



Intermedia Agenda-Setting in Pakistan's Hybrid Media System: A Longitudinal Cross-Lagged Analysis of X and Television News

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ABSTRACT

The emergence of a hybrid media system has shifted the agenda-setting process from one-directional to two-way, as social media and mainstream news media interact constantly. In Pakistan, the influence of the social media platform X (formerly Twitter) and television news channels is growing more influential in the realm of political and public discourse. Intermedia agenda-setting dynamics between X and prime-time television news channels (Geo News, ARY News and Samaa TV) have been explored in the context of this study with the help of longitudinal quantitative content analysis. Data were collected using a purposive sampling technique during 16–31 January 2023 and 16–31 January 2025, with descriptive statistics, cross-lagged correlation analysis, and the Rozelle–Campbell Baseline used to analyze the data. The results show a statistically significant but relatively weak bidirectional relationship between the agendas of X and television news. But the relationship is significant and more enduring in one direction than the other, with X influencing television news more than television news influencing X. There is less stability in television news's agenda, and it is more responsive to issues that arise on X. The study shows that X is becoming an agenda setter and television news is becoming an agenda amplifier and legitimizer of the agenda in Pakistan's hybrid media system.

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INTRODUCTION

The contemporary media landscape has changed dramatically with the quick growth of digital technologies and algorithm-based communication platforms. The role of traditional media as "gatekeepers" of information is no longer exclusive, but digital media are increasingly influencing political discourse and issues visibility. This transformation has led to the development of a hybrid media system in which traditional and new media co-evolve, compete, and interact in the process of agenda setting (Chadwick, 2017; Reuters Institute, 2025).

Within this environment, social media platforms have emerged as key players influencing public communication. Among them, X (formerly Twitter) has a significant influence in political communication, news diffusion and real-time public engagement. It has hashtag systems and algorithmic trending features that enable issues to become visible and to be spread across media ecosystems quickly and widely (Bruns & Burgess, 2016; Jungherr, 2023).

This shift has gone against the traditional agenda-setting theory suggested by McCombs and Shaw (1972) who proposed that mainstream media is the biggest influence on the salience of issues. In digital world, audiences are no longer passive recipients, but are active participants in content creation and dissemination. Therefore, the formation of an agenda has been shifted to a decentralized and networked approach (Guo, 2024).

Intermedia agenda-setting theory, in turn, builds on the traditional agenda-setting theory by analyzing how media platforms influence the priorities of each other (McCombs, 2014; Harder et al., 2017). As revealed by recent research, the influence of the agenda has become a two-way street between social media and traditional media, where the extent of influence is not always even. Social media is often the first to sense and traditional media offers institutional endorsement and propagation.

Empirical research further confirm that the dynamics of the intermedia agenda are influenced by platform visibility, political context and algorithmic amplification. In recent studies, for instance, the role of social media in mainstream news selection has been revealed to be growing in significance, and the voice of traditional media is still dominant in legitimizing online news discourse (Gil de Zúñiga et al., 2024; Su & Xiao, 2024). These results indicate a networked media environment as opposed to discrete media effects.

Such phenomena are even more pronounced in developing democracies, where polarization and increasingly complex digital infrastructure exist. In this context, Pakistan is an important country to look at because although the use of television news was very strong, the use of social media is on the rise, at a rapid pace (DataReportal, 2025; Pakistan Telecommunication Authority, 2025). Television channels like Geo News, ARY News, and Samaa TV are still very much influencing the political discussion locally, and X is now a vital platform for political discussion and communication among the elite (Pew Research Center, 2024).

Pakistani political players are actively using X for real-time action, messaging and opinion shaping. Meanwhile, TV news is regularly incorporating social media into programs, and web-based conversations are often commenting on the political reporting of television. This signals a new hybrid media ecology, where agenda building takes place on many platforms that are mutually connected (Chadwick, 2017; Reuters Institute, 2025).

However, empirical studies on the directionality of intermedia agenda-setting in Pakistan are still scarce. Existing research tends to examine either the traditional agenda-setting effects or the overall use of social media, but not cross-platform, systematic agenda transfer. Furthermore, very few studies use a longitudinal research design and/or cross-lagged model to test the causality of the relationship between media agendas (Harder et al., 2017; Qaisar & Sultan, 2021).

Theoretically, this gap is important since it refines the understanding of whether or not social media precedes, follows, or co-evolves with traditional media to influence public agendas. Thus, the study looks into the intermedia agenda-setting dynamics between X and television news channels in Pakistan through the longitudinal cross-lagged analysis approach.

The study helps to fill the intermedia agenda-setting research, and also builds on hybrid media system theory by offering empirical evidence in a developing democratic setting in which the digital and traditional media are increasingly co-producing public agendas.

PROBLEM STATEMENT

Pakistan's news media landscape has seen significant changes in recent years, as digital platforms like X (formerly twitter) have grown in popularity, while traditional TV news

channels remain dominant. In this hybrid media system, the concept of issue salience is not solely fashioned by newsroom gatekeeping, but is more and more being shaped through interactions with social media trends and television news agendas (Chadwick, 2017; Klinger & Svensson, 2015; Reuters Institute, 2025).

While the relationships between social media and traditional media are mostly found to be context-sensitive, asymmetrical, and reciprocal (Harder et al., 2017; Guo & Vargo, 2020; Su & Xiao, 2024), there is limited empirical evidence from developing media systems like Pakistan. In particular, it remains uncertain whether X serves as the primary agenda setter, whether television news continues to lead the agenda-setting process, or whether both platforms mutually influence each other's issue salience over time (McCombs, 2014; Neuman et al., 2014; Chen et al., 2024).

Most of the existing studies conducted on agenda-setting effects in Pakistan are built around traditional agenda-setting effects, political communication or social media consumption patterns, which do not follow the analytical designs of longitudinal or cross-lagged designs to explore the direction of agenda transfer between platforms (Yousaf, 2022; Pasha, 2021; Pakistan Telecommunication Authority, 2025). Consequently, there is no systematic evidence that explains the movement of issue agendas between X and TV news channels and to what extent in Pakistan's hybrid media ecology.

The gap hinders the theoretical framework of intermedia agenda-setting in non-Western settings (Chadwick, 2017; Vaccari et al., 2015; Gil de Zúñiga et al., 2024) and understanding the contemporary process of agenda building. Hence, it is needed to conduct a rigorous empirical investigation to clarify the direction, intensity and reciprocity of agenda influence between X and TV news in Pakistan by way of a longitudinal cross-lagged analysis.

But, no systematic cross-lagged longitudinal evidence exists in Pakistan that takes a cross-lagged approach to examine the agenda-setting direction (A to B and B to A) between X and television news channels and this creates an empirical and theoretical gap in the study of hybrid media. (Qaisar & Sultan, 2021; Harder et al., 2017).

OBJECTIVES OF THE STUDY

This study aims to analyze the intermedia agenda-setting dynamics between X (formerly Twitter) and television news channels in the hybrid media environment in Pakistan. In particular, the objectives are:

- To analyze the agenda-setting process of intermedia relations between X and television news channels in Pakistan.
- To find the relationship between the trending topics on X and agenda coverage on prime time television news channels in Pakistan.
- To examine the level of influence of trending issues on X over TV news agenda in Pakistan.

RESEARCH QUESTIONS

RQ1: What is the relationship between the trending topics on X and agenda setting on television news channels in Pakistan?

RQ2: To what extent do topics that trend on X influence the television news agenda in Pakistan?

RQ3: How much does television news coverage impact issue salience and conversation around X in Pakistan?

RESEARCH HYPOTHESES

H1: The relationship between trending topics on X and agenda coverage on television news channels in Pakistan is statistically significant.

H2: The trending issues on X have statistically significant influence on news agenda of prime time television news in Pakistan.

H3: TV news has a statistically significant influence on issue salience and discussion of X in Pakistan

LITERATURE REVIEW

1. Agenda-Setting Theory in Contemporary Media Environments

The agenda-Setting Theory is among the most influential theory in the field of media studies, since it is used to explain why the media have such an influence on public perceptions of the importance of a subject. The theory suggests that the media does not necessarily dictate people's thoughts but it has a profound impact on their thoughts (McCombs & Shaw, 1972).

Agenda-setting theory has come a long way from first-level agenda setting (issue salience) to second-level agenda setting (issue attributes) and network agenda setting (issue framing and relationships) over the years (McCombs, 2014; Guo, 2024).

In today's digital world, the process of forming an agenda has become more complex. Recent research indicates that the agenda-setting process is not a linear and direct one from media to audience. Instead, the salience of issues is created by the interplay between journalists, politicians, algorithms, and audiences in networked communication systems (Gil de Zúñiga et al., 2024; Guo & Vargo, 2020). The transformation is particularly pronounced in digital ecosystems, where social media platforms provide faster information flows and now shape news choices for traditional media more than ever before (Chen et al., 2024; Neuman et al., 2014; Su & Xiao, 2024).

2. Intermedia Agenda-Setting in Hybrid Media Systems

Intermedia Agenda-Setting builds upon the original Agenda-Setting theory by looking at the influence of one media product on the agenda priorities of another over time (McCombs, 2014). The intermedia agenda-setting process is of special concern in the Hybrid Media System as digital and legacy media are not independent, but deeply interconnected (Chadwick, 2017).

Empirical studies recently conducted show a two-way influence of agenda in social and traditional media; sometimes it's not equal. Research has demonstrated that mainstream news and X can have a great impact on each other's issue priorities, especially during politically significant situations (Su & Xiao, 2024). This indicates a dynamic and interactive transfer of the agenda and its high sensitivity to time and place (Gil de Zúñiga et al., 2024).

3. Social Media (X) as an Agenda Initiator

From being a participatory communication platform, X (formerly Twitter) has become a key agenda setter in political and journalistic communication. The hashtag, the trending algorithm, and the real-time engagement all help to amplify issues quickly, sometimes before mainstream media coverage starts (Bruns & Burgess, 2016; Jungherr, 2023; Pew Research Center, 2024).

Recent research shows that journalists are more likely to follow X as real-time indicator of emerging issues, unfolding, popular opinion, and current events (Chen et al., 2024; Su &

Xiao, 2024). This shift has also caused changes in the way agendas are set, as social media is often used to initial news selection, and to drive further media coverage (Gil de Zúñiga et al., 2024; Guo & Vargo, 2020; Harder et al., 2017).

However, agenda-setting influence of social media depends on the nature of the issue, the politico-social context and news values. Rarely complex policy-related topics are more susceptible to the influence of traditional media institutions on X, whereas emotionally charged and more visible topics tend to throw off more momentum in a short period of time (Gilardi et al., 2022; Langer & Gruber, 2021; Vaccari & Chadwick, 2024).

a. Television News as Agenda Amplifier and Legitim�izer

Despite rapid digital transformation, television news remains a powerful force in legitimizing and stabilizing public agendas. Traditional media continue to hold institutional authority, editorial control and widespread audience reach, and have the power to turn fleeting online conversations into lasting public debate (Chen et al., 2024; Harder et al., 2017).

Television is often an agenda amplifier, picking up issues that gain momentum online and reframing them in institutional journalistic stories. Through this process, online discussions that are the main focus of this process become more widely publicized and legitimate. Finally, television has significant agenda-setting power when dealing with politically important and salient events because of its dependence on official sources and established journalistic habits (Neuman et al., 2014; Su & Xiao, 2024). So while television is faced with a challenge at the hands of digital platforms, it still plays an important role in agenda setting.

b. Bidirectional Dynamics and Asymmetry in Agenda Transfer

The current research has revealed to be consistently intermedia agenda-setting is both two-way and asymmetric. X has an influence on TV and TV has an influence on X, but the extent, rate, and durability of impact varies by platform (Harder et al., 2017; Su & Xiao, 2024).

Short term influence of social media and its impact on news selection has been shown as being more pronounced, as it brings up issues quickly and easily. Conversely, television news tends to have slower but more persistent impacts on online conversations, due to the institutional credibility and framing of television news (Chen et al., 2024). Agenda transfer

research also suggests that the process of agenda transfer be considered a dynamic, temporal process and not a static relationship.

c. Intermedia Agenda-Setting in Developing Democracies

For the development of democracy, intermedia agenda-setting is more complicated in developing countries, especially in democracies as a result of political polarization, regulatory issues, and differential digitalization. The situation in Pakistan is quite interesting because the influence of TV news is still substantial, and digital media are gaining momentum.

Recently, the X platform is considered a significant medium for political communication, communication among the elite and instant communication with the masses in Pakistan (Yousaf, 2022). Meanwhile, TV stations are increasingly using social media conversations to produce news, creating greater link between online and offline media (Hussain et al., 2020).

Empirical studies in Pakistan are, however, limited, especially with regard to longitudinal and cross-lagged designs. Existing studies are mostly descriptive or cross-sectional, which do not allow for causal or directional relationships between the media platforms to be drawn. This gap hampers the understanding of agenda transfer in the changing media ecology in Pakistan.

RESEARCH GAP

Although intermedia agenda setting is recognized and documented at the international level, empirical studies are scarce on intermedia agenda setting in the context of South Asian hybrid media systems and very few studies using longitudinal cross-lagged analysis (Harder et al., 2017; Su & Xiao, 2024). In Pakistan, it is not clear whether X primarily drives television news agendas or whether television news still dominates agenda-setting for issues (Data Reportal, 2025; Pakistan Telecommunication Authority, 2025).

Furthermore, advanced methods of analysis like cross-lagged correlation and Rozelle–Campbell Baseline are not widely used in Pakistan for scholarship to substantiate the transfer of direction (Kenny, 2005; Rozelle & Campbell, 1969). The lack of this methodological approach limits the scope of theories on intermedia agenda-setting in non-Western democratic context (Gil de Zúñiga et al., 2024; Guo, 2024). Thus, this study aims to fill this void by

analyzing the nature, intensity, and reciprocity of the agenda transfer between X and television news in hybrid media environment in Pakistan.

METHODOLOGY

RESEARCH DESIGN

This study with a quantitative research design adopted the longitudinal content analysis approach to analyze intermedia agenda-setting relationship of X (formerly Twitter) and television news channels in Pakistan. Neuendorf (2017) suggests that quantitative content analysis is suitable to systematically identify patterns, frequencies and issue salience across media platforms in a reliable and replicable way.

To see if there was a temporal transfer of the agenda, as occurs in intermedia agenda-setting, a longitudinal design was used (McCombs, 2014; Guo, 2021). This design allowed for tracking the salience of issues over time and allowed for the analysis of bidirectionality between digital and traditional media. It was not a qualitative design, because the study required measurable indicators of issue salience and temporal relationships between media agendas, instead of interpretive analysis of content meaning.

The research was based on Agenda-Setting Theory, Intermedia Agenda-Setting Theory, and Hybrid Media System Theory, which explain how the priorities of issues are carried across interconnected media systems (Chadwick, 2017; Westlund, 2024).

SAMPLING TECHNIQUE

The study employed purposive sampling because the content of both media was chosen to be suitable for the study. However, because the research was focused on issues that are salient and relevant to politics, the selection of these participants was deemed to be appropriate, as they are not limited to entertaining or irrelevant content but are relevant to the agenda-setting processes (Etikan et al., 2016; Neuendorf, 2017). This sampling process, however, was designed to allow for the inclusion of meaningful agenda-building processes on both platforms.

STUDY PERIOD

The data were collected during two similar observation periods: January 16–31, 2023 and January 16–31, 2025. Several reasons were given for choosing January: it allowed for

similar timeframes of observation that included active political discussions, and it also minimized the seasonal variations in media coverage (McCombs, 2014; Guo & Vargo, 2020).

These periods were chosen because they reflect the dynamics of the short-term agenda and to examine the shifts in the influence of intermedia in two contrasting political settings of Pakistan (Chadwick, 2024). Agenda-setting studies may rely on short observation windows to identify patterns of agenda transfer in the short term and/or issue prioritisation in the day-to-day (Guo & Vargo, 2020; Guo, 2023).

UNITS OF ANALYSIS

Two media: the unit of analysis depended on the different content structures. Content analysis is the unit of analysis that is the smallest meaningful segment that is selected for systematic examination (Krippendorff, 2019).

The unit of analysis for X (formerly Twitter) were daily trending hashtags, trending keywords and dominant issue topics. The unit of analysis for television news was news stories transmitted in prime time news broadcasts. The comparisons were done at the level of each unit to explore the salience of each agenda and the influence of each medium on the other. The comparisons were made at the unit level, as cross-platform comparisons of agenda salience and intermedia influence were conducted (McCombs, 2004; Guo, 2023; Vargo, 2022).

DATA COLLECTION PROCEDURE

Data were collected from X using one of the researcher's personal account set up to keep an eye on the Pakistani trends. Data was collected every day from 10:00 a.m. to 8:00 p.m. The top 10 most popular topics were chosen for each day, to represent the most salient topics on the agenda (McCombs, 2004; Guo, 2023).

Only tweets that had over twenty engagements (likes, retweets or comments) were taken into account and individual posts, jokes or irrelevant information were avoided. This strategy guaranteed uniform real-time data gathering, reduced algorithmic biases, and the opportunity to apply strict inclusion requirements, including engagement levels (Jungherr, 2016; Murthy, 2018; Bruns, 2022).

Television data were gathered for News television broadcasts on Geo News, ARY News, and Samaa TV during prime-time news bulletins from 8:00 pm to 10:00 pm. This time period was chosen because the prime time bulletin is generally viewed and has an even greater

agenda setting power than other times of the day in television journalism (McCombs, 2004; Chadwick, 2024). All political and public affairs news broadcasts from this period were taped and coded for analysis.

OPERATIONAL DEFINITIONS

Intermedia agenda setting is the process by which an issue agenda of one media is set by another media. In this study, it means the direction and intensity of the transfer of issues from X to television news. Issue salience is the perceived importance of an issue, as determined by frequency of and prominence in coverage (McCombs, 2014; Guo, 2023).

Operationalization in terms of issue salience was determined by the frequency, repetition across time and prominence within each platform (Neuendorf, 2017; Krippendorff, 2019). Agenda stability measures how consistent were the priorities of issues across time within the same medium and was determined by stability coefficient between time intervals (Guo, 2023).

CODING SCHEME AND CATEGORIES

To classify the content according to content analysis procedures, the thematic issue categories were determined in accordance with a structured coding sheet developed as a result of the content analysis procedures (Neuendorf, 2017; Krippendorff, 2019). The categories ranged from political corruption and governance, to sports, judicial affairs, military affairs, security and crime, economic crisis, foreign affairs, energy crisis, health, culture and entertainment, human rights, flood and weather, environmental issues, education and others (miscellaneous).

Issues were coded by issue category, frequency, prominence, and media source for each item. The coding scheme was designed based on the previous agenda setting studies and modified to the context of the Pakistani media (McCombs, 2004; Guo, 2023).

RELIABILITY AND VALIDITY

Reliability and validity of the data were ensured by following established content analysis procedures (Neuendorf, 2017; Krippendorff, 2019). A coding guideline was developed, and a pilot study was conducted on 10% of the data to refine the coding categories, in line with the recommendations for pilot testing research procedures before the actual data

collection (Connelly, 2008). The researcher coded the entire dataset, and the coded data were reviewed for accuracy and consistency using the coding guideline. Content validity was established through pilot testing and the refinement of the coding categories (Creswell & Creswell, 2018).

DATA ANALYSIS TECHNIQUES

The collected data were analyzed using descriptive statistics, cross-lagged correlation analysis and Rozelle–Campbell Baseline with IBM SPSS Statistics. Pearson's correlation coefficients were calculated to estimate the synchronous, autocorrelated (stability) and cross-lagged correlations between X and television news agendas over time periods (Cohen, 1988).

Frequency distribution, dominant issue categories and platform-wise coverage pattern were examined using descriptive statistics. To analyze the directionality of the agenda influence, the use of cross-lagged correlation analysis was used to determine if issue salience at Time 1 predicted television agenda at Time 2, and television agenda at Time 1 predicted issue salience at Time 2 (Kenny, 2005).

To validate these results, the Rozelle–Campbell Baseline was used to identify if the observed cross-lagged correlations were greater than random chance associations, indicating meaningful direction of agenda transfer (Rozelle & Campbell, 1969; Guo, 2023). Positive baseline values suggested that there was an agenda transfer between media platforms, rather than random covariance. This analytical framework allowed for the assessment of direction of agenda transfer, strength of the influence, and stability of the issues over time.

Platform-Level Agenda Aggregation

The cross-lagged correlation analysis was based on an agenda level and not an individual outlet level. Consequently, the social media agenda comprised of tweets from X and the composite television agenda comprised of the frequency of the news items from the Geo News, ARY News and Samaa TV.

Aggregation minimized the editorial bias of individual outlets and allowed for the analysis of media-type patterns of agenda, as previous intermedia agenda-setting studies have focused on agenda transfer across media types instead of outlet types (McCombs & Shaw, 1972; Conway

et al., 2015; Harder et al., 2017). So, results need to be understood as between media agenda relationships and not as one-to-one media outlet effects.

RESULTS

Descriptive Analysis

Descriptive analysis was used to explore the general trends, frequency and distribution of the issues addressed in X and television news media. The aim of this analysis is to highlight the dominant themes and compare the prevalence of them across the selected media platforms.

Figure 1: Overall Issues Coverage across Media Platforms

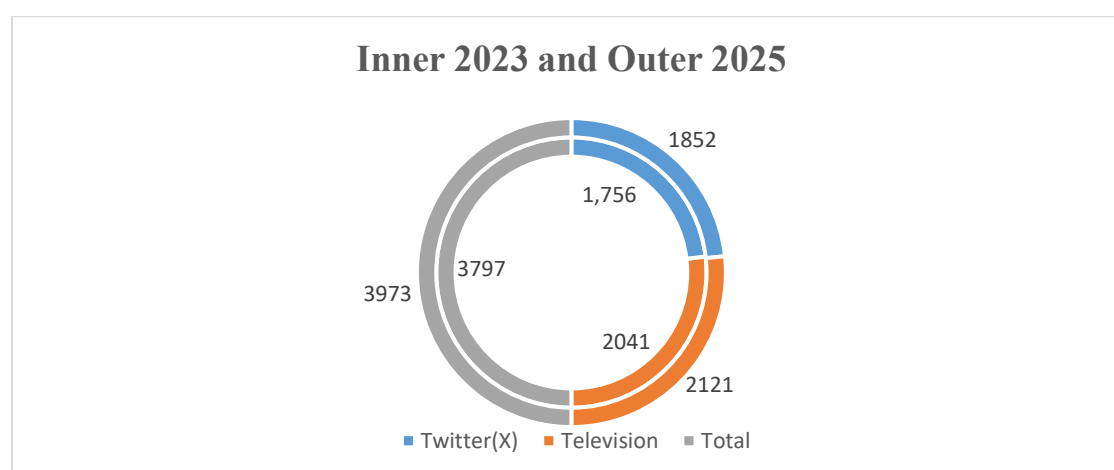


Figure 1 presents the overall distribution of issue coverage across X and television news channels (Geo News, ARY News, and Samaa TV) in 2023 and 2025. For visualization, numbers are shown, the inner ring shows the 2023 data and outer shows the 2025 data.

Table 1: Frequency of News across Media platforms

Media Type	Year, 2023	Year, 2025	Total
X	1,756	1852	3608
TV Channels	2041	2121	4162
Total	3797	3973	7,770

Table 1 presents the overall frequency of news items across X and television news channels in 2023 and 2025. The coverage of television news was the highest (4,162 items), followed by X (3,608 items). In total, 7,770 news items were studied during the study period.

Table 2: Frequency of News Week Wise across Media platforms

Media Type	Year, 2023			Year, 2025		
	Week, 1	Week, 2	Total	Week, 1	Week, 2	Total
X	881	875	1756	943	909	1852
TV Channels	1045	996	2041	1090	1031	2121
Total	1926	1871	3797	2033	1940	3973

Table 2 shows the distribution of news stories by weeks for both X news and television news channels for 2023 and 2025. Television consistently had more news coverage than X both weeks and years. The overall production of news rose slightly in 2025, but there was slightly more production on both platforms in Week 1 than in Week 2.

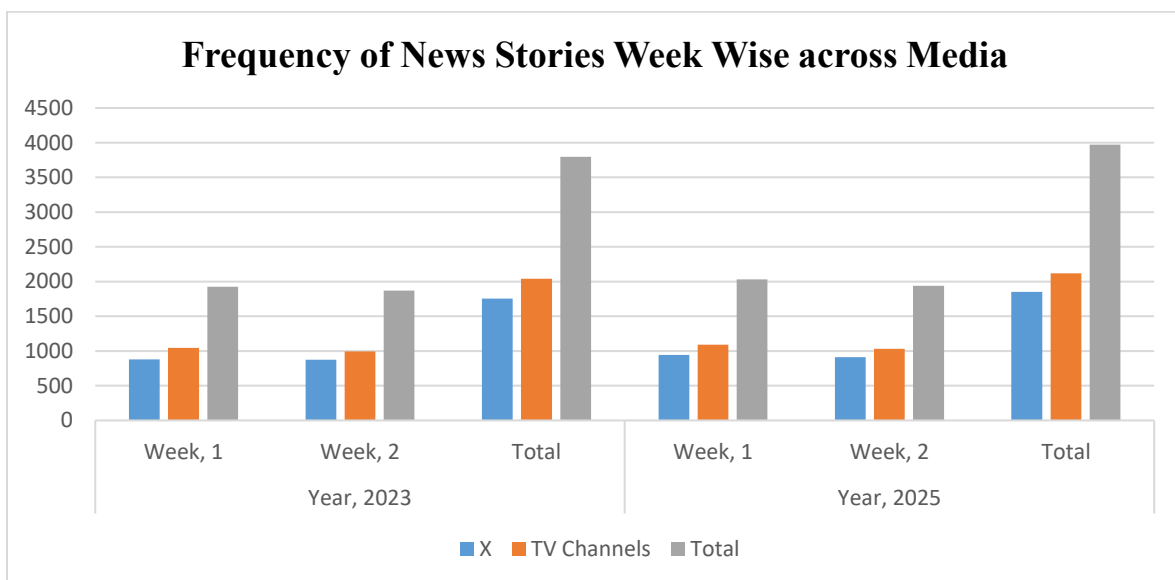
Figure 2: Frequency of News Stories Week Wise across Media

Figure 2 displays the week-wise news coverage across X and TV news channels for 2023 and 2025. Overall, news coverage was slightly higher in 2025 than in 2023, with both platforms seeing marginally more coverage in Week 1 than Week 2.

Table 3: Distribution of Issue Coverage across Media Platforms

Sr.	Issue Categories	X				TV Channels			
		2023		2025		2023		2025	%
		N	%	N	%	N	%	N	%
1	Political, Corruption, and Governance	165	9%	166	9%	291	14%	299	14%
2	Sports	144	8%	147	8%	122	6%	128	6%
3	Judicial Matters	162	9%	167	9%	185	9%	192	9%
4	Military	126	7%	135	7%	150	7%	153	7%
5	Security, Kidnapping, and Crime	152	9%	159	9%	163	8%	169	8%
6	Economic Crisis	95	5%	105	6%	125	6%	128	6%
7	Foreign Affairs	158	9%	164	9%	112	5%	118	6%
8	Energy Crisis	90	5%	99	5%	116	6%	119	6%
9	Health	97	6%	107	6%	96	5%	99	5%
10	Cultural Events	109	6%	115	6%	116	6%	122	6%
11	Human Rights	98	6%	103	6%	110	5%	114	5%
12	Flood and Weather	78	4%	85	5%	113	6%	117	6%
13	Environmental Issues	89	5%	95	5%	108	5%	113	5%
14	Education	76	4%	86	5%	104	5%	115	5%
15	Others	117	7%	119	6%	130	6%	135	6%
16	Grand Total	1756	100 %	1852	100 %	2041	100 %	2121	100 %

Table 3 presents the distribution of issue coverage across X and television news channels in 2023 and 2025. Political, corruption, and governance received the highest coverage on television in both years (14%), indicating the continued prominence of political affairs in television news. Political, judicial, security and foreign affairs were the most covered issues, accounting for 9% of coverage each in both years on X. Compared to TV, there was also a relative increase in coverage for sports, at 8%, versus 6%.

Television focused more on economic crisis, energy crisis, flood and weather, and education, however, as compared to other topics. The proportion of stories by issue category

was largely consistent between 2023 and 2025, with an overall increase in the number of stories in 2025 in all but one category. In general, the results indicate that television was more oriented towards the political and public affairs, while X was more diversified in terms of the distribution of the newspaper's coverage of topics.

Cross-lagged correlation analysis

The cross-lagged correlation analysis was conducted between X and selected television channels (Geo News, ARY News, and Samaa TV) to see the direction and degree of influence between social media and television media in 2023 and 2025. The analysis determines whether the changes in X appear before or after the changes in TV coverage, suggesting effects on the inter-media agenda-setting process over time. The cross-lagged analysis was based on 16 daily observations in each study period (16-31 January), resulting in 15 cross-lagged intervals (T1-T2, T2-T3... T15-T16) for comparing the agendas.

Table 4. X and Television channels (Day-Wise Agenda Setting) of 2023

Time	X and TV (r, p-value)	TV and X (r, p-value)	X Stability (r, p-value)	TV Stability (r, p-value)	Rozelle- Campbell [$X_1Y_2 - Y_1X_2$]
T1 and T2	0.142** (0.003)	0.135* (0.004)	0.253** (0.000)	0.031 (0.512)	0.007
T2 and T3	0.141** (0.003)	0.128* (0.007)	0.253** (0.000)	0.021 (0.660)	0.013
T3 and T4	0.142** (0.003)	0.130* (0.006)	0.255** (0.000)	0.021 (0.657)	0.012
T4 and T5	0.142** (0.003)	0.130* (0.006)	0.255** (0.000)	0.021 (0.658)	0.012
T5 and T6	0.142** (0.003)	0.129* (0.006)	0.254** (0.000)	0.020 (0.667)	0.013
T6 and T7	0.141** (0.003)	0.129* (0.006)	0.256** (0.000)	0.020 (0.676)	0.012
T7 and T8	0.141** (0.003)	0.129* (0.007)	0.257** (0.000)	0.019 (0.687)	0.012
T8 and T9	0.143** (0.003)	0.127* (0.008)	0.255** (0.000)	0.020 (0.670)	0.016
T9 and T10	0.144** (0.002)	0.128* (0.007)	0.255** (0.000)	0.020 (0.677)	0.016
T10 and T11	0.144** (0.003)	0.128* (0.007)	0.255** (0.000)	0.020 (0.675)	0.016
T11 and T12	0.144** (0.003)	0.128* (0.007)	0.255** (0.000)	0.020 (0.674)	0.016
T12 and T13	0.144** (0.003)	0.128* (0.007)	0.255** (0.000)	0.020 (0.670)	0.016
T13 and T14	0.144** (0.003)	0.126* (0.008)	0.255** (0.000)	0.019 (0.693)	0.018
T14 and T15	0.144** (0.003)	0.126* (0.008)	0.255** (0.000)	0.019 (0.693)	0.018
T15 and T16	0.140** (0.003)	0.124* (0.010)	0.252** (0.000)	0.017 (0.727)	0.016

* $P < .05$, ** $p < .01$, *** $p < .001$

Table 4 explore the direction and magnitudes of the intermedia agenda-setting relationship between X and TV news channels (Geo News, ARY News, and Samaa TV). A day-wise cross-lagged analysis of X and TV news channels is presented for the year 2023.

The results show that there is a statistically significant but relatively weak bi-directional relationship between X and the television news agenda. Results for the cross-lagged correlation between X and television (X_1Y_2) were consistently significant, $r = 0.140$ to 0.144 ($p < .01$) at every time interval. The findings suggest that issues trending on X modestly influenced the subsequent agenda of television news channels. That is, issues gaining salience on X were somewhat more likely to receive subsequent coverage in television news broadcasts.

In the same way, the cross-lagged correlation of television with X (Y_1X_2) was also significant, ranging from 0.124 to 0.135 ($p < .05$). This suggests the influence of television news on X salience too, but it was weaker than the X salience influence of television.

The stability coefficients provide additional clues about the persistence of the agenda in each medium. The coefficients ranged from $r = 0.252$ to 0.257 (all p values $< .001$), and this suggests that there was relatively little change in the priorities of issues across time on X. By comparison, there was little stability in television news, with the correlation coefficients between the different years ranging from $r = 0.017$ to 0.031 ($p > .05$). The implication here is that the television agendas were less rigid and less resistant to new developments, and more dynamic.

The values of Rozelle–Campbell were positive with an interval ranging from 0.007 to 0.018 . The cross-lagged relationships found were above the expected synchronous relationships, and this was reported as positive baseline values, which suggest that there was meaningful agenda transfer between the two media platforms.

In conclusion, the results from Table 4 provide evidence of statistically significant bidirectional intermedia agenda-setting in 2023 between X and television news, although the effect sizes are relatively small. However, the significant but weak effect of cross-lagged influence from X to television indicates that television was more reactive than television was proactive, in that X appeared to have had a more active role in agenda setting. The findings corroborate the idea that Pakistan's media environment is a hybrid – in which social and

traditional media constantly influence one another in their role of creating and maintaining salience of public issues.

Table 5. X and Television channels (Day-Wise Agenda Setting) of 2025

Time	X and TV (r, p-value)	TV and X (r, p-value)	X Stability (r, p-value)	TV Stability (r, p-value)	Rozelle-Campbell [$X_1Y_2 - Y_1X_2$]
T1 and T2	0.127** (.007)	0.099* (.036)	0.218*** (< .001)	0.026 (.580)	0.028
T2 and T3	0.126** (.008)	0.092 (.051)	0.217*** (< .001)	0.017 (.722)	0.034
T3 and T4	0.126** (.008)	0.094* (.046)	0.219*** (< .001)	0.016 (.729)	0.032
T4 and T5	0.126** (.008)	0.094* (.046)	0.219*** (< .001)	0.016 (.730)	0.032
T5 and T6	0.126** (.008)	0.093* (.049)	0.219*** (< .001)	0.016 (.737)	0.033
T6 and T7	0.125** (.008)	0.094* (.048)	0.221*** (< .001)	0.016 (.743)	0.031
T7 and T8	0.126** (.008)	0.093* (.049)	0.222*** (< .001)	0.015 (.753)	0.033
T8 and T9	0.128** (.007)	0.091(.056)	0.220*** (< .001)	0.016 (.731)	0.037
T9 and T10	0.129** (.007)	0.092 (.054)	0.220*** (< .001)	0.016 (.741)	0.037
T10 and T11	0.129** (.007)	0.092 (.054)	0.220*** (< .001)	0.016 (.739)	0.037
T11 and T12	0.129** (.007)	0.092 (.054)	0.220*** (< .001)	0.016 (.739)	0.037
T12 and T13	0.130** (.007)	0.092 (.054)	0.220*** (< .001)	0.016 (.731)	0.038
T13 and T14	0.129** (.007)	0.090 (.061)	0.219*** (< .001)	0.015 (.756)	0.039
T14 and T15	0.129** (.007)	0.090 (.061)	0.219*** (< .001)	0.015 (.756)	0.039
T15 and T16	0.126** (.008)	0.088 (.066)	0.217*** (< .001)	0.013 (.786)	0.038

Table 5. Analyzes the direction and strength of intermedia agenda-setting relationships between X and television news channels (Geo News, ARY News and Samaa TV) for the day-wise cross-lagged correlation for 2025, to explore the intermedia agenda-setting relationships in Pakistan's hybrid media environment.

The findings show that X continues to exert a statistically significant but modest influence on the television news agenda. For all the time periods, the cross-lagged correlations of X_1 to Y_2 range from 0.125 to 0.130 ($p < .01$). This suggests that topics gaining higher visibility on X modestly predict subsequent television news coverage. This implies that problems that are becoming News likeness on X will directly influence the next day's TV news coverage. That is, TV channels are increasingly turning to trends on social media for cues to choose and prioritize news.

Television news' influence over X is relatively weak, however. The cross-lagged correlations of television with X (Y_1X_2) vary from $r = .088$ to $.099$ with some being “marginal”

or not significant ($p > .05$ at some points). This means that the news program on television can influence the agenda of online discussion, but it is not as strong or predictable as the contrary influence.

The stability coefficients further underscore some significant distinctions between the two media platforms. Issue salience on X is relatively stable over time, as evidenced by coefficients ranging from $r = 0.217$ to 0.222 ($p < .001$). On the other hand, the stability of TV news is very weak and statistically insignificant, ranging from $r = 0.013$ to 0.026 ($p > .05$). This shows the event-driven and highly responsive character of TV news agendas, which seldom have stable issue hierarchies.

The values for the Rozelle–Campbell Baseline (0.028 to 0.039) are positive across all intervals, suggesting that the relationships between the variables are greater than would be expected to be found with random or purely synchronous associations. This validates that there is a meaningful intermedia agenda transfer between X and television news channels.

Overall, the results of Table 5 indicate an asymmetric agenda-setting relationship, with X exerting a statistically significant but relatively modest influence on television news, while television's influence on X appears weaker and less consistent. Television news is still sensitive to online conversation, though its impact on social media agendas is less significant. The findings further support the view of the media environment in Pakistan as a hybrid media ecology marked by frequent but unequal interactions of agendas between digital and traditional media outlets.

Table 6. Hypotheses Summary

Hypotheses	Conclusion	Direction of Influence	Key Insight
H1: Significant relationship exists between X and TV	Supported	Bidirectional	Weak but statistically significant positive relationship
H2: X influences TV agendas	Supported	$X \rightarrow TV$	X has slightly stronger agenda-setting influence
H3: TV influences X agendas	Partially Supported	$TV \rightarrow X$	TV influence is weaker and less consistent

DISCUSSION

The intermedia agenda-setting dynamics is the subject of this study, where X (formerly Twitter) and TV news media interact in Pakistan, in the context of a hybrid media system (Chadwick, 2017). Results indicate a statistically significant but relatively weak bidirectional relationship between social media and television news agendas, with an asymmetric direction of influence.

The descriptive analysis revealed that X and television news not only covered wide range of political and public affairs issues, but also television news generated more in number of stories. But X was more diverse in terms of the issues it covered, especially sports and foreign affairs, indicating that social media can serve as a more pluralistic and audience-oriented agenda space. Consistent with this, Papacharissi (2023) point to the agenda-amplifying nature of communication with hashtags.

The cross-lagged analysis revealed statistically significant but modest bidirectional agenda influence in 2023, but that the influence was generally greater in the direction of X on TV news than the other direction. Television's influence on X was lessened on several occasions but was still strong in 2025. The results suggest that Pakistani television is more responsive to digital trends and online public interest. In Pakistan, the use of X for real-time political communication is more active among political actors, journalists, and opinion leaders, where digital discourse can be a vital means of news cues for television channels, which may be more evident in this country. This supports previous studies on intermedia agenda-setting (McCombs, 2014; Harder et al., 2017; Guo & Vargo, 2020).

In both study periods, X's agenda was more stable than television news, suggesting that issue salience on social media is more enduring than that in television news, which tends to be event-driven and reactive (Guo, 2023). This reinforces what Chadwick (2017) has said: "Legacy media are increasingly responding to digitally amplified signals."

Overall, the results indicate that Pakistan's media landscape is a rather dynamic hybrid media ecology in which X now acts as an agenda initiator, while television news remains an agenda amplifier and legitimizer.

CONCLUSION

The present study used the intermedia agenda-setting approach and utilized a longitudinal content analysis and cross-lagged correlation analysis in order to investigate the relationship of intermedia by studying intermedia agenda-setting between the X and television news channels in Pakistan. The results indicate that agenda-setting is two way and unequal in Pakistan (McCombs, 2014).

Influence between X and television news is bidirectional, but the influence of X on television appears relatively stronger and more consistent than the influence of television on X, although both effects remain modest in size. This means that problems that are popular on X have a greater influence on TV media coverage, while the influence of TV on online discussions is relatively smaller (Guo & Vargo, 2020).

The study contributes to the scholarship of agenda-setting and hybrid media system by demonstrating that the traditional media is no longer controlling the agenda-building process in Pakistan. Rather, it is now decentralized and participatory, and digital and traditional media have been shaped and ongoing influencing one another (Chadwick, 2017).

Overall, X is becoming more of an agenda initiator, while television news remains a player at the juncture between agenda amplification and agenda legitimization in the ongoing hybrid media system of Pakistan. The shift in media landscape also represents a shift in the awareness of the public in Pakistan, where digital media takes the focus of public attention and traditional media is continuously validating and amplifying the emerging issues (Harder et al., 2017; Chadwick, 2017).

LIMITATIONS AND FUTURE RESEARCH

The limitations of this study are: The time period is relatively short and the selected television channels and social media platform used is limited. More research needs to be conducted with larger datasets, other platforms (e.g. YouTube and Facebook), and more time to more accurately reflect the changing nature of intermedia dynamics. Furthermore, future research may also incorporate framing and sentiment analysis to gain a more profound understanding of the way in which issues are not just transferred, but transformed, within the media ecology.

REFERENCES

- Abbas, F. (2022). Social media and political discourse in Pakistan. *Pakistan Journal of Social Sciences*.
- Aldaihani, F. M., & Shin, S. Y. (2022). Twitter and agenda setting. *Journal of Social Media Studies*, 9(2), 45–60.
- Ali, M., & Hassan, R. (2023). Television news influence in Pakistan. *Pakistan Media Review*.
- Bennett, W. L., & Segerberg, A. (2012). Digital media and collective action. *Information, Communication & Society*.
- Bruns, A. (2018). *Gatewatching and news curation*. Peter Lang.
- Bruns, A., & Burgess, J. (2016). Twitter hashtags and publics. In *Hashtag publics*. Peter Lang.
- Castells, M. (2012). *Networks of outrage and hope*. Polity Press.
- Chadwick, A. (2013). *The hybrid media system*. Oxford University Press.
- Chadwick, A. (2017). *The hybrid media system: Politics and power* (2nd ed.). Oxford University Press.
- Chadwick, A., & Dennis, J. (2017). Social media logic. *Journal of Communication*.
- Chen, Y., Li, H., & Zhang, W. (2024). Cross-platform agenda dynamics. *New Media & Society*.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Routledge.
- Conway, B. A., Kenski, K., & Wang, D. (2015). Twitter in political campaigns. *Journal of Computer-Mediated Communication*, 20(4), 363–380.
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approach* (5th ed.). Sage.
- DataReportal. (2025). *Digital 2025: Pakistan*. <https://datareportal.com/reports/digital-2025-pakistan>
-

-
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Sampling methods comparison. *American Journal of Theoretical and Applied Statistics*.
- Field, A. (2018). *Discovering statistics using IBM SPSS Statistics*. Sage.
- Gilardi, F., Gessler, T., Kubli, M., & Müller, S. (2022). Social media and political agenda formation. *American Political Science Review*, 116(3).
- Granger, C. W. J. (1969). Investigating causal relations by econometric models. *Econometrica*.
- Gujarati, D. N. (2015). *Econometrics by example*. Palgrave Macmillan.
- Guo, L., & Vargo, C. J. (2020). Fake news and intermedia agenda setting. *Communication Research*, 47(2), 178–200.
- Harder, R. A., Sevenans, J., & Van Aelst, P. (2017). Intermedia agenda setting in the social media age. *Journalism Studies*, 18(3).
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis*. Guilford Press.
- Hox, J. J. (2010). *Multilevel analysis techniques*. Routledge.
- Hussain, M., & Shah, S. (2019). Television dominance in Pakistan. *Global Media Journal*.
- Hussain, S., Khan, A., & Iqbal, M. (2020). Media hybridity in Pakistan. *South Asian Studies*.
- Jungherr, A. (2023). Twitter/X in political communication. In K. Kenski & K. H. Jamieson (Eds.), *The Oxford handbook of political communication* (2nd ed.). Oxford University Press.
- Karamat, M., & Qureshi, A. (2020). Political communication in Pakistan. *Journal of Political Studies*.
- Kenny, D. A. (2005). Cross-lagged panel design. In *Encyclopedia of statistics in behavioral science*. Wiley.
- Khan, R., & Ali, S. (2021). News media and political influence in Pakistan. *Asian Journal of Communication*.
- Klinger, U., & Svensson, J. (2015). The emergence of network media logic. *New Media & Society*, 17(8), 1241–1257.
-

-
- Krippendorff, K. (2019). *Content analysis: An introduction to its methodology* (4th ed.). Sage.
- Landis, J. R., & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics*, 33(1), 159–174.
- Langer, A., & Gruber, T. (2021). News values and digital attention. *Digital Journalism*, 9(7).
- McCombs, M. (2004). *Setting the agenda: The mass media and public opinion*. Polity.
- McCombs, M. (2014). *Setting the agenda: The mass media and public opinion* (3rd ed.). Polity Press.
- McCombs, M. E., & Shaw, D. L. (1972). The agenda-setting function of mass media. *Public Opinion Quarterly*, 36(2), 176–187.
- Meraz, S., & Papacharissi, Z. (2013). Networked gatekeeping and framing. *Journal of Communication*, 63(2).
- Neuendorf, K. A. (2017). *The content analysis guidebook* (2nd ed.). Sage.
- Neuman, W. R., Guggenheim, L., Jang, S. M., & Bae, S. Y. (2014). The dynamics of public attention. *Journal of Communication*, 64(2), 193–214.
- Newman, N., Fletcher, R., Robertson, C. T., Eddy, K., & Nielsen, R. K. (2025). *Reuters Institute digital news report 2025*. Reuters Institute for the Study of Journalism, University of Oxford. <https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2025>
- Pakistan Telecommunication Authority. (2025). *Annual report 2024–2025*. <https://www.pta.gov.pk>
- Pasha, H. A. (2021). Media consumption patterns in Pakistan. *Pakistan Journal of Media Studies*, 8(1), 55–72.
- Rogers, E. M., & Kincaid, D. L. (1981). *Communication networks: Toward a new paradigm for research*. Free Press.
- Rozelle, R. M., & Campbell, D. T. (1969). Panel data procedures. *Psychological Bulletin*, 72(1).
- Shah, S., & Khan, F. (2023). Digital politics in Pakistan. *Journal of South Asian Media Studies*.
- Smrdelj, N. (2024). Hybrid media and agenda co-production. *Digital Journalism*.
-

- Su, Y., & Xiao, X. (2024). Intermedia agenda-setting in hybrid news ecosystems. *Journalism & Mass Communication Quarterly*.
- Tufekci, Z. (2017). *Twitter and tear gas*. Yale University Press.
- Vaccari, C., Chadwick, A., & O'Loughlin, B. (2015). Dual screening political communication. *Political Communication*, 32(3).
- Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data*. MIT Press.
- Yi, J., & Wang, X. (2022). Social media and intermedia agenda setting. *Telematics and Informatics*, 68.
- Yousaf, Z. (2022). Digital activism in Pakistan. *South Asian Journal of Communication Research*, 4(2), 77–93.