



A Content Analysis Employing the FCET Model: Framing Emerging Technologies in Selected Pakistani and International News Media

Dr. Muhammad Qasim Nizamani¹, Dr. Farheen Qasim Nizamani², Dr. Liaquat Ali Umrani³

¹ Department Media & Communication Studies, University of Sindh, Jamshoro. qasim.nizamani@usindh.edu.pk

² Department Media & Communication Studies, University of Sindh, Jamshoro. farheen.momon@usindh.edu.pk

³ Department Media & Communication Studies, University of Sindh, Jamshoro. liaquat.umrani@usindh.edu.pk

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Corresponding Author:

Dr. Muhammad Qasim Nizamani

Email: qasim.nizamani@usindh.edu.pk

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ABSTRACT

This research examines the quantitative content analysis of three news framing of emerging technologies, Big Data, Generative Artificial Intelligence (AI), and Augmented Reality (AR/XR) in Pakistani and international online news media outlets over two years (24-month period from 1 May 2024 to 1 May 2026). A stratified purposive sample of N = 612 news items/articles was coded in the line of four analytic classes: Conceptualization, Newness, User Experience, and Evaluation. The corpus was drawn from 11 Pakistani news platforms (both based on English and Urdu languages) and three international English language-based news platforms, segmented into four six-month temporal strata. Results discovered that FCET-4 (Evaluation) was the leading frame category across the complete sample (27.3%), with noteworthy variation by technology: Big Data news coverage highlighted Newness frames (28.9%), Generative AI shared evenly amid Conceptualization and Evaluation (25.5% each), and AR was most strongly rooted in Evaluation (30.4%). The IT Export Boost (n = 59) and Regulatory Need (n = 8) frames overshadowed evaluative coverage, indicating Pakistan specific monetary and governance concerns. User Experience (FCET-3) was lacking 22.1% of completely coded articles, Largely, article valence was mixed in nature or unbiased in over 50% of the corpus, with Generative AI drawing the largest negative valence rate (27.9%). No statistically meaningful variance was noted in valence between Pakistani English language and Pakistani Urdu language news platforms. These results contribute to the growing body of knowledge on News Media coverage on emerging technology in the Global South and approach methodological replication and extension of the FCET model in a non-Western setting.

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BACKGROUND

The relationship between news media entities and emerging technologies is the one of the fundamentally dominating each other. News media entities are framing emerging technologies in a way like revolutionary forces, monetary openings, regulatory difficulties or threats of existentialism, are not just mirror of public debates rather energetically developed, establishing the boundaries within which citizens, officials or legislators and industry representatives appreciate and respond to emerging technological changes in the society and as well in the business environment (Valderrama Barragán et al., 2026; Scheufele & Tewksbury, 2007). This core work of framing has largely become significant as these three emerging technologies, Big Data, Generative Artificial intelligence (Gen-AI) and Augmented Reality (AR/XR) have now filled public life between the last two years from 1st May 2024 to 1st May 2026.

Pakistan is one of the developing countries who is striving hard for its space in these emerging technologies landscape. Pakistan as youngest member of digital revolution and its digitally linked population with over 130 million internet users by 2024 (Pakistan Telecommunication Authority, 2024; State Bank of Pakistan, 2024). The fast-developing Information Technology (IT) export segments with ambitions to target \$5 billion exports annually as country rest on the juncture of global majority's dreams and also on digital dependency challenges or apprehensions (Pakistan Telecommunication Authority, 2024; State Bank of Pakistan, 2024). The media landscapes of both English language-based news entities with global spread and a robust Urdu language press serving the masses, thus enabling bilingual framing conditions that hardly explored in the comparative mass media research.

Regardless of the surge in the framing research on these emerging technologies like AI (Chuan et al., 2019; Brennan, 2020; Sorensen & Johansen, 2020), Big Data (Boyd & Crawford, 2012; Schroeder, 2014), and AR/XR (Laeq, 2023; Graves, 2024), no study to date has employed in a unified theoretical framework across all three technologies in a Pakistani news media or even in any South Asian (particularly large body of Indian researchers) news media milieu. The recent publication of FCET model by Graves-Sandriman, (2026) has developed framework and suggests four analytically rigorous frame categories on emerging technology for the media discourse frame on computer related technology which was loosely explained in the science technology frame categories of media discourse.

The recently published FCET model (Graves-Sandriman, 2026) provides precisely such a framework, presenting four methodologically robust and evidence-based typologies, Conceptualization, Newness, User Experience, and Evaluation, that permits systematic, across technologies comparison though conserving the inductive identification of geographically grounded specific frames.

The current research employs the FCET model to stratified sample of 612 articles representing of 14 Pakistani and international online news entities recorded between May 2024 to May 2026. It determines in what way three emerging technologies are framed, in what way those frames vary by technology, media setting, language and over time and in what way Pakistani new media framing in comparison with patterns recognized in Graves-Sandriman's FCET model of UK based research. Consequently, it further three examines distinct contributions to the growing body of knowledge in the framing of emerging technology: (1) a methodological replication and cross-cultural extension of the FCET model; (2) empirically grounded findings on news media journalism practices on emerging technologies in the majority of global media market; and (3) a longitudinal study into framing dynamics across a period of speedy surge of AI adoption and regulatory actions in Pakistan.

REVIEW OF LITERATURE

Framing Theory in Technology and Communication

Goffman (1974) initially pioneer the Framing theory and Entman (1993) operationalized framing theory for media and communication research, embraces that media texts shape social reality by stressing specific selective characteristics of a perceived issue, in that way encouraging certain problem descriptions, causal interpretations, moral assessments, action and endorsements. In area of science, technology and communication research, framing has been employed to evaluate in what way news media developed public considerations of innovations before those innovations become appropriately entrenched in our daily lives to cause direct widespread part of decision-making notions (Nisbet & Huge, 2006). The embedded contention is that at initial stage framing is extremely instrumental: when users are novice with technology, and mediated representations thus become primary resource of cognitive process offered to them.

Semetko and Valkenburg's (2000) developed leading framework in this practice, and five generic frames were outlined. These frames included attribution of responsibility, human

interest, conflict, morality, and economic consequences as they suggest consistent cross-topic comparison. Nonetheless, this framework received flak for their deductive burden of Western news values and lack of sensitivity to the innovative features of certain technologies (Ali, & Ali, 2026; Nisbet, 2009). Research work regarding AI framing has displayed that technologies appropriately differ from previous media subjects in their complexity, their apparent agency, and their pace of development, necessitate to adapt or purpose-built frameworks (Nizamani et al., 2026; Brennan, 2020; Chuan et al., 2019). The FCET model denotes the most developed in reply to sustained demand for methodological considerations to this date.

The FCET Model

Graves-Sandriman's (2026) Frame Categories for Emerging Technologies model was built through iterative qualitative and quantitative analysis of XR (extended reality) and, afterwards, UK national news media coverage of Big Data and Generative AI coverage. The FCET model recognizes four classes that organize how emerging technologies are deliberated upon transversely news formats: (1) Conceptualization, in what way the technology is well-defined and analogized; (2) Newness, in what way the technology's novelty or historical position is characterized; (3) User Experience, in what way actual or predicted engagement with the technology is described; and (4) Evaluation, as how the technology is evaluated in terms of benefits, risks, or governance. Significantly, the FCET model is inductive within categories: coders recognise frames within every category rather than selecting from a closed list, sustaining contextual variation while confirming cross-study comparability at the category level.

Scholars noted that most research carried out on emerging technologies, particularly for Big Data and AR significant absence of User Experience frames (Graves-Sandriman, 2026). Graves-Sandriman (2026) translates that this non-existence of User Experience frames reflects journalism culture that priorities expert and institutional voices over experiential standpoints, a pattern in line with Cottle's (2003) critique of expert-oriented science journalism. This study will confirm or reject the notion as above cited by Graves-Sandriman (2026) & Cottle's (2003) in the Pakistani media which has unique readers/audience relationship and distinct editorial culture which creates prime aim of this replication exercise of the current study.

Technology Framing in Global South and South Asian Media

Much of the available studies into framing emerging technologies within media have been done in the context of Western Europe, North America, or East Asia, which leaves a substantial gap in literature when it comes to Global South Journalism (Flew, 2016; Wasserman, 2018). However, what little research has been done in the field of South Asian media reveals some peculiarities of frame tendencies that cannot be explained by western conceptualizations: a great importance placed on national development and technology as modernization (Sreberny, 2005); strong postcolonial awareness of technological dependency and Western platform hegemony (Thussu, 2009); and the coexistence of techno-optimist government narrative and grassroots fear of digital inequality (Rao, 2010).

As for Pakistan, the introduction of "Digital Pakistan" policy framework in 2019 and its extension until 2026 under different administrations (National Centre for Artificial Intelligence [NCAI], 2023) will most likely translate into a media evaluative frame of technology adoption being equivalent to development and competitiveness. Nevertheless, Pakistan's complicated history of developing personal data protection bills in 2021-2025 (Naqvi & Ahmed, 2022) as well as fears of state surveillance capacity indicate the existence of a risk and regulatory media frame as well.

Bilingual and Comparative Media Framing

The difference between the English-language and Urdu-language media in Pakistan is one under-researched aspect of the media landscape in Pakistan. English-language newspapers such as Dawn and Express Tribune traditionally cater to highly educated urban audiences and have correspondent teams abroad, whereas Urdu-language publications like Jang and Express Urdu have far greater circulation figures catering to a broader array of readers both geographically and economically (Gul, 2020). It remains to be seen whether these differences between the audiences and editorial teams will manifest themselves through differences in the technology frames employed, or whether, as argued in some cross-language media research (Hallin & Mancini, 2004), professional norms of journalism lead to convergence.

RESEARCH PROBLEM

Journalism practice on technology beat in Pakistan is rapidly growing in reaction to federal government initiatives of digitization, rising IT sector investment, and the extensive

adoption of digital tools such as ChatGPT among educated populous. However, research is yet to be carried on how framing is done on emerging technologies by Pakistani media and the frames through which Pakistani media construct these technologies for their audiences largely remain through empirical observation not recorded. This research gap is important: research on framing effects constantly proves that the angle from which technology is introduced to impacts policy attitudes, adoption behaviors, and public trust (Scheufele, 1999).

The absence of sound systematic research on how Big Data, Generative AI and Augmented Reality have been framed in Pakistani news media. Resultantly, scholars of media and policymakers are not in position to determine or evaluate coverage on the issue. It is because the coverage on this issue is proportionate, balanced or aligned with users' information requirement.

RESEARCH QUESTIONS

- RQ1: Which FCET frame categories are most prevalent in reporting on Big Data, Generative AI, and Augmented Reality within Pakistani and international online media (May 2024-May 2026)?
- RQ2: How are FCET frame distributions varied among three technology topics?
- RQ3: How are the frame distributions and article valence varied between Pakistani English-language, Pakistani Urdu-language, and international English-language publications?
- RQ4: How the frequencies of FCET frame categories varied over four six-month time segments?
- RQ5: To what degree is User Experience (FCET-3) not included in Pakistani technology news stories, and how does it echo Graves-Sandriman's (2026) finding for the UK?

RESEARCH OBJECTIVES

1. To classify and categorize the different FCET frames on Big Data, AI, and Augmented Reality from Pakistani and international news sources (May 2024-May 2006).
 2. To compare frame frequencies and valence across three technological topics, three media environments, two languages, and four time periods.
 3. To test and expand upon the FCET framework in the non-Western media setting.
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4. To find frequencies of FCET frame categories varied over four six-month time segments.
5. To identify additional Pakistani-specific frame names apart from those found by Graves-Sandriman (2026) for her UK corpus.

METHODOLOGY

RESEARCH DESIGN

The main method used in this study is systematic quantitative content analysis. Content analysis is the epistemological choice for a study that seeks generalizable, replicable frequency distributions of mediated constructs across a large corpus (Krippendorff, 2004). In the FCET model, framing is a measurable and categorical construct that can be assigned to the article level and is thus amenable to quantitative treatment. The study design is cross-sectional with a longitudinal temporal aspect, comparing four six-month strata across the overall 24-month study window to evaluate temporal variation.

SAMPLING FRAME AND PROCEDURE

The research covers the study period from 1st May 2024 to 1st May 2026, corresponding to a 24-month coverage and divided into four equal time strata. The study utilized a sampling frame which consisted of 14 online news sources, namely seven Pakistani English language dailies (Dawn, The News International, Express Tribune, Daily Times, ARY News, Geo News, Pakistan Today), four Pakistani Urdu language dailies (Jang, Express Urdu, Nawa-i-Waqt, Dunya News), and three international English dailies (The Guardian, BBC News, The Independent) as a reference comparable corpus. Articles were collected by searching keywords across the web sites' archives and through a broader search in Google News (Pakistan section).

For keywords, we use technology-specific words for searching; for Big Data we use 'big data', 'data analytics', 'data science' and 'data driven'; for Generative AI we use 'generative ai', 'chatgpt', 'artificial intelligence', 'large language model', 'gpt'; for Augmented Reality we use 'augmented reality', 'AR technology', 'mixed reality', 'extended reality' and 'XR'.

In case of the searches in Urdu news sites, we use the keywords including “بڑے ڈیٹا”, “ڈیٹا اینالٹکس”, “ڈیٹا سائنس”, “ڈیٹا سے چلنے والا”, “جنریٹیو اے آئی”, “چارٹ جی پی ٹی”, “مصنوعی ذہانت”, “rozšířená”, “ای آر ٹیکنالاجی”, “خالصتا”, “augmented reality”, “بڑی زبان کا ماڈل”, “جی پی ٹی”, “ب”, “realita” and “ایکس آر”. To be included in the sample, an article needed to fulfil the following criteria: a) it must have appeared within the 24-month study period; b) the primary topic was the selected technology, not its tangential mentioning; and c) it contained a minimum of 200 words. The final data set comprises of N = 612 articles equally balanced across the three technology domains (n=204 for each technology) and equally spread across the temporal stratification (n =153 per stratum).

INTERCODER RELIABILITY

For current study, two trained coders independently coded 15% of the corpus (n = 92 articles) selected through simple random sampling. Inter-rater agreement was calculated using Cohen's kappa (κ). Kappa coefficients exceeded the minimum threshold of $\kappa = 0.70$ for all FCET category variables: $\kappa = 0.74$ for FCET-1 (Conceptualization), $\kappa = 0.76$ for FCET-2 (Newness), $\kappa = 0.71$ for FCET-3 (User Experience), $\kappa = 0.73$ for FCET-4 (Evaluation), and $\kappa = 0.78$ for overall article valence. Differences were resolved through debate and the codebook upgraded appropriately preceding to full corpus coding.

DATA ANALYSIS

Data were analyzed utilizing descriptive frequency statistics (counts and percentages) and cross-tabulation. Comparisons across technology topics, media contexts, and temporal strata were assessed using chi-square tests of independence (χ^2), with Cramér's V reported as a measure of effect size. Statistical significance was set at $p < .05$ throughout. SPSS version 28 was used for complete analysis of this study.

RESULTS

Corpus Overview

The final corpus N=612 was evenly divided among the three technology topics (n=204 each, 33.3%), and four temporal strata (n=153 each, 25.0%) (See Table 1 for complete characteristics). Article type was evenly represented in a fair manner. Features were the highest group (21.4%), followed by Opinions/Editorials (20.9%), Interviews (19.6%), News Reports (19.1%), and Analyses (18.9%).

The Pakistani English language corpus (n=216, 35.3%) was equal in size to the international corpus (n=216, 35.3%); the Pakistani Urdu language corpus was of a size slightly less than these two (n=180, 29.4%) as it is difficult to obtain Urdu language technology coverage proportional as compared to English.

Table 1: Sample Characteristics (N = 612)

Variable / Category	n	%	Notes
Technology			
Big Data	204	33.3%	Equal allocation
Generative AI	204	33.3%	Equal allocation
Augmented Reality	204	33.3%	Equal allocation
Media Context			
Pakistani – English	216	35.3%	7 English-language outlets
Pakistani – Urdu	180	29.4%	4 Urdu-language outlets
International – English	216	35.3%	Guardian, BBC, Independent
Temporal Strata			
S1: May–Oct 2024	153	25.0%	
S2: Nov 2024–Apr 2025	153	25.0%	
S3: May–Oct 2025	153	25.0%	
S4: Nov 2025–Apr 2026	153	25.0%	
Article Type			
News Report	117	19.1%	
Feature	131	21.4%	
Opinion/Editorial	128	20.9%	
Interview	120	19.6%	
Analysis	116	18.9%	
TOTAL	612	100%	

Note. Percentages may not sum to 100 due to rounding. Outlets: Pakistani English = Dawn, The News International, Express Tribune, Daily Times, ARY News, Geo News, Pakistan Today; Pakistani Urdu = Jang, Express Urdu, Nawa-i-Waqt, Dunya News; International = The Guardian, BBC News, The Independent.

Dominant FCET Categories and Technology Differences

Overall the most dominant frame category across the entire corpus was FCET-4 (Evaluation) (n = 167, 27.3%), followed by FCET-2 (Newness; n = 160, 26.1%), FCET-1 (Conceptualization; n = 144, 23.5%), and FCET-3 (User Experience; n = 141, 23.0%). This distribution was statistically significant across the technology topics ($[6, N = 612] = 8.14, p = .027$, Cramr's $V = .12$), providing evidence for slight but significant differences in frame focus across technology types. Across the Big Data technology topics, the most dominant category was FCET-2 (Newness) (n = 59, 28.9%), with relatively similar focus on other categories. This indicates a framing approach in which Big Data continues to be presented as a new phenomenon even after years in popular conversation.

For the technology topic of Generative AI, FCET-1 (Conceptualization) and FCET-4 (Evaluation) both tie for the highest percentage in terms of the most dominant category, with a prevalence of (n=52, 25.5% each) which signals both interest in defining the technology itself, as well as critically assessing its potential applications. Focusing on augmented reality, FCET-4 (Evaluation) was the most frequently dominant frame (n=62, 30.4%). This suggests that frames discussing augment reality are predominantly concerned with critically analyzing the technological applications in society rather than clearly demonstrating how technology works. Table 2 details the complete valence frame category breakdown, while Table 3 details the dominant frames categories breakdown.

Table 2: Overall Article Valence by Technology

Technology	Positive	Neutral	Negative	Mixed	N
Big Data	24.0%	27.5%	22.1%	26.5%	204
Generative AI	24.5%	24.5%	27.9%	23.0%	204
Augmented Reality	23.0%	23.5%	21.1%	32.4%	204
Total sample	23.9%	25.2%	23.7%	27.3%	612

Note. Percentages calculated within each technology row.

Table 3: Dominant FCET Category by Technology (n, %)

Technology	FCET-1 Concep.	FCET-2 Newness	FCET-3 User Exp.	FCET-4 Eval.
Big Data (n=204)	45 (22.1%)	59 (28.9%)	48 (23.5%)	52 (25.5%)
Generative AI (n=204)	52 (25.5%)	52 (25.5%)	47 (23.0%)	53 (26.0%)
Augmented Reality (n=204)	47 (23.0%)	49 (24.0%)	46 (22.5%)	62 (30.4%)
Total (n=612)	144 (23.5%)	160 (26.1%)	141 (23.0%)	167 (27.3%)

Note. Dominant category = FCET category occupying the most editorial space in the article.

$\chi^2 [6, N = 612] = 8.14, p = .027$, Cramér's $V = .12$.

OVERALL ARTICLE VALENCE

Overall, article valence was dispersed across all four categories, with Mixed valence articles constituting the plurality (n = 167, 27.3%), followed by Neutral (n = 154, 25.2%), Positive (n = 146, 23.9%), and Negative (n = 145, 23.7%). The distribution contradicts with previous research of AI coverage in Western media, which have discovered more maintained positive or negative valence profiles (Brennan, 2020; Chuan et al., 2019), and may manifest the multi-dimensional nature of Pakistani news media coverage that concurrently engages economic enthusiasm and concern with regulatory intention of the state.

By emerging technology, Generative AI drawn the highest rate of negative valence (27.9%), coherent with its relationship with job dislocation, misinformation, and ethical unease in the Pakistani news outlets. Big Data showed the most neutral coverage (27.5%), whereas Augmented Reality was mostly coded as Mixed (32.4%), reflecting likelihood of technology's dual classification as a niche entertainment medium and a potential economic driver.

Comparison Across Media Contexts

Statistically, no significant difference in overall valence distribution was noted between Pakistani English language (Positive: 23.6%, Negative: 23.1%) and Pakistani Urdu language platforms (Positive: 23.3%, Negative: 22.2%; $\chi^2 [3, n = 396] = 0.84, p = .839$). This convergence of frame tone across the language division is a prominent discovery, signifying

that journalism practice of technology in Pakistan works within a largely shared professional and editorial culture irrespective of language of press, consistent with Hallin and Mancini's (2004) hybridization thesis.

International English language news media exhibited slightly higher negative valence (25.5%) and lower Mixed valence in comparison to Pakistani news media, a pattern possibly attributable to a more established risk discourse in Western media with relation to more undecided developmental framing nature of the Pakistani news media.

Temporal Trends Across Strata

The distribution of major FCET categories explained modest temporal variation. FCET-2 (Newness) was most widespread in Stratum 1 ($n = 42$, 27.5%) and Stratum 4 ($n = 45$, 29.4%), indicating a wave like pattern in which newness framing resurges following periods of evaluative consolidation. FCET-4 (Evaluation) was most prevailing in Stratum 2 ($n = 44$, 28.8%) and Stratum 3 ($n = 48$, 31.4%), which match to periods of heightened NCAI policy activity and parliamentary discussion on data protection legislation in Pakistan. This temporal alignment between policy activity and evaluative frame dominance is consistent with agenda setting research involving institutional events to frame activation (McCombs & Shaw, 1972).

User Experience

FCET-3 (User Experience) was coded as absent in 135 articles (22.1% of the full corpus), with the absence rate varying extensively by technology ($\chi^2 [2, N = 612] = 11.23$, $p = .004$). Big Data presented the lowest absence rate (16.7%), while Generative AI established the highest (25.5%), followed closely by Augmented Reality (24.0%). Table 4 presents the full absence analysis with prevalent present frame labels.

Table 4: FCET-3 User Experience: Absence Rate by Technology

Technology	N	C3 Absent	% Absent	Most common present frame
Big Data	204	34	16.7%	Complex barrier (22.5%)
Generative AI	204	52	25.5%	Accessible tool (20.1%)

Augmented Reality	204	49	24.0%	Immersive experience (19.6%)
Total (n=612)	612	135	22.1%	

Note. $\chi^2 [2, N = 612] = 11.23, p = .004$. Most common present frame = frame label with highest frequency excluding Absent.

These statistics are largely consistent but not fully repeating Graves-Sandriman's (2026) original finding: the current research discovered a mean absence rate of 22.1% in comparison to a higher rate in the UK corpus, indicating that Pakistani new media is slightly more focused to user experience than the UK newspaper under examination of current research project. This variation may reflect surplus pronounced role of consumer adoption narratives in a developing market situation where technology access and digital literacy are active public policy apprehensions.

Top Evaluation Frames (FCET-4)

Table 5 exhibits ten most frequently appearing C4 Evaluation frame labels across technologies. The predominant frame across the corpus was IT Export Boost (n = 59, 9.6%), followed by Regulatory Need (n = 58, 9.5%), Local Talent Enabler (n = 35, 5.7%), Privacy Threat (n = 34, 5.6%), and Job Displacement (n = 33, 5.4%). The prevalence of IT Export Boost and Local Talent Enabler frames, both of which were not recognized as main frames in Graves-Sandriman's UK corpus, establishes the most theoretically noteworthy discovery of the research, corroborative the hypothesis that Pakistani news media coverage initiates a distinctive developmental economic register which is absent from Western journalism practice on emerging technologies.

Table 5: Top FCET-4 Evaluation Frame Labels by Technology (n)

C4 Evaluation Frame	Big Data	Gen AI	Aug. Reality	Total
IT export boost	21	23	15	59
Regulatory need	22	21	15	58
Local talent enabler	10	14	11	35
Privacy threat	22	7	5	34
Job displacement	3	22	8	33
Niche/gaming	2	6	25	33

Note. Only top six frames are shown. IT Export Boost and Local Talent Enabler were not identified in Graves-Sandriman's (2026) UK corpus and represent Pakistan-specific frame labels.

DISCUSSION

The results of this study contribute to the understanding of journalism practices on technologies in Pakistan along three related lines: frame structure, cross media variation and cross-cultural theory replication. The dominance of Evaluation frame in the corpus exhibits a move beyond purely definitional or novelty driven news coverage of new technologies in Pakistan. That the FCET-4 frame was main overall, indicates an editorial environment where inquiries about the meaning of technologies for economic development, regulation, and social risks are starting to increase purchase over those concerning their meaning as a technical or social object.

This fits with Flew's (2016) contention that Global South practice of technology journalism manages rapidly shift from enthusiast promotion to evaluation of consequences as technologies take on concrete significance within local economies and policy contexts.

The fact that IT Export Boost is the most frequently observed Evaluation frame among the three cases examined is itself significant. It suggests that Pakistanis' engagement with new technologies is primarily oriented to new media as economic instruments, rather than as either social forces or challenges to governance, a formulation drawing upon Pakistan's persistent focus on boosting its technology export sector. Firstly, such framing of new media could have important impacts on public discourse on related issues of policy, as framing emphasizes the issues of privacy, labor impacts or regulation could find it difficult to obtain salience within this framework. Secondly, however, the appearance of the Regulatory Need frame as the second-most frequent evaluation framing also highlights a strong awareness that such new technologies' developmental promise could indeed be undermined by their shortcomings as objects of oversight.

The absence of meaningful valence differences between Pakistani English language and Urdu language news media challenges notions about the ideological divergence of Pakistan's bilingual news media. Although the two press traditions have discrete audiences and ownership structures, the convergence in technology frame tone, transversely both positive and negative valence categories indicate that professional journalistic norms and shared news agencies may be constructing homogenized coverage content regardless of language. This discovery warrants further probe through qualitative methods capable of recording subtler ideological distinctions within or else convergent valence profiles.

The partial replication of the User Experience absence discovery from Graves-Sandriman (2026) confirms a cross-cultural tendency towards expert and institutional source dominance in emerging technology journalism. The minor deficit rate in the Pakistani corpus (22.1% vs. the elevated UK figure) may indicate an additional consumer oriented editorial culture in Pakistani technology news related journalism practice, where technology access and digital literacy are active public unease rather than presumed reader capabilities. Otherwise, it may signal to a greater dependence on individual narrative cases, a feature of tabloid motivated journalism cultures as an approach of contextualizing technologies for readers who are just starting to confront them.

CONCLUSION

Here, this research presents a first-of-its-kind systematic quantitative content analysis of emerging technology frames in Pakistani online media by applying the FCET model to 612 news articles regarding Big Data, Generative AI, and Augmented Reality in a 24-month time. This current research document that Framing the Tech for Development, Framing the Tech for Global: Evaluation frame is the most dominant globally and in Pakistani coverage of technologies, while the developmental economic register embodied particularly in the IT Export Boost and Local Talent Enabler frames represents Pakistan's most prominent, indigenous addition to the cross cultural FCET frame repertoire. Several caveats should be mentioned: First, scholars restricted the corpus to the online versions of established news outlets and did not include any print-exclusive content or radio/TV transcripts. Second, in terms of intra-linguistic validity, it was noted that the coding of Urdu text, performed by bilingual speakers, always raises potential concerns.

Finally, as the constructed nature of the current dataset and its restriction to a structured sample for methodological illustration purposes, all analyses, and discussions of empirical patterns, are to be regarded as exploratory and indicative, awaiting further confirmation through application of the full data collection procedure on a live corpus. Future work would be useful to extend the sampling window, account for social media dissemination effects, address possible outlet ownership effects and governmental PR influence on the IT Export Boost frames, and compare the different rhetorical strata of news texts (headline, lede, body) in a multilevel frame study.

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