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Presenting a Media Governance Model with Emphasis on Fake News Management in the Age of Artificial Intelligence

ABSTRACT

Fake news management is regarded as an important dimension of sound media governance and, according to many media scholars, this dimension is considered the most important pillar of sound media governance. The aim of this study was to present a media governance model with emphasis on fake news management in the age of artificial intelligence. This study employed a mixed-methods design (qualitative–quantitative) and was basic in terms of purpose. In terms of data collection method, it was also considered a field study. The participants in the qualitative section included experts consisting of former managers of the Islamic Republic of Iran Broadcasting (IRIB), experts in the field of IRIB journalism, IRIB presenters, IRIB news editors and desk editors, experts in media and cyberspace in the Parliament, information technology managers, managers and experts working in the Ministry of Culture and Islamic Guidance, and directors general of public relations departments in various organizations. The number of participants was 16, who were selected through non-probability purposive sampling. The data collection instrument in the qualitative section was a semi-structured interview, and open, axial, and selective coding were used to analyze the data. Grounded theory was also used to design and test the model. All coding procedures were conducted using MAXQDA 2020 software. The results of axial and selective coding showed that public access to content production tools, the economic logic and platform algorithms, public trust and cognitive warfare, and geopolitical rivalries played roles as causal conditions in the model. The concepts related to the central phenomenon included technology and algorithms, flexibility and dynamism, legal and regulatory dimensions, education and media literacy, the behavior and interaction of members of society, and institutional and policymaking dimensions. Technological strategy, editorial and professional strategy, platform strategy, educational and social strategy, continuous review of models and policies, the creation of a culture of collective response, and legal and political strategy were identified as the strategies of the model. The concepts related to intervening conditions included governmental institutions, the behavior of members of society, social networks, and the knowledge and awareness of members of society. The concepts related to contextual conditions included social transformations, society's immersion in technology, and the penetration of information technology. Finally, the individual level, social level, institutional and democratic level, and media level were identified as the outcomes of the model. The statistical population in the quantitative section consisted of media experts, and the sample size was considered to be 223 individuals, selected using Cohen's method. The sampling method in this section was simple random sampling, and the data collection instrument was a questionnaire. Structural equation modeling was used to analyze the data, and the obtained results indicated significant relationships among the components of the research paradigm model.

Keywords: Media governance; fake news management; artificial intelligence

Introduction

The accelerated digitalization of communication systems has fundamentally transformed the logic, instruments, and institutional boundaries of media governance. In contemporary societies, media no longer operates merely as a channel for transmitting information; rather, it has become an infrastructural environment in which public opinion, political legitimacy, social trust, collective identity, crisis response, market behavior, and organizational reputation are continuously produced and contested. Social media, as a networked form of digital interaction, has expanded the capacity of individuals, organizations, political actors, and automated systems to generate, circulate, amplify, and reinterpret information at unprecedented speed and scale [1]. This transformation has created new possibilities for participation, transparency, and public value creation, while simultaneously intensifying risks associated with misinformation, disinformation, manipulation, polarization, and the erosion of institutional credibility [2, 3]. Accordingly, media governance in the digital age must be understood not only as the regulation of media institutions but also as the coordinated management of technological platforms, algorithmic infrastructures, social actors, public communication flows, and normative mechanisms that shape the reliability and accountability of information ecosystems.

The emergence of artificial intelligence has intensified the complexity of media governance by altering both the production and detection of information disorder. AI-based systems are increasingly embedded in news production, content recommendation, sentiment analysis, audience segmentation, behavioral prediction, automated monitoring, and decision support processes. These technologies provide media organizations and public institutions with powerful capabilities for analyzing large-scale data, identifying trends, detecting anomalies, and responding to communicative crises. However, the same technological capacities can also be used to produce deceptive content, automate influence operations, generate synthetic media, personalize manipulative narratives, and accelerate the diffusion of fake news across digital networks [4, 5]. As a result, artificial intelligence has become a dual-use force in contemporary media systems: it is simultaneously a tool for strengthening governance capacity and a source of new governance vulnerabilities.

Fake news management has therefore emerged as one of the central concerns of media governance. Fake news is not limited to inaccurate content; it often involves intentional or strategic distortion, emotional framing, platform-based amplification, selective disclosure, and the exploitation of cognitive biases. In algorithmically mediated environments, the circulation of fake news is shaped not only by human intention but also by recommender systems, engagement metrics, platform incentives, and network effects. Studies on fake news detection and mitigation show that the problem requires more than technical classification; it demands an integrated approach that includes platform accountability, institutional coordination, media literacy, public trust, legal frameworks, and technological monitoring [5]. From this perspective, managing fake news in the age of artificial intelligence is not merely an operational task for journalists or fact-checking units; it is a strategic governance issue that requires alignment among media organizations, governmental institutions, civil society, technology actors, and citizens.

The governance challenge becomes more significant when media environments are viewed as complex socio-technical systems. AI-driven communication platforms are not neutral channels; they structure visibility, prioritize content, personalize exposure, and influence the conditions under which citizens encounter public information. Research on media bias using deep learning and explainable artificial intelligence demonstrates that algorithmic methods can reveal hidden patterns in media coverage, particularly in sensitive domains such as defense and foreign affairs [6]. Such findings show that AI can

contribute to transparency and accountability in media analysis, but they also highlight the need for governance models capable of interpreting and controlling algorithmic influence. Similarly, the application of platform data in policymaking reflects the growing importance of data-driven governance, where social media data can inform public decision-making, monitor social needs, and support more responsive institutional action [7]. Nevertheless, the use of platform data also raises concerns regarding representativeness, privacy, manipulation, algorithmic opacity, and the risk of overreliance on digital traces as proxies for public opinion.

In the field of management, media governance can be conceptualized as a multidimensional process involving strategic leadership, institutional design, stakeholder coordination, risk management, technological adaptation, and accountability mechanisms. The future of leadership in media organizations is increasingly shaped by technological developments, requiring leaders to develop digital foresight, adaptive capacity, ethical awareness, and the ability to govern hybrid human–machine communication systems [8]. In this context, leadership is not limited to administrative decision-making; it involves the design of governance architectures that can anticipate technological change, respond to information crises, and balance innovation with public responsibility. The transformation of the media industry under the influence of artificial intelligence further confirms that traditional models of media management are insufficient for dealing with the speed, automation, and complexity of contemporary communication environments [9]. Therefore, a robust model of media governance must incorporate technological, legal, ethical, professional, educational, and social dimensions.

The relevance of artificial intelligence to governance extends beyond media organizations and intersects with broader transformations in organizational management. Studies in human resource management show that AI adoption affects recruitment, performance evaluation, workforce planning, employee experience, innovation, and organizational decision-making, while also producing challenges related to job insecurity, skill displacement, fairness, and accountability [10-12]. These insights are relevant to media governance because newsrooms, communication departments, platform companies, and public relations institutions increasingly depend on AI-based tools for content production, monitoring, and audience analysis. At the same time, the adoption of AI may transform occupational roles, editorial routines, professional standards, and organizational power relations. Research on AI adoption and unemployment highlights the multifaceted relationship between automation and labor markets, suggesting that technological transformation must be managed through careful institutional planning and social safeguards [13]. In media systems, this implies that fake news management cannot be separated from the organizational capacities, competencies, and governance arrangements that determine how AI is adopted and controlled.

Knowledge management is another critical foundation for AI-enabled governance. The effective use of artificial intelligence depends not merely on technological access but also on the ability of organizations to acquire, share, interpret, and apply knowledge in decision-making processes [14]. Media governance in the age of AI requires knowledge infrastructures that connect technical expertise, journalistic judgment, legal interpretation, public communication, and crisis management. Without such integrative knowledge processes, organizations may possess advanced tools but lack the institutional capacity to use them responsibly and effectively. Similarly, big data affordances can improve market and organizational performance when firms possess the necessary strategic orientation and service-based capabilities [15]. Applied to media governance, this suggests that the value of data and AI lies not in their mere availability but in the organizational capacity to transform them into reliable, accountable, and socially beneficial governance practices.

The diffusion of digital platforms has also changed the behavior of audiences and users, making citizen participation both an opportunity and a challenge for media governance. User-generated content and marketer-generated content affect perceptions, satisfaction, and decision-making, indicating that public communication is increasingly co-produced by institutional and non-institutional actors [16]. In media environments, this co-production means that citizens are not only receivers of news but also distributors, interpreters, commentators, and sometimes producers of misleading or false information. Online interaction is further shaped by social influence mechanisms, language mimicry, peer recognition, emotional resonance, and networked identity performance [17]. Consequently, fake news management must address behavioral and social mechanisms of diffusion, not simply the content of false claims. Studies of public discussions around social justice hashtags demonstrate that online discourse can rapidly mobilize collective attention, but it can also generate polarized narratives, contested meanings, and high-volume information flows that are difficult to govern through conventional media management practices [18].

The relationship between emotion, personalization, and algorithmic communication is particularly important in fake news management. AI-based systems increasingly personalize content according to user preferences, emotional states, behavioral patterns, and predicted engagement. Research on emotion-based personalized recommendation systems shows that algorithms can be designed to improve emotional states and tailor content to individual needs [19]. While such personalization may support user satisfaction and relevance, it can also create vulnerabilities when emotional targeting is used to amplify sensational, divisive, or misleading content. Similarly, AI-mediated customer experience and parasocial relationships can shape users' ideal identities and emotional attachment to digital actors or brands [20]. In media governance, these dynamics indicate that fake news spreads not only because it is available but because it is often emotionally optimized, identity-relevant, and algorithmically amplified. Therefore, governance models must include mechanisms for addressing the affective and relational dimensions of misinformation.

The growing integration of AI into social, economic, and communicative systems also demonstrates that governance must be context-sensitive. In tourism enterprises, media governance and green transformation policies have been shown to contribute to high-quality development, indicating that governance mechanisms can shape organizational adaptation and sustainable value creation [21]. In digital innovation and the communication culture industry, structural optimization can influence economic development, demonstrating the broader developmental role of new media systems [22]. Research on strategic information disclosure further shows that information management has economic consequences, including effects on capital costs and investor perceptions [23]. These findings collectively suggest that information governance is not a peripheral function; it is a strategic management mechanism that affects institutional legitimacy, economic performance, stakeholder confidence, and long-term development. In the context of fake news, weak governance can damage not only media credibility but also public institutions, markets, social cohesion, and democratic processes.

Artificial intelligence also plays an increasingly important role in public service, emergency response, and governance-related monitoring. AI-based location intelligence and sentiment analysis can support automated disaster monitoring from social media posts, demonstrating how digital traces can be transformed into actionable intelligence for public safety and crisis management [24]. Such applications show the constructive potential of AI for detecting urgent events, identifying public needs, and supporting timely interventions. However, they also underline the need for verification, ethical oversight, and institutional protocols, because crisis contexts are especially vulnerable to rumors, panic, manipulation, and false

information. Similarly, advances in AI-based text and image detection, such as transformer-based approaches for identifying license plates and text in drone images, illustrate the rapid development of machine vision capacities that can be applied in security, monitoring, and governance systems [25]. These technological developments broaden the scope of media governance beyond textual information and require attention to visual, synthetic, multimodal, and sensor-based information environments.

The educational dimension of AI and media governance is equally important. As AI tools become more accessible, the public's capacity to understand, evaluate, and responsibly use digital technologies becomes a core component of governance. Studies examining the role of technology and artificial intelligence in students' academic performance and advancement suggest that AI can support learning, skill development, and educational outcomes when it is integrated appropriately [26, 27]. For media governance, this implies that media literacy and AI literacy should be treated as strategic capacities at both individual and societal levels. Citizens need competencies to identify unreliable information, recognize manipulation, understand platform algorithms, and critically evaluate AI-generated content. Without such competencies, even technically advanced governance systems may fail, because the demand side of fake news—belief, sharing, emotional acceptance, and social reinforcement—will remain insufficiently addressed.

Consumer and citizen behavior in AI-mediated environments also provides useful insights for media governance. Research on mobile health applications shows that digital affordances influence consumers' purchasing decisions, highlighting the behavioral power of platform design, perceived usefulness, interactivity, and user engagement [28]. Although this research is situated in consumer behavior, its implications extend to media governance because similar affordances shape how users consume, trust, share, and respond to news content. In financial markets, social, cognitive, and behavioral information extracted from social media can be used with AI and big data to predict stock market behavior, demonstrating the extent to which digital discourse can influence and reflect collective expectations [29]. These findings reinforce the argument that social media data are not merely communicative artifacts; they are behavioral signals with organizational, economic, and governance consequences. Therefore, fake news management must consider the interaction between content, cognition, behavior, and algorithmic infrastructures.

At the macro level, modern governance in cyberspace is increasingly confronted with both opportunities and challenges arising from artificial intelligence. AI can enhance public administration, support evidence-based policymaking, improve monitoring systems, and strengthen the responsiveness of institutions; however, it can also intensify surveillance risks, deepen digital inequalities, increase dependency on platform infrastructures, and create new forms of manipulation [30]. For media governance, these tensions require a balanced model that neither rejects technological innovation nor assumes that technology alone can solve the problem of fake news. Instead, governance must be designed as an adaptive, multi-level, and multi-actor system that integrates technological strategies, legal regulation, editorial professionalism, platform responsibility, civic education, and continuous evaluation. Such a model should also recognize that fake news is embedded in broader geopolitical, economic, social, and institutional conditions, including cognitive warfare, competition over narratives, and the strategic use of media systems to influence public perception.

Despite the growing body of research on artificial intelligence, social media, platform governance, digital policymaking, and fake news detection, there remains a need for an integrated media governance model that specifically focuses on fake news management in the age of artificial intelligence. Existing studies provide valuable insights into AI-enabled media

analysis, social media convergence, fake news mitigation, data-driven policymaking, organizational transformation, and digital behavior; however, these contributions are often dispersed across separate domains and do not fully explain how causal conditions, contextual factors, intervening conditions, strategies, and outcomes can be organized into a coherent governance framework. A grounded and empirically tested model can help clarify how media organizations and policy institutions should conceptualize fake news management as a strategic governance process rather than a fragmented technical or editorial response.

The aim of this study was to present a media governance model with emphasis on fake news management in the age of artificial intelligence.

Methodology

The research method in this study was mixed-methods (qualitative–quantitative), and the study was basic in terms of purpose. Both research approaches were used in this study, such that an inductive approach was employed in the qualitative phase, while a hypothetico-deductive approach was used in the quantitative phase. In terms of data collection method, the study was also considered field research. The participants in the qualitative section included experts consisting of former managers of the Islamic Republic of Iran Broadcasting (IRIB), experts in the field of IRIB journalism, IRIB presenters, IRIB news editors and news desk editors, experts in media and cyberspace in the Parliament, information technology managers, managers and experts working in the Ministry of Culture and Islamic Guidance, and directors general of public relations departments in various organizations. Their number was 16, and they were selected through non-probability purposive sampling. The data collection instrument in the qualitative section was a semi-structured interview, and open, axial, and selective coding were used to analyze the data. The qualitative strategy used in the first phase of the study was grounded theory, and the quantitative strategy used in this study was survey-correlational. The statistical population in the quantitative section also consisted of media experts, and the sample size was determined as 223 individuals using Cohen's method. The sampling method in this study was simple random sampling, and the data collection instrument in this section was a questionnaire. Structural equation modeling was used to analyze the data.

Findings and Results

This section consists of two main parts. The first part is devoted to explaining the analysis of qualitative data, in which the research data collected through semi-structured interviews are described using open coding, axial coding, and selective coding. In the second part, which is related to the quantitative section, the significance of relationships is examined, the conceptual model of the study is fitted, and the relationships among the components of the model are investigated. It should be noted that all coding procedures were conducted using MAXQDA 2020 software.

In the general model, which includes both the measurement model and the structural model, the evaluation of fit is completed by confirming the model fit. Accordingly, the measurement, structural, and overall fit of the measurement model of causal conditions are evaluated below:

Table 1*Factor Loadings of Codes and Standardized Estimation Coefficients of the Dimensions of Causal Conditions*

Outer Significance Level	Outer Significance Values	Factor Loading	Open Codes	Inner Significance Level	Inner Significance Values	Estimation Coefficients	Concepts
0.000	20.913	0.847	Ease of content production and deepfake creation	0.000	26.303	0.798	Public access to content production tools
0.000	32.961	0.854	Reduction in the cost of rumor production				
0.000	55.243	0.905	Increase in the speed of rumor dissemination				
0.000	37.845	0.844	Society's trust in authoritative news sources	0.000	67.004	0.902	Public trust
0.000	35.9933	0.838	Reconstruction of social capital				
0.000	32.767	0.873	Increasing individual participation and social responsibility				
0.000	27.297	0.806	Design and deployment of mechanisms for communicative transparency				
0.000	63.703	0.879	Viral dissemination of content based on interactive-communicative algorithms	0.000	88.922	0.918	Economic logic and platform algorithms
0.000	61.235	0.909	Algorithmic rewards for the dissemination of emotional content				
0.000	27.433	0.836	Use of machine learning algorithms in the viral dissemination of news				
0.000	73.137	0.907	Organized operations aimed at destabilizing the country	0.000	21.662	0.813	Cognitive warfare and geopolitical rivalries
0.000	29.904	0.868	Undermining the credibility of the country's official institutions				
0.000	8.124	0.596	Weakening the perceptual security of society				

Finally, after conducting first-order and second-order factor analyses, it was found that 15 constructs did not have acceptable factor loadings, meaning that their factor loadings were lower than 0.70; therefore, they were removed from the final model. In addition, based on the examination of significance in the measurement models, three concepts were not significant at the 95% confidence level and were excluded from the model.

Based on the final research model, the hypotheses were formulated as follows. In this section, path coefficients and significance values were examined to test the research hypotheses.

First hypothesis: There is a significant relationship between the identified causal conditions and the central phenomenon, namely media governance with emphasis on fake news management in the age of artificial intelligence.

Second hypothesis: There is a significant relationship between the central phenomenon, namely media governance with emphasis on fake news management in the age of artificial intelligence, and the identified strategies.

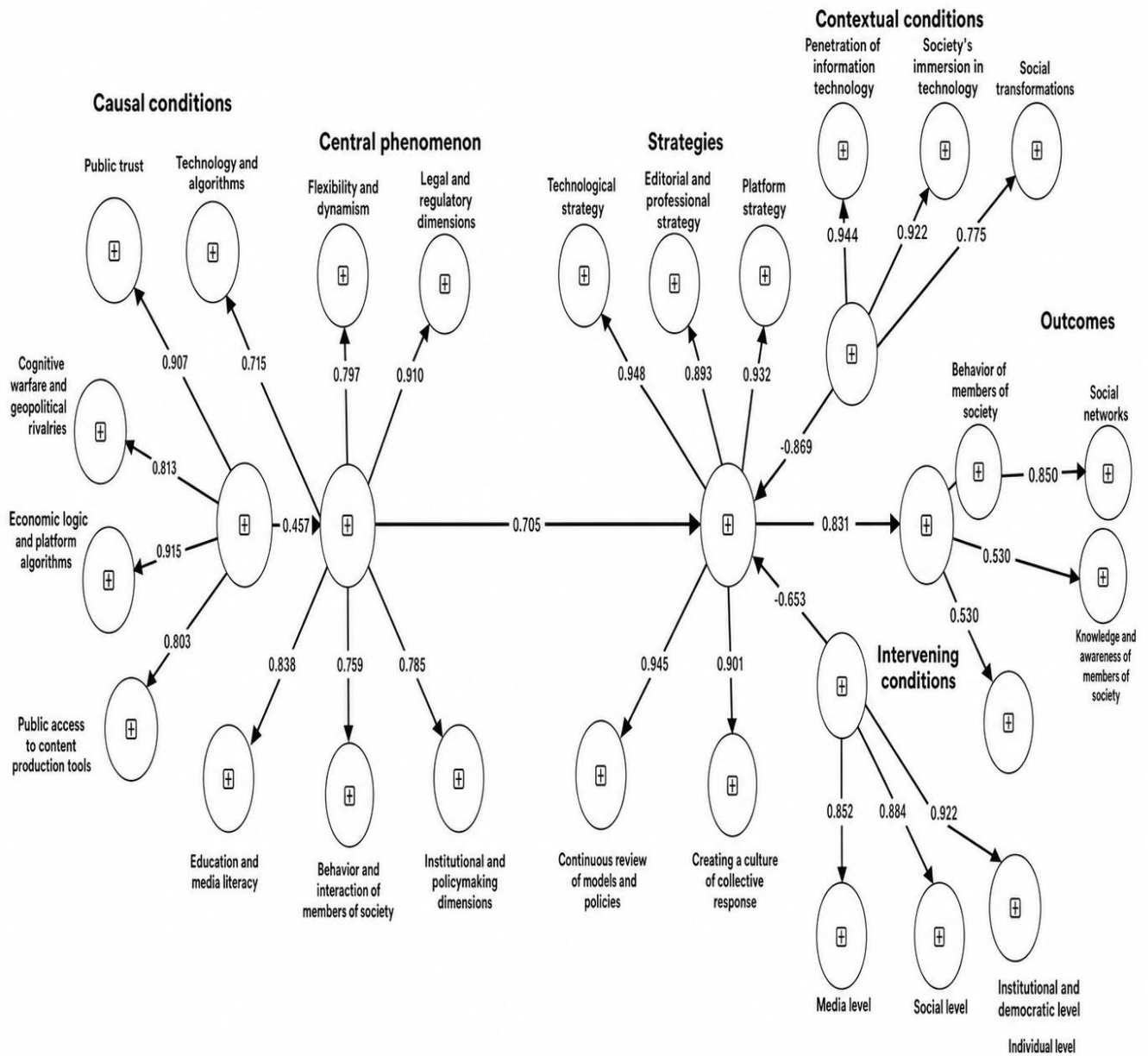
Third hypothesis: There is a significant relationship between intervening conditions and the identified strategies.

Fourth hypothesis: There is a significant relationship between contextual conditions and the identified strategies.

Fifth hypothesis: There is a significant relationship between the identified strategies and the identified outcomes.

Figure 1

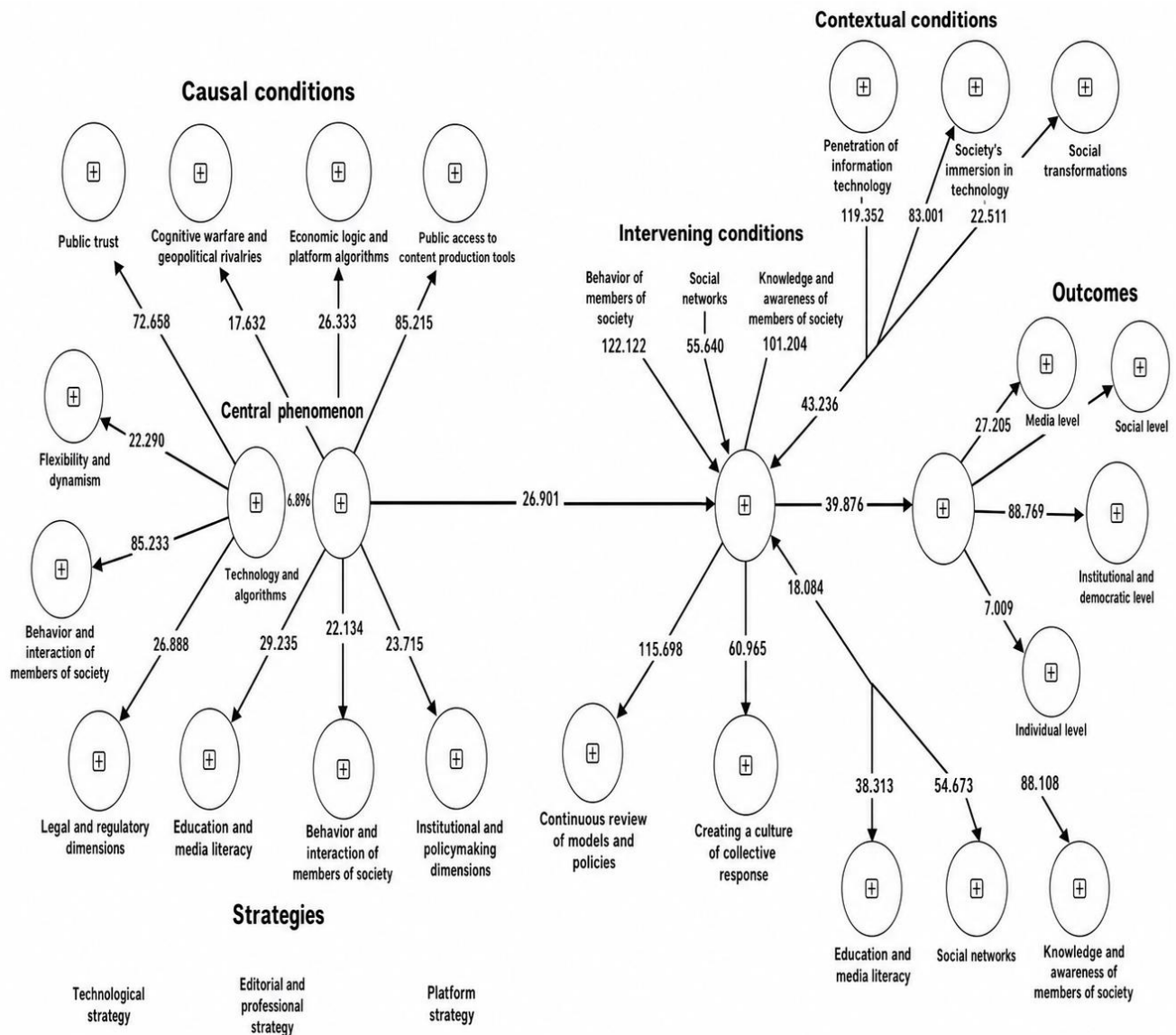
Standardized Estimation Model of Media Governance with Emphasis on Fake News Management in the Age of Artificial Intelligence



To examine the significance of the model, t coefficients were used. In structural equation modeling, t coefficients indicate the significance level of the path coefficients in the model. In fact, the t coefficient for each path coefficient shows whether the path coefficient is significant or not. Figure 4 presents the model in the significance-values estimation mode.

Figure 2

Significance-Value Model of Media Governance with Emphasis on Fake News Management in the Age of Artificial Intelligence



Based on the results obtained from model estimation in the standardized coefficients, significance values, and significance-level modes, the research hypotheses were tested as follows:

Table 2

Testing of the Research Hypotheses

No.	Hypothesis	Standardized Estimate	t Statistic	Significance Level	Result
1	There is a significant relationship between the identified causal conditions and the central phenomenon, namely media governance with emphasis on fake news management in the age of artificial intelligence.	-0.457	6.896	0.000	Confirmed
2	There is a significant relationship between the central phenomenon, namely media governance with emphasis on fake news management in the age of artificial intelligence, and the identified strategies.	0.705	26.901	0.000	Confirmed
3	There is a significant relationship between intervening conditions and the identified strategies.	-0.635	18.084	0.000	Confirmed
4	There is a significant relationship between contextual conditions and the identified strategies.	-0.869	43.236	0.000	Confirmed
5	There is a significant relationship between the identified strategies and the identified outcomes.	0.831	39.876	0.000	Confirmed

Discussion and Conclusion

The present study aimed to present a media governance model with emphasis on fake news management in the age of artificial intelligence. The findings of the qualitative phase showed that the model consists of causal conditions, the central phenomenon, strategies, intervening conditions, contextual conditions, and outcomes. The results of the quantitative phase also confirmed the significance of the relationships among the main components of the paradigm model. More specifically, the relationship between causal conditions and the central phenomenon was significant, the relationship between the central phenomenon and the identified strategies was significant, the relationship between intervening conditions and strategies was significant, the relationship between contextual conditions and strategies was significant, and the relationship between strategies and outcomes was significant. These findings indicate that fake news management in the age of artificial intelligence is not a single-dimensional technical issue but a complex governance phenomenon shaped by technological, institutional, behavioral, social, economic, and geopolitical factors.

The first finding showed that the identified causal conditions had a significant relationship with the central phenomenon of media governance with emphasis on fake news management in the age of artificial intelligence. These causal conditions included public access to content production tools, economic logic and platform algorithms, public trust, cognitive warfare, and geopolitical rivalries. This finding is theoretically meaningful because artificial intelligence has changed the conditions of content production and dissemination. The increasing availability of AI-based tools has reduced the cost and complexity of producing persuasive, synthetic, and manipulative content, including deepfakes and algorithmically optimized rumors. This result is consistent with studies emphasizing that the convergence of artificial intelligence and social media has created new communicative capacities while simultaneously increasing risks related to misinformation, manipulation, and content disorder [4, 5]. It also aligns with the argument that social media platforms have become central infrastructures for public communication, where user participation, rapid dissemination, and platform-based visibility shape the social effects of information [1].

The significant relationship between causal conditions and the central phenomenon can also be explained through the role of platform algorithms and the economic logic of engagement. In contemporary media ecosystems, content visibility is not determined only by editorial judgment or public value but also by algorithmic recommendation, emotional engagement, virality, and monetization incentives. Studies on user-generated and marketer-generated content show that digital content influences satisfaction, perception, and behavioral response, suggesting that content value is increasingly shaped by interactional and textual dynamics [16]. Similarly, research on online social communities indicates that linguistic, social, and peer-recognition mechanisms affect participation and visibility in digital environments [17]. Therefore, the finding of this study confirms that fake news management must address the structural mechanisms through which digital platforms reward emotional, controversial, and high-engagement content. In such environments, fake news becomes not only a content problem but also a platform-governance problem.

Another important aspect of the first finding is the role of public trust. The results indicated that public trust is one of the key causal concepts in the governance model. This is consistent with the broader literature on public value, e-governance, and citizen engagement, which emphasizes that digital governance is effective only when citizens perceive institutions as credible, responsive, and accountable [2, 3]. When public trust in official media and public institutions declines, citizens become more vulnerable to alternative narratives, conspiracy-based interpretations, and emotionally charged

misinformation. Moreover, fake news can strategically target trust itself by undermining the credibility of official institutions and reconstructing social perception around suspicion. This point corresponds with studies showing that strategic information disclosure affects institutional and market perceptions, indicating that the management of information is directly related to legitimacy, confidence, and stakeholder behavior [23]. Therefore, the causal role of public trust in the present model is strongly supported by prior research.

The second finding showed that the central phenomenon had a significant relationship with the identified strategies. These strategies included technological strategy, editorial and professional strategy, platform strategy, educational and social strategy, continuous review of models and policies, creation of a culture of collective response, and legal and political strategy. This finding indicates that when media governance is conceptualized around fake news management in the age of artificial intelligence, it naturally requires a multidimensional and integrated strategic response. This result is consistent with studies emphasizing that AI can support media analysis, bias detection, monitoring, and explainability, but its use requires governance, transparency, and interpretive accountability [6]. It is also aligned with the view that the future of leadership in media organizations depends on technological foresight, adaptive management, and strategic preparedness for digital transformation [8]. Therefore, strategies for fake news management should not be limited to content correction after publication; they should include preventive, analytical, regulatory, educational, and participatory mechanisms.

The technological strategies identified in this study are supported by research showing the expanding role of AI in monitoring, detection, prediction, and decision support. For instance, AI-based location intelligence and sentiment analysis have been used for automated disaster monitoring from social media posts, demonstrating the potential of artificial intelligence for extracting actionable information from large-scale digital communication flows [24]. Similarly, AI-based text and image detection methods demonstrate the growing capacity of machine learning and transformer-based systems to process complex visual and textual data [25]. These studies support the present finding that fake news governance in the AI era requires technological strategies such as automated detection, anomaly identification, deepfake recognition, and algorithmic monitoring. However, technology alone cannot provide a complete solution because fake news is also shaped by meaning, context, trust, political interests, and public interpretation.

The editorial and professional strategies identified in this study are also consistent with the literature on media transformation. Artificial intelligence has changed the media industry by affecting content production, newsroom routines, audience analytics, and media competition [9]. However, the transformation of media by AI increases rather than decreases the need for professional standards. In an environment where automated tools can generate news-like content and synthetic narratives, journalistic norms such as verification, source transparency, accountability, and editorial independence become more important. The application of social media platform data in policymaking similarly shows that data-driven approaches can support governance, but they require careful interpretation and institutional responsibility [7]. Therefore, the finding of this study emphasizes that professional media governance must combine computational capacity with editorial judgment and ethical responsibility.

The educational and social strategies identified in the model are strongly supported by studies on technology, learning, and AI literacy. Research has shown that technology and artificial intelligence can influence academic performance, learning processes, and educational advancement [26, 27]. These findings are relevant because media literacy and AI literacy are essential for strengthening citizens' capacity to recognize misinformation, evaluate digital sources, understand algorithmic

influence, and avoid uncritical sharing of unreliable content. In addition, studies on digital affordances show that platform design and interactive features influence user behavior and decision-making [28]. This supports the argument that educational strategies must not only teach citizens to identify fake news but also help them understand how digital environments shape attention, emotion, trust, and participation.

The third finding showed that intervening conditions had a significant relationship with the identified strategies. In the present model, intervening conditions included governmental institutions, the behavior of members of society, social networks, and the knowledge and awareness of citizens. This result suggests that even when appropriate governance strategies are developed, their implementation depends on the institutional and social environment in which they operate. The role of governmental institutions is particularly important because fake news management often requires coordination among media regulators, public institutions, technology agencies, legal authorities, and media organizations. This interpretation is consistent with research on modern governance in cyberspace, which emphasizes both the opportunities and challenges of artificial intelligence for governance, policy, and public administration [30]. It also corresponds with the literature on media governance and high-quality organizational development, which shows that governance mechanisms can shape institutional adaptation and strategic performance [21].

The role of social networks and user behavior as intervening conditions is also supported by prior studies. Social media platforms are not passive communication channels; they are interactive environments in which citizens produce, circulate, interpret, and amplify information. Studies on hashtag-based public discussions show that online discourse can rapidly organize collective attention around social and political issues while also producing complex and polarized communication flows [18]. Similarly, research using social, cognitive, and behavioral information from social media to predict stock markets demonstrates that digital communication contains behavioral signals that can affect broader social and economic outcomes [29]. These findings support the present study's conclusion that fake news governance must consider citizen behavior, social interaction, and platform-mediated amplification as intervening forces that affect the success or failure of governance strategies.

The fourth finding indicated that contextual conditions had a significant relationship with the identified strategies. These contextual conditions included social transformations, society's immersion in technology, and the penetration of information technology. This finding reflects the fact that fake news governance occurs within a broader digital transformation of society. As digital infrastructures become embedded in everyday life, organizational processes, public communication, education, markets, and political participation, governance strategies must be adaptive and context-aware. Studies on digital innovation and new media communication culture show that digital transformation can influence industrial structures and economic growth [22]. Research on big data affordances also demonstrates that data-driven capabilities can affect market performance when aligned with organizational strategy and service orientation [15]. Therefore, the strategies of media governance must be designed in accordance with the technological maturity, digital culture, institutional capacity, and social conditions of the target environment.

The significance of contextual conditions is also understandable in light of the broader organizational consequences of artificial intelligence adoption. Research in human resource management indicates that AI transforms managerial practices, innovation processes, workforce planning, and organizational capabilities, while also creating challenges related to fairness, displacement, and accountability [10-12]. Other research has emphasized the multifaceted relationship between AI adoption

and unemployment, showing that technological change can produce both efficiency gains and social risks [13]. These findings support the present study because media governance strategies cannot be separated from the organizational and social contexts in which artificial intelligence is implemented. If institutions lack technological skills, regulatory clarity, professional training, and adaptive leadership, AI-based fake news management strategies may remain ineffective or even generate new risks.

The fifth finding showed that the identified strategies had a significant relationship with the identified outcomes. The outcomes of the model were classified at the individual, social, institutional and democratic, and media levels. This finding indicates that effective fake news management can produce multi-level consequences. At the individual level, it can improve media literacy, critical awareness, and responsible information behavior. At the social level, it can strengthen trust, reduce polarization, and support collective resilience against manipulation. At the institutional and democratic level, it can protect legitimacy, accountability, and public decision-making. At the media level, it can improve credibility, professional quality, and governance capacity. This result is consistent with studies suggesting that AI and data-driven systems can enhance decision-making and organizational performance when supported by knowledge management processes and appropriate institutional capabilities [14]. It also aligns with research showing that AI-based personalization, recommendation, and digital experience can influence emotions, identity, and user behavior, which confirms the need for governance strategies that address both technical and human outcomes [19, 20].

Overall, the findings of this study are consistent with the growing body of research that views artificial intelligence as both an opportunity and a challenge for media governance. AI can increase the speed, accuracy, and scope of monitoring systems, but it can also increase the scale and sophistication of fake news production. Social media can strengthen citizen engagement, but it can also intensify rumor diffusion and cognitive manipulation. Platform data can support policymaking, but it can also create problems of algorithmic opacity and unequal visibility. Therefore, the present study contributes to the literature by integrating these fragmented dimensions into a coherent paradigm model. The confirmed relationships among causal conditions, the central phenomenon, strategies, intervening conditions, contextual conditions, and outcomes show that fake news management in the age of artificial intelligence requires a comprehensive governance architecture that is technological, professional, legal, educational, institutional, and social at the same time.

One of the most important theoretical implications of this study is that media governance should be reconceptualized as an adaptive socio-technical system. Traditional approaches that focus only on regulation, editorial control, or public communication are no longer sufficient. In the AI era, fake news is produced through the interaction of automated tools, platform incentives, user behavior, social emotions, political interests, and institutional trust. Therefore, media governance must combine algorithmic accountability, professional journalism, public education, legal regulation, platform responsibility, and inter-institutional coordination. This integrated view is supported by studies on AI–social media convergence, data-driven policymaking, digital innovation, media leadership, and fake news mitigation [4, 5, 7, 8]. Accordingly, the model developed in this study can provide a conceptual and empirical basis for designing more resilient media governance systems in societies facing rapid technological and informational change.

This study had several limitations. First, the qualitative participants were selected from experts in media, journalism, broadcasting, policymaking, information technology, and public relations; therefore, although their expertise was directly relevant to the research topic, the findings may not fully reflect the perspectives of ordinary media users, independent fact-

checking organizations, private platform companies, or civil society actors. Second, the quantitative section was based on a questionnaire administered to media experts, which may have introduced perceptual bias because the data reflected expert judgments rather than direct behavioral or platform-level measurements. Third, the study was conducted in a specific institutional and cultural context, and the model may require further testing before being generalized to other countries, media systems, regulatory environments, or platform ecosystems.

Future studies are recommended to test the proposed model in different institutional, cultural, and technological contexts in order to examine its generalizability and comparative validity. Researchers can also expand the model by including the perspectives of citizens, journalists, platform designers, fact-checkers, policymakers, and civil society organizations. In addition, future research may use mixed data sources such as social media analytics, experimental designs, digital trace data, interviews, and longitudinal surveys to examine how fake news spreads, how users respond to corrective information, and how AI-based governance tools perform over time. It is also suggested that future studies investigate the ethical, legal, and operational consequences of using artificial intelligence for fake news detection, content moderation, and public communication management.

Media organizations and public institutions should develop integrated governance systems for fake news management that combine technological monitoring, professional verification, legal coordination, public education, and platform accountability. Newsrooms should strengthen editorial protocols for AI-generated and user-generated content, while policymakers should design transparent regulations that protect both information integrity and freedom of expression. Public education programs should focus on media literacy, AI literacy, source evaluation, and responsible sharing behavior. In addition, institutions should establish rapid-response mechanisms for detecting and countering fake news during crises, elections, public health emergencies, and geopolitical tensions. Such mechanisms should be collaborative, evidence-based, transparent, and continuously updated in response to technological change.

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Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. Written consent was obtained from all participants in the study.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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