess the tone of media coverage of political parties, we perform aspect-based sentiment analysis (ABSA). For the 2022 election and Troll Factory scandal datasets we apply GPT-3.5 Turbo to classify sentiment toward the SD specifically. To analyze how news sentiment toward the SD evolves over time and compares to other parties we also classify the sentiment toward all major parties in our baseline dataset by use of the Swedish-translated version of the VADER lexicon.

17. See section 5.2. for variable definitions. Net sentiment is defined as the number of positive less negative articles.

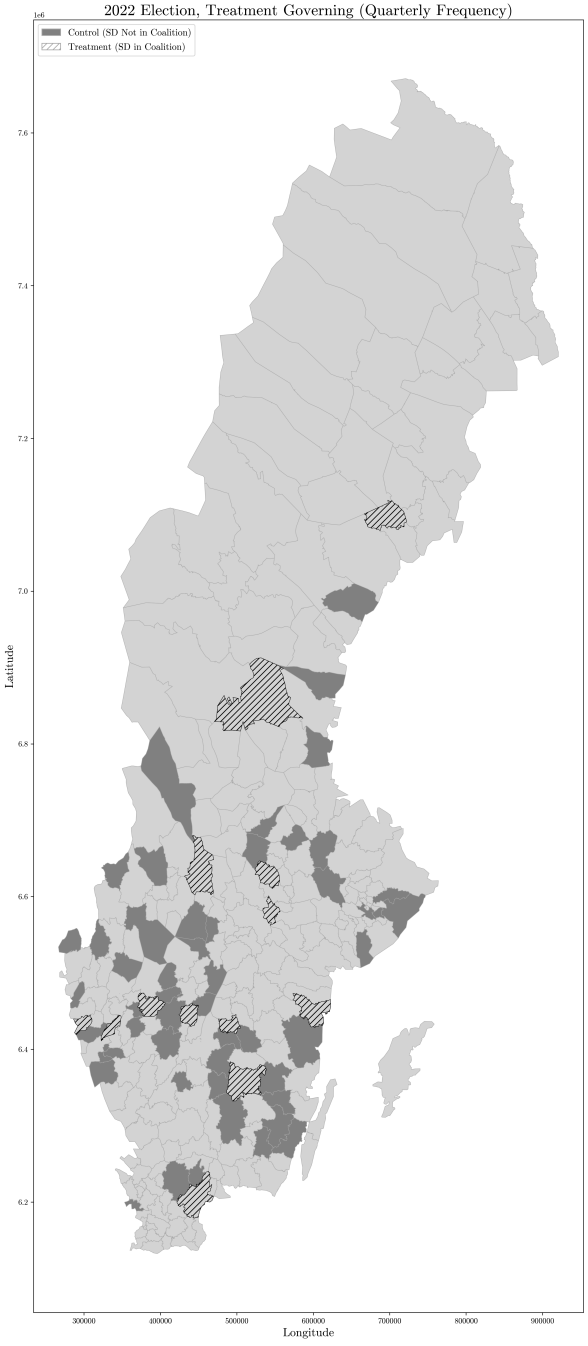


Figure 5: Geographical Coverage of 2022 Election Dataset
Map of the geographical coverage of our 2022 election dataset, including municipalities belonging to treatment and control groups. The list of newspapers is from Retriever Research. Data for SD participation in governing coalitions is sourced from SKR

Table 1: Period Start and End Dates for 2022 Election and Troll Factory Scandal Datasets

2022 Election Dataset			**Troll Factory Scandal Dataset**		
Quarter	**Start Date**	**End Date**	**Month**	**Start Date**	**End Date**
Q-10	2020-03-25	2020-06-22	M-18	2022-11-14	2022-12-13
Q-9	2020-06-23	2020-09-20	M-17	2022-12-14	2023-01-12
Q-8	2020-09-21	2020-12-19	M-16	2023-01-13	2023-02-11
Q-7	2020-12-20	2021-03-19	M-15	2023-02-12	2023-03-13
Q-6	2021-03-20	2021-06-17	M-14	2023-03-14	2023-04-12
Q-5	2021-06-18	2021-09-15	M-13	2023-04-13	2023-05-12
Q-4	2021-09-16	2021-12-14	M-12	2023-05-13	2023-06-11
Q-3	2021-12-15	2022-03-14	M-11	2023-06-12	2023-07-11
Q-2	2022-03-15	2022-06-12	M-10	2023-07-12	2023-08-10
Q-1	2022-06-13	2022-09-10	M-9	2023-08-11	2023-09-09
Q1	2022-09-12	2022-12-10	M-8	2023-09-10	2023-10-09
Q2	2022-12-11	2023-03-10	M-7	2023-10-10	2023-11-08
Q3	2023-03-11	2023-06-08	M-6	2023-11-09	2023-12-08
Q4	2023-06-09	2023-09-06	M-5	2023-12-09	2024-01-07
Q5	2023-09-07	2023-12-05	M-4	2024-01-08	2024-02-06
Q6	2023-12-06	2024-03-04	M-3	2024-02-07	2024-03-07
Q7	2024-03-05	2024-06-02	M-2	2024-03-08	2024-04-06
Q8	2024-06-03	2024-08-31	M-1	2024-04-07	2024-05-06
			M1	2024-05-08	2024-06-06
			M2	2024-06-07	2024-07-06
			M3	2024-07-07	2024-08-05
			M4	2024-08-06	2024-09-04
			M5	2024-09-05	2024-10-04

Lexicon-based methods are widely used for textual analysis in the social sciences, while large language model (LLM)-based methods are gaining traction in select fields like finance and accounting (Kok 2024). Lexicon-based approaches determine sentiment by comparing keywords to predefined phrase-polarity pairs, offering simplicity and efficiency. However, they are limited in contextual understanding and can struggle with complex language constructs such as idioms and wordplay, not uncommon in news articles.

We first apply a translated version of the English VADER lexicon to analyze sentiment toward all eight major parties, including the SD, between 2008 and 2024. Since our baseline dataset is large, we employ a lexicon-based method for its low economic and computational cost. We choose VADER specifically due to its widespread adoption in social science research, despite its lower performance on news media (F1-score of 0.55 for New York Times articles) and potential loss in quality during translation (Hutto and Gilbert 2014; Gustafsson 2022).

To attribute sentiment to political parties, we analyze sentences explicitly mentioning one of the eight parliamentary parties and include the surrounding four sentences for local context. The mean sentiment of these sentences serves as our aspect-based sentiment measure categorized into positive, neutral, or negative. Similar approaches to incorporating context in

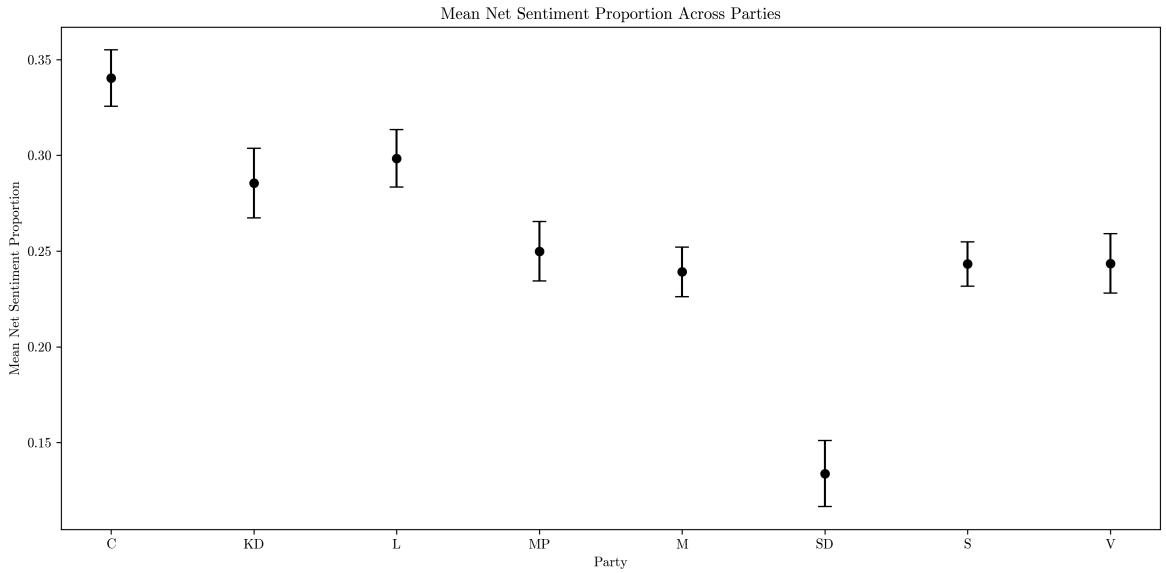


Figure 6: Mean Net Sentiment Proportion by Political Party
Mean net sentiment proportion (pooled data 2008-2024) for the eight major political parties, including 95% confidence intervals. Sentiment determined using VADER lexicon. Newspaper articles sourced from Retriever Research.

sentiment analysis of political news has been applied using both LLM- and lexicon-methods (Salnikova and Kyrychenko 2021; Thesen, Green-Pedersen, and Mortensen 2024).

Figure 6 shows that the mean net sentiment proportion of articles is significantly lower for the SD compared to the other parties in parliament. This supports the idea that there is something unique about the PRRP-media interaction and that the SD is stigmatized in news media. Figure 7 shows that the mean net sentiment proportion for the SD is significantly higher in the period from the 2018 election onward, compared to all previous periods. This indicates that reporting about the SD has become more positive over time, motivating a study of contemporary SD-media interaction.

For our main analyses of the 2022 election and Troll Factory scandal we perform ABSA using a GPT-model. With the introduction of transformer models based on the attention mechanism (Vaswani et al. 2017), a deeper contextual understanding of text is possible and accessible. There are currently two common LLM-model types used in social science research, BERT (bidirectional encoder representations from transformers, developed by Google) and models built in the GPT-line (generative pre-trained transformer, developed by OpenAI) (Kok 2024). Kok describes the tradeoffs between GPT and BERT as follows: "The primary issue with GPT models is that they are expensive to scale, and the primary issue with BERT approaches is that they require costly training datasets. As a result, more complex textual analysis problems at small to medium scales align well with GPT approaches whereas simpler and larger scale problems align well with BERT approaches."

Since we pursue a medium scale, challenging textual analysis task (sentiment analysis in relation to a specific political party in a setting where language use is varied and complex) and we do not have the time nor resources to label a large dataset for training and validation within the frame of the present bachelor thesis, we choose a GPT-approach. However, the literature

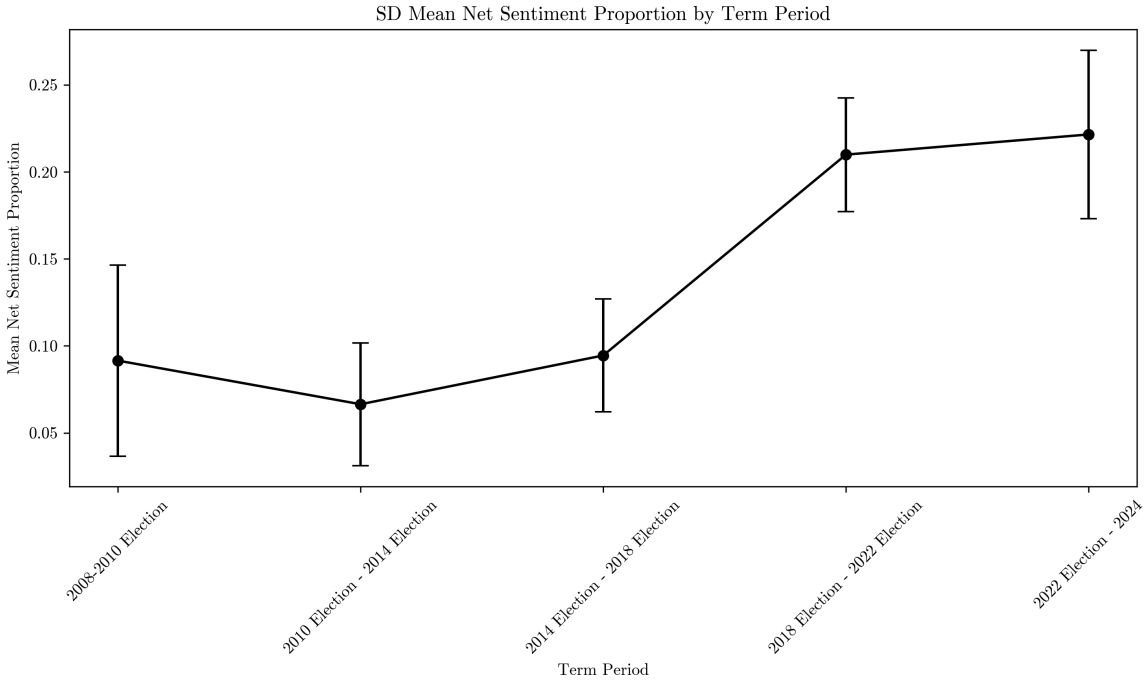


Figure 7: Mean Net Sentiment Proportion for the SD Over Time
Mean net sentiment proportion for the SD over time, including 95% confidence intervals. Sentiment determined using VADER lexicon. Newspaper articles sourced from Retriever Research

on GPT applications for textual analysis in economics is smaller than that for BERT models, and there is uncertainty surrounding issues such as prompt engineering and the use of fine-tuning compared to zero-shot approaches (Kok 2024). Despite these potential challenges, using a GPT-model offers us a greater opportunity to contribute to gaps in the existing literature.

We choose a GPT-3.5 model over other GPT-models as it has previously been used satisfactorily for similar tasks (for example Jha et al. (2024)) and provides a combination of low cost and high performance. More specifically, we apply GPT-3.5 Turbo. In August 2024 GPT-4o mini was released—a higher performance, lower cost model. However, GPT-4o mini has been trained on data up until October 2023 which means that there is a risk that sentiment scores for periods before the 2022 election are influenced by the model's knowledge of events post-election. This risk is smaller for GPT-3.5 Turbo since its training data cutoff is September 2021 (OpenAI, n.d.) .

GPT-3.5 Turbo takes a maximum of 4096 tokens for input, roughly translating to 3000 words. Only 43 articles exceed this length (0.09% of the sample) and were removed prior to analysis. Since our prompt was only 177 tokens long and each article was sent as an independent call to the API, no call exceeds the total context length limit of 16385 tokens. This means that whole articles (including headlines) are used to determine sentiment toward the SD, providing ample context. Temperature is set to zero and zero-shot calls are made to the OpenAI API with the prompt shown in section A.1.

In line with GPT use for similar zero-shot applications in the economics literature (for example Lopez-Lira and Tang (2024)), we prompt our model to output a discrete value of 1, 0 or -1 (corresponding to a classification of positive, neutral and negative sentiment, respectively), rather than more specific classifications, for increased accuracy. To mitigate potential bias toward the SD and reduce the risk of the model generating irrelevant outputs when the SD is not mentioned in an article, our prompt instructs the model to analyze sentiment for any Swedish parliamentary party. A qualitative cursory analysis indicates that this model has a richer understanding of context and classifies sentiment more accurately than our lexicon-based method. As an example, section A.2. shows how the two approaches compare on an indicative sample of a newspaper article, with a brief explanation of why GPT outperforms VADER.

Following the analysis of how electoral performance influences sentiment toward the SD in news media, it is natural to examine how the content of articles about the party evolves. A key consideration is ensuring that any observed positive impact of governance on sentiment is not solely attributable to articles reporting on the party's electoral success. Addressing this issue necessitates topic modeling and we describe our approach and results in detail in section A.5.

5.2 Difference-in-Differences (DiD)

We employ a DiD strategy to identify the causal effect of SD incumbency on local media reporting. While regression discontinuty design is a common choice for studying incumbency effects in proportional election systems (see for example Folke (2014), Carlsson, Dahl, and Rooth (2021), and Enrique Perilla Garcia (2024)), DiD has the advantage of being more transparent and easy to interpret. We specify our general model using two-way fixed effect difference-in-differences (TWFE DiD), as follows:

$$y_{it} = \beta_0 + \beta_1 POST_t * Treatment_i + \lambda_t + \mu_i + u_{it} \quad (1)$$

where i is a municipality, our unit of observation; t is time, with one time period being one quarter for the 2022 election case, and one month for the Troll Factory scandal case; y_{it} is the outcome variable; $POST_t$ is a dummy variable taking on the value 1 after the event has taken place, and 0 otherwise; $Treatment_i$ is a dummy variable taking on the value 1 for the treated municipalities and 0 for the control municipalities; λ_t and μ_i are time and municipality fixed effects, respectively, and u_{it} is the error term. The coefficient of interest is that on the interaction between $POST_t$ and $Treatment_i$, β_1.

Dependent variables We run regressions with a number of different outcome variables substituted for y_{it} in Equation 1. The outcome variables we use are as follows. To measure the quantity of local news media coverage, we use the total number of articles mentioning the SD, $Total\ Articles_{it}$. We also run regressions with the outcome being the number of articles coded as expressing a positive, neutral or negative sentiment toward the party: $Positive\ Articles_{it}$, $Neutral\ Articles_{it}$ and $Negative\ Articles_{it}$. Finally, we construct measures for the overall sentiment: for our study of the 2022 election, this variable is $Net\ Sentiment\ Proportion_{it}$, and for our study of the Troll Factory scandal it is simply $Net\ Sentiment_{it}$. [18] The measures of overall sentiment were constructed as follows:

$$Net\ Sentiment\ Proportion_{it} = \frac{(Positive\ Articles_{it} - Negative\ Articles_{it})}{Total\ Articles_{it}} \quad (2)$$

$$Net\ Sentiment_{it} = Positive\ Articles_{it} - Negative\ Articles \quad (3)$$

As previously mentioned in section 4.5, the distributions of our dependent variables $Total\ Articles_{it}$, $Positive\ Articles_{it}$, $Neutral\ Articles_{it}$ and $Negative\ Articles_{it}$ are heavily right skewed with extreme upper-end values. To address this, we replicate key findings using transformed versions of the dependent variables: the natural logarithm of $Total\ Articles_{it}$ and the inverse hyperbolic sine (IHS) of $Positive\ Articles_{it}$, $Neutral\ Articles_{it}$ and $Negative\ Articles_{it}$. The IHS shares similar general characteristics with the log function and since it allows for zero values it is widely used to reduce the influence of outliers in right-skewed distributions (Norton 2022). These transformations yield approximately normal distributions with reduced tails, as shown for our 2022 election dataset in section A.3.4 in tables 20 through 23, thereby mitigating the impact of outliers on our analyses.

Time Dummy For our two different events, we use two different definitions of the dummy $POST_t$. $POST\ Election_t$ is defined so that it takes on the value 1 for the period starting with the day after the 2022 election, and 0 for the period ending with the day before the election[19]. $POST\ Scandal_t$ takes on the value 1 for the period starting with the first day after the scandal, and 0 for the period ending the day before the scandal began.

18. As described in section 4.5, the reason for this was the prevalence of municipalities with at least one month of missing data; that is, no article about the SD in at least one month.

19. In reality, coalition formation rarely happens on the day of the election, and can take varying periods of time in different municipalities. The fact that we simplify the treatment timing to taking place at the same time as the election, and at the same time in all municipalities, constitutes a limitation of our approach. However, we did attempt to aggregate data to semi-annual periods (so that the first period after the election encompasses the coalition formation of all treated municipalities) and found the same results as the ones we present. Another, albeit slightly more complex, way to deal with this issue, could be to apply staggered DiD.

Treatment Dummy Our main treatment dummy $Treatment_i$ is for both events defined as *SD In Coalition* 2022_i, which takes on the value 1 for municipalities where the SD was included in a governing coalition after the 2022 election, and 0 otherwise. For the 2022 election case, we also run a regression with treatment defined as the SD winning more seats in 2022 compared to the 2018 election, *SD Additional Seats* 2022_i.

Identifying assumption Provided that the identifying assumption holds, the DiD strategy controls for differences in the outcome variable between municipalities that remain fixed during our period of study, as well as for any trends in the outcome variable which are the same across municipalities. This allows us to identify a causal effect.

The identifying assumption is that of parallel trends; that is, that absent treatment, the treatment and control groups would have developed in parallel. In other words, we need to assume that differences in trends in the outcome variable between municipalities where the SD are incumbents and those where they are not, reflect only the effect of SD incumbency. A key concern is that there may exist pre-treatment deviations—pre-trends—between the control and treatment groups, for example due to anticipation of electoral outcomes by the media. To investigate this, we make use of the dynamic DiD (event study) method, which replaces the single treatment indicator with lead and lag variables. If lead coefficients are statistically insignificant, pre-treatment trends between the groups are similar (Miller 2023). We also proceed by visual inspection of plots of time trends for the treatment and control means. Furthermore, where the parallel trends assumption appears suspect, we apply a synthetic difference-in-differences approach (SDiD).

Standard Errors Standard errors are clustered at the municipality level (the level of treatment assignment) to account for within-municipality correlation in the error term over time.

5.3 Synthetic DiD

Where the parallel trends assumption appears not to hold, we apply the Synthetic DiD method following Arkhangelsky et al. (2021). By combining weighted pre-treatment trends, the Synthetic DiD can alleviate violations of the parallel trends assumption in a manner similar to a synthetic control. We assume N units and T time periods comprise a balanced panel, Y_{it} is the outcome for unit i in period t and $W_{it} \in \{0, 1\}$ denotes assignment to treatment. The unit-specific weight is denoted as $\hat{\omega}^i_{\text{sdid}}$, and the time-specific weight as $\hat{\lambda}^t_{\text{sdid}}$. These weights are optimized so that the pre-treatment outcome trends of untreated units are closely matched to those of the treated units and adjust for differences between the pre-treatment and post-treatment periods, respectively (Bernhardt, Breiderhoff, and Dewenter 2023). Equation 4 shows the optimization equation.

$$\left(\hat{\tau}_{\text{sdid}}, \hat{\mu}, \hat{\alpha}, \hat{\beta}\right) = \arg\min_{\tau,\mu,\alpha,\beta} \left\{ \sum_{i=1}^{N} \sum_{t=1}^{T} \left(Y_{it} - \mu - \alpha_i - \beta_t - W_{it}\tau\right)^2 \hat{\omega}^i_{\text{sdid}} \hat{\lambda}^t_{\text{sdid}} \right\} \tag{4}$$

We use the Jackknife variance estimator for our standard errors as it produces generally conservative and precise estimates when treatment and control groups are sufficiently similar

A reason for using the day after election as a single treatment period is that, as explained in section 4.2.2., coalition formation could be thought of as partially endogenous to election-day outcomes for the SD (Kärnä, Meriläinen, and Norell 2024).

(Miller 1974). Our summary statistics in tables 5 and 6 show that this is likely to be the case. To run our SDiD regressions and create our plots, we use the synthdid package in R, as presented in Arkhangelsky et al. (2021).

6 Results

6.1 2022 Election

DiD Estimation We start by interpreting the effects of the SD becoming part of a governing coalition in 2022 on the quantity and sentiment of news reporting about the party. Table 2 shows the TWFE DiD regression estimates of the treatment effect of SD governing on our dependent variables: $Total\ Articles_{it}$, $Net\ Sentiment\ Proportion_{it}$, $Positive\ Articles_{it}$, $Neutral\ Articles_{it}$ and $Negative\ Articles_{it}$, together with standard errors clustered at the municipal level.

When we run the regression with $Total\ Articles_{it}$ as the dependent variable, the estimated coefficient is positive with an effect size of 4.92. However, it is not statistically significant at the 5% level.

For $Net\ Sentiment\ Proportion_{it}$, the estimated coefficient is 0.12, statistically significant at the 5% level. If we were to interpret this result as causal, this means that the inclusion of the SD in municipal governments causes the net sentiment proportion in local news reporting about the party to increase by 0.12, or 0.46 control group standard deviations.

Breaking down net sentiment proportion into its components, we see positive and significant estimates for the treatment effects on the number of positive ($Positive\ Articles_{it}$) and neutral articles ($Neutral\ Articles_{it}$) written about the SD. The largest effect is that on the number of positive articles, with an effect size of 3.03, significant to the 1% level. This means that the SD entering a municipal coalition is associated with local news media writing three more positive articles about the party on average, than they would have had the SD not entered into a governing coalition. The estimated effect on the number of neutral articles is 1.86, significant to the 5% level. When the dependent variable is the number of negative articles ($Negative\ Articles_{it}$), the estimated coefficient is close to zero and not significant. These results suggest that the increase in the net sentiment proportion associated with the SD entering municipal government is driven by an increase in the number of positive articles about the party, rather than a decrease in the number of negative articles. Figures 24 - 28 in section A.3.5 show the means of our dependent variables for the treatment and control groups over time. These plots largely corroborate the results of our TWFE DiD regressions, namely that the treatment means for the net sentiment proportion and the number of positive and neutral articles appear to be larger and closer to the control means post-election.

Table 9 in section A.4.2 shows the estimates of the same regression, but with treatment defined as the SD winning more seats in the 2022 election compared to the 2018 election. Nearly all of the estimates have the same sign but unlike the previous specification, none of the treatment effects in this table are statistically significant at conventional levels. This result is also shown visually in section A.3.5 figure 29, which shows no discernible divergence in the trends of the means of net sentiment proportion for the treatment and control groups after the 2022 election. These findings suggest that merely gaining more seats in the 2022 election compared to 2018 does not have a measurable impact on either the quantity nor

Table 2: DiD: Effect of Entering Governing Coalition in 2022 on News Volume and Sentiment

Dependent Variable	**Treatment Effect**
Total Articles	4.92
	(3.29)
Net Sentiment Proportion	0.12*
	(0.05)
Positive Articles	3.03**
	(0.94)
Neutral Articles	1.86*
	(0.86)
Negative Articles	0.03
	(1.96)

Significance levels: * $p < 0.05$, ** $p < 0.01$. $N = 1170$

Description: This table shows the regression estimates for the interaction term $POST\ Election_t \cdot SD\ In\ Coalition\ 2022_i$ using a TWFE DiD model. The dependent variables are total articles, net sentiment proportion, and the count of positive, neutral, and negative articles written about the SD. Standard errors are clustered at the municipality level. Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

sentiment of local news reporting about the SD. [20] Henceforth, we use participation in coalition formation to define the treatment and control groups; that is, we only run regressions using $SD\ In\ Coalition\ 2022_i$ as the treatment dummy.

As the distributions of the number of total, positive, neutral and negative articles are all heavily right skewed, we next investigate whether observations at the end of the distribution and outliers drive the results of our original TWFE DiD regression. Calculating the log of total number of articles, and the IHS of the number of positive, neutral and negative articles gives us near normal distributions with values clustered more tightly around the mean, see figures 20 - 23 in section A.3.4. Running our TWFE DiD regression on the transformations of these variables gives us the estimates in section A.4.2 table 7. These estimates tell us a similar story as those in Table 2, with a positive and significant effect (to the 1% level) of entering a governing coalition on the IHS of positive articles written about the SD, and a near-zero, insignificant estimate for the IHS of negative articles. The estimate for the IHS of number of neutral articles, however, is no longer significant. [21]

A backlash regime would imply a positive causal effect of incumbency on the number of total and negative articles, as well as a negative effect on the net sentiment proportion

20. Running the same regression with the treatment variable defined as the SD gaining more seats than the mean seat change between 2018 and 2022, either as a percentage (16.26%) or as number of seats (1 seat), yields similar, insignificant results for all of our dependent variables. Figures 31 and 30 in section A.3.5 show the mean net sentiment proportion trends for the treatment and control groups using these two treatment definitions, respectively, with no clear deviations between the two groups post treatment in either of the graphs.

21. Although we do not show it here, plotting the means of the transformed dependent variables over time for the treatment and control groups also yields plausible parallel trends prior to treatment

of articles. If we were to interpret the estimates of the TWFE DiD regressions presented above as causal effects of incumbency on local news media reporting, we find no evidence for a backlash regime. On the contrary, significant positive estimates for the net sentiment proportion and number of positive articles point in the opposite direction, providing support for a normalization regime. These results are not due to outliers or heavily skewed data. Furthermore, the comparison of DiD regression estimates using the SD entering coalition and the SD gaining more seats in the 2022 election compared to 2018 indicates that this possible normalization effect is due to officeholding rather than mere seat gains.

Identifying Assumption Having established a positive association between the inclusion of the SD in a governing coalition and the net sentiment proportion and number of positive articles, the next question is whether these relationships are causal. When it comes to the plausibility of our identifying assumption of parallel trends, we visually inspect the time trends of the means of our respective outcome variables, as well as look at the dynamic difference-in-differences graphs.

While figures 24, 26, 27 and 28 in section A.3.5. show possible parallel trends for the number of total, positive, neutral and negative articles prior to the 2022 election, figure 25 does not indicate parallel trends for the net sentiment proportion of articles, with high variability in the mean values and a pronounced pre-trend that shows divergence between the treatment and control means already in Q-2.

Consulting the dynamic difference-in-differences graphs in section A.3.5, figure 32 shows a significantly higher treatment effect on the number of total articles written about the SD compared to the reference period Q-1 for quarters Q2 and onward. If our parallel trends assumption were to hold we would expect only the estimates for periods after the 2022 election to be significantly different from the estimate in our reference period Q-1. However, the quarters prior to Q-1 are also significantly different from zero, which does not support our identifying assumption. While figure 34 shows insignificant estimates in the pre-treatment period and generally significant estimates after the 2022 election for the number of positive articles, figures 35 and 36 show that the event study plots of neutral and negative articles mirror the results for total articles, with significant estimates for pre-treatment periods. This violation of the parallel trends assumption suggests that factors other than the treatment itself may have influenced media coverage in pre-treatment periods. For example, it may be that news media anticipated the formation of municipal coalitions based on election polls. We therefore move on to the synthetic DiD method in an effort to alleviate violations of the parallel trends assumption.

SDiD Estimation Table 3 reports the estimates for the treatment effects on our dependent variables with the SDiD methodology. The estimated treatment effects are positive but insignificant on all of our dependent variables. Upon visual inspection of the SDiD plots in section A.3.5 figures 37 39, 40, and 41, the assumption of parallel trends appears to hold for the four dependent variables number of total, positive, neutral, and negative articles with the treatment and synthetic control trends deviating first after the election date. This suggests that, at least for these dependent variables, the synthetic difference-in-differences approach has mitigated concerns about the pre-treatment deviations in trends observed in our dynamic difference-in-differences graphs. For net sentiment proportion, however, Figure 38 still shows a pre-trend from Q-2 and a generally poor fit for our treatment and control trends. This means that we cannot make a causal interpretation of the effect of governing on the net sentiment proportion of articles toward the SD in the municipal setting.

Table 3: SDiD: Effect of Entering Governing Coalition in 2022 on News Volume and Sentiment

Dependent Variable	Treatment Effect
Total Articles	5.22
	(3.33)
Net Sentiment Proportion	0.06
	(0.05)
Positive Articles	1.90
	(1.02)
Neutral Articles	1.55
	(0.87)
Negative Articles	1.56
	(1.64)

Significance levels: * $p < 0.05$, ** $p < 0.01$. $N = 1170$

Description: This table shows the SDiD regression estimates for the interaction term $POST\ Election_t \cdot SD\ In\ Coalition\ 2022_i$. The dependent variables are total articles, net sentiment proportion, and the count of positive, neutral, and negative articles written about the SD. Standard errors are calculated using the Jackknife variance estimator. Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

The estimated treatment effect on the total number of articles is 5.22, comparable to the TWFE DiD estimate of 4.92 but remains statistically insignificant, with a standard error of 3.33. Breaking down the sentiment proportion components, the treatment effects on the number of positive and neutral articles are 1.90 and 1.55, respectively, both smaller than their TWFE counterparts and statistically insignificant at the 5% level (although significant at the 10% level). This suggests that the positive association observed in the TWFE DiD specification may have been overstated due to violations of the parallel trends assumption. For negative articles, the SDiD estimate of 1.56 is higher than the TWFE estimate of 0.03 but remains insignificant, with a relatively large standard error of 1.64.

Our SDiD specification reports positive, but statistically insignificant estimates of the causal effect of entering municipal coalitions and the reporting volume and sentiment toward the SD in local news media. Similarly to our TWFE DiD regressions, this provides evidence contrary to the backlash regime found by Carlsson, Dahl, and Rooth (2021). However, it does not necessarily support the normalization regime either as we find no positive causal effect of incumbency on the number of positive articles about the SD. As section A.5 reports, these results are robust to the exclusion of articles classified as electoral performance related.

6.2 The Troll Factory Scandal

DiD Estimation Proceeding with TWFE DiD estimation, we report the estimated treatment effect of SD inclusion in municipal government on our five dependent variables $Total\ Articles_{it}$, $Net\ Sentiment_{it}$, $Positive\ Articles_{it}$, $Neutral\ Articles_{it}$ and $Negative\ Articles_{it}$, in table 4 using the Troll Factory scandal dataset. The regression is run with 18 pre-treatment months prior to the scandal taking place, and 1 post-treatment month. We present clustered standard

errors at the municipality level.

Table 4: Effect of Entering Governing Coalition in 2022 on News Volume and Sentiment During a Scandal

Dependent Variable	**Treatment Effect**
Total Articles	-1.08
	(2.18)
Net Sentiment	4.38**
	(1.38)
Positive Articles	1.29
	(1.06)
Neutral Articles	0.72
	(0.52)
Negative Articles	-3.09*
	(1.30)

Significance levels: * $p < 0.05$, ** $p < 0.01$. $N = 7144$

Description: This table shows the TWFE DiD regression estimates for the interaction term $POST\ Scandal_t \cdot SD\ In\ Coalition\ 2022_i$. The regression includes 18 months before the Troll Factory scandal and 1 month after. The dependent variables include total articles, net sentiment, and the count of positive, neutral, and negative articles written about the SD. Standard errors are clustered at the municipality level. Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

Firstly, we note that the estimated coefficient on the interaction of $POST\ Scandal_t$ and $SD\ In\ Coalition\ 2022_i$ is negative when the outcome variable is the total number of articles, $Total\ Articles_{it}$; however, it has relatively large standard errors and is thus not significant at the 5% level. Therefore, our analysis suggests that local media does not report more on the SD following the scandal in municipalities where they are part of a governing coalition, compared to a counterfactual where they are not.

The effect of SD governance on the net sentiment of articles about the party is estimated to be positive and is highly statistically significant. The estimated coefficient of 4.38 indicates that the SD being included in municipal government caused an increase of 4.38 on the net sentiment scale, compared to municipalities where they did not govern. Equivalently, we can say that SD governance causes the net sentiment of articles about the party to increase by 1.26 control group standard deviations, compared to the control group, assuming parallel trends. We interpret this effect as highly economically significant.

Breaking down net sentiment into the number of positive and negative articles, we note that the effect on the number of positive articles is estimated to be positive, but not statistically significant at the 5% significance level. Rather, it seems that a large negative effect on the number of negative articles is driving the increased net sentiment. We find a negative and statistically significant effect of SD incumbency on the number of negative articles about the party published after the scandal surfaced. The magnitude of -3.09 suggests that on average,

SD governing in a municipality causes 3 fewer negative articles to be written in the wake of the Troll Factory scandal, compared to the municipalities where the SD did not govern. The magnitude of 3.09 articles is equivalent to 0.89 control group standard deviations. Finally, our table shows that there is no significant effect of SD incumbency on the number of neutral articles written about the party, although the estimate is positive.

As the distributions of the number of total, positive, neutral and negative articles are all heavily right skewed also for our Troll Factory scandal dataset, we run a TWFE DiD regression on transformed versions of the dependent variables just as in section 6.1. Although the distribution of net sentiment for the Troll Factory scandal dataset (shown in figure 19 in section A.3.4) is somewhat normally distributed around a mean of zero, it displays some outliers, and we therefore choose to include a transformation of this variable too. Table 8 in section A.4.2 shows that the estimate of the effect of the SD entering a coalition government on the IHS of the number of negative articles written about the party in the wake of a scandal retains its direction but is no longer significant. This indicates that outliers may lead the effect in our original specification to be overstated. The effect on the IHS of net sentiment, however, is still positive and significant.

Overall, we find no significant effect of SD incumbency on the number of total articles written about the party after the Troll Factory scandal became public, but a significant positive effect on the net sentiment, likely to primarily be driven by a decrease in the number of negative articles. These findings suggest that during a large political scandal, local media scrutinize the SD less vigorously in municipalities where they are part of the governing coalition.

Identifying assumption To assess the plausibility of our identifying assumption, we visually inspect the time trends of our respective outcome variables, as well as the event study graphs.

Figure 42 in section A.3.6 shows the trends for the mean total number of articles for the control and treatment groups. From this figure, parallel trends seem plausible, although it is not obvious. Figure 43 in section A.3.6 shows the time trends for net sentiment, for which the trends are not perfectly parallel, albeit still plausibly so. Furthermore, the divergence between the two groups in the first month after the airing of the program (M1) is visually evident, although we also note potential divergences in M-18, M-16, M-9 and M-5 which warrant further inspection. The trends for the number of positive and neutral articles in figures 44 and 45 in section A.3.6 also appear to be plausibly parallel. For the number of negative articles, figure 46 reveals some potential divergences from the parallel trends.

Looking at the event study graphs in section A.3.6, we find no pre-trends, and no significant coefficients in any month before the scandal for the total number of articles (figure 47), the net sentiment (figure 48) or the number of positive articles (Figure 49). Out of these, only the treatment effect of SD in coalition on the net sentiment variable has a coefficient for which the 95% confidence interval does not overlap with the reference point in M1, which is consistent with our TWFE DiD regression result. For the number of neutral articles figure 50 shows that the confidence intervals of coefficients are slightly below the reference in three cases, although there are no discernible pre-trends; but neither is there any evidence of a significant treatment effect, except in M5. Finally, figure 51 shows a few coefficients before the scandal which are almost or just barely different from zero, such as in M-11 and M-5. Even though the coefficient in M1 just barely overlaps zero, there is still a discernible drop in the estimated coefficient from M-1 to M1.

From the visual inspection described above, we conclude that our parallel trends as-

sumption plausibly holds without any visible pre-trends and therefore do not apply SDiD estimation.

7 Discussion

7.1 Analysis of our results

Our review of the literature suggested two potential regimes for the interaction between PRRP incumbency and news media coverage in the municipal setting: the backlash and normalization effects. The backlash effect has previously been shown to hold true empirically for the SD and posits that incumbency increases media exposure to a stigmatized platform, leading to an increase in reporting quantity and a decline in the net sentiment proportion of articles due to adverse media reactions.

If there were still a backlash effect at play, we would have found a positive and significant effect of SD incumbency on the total number of articles written about the party, and most importantly, a negative and significant effect on the net sentiment proportion. Our results are not consistent with this. We find no support for a positive and significant causal effect of the SD entering a governing coalition on the number of total, nor negative articles. Although we cannot establish a causal interpretation of the relationship between officeholding and the net sentiment proportion of articles about the SD, the absence of a significant positive effect on the number of negative articles makes a negative effect on net sentiment proportion unlikely.

Having established that we do not observe a backlash effect, we also do not find definitive evidence for a normalization effect in our study of the 2022 election case either; the effect on the number of positive articles is only significant at the 10% level and there is no significant positive effect on net sentiment proportion of articles.

However, we do find support for a large, positive and significant causal effect of SD incumbency on the net sentiment of newspaper articles following the Troll Factory scandal. We also find a significant negative effect on the number of negative articles about the SD in the wake of the scandal, although this particular result is not robust to IHS transformation. Overall, the robustness of the effect on net sentiment suggests that, in the month following the airing of the Kalla Fakta investigation, local media scrutinized the SD less harshly in municipalities where the party held office compared to the counterfactual. This finding is consistent with the idea that incumbency may contribute to normalization. The scandal case provides further evidence against a backlash regime explaining SD-local media interactions around the 2022 election.

Taken together, our findings provide suggestive evidence supporting our hypothesized unified framework. While a backlash effect may have existed previously (Carlsson, Dahl, and Rooth 2021), it appears to no longer be present. Instead, the results from the scandal case point to the possibility of a normalization effect. One potential explanation for the differing results between the 2022 election case and the scandal case is that normalization is a gradual process, occurring over time as societal norms erode.

That said, normalization may be only one explanation for the improved net sentiment observed following SD incumbency in the Troll Factory scandal analysis. Another possible explanation is moderation: as the SD collaborate with more moderate, center-right parties, they may have softened their radical positions to facilitate cooperation. However, we argue

that normalization is a more likely explanation in this context, as the Troll Factory scandal was national in scope and thus independent of the policy positions of local party coalitions.

Our findings challenge the Sweden Democrat's narrative of being systematically disfavored and mistreated by the "media establishment" (Ellinas 2018). News coverage of the SD does remain more negative in tone compared to other parties overall through the 2022 election. But negative coverage of the SD is not an inherent, immutable characteristic of the media as it seems to improve with electoral success.

7.2 Limitations and Future Research

Regarding internal validity, a key limitation of our study is the availability of data on local media reporting. While the Retriever Research database includes a large number of local newspapers, many municipalities had to be excluded during data cleaning due to sparse reporting. Having access to consistent data on a larger number of municipalities than we ended up with, that is, a larger number of units of observation, would have provided us with higher statistical power and allowed us to obtain more precise estimates. Furthermore, although we conducted multiple robustness checks (using log and IHS transformed dependent variables and excluding election coverage) we never combine these specifications. It is therefore possible that, for example, using transformed dependent variables and excluding electoral performance related articles would generate different results than the ones observed in this study.

Moreover, while our findings provide suggestive evidence of the normalizing effect of PRRP incumbency, through the channel of media reporting, this is only one part of the puzzle. To fully explain the role the media plays in the future success of populist radical right parties, we would also need to estimate the effect of news media sentiment on party sympathies and voter behavior. This could be an avenue for future research. In light of the increasing popularity of social media and especially its relationship to the populist radical right (see for example Ellinas (2018)), a natural extension would also be to use data from social media, in lieu of only the printed press.

Finally, there is the issue of external validity. The observed results may not generalize to the national level, given the observations made by Leander (2024) about the importance of social relationships in municipal coalition formation—an aspect largely absent in the national context. Future research could address this by investigating whether similar effects are observed at the national level in countries where populist radical right parties are or have been part of the national government.

8 Conclusion

The rise of the populist radical right is one of the defining developments of 21st century politics, motivating research of the future trajectory of the party group. Recognizing the media as an important factor for explaining these developments, this study examined the impact of the Swedish populist radical right party the Sweden Democrats' recent inclusion in municipal governing coalitions on local news media coverage about the party. This analysis was performed both in the context of the 2022 municipal election itself and a subsequent political scandal, the Troll Factory scandal, which happened in May of 2024.

Our synthesis of the literature integrated two competing regimes—backlash and normalization—into one unified framework on PRRP-media interaction. We hypothesized that a

backlash effect dominates when PRRPs are excluded from office, as electoral success increases media scrutiny of their counter-normative positions. However, once these parties enter governing coalitions they appear more legitimate and familiar, and media coverage of these parties becomes less critical.

To empirically test our framework we constructed a panel dataset tracking 65 Swedish municipalities surrounding the latest municipal election in 2022 and analyzed local news media sentiment toward the Sweden Democrats using LLM-determined aspect-based sentiment analysis. To identify the causal effects of governing on media coverage, we employed difference-in-differences and synthetic difference-in-differences methodologies, estimating the effect on quantity and sentiment of articles toward the party due to the Sweden Democrat's participation in municipal coalitions.

For our study of the 2022 election, we found no causal effect of the Sweden Democrats entering coalition governments on the number of total, positive, neutral or negative articles written about the party by local news media. This result offered evidence contrary to both the hypothesized backlash regime and the normalization regime, as the media seemed to neither increase in their scrutiny of, nor their positive reporting on, the Sweden Democrats. However, being part of a governing coalition had a large positive effect on the net sentiment of news reporting about the party in the month following the Troll Factory scandal. Recognizing that norms change over time, these result provided evidence in support of a normalization regime, where incumbency causes news media to scrutinize the party less harshly. Taken together, although we cannot definitively prove that entering office causes the transition from backlash to normalization, we do find supporting evidence for this hypothesis.

Will the media serve as a roadblock for the rise of the populist radical right? Our findings suggest not; there is no evidence that the media serves as an automatic counteracting force to the Sweden Democrats entering governing coalitions. On the contrary, media scrutiny appears to diminish as an effect of officeholding. However, as politics in the municipal setting is heavily relationship based, our results are not necessarily transferable to the national level. Furthermore, our relatively small sample size calls the robustness of our results into question. A future study with higher statistical power could possibly provide more precise estimates of the incumbency effect of governing on news sentiment. Other avenues for future research indicated by our study include the effect of PRRP officeholding on social media sentiment and the effect of media sentiment on voter support for these parties.

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A Appendix

A.1 GPT Prompt for Aspect-Based Sentiment Analysis

"You are a specialized machine trained to do aspect-based sentiment analysis on Swedish political newspaper articles. For each article given, extract every combination of aspect – which is one of the political parties: [Sverigedemokraterna, Socialdemokraterna, Moderaterna, Kristdemokraterna, Liberalerna/Folkpartiet, Miljöpartiet, Vänsterpartiet, Centerpartiet] – and the sentiment associated with the party in the text, -1, 0 or 1 (negative, neutral, positive). If the parties are mentioned in the text, only output the parties from the list and the associated sentiment, e.g. "Miljöpartiet: -1, Moderaterna: 0". Otherwise, output nothing."

A.2 Sentiment Analysis Example Text—Comparison of GPT and VADER

This section presents a news article excerpt that is indicative of the relative performance of our lexicon-based and large language model-based sentiment analysis methods.

Original Version: Med "prioritering av ekonomiska överväganden" som förevändning så riskerar SD människors hälsa och säkerhet. Med detta försöker partiet att skapa en orättvis och ojämlik vårdpolitik som går emot grundläggande principer om rättvisa och solidaritet (Al Mokdad 2024).

English Translation[22]: Using "prioritization of economic considerations" as a pretext, the Sweden Democrats risk people's health and safety. With this, the party attempts to create an unfair and unequal healthcare policy that goes against fundamental principles of justice and solidarity.

The excerpt above conveys a clear negative sentiment toward the SD, correctly classified by GPT-3.5 Turbo using the prompt in section A.1. In contrast, the Swedish translated VADER lexicon picks out the words health (hälsa), safety (säkerhet), justice (rättvisa) and solidarity (solidaritet) as positive, and the words unfair (orättvis) and unequal (ojämlik) as negative. Weighing the four positive and two negative words against each other, our lexicon-algorithm outputs an overall classification of the text as positive. Although our lexicon-method incorporates some context into its analysis (classifying the sentiment of the surrounding four sentences around a given search term), correctly analyzing a text like the example shown requires deeper contextual understanding at a more granular level.

22. Translated using ChatGPT-4o

A.3 Figures

A.3.1 Newspaper-Municipality Distribution

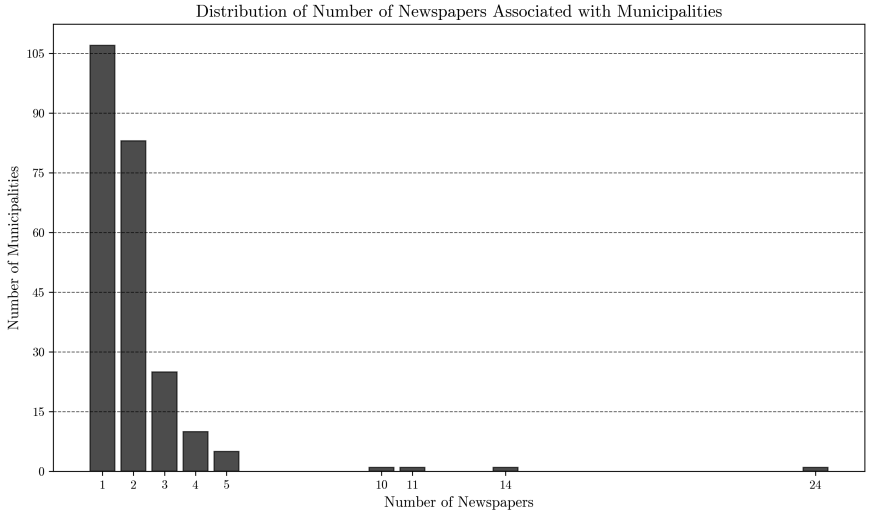


Figure 8: Distribution of Newspapers per Municipality
The list of newspapers is from Retriever Research. The newspapers were matched to municipalities manually.

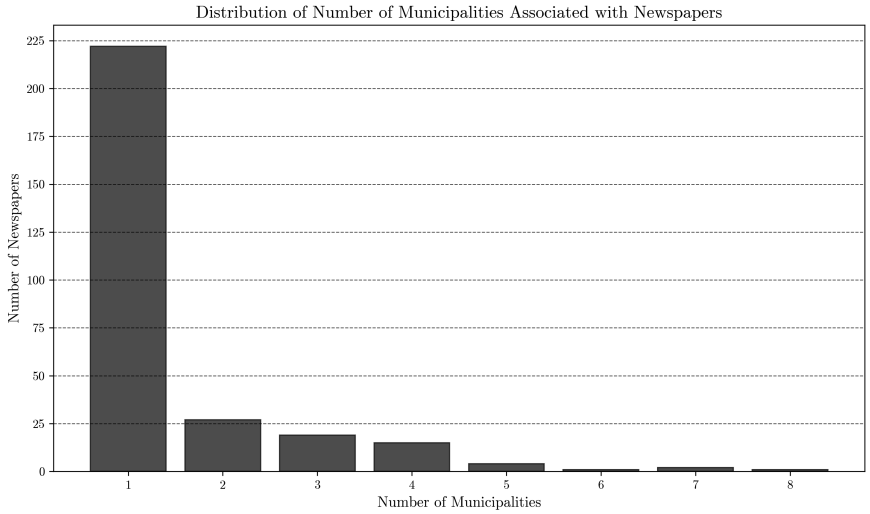


Figure 9: Distribution of Municipalities per Newspaper
The list of newspapers is from Retriever Research. The newspapers were matched to municipalities manually

A.3.2 Maps of Our Datasets

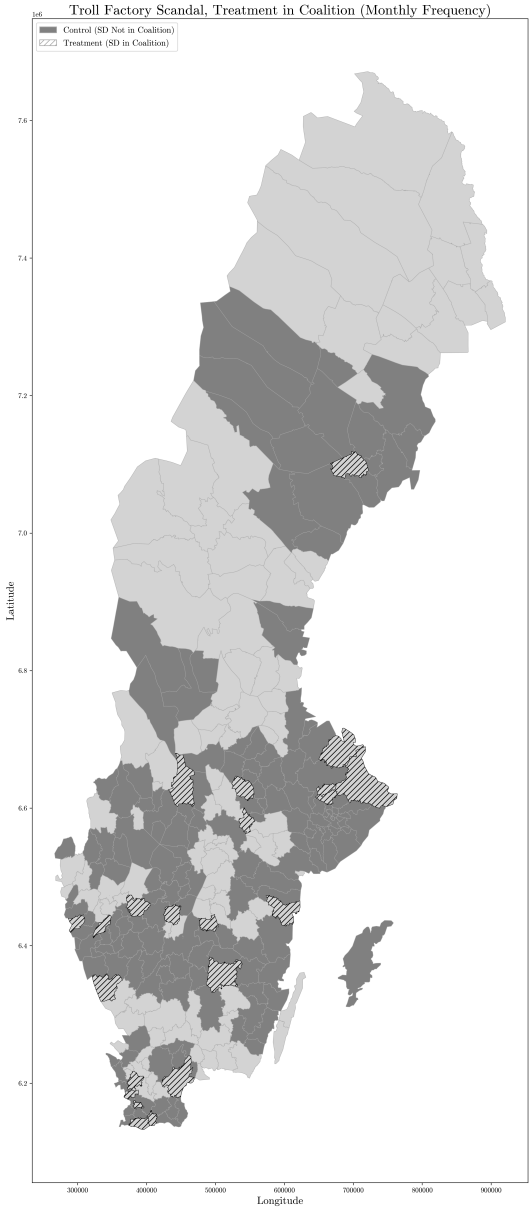


Figure 10: Geographical Coverage of Troll Factory Scandal Dataset

Map of the geographical coverage of our local newspaper data surrounding the Troll Factory scandal, including municipalities belonging to treatment and control groups. The list of newspapers is from Retriever Research. Data for SD participation in governing coalitions sourced from SKR

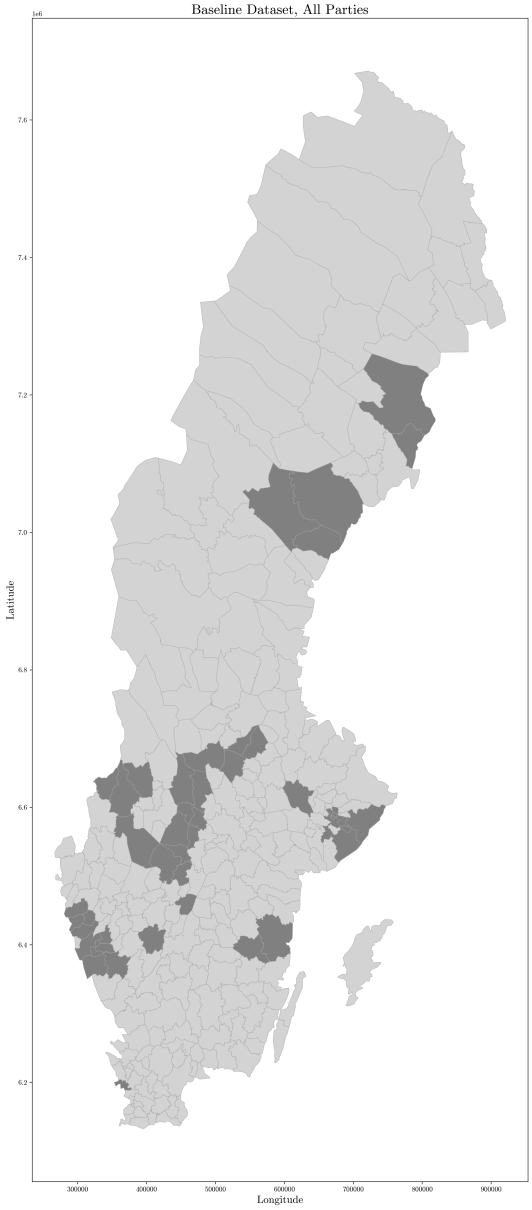


Figure 11: Geographical Coverage of Baseline Dataset

Map of the geographical coverage of our local newspaper data in the baseline dataset spanning 2008 to 2024. The list of newspapers is from Retriever Research.

A.3.3 Troll Factory Scandal Search Trends

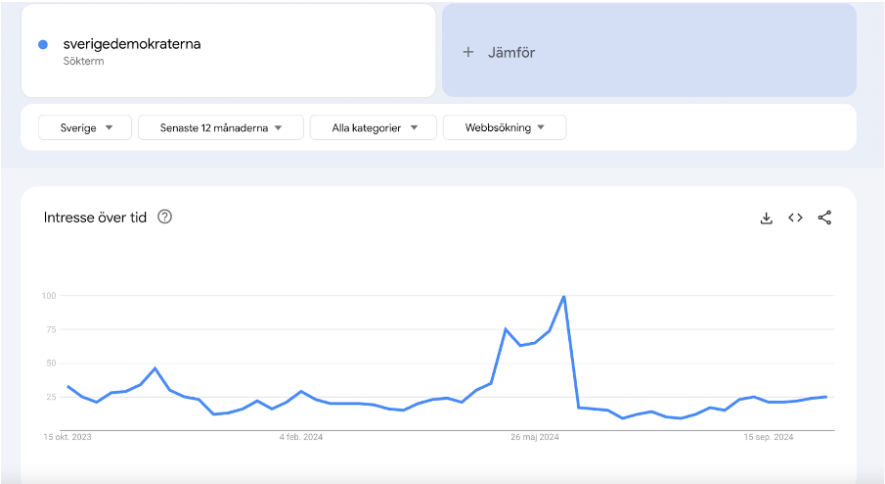


Figure 12: Google Trends Searches for Sweden Democrats
Google trends searches (interest over time) for "Sweden Democrats", surrounding the Troll Factory scandal

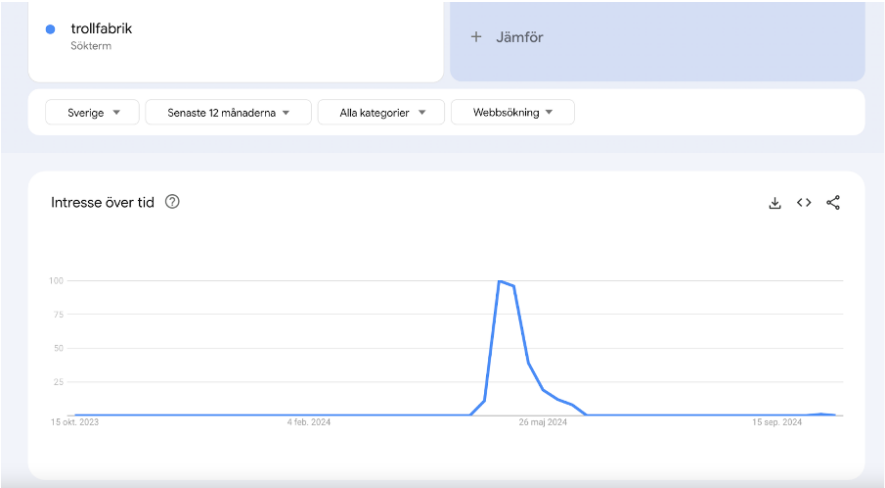


Figure 13: Google Trends Searches for Troll Factory
Google Trends searches (interest over time) for "Troll Factory", surrounding the Troll Factory scandal

A.3.4 Distributions of Dependent Variables

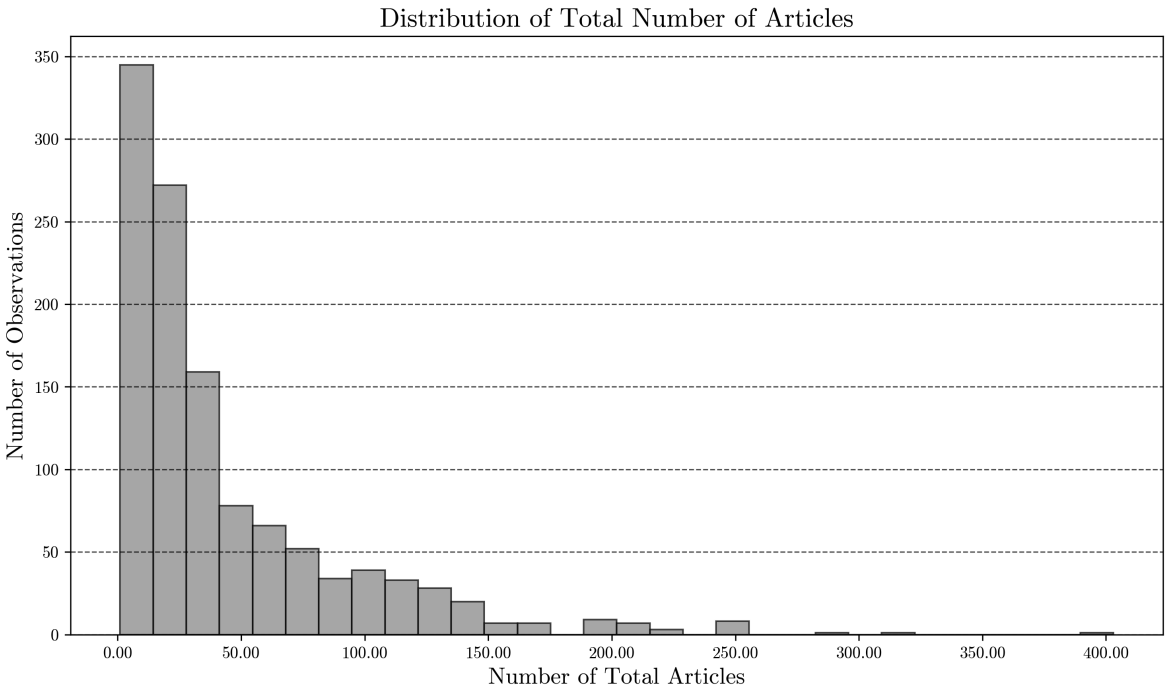


Figure 14: Distribution of $Total\ Articles_{it}$ in the 2022 Election Dataset
Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

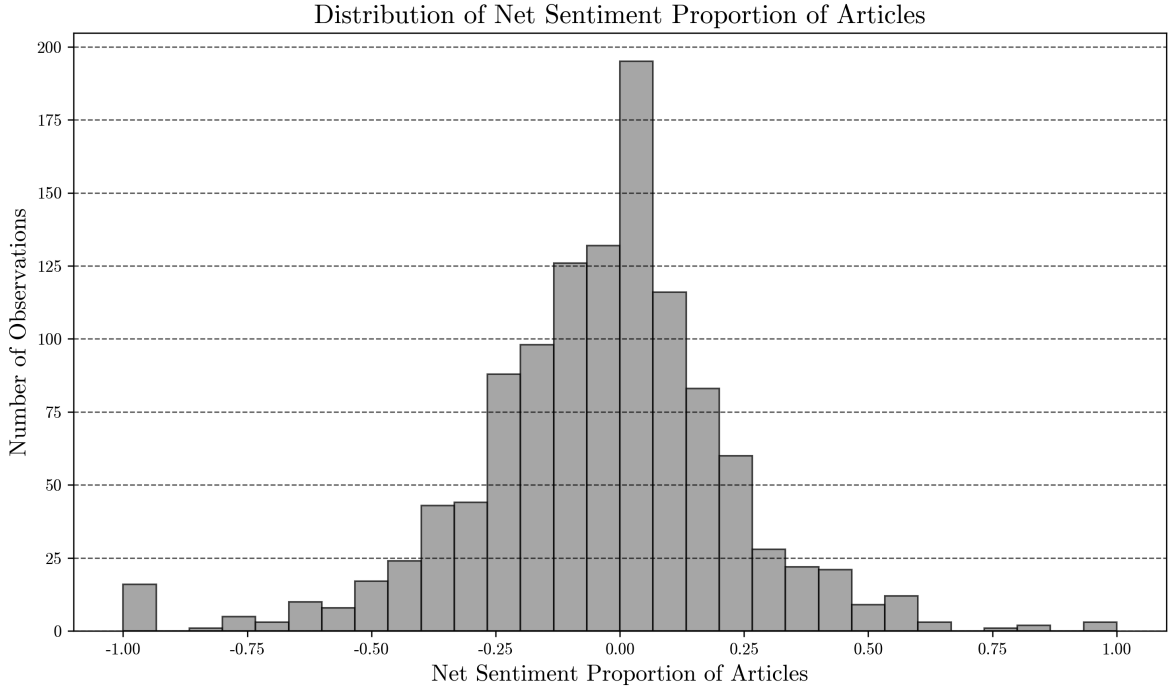


Figure 15: Distribution of $Net\ Sentiment\ Proportion_{it}$ in 2022 Election Dataset
Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

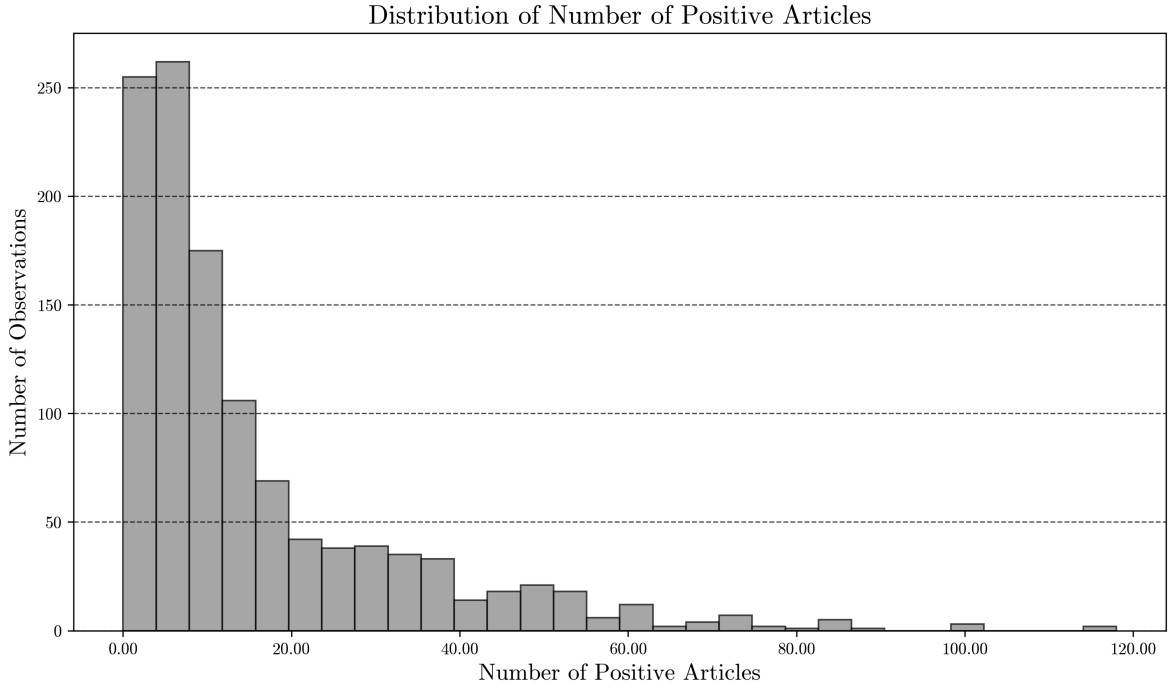


Figure 16: Distribution of $Positive\ Articles_{it}$ in 2022 Election Dataset
Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

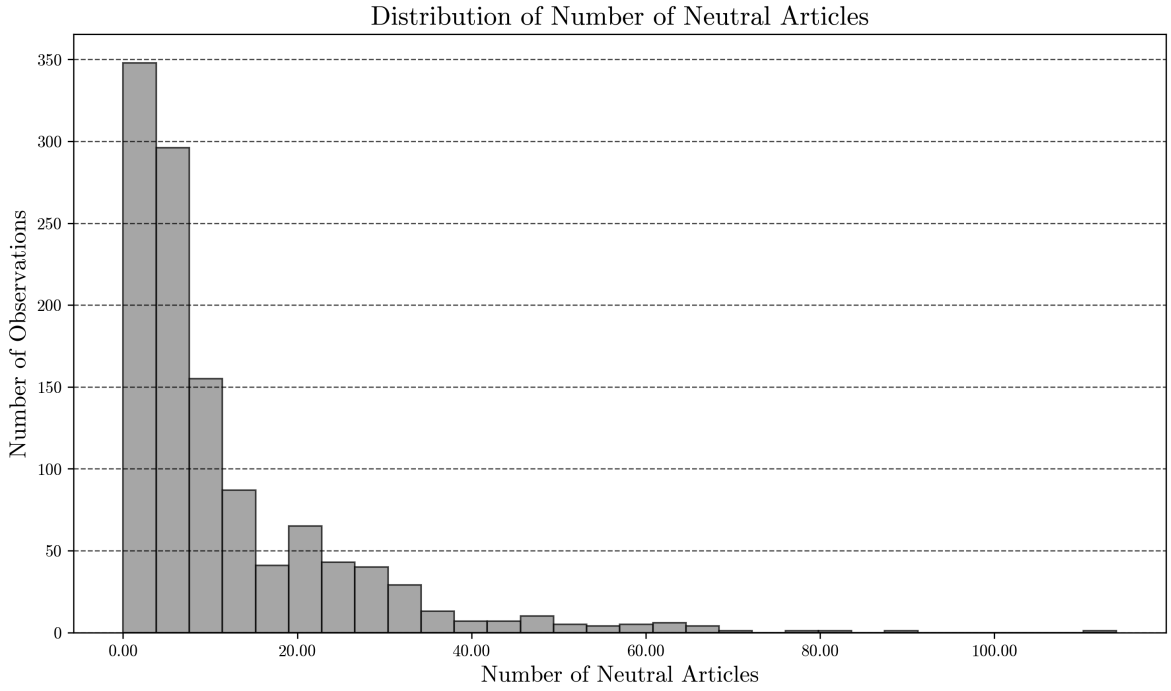


Figure 17: Distribution of $Neutral\ Articles_{it}$ in 2022 Election Dataset
Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

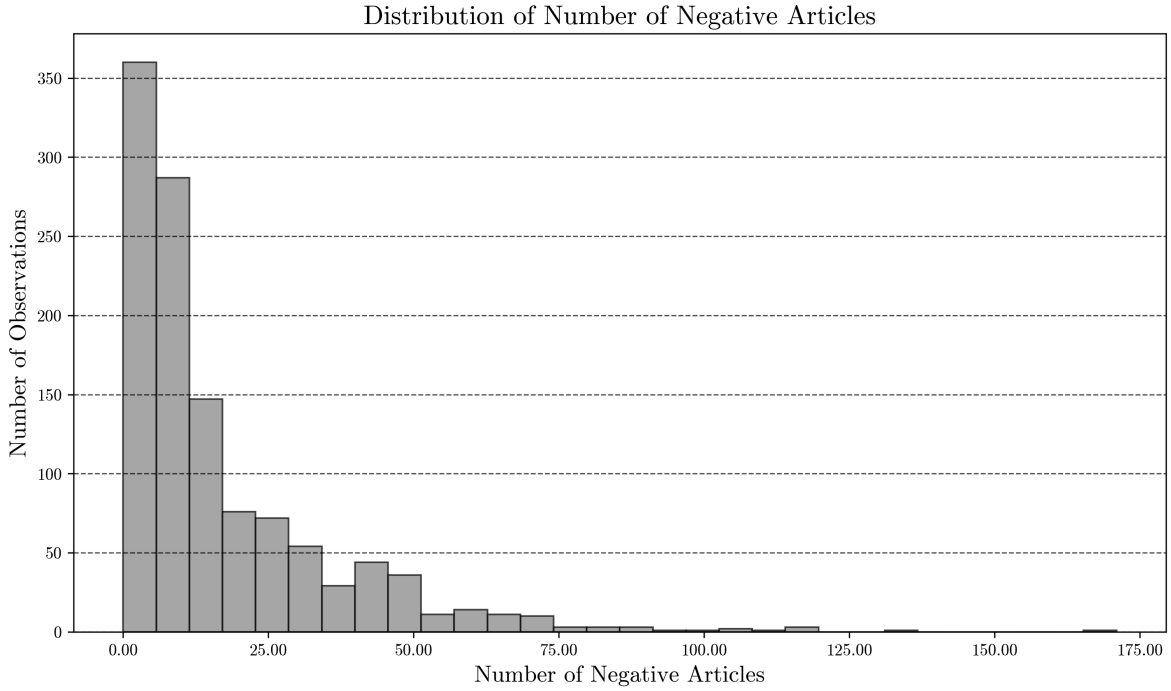


Figure 18: Distribution of $Negative\ Articles_{it}$ in 2022 Election Dataset
Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

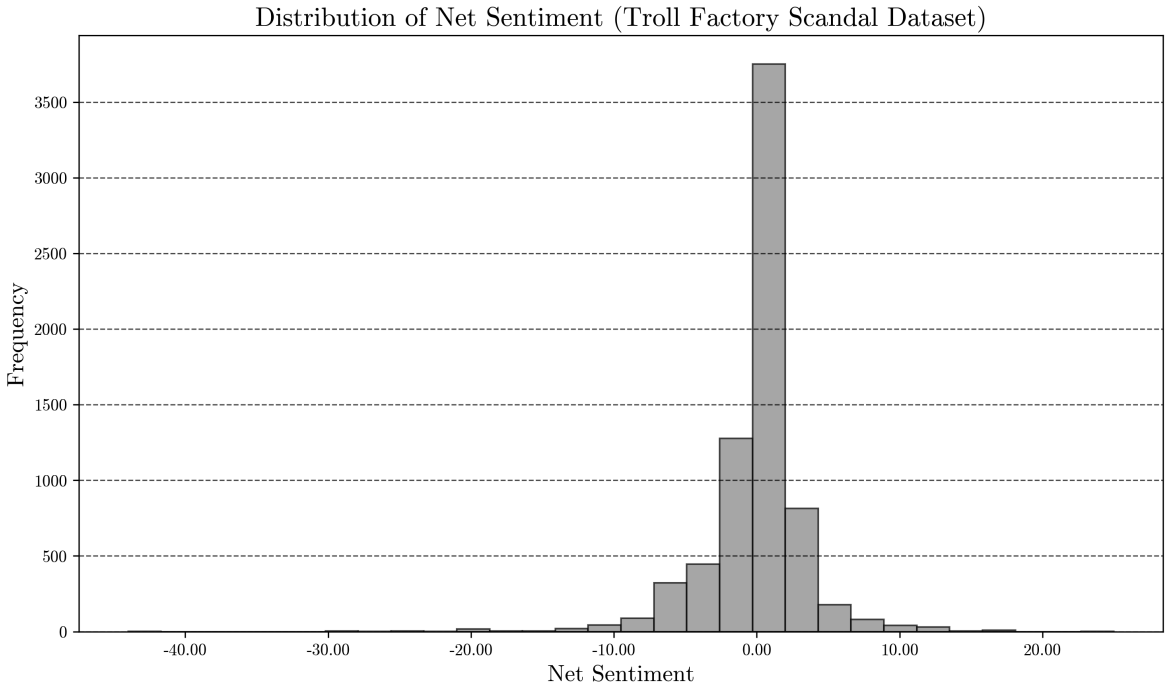


Figure 19: Distribution of $NetSentiment_{it}$ in Troll Factory Scandal Dataset
Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

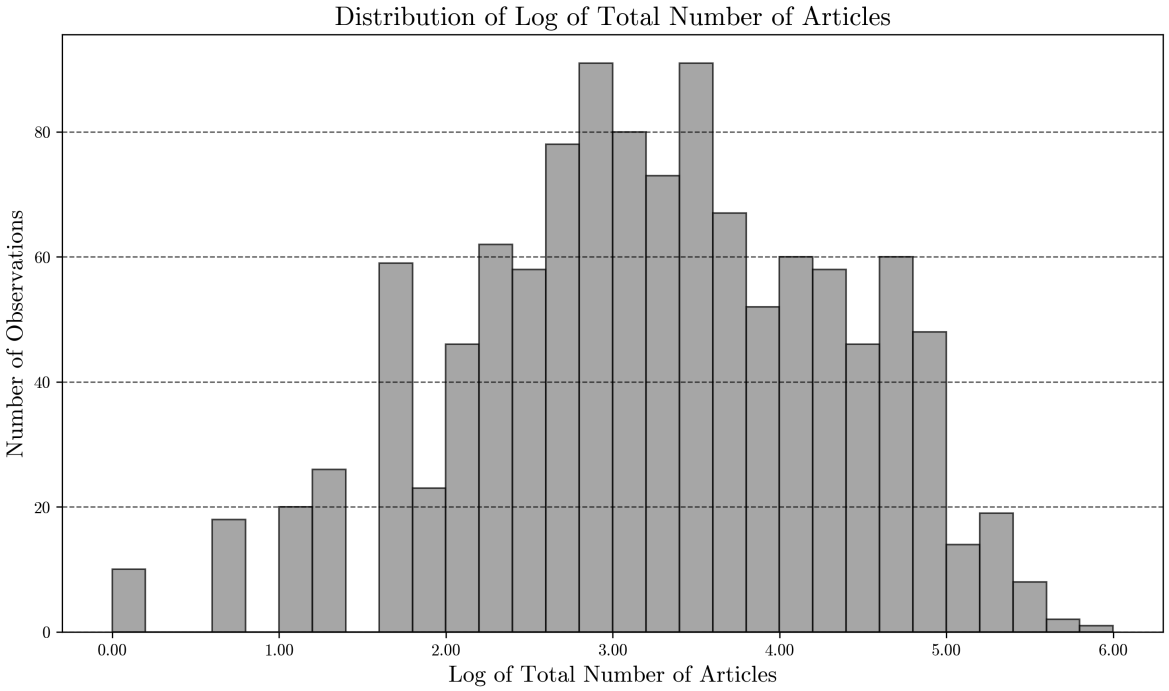


Figure 20: Distribution of $ln(Total\ Articles_{it})$ in 2022 Election Dataset
Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

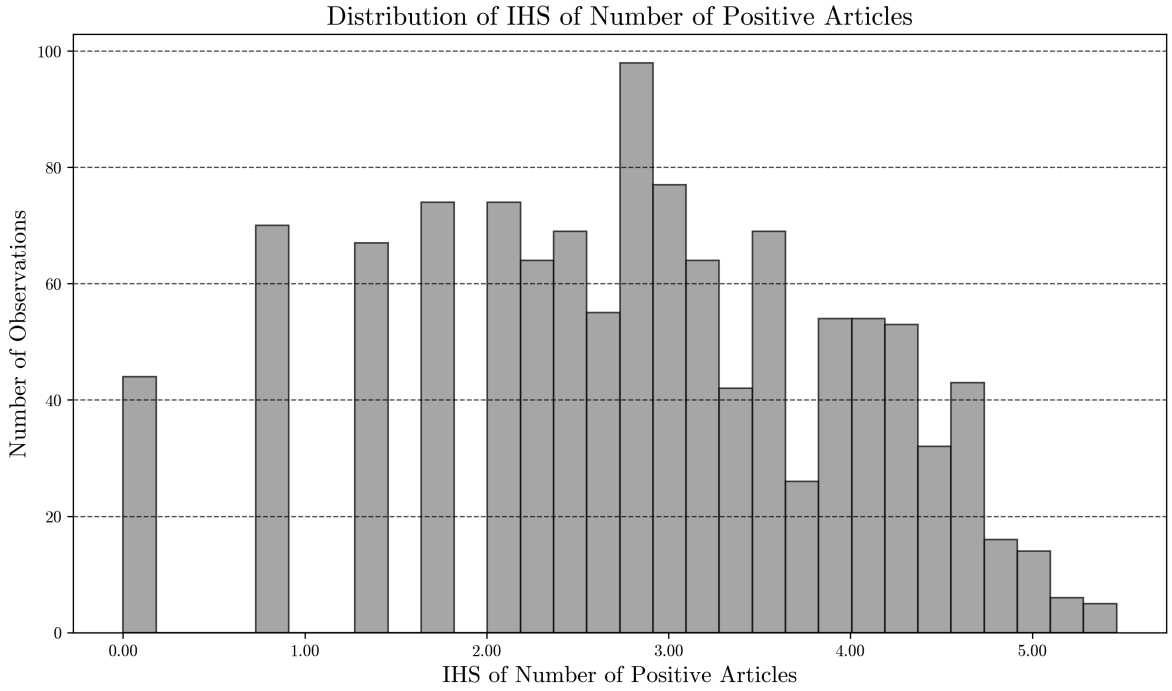


Figure 21: Distribution of $IHS(Positive\ Articles_{it})$ in 2022 Election Dataset
Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

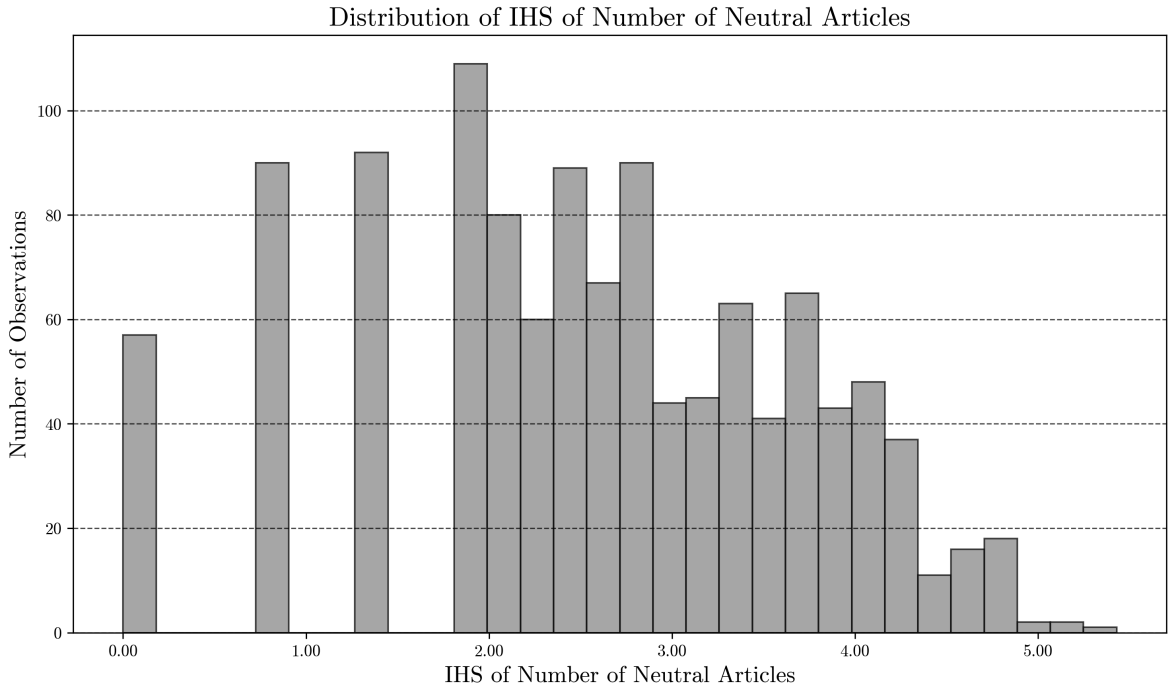


Figure 22: Distribution of $IHS(Neutral\ Articles_{it})$ in 2022 Election Dataset
Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

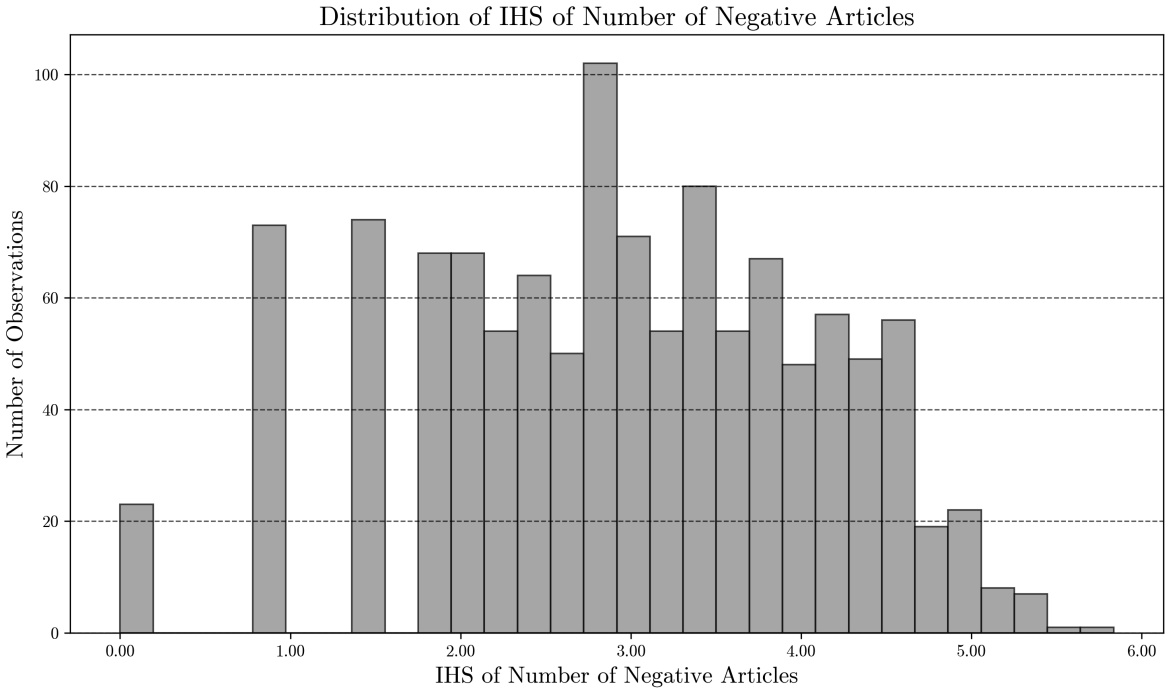


Figure 23: Distribution of $IHS(Negative\ Articles_{it})$ in 2022 Election Dataset
Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

A.3.5 Figures for Study of the 2022 Election

Mean Plots, Treatment in Coalition

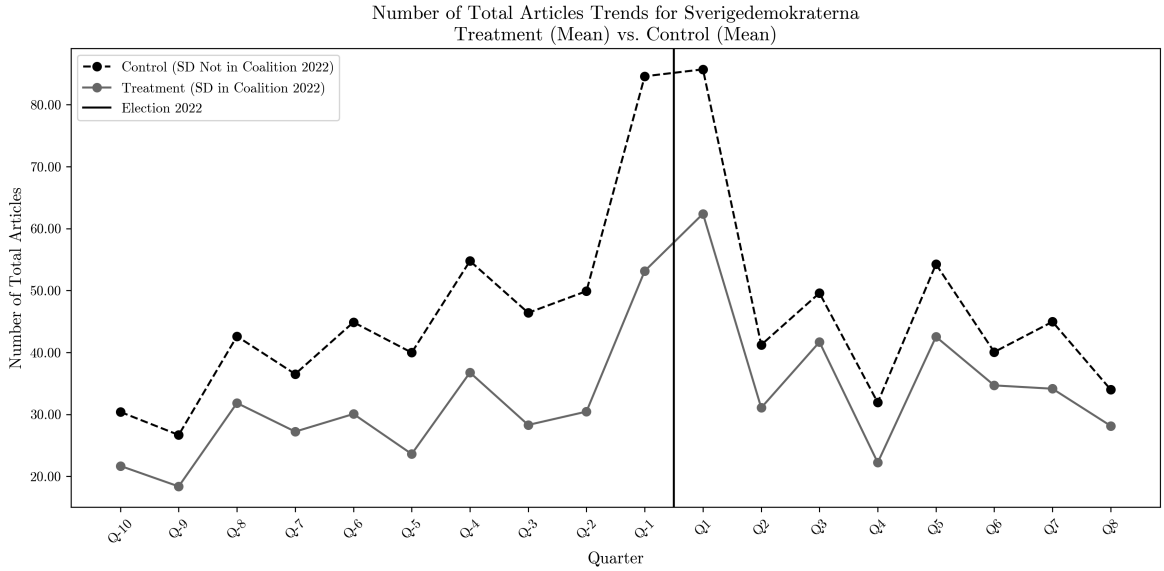


Figure 24: 2022 Election Mean Trend: $Total\ Articles_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

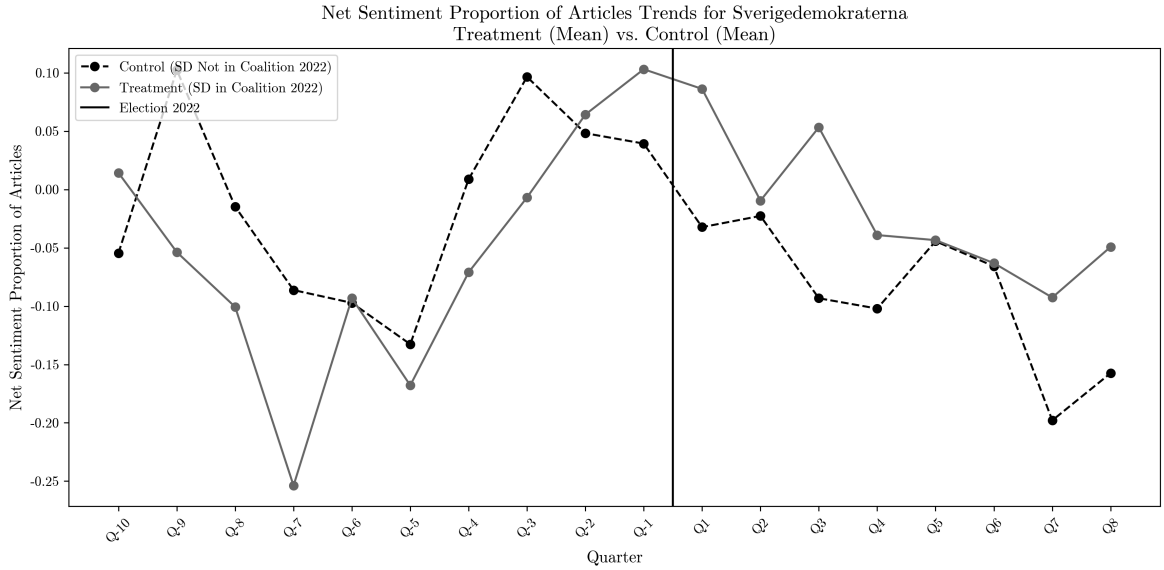


Figure 25: 2022 Election Mean Trend: $Net\ Sentiment\ Proportion_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

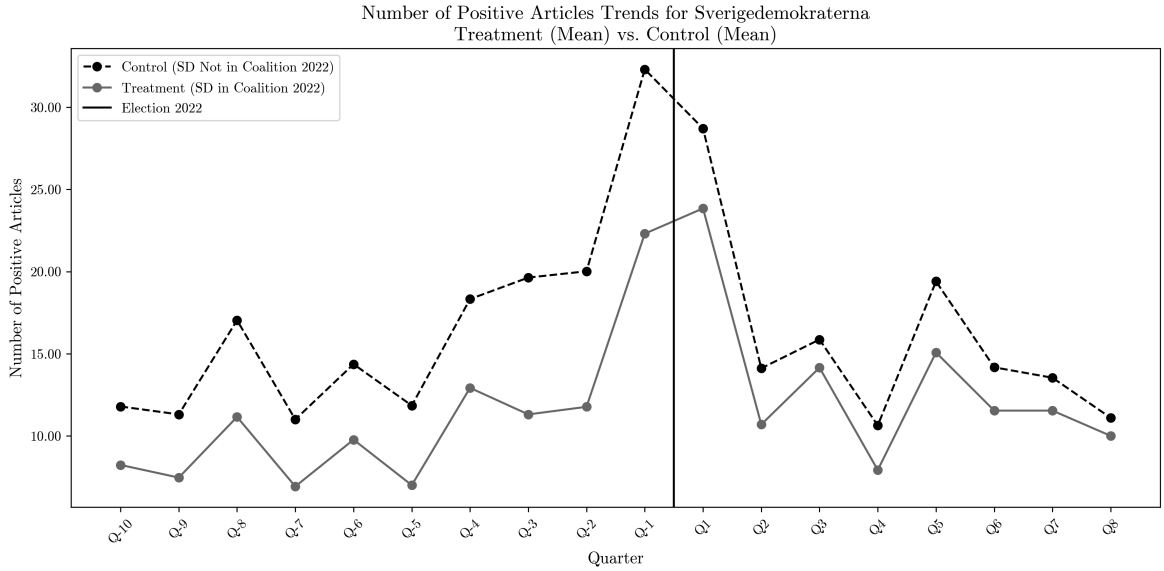


Figure 26: 2022 Election Mean Trend: *Positive Articles*$_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

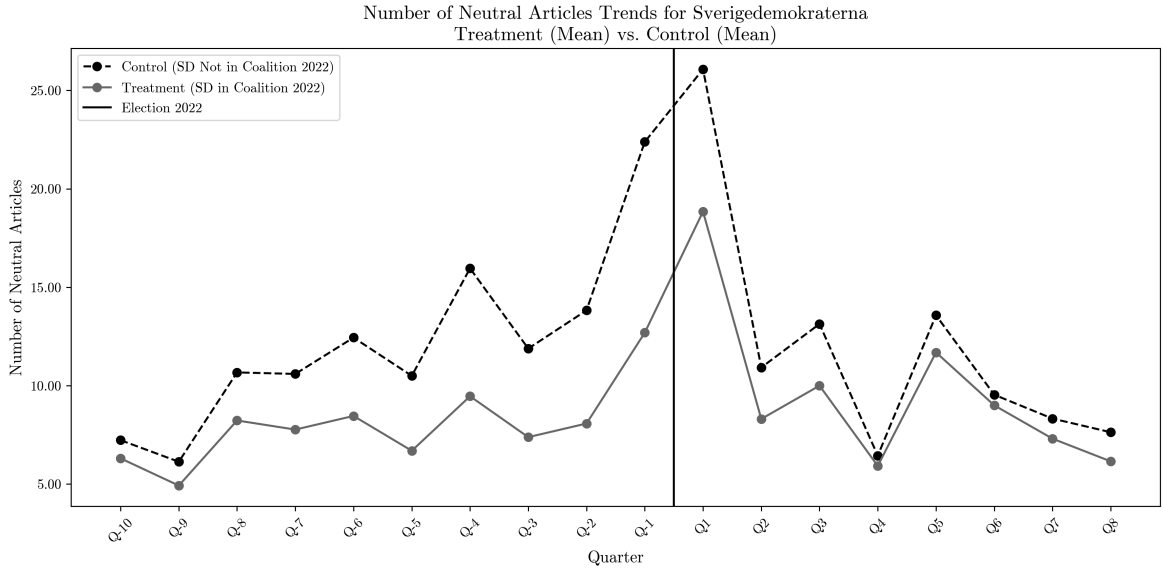


Figure 27: 2022 Election Mean Trend: *Neutral Articles*$_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

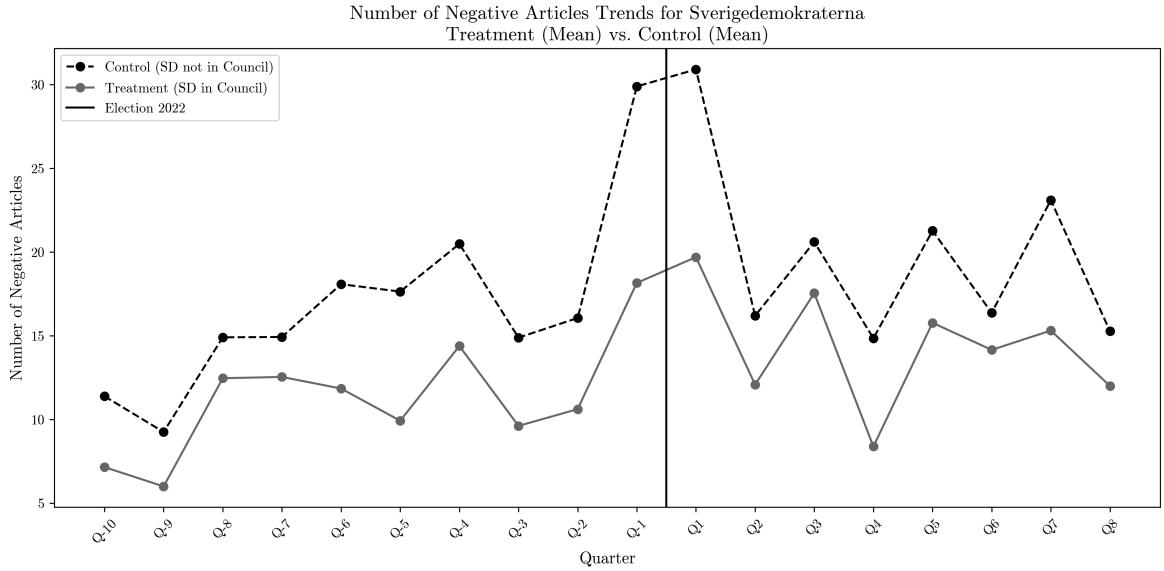


Figure 28: 2022 Election Mean Trend: *Negative Articles*$_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

Mean Plots, Treatment Increase Seats

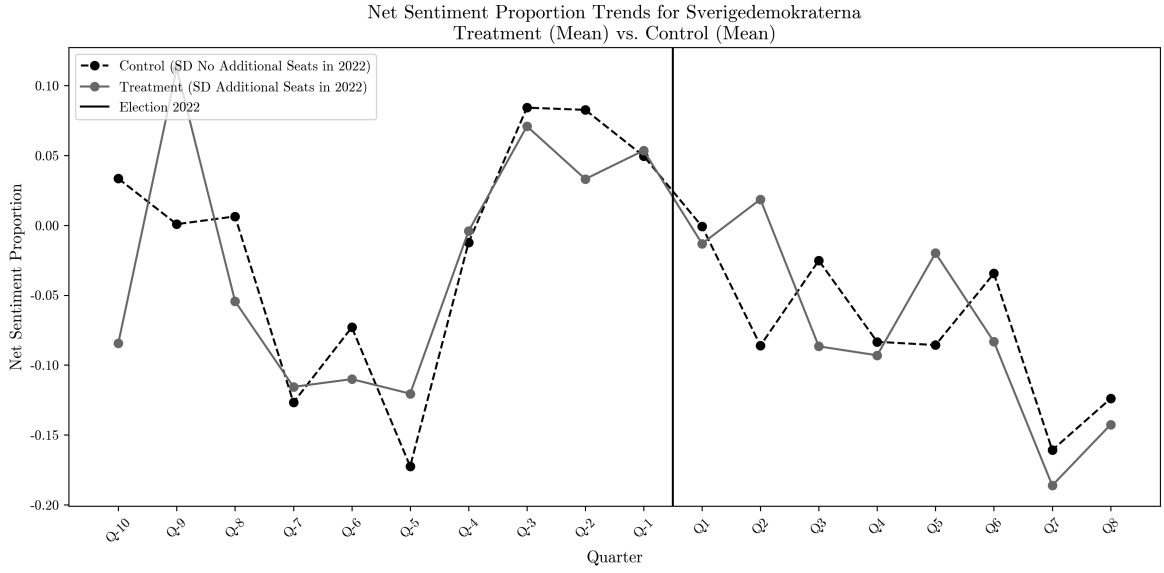


Figure 29: 2022 Election Mean Trend, Treatment Seat Increase: *Net Sentiment Proportion*$_{it}$
Net sentiment proportion trend for treatment (defined as municipalities where the SD gained more seats in 2022 compared to 2018) and control. Information about seat counts is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

Quarterly Mean Plots (Treatment Increase Seats More Than Mean)

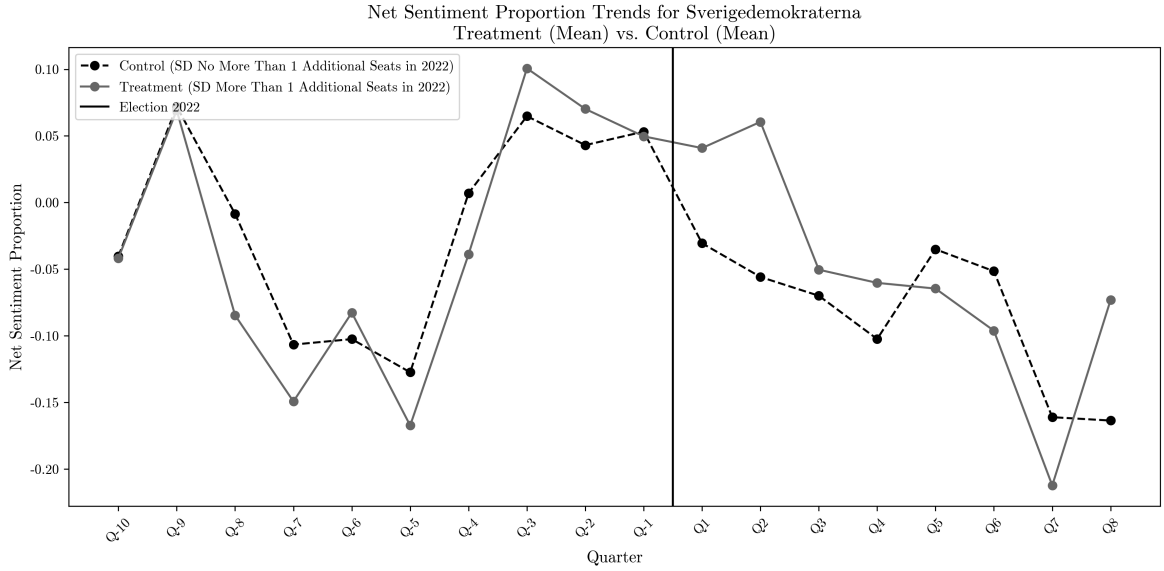


Figure 30: 2022 Election Mean Trend, Treatment Seat Increase More Than Mean Number: *Net Sentiment Proportion*$_{it}$

Net sentiment proportion trend for treatment (defined as municipalities where the SD gained more than one more seat in 2022 compared to 2018) and control. Information about seat counts is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

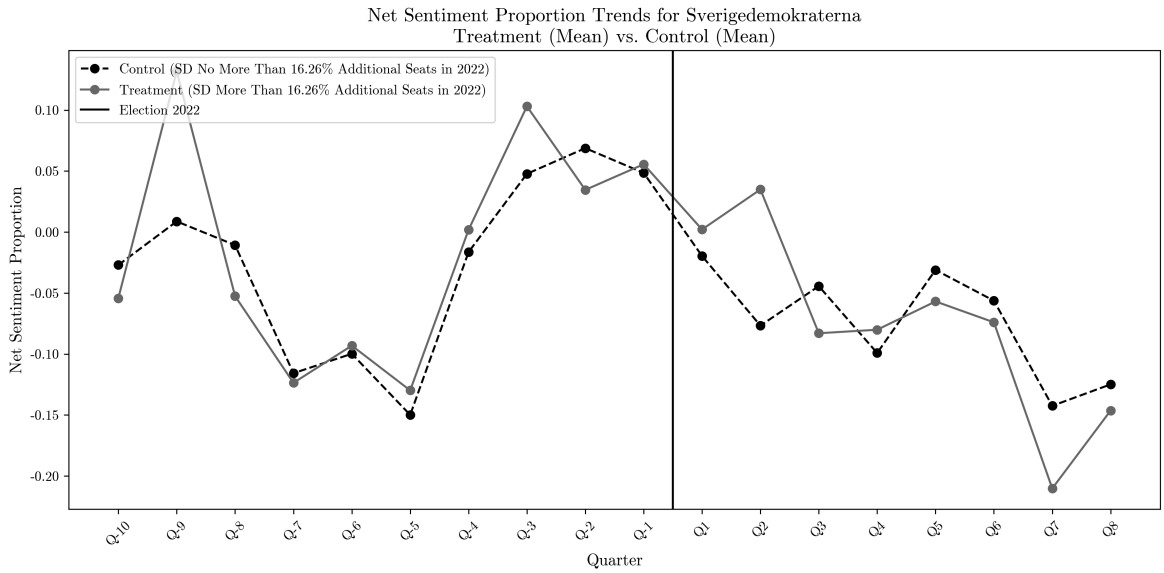


Figure 31: 2022 Election Mean Trend, Treatment Seat Increase More Than Mean Percentage: *Net Sentiment Proportion*$_{it}$
Net sentiment proportion trend for treatment (defined as municipalities where the SD gained more than 16.3% more seats in 2022 compared to 2018) and control. Information about seat counts is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

Event Study Plots

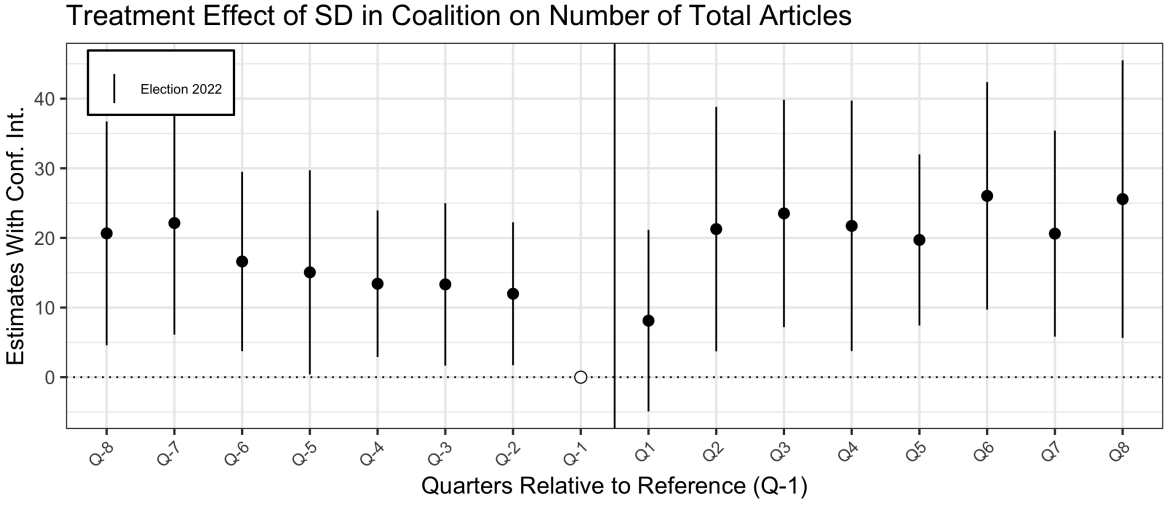


Figure 32: 2022 Election Event Study Plot: *Total Articles*$_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

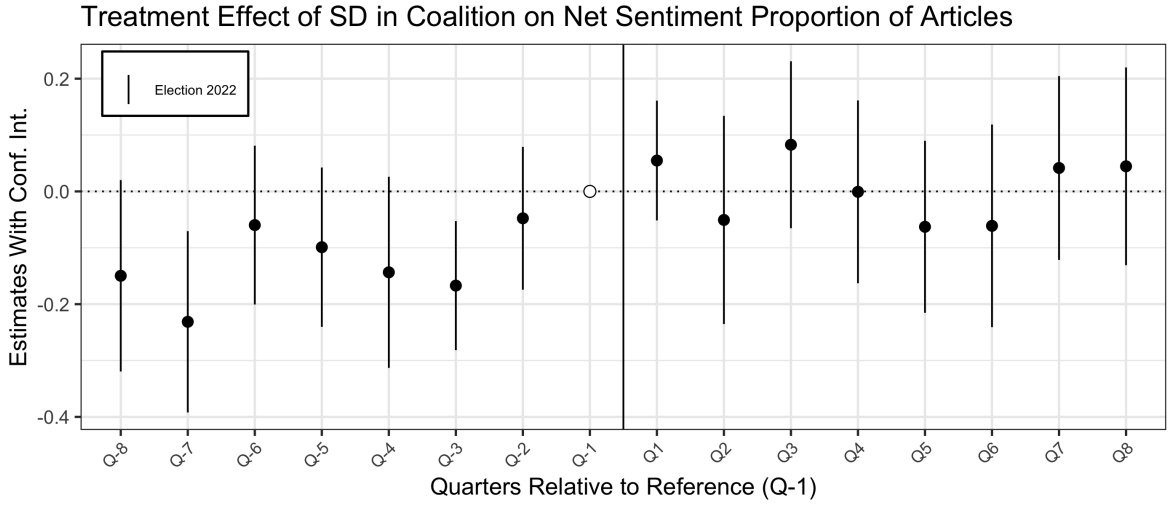


Figure 33: 2022 Election Event Study Plot: $Net\ Sentiment\ Proportion_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

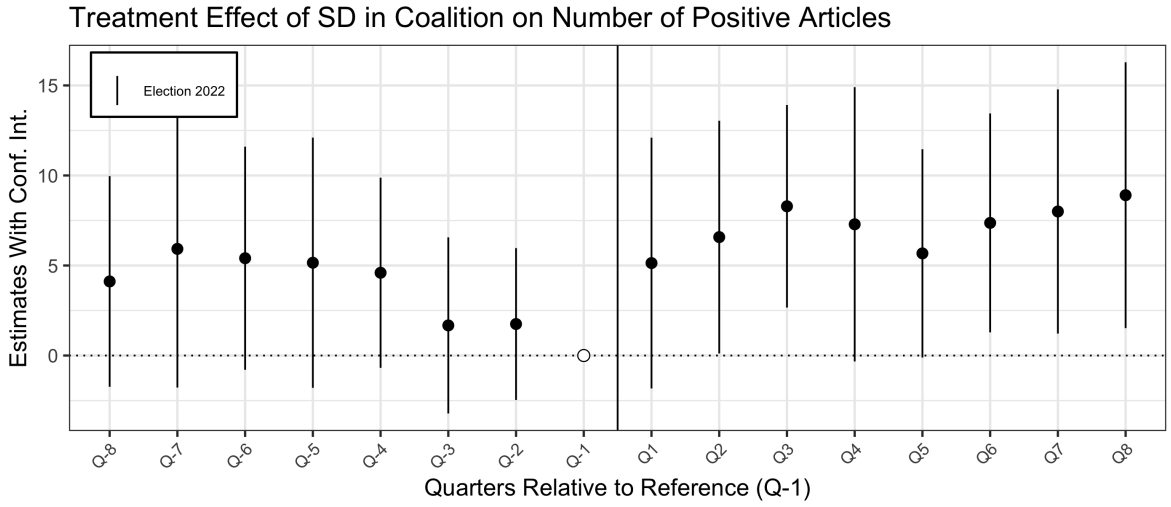


Figure 34: 2022 Election Event Study Plot: $Positive\ Articles_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

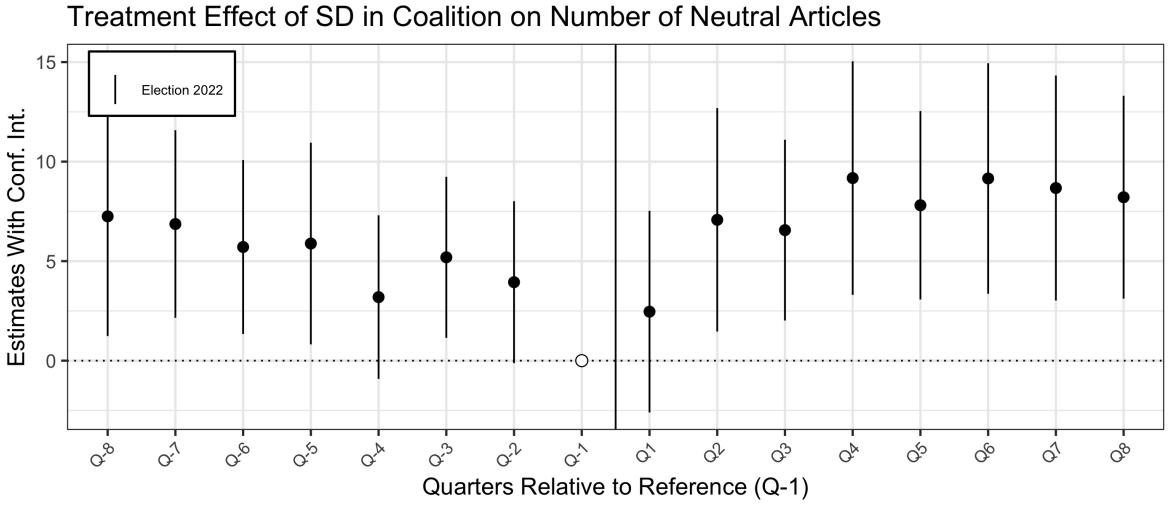


Figure 35: 2022 Election Event Study Plot: $Neutral\ Articles_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

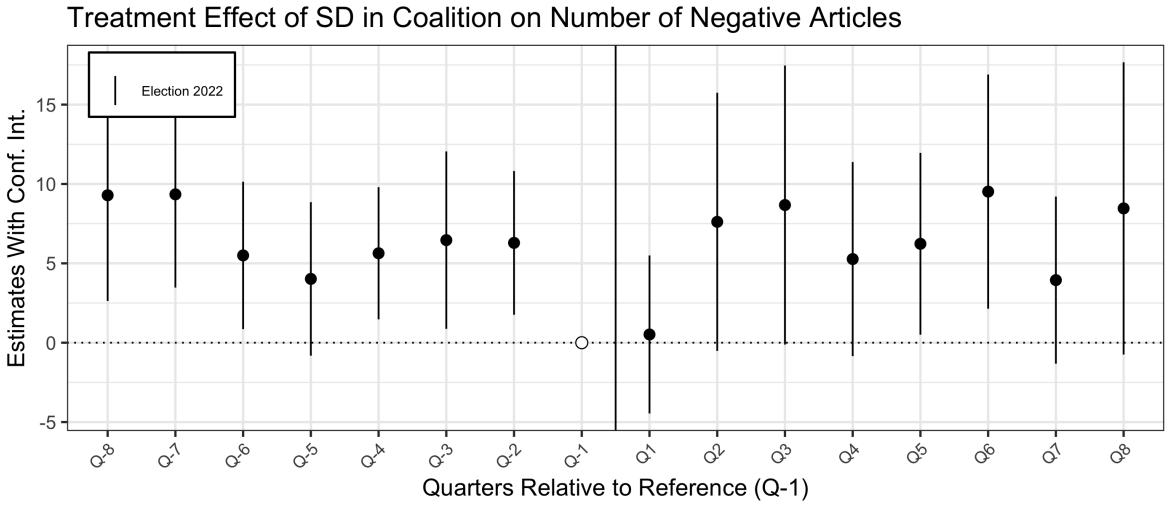


Figure 36: 2022 Election Event Study Plot: $Negative\ Articles_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

SDiD Plots

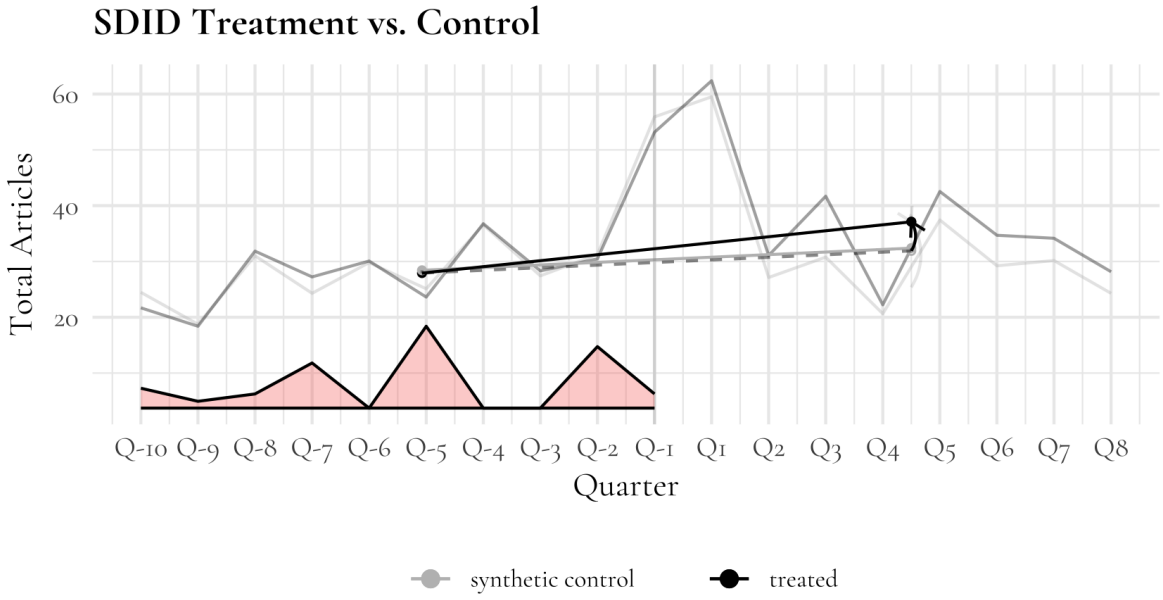


Figure 37: 2022 Election SDiD Plot: $Total\ Articles_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

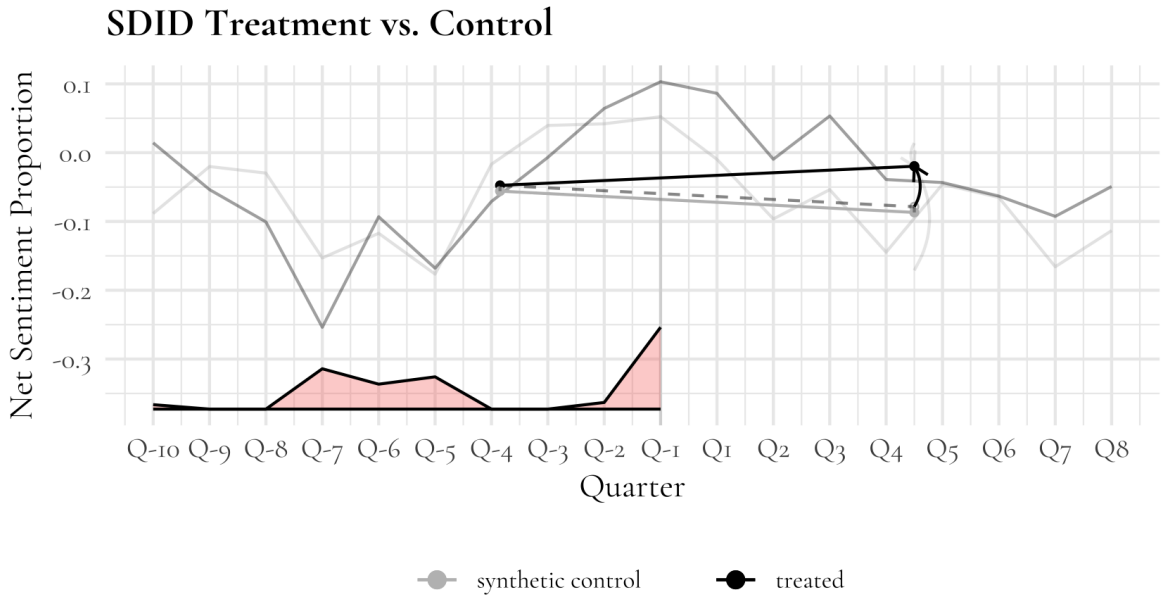


Figure 38: 2022 Election SDiD Plot: $Net\ Sentiment\ Proportion_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

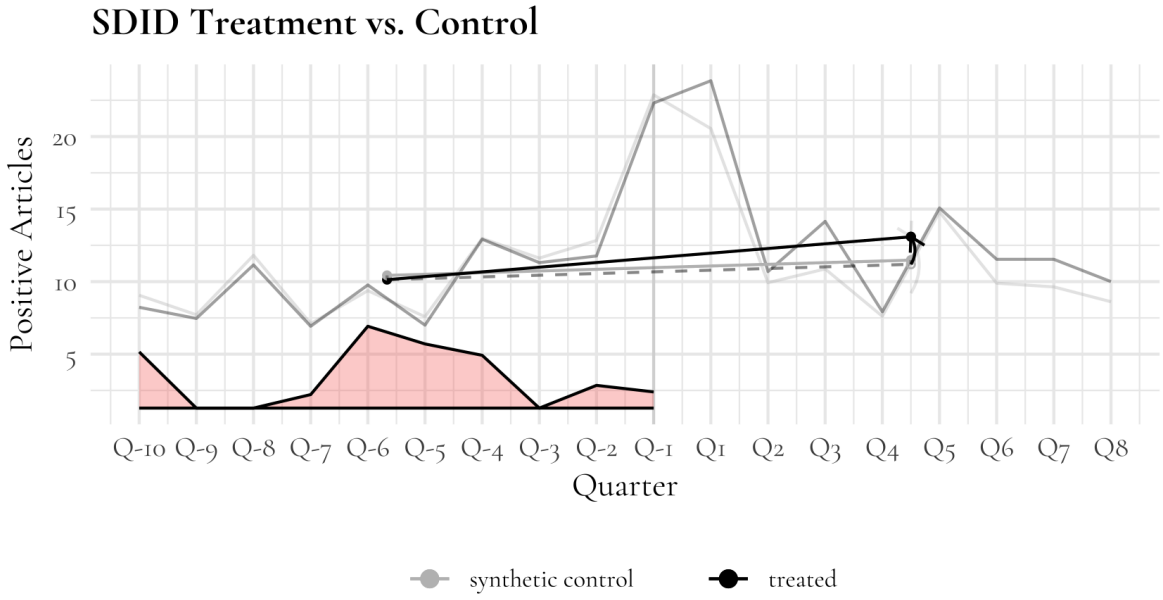


Figure 39: 2022 Election SDiD Plot: *Positive Articles*$_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

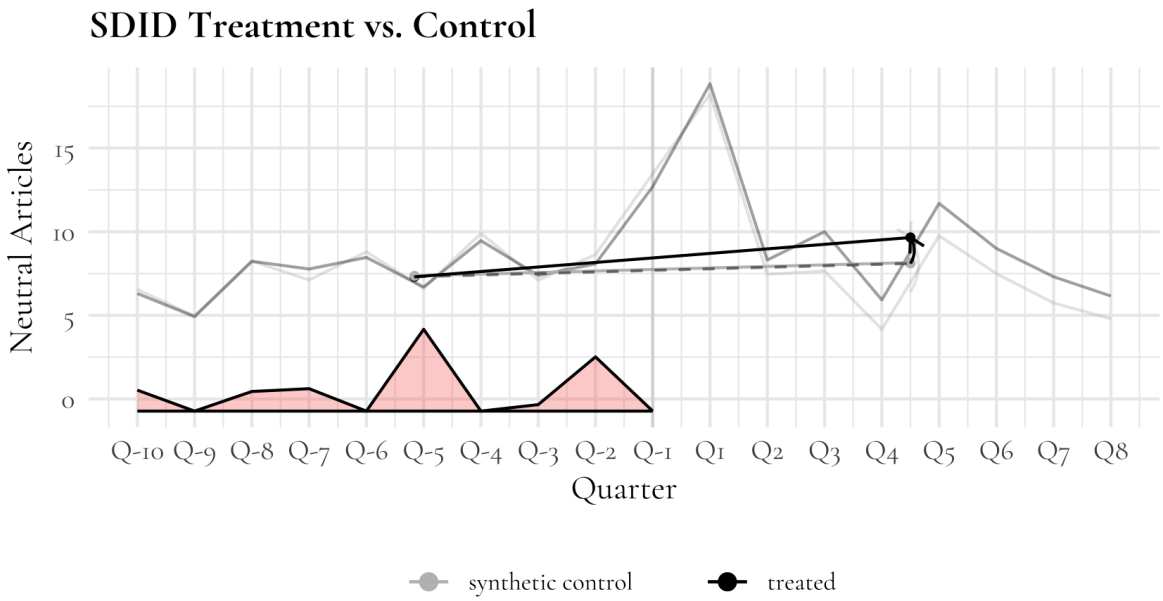


Figure 40: 2022 Election SDiD Plot: *Neutral Articles*$_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

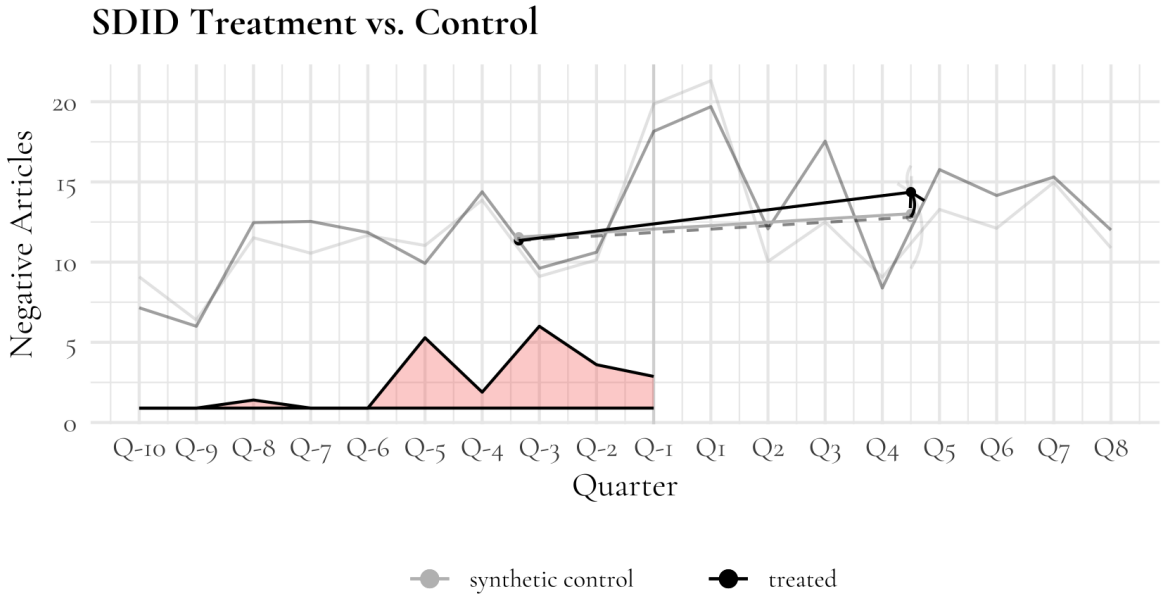


Figure 41: 2022 Election SDiD Plot: $Negative\ Articles_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

A.3.6 Figures for Study of the Troll Factory Scandal

Mean Plots

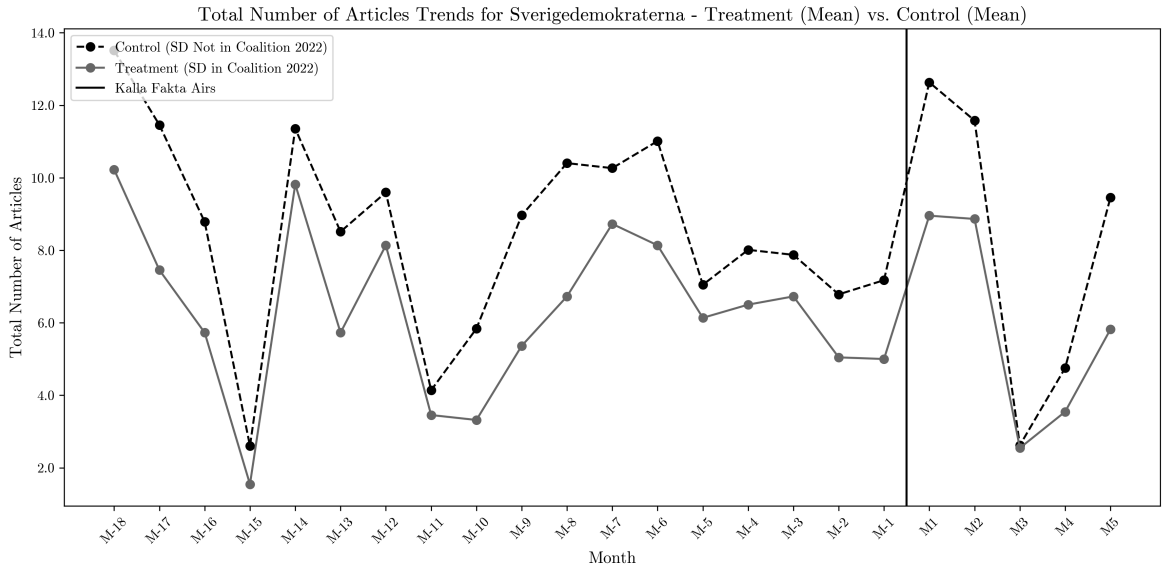


Figure 42: Troll Factory Scandal Mean Trend: $Total\ Articles_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

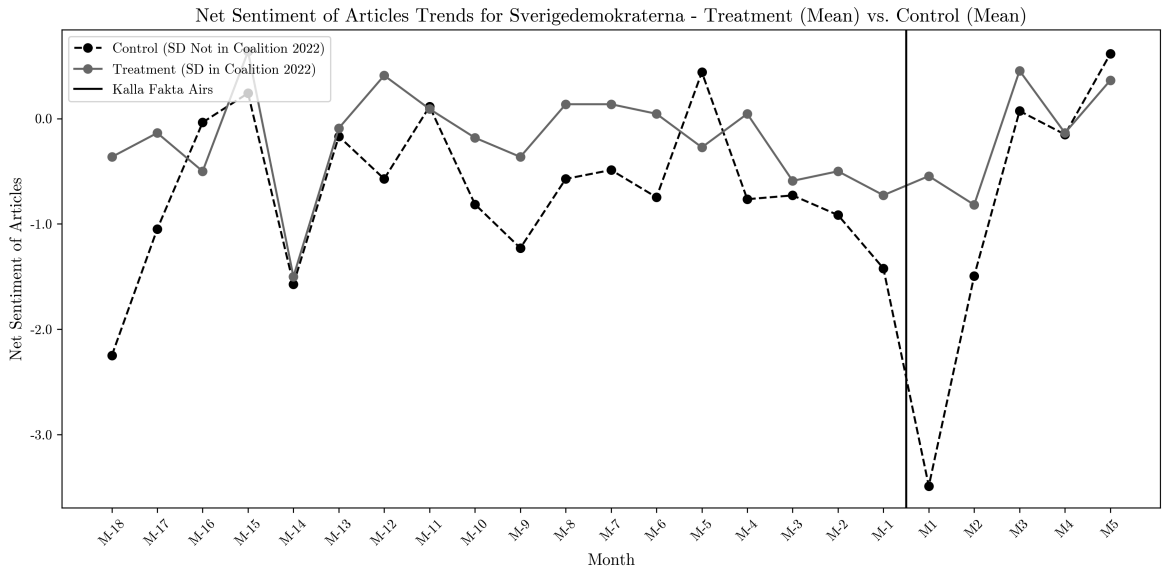


Figure 43: Troll Factory Scandal Mean Trend: *Net Sentiment Proportion*$_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

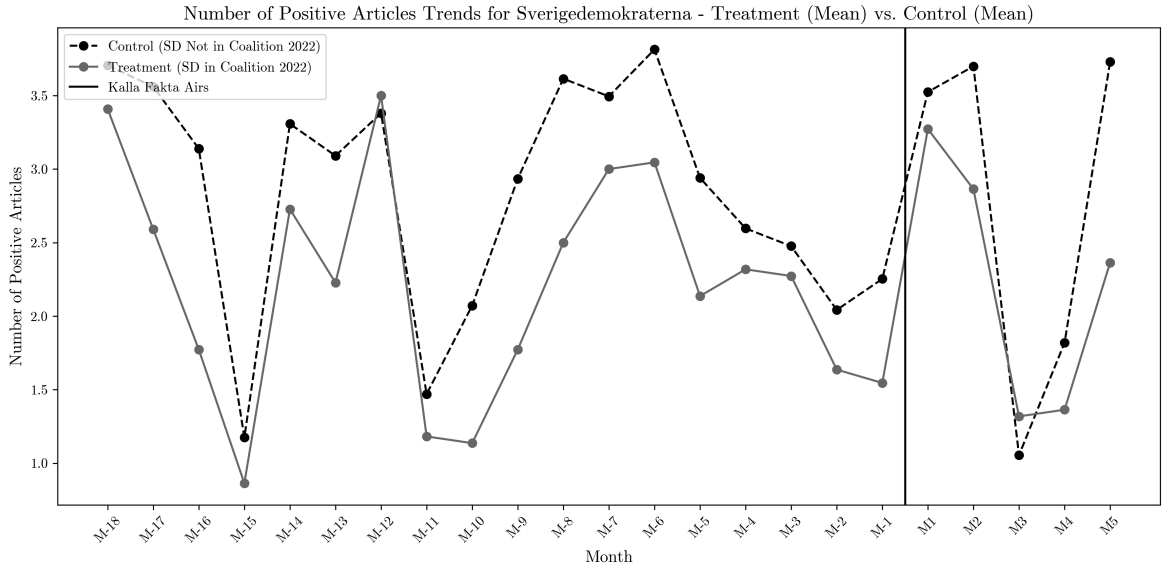


Figure 44: Troll Factory Scandal Mean Trend: *Positive Articles*$_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

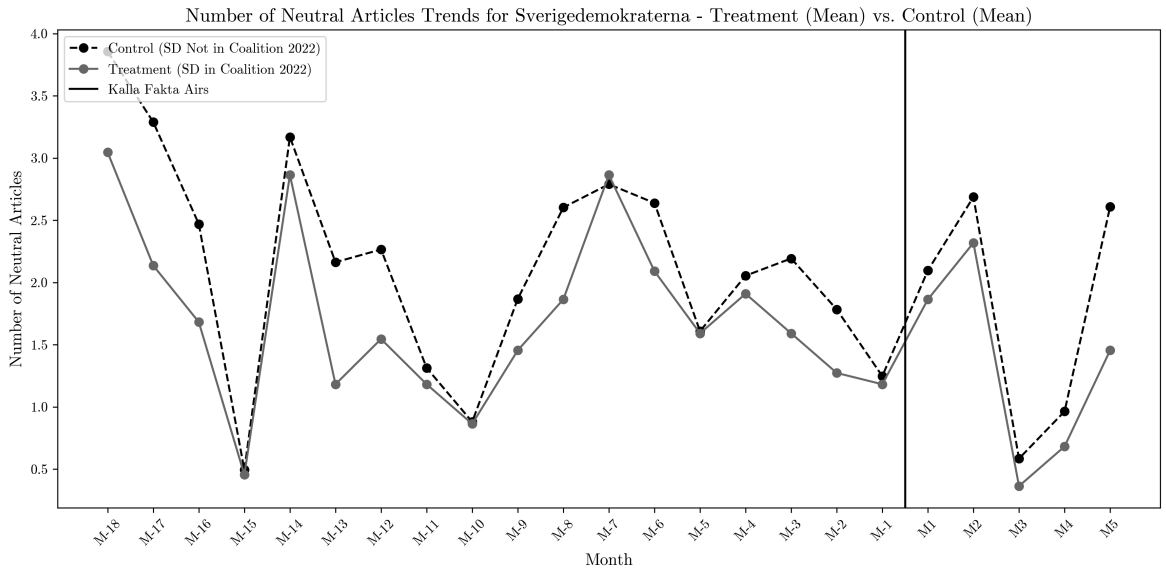


Figure 45: Troll Factory Scandal Mean Trend: $Neutral\ Articles_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

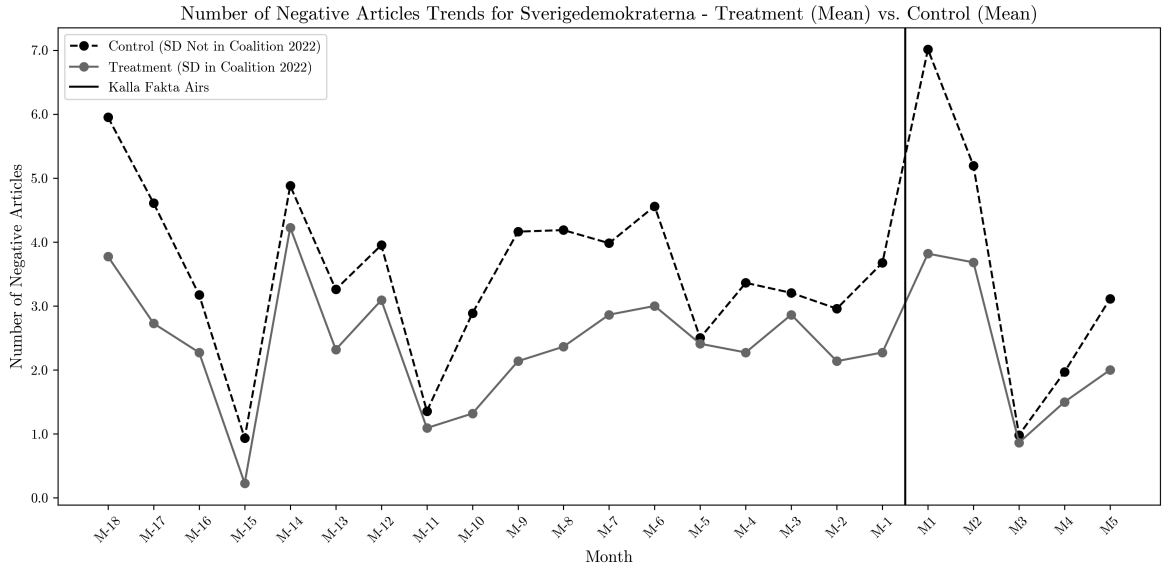


Figure 46: Troll Factory Scandal Mean Trend: $Negative\ Articles_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

Event Study Plots

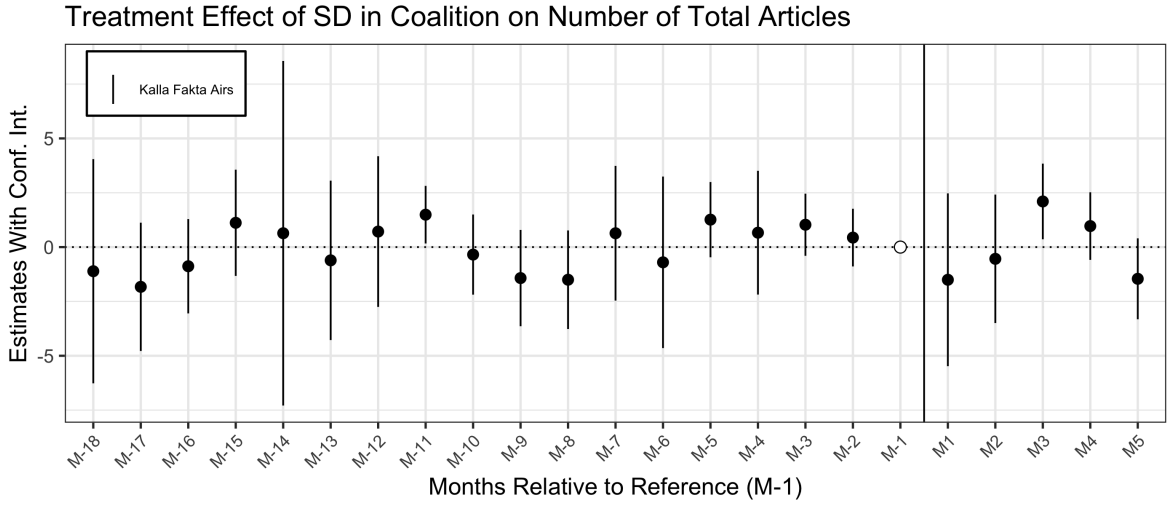


Figure 47: Troll Factory Scandal Event study plot: $Total\ Articles_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

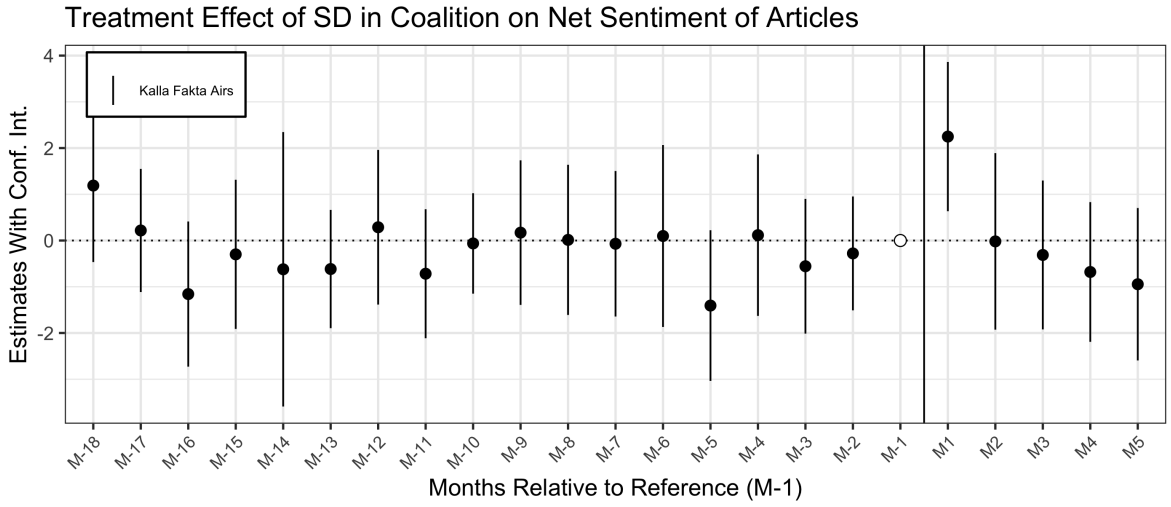


Figure 48: Troll Factory Scandal Event study plot: $Net\ Sentiment_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

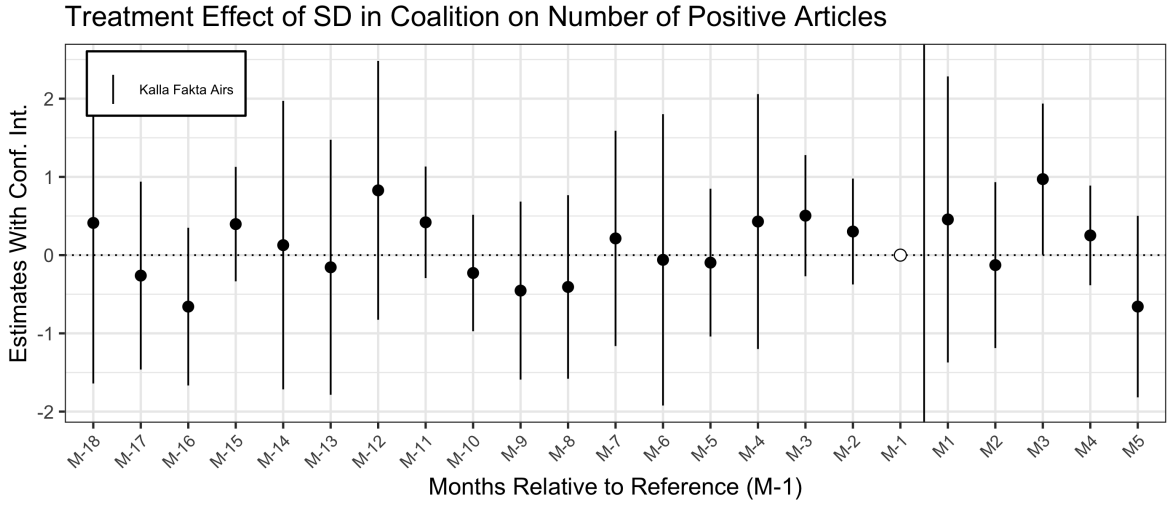


Figure 49: Troll Factory Scandal Event study plot: $Positive\ Articles_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

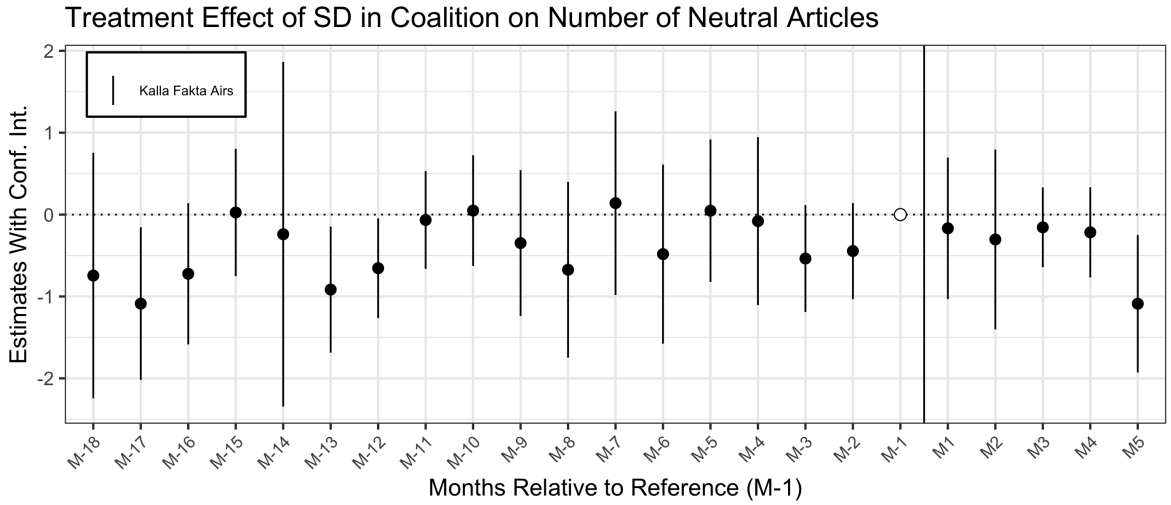


Figure 50: Troll Factory Scandal Event study plot: $Neutral\ Articles_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

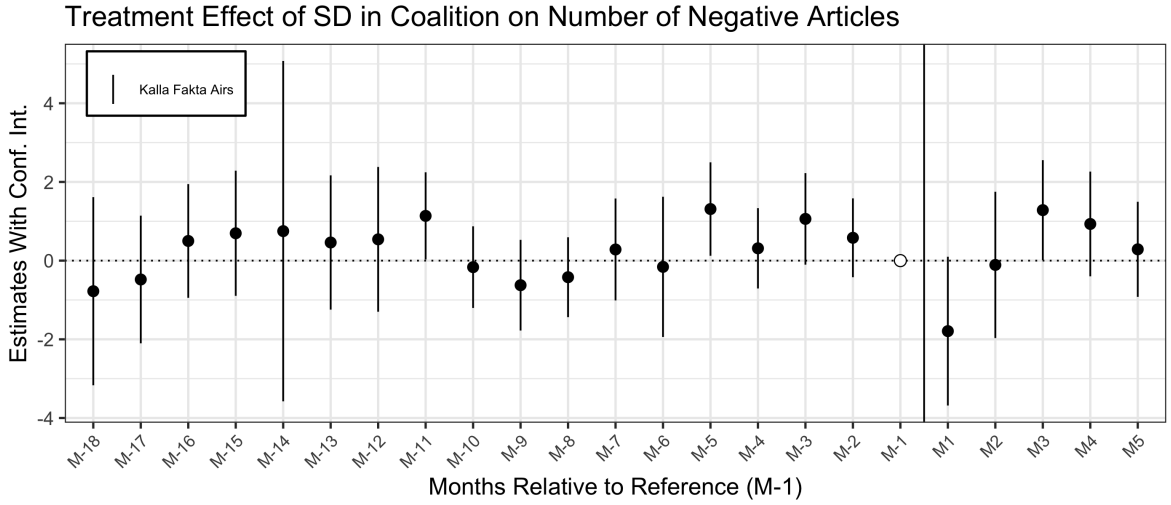


Figure 51: Troll Factory Scandal Event study plot: $Negative\ Articles_{it}$
Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

A.4 Tables

A.4.1 Summary Statistics

Table 5: Election 2022 Dataset, Summary Statistics for Control (SD in governing coalition) and Treatment Groups

Group	Variable	Count	Mean	Std	Min	25%	50%	Max
Control	Total Articles	936	46.582	49.848	1	13.00	27.00	403
	Net Sentiment Proportion	936	-0.045	0.260	-1	-0.167	-0.028	1
	Positive Articles	936	16.399	17.943	0	4.00	10.00	118
	Neutral Articles	936	12.072	13.740	0	3.00	7.00	114
	Negative Articles	936	18.112	19.860	0	5.00	11.00	171
Treatment	Total Articles	234	33.248	38.860	1	10.00	21.00	245
	Net Sentiment Proportion	234	-0.040	0.276	-1	-0.180	0.000	0.6
	Positive Articles	234	11.868	14.646	0	3.00	7.00	99
	Neutral Articles	234	8.735	9.800	0	3.00	6.00	62
	Negative Articles	234	12.645	15.762	0	3.00	7.00	115

Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

Table 6: Troll Factory Scandal Dataset, Summary Statistics for Control (SD in governing coalition) and Treatment Groups

Group	Variable	Count	Mean	Std	Min	25%	50%	75%	Max
Control	Total Articles	6308	9.928	15.967	0	0	3	13	174
	Net Sentiment Proportion	6308	-0.306	3.463	-44	-1	0	1	25
	Positive Articles	6308	3.509	5.917	0	0	1	4	66
	Neutral Articles	6308	2.605	4.488	0	0	1	3	50
	Negative Articles	6308	3.814	6.436	0	0	1	5	70
Treatment	Total Articles	836	6.860	12.911	0	0	2	8	120
	Net Sentiment Proportion	836	0.038	2.701	-30	0	0	1	18
	Positive Articles	836	2.539	4.905	0	0	0	3	44
	Neutral Articles	836	1.819	3.431	0	0	0	2	30
	Negative Articles	836	2.501	5.208	0	0	1	3	58

Information about governing coalitions is from SKR. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

A.4.2 TWFE DiD Regressions (Log and IHS Transformations of Dependent Variables)

Table 7: Effect of Entering Governing Coalition in 2022 on News Volume and Sentiment (Transformed Dependent Variables)

Dependent Variable	Treatment Effect
Log Total Articles	0.23
	(0.13)
IHS Positive Articles	0.40**
	(0.14)
IHS Neutral Articles	0.17
	(0.11)
IHS Negative Articles	0.02
	(0.17)

Significance levels: * $p < 0.05$, ** $p < 0.01$. $N = 1170$

Description: This table shows the regression estimates for the interaction term $POST\ Election_t \cdot SD\ In\ Coalition\ 2022_i$ using a TWFE DiD model. The dependent variables are log-transformed total articles, inverse hyperbolic sine (IHS) transformations of positive, neutral, and negative articles written about the SD. Standard errors are clustered at the municipality level. Information about governing coalitions taken from SKR, newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

Table 8: Effect of Entering Governing Coalition in 2022 on News Volume and Sentiment after a Political Scandal (Transformed Dependent Variables)

Dependent Variable	**Treatment Effect**
Log Total Articles	0.09
	(0.11)
IHS Net Sentiment	0.60*
	(0.29)
IHS Positive Articles	0.24
	(0.21)
IHS Neutral Articles	0.01
	(0.18)
IHS Negative Articles	-0.08
	(0.08)

Significance levels: * $p < 0.05$, ** $p < 0.01$ $N = 7144$

Description: This table shows the regression estimates for the interaction term $POST\ Scandal_t \cdot SD\ In\ Coalition\ 2022_i$ using a TWFE DiD model. The dependent variables are log-transformed total articles, inverse hyperbolic sine (IHS) transformations of net sentiment and positive, neutral, and negative articles written about the SD. Standard errors are clustered at the municipality level. Information about governing coalitions taken from SKR, newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

Table 9: Effect of Additional Seats in 2022 on News Volume and Sentiment

Dependent Variable	Treatment Effect
Total Articles	0.91
	(2.49)
Net Sentiment Proportion	0.01
	(0.04)
Positive Articles	0.69
	(0.88)
Neutral Articles	0.81
	(0.74)
Negative Articles	-0.59
	(1.48)
Significance levels: * $p < 0.05$, ** $p < 0.01$.	$N = 1170$

Description: This table shows the regression estimates for the interaction term $POST\ Election_t \cdot SD\ Additional\ Seats$ 2022 using a TWFE DiD model. The dependent variables are total articles, net sentiment proportion, and the count of positive, neutral, and negative articles. Standard errors are clustered at the municipality level. Data on seat shares is sourced from SCB. Newspaper articles are from Retriever Research and were analyzed using GPT-3.5 Turbo.

A.5 Topic Modeling

Building on the analysis of electoral performance and sentiment toward the SD in news media, it is important to examine how article content about the party changes over time. To ensure that any shifts in sentiment are not merely driven by coverage of the election, we reproduce our SDiD regression without articles discussing electoral performance and plot the topic weighted net sentiment over time. Our results indicate that coverage of the election explains a small part of the movement in sentiment associated with incumbency, with the impact of electoral reporting diminishing quickly post election. Running our standard SDiD regression with articles assigned to this topic excluded, yields similar results as when using the full sample. Importantly for the interpretation of our main results, coverage of the election does not hide a significant backlash effect.

Our Approach to Content Analysis An efficient approach to content analysis is topic modeling, which refers to statistical techniques to discovering underlying topics in texts. LDA (Latent Dirichlet Allocation) is a common and simple unsupervised method for topic modeling that has been used to understand content in political contexts (Grimmer and Stewart 2013). LDA conceptualizes words within articles as being generated through probabilistic sampling driven by unknown, underlying themes and has the benefit of avoiding the researcher's own bias (Hagen 2018).

After stemming, our primary dataset of 47,480 articles was analyzed by LDA, iterating over 5 - 20 topics. Since our goal was to be able to classify articles discussing electoral performance, 20 topics were chosen. This provided us with the largest sample of articles assigned to topic 6 (the topic consistently linked the most closely to electoral performance) with the most extreme electoral keyword density. Table 10 shows how many standard deviations

more extreme the electoral keyword density for topic 6 (Electoral Z-Score) is in comparison to the mean article for different values of number of topics. With number of topics set at 20, Table 11 shows the number of articles classified as most likely to belong to each topic with the corresponding topics' Electoral Z-Scores. Only topic 6 stands out as especially linked to electoral performance talk.

Table 10: Number of Articles and Electoral Z-Scores for Topic 6 Across Different Numbers of Topics

Number of Topics	**Articles (Topic 6)**	**Electoral Z-Score (Topic 6)**
5	12791	-0.28
6	9835	0.69
7	10204	0.66
8	8097	0.88
9	8713	0.78
10	8214	0.78
11	7704	0.85
12	6825	0.54
13	6784	0.84
14	6960	0.99
15	6773	0.81
16	6182	0.95
17	4570	1.32
18	4189	1.40
19	4961	1.09
20	4382	1.40

Newspaper articles are from Retriever Research.

Table 11: Number of Articles and Electoral Keyword Density Z-Scores by Topic

Topic	Articles	Electoral Z-Score
1	10403	0.04
2	3834	-0.22
3	6746	-0.32
4	34	-0.59
5	3093	-0.44
6	4382	1.40
7	483	-0.38
8	897	-0.43
9	740	0.16
10	5	0.09
11	1493	-0.41
12	4	0.08
13	10140	-0.14
14	2	-0.72
15	0	nan
16	2961	-0.05
17	2166	0.23
18	5	0.01
19	2	-0.72
20	90	-0.41

Newspaper articles are from Retriever Research.

To get a measure of electoral keyword density, we prompted ChatGPT-4o to create a keyword list of electoral performance related terms. After minor manual adjustments, we ended up with the following list:

Electoral Keywords: valvinst, valförlust, röster, mandat, majoritet, minoritet, koalition, valseger, valresultat, valkampanj, valkrets, väljare, partiledare, röstfördelning, röstning, valrörelse, röstningssiffror, valundersökning, valprognos, valdeltagande, partival, valanalys, valsystem, valsedel, valkampanjstrategi, valförberedelse, partiprogram, vallöfte, debatt, opinionsmätning, röststyrka, kommunfullmäktige, riksdagsval, kommunval, regionval, styrelsemajoritet, regeringsbildning, regeringskoalition, parlamentarisk, regeringsunderlag, minoritetsregering, valfusk.

Figure 52 shows the large overlap between the amount of topics that have been classified as topic 6 and that have above one standard deviation higher electoral keyword density than the mean article. Both articles assigned to topic 6 and articles with high electoral keyword density spike in number after the 2022 election, pointing in the direction of topic 6 being a good classifier of electoral performance talk. To make sure our main results are not solely due to election coverage, we present our plots and regression also on a sample with all articles classified as topic 6 removed.

To evaluate the importance of electoral performance talk in driving variations in news

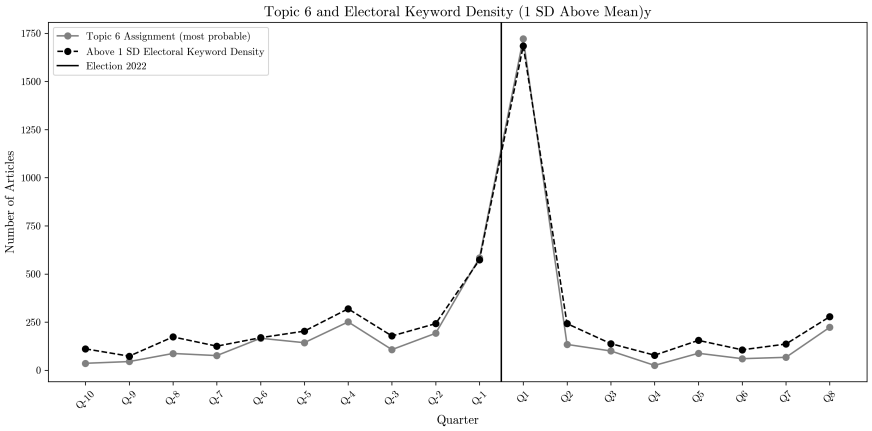


Figure 52: Distribution of Electoral Performance Articles
Distribution of number of articles assigned to topic 6, and number or articles with an electoral keyword density $>$ 1 standard deviation above the mean. Newspaper articles are from Retriever Research.

sentiment, we also construct a measure of weighted sentiment by topic. Net sentiment is defined as the difference between the number of positive and negative articles within a municipality for a given quarter. This net sentiment is then scaled by the proportion of articles associated with a specific topic in a given municipality and quarter. Aggregating these topic-weighted net sentiments across all municipalities for each quarter yields the overall topic-weighted net sentiment measure. Using quarters and municipalities as indices t and i, respectively, Equation 5 shows this measure.

$$\text{Weighted Net Sentiment by Topic}_t = \sum_i \text{Net Sentiment}_{it} \cdot \text{Topic Proportion}_{it} \tag{5}$$

To further evaluate the role of a given topic in shaping overall sentiment, we also computed the inverse topic-weighted net sentiment, defined in Equation 6. This measure captures net sentiment scaled by the proportion of articles not associated with the specific topic of interest.

$$\text{Weighted Net Sentiment by Inverse Topic}_t = \sum_i \text{Net Sentiment}_{it} \cdot (1 - \text{Topic Proportion}_{it}) \tag{6}$$

By plotting the electoral performance topic-weighted net sentiment, the inverse topic-weighted net sentiment, and their sum, we visually analyzed how important electoral performance discourse is in driving the overall sentiment dynamics over time relative to articles not associated with that topic.

Does Coverage of the 2022 Election Drive Our Results? Having established positive but insignificant estimates of the effect of governing on the net sentiment proportion, as well as the number of total, positive, neutral and negative articles written about the SD in our SDiD regression in section 6.1, the next question arises: is this lack of an effect

solely driven by our sentiment analysis model classifying articles about electoral successes in treatment municipalities as positive, while interpreting reports on electoral setbacks in control municipalities as negative? In other words, is there a possibility that support for a backlash effect is hidden by reporting about the election?

As our LDA analysis identified topic 6 as being closely linked to electoral performance related words, we report our SDiD regression without articles classified as discussing electoral performance. Table 12 shows that estimates of the effect of governing on all dependent variables in our limited sample shares the same general characteristics as the estimates on the full sample. All estimates are positive and insignificant. This indicates that electoral performance talk does not hide a significant negative effect of entering a governing coalition on the net sentiment proportion of articles covering the SD.

Table 12: Effect of Entering Governing Coalition in 2022 on News Volume and Sentiment (Electoral Performance Coverage Removed)

Dependent Variable	**Treatment Effect**
Total Articles	4.14
	(3.00)
Net Sentiment Proportion	0.06
	(0.05)
Positive Articles	1.85
	(0.99)
Neutral Articles	1.31
	(0.80)
Negative Articles	1.70
	(1.71)

Significance levels: * $p < 0.05$, ** $p < 0.01$.

Description: This table shows the SDiD regression estimates for the interaction term $POST\ Election_t \cdot SD\ In\ Coalition\ 2022_i$ on news volume and sentiment after removing articles focused on electoral performance. The dependent variables are the total number of articles, net sentiment proportion, and the number of positive, neutral, and negative articles about the SD. Standard errors are calculated using Jackknife variance estimation. The data on governing coalitions is sourced from SKR, and the news articles analyzed are from Retriever Research using GPT-3.5 Turbo for sentiment analysis.

To visualize the importance of electoral performance talk in driving sentiment over time we calculate the sum of all treatment and control municipalities' topic weighted and inverse topic weighted net sentiment for each quarter (according to equation 1 and 2) and display this in Figures 53 and 54. Figure 53 shows that, as we might expect, the electoral performance topic weighted net sentiment increases after the election in treatment municipalities. The reverse is shown for the control group in figure 54. Although talk about electoral performance explains part of the positive net sentiment for the treatment group, and the negative net sentiment for the control group, other topics are more important in explaining the divergence between treatment and control net sentiment, post election. Based on the trajectory of the electoral

performance topic weighted net sentiment we can see that after Q1, talk about electoral performance explains very little of variations in net sentiment.

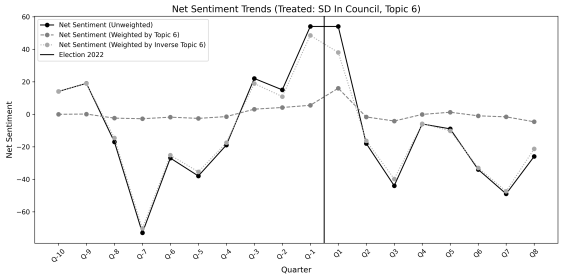


Figure 53: Topic Weighted Net Sentiment, Treatment
Trends for $Net\ Sentiment\ Proportion_{it}$; Unweighted vs. Weighted by Topic 6 vs. Weighted by Inverse Topic 6, Treatment group ($SD\ In\ Coalition\ 2022_i = 1$). Newspaper articles are from Retriever Research

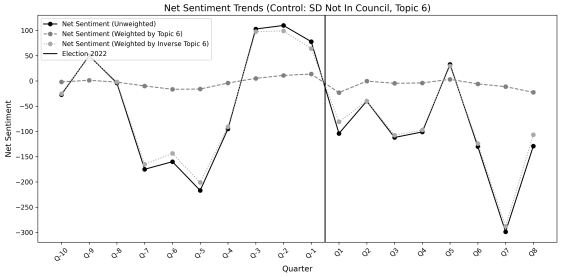


Figure 54: Topic Weighted Net Sentiment, Control
Trends for $Net\ Sentiment\ Proportion_{it}$; Unweighted vs. Weighted by Topic 6 vs. Weighted by Inverse Topic 6, Control group ($SD\ In\ Coalition\ 2022_i = 0$). Newspaper articles are from Retriever Research

The results of our limited sample SDiD regression and topic weighted net sentiment graphs indicate that electoral performance talk is not covering up a significant negative effect of entering a governing coalition on the net sentiment proportion of articles toward the SD. Therefore, our evidence against the presence of a backlash effect is robust to the exclusion of election coverage. Furthermore, as news reporting discussing electoral performance quickly diminishes in terms of number of articles and influence on the overall movement of net sentiment, it indicates that our results regarding the Troll Factory scandal also are likely to be robust to the exclusion of election related coverage.

A.6 AI-Disclosure

According to SSE guidelines for students on use of GenAI in thesis writing, students must submit an AI-appendix/AI-disclosure detailing its use. Below are the four questions the guidelines require us to answer, along with our responses.

1. **What AI tools have been used and how?** The used AI tools include GPT-3.5 Turbo for our ABSA, as detailed in section 5.1. and A.1, as well as ChatGPT 4o for generating key-word lists used in our LDA analysis (see section A.5), and to translate the newspaper article example we use in section A.2. Furthermore, ChatGPT-4o was used to help with coding, especially translating code between Python, STATA, and R, as we used methods and packages which required switching between these different coding languages, as well as formatting our thesis, including the main LaTex document, tables and figures.

2. I**n what ways have these tools contributed to increasing the quality of the thesis?** Our ABSA and LDA analyses would not have been possible without the use of generative AI tools. Furthermore, relying partly on ChatGPT for formatting allowed us

to focus on the more substantive parts of the analysis and written presentation of our thesis.

3. **What potential risks were found using AI and what measures were taken to reduce these risks?** For our sentiment analysis, it is important to note that it is more difficult to evaluate what the model does to arrive at a sentiment score, compared to lexicon-based models which are more transparent. While this concern regarding LLMs—that they are essentially black boxes—is difficult to mitigate, we base our choice of sentiment analysis model on previous literature and qualitative assessment of performance on our dataset. Moreover, when it comes to coding help, it is easy to assess whether code generated or translated by ChatGPT makes sense and produces the intended output.

4. **What are the insights gained from using AI tools in the thesis writing process?** Our main insight gained regards the practicalities of using LLM models for sentiment analysis. From a qualitative assessment, we find that GPT-3.5 Tubro was quite good at interpreting contextual cues when performing textual analysis.