

The Co-Evolving Signs of the Anti-Kremlin Rhetoric: A Longitudinal Analysis of Offline and Online Indicators from Russian Opposition Telegram Channels

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Abstract

During Russia's invasion of Ukraine in February 2022, Telegram became an essential platform for state-sponsored propaganda dissemination. Over time anti-Kremlin channels have also emerged as a prominent voice of dissent against the state-sponsored narratives. This study investigates how informational autocracies navigate interstate conflicts by influencing public opinion, and examines the dynamics of anti-Kremlin narratives on Telegram before and after the invasion. Through longitudinal analysis of anti-Kremlin Telegram channels, we explore thematic trends, users' reactions, and engagement levels concerning documented offline events. Our findings highlight predominant themes such as Russian domestic affairs, Economy, and International politics, revealing; (i) the Kremlin's information control lapses amid increasing opposition crackdowns and military mobilization, (ii) unexpected resilience in the Russian economy against the Western sanctions. This suggests anti-Kremlin outlets are adeptly tailoring their content in response to evolving offline events.

To address this gap, our study aims to analyze over a million posts from influential anti-Kremlin communication channels on Telegram, spanning from before the invasion of Ukraine to the protracted conflict that followed. Through this analysis, we seek to uncover the nuances of content production, user engagement, and narrative evolution within this digital realm, focusing on the strategic shifts and evolving narratives that shape online discourse and influence public opinion.

Our findings reveal a strategic recalibration of messaging by anti-Kremlin channels, focusing on critical issues, such as Russian domestic affairs, to shape public opinion and challenge the Kremlin's narrative. Despite the widely anticipated collapse of the Russian economy ([Sonnenfeld et al., 2022](#)), our analysis shows a deliberate shift in focus away from the economy towards other alternative themes, such as international politics, indicating a concerted effort to maintain user engagement and anti-Kremlin sentiment. Further, ([Egorov, 2023](#)) provide evidence as to why the Russian economy was not affected by Western sanctions.

1 Introduction

The pervasive influence of Kremlin propaganda, exemplified by figures like Vladimir Solovyov and platforms like Telegram, underscores the urgent need to understand the dynamics of dissenting voices within Russia's tightly controlled media landscape ([Hanley and Durumeric, 2023](#)). As authoritarian regimes increasingly utilize social media for propaganda dissemination and control, platforms like Telegram have become crucial spaces for independent and dissenting voices, particularly anti-Kremlin channels, to challenge official narratives and mobilize public opinion against government agendas. However, despite their growing influence, there is a lack of comprehensive research examining the evolution of anti-Kremlin channels and their impact on public discourse.

Moreover, our research illuminates the intricate interplay between offline events and online content, highlighting a dynamic and thematic symbiosis within the Telegram information space. Despite Russia's strenuous efforts to dominate domestic information space, anti-Kremlin channels not only survived but also effectively provided an alternative space for criticizing the Kremlin's propaganda and failings in its war efforts. These channels seem to have undergone a strategic "learning curve," by targeting issues like opposition crackdowns, suppression of free speech, mobilization, and referendums – topics deliberately avoided or prevented by the Russian government. Further, these channels played a crucial role in shaping public opinion and contributing to minimal public resistance during Prigozhin's attempted coup against the Kremlin.

2 Methodology

2.1 Data

We gathered and analyzed multi-modal data from 615 prominent Russian Telegram channels. After annotation, we identified and validated 402 Pro-Kremlin and 114 Anti-Kremlin channels. Focusing on Anti-Kremlin channels, we collected data spanning from March 11, 2021, to February 9, 2023.

Temporal Phases: Our Anti-Kremlin dataset comprises over 1M posts. Of these, 286,645 (28%) were posted before February 24, 2022 (Russia's invasion of Ukraine), and 738,647 (72%) after the invasion. The study delineates six temporal phases of the war (plus pre-invasion).

2.2 Content Analysis

To gain a better understanding of the prominent conversations and relevant information pieces in anti-Kremlin Telegram channels pre- and post-invasion, we conduct content analysis through topic modeling and n-gram analysis (n=1,2,3) on the raw text data. Preprocessing involves removing punctuation, hyperlinks, numbers, special characters, and stopwords in both Russian and English. Lemmatization of Russian text is crucial to handle variations in word forms. Translations from Russian to English are applied for clarity in the presentation.

Topical Analysis. To analyze the relationship between online and offline propaganda events on Telegram post-Russian invasion of Ukraine, we employ topic modeling across seven phases of anti-Kremlin channels. Utilizing the multilingual version of MP-Net (Song et al., 2020) for Russian sentence embeddings, we apply BERTopic modeling (Grootendorst, 2022) with UMAP for dimensionality reduction and HDBSCAN for clustering. The top 10 key keywords representing topical information are extracted using TF-IDF for each cluster. Coherence metrics guide the determination of optimal topic numbers. The optimal number of topics ranged from 75 to 125 depending on the phase. For qualitative analysis of these topics, we followed the Gioia methodology (Gioia et al., 2013). First, two team members of the research team (one of whom is a Russian native speaker) annotated the topics in each phase with their respective thematic first-order categories and second-order (sub)categories. An independent political science scholar who is also a native Russian speaker, reviewed and for accuracy and validation. Offline events are then mapped onto the online discourse timeline to assess category relevance and reflectiveness of offline occurrences in online conversations.

2.3 Statistical Analysis

Following phase-wise topic modeling, we annotate topics into categories and subcategories and conduct a temporal analysis to understand category evolution throughout the conflict. Statistical significance assessment across phases helps identify prominent categories and their shifts in prevalence. Utilizing a-priori, ANOVA, and post-hoc tests, we evaluate the interaction effects of categories with post-volume and user interactions.

To assess the statistical significance of post volumes across phases, we employ orthogonal Contrast weights and conduct Levene's test for homogeneity of variance. ANOVA and T-tests follow, with consideration for equal or unequal variances. Weekly average posts across phases serve as dependent variables, while phase acts as the independent variable. Subsequently, we analyze user reactions to posts, segregating emojis into positive and negative sentiment categories based on EmojiNet (Wijeratne et al., 2017). Net reactions per post, averaged weekly across phases, undergo statistical tests.

3 Results & Conclusion

Our analysis of the Russia-Ukraine conflict's impact on anti-Kremlin Telegram channels unveils significant thematic shifts and their implications. Pre-invasion, discussions predominantly focused on COVID, internal politics, and US figures, while post-invasion discourse centered around the conflict itself, highlighting forces, regions, and alerts. Noteworthy topics such as Combat and Frontline Updates, International Politics, and Domestic Affairs emerged, with phases 4 and 5 showing a spike in negative reactions, particularly regarding topics the Russian government aims to suppress. More specifically the most prevalent topics include *Russian Domestic Affairs*, *International Politics*, *Combat and Frontline Updates*, *Economy*, and *Ukrainian Domestic Affairs*.

Statistical tests corroborated these findings, indicating a failure of Kremlin's control strategies amidst increasing opposition crackdowns and a shift towards discussions on Russian domestic affairs by Anti-Kremlin channels. Despite predictions of economic collapse, resilience in the Russian economy was reflected in online discourse, with diminishing post efforts and statistically insignificant user reactions. Our analysis underscores the importance of understanding audience dynamics and offline events, with channels adapting content meticulously across phases.

4 Ethical Considerations

For this work, we utilize public data, and our study does not involve any direct interaction with any individuals or their personally identifiable private data. We follow standard practices for anonymization during data collection and processing by removing any identifiable information including names, usernames, URLs.

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