

## **Who speaks and who is heard on Facebook? Political mobilization and engagement patterns of partisanship and gender in Switzerland's direct democracy**

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This descriptive study investigates political mobilization and user engagement patterns on Facebook and associated partisan and gender discrepancies. It focuses on Switzerland, where political actors frequently seek to mobilize and shape citizens' opinions before direct-democratic voting on wide-ranging policy issues. Using digital trace data from CrowdTangle, the analysis focuses on the posting frequency and received user interactions of 770 Swiss political actors' Facebook pages. The analysis period covers 20 months, from November 2019 to July 2021, during which five popular votes occurred, and the sampled FB pages published more than 226,000 posts and received more than 18,000,000 user interactions. A descriptive quantitative analysis and a multiple regression analysis revealed an overall skewed pattern: Mobilization and user engagement are driven by small subsets of highly active and interacted-with FB pages. A few FB pages of the right-wing Swiss People's Party and male politicians receive highly disproportionate user engagement – relative to more centrist parties and female politicians – but also relative to their electoral share in the national parliament. The results show that only a few dominant political voices are widely heard on Facebook, even if many

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speak. These insights are of interest beyond Switzerland, as Facebook and other social media platforms shape political discourse across liberal democracies.

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There was hope that the Internet and participatory digital media technologies such as social media platforms would democratize public discourse and “give new voice to people who’ve felt voiceless” (Gillmor 2004, xviii). Likewise, these technologies were expected to act as a “great equalizer” and help mitigate inequalities in the offline world, such as gender disparities in political participation and engagement (Brandtzaeg, 2017, p. 2). These hopes have turned out too optimistic. Often, offline inequalities have translated to digital inequalities: disadvantaged groups – the poor, the elderly, the undereducated, people with migration backgrounds, and those in rural areas – continue to lag in access to and use of digital media and web technologies (Lutz, 2019; NTIA, 2000, 2002; Bimber, 2000; Wilhelm, 2002). Even among prolific digital media users, inequalities persist. Hindman (2008) argued that it might be easy to speak. Still, it remains difficult to be heard on the Internet: “Those whose political voices have been amplified the most have been white, upper-middle-class, highly educated professionals” (p. 142).

In other words, the visibility in the digital public sphere tends to be highly skewed. It favors a few who get much attention at the cost of the many who remain largely unseen and unheard – even if the latter actively and regularly produce and publish digital media content. This study addresses this problem empirically in the context of political communication on Facebook – which remains the world’s most widely used social media platform, with more than 2.9 billion active monthly users as of December 2021 (Meta Platforms, Inc., 2022). Indeed, its large user base and technological features have made Facebook particularly appealing to political actors. As Tsichla et al. (2021) observed, “politicians realized the astounding potential of social media, which allows them to bypass

the media's gatekeeping function and control the message projected to the electorate, gain visibility, mobilize, engage, and nurture a two-way relationship with voters" (p. 2). Moreover, as Bossetta (2018) and Borah (2016) indicated, Facebook provides political actors sophisticated targeting options for their political messages.

The study analyzes Facebook's role in direct-democratic popular voting in Switzerland. Such votes, in which Swiss citizens can decide on a wide range of policy issues, occur up to four times a year and are accompanied by political campaigning and debates. Therefore, Swiss political actors, including politicians, parties, labor unions, lobby organizations, churches, and even government agencies, regularly seek to convince voters to accept or reject vote proposals. These campaigning and debates also occur on Facebook, where political actors actively maintain pages through which they publish posts that contain their political messages – activities that can be qualified as efforts to mobilize voters. FB users, in turn, who follow political actors' FB pages can then interact with these posts, notably by liking, sharing, and commenting on them – activities that can be characterized as audience engagement with political actors' mobilization efforts.

Consequently, the frequent direct-democratic campaigning and debating in Switzerland represent an ideal environment to understand better the interplay and discrepancies in political mobilization and corresponding audience engagement patterns on Facebook, considering that Facebook is an arena for political communication across liberal democracies. This study sheds light on who speaks and who gets heard in the Swiss political discourse on Facebook. It starts by providing insights into the particularities of the Swiss political system. It proceeds with a theoretical part in which the literature on political mobilization and engagement is reviewed – including the role of partisanship and gender. The methods section explains the sampling, variable construction, and empirical approach that combines quantitative description and multiple regression analysis. The analysis and results comprise three parts: The overarching mobilization and user engagement patterns among FB pages of all types of political actors. Second, the patterns among FB pages of a subset of political actors representing major political parties. Third, differences in

mobilization and engagement patterns among the FB pages of male and female politicians. These three parts of the analysis each seek to uncover who speaks how frequently on Facebook (measured through the number of FB posts) and who, in turn, gets heard most often by audiences (measured through user engagement). The paper concludes by discussing the results and suggesting promising directions for further development of this research.

### *The Swiss case*

The study's focus on Switzerland's direct democracy is insightful in several ways. First, it concerns a relatively small political system in a country with 8.6 million inhabitants in 2022. This scope has the advantage that the number of political actors who actively maintain FB pages with relevant numbers of followers is manageable and can be comprehensively analyzed. In other words, analyzing the posting activities and user engagement of all significant FB pages of Swiss political actors over extended periods is possible.

Second, Switzerland ranks high in Internet and social media usage. As of 2021, the country exhibits an Internet penetration rate of more than 93%, whereas more than 80% of the population are active social media users (Kemp, 2021). Unsurprisingly, Swiss citizens routinely use digital media to access news and information content (Fög, 2020). Facebook, Switzerland's third most visited website after Google and YouTube in 2021 (Alexa, 2021), plays a vital role in this context. Prominent Swiss politicians and all parties represented in the national parliament actively maintain FB pages through which they communicate and interact with the public.

Third, the Swiss political system exhibits a high frequency and wide range of topics on which direct-democratic voting occurs. Swiss voters are frequently – up to four times a year – called to vote on popular initiatives and referendums to decide on policy issues on both the national and regional (cantonal) levels. On voting days, which traditionally fall on

Sundays, several proposals are to be voted on. For example, on 27 September 2020, the Swiss voted on national policies regarding state-funded paternity leave, immigration, hunting, taxation, and the government procurement of combat aircraft. Such direct democratic votes occur in addition to national and regional elections, usually held every four years, similar to other Western democracies. In the run-up to direct democratic votes, Swiss political actors seek to mobilize support or opposition to voting proposals through campaigning activities. In addition to traditional political communication channels and public forums, notably political television talk shows, social media platforms such as Facebook and Twitter have emerged as crucial campaigning arenas for vote proposals (e.g., Lilleker et al., 2015).

These attributes of the Swiss political system make it a laboratory to study political communication on Facebook. While we have a sound knowledge of political communication in Switzerland in general and the role the traditional media plays in shaping the information flows (e.g., Hänggli, 2020; Bernhard, 2012), less is known about the role and effects of social media in this context. Therefore, there is a need to broaden the current understanding of political campaigning strategies on social media (Auter & Fine, 2018; Kreiss, 2016), with voters increasingly searching for political information online (Chadwick, 2013).

### **Theoretical background**

Two strands of the literature are relevant and combined for this study: On the one hand, research on political campaigning and mobilization, notably in the context of direct-democratic voting. On the other hand, literature on social media platforms' role in political campaigning and mobilization, notably their ability to help political actors draw attention to and increase user engagement with content related to specific political issues.

### *Mobilization and user engagement in political campaigns*

We start by taking an overall perspective on mobilization and user engagement. Campaigners decide on the intensity and timing when crafting their mobilization strategy on a channel (Kriesi et al., 2009; Hänggli, 2020). These mobilization activities of political actors are predominantly driven by votes and elections – notably by the institutionally-driven debates that precede them (Wolfsfeld, 1997; Lawrence, 2000; Livingston & Bennett, 2003).

Usually, in Switzerland, campaigning begins three months before voting day. The intensity of political actors' mobilization activities culminates in the last six to three weeks preceding the vote (Hänggli, 2020, p.165). The intensity of mobilization activities is generally higher the more contested the issue is and the closer the vote is expected.

Conversely, if political elites agree about given proposals across party lines, there is less or no campaigning occurring (Kriesi, 2005). In addition, the intensity of mobilization activities is constrained by the resources available. In the case of Facebook, we assume that this primarily amounts to human labor costs and time spent curating the FB pages of political actors.

Next, we discuss user engagement. We regard user engagement on Facebook as an outcome shaped by the combined agency of three interdependent actors. First, it depends on the agency of the political actors who create content and aim to generate as much attention as possible. Second, user engagement also depends on the agency of the users themselves. They decide which posts they want to interact with among all the content appearing in their personalized Facebook news feeds. Third, user engagement outcomes are also affected by the agency of a non-human algorithmic actor: the FB News Feed. While the News Feed works automatically, it is essential not to forget that it executes what Facebook's engineers have programmed it to do: act as the central algorithmically driven hub that steers the flow of information on Facebook. Through its working logic, content

becomes visible to users – in a personalized way shaped by users’ previous browsing behavior and their connections to friends and FB pages they follow (Wallace, 2018). However, because user attention is limited, the News Feed acts as an “informational bottleneck” (Tandoc & Maitra, 2018, p. 1681) that selectively assigns higher visibility to some content at the expense of other content. By content, we specifically mean FB posts published by FB pages. Indeed, content selection on Facebook is shaped by user preferences, news gatekeeping processes, and the dynamics of platforms (Van Dijck et al., 2018).

Consequently, Facebook actively shapes the flow of information through the structure and working logic of the algorithmic system and the design of interaction possibilities that governs its platform. However, Facebook has conceived itself as an intermediary actor (Jarren, 2021) and has an economic orientation (Napoli & Caplan, 2017). It neither fulfills journalistic tasks nor norms, such as balancing the different degrees of activity and providing a balanced flow of information. It also has no anticipation effect on the part of political actors, which benefits the quality of the discourse (Hänggli, 2020, p. 139). As a result, the interaction might result in a skewed user engagement pattern in which only very few actors receive disproportionately high levels of attention which would clash with values prevalent in Switzerland, like power-sharing and that no winner should take all (Linder & Mueller, 2017). Decisions are considered legitimate if they are reached through collegial decision-making, bargaining, and compromise (Lijphart, 1999). This requires a flow of information in which no winner takes it all, but all involved parties are heard on similar or proportional terms. Based on these insights, we propose a first research question and corresponding hypotheses:

RQ1: What general patterns emerge from political actors’ posting activities (mobilization efforts) and the number of user interactions (engagement) on Facebook?

H1a: The posting frequency and the number of user interactions of political actors' Facebook pages increase considerably before and during voting events.

H1b: The posting frequency and the number of user interactions are unequally distributed among political actors' Facebook pages.

### ***Partisanship in mobilization and user engagement***

In the next step, we look at the role of the party affiliation of political actors. Previous research has demonstrated that parties across the political spectrum use communication channels differently. Their campaign strategies depend on resources. In Switzerland, left-wing parties have traditionally relied more on volunteering, whereas right-wing parties have typically had more access to financial resources (Bernhard, 2012, pp. 96-98). Alternatively, one can rely on the help of supporters (via posts and sharing messages; hashtags remain largely ineffective for increasing reach on Facebook) to boost attention (Bossetta, 2018, p. 487).

Social media platforms such as Facebook, search engines, and user-generated content portals can be qualified as intermediated channels. They enable content but do not create original content (Jarren, 2021). Hence, they guarantee political campaigns control over the content of the message to a large extent (Hänggli, 2020, p. 32) – apart from content moderation for illegal content, content selection via user preferences, news gatekeeping processes, and the dynamics of platforms (Van Dijck et al., 2018).

Notably, no traditional media organizations and journalists act as gatekeepers on social media by choosing and framing political actors' public messages. In Norris et al.'s (1999) terms, inter- and unmediated channels offer political actors the opportunity to use their "ideal message." These affordances attract populist political actors, who maintain anti-elitist views and, therefore, prefer such direct contact with "the people" – something



social media facilitates. According to Mudde (2004), populism refers to an ideology that considers society to be ultimately separated into two homogenous 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. (p. 543)

The Swiss People’s Party (SVP) has been characterized as a populist party (Ernst et al., 2016; Bernhard, 2017) (besides the regional Ticino League (Lega) and the Geneva Citizens’ Movement). This study will investigate whether the FB pages of the SVP and its politicians make particular use of Facebook’s intermediated channel.

For the political actors and the quality of the opinion formation process, it is relevant how often political messages are distributed. Thus, we also address user engagement. In the flow of information through traditional news media, it is well known that the response in the media depends proportionally on the input of political actors, formal competencies, the strength of a party in the parliament, the official role of a politician, or their power and prominence (Sigal, 1973; Gans, 2004; Wolfsfeld, 1997; Bonfadelli, 2000; Kamber & Imhof, 2005; Tresch, 2009; Hänggli, 2020, p. 141; Hänggli, 2012; Hänggli, 2019, p. 196). Prominent actors, which in the Swiss case is especially the government, namely the seven members of the Swiss Federal Council, typically receive a disproportionate amount of attention (Hänggli, 2012). Furthermore, journalistic norms like balancing out the messages of both left and right political camps shape public debates in traditional media settings. Nevertheless, the flow of information on social media works differently.

Facebook, which considers itself a tech platform, not a media company, is primarily economically interested (Napoli & Caplan, 2017). Its primary business model that guides its algorithmic system’s design and working logic is to sell advertisements. Facebook notably aims to “increase the number of regular users and the time that they spend on the platforms – to increase engagement” (Napoli, 2019, p. 36). To hook and hold user attention, Facebook’s news feed algorithms assign higher visibility to information for which they

predict higher levels of engagement – for each user individually. Facebook engineers are thought to value “friend relationships, explicitly expressed user interests, prior user engagement, implicitly expressed user preferences, post age, platform priorities, page relationships, negatively expressed preferences, and content quality” in the algorithm (De Vito, 2017, p. 766). The resulting personalized content stream in users’ news feeds is thus optimized to their interests and preferences. Conversely, content with lower predicted engagement levels gets algorithmically downranked in its audience reach – irrespective of civic or political importance.

Previous research found that negative, controversial, and polarizing content gets higher visibility on Facebook, likely because of its ability to trigger higher levels of user engagement. Indeed, conflict and controversy seem to elicit Facebook users to share and interact with posts (García-Perdomo et al., 2018). Heiss, Schmuck, and Matthes (2019) and Aarøe et al. (2022) found that negative sentiment in politicians’ Facebook posts increased interaction. Klinger, Koc-Michalska, and Russmann (2022) noted that negative, exaggerated, and sensationalized content increases interaction. Similarly, in a study that analyzed the FB pages of the six largest parties in Germany and Austria before the national elections in 2017, Blassnig et al. (2021) found that parties’ core issues, identity issues, and positive and negative emotions increase interaction rates. In other words, posts from more extreme, nationalist, and populist parties tend to elicit higher proportions of (emotional) reactions (see also, e.g., Muraoka et al., 2021; Blassnig & Wirz, 2019; Muraoka et al., 2021). This results in higher visibility of more “extreme” content (e.g., Kim & Kim, 2019; Kligler-Vilenchik, Baden & Yarchi, 2020; Tucker et al., 2018). Hopster (2021) observed mutual affordances between social media and populism.

Our study seeks to answer whether populists and parties from the poles of the political spectrum get more interactions than those from more centrist parties. Thus, our second research question and corresponding hypothesis read:

RQ2: What patterns emerge from partisan political actors' posting activities (mobilization efforts) and user interactions (engagement) on Facebook?

H2: The posting frequency and the number of user interactions are unequally distributed among partisan actors' Facebook pages.

### ***Gender in mobilization and user engagement***

Does it matter whether a political actor on Facebook is a male or female politician? Previous research suggests that examining gender-role differences on Facebook in political campaigns is under-explored (McGregor & Mourao, 2016; Yarchi & Samuel-Azran, 2018). A systematic literature review study concluded that men generally were more likely to express their political opinions on social media (Lutz et al., 2014). Another study showed that women were more inclined to respond to public messages and like content (Joiner et al., 2014). A study by Facebook showed that men tended to share more political content, whereas women posted more frequently about personal issues, such as family matters (Wang et al., 2013). On the user side, research showed that men were more likely to use social media to form new relationships, whereas women tended to focus more on maintaining existing ones (Muscanell and Guadagno. 2012). Thus, we formulate our third research question and hypothesis.

RQ3: What patterns emerge from male and female politicians' posting activities (mobilization efforts) and user interactions (engagement) on Facebook?

H3: The posting frequency and the number of user interactions are unequally distributed among female and male political actors' Facebook pages.

### **Empirical approach**

The empirical approach of this study can be characterized as an exploratory quantitative description using digital trace data from Facebook. It is exploratory because it does not test preconceived hypotheses but examines the data first to identify and make sense of patterns. The approach is descriptive because it seeks to understand the structure and composition of the Swiss political field on Facebook in the context of direct-democratic votes. In other words, the aim is to map the political mobilization and engagement patterns among Swiss political actors and Facebook users.

### ***Data source and sampling***

The study maps the Swiss political field on Facebook using large-scale digital trace data collected through CrowdTangle, a social media analytics tool owned and operated by Meta, Facebook's parent company (Shiffman, 2021). CrowdTangle is a browser-based analytics software that allows users to track public content from pages and posts on Facebook and Instagram. It had been initially designed for commercial social media content creators, such as news publishers and brands. With CrowdTangle, content creators could monitor what FB posts and pages were popular with users and how their content and pages performed against the competition, notably regarding social media interactions such as shares, reactions, and comments.

Since 2019, CrowdTangle has been accessible to researchers and journalists for non-commercial research purposes. It is currently unknown how long this transparency will be upheld. While CrowdTangle usage has since been free, academics must pass an application procedure to explain their intended data use cases in specific research projects. Moreover, researchers cannot independently verify the completeness and quality of the data provided. This means that researchers must trust Facebook that the provided raw data adequately represents what is happening on the social media platform.

Nevertheless, despite these limitations, CrowdTangle represents an unprecedented opportunity for researchers to access vast amounts of otherwise inaccessible historical Facebook data.

At the technical level, CrowdTangle allows researchers to download historical data of either FB pages (metadata) or FB posts (content data) via API or CSV downloads. In the current study, we used FB page metadata, meaning that our units of analysis are FB pages. Specifically, we analyze a data table with FB pages as rows (cases) and a range of metrics – such as the number of published posts and shares – as columns. Using such metadata, we constructed a quantitative sample of 770 FB pages operated by Swiss political actors.

Our sampling strategy aimed to collect data from all Swiss political actors with relevant activity on Facebook. To be included in the sample, FB pages had to be operated by Switzerland-based actors with a core political mission in Switzerland. We purposefully used such a broad definition of political actors. To find relevant FB pages, we systematically searched Facebook for political parties and politicians with active or past mandates at the national and regional levels in Switzerland. We also included FB pages of other political organizations, such as campaign committees, lobby organizations, labor unions, citizen's interest groups, professional associations, and politically active NGOs.

To find relevant political actors that belong to these categories, we used official lists of parliamentary parties, politicians, and accredited lobby organizations published on the Swiss government website. We then used Facebook's internal search to find the FB pages of these actors. Moreover, we also checked political actors' websites for links to their FB pages in cases where FB's search did not yield results.

We also consulted Facebook's internal classification of pages as "politician," "political organization," and "political party" – although these self-reported categories seem inaccurate for some FB pages. Therefore, in doubtful cases, we used our judgment to

decide whether a page belonged to an actor with a core political purpose or not. For example, we excluded the FB pages of actors associated with the political field but did not pursue a core political purpose, such as news organizations that report and comment on politics. We also excluded the FB pages of Swiss-based humanitarian NGOs that primarily operate abroad and whose English-language websites are directed toward an international audience of donors. In contrast, the FB page of another Swiss-based NGO, Alliance Sud, was included because this organization has been involved in lobbying activities in the Swiss parliament.

Moreover, to be included in the sample, FB pages had to have minimal relevancy on Facebook. We assured this with the following thresholds: First, they had to have at least 1,000 followers as of July 2021, and second, they had to have published at least 10 FB posts in the analyzed period.

Through this inclusive sampling strategy, we aimed to minimize the odds of omitting important political actors on Facebook. We acknowledge that these thresholds exclude a small number of FB pages of some well-known political actors, such as politicians with seats in the national parliament. However, we assume that FB accounts that were inactive or had less than 1,000 followers – a low threshold even for the relatively small Swiss political system – were unlikely to have had any meaningful impact on political discourse in the analysis period.

### *Period and units of analysis*

We collected data for a period during which five national popular votes occurred: 20 months (=87 weeks), from 4 November 2019 to 4 July 2021. We also chose this analysis period because it lies between national elections, which we consider potential confounding events. In the analysis period, the Swiss voted five times at the national level (9 February 2020; 27 September 2020; 7 March 2021; and 13 June 2021). On each of those voting days, voters had to decide on various legislative issues, totaling 17 votes (see list in Table 1).

**Table 1. Swiss federal popular votes in the analysis period**

Vote	Proposal (original German title)	English translation	Outcome
Vote 1 9 Feb 2020	Initiative „Mehr bezahlbare Wohnungen“	Initiative “more affordable housing”	NO
	Verbot der Diskriminierung aufgrund der sexuellen Orientierung	Prohibition of discrimination on the basis of sexual orientation	YES
Vote 2 27 Sep 2020	Begrenzungsinitiative	(Immigration) limitation initiative	NO
	Jagdgesetz	Hunting law	NO
	Erhöhung der steuerlichen Kinderabzüge	Increase in tax deductions for parents with children	NO
	Vaterschaftsurlaub	Paternity leave	YES
	Beschaffung neuer Kampfflugzeuge	Procurement of new fighter aircraft	YES
Vote 3 29 Nov 2020	Konzernverantwortungsinitiative	Corporate responsibility initiative	NO
	„Kriegsgeschäfte-Initiative“	Prohibition of arms sales to war zones initiative	NO
Vote 4 7 Mar 2021	Initiative für ein Verhüllungsverbot	Initiative for a ban on face veils	YES
	Gesetz über elektronische Identifizierungsdienste	Electronic identification services act	NO
	Freihandelsabkommen mit Indonesien	Free trade agreement with Indonesia	YES
Vote 5 13 Jun 2021	Trinkwasserinitiative	(Clean) drinking water initiative	NO
	Pestizidinitiative	Anti-pesticide initiative	NO
	Covid-19-Gesetz	Covid-19 law	YES
	CO2-Gesetz	CO2 Act (limiting carbon emissions)	NO
	Gesetz über polizeiliche Massnahmen gegen Terrorismus	Law on police measures against terrorism	YES

*Note.* Overview of the Swiss federal popular vote proposals and their outcomes in the analysis period.

Since the units of analysis are FB pages, the study focuses on aggregated, page-level metadata. It did not consider post-level content data, that is, the political messages in the FB posts. Instead, it analyzed aggregated digital trace data generated through the interaction of three types of actors: political actors, audiences, and Facebook. While political actors publish posts through their FB pages, audiences engage with these pages and posts (generating interactions). Facebook also assumes a certain agency by acting as an algorithmically driven platform that mediates the information flows between the latter two types of actors.

### *Variables*

Mobilization and user engagement were operationalized through two types of metrics in the analysis period:

*Total Posts* (TP), for mobilization: The total number of posts a FB page published in the analysis period. These include status posts, link posts, photo posts (including memes), and video posts (including live video posts).

*Total Interactions* (TI), for user engagement: The total number of likes, shares, and comments a FB page received during the analysis period. The metric also includes the total number of FB reactions, such as love, haha, wow, sad, and angry – metrics that Facebook treats as subtypes of likes.

We analyzed these page-level metrics at two levels of granularity: first, as an aggregated total, and second, as a weekly time series. The first dataset, the aggregate, contains the total values for each analyzed FB page (n=770) during the 20 months of analysis. This dataset is particularly well-suited to studying the Swiss political field's general composition – or cartography – on Facebook.



The second dataset contains a time series of 87 calendar week observations for the same metrics as the aggregate values for each FB page. The time series data provide insights into the development over time of Total Posts and Total Interactions. We chose calendar weeks, from Monday to Sunday, as the interval because all votes in the analyzed time frame took place on Sundays, with the campaigning activities usually peaking in the six to three weeks preceding the voting date. Therefore, this granularity level seems adequate for our analysis – monthly data would have been too rough, whereas daily data would have been too volatile.

To further increase the practical value of our data, we constructed additional variables by manually categorizing the political actors' FB pages:

*Page Type:* A binary variable classifying FB pages as person or non-person pages. In our sample, person pages represent politicians (n=162), while non-person pages represent organizational political actors, such as parties, economic interest groups, citizens' interest groups, and ad hoc committees. (n=608).

*Partisan:* A binary variable classifying FB pages as partisan or non-partisan political actors. Partisan actors (n=313) were those affiliated with a singular political party represented in the Swiss national parliament. All others were categorized as non-partisan, including those representing politicians of regional parties not represented in the federal parliament and non-partisan, bi-partisan, and multi-partisan organizations (e.g., multi-party campaign committees).

*National:* A binary variable classifying FB pages as national or regional political actors.

The subset of FB pages that represented partisan pages and persons – i.e., politicians affiliated with parties represented in the federal parliament – were additionally categorized:

*Party:* A categorical variable classifying FB pages according to national parliamentary groups. All partisan person and non-person pages that could be attributed to national parliamentary groups were classified. As of October 2021, six parliamentary groups existed, each led by major Swiss political parties. These include those of the Swiss People's Party, the Social Democratic Party, the Liberals, the Centre, the Green Party, and the Green Liberal Party.

*Gender:* A categorical variable classifying FB pages operated by politicians as either male or female.

### ***Descriptive analysis and multiple linear regression analysis***

The study used the data, metrics, and categories described above to conduct descriptive analyses of the mobilization and engagement patterns of Swiss political actors on Facebook. A focus was laid on the properties of the aggregated distributions of Total Posts and Total Interactions. These metrics were also analyzed in the form of time series with calendar weeks as intervals (Monday to Sunday) to understand better the temporal patterns of mobilization and engagement in the Swiss political discourse on Facebook.

The study also investigated the relationship between mobilization and engagement in the partisan subset of 313 FB pages. Specifically, it analyzed the relative frequency of Total Posts and Total Interactions for the six major partisan groups: The Swiss People's Party, the Centre, the Green Party, and the Green Liberals. To put these figures in perspective, it compared them to these parties' relative shares in the partisan subset of FB pages in the sample and the Swiss national parliament.

Moreover, the study descriptively analyzed mobilization and engagement patterns in the subset of 160 FB pages representing male and female politicians of partisan groups represented in the national parliament. It explored the relative frequency of Total Posts and Total Interactions across the binary genders, male and female. To put these figures in

perspective, it compared them to politicians' relative gender shares in the sample of FB pages and the Swiss national parliament.

We also ran a regression analysis to complement the descriptive insights about the general, partisan, and gender-related mobilization and user engagement patterns of Swiss political actors' FB pages. Regression analysis provides insights into the statistical covariation between mobilization and engagement metrics and the categorical variables assigned to FB pages through our coding. By construction, a regression analysis (to the mean) helps to better understand the probabilistic processes that govern the outcome of average cases based on a statistical sample. Focusing on the average case contrasts with our descriptive approach that focuses on the aggregate, absolute sums of mobilization and engagement metrics.

Specifically, we fitted three regression models with Total Interactions as the output variable. We used the stepwise, backward variable selection method to identify significant input variables – an established technique in statistics and data mining, particularly in pattern exploration (Hastie, Tibshirani, Friedman, 2009). This method aims to identify a subset of statistically significant input variables from a more extensive set of potential input variables correlated to the output variable. The stepwise approach begins with all available input variables. Subsequently, it removes, one by one, those with no significant relationship to the output variable. Thereby, it minimizes the model's Akaike information criterion (AIC) – an “estimate of the deviance that would be expected if the fitted model is used to predict new data” (Gelman, Hill, Vehtari, 2021, p. 175).

The first regression model was fitted to the aggregate sample of 770 FB pages and had log(Total Interactions) as the output variable. Logarithmic transformations were used to account for the skewed distribution of values. Potential input variables subject to the backward variable selection process included log(Total Posts), log(Follower Growth), Person, Partisan, and National.

The second regression model was fitted to the 313 partisan FB pages subset and had  $\log(\text{Total Interactions})$  as the output variable. In addition to the potential input variables of the first regression model, binary variables for each Party were used as additional possibly significant input variables. For example, it was tested whether the binary variable Swiss People's Party (indicating whether or not a partisan FB page represented an actor of this party) was a significant input variable for the output variable  $\log(\text{Total Interactions})$ .

The third and last regression model was fitted to the subset of 160 FB pages of partisan male and female politicians. In addition to the input variables of the two preceding regression models, this model also tested the binary Gender for statistical significance.

We created the statistical analyses and graphics with the R open-source software (version 4.2.1.; R Core Team, 2022). The study also used specialized R packages, notably *ggplot2*, to create graphics (Wickham, 2016) and *AICcmodavg*, to compute backward stepwise regression (Mazerolle, 2020).

## Results

The results are divided into four sections. First, we report general descriptive insights into mobilization and engagement patterns in Swiss political communication on Facebook. Second, we document how FB pages of partisan political actors mobilized and received user engagement in the analysis period. Third, we show how male and female politicians' FB pages differ in their mobilization and engagement patterns. Fourth, we present the results of a regression analysis that put the previous insights – regarding the general, partisan, and gender patterns – into perspective. We provide answers to our research questions in each section where they apply.

### *General mobilization and engagement pattern*

Two types of descriptive data reveal general mobilization and engagement patterns of Swiss political actors on Facebook. First, the time series of the metrics Total Posts and Total Interactions – i.e., aggregated data of Swiss political actors' FB pages – shows how mobilization and engagement evolved across the analysis period. Second, the statistical distribution of these two metrics reveals the dispersion regarding who speaks and who is heard across Swiss political actors' FB accounts.

Figure 1 depicts the time series of the aggregated Total Posts (blue line) and Total Interactions (green line) for the sample of 770 Swiss political actors' FB pages. The black dotted vertical lines indicate the five federal popular votes that occurred during the 20-months analysis period (see Table 1 for the list of votes). The red dotted line, in turn, marks a postponed vote scheduled for 17 May 2020 – the Swiss government deferred it because of the outbreak of the COVID-19 pandemic crisis (Swiss Federal Council, 2020). Two patterns stand out in the Total Posts time series (blue line), representing the mobilization efforts' intensity and timing.

First, the posting frequency of Swiss political actors' FB pages seems correlated with popular votes. Except for vote 1 – held in February 2020 – the Total Posts time series exhibits local maximums in calendar weeks during which votes occurred (votes 2, 3, 4, and 5). Likewise, the time series shows increasing posting frequencies in the weeks preceding votes. Nonetheless, there are also some deviations from this general pattern.

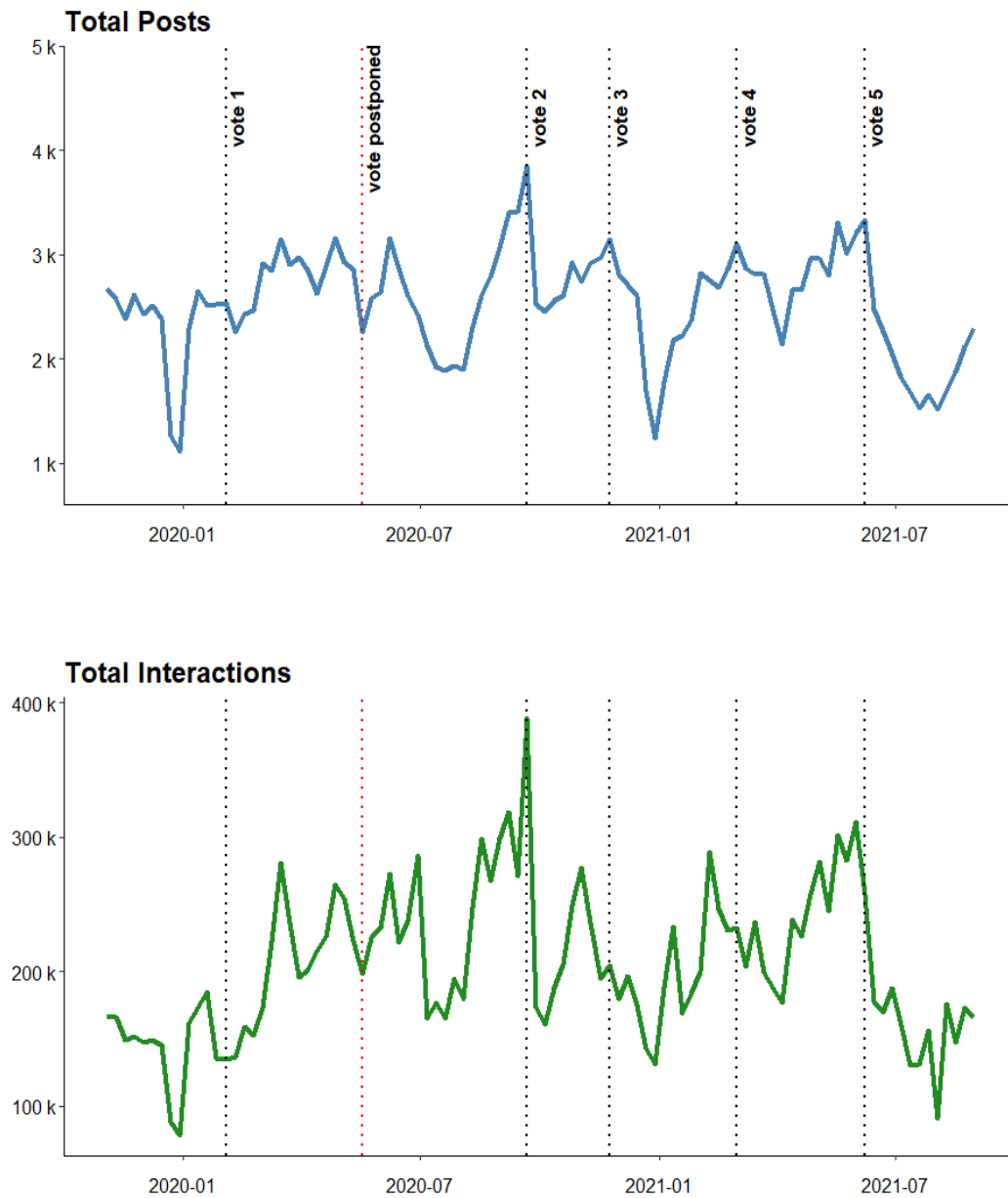
Several local maximums in posting frequency appeared in the first half of 2020, corresponding to the first six months of the COVID-19 pandemic, which also highly affected Switzerland. During this anomalous period, the FB pages of Swiss political actors markedly increased their posting frequency, reaching local maximums on weeks without votes. This likely reflects the political debate surrounding the pandemic outbreak and associated policy measures to contain it. The Swiss government's postponement of a

popular vote also marks a historically rare event: It last occurred in 1951, following an outbreak of the hoof-and-mouth disease in cattle (Swiss Federal Council, 2020). Despite these anomalies in posting frequency, the general pattern of increasing posting frequencies before and during voting events holds for four out of five votes.

Second, the Total Posts time series also exhibits a seasonal pattern: local minimums in posting frequency occurred during Christmas and New Year holidays in 2020 and 2021, respectively. Similar local minimums occurred in both years during the summer holidays in July and August. It is plausible that Swiss political actors post the least on FB during those periods, not only because of holidays but also because the national and most regional parliaments are also paused. Moreover, the time series shows no clear positive or negative trend in posting frequency across the analysis period.

Both patterns help us to answer RQ1: the data shows that the intensity and timing of Swiss political actors' FB posting activities correlate with voting. Hence, mobilization efforts follow an institutionally driven pattern, increasing posting frequencies before and culminating during voting weeks. Nevertheless, this pattern depends on the topic's importance and is not immune to confounding factors such as seasonality and pandemics.

The green line of the second time series graphic in Figure 1 shows the audience engagement metric Total Interactions development. Comparing this curve to the Total Posts time series is helpful, particularly when assuming that Total Interactions reflect a reaction to it. While apart in scale (by roughly a factor of 100), both curves exhibit maximums in the calendar week of vote 2, which occurred on September 27, 2020. During that vote, the Swiss decided on highly politicized policy issues, including legislation on immigration, hunting, paternity leave, and the procurement of combat aircraft (see Table 1). Moreover, vote 2 happened after an exceptionally long period without votes because of the deferred vote of May 17, 2020. Hence, both political actors' mobilization efforts and user engagements on Facebook were particularly intense during that week.



**Figure 1. Time series of Total Posts and Total Interactions of Swiss political actors' Facebook pages. The dotted lines denote dates of national direct-democratic votes.**

Except for vote 2, however, no local maximums of Total Interactions coincide with votes, contrasting the Total Posts curve. Instead, local maximums occur before the weeks with votes (i.e., for four out of five votes: votes 1, 2, 3, and 5), and the curve decreases through the voting weeks. This is a remarkable difference from the Total Posts curve, which usually increases until the week of the vote. It also means that FB users interact more frequently with the FB posts and pages of political actors in the 3-5 weeks before votes occur, eventually decreasing their interaction rates the closer the voting week.

In addition to understanding the mobilization and user engagement metrics' time series, it is also insightful to analyze their aggregate statistical distributions. A critical pattern that stands out is the high skewness of Total Posts and Total Interactions (Table 2 and Figure 2). Both metrics exhibit left-skewed distributions with median values lower than mean values. In other words, a few FB pages posted much more frequently and received far more user interactions than the median pages (not necessarily the same pages).

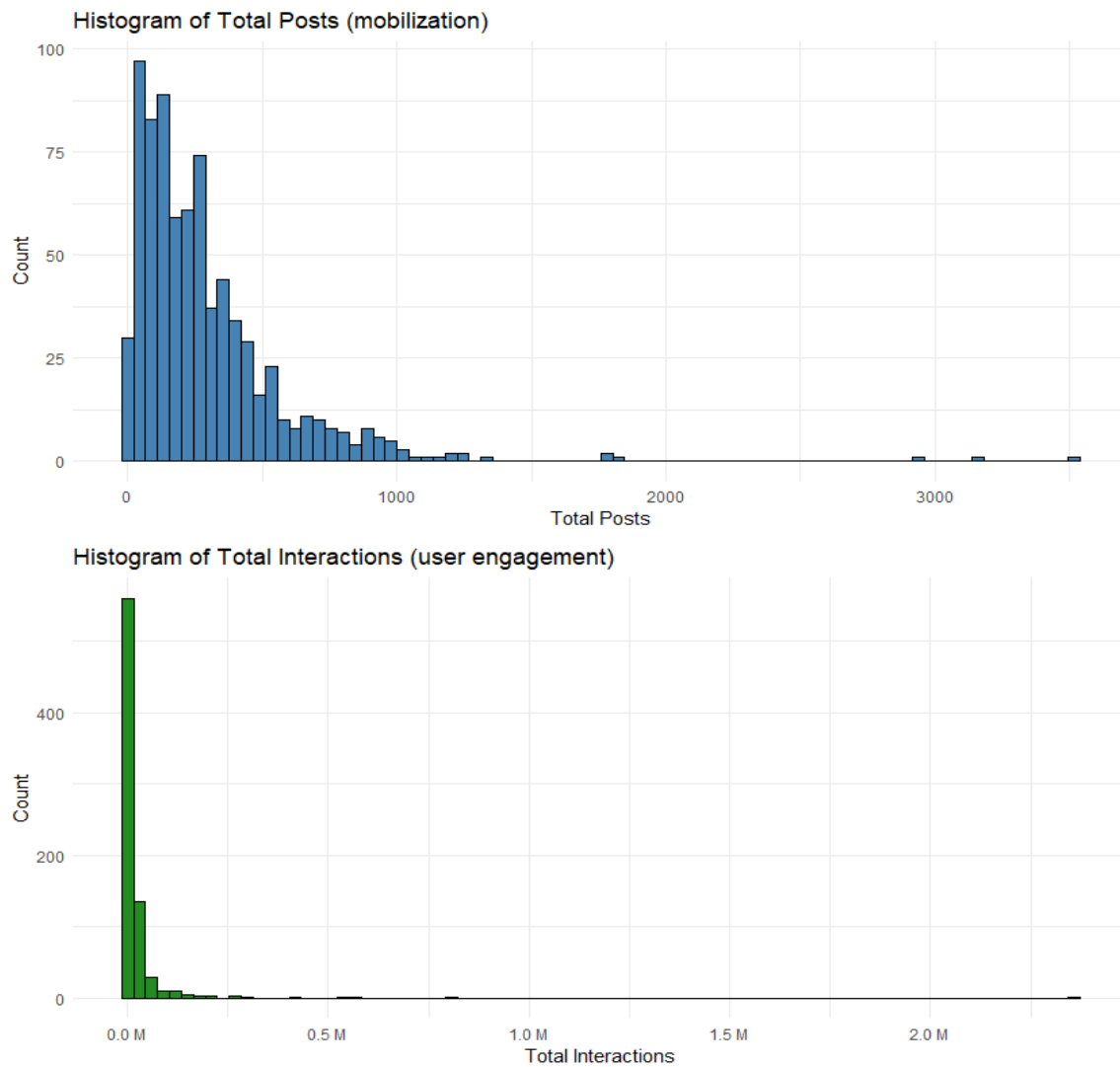
The left skewness of 17.5 is extreme for the engagement metric Total Interactions – a key result of the paper. Some outlier FB pages received more than 2 million user interactions, whereas more than 95 percent received fewer than 250.000.

The discrepancy in skewness between the posting frequency and user interactions, amounting to a ratio of  $17.5 / 4.1 = 4.27$ , is indeed remarkable. The FB News Feed algorithm, which amplifies the visibility of some posts at the expense of others, paired with the agency of FB users, results in the high skewness of Total Interactions. In other words, the intermediation between Facebook and users amplifies the imbalance by 4.27, resulting in very few FB posts receiving extremely high Total Interactions. This contrasts with the effect of mediation (of traditional media) in which the edition by journalists helps to balance out the different degrees of activity (Hänggli, 2020, p. 139).



**Table 2. Statistics on the variability of mobilization and engagement metrics.**

Metric	Sum	Mean	Median	Median absolute deviation	Skewness
Total Posts	226,801	295	222	203	4.1
Total Interactions	18,248,351	23,699	5,821	6,784	17.5

**Figure 2. Histograms of Total Posts and Total Interactions of Swiss political actors' Facebook pages.**

### *Partisan patterns*

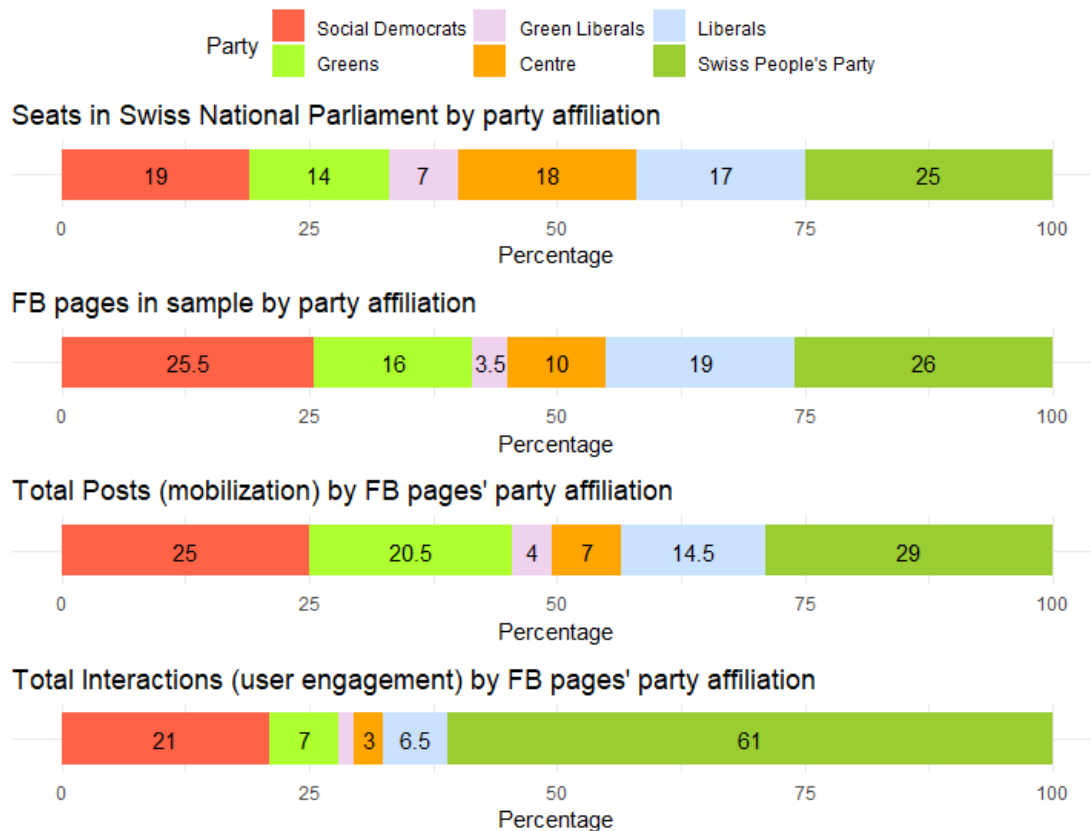
To further understand the discrepancy between who speaks and who gets heard in the Swiss political field on Facebook, it is worthwhile to consider the subset of partisan FB pages. The subset, which contains 313 FB pages (ca. 40 percent of the sample), represents actors from partisan groups represented in the Swiss national parliament. Four descriptive statistics, depicted in the horizontal bars in Figure 3, illustrate and help contextualize the discrepancy between who speaks and who gets heard on FB.

The first bar, on top, shows each partisan group's share of seats in the national parliament, i.e., their electoral share. The second bar shows the partisan actors' relative representation in our sample of FB pages. Of the sampled FB pages, 26% (80) are of the Social Democratic Party, which is an overrepresentation compared to the 20% of seats in the parliament. The 50 pages of the Greens, representing 16% of partisan pages, are closer to their real-world 14% fraction of parliamentary seats. The smallest partisan group with 7% of parliamentary seats, the Green Liberals, is underrepresented in the sample with 11 FB pages (4%). The Centre, a party with a parliamentary representation of 18%, is also underrepresented in the sample, with just 31 FB pages, accounting for 10% of partisan pages. The parliamentary fraction of the Liberals, 17% of parliamentary seats, is quite reasonably represented in the sample with 60 FB pages (19%). Lastly, the Swiss People's Party, which forms the largest partisan group in Switzerland with 25% of parliamentary seats, is quite accurately represented in the sample with 81 FB pages (26%).

The third and fourth bars in Figure 3, in turn, represent the relative shares of each partisan group's Total Posts and Total Interactions, respectively. This is where things get interesting, as several discrepancies – including some remarkable ones – appear.

Specifically, an amplifying pattern towards the (right-wing) Swiss People's Party becomes apparent. Indeed, its FB pages attracted 61% of Total Interactions, despite only contributing 29% of the posts of all the partisan FB pages in the sample. In other words,

with a slightly above-average mobilization effort, the Swiss People's Party got the lion's share of user engagement across partisan FB pages.



**Figure 3. Relative shares of Swiss political parties in the Swiss national parliament, the sample, Total Posts, and Total Interactions.**

At the other (left-wing) end of the political spectrum, the Social Democrats lost a bit in relative terms but still secured two-digit percentage figures in the metrics Total Interactions. The FB pages affiliated with the more centrist parties of the Greens, the Green Liberals, the Centre, and the Liberals generated fewer Total Interactions than their fractions in the sample and Total Posts would suggest. This is most apparent for the Greens, who contributed 21% of Total Posts but garnered only 7% of Total Interactions. A similar stuck-

in-the-middle effect haunts the Green Liberals, the Centre, and the Liberals, with all receiving fewer interactions relative to their posting activity.

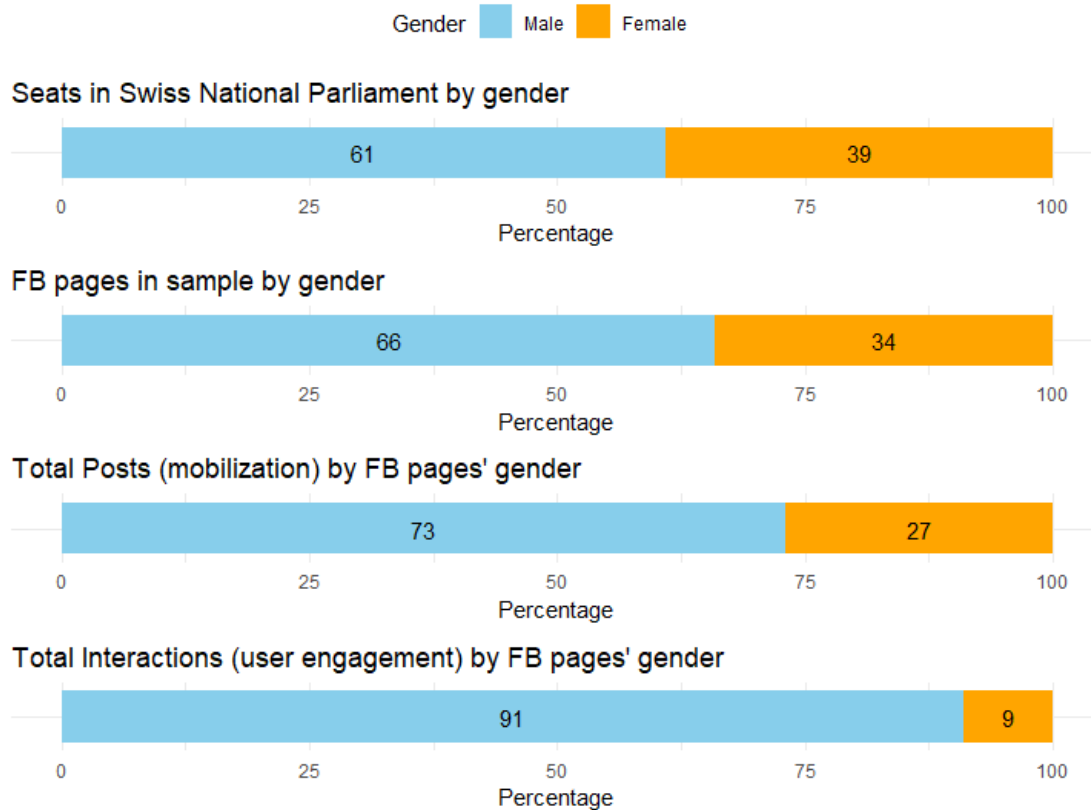
These insights help us answer RQ2: The mobilization activities and user engagement of Swiss political actors' FB pages clearly vary according to their partisan affiliation. While the Total Interactions of FB pages of the right-wing populist Swiss People's Party tend to get disproportionally amplified – relative to their posting frequency and representations in the sample and national parliament – the opposite is true for more centrist FB pages. The Greens, notably, tend to receive much fewer Total Interactions than their posting frequency but also their representation in the sample and parliament would suggest. The FB pages of the Social Democrats, situated at the left-wing-end of the political spectrum, in turn, receive slightly fewer Total Interactions than their Total Posts would suggest. However, their share of Total Interactions is similar to their parliamentary representation.

### *Gender patterns*

Another pattern of interest concerns the role of gender in Swiss politicians' mobilization and user engagement on Facebook. To explore differences between male and female politicians, we can again compare their relative shares in the national parliament, the subset of partisan politicians' FB pages from our sample ( $n = 160$ ), and their respective proportions of Total Posts and Total Interactions. The horizontal bar graphs in Figure 4 indicate the proportion of male and female politicians across these categories. Note that we only used the binary male and female genders for this analysis. To our knowledge, no politicians identifying as non-binary were part of our sample and analysis period.

We can use the descriptive results from Figure 4 to answer RQ 3: they reveal a pattern of declining shares of female political participation. Female politicians are already underrepresented in the 246-seat Swiss parliament, where their proportion stood at 39% in the analysis period; for reference, 50.4% of the Swiss population was female in 2021. The

gender disparity increases in our subset of sampled FB pages of politicians: only 34% belonged to females – against 66% to males. This also means that fewer females than males met our sampling criteria, such as having an active FB page with at least 1,000 followers.



**Figure 4. Relative shares of male and female Swiss politicians in the Swiss national parliament, the sample of FB pages, Total Posts, and Total Interactions.**

The gender disparity increases even more through the mobilization and engagement metrics. Although FB pages of female politicians comprise 34% of the sample and published 27% of Total Posts, they only received 9% of Total Interactions. In other words, FB pages of male politicians, which accounted for 66% of the sample and published 73% of posts, managed to capture 91% of user engagement (Total Interactions). FB pages of

female politicians, who are already underrepresented, published fewer Total Posts and received far fewer Total Interactions than their share in the sample or even the national parliament would suggest. Hence, mobilization activities and user engagement of Swiss political actors' FB pages clearly vary across males and females. While male political voices get amplified on Facebook, female voices get toned down relative to their speech frequency.

### ***Regression insights***

We also ran a regression analysis to complement the general, partisan, and gender-related descriptive insights about mobilization and user engagement patterns of Swiss political actors' FB pages. We fitted three regression models using  $\log(\text{Total Interactions})$  as the output variable. We used logarithmic transformation to account for the strong skewness of some of the variables. Table 3 describes the model statistics. Model 1 considers all observations of our sample of FB pages ( $n=770$ ). Model 2 is based on the partisan subset ( $n=313$ ), and Model 3 is on the subset of partisan politicians ( $n=160$ ).

The parameters of Model 1, about the total sample, indicate highly significant positive correlations between the output variable  $\log(\text{Total Interactions})$  and the input variables  $\log(\text{Total Posts})$  and  $\log(\text{Page Followers})$ . The categorical input variables Person and Partisan are also highly significantly and positively correlated to the output variable (all at the 0.01 level;\*\*\*). With these input variables, which were retained using the backward stepwise variable selection method (see methods section), Model 1 exhibits an adjusted R squared of 63.9%. These insights can be linked to the literature on frame building in classical news media (Hänggli, 2012, 2020). It suggests that the input of political actors (here: Total Posts) and prominence (Page Followers) are associated with increased attention (Total Interactions). Model 1 also indicates that, on average, FB pages representing persons rather than organizations receive more Total Interactions.

Model 2 was fitted to the partisan subset of FB pages ( $n = 313$ ). Its model statistics in Table 3 reveal highly significant positive correlations of  $\log(\text{Total Interactions})$  with the input variables  $\log(\text{Total Posts})$ ,  $\log(\text{Page Followers})$ , and *Person*. Of the partisan categorical input variables, only the Swiss People's Party dummy variable exhibits a highly significant (positive) correlation (\*\*\*). This result is in line with the descriptive insights. The coefficients of The Centre (\*\*), The Liberals (\*\*), and The Social Democrats (\*) are also significantly positively correlated to  $\log(\text{Total Interactions})$ , however, to lower degrees and regression weights. Note that the remaining partisan categorical input variables – The Greens and The Green Liberals – were not retained as significant input variables in the backward variable selection process. This means that, on average, FB pages of the parties whose variables were retained in Model 2 as positive inputs received significantly more Total Interactions than those of the Greens and Green Liberals.

Moreover, Model 2 indicates no significant relationship between the categorical input variable *National* and  $\log(\text{Total Interactions})$ . However, the backward selection process retained this input variable (likely because of its near-significant correlation with the other variables). Hence, on average, user engagement does not differ meaningfully depending on whether a FB page represents a national or regional political actor. This reflects direct democracy that also allows local actors to play significant roles. Note that with 80.4%, Model 2 exhibits a relatively high adjusted R squared, indicating a good model fit.

Model 3, in turn, was fitted to the subset of partisan politicians' FB pages ( $n = 160$ ); its model statistics are also listed in Table 3. As in the first two models, the output variable  $\log(\text{Total Interactions})$  is positively correlated – with high significance (\*\*\*) – with the input variables  $\log(\text{Total Posts})$  and  $\log(\text{Page Followers})$ . Remarkably, and against our expectations following the descriptive insights, the categorical input variable *Female* exhibits a positive correlation with the output variable (weight of 0.202), although not at a statistically significant level. This suggests that the male dominance observed in the descriptive analysis likely results from the effect of outliers: a few male accounts receive

disproportionate levels of Total Interactions. This pattern, however, cannot be sustained when considering the average case of a Swiss politician's FB page, as the regression analysis has shown.

**Table 3. Regression models for the dependent variable log(Total Interactions): (1) total sample (n =770); (2) partisan subset (n=313); and (3) politicians subset (n=160).**

Variable	(1)	(2)	(3)
log(Total Posts)	0.875*** (0.037)	0.979*** (0.042)	0.946*** (0.059)
log(Page Followers)	0.754*** (0.040)	0.789*** (0.056)	0.831*** (0.086)
Person	0.401*** (0.115)	0.424*** (0.096)	-
Partisan	0.378*** (0.091)	-	-
Female	-	-	0.202 (0.132)
National	-	0.143 (0.087)	0.198 (0.128)
Swiss People's Party	-	0.681*** (0.112)	0.707*** (0.154)
Social Democrats	-	0.203* (0.112)	-
The Centre	-	0.317** (0.148)	0.381* (0.193)
Liberals	-	0.264** (0.121)	0.295* (0.162)
Constant	-2.206*** (0.324)	-3.006*** (0.413)	-2.853*** (0.678)
Observations	770	313	160
R <sup>2</sup>	.641	.809	.785
Adjusted R <sup>2</sup>	.639	.804	.775
Residual Std. Error	.952 (df = 765)	.652 (df = 304)	.745 (df = 152)
F Statistic	341.124*** (df = 4; 765)	160.825*** (df = 8; 304)	79.414*** (df = 7; 152)

Note. . \* p < .1; \*\* p < .05; \*\*\* p < .01. Standard errors in parentheses..

Moreover, the highly significant positive correlation between log(Total Interactions) and the categorical input variable Swiss People's Party persisted in Model 3. This finding confirms the descriptive insights gained for partisan FB pages in general. In Model 3, the input variables the Centre and the Liberals are also positively correlated to



the output variable, however, at a lower significance level and with lesser weight. The other partisan input variables – i.e., the Social Democrats, the Greens, and Green Liberals – were not retained in Model 3 as significant inputs. With an adjusted R squared of 77.5%, Model 3 exhibits a good model fit.

### **Discussion**

This study set out to explore political actors' mobilization and audience engagement patterns on Facebook. It focused on political communication in Switzerland, a direct democracy with a tradition of frequent and diverse efforts by political actors to shape voters' opinions before popular votes. Using digital trace data from CrowdTangle, it operationalized political mobilization as FB pages' posting frequency (Total Posts) and audience engagement as their received number of user interactions (Total Interactions). These metrics were analyzed for a representative sample of 770 actively maintained FB pages of major Swiss political actors, including politicians, parties, labor unions, NGOs, and others. The data covered a 20-months period during which five direct democratic votes on a wide range of policy issues occurred. The analysis revealed key patterns of mobilization and audience engagement in the Swiss political field on Facebook – at a general level and differentiated for FB pages' party affiliation and politicians' male and female gender.

First, a descriptive time series analysis showed that direct-democratic votes drove political actors' posting frequency and, to a lesser degree, audience engagement. Both typically peak in the last few weeks before voting day, although the local maximums of audience engagement precede those of mobilization efforts. On Facebook, therefore, there are time lag discrepancies between the posting frequency of political actors' FB pages and the user engagement they receive, particularly in the last two to three weeks preceding direct-democratic votes. It is not clear from the data why this occurs. It could result from audiences' decreasing interest in the vicinity of votes – which seems unlikely. It could also

result from an algorithmic effect: the FB news feed, which determines the reach of posts, may “punish” or “flatten” political actors’ posting spikes before and during votes.

Second, the analysis revealed a strong skewness in the distributions of posting frequency and user engagement. For the mobilization metric Total Posts, the top 10 FB pages with the highest posting frequency, which account for 1.3% of the sample of 770 FB pages, contributed 8.8% of all posts. For the Total Interactions metric, the top 10 FB pages even accounted for 33.4% of all interactions in the sample. These discrepancies mean that a minority of FB pages post much more than the rest. An even smaller minority of FB pages (not necessarily the same as those that post the most) receive the lion’s share of interactions. Hence, out of the 770 Swiss political actors who actively maintain a FB page, only a few are widely heard and receive high user engagement.

Third, the analysis uncovered partisan discrepancies in mobilization and engagement patterns across FB pages affiliated with parties represented in the Swiss national parliament ( $n = 313$ ). Those affiliated with political parties situated at the left and right poles of the political spectrum not only tended to be overrepresented in the sample compared to their number of seats in parliament. FB pages of the (left-wing) Social Democrats and the (right-wing) Swiss People’s Party – but also of the Greens and the Liberals – published posts more frequently in the analysis period than their fraction in the sample would suggest. In contrast, the FB pages of the more centrist Green Liberals and the Centre were less present and published fewer posts. The Swiss People’s Party very clearly outperformed the other parties regarding the number of received user interactions. Its FB pages received 61% of interactions, although they only contributed 29% of all FB posts in the analysis period. Hence, we conclude that FB pages of populist political actors, notably from the right wing, achieve the most user engagement in Switzerland

Fourth, the analysis uncovered mobilization and user engagement discrepancies between male and female politicians’ FB pages. Male FB pages (66% of the subset of 160 person-centric FB pages) were not only over-represented in the sample compared to their electoral share in the Swiss national parliament. They also published more FB posts (73%)

than their sample weight would suggest. An even deeper gender gap emerged regarding user engagement: FB pages of female politicians, who contributed 27% of FB posts, received only 9% of interactions. Hence, in Switzerland, the mobilization efforts of female politicians on Facebook are met with much less user engagement than their male peers.

From a normative perspective, such discrepancies threaten the societal cohesion within liberal democracies such as Switzerland, notably their “one-ness” and central values. These purport that decisions are considered legitimate if they are reached through collegial decision-making, bargaining, and compromise (Lijphart, 1999). This, in turn, requires a flow of information in which no winner takes it all, but all involved political actors can express their arguments on similar or proportional terms. Facebook cannot assure such conditions.

Our findings come with limitations, which offer opportunities for future research. First, we did not investigate the actual content of political actors’ FB posts. Which messages get disproportionately high interactions? Although we suspect that populist, provocative, and emotional content received relatively more user interactions than compromise-oriented messages, future research could certainly further explore this hypothesis. Second, we do not explain the patterns at a causal level. Does the algorithmic system of Facebook, driven by Meta’s economic interests, somehow favor FB pages of persons (notably populists or provocateurs) by assigning them higher visibility? Or do users deliberately engage more with such actors? Or do some FB pages (e.g., populist males) create higher-quality content that garners more engagement? These hypotheses or combinations thereof could explain some of the uncovered patterns. However, getting empirical proof for such explanations might be tricky because Facebook typically does not reveal how its algorithms work. Third, we did not further analyze the audience of Swiss political actors’ FB pages except for audience engagement metrics. There could be significant differences in audience demographics and geographical locations across FB pages. For example, it could be that some populist FB pages with the highest audience engagement have an international audience beyond Switzerland, thus enabling a much

higher reach and interactions. Fourth, future research should investigate the consequences of the uncovered discrepancies, notably whether they shape political convictions and offline voting behaviors.

We also suggest considering the consequences of the empirical pattern found in this study: for the recruitment of political actors, political socialization, finding solutions, and strategies and behavior of all actors involved. Who fits well in such a system, and who does not? In which way do political actors adapt to the algorithmic system? From an institutional perspective, one could also address the consequences of the unknown or economic-interest-oriented algorithmic system on trust in politics or other people. Even more important: How can we ensure that institutions such as the algorithmic system are value-sensitive and respect and represent the core values of a society or different interest groups? Future studies should investigate political mobilization and engagement patterns in other political systems and on other social media platforms. They should generally assess the normative and societal consequences of social media's dominant role in political communication.

Our insights also generally update our knowledge of political mobilization on social media. Assuming social media platforms like Facebook work similarly worldwide, favoring a few loud, populist, and predominantly male political voices at the cost of females and more compromise-oriented ones is problematic beyond the Swiss case. The digital divide manifests less in unequal access to speaking out but in unequal chances of getting heard and receiving attention.

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