

Urban and Disinformation: The Crucial Role of Urban Scale in Addressing Disinformation

Nur Mawaddah

Urban Cyfluence Lab/Cyfluence Research Center, Germany

*Email: nur.m@cyfluence-research.org

| ARTICLE INFO | ABSTRACT |
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| <p>Keywords: Urban Disinformation Electoral Misinformation Democratic</p> | <p><i>Disinformation, particularly during electoral periods, poses significant challenges in urban environments, where high connectivity and dense populations can accelerate the spread of false narratives. This paper examines how disinformation spread during the 2019 elections and explores the role of urban-scale interventions in mitigating its impact. Utilizing social media analysis and social network analysis (SNA), this study uncovers patterns of engagement with disinformation and maps the influence of key actors within urban networks. Findings show that urban areas, due to their social and technological infrastructure, are particularly vulnerable to the effects of misinformation, highlighting the need for targeted urban policy responses.</i></p> |

INTRODUCTION

Disinformation has emerged as a significant threat to democratic processes, particularly in urban areas where dense populations and digital infrastructure facilitate rapid dissemination of false information. The 2019 elections serve as a case study to explore the influence of disinformation on voter behavior in a large urban setting. With the rise of social media as a primary source of information (Castells, 2011), the spread of misleading content during political campaigns has intensified, raising concerns about public trust and the integrity of elections.

In urban environments like Jakarta, the dynamics of disinformation are shaped by the interaction of diverse communities, high internet penetration, and extensive social media engagement (Trijsburg et al., 2024). These densely populated urban settings accelerate the propagation of false narratives, reflecting trends observed in global cities. The *Disinformation in the City: Response Playbook* highlights how urban disinformation is not just an online phenomenon but one that drives physical protests and societal unrest in city spaces. Disinformation thrives on the complexity of urban environments, exploiting social, cultural, and political divisions to polarize communities. This paper explores how urban-scale responses can address disinformation, emphasizing the need for localized strategies to combat the spread of false narratives in cities (Giglietto et al., 2019).

Urban planners play a critical role in addressing the spread of disinformation because the design of urban environments—both their physical and digital infrastructure—affects how quickly and widely false narratives spread; as demonstrated in Jakarta during the 2019 elections, disinformation thrives in cities with high digital connectivity and fragmented social networks, a pattern similarly observed in global cities such as São Paulo and New York (Bradshaw & Howard, 2019; Wardle & Derakhshan, 2017), where disinformation exacerbated social divisions and undermined public trust.

METHOD

Social Media Analysis: A quantitative approach was employed to gather data from social media platforms (Twitter) during the 2019 elections. Key search terms and hashtags related to the elections, such as #2019GantiPresiden, were tracked to measure engagement with disinformation. The analysis focused on metrics such as likes, shares, retweets, and comments, which provided insights into how misinformation was consumed and spread across different urban districts.

Social Network Analysis (SNA): Social network analysis (SNA) was employed to delineate the relationships among users who interacted with disinformation content. By examining user interactions, along with metrics such as centrality and network density, the study elucidated the key influencers contributing to the

amplification of disinformation. The application of SNA facilitated the visualization of misinformation dissemination within Jakarta's urban social networks, revealing distinct clusters of users who significantly contributed to the propagation of false narratives. The dataset, derived from social media interactions, was processed utilizing Gephi software to construct interaction maps and generate network diagrams.

Furthermore, urban characteristics, including population density and elevated social media usage, serve as critical enablers of disinformation. This phenomenon is articulated in the Disinformation in the City: Response Playbook, which posits that disinformation proliferates rapidly in urban settings due to their advanced digital infrastructure and inherent social complexity.

RESULTS AND DISCUSSION

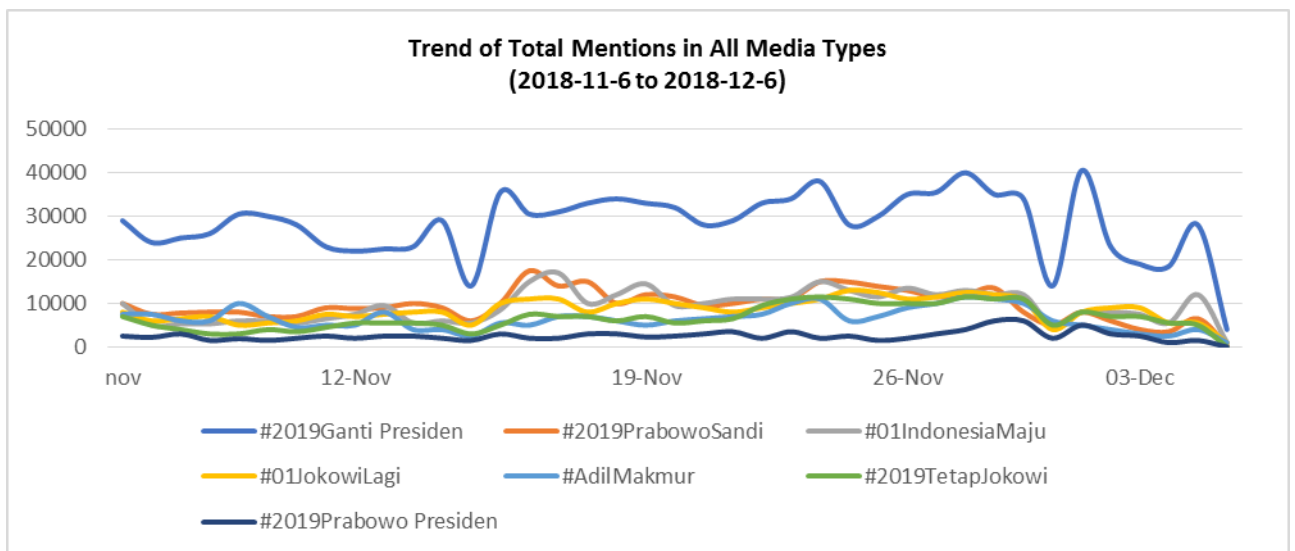


Figure 1-Trend of Total Mentions in All Media Types

The analysis of social media engagement revealed substantial interaction with disinformation during the 2019 elections, particularly through the utilization of popular hashtags such as #2019GantiPresiden and #2019TetapJokowi. These hashtags functioned as pivotal conduits for the dissemination of false narratives, drawing significant engagement through likes, shares, and retweets. Posts incorporating these hashtags exhibited elevated levels of interaction, underscoring the efficacy of the disinformation strategies employed. A comprehensive examination of engagement metrics demonstrates the pervasive influence of these hashtags in shaping political discourse (Themi & Perdana, 2021). The dynamics and levels of engagement associated with these hashtags were meticulously documented across diverse sources, including comparative analyses of prominent hashtag campaigns.

As highlighted in the comparative analysis of the hashtags #2019PrabowoPresiden and #2019TetapJokowi, the hashtag #2019GantiPresiden consistently outperformed its counterparts in terms of tweet volume and engagement metrics in the lead-up to the election. This disinformation campaign transcended mere influence on political sentiment; it strategically leveraged identity politics (Nielsen, 2016), particularly invoking religious and nationalist themes. Such disinformation narratives were not arbitrary; they were deliberately structured to resonate with emotional and ideological affiliations, effectively polarizing voters along deeply entrenched societal lines. These findings align with existing literature, which indicates that disinformation propagates more effectively when it engages with pre-existing identity divisions (Disinformation in the City: Response Playbook).

Figure 1 illustrates the trend in total mentions of various hashtags across multiple media types throughout the monitored period. The data reveals that the hashtag #2019GantiPresiden consistently attracted higher engagement relative to others, reflecting the public's interest and involvement in this disinformation campaign.

Social Network Analysis

The Social Network Analysis (SNA) provided further insights into the spread of disinformation within Jakarta's urban digital landscape. By examining user interaction patterns, it became evident that a limited number of highly influential accounts, commonly referred to as "buzzers," were pivotal in amplifying disinformation. These key users, identified through their high centrality scores, functioned as central nodes in the network, facilitating

the broad dissemination of false narratives across various digital communities (McCoy et al., 2018). The findings align with the framework provided in the "Disinformation in the City Playbook", which emphasizes how urban environments—due to their density and digital connectivity—serve as key entry points for disinformation campaigns.



Figure 2 - Social Network Analysis: Retweet Network of Hashtags #KoalisiPrabohong and #BapakHoaxNasional (October 4-5, 2018)

The Social Network Analysis: Retweet Network (as illustrated in Figure 2) reveals the polarization within the digital space surrounding the hashtags #KoalisiPrabohong and #BapakHoaxNasional. These hashtags were primarily used to discredit political opponents, with network density showing distinct, polarized clusters of misinformation sharing. As described by the Playbook, the characteristics of urban digital spaces, including high connectivity and fragmented user bases, create an ideal environment for such polarization (Arianita et al., 2021). Central to this process were influential accounts that played a crucial role in connecting users from different clusters, maximizing the reach and impact of the disinformation campaign.

The employment of identity politics in disinformation campaigns during the 2019 elections significantly contributed to the polarization of public opinion. Many hashtags and narratives that gained traction, such as #KoalisiPrabohong and #BapakHoaxNasional, were designed to weaponize religious and ethnic identities—a phenomenon not unique to Indonesia, as outlined in the Disinformation in the City Playbook. The Playbook highlights how disinformation actors exploit identity-based content to stoke societal divisions, and Jakarta's diverse urban population was particularly vulnerable to this strategy.

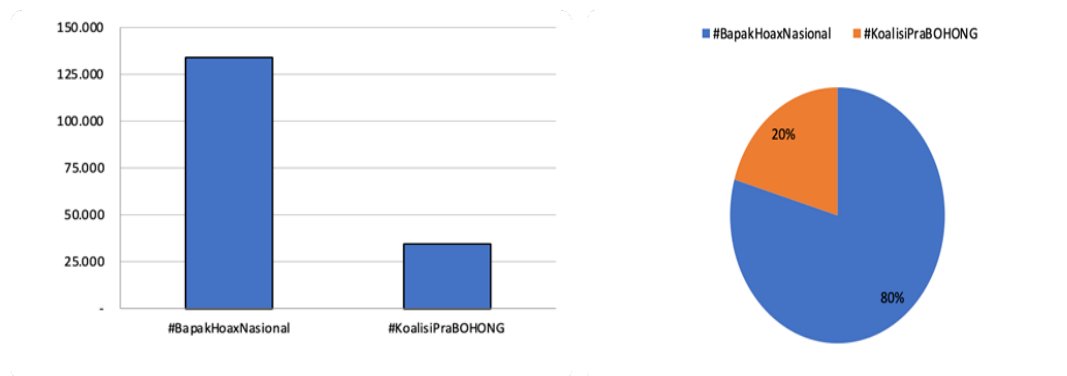


Figure 3 - Total Mentions for #KoalisiPrabohong and #BapakHoaxNasional (October 4-5, 2018)

Source: author

Analysis of online discussions (Figure 3) surrounding these hashtags further reveals that the most engaged users often framed their arguments in religious or nationalistic terms, exacerbating societal divisions. This supports the Playbook's assertion that urban areas, with their diverse populations and socio-political complexities, are especially susceptible to the polarizing effects of identity-based disinformation. The prevalence of emotionally charged issues suggests that disinformation campaigns in urban environments are designed to target and manipulate deeply rooted social fractures (Bakir & McStay, 2018).

Further analysis indicated that the highest engagement with disinformation content occurred in urban districts characterized by high internet penetration (Aleinikoff, 2000). These areas also boast a significant concentration of younger voters, who rely heavily on social media for political information, rendering them more susceptible to the spread of misinformation. The role of digital infrastructure in urban areas, noting that high levels of connectivity create fertile ground for disinformation to proliferate. The influence of central nodes within disinformation networks, coupled with the demographic characteristics of their audiences, underscores the challenges urban environments face in curbing the dissemination of false narratives.

Urban Vulnerability and Identity Politics

The results also highlight the specific vulnerabilities of urban environments to disinformation, particularly when compounded by the dynamics of identity politics. In the analysis of content related to the 2019 elections, a strong correlation between disinformation and identity-based appeals emerged. Religious and ethnic narratives were frequently employed to polarize public opinion, often positioning candidates as either defenders or adversaries of religious or ethnic groups (Schudson, 2008). Such content resonated deeply with voters in districts where political affiliations and religious identities were closely intertwined, thereby accelerating the spread of divisive and emotionally charged misinformation.



Figure 3: Impact of Disinformation and Identity Politics: Riots Following the 2019 Elections

This pattern aligns with broader trends outlined in the Disinformation in the City Playbook, which underscores the role of identity politics in creating fertile ground for disinformation within urban environments. The Playbook emphasizes that urban areas, due to their demographic diversity and high levels of digital connectivity, are especially vulnerable to disinformation strategies that exploit identity-based tensions. The Jakarta case provides a compelling example of this dynamic, where the convergence of political and religious identities created a favorable environment for disinformation to proliferate (Benhabib, 2013). In such contexts, the strategic manipulation of identity often proves more emotionally resonant than factual argumentation, as these narratives leverage deep-rooted societal divisions to polarize public opinion.

Urban planners are critical to addressing the spread of disinformation, as the design and structure of urban environments—both physical and digital—significantly influence how rapidly false narratives propagate. The case of Jakarta's 2019 elections illustrates how disinformation can exploit fragmented urban settings characterized by high digital connectivity and social complexity. Similar patterns have been observed in global

cities such as São Paulo and New York, where disinformation has exacerbated social divisions and undermined public trust, particularly during politically charged periods (Bradshaw & Howard, 2019; Wardle & Derakhshan, 2017). These examples underscore the need for urban planners to engage with strategies that integrate physical infrastructure planning with digital resilience initiatives, thereby fostering social cohesion and mitigating the detrimental impacts of disinformation.

The deployment of religious identity politics in Jakarta is consistent with the analysis of (Prayogi & Fahadayna, 2024), who contend that such tactics have become a defining feature of electoral disinformation in Indonesia. The exploitation of identity-based narratives not only deepened existing societal tensions but also escalated into violent riots during and after the election. These riots serve as a stark representation of the tangible effects of disinformation rooted in identity politics, highlighting the significant challenges associated with managing disinformation in urban settings. In these environments, where the stakes are high and social dynamics are fragile, disinformation can swiftly inflame public sentiment and lead to widespread unrest.

The *Disinformation in the City Playbook* further underscores the risks associated with unchecked disinformation in urban areas, particularly those marked by high digital connectivity and demographic diversity. The Playbook emphasizes that the intersection of these factors creates an environment where disinformation can thrive, fueling social division and, in extreme cases, triggering real-world violence. This convergence represents a critical challenge for policymakers and city planners, as the capacity of digital disinformation to exploit societal fissures continues to grow.

Implications for Urban Policy

The findings from this study have significant implications for urban policy, particularly in addressing the vulnerability of cities to disinformation (McCoy et al., 2018). The rapid spread of false information during the 2019 elections underscores the need for more robust digital literacy programs that target urban populations, particularly younger, more socially engaged demographics. Enhancing public understanding of how to identify and counter misinformation is critical in mitigating its effects on democratic processes.

Additionally, policymakers must consider the regulatory frameworks governing the role of social media influencers, who, as this study shows, play a critical role in the amplification of disinformation. Platforms must be held accountable for the content shared by their users, and policies should be developed to limit the reach of disinformation, particularly during sensitive periods like elections. The creation of rapid response units that can debunk false information in real time could also be a valuable tool in curbing the influence of disinformation in urban areas (Van Dijck et al., 2018).

The results further emphasize the importance of a multi-stakeholder approach to combat disinformation. Collaboration between local governments, social media platforms, and civil society organizations is essential to create a more resilient information ecosystem in urban areas. By addressing the unique vulnerabilities of cities, policymakers can better protect the integrity of democratic processes and foster greater public trust.

CONCLUSION

This study highlights the susceptibility of urban environments to rapid disinformation spread due to high connectivity and dense social networks, as evidenced by the 2019 elections, where social media "buzzers" amplified divisive content. The merging of political and religious identities in these campaigns further polarized urban communities, threatening democratic processes. Urban planners and policymakers must design cities that are resilient to these challenges, recognizing that both physical and digital infrastructure shape information flow. Strategies for combating disinformation include promoting digital literacy through programs in public spaces to help residents critically assess social media content, fostering inclusive communities by creating shared public areas that enhance social cohesion, and leveraging technology for real-time disinformation monitoring. Transparent communication networks, in partnership with local governments, enhance trust by providing residents with reliable information. Moreover, collaboration among city officials, social media platforms, civil organizations, and the private sector is vital, as disinformation is a complex issue requiring a unified response. In conclusion, urban planners play a crucial role in building cities resilient to disinformation by promoting literacy, cohesion, smart technology, and partnerships, thereby protecting democratic values and public trust in an increasingly interconnected urban landscape.

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