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Examining the Role of Content Strategies in Formulating Digital Media Policies: An Approach Based on Soft Systems Methodology

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Abstract

In the contemporary era, where digital technologies impact all aspects of human life, effective policymaking in digital media is crucial. Considering the influence of these media on public opinion, political and social communications, and their effects on cultural and economic spheres, the need for careful policy assessment is evident. Given the complexity of digital media policymaking, applying soft operational research methodologies can yield more comprehensive outcomes. This research examines soft systems and cognitive mapping as tools for assessing digital media policymaking. This approach identifies current issues, evaluates capacities for improvement, and offers a practical framework for effective policymaking. Data for the conceptual model were obtained from prior studies and interviews with digital media experts. In analyzing the media and communication sector, a key observation—similar to other social and cultural domains—is cultural lag, where rapid technological development surpasses society's and policymakers' ability to adapt and develop suitable content strategies. This research highlights that modifications in the "content" domain are crucial for effective digital media policymaking.

Keywords: Media, digital media, media policy, soft systems methodology, cognitive mapping.

Introduction

Digital technologies have changed the landscape of the world. The shape of today's businesses, manufacturing processes, health care, communication, education, mass media, as well as almost every other aspect of human life has changed dramatically (Khodaei, Hosseinpour, Jamshidi, Mohamadifar, 2024). Digital media significantly influence public opinion, political discourse, and economic dynamics (Drossos et al., 2024). By

establishing a global platform for the unrestricted exchange of ideas, these media have become pivotal in shaping public sentiment and driving socio-political developments (Maitri et al., 2023; Grossman, 2022). The development of new technologies in the realm of media and communications has led to shifts in audience behaviors, the creation of new audience needs, and the entry of new competitors into the media market and the specialization of networks

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(Alamshahi et al., 2024). Rapid technological advancements and shifting media consumption trends necessitate continuous updates to media policies. The emergence of content recommendation systems has introduced challenges related to cultural and political diversity (Burgess et al., 2024), while the dynamic nature of digital media complicates effective policymaking (Lopes & Casais, 2022). A key challenge in digital media governance is addressing the spread of fake news and misinformation. Advanced technologies, such as big data analytics and artificial intelligence, have become essential tools for detecting and mitigating these issues, enabling data-driven policymaking (Shahzad et al., 2022). Policymakers also face concerns regarding privacy, data security, and market competition (Grossman, 2022), highlighting the need for robust, adaptive strategies. Content strategies play a crucial role in digital media governance by enhancing audience engagement, fostering brand loyalty, and optimizing communication (Demirer, 2022; Sharma, 2019; Zhou, 2024). In countries like Iran, where unique social and political challenges exist, assessing media policies is particularly critical. Digital media policymaking must balance public interests, democratic values, and economic growth, requiring collaboration among governments, media sectors, and civil society. This research aims to examine digital media policymaking in Iran, exploring its challenges, opportunities, and current strategies. By employing cognitive mapping and soft systems methodologies, this study offers a comprehensive analysis of the factors influencing policymaking and proposes effective models for future governance. Despite recent advancements in Iran's digital

media landscape, policy-related issues persist, including content regulation, user privacy, and balancing national security with freedom of expression. Prior studies have focused on areas like marketing or audience engagement, with limited attention to macro-level policymaking and its socio-cultural dimensions. This gap underscores the need for an integrated analysis of Iran's digital media policies. This study investigates the outcomes of Iranian government policies over the past decade, aiming to identify an optimal model for digital media policymaking. By combining cognitive mapping with soft systems methodologies, it provides a holistic assessment, capturing the perspectives of key stakeholders and addressing both social and technical complexities. The findings will inform researchers, media practitioners, and policymakers, contributing to more effective digital media governance.

Review of the Theoretical Foundations of the Research

Theoretical Background

The development and proliferation of digital media have significantly impacted various aspects of social, economic, and cultural life. The digital transition has heightened the need for effective policymaking, particularly as digital marketing and media play crucial roles in business growth, especially for startups (Maithil et al., 2023). This underscores the importance of policies that support digital infrastructure development and digital literacy. However, challenges such as the spread of misinformation and fake news remain critical concerns, emphasizing the need for robust media literacy and regulatory frameworks (Bianchi & Tafuri, 2023).

Digital media also present opportunities in education, where digital tools can enhance learning outcomes and support children's development (Sitinjak, 2023). This highlights the necessity of effective policies for integrating digital tools in educational environments. Additionally, digital media influence language and culture, creating tensions between preserving cultural heritage and embracing linguistic innovation (Volkova & Chernyavskaya, 2021). The digital revolution has further transformed the economy, with digital economy and governance emerging as key areas of research (Liu et al., 2022). These developments call for comprehensive policymaking to foster inclusive and sustainable economic growth.

In Iran, digital media adoption has grown significantly, mirroring global trends. Yet, policymaking faces challenges related to content regulation, user privacy, and balancing national security with freedom of expression (Grossman, 2022). Iranian governments have varied in their approaches, ranging from strict censorship to more liberal policies, reflecting shifts in political priorities. The media convergence theory, introduced by Jenkins (2004), provides a framework for understanding the integration of diverse communication technologies and their impact on media consumption patterns (Triyono et al., 2023). Media convergence encompasses technological shifts, cultural changes, and evolving audience behaviors (Ling, 2011). Research shows that media convergence has reshaped media industry structures, content creation, and audience engagement, with significant growth observed in China from 2008 to 2018 (Feng et al., 2020). Applying this theory to Iran helps identify the need for policy adjustments

in content regulation, digital innovation investments, and holistic policymaking that balances economic and cultural dimensions. Given the complex, "ill-structured" nature of digital media policymaking, this study employs Soft Systems Methodology (SSM) to define problems, identify stakeholders, and analyze key information flows. SSM facilitates a comprehensive examination of complex systems, supporting strategic decision-making for policymakers (Mingers, 2011). Traditional methods often fall short in addressing issues characterized by multiple stakeholders, ambiguous resources, and uncertainty. SSM addresses these gaps by clarifying the structure of complex issues and enabling effective solutions (Golshahi et al., 2022; Rajabzadeh Ghatari et al., 2015). SSM posits that individuals interpret situations differently based on their experiences and cognitive frameworks (Fatemi et al., 2019). Developed by Checkland and colleagues at Lancaster University, SSM is a form of action research that fosters deep understanding through real-world analysis (Checkland & Holwell, 1998). Complementing SSM, cognitive mapping helps policymakers understand stakeholders' mental models and anticipate policy outcomes (Bryson, 2004). This dual approach clarifies diverse perspectives, aiding in conflict resolution among stakeholders. In Iran, where digital media policymaking is influenced by complex internal and external factors, integrating SSM and cognitive mapping enables data-driven, adaptable, and stakeholder-inclusive policy development. These methodologies help Iranian policymakers navigate digital media's inherent complexities, fostering more effective governance tailored to the country's unique context.

Experimental background

Digital media policy has emerged as a significant and complex area within media studies. Numerous studies have explored various aspects of this subject. Flew et al. (2019) examined internet regulation in the context of media policy, arguing that the rise of digital platforms necessitates a reassessment of media corporations' roles and the balance between public interest and freedom of expression. Burgess et al. (2024) analyzed the role of recommendation systems on global media platforms, highlighting the need for policies that address cultural diversity both globally and within local contexts. Similarly, Dementieva et al. (2023) explored the evolution of Russia's digital media landscape, demonstrating how political developments influence digital media's form and content. Shahzad et al. (2022) investigated the relationship between big data analysis and fake news detection, emphasizing the importance of advanced technologies such as artificial intelligence and neural networks in combating misinformation. These studies collectively suggest that digital media policymaking requires a multifaceted approach, incorporating technical, economic, cultural, and legal dimensions. Additionally, rapid technological advancements and shifts in media consumption patterns highlight the need for continuous evaluation of media regulations. Demirer (2022) examined the impact of content strategies on digital media regulation, showing how factors like content type, agility, context, post format, and publishing schedules influence user engagement metrics such as likes, shares, and comments. Drossos et al. (2024) further demonstrated that multimedia content, transformative appeals, and minimal

interaction can enhance user engagement. Peil and Sparviero (2017) explored the challenges associated with media convergence, providing insights into the evolving media landscape.

This research builds on these prior studies, employing the Soft Systems Methodology (SSM) to develop a comprehensive framework for formulating content strategies in digital media policymaking. This framework aims to serve as a practical guide for policymakers and media managers, offering insights for more effective governance in the dynamic digital media environment.

Research Methodology

This research is classified as an applied study in terms of its objectives and is descriptive-exploratory in terms of methodology, aiming to clearly delineate the existing processes within the digital media policy cycle and to propose an optimal model for policymaking in this field, especially given the scarcity of comprehensive data. To gather data, this study utilized two primary methods: extensive library research and field investigations. The library research involved a thorough examination of current literature and documents related to digital media policy and its associated challenges. Simultaneously, field investigations were conducted through semi-structured interviews with a range of specialists and executives in the media sector, selected via purposive sampling to form an expert panel capable of providing diverse insights. To ensure a comprehensive understanding, snowball sampling was also employed, where initial interviews with a select few experts led to referrals to other knowledgeable individuals. This process

continued until theoretical saturation was achieved, which occurs when additional interviews no longer contribute new insights to the research questions. The study adopted a hybrid methodology combining Soft Systems Methodology (SSM) and Cognitive Mapping (CM) to effectively examine the complex situations often encountered in digital media policy. This methodology is not implemented in a fixed, linear sequence but is instead dynamically adapted to fit the evolving context and needs of the research. According to Checkland and Poulter (2006), the SSM process involves seven principal steps, all of which were utilized in this research to address the multifaceted issues of digital media policy.

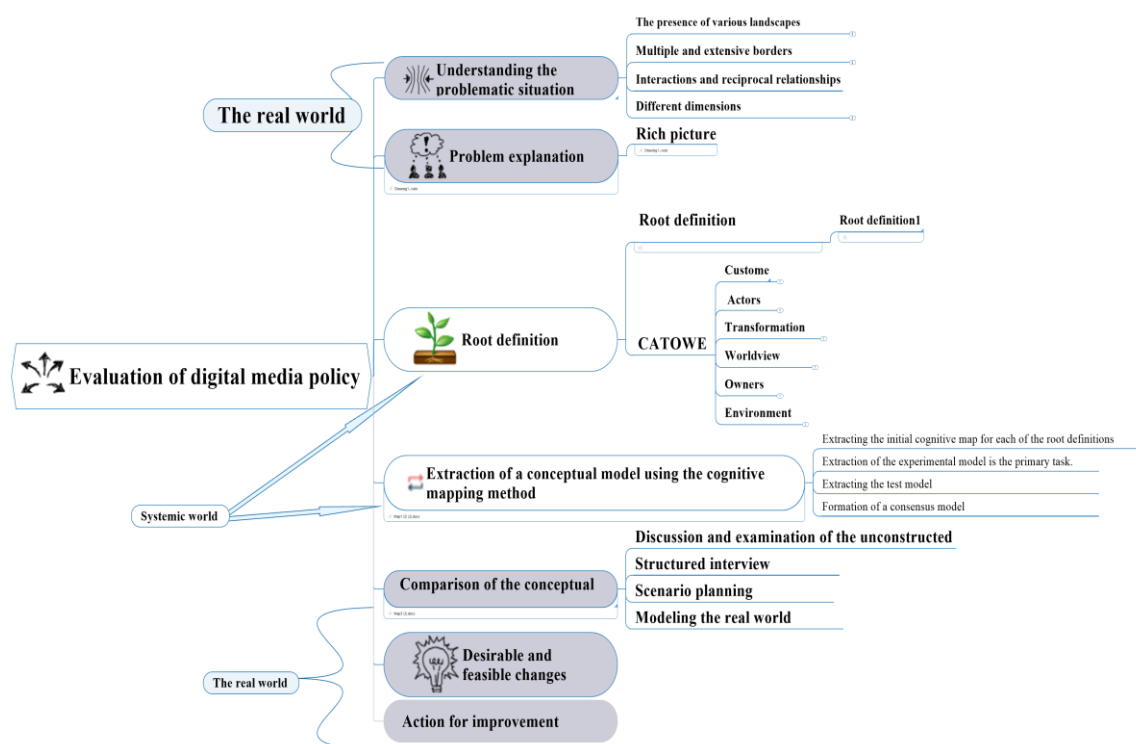
Despite the strengths of SSM, its limitations in the modeling phase are recognized, which led to the integration of Cognitive Mapping to enhance the

robustness of the analysis. Cognitive Mapping, rooted in George Kelly's theory of personal constructs (1985), focuses on reducing the interference of the researcher's biases in interpreting qualitative data. This technique strengthens the validity of the research by ensuring that the analysis deeply reflects the views and perceptions of the participants.

The integration of SSM and CM in this study provides a comprehensive framework that not only facilitates a deeper understanding of the policy issues but also supports the development of more effective and sustainable digital media policies. This methodological approach, by allowing concurrent exploration of various aspects of the problems, enables the researcher to gain deeper insights and propose more precise and practical solutions.

Figure 1.

Combined diagram of soft systems methodology and cognitive mapping



Research Findings

This section details the steps involved in the integrated Soft Systems Methodology (SSM) and Cognitive Mapping (CM) approach as applied to digital media policy-making.

Step One: Articulate the Problematic Scenario

The initial phase involves a deep analysis of the current situation in digital media, moving beyond simple problem identification to explore its complexities and uncertainties. This includes examining contributing factors and pertinent facts about the situation, as well as gathering stakeholder opinions, as emphasized by Checkland and Winter (2006) and Azar et al. (2016). The research identified governance challenges in digital media, which are exacerbated by the diversity of platforms like social networks and content-sharing services. These complexities make it difficult to develop and implement effective regulations that encompass all aspects of media policy, which aims to guide media towards achieving specific goals while upholding societal values.

The focus has primarily been on the content aspect of digital media challenges, addressing issues such as content diversity, volume, quality, and the presence of harmful or unlawful material. Formulating policy in this domain requires a comprehensive approach that promotes freedom of expression and access to information while ensuring accountability, media ethics, and protection of citizens' rights. Structured interviews with academic and executive media elites were conducted to understand the problematic scenario better and gather insights on optimal policy-making approaches. These interviews aimed to capture diverse perspectives and suggestions

for successful digital media policy-making. Interview findings suggest that various elements influence the development of effective policies in digital media. These include fostering active citizen engagement, ensuring transparency in information sharing and decision-making, enhancing institutional accountability, building public trust in government media initiatives, supporting the growth of independent and non-governmental media, promoting competition among media outlets, preventing monopolization, and implementing cascading strategies for policy development. These elements highlight the importance of transparency, accountability, and stakeholder engagement in creating policies that balance media diversity, informational equity, and public trust. Despite the identification of these influential factors, a comprehensive, consensus-based model for digital media policy remains elusive. This research addresses this gap by exploring diverse viewpoints from both academic and executive spheres, thereby shedding light on the complex issues and potential solutions in digital media policymaking.

Step Two: Creating a striking illustration

This step enhances understanding of the digital media policy-making scenario through the use of vivid imagery. As described by Azar & Zarghami Fard (2015) and outlined in Checkland and Poulter's "Learning for Action," this technique involves creating detailed written and visual representations, such as caricatures, to highlight key elements of the scenario—participants, issues, processes, and their interrelations. Methodological Approaches: Self-intervention Analysis; Identifies the roles and responsibilities of key individuals and stakeholders within the problematic

scenario. Social Analysis; Focuses on the pertinent norms, values, and social roles influencing the situation. Political Analysis; Examines power distributions and the dynamics of interactions among actors. Figure 2 in the study illustrates the problematic context in detail, employing these methodologies.

This research seeks to analyze the problematic situation and identify the factors affecting the desirability of policymaking in digital media. As illustrated, the Ministry of Culture and Islamic Guidance and the National Cyberspace Center, the primary institutions responsible for policymaking in this domain, function as "problem solvers."

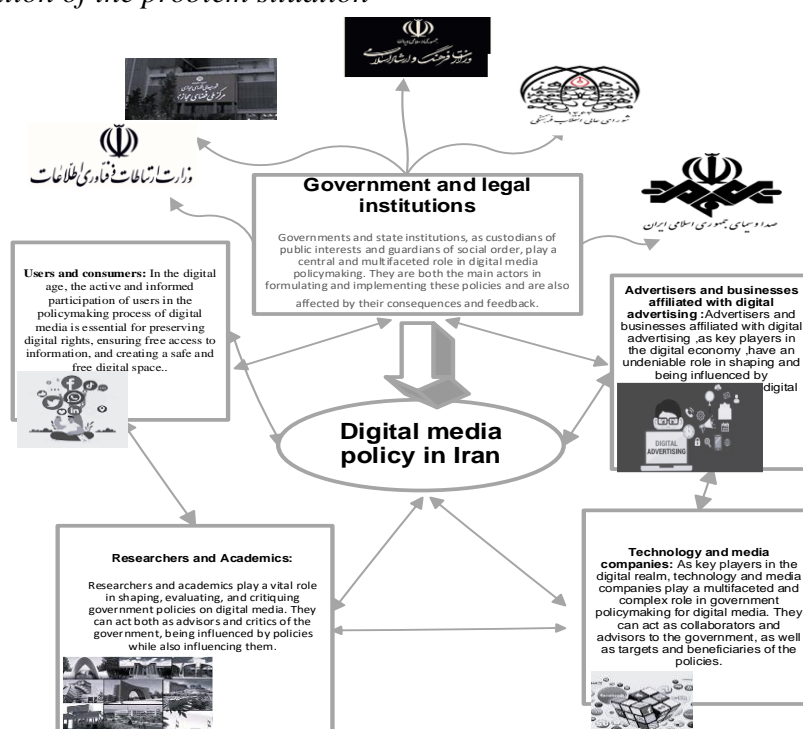
This research categorizes stakeholders involved in digital media policymaking into two groups: Primary Stakeholders; Directly engaged in the policymaking process or significantly impacted by its outcomes. This group includes major institutions such as the

Islamic Consultative Assembly, the Supreme Council of the Cultural Revolution, the Islamic Republic of Iran Broadcasting Organization, and the Ministry of Communications and Information Technology. Secondary Stakeholders; While not directly involved, these entities greatly influence policy outcomes through indirect effects or by affecting policy implementation and execution. This includes governmental and private executive bodies, educational institutions, and various societal divisions.

The Ministry of Culture and Islamic Guidance and the National Cyberspace Center are depicted as "problem solvers" navigating the policymaking framework. The nuanced roles of both primary and secondary stakeholders are crucial for the effective implementation of policies and for driving positive changes in the digital media landscape.

Figure 2.

A clear illustration of the problem situation



Step Three: CATWOE Analysis and Extraction of Fundamental Definitions

At this critical juncture, the research transitions from tangible observations to the conceptual and systemic realm by articulating a "root definition" of the issue at hand. A root definition is a concise yet comprehensive statement that outlines the system's objectives, identifying the principal actors and stakeholders involved. It serves as a conceptual foundation, enhancing understanding of the topic and guiding further analysis phases. Actors and Stakeholders; The root definition encompasses all relevant actors: system members, individuals, and groups affected by or influencing the system's efficacy. This comprehensive approach ensures that all perspectives are considered in the analysis, making the insights generated both inclusive and actionable. Formulation of the Root Definition;

The process of extracting and formulating the root definition is intricate and demands meticulous precision. It begins with a comprehensive overview of the issue, recognizing the primary elements and their interrelations. The next step involves selecting a specific aspect of the situation for focused modeling. This selection is strategic, aimed at addressing the principal features of the issue to facilitate effective management and control (Salmani Nejad et al., 2017). Once the root definition is established, the subsequent step is to define a specific subject or activity as the focal point for modeling. This is based on the elements and linkages identified in previous analyses. The system's framework can be succinctly described as "A system that achieves P through Q to realize R." Here, P represents the primary objective of the system, Q details the methodologies

employed to achieve these objectives under existing conditions, and R signifies the desired outcome or ultimate goal of the system. For instance, let P be "mitigating challenges and issues in digital media," Q represent "formulating and executing pertinent guidelines," and R denote "enhancing the quality of policymaking in digital media." Utilizing the PQR formula clarifies the system's operational logic and aids in developing practical and efficient solutions. The CATWOE model provides a robust framework for developing root definitions, ensuring they are well-rounded and cover all necessary aspects of the system being analyzed. This model helps in pinpointing the elements crucial for a comprehensive understanding and effective management of digital media challenges.

Clients

In Iran's digital media policy landscape, "customers" encompass diverse social actors affected by these policies. These include end users (content consumers), media and content creators, technology firms, internet service providers, governmental and regulatory bodies, civil society organizations, advertisers, and businesses.

Actors

Within the CATWOE framework, "actors" are individuals or entities responsible for implementing policies and reforms. They execute processes, enforce policies, and influence outcomes. Key actors in Iran's digital media policymaking include the Ministry of Communications and Information Technology, the Ministry of Culture and Islamic Guidance, the Communications Regulatory Authority, digital media platforms, technology firms, internet service providers, the judiciary, the Islamic Republic of Iran Broadcasting

Organization, and civil and human rights organizations.

Transformation

In the CATWOE model, transformation refers to the transition from the current state to the desired state through a structured series of actions. Digital media policymaking in Iran involves reforms across multiple domains—laws, oversight, infrastructure, and stakeholder engagement—aiming to enhance the digital media landscape.

Worldview

Iran's digital media policymaking is rooted in core values that shape policy assessment and development. These values include freedom of expression, digital rights protection, innovation, balancing liberty with security, stakeholder engagement, and adherence to justice and transparency.

Owner

In Iran's digital media policymaking, institutions with decision-making authority serve as primary stakeholders. The government and state agencies regulate this

domain by establishing and enforcing policies. Key entities include the Ministry of Communications and Information Technology, the Ministry of Culture and Islamic Guidance, the Supreme Council of Cyberspace, and the Communications Regulatory Authority. Understanding these stakeholders and their power dynamics is essential for improving decision-making processes and policymaking effectiveness.

Environmental Limitations

External factors influence policy formation and implementation, either as constraints or opportunities. The primary environmental influences in Iran's digital media policy span legal, cultural, social, economic, technological, and political dimensions. A precise understanding of these constraints is essential for mitigating their impact and devising more effective digital media strategies. Identifying and addressing these factors enhances policy efficiency and effectiveness.

Table 1.
Root Definitions Based on the CATWOE Model

RD ⁶ Content domain	Fundamental definitions resulting from a rich picture
Users and consumers who consume content and are influenced by it, including advertisers and businesses that use content to attract customers. Media and content creators. The government and regulatory bodies.	Customers (C)
The government and governmental institutions (such as the Ministry of Communications and Information Technology and the National Cyberspace Center). Technology and media companies. Researchers and academics. The Regulatory Authority for Radio Communications.	Actors (A)

⁶ Root Definition

RD ⁶ Content domain	Fundamental definitions resulting from a rich picture
Implementing policies and overseeing digital content with the aim of ensuring quality, adhering to ethical standards, and aligning with social and cultural values and norms. Enhancing media literacy and empowering audiences in dealing with digital content.	Transformation (T)
mpphasis on promoting valuable and ethical content in digital media to uphold social and cultural values and combat the spread of inappropriate content. Maintaining a balance between freedom and security in the digital space. Ensuring justice and transparency in the realm of digital media.	Worldview (W)
The government and responsible institutions that are tasked with regulating and overseeing content. Ministry of Culture and Islamic Guidance. Supreme Council of Cyberspace.	Owner (O)
Cyber threats, regulatory and legal restrictions, technical complexities, and international competition in the field of technology. Cultural and social limitations. Political restrictions.	Environment (E)

Employing the CATWOE conceptual framework enables the establishment of key definitions related to digital media policy. **Policy formation in digital media content (RD)** involves organizing and directing the creation and dissemination of digital content. This process is driven by the development and implementation of cultural and media policies, with active participation from the government, cultural institutions, media enterprises, content creators, and users. Its primary objectives are to enhance the quality and diversity of digital content, safeguard freedom of expression, and strengthen media culture within society. The CATWOE analytical methodology facilitates a holistic approach to digital media policymaking in Iran. By considering all relevant factors and influencing variables, it supports the development of comprehensive plans for advancing and improving this domain. A comprehensive definition of digital media

policymaking in Iran, grounded in the CATWOE paradigm, highlights an extensive and collaborative process. It involves the government and key institutions working alongside stakeholders to design and implement policies that promote freedom of expression, protect digital rights, foster technological innovation, balance freedom with security, and ensure justice and transparency in policy enforcement. This process must account for environmental constraints and prevailing conditions while strengthening infrastructure, raising awareness among users and content providers, and enhancing transparency and accountability in regulatory oversight. Incorporating all elements of the CATWOE framework, this definition clearly articulates the objectives, roles, processes, and constraints of digital media policymaking in Iran. It aids in identifying specific policy needs and modifications, guiding progress

and development in the digital media landscape.

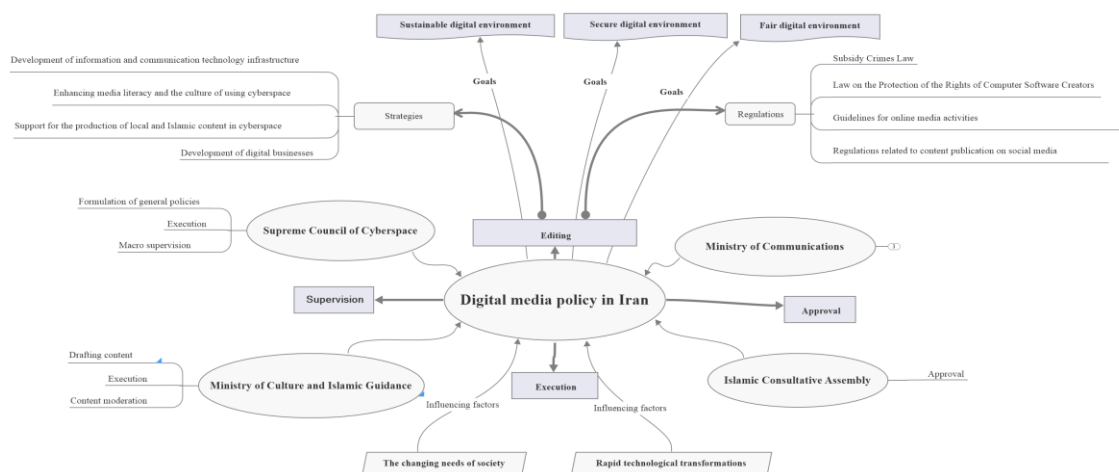
Step Four: Developing the conceptual model and the process of attaining consensus on the cognitive map

A conceptual model, constructed using root definitions and system rules, represents a diagram illustrating activities and their interrelations to support problem-solving and the achievement of specific objectives within the Soft Systems Methodology (SSM). This model typically includes five to nine key activities that are logically and interdependently connected. The incorporation of causal relationships helps identify both unrelated concepts and critical factors influencing decision-making (Azar et al., 2017). At this stage, a conceptual model for evaluating digital media policy has been developed using SSM and cognitive mapping tools, aiming to achieve expert consensus. Cognitive mapping serves as an effective method for systematically gathering, organizing, and presenting relevant data on the research topic, "evaluation of digital media policy." A foundational definition was first established, followed by interviews with

think tanks, leading to the identification and organization of key aspects into a cognitive map. This map highlights the causal, structural, and conceptual links among essential components. To achieve consensus among experts and stakeholders regarding the proposed conceptual model, the **Preliminary Task Model** was designed. Key figures in digital media policy were identified and engaged to support the development of this model. A root definition was then derived to guide the creation of the **Test Model**, which integrates elements from the preliminary model while incorporating additional features reflecting diverse perspectives. If the initial model does not yield satisfactory results, the process reverts to refining the root definition and adjusting the test model accordingly (Tavallaei et al., 2014).

Following this iterative process, the **Initial Consensus Task Model** is developed. Upon completion, a comprehensive, consensus-based conceptual model for assessing digital media policy will be established, enabling more accurate analyses and improving decision-making efficiency.

Figure 3.
Conceptual Model of Digital Media Policy



In steps five to seven, the process returns to the real-world environment, where the constructed model(s) are evaluated against actual conditions. At this stage, potential modifications are identified, and an operational strategy is developed and implemented to address them. Contrary to its idealized linear depiction, the Soft Systems Methodology (SSM) operates iteratively in practice. Repeating various phases is often necessary, as discussions initiated in step five may lead to revisions of earlier analyses and definitions (Nik-Kadam et al., 2017). This iterative approach supports continuous model improvement, enhancing its alignment with real-world conditions.

Step Five: Benchmarking

The fifth stage of the hybrid model focuses on comparing the developed conceptual

models with real-world conditions. This stage re-engages with reality to identify discrepancies and inconsistencies between the models and actual circumstances, highlighting deficiencies and necessary modifications to enhance their practical applicability (Azar et al., 2017). Researchers have proposed various methods for this comparison, including informal discussions, formal questioning, scenario writing, and creating real-world models analogous to conceptual ones, as suggested by Checkland (Checkland & Davies, 1986). Soft Systems Methodology (SSM) is inherently participatory, emphasizing dialogue as the primary driver of progress. This characteristic makes SSM particularly effective for addressing complex issues in an interactive and efficient manner.

Table 2.

Standard Comparative Table for Comparing the Conceptual Model with the Real World

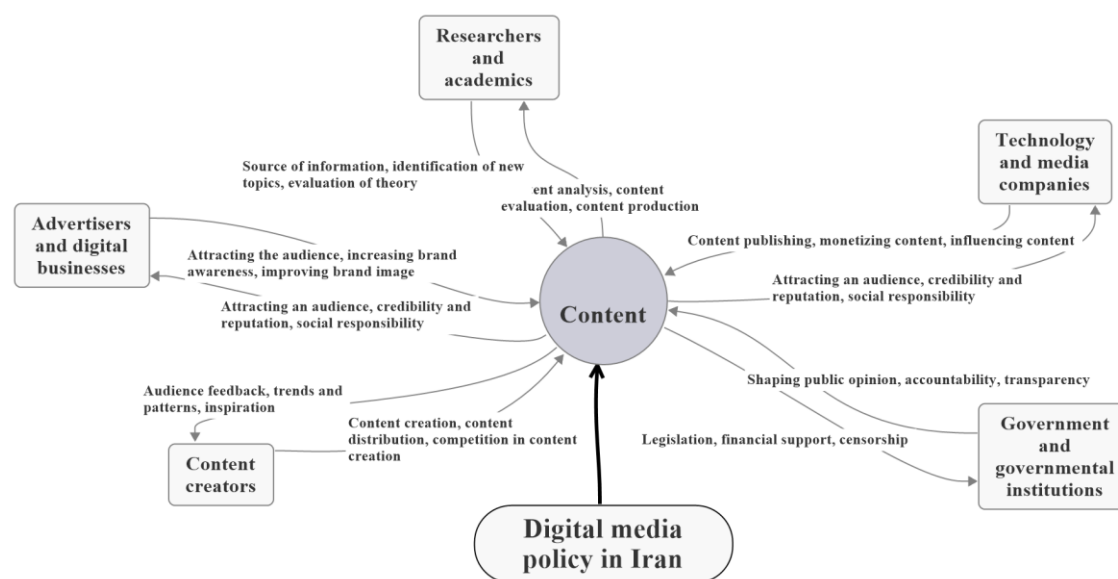
Necessary recommendations	Required changes	Comparison with practical measures	Real-world execution mechanism	Do they exist in the real world?	Factors influencing the conceptual model
creating new laws, upgrading standards, and establishing efficient monitoring systems to ensure content quality	Strengthening regulations	Average	government control of content; some producers face censorship restrictions	Yes	Content

Through a comparative table and comprehensive analysis, key modifications and recommendations for improving digital media policymaking in Iran can be identified. This analysis supports policymakers in developing and implementing more effective strategies. The comparison table addresses the following questions: Do the critical factors identified in the conceptual model for optimal digital media policy exist in real-world practices? What mechanisms are in place to implement these factors, if applicable? The table compares elements

essential to effective digital media policymaking, as outlined in the conceptual model, with actual practices conducted by the Ministry of Culture and Islamic Guidance and the Cyberspace Organization. This comparison helps identify necessary adjustments to enhance policy implementation and formulate targeted recommendations. The outcomes of this phase provide a set of actionable recommendations for refining digital media policy execution.

Figure 4.

Cognitive map of experts regarding the factors influencing optimal digital media policymaking



Steps six and seven: Identifying and offering options for transformation

In light of prior phases and the research undertaken to enhance the system, it is essential to offer pragmatic recommendations within the scope of senior managers' authority for the effective execution of digital media policy. Consequently, following several meetings and the involvement of project team members, recommendations for essential modifications in the execution of the intended digital media policy process have been proposed. This research presents a conceptual model comprising a primary domain, "content," which includes five principal categories: "government and governmental institutions," "advertisers and digital businesses," "media companies," "content creators," and "researchers and academics."

Content creators are directly influenced by rules pertaining to content, such as censorship regulations, media ethics, and content standards, which can hinder their

creativity and freedom of speech. Media enterprises necessitate robust infrastructure for content production and distribution, while governmental regulations about access to infrastructure and resources impact the quality and volume of the content generated. Advertisers require material generated by media and content providers to market their products and services, and restrictive or regulating regulations on content influence their advertising methods and efficacy. Government and its institutions regulate content control through policymaking, employing legislation to inhibit the distribution of unsuitable material or to encourage specific content, so affecting both content creators and consumers. Technology firms require suitable infrastructure to create and offer services, and governmental regulations in this domain influence their capacity to supply innovative solutions. Policies that facilitate the enhancement of technological infrastructure foster the expansion and progress of the digital media sector.

Conclusion and Recommendations

Conclusion

The study's findings underscore the critical role of **"content"** in shaping Iran's digital media policymaking. Content serves as the foundation of digital media, significantly influencing cultural and societal dynamics, contributing to the digital economy, enhancing global competitiveness, strengthening national security and cyber governance, and driving technological advancement.

Policymaking with a strong focus on content can yield far-reaching impacts, including: Enhancing media and digital literacy, Increasing user participation in content creation and consumption, Promoting cultural independence and reducing reliance on foreign content, Creating job opportunities in the digital content industry, Boosting revenue through digital content exports. Ultimately, emphasizing content fosters a dynamic, innovative, and accountable media ecosystem that supports growth in the digital era while preserving cultural and social values. Given content's pivotal role, effective policymaking in this area can significantly influence Iran's digital media landscape. Using **Soft Systems Methodology (SSM)** and **cognitive mapping**, this study evaluates factors influencing optimal digital media policymaking in Iran. By comparing conceptual model elements with real-world practices, the research identifies necessary adjustments for efficient policy implementation, ensuring both feasibility from governmental perspectives and desirability for stakeholders.

Adjustments in content-related policies are essential for enhancing digital media

governance. Infrastructure is a critical factor, as media companies require robust systems for producing and distributing high-quality content. Government policies that improve access to infrastructure—especially for small businesses—can enhance both the quantity and quality of content. Conversely, inadequate technological infrastructure hampers content development.

Advertisers rely on content from media creators to promote their products. Policies that regulate media content can directly impact advertising strategies and effectiveness. Hence, content-related legislation should consider the role of advertising within the media economy to avoid stifling growth.

Government institutions determine the degree of control over content through policymaking. Regulations may aim to restrict harmful content or promote cultural and educational materials, directly affecting content accessibility for audiences and operational freedom for creators. Balancing the need for oversight with the protection of individual freedoms and access to information is crucial. Policymaking in this space demands precision to align freedom of expression with societal and cultural needs. Supporting media companies and content creators through fair, transparent policies and improved infrastructure is key to raising content quality. Moreover, content policies should account for their potential effects on advertising and the digital economy, avoiding unnecessary restrictions that deter investment and innovation. This study distinguishes itself by applying SSM and cognitive mapping to explore the complexities of digital media policymaking in Iran, offering deeper insights compared to prior research:

Vlad et al. (2023) examined digital media's role in government-citizen interactions in Romanian and American rural areas. While their focus was on cross-country rural dynamics, this study adopts a broader, more analytical approach to policymaking complexities and stakeholder conflicts in Iran.

Guess et al. (2020) explored digital media literacy's role in combating misinformation in the U.S. and India. Unlike their focus on educational interventions, this research emphasizes macro-level content policies and their systemic impacts.

Jones (2023) and **Grossman (2022)** focused on governmental regulations in digital media. In contrast, this study provides a nuanced analysis of government-user-stakeholder interactions through cognitive mapping, highlighting participatory policymaking approaches.

Blank & Reisdorf (2023) analyzed digital inequality during COVID-19, particularly in accessing health information. While addressing similar challenges in Iran, this study innovatively applies cognitive models to understand stakeholder conflicts and propose effective policy solutions.

Kainja (2023) investigated digital rights in Malawi, identifying legal and infrastructural barriers. This study extends the analysis to Iran, exploring how SSM can guide effective legislation for digital rights and privacy protection.

Garganas (2024) focused on digital video advertising's evolution in the media landscape, contrasting social media ads with traditional TV. This study builds on that by stressing the need for continuous media law evaluations in response to shifting consumption patterns.

Akbar et al. (2023) explored media convergence through Indonesia's RRI Play Go app. Drawing from this, the current study applies media convergence theory to Iran's specific digital media context, offering fresh insights into policymaking.

The application of multi-layered analytical techniques, including SSM and cognitive mapping, helps policymakers address the social, cultural, political, and technological complexities of digital media governance. While previous studies often focused on specific regulatory or technological aspects, this research provides a comprehensive framework that integrates media convergence theory and systems thinking. This approach facilitates a deeper understanding of stakeholder dynamics, ultimately supporting more effective and adaptable digital media policies in Iran.

Suggestions

Based on successful international experiences, the theoretical principles outlined in this research, and Iran's unique digital media challenges, the following recommendations are proposed:

Establish laws that promote innovation and creativity in digital content creation while preserving cultural and social values. A robust legal framework should uphold national security, safeguard users' digital rights, and foster innovation in the IT sector. This framework should include regulations on cybersecurity, data protection, and user privacy, developed through collaboration among government bodies, IT firms, and civil institutions. Iran can model its legislation on frameworks like the EU's General Data Protection Regulation (GDPR), which emphasizes digital user privacy.

Create an autonomous regulatory body responsible for overseeing digital media performance, protecting user rights, and ensuring freedom of expression. This authority should operate independently of government influence, providing transparent reports and objective assessments. It should also develop clear standards for evaluating digital content, addressing technical quality, content integrity, and ethical considerations.

Promote comprehensive media and digital literacy programs to help individuals critically evaluate digital content. Educational initiatives, including online courses and university programs, should focus on digital security, privacy, and responsible social media use. These efforts will raise public awareness of digital rights and responsibilities and help combat the spread of misinformation.

Shift from restrictive content control methods to using advanced technologies, such as artificial intelligence (AI), for digital content monitoring. AI can improve content filtering and prevent the spread of harmful or misleading information without infringing on user rights. Developing local AI solutions can reduce the reliance on strict censorship while ensuring effective content moderation.

Update Iran's digital media regulations to align with international best practices and actively engage in knowledge exchange with countries experienced in digital content policy. International collaboration can help address regional challenges while leveraging global insights for policy development.

Invest in the creation of competitive domestic platforms to rival international models and maintain control over data flows. Strengthening local digital infrastructure will support Iran's digital sovereignty and foster a

dynamic, responsible ecosystem for digital content creation and consumption.

Suggestions for Future Research:

One of the biggest obstacles to digital media policymaking continues to be digital inequality. More thorough policies to bridge digital disparities can be developed with the use of research that looks more thoroughly at the social, economic, and cultural elements affecting digital inequality in Iran. This study can examine how technical capabilities, digital education, and internet access affect various regions of the nation. Future studies can look at the function and effects of artificial intelligence (AI) in digital media governance, given the technology's explosive rise in the domains of data filtering, information personalization, and content management. The usage of AI algorithms in content management and online privacy protection could be examined in this study.

References

- Akbar, Y., Muzakkir, M., & Samwil, S. (2023). RRI Play Go: Revolutionizing Radio Broadcasting through Media Convergence. *Jurnal Sosiologi USK (Media Pemikiran & Aplikasi)*. DOI: [10.24815.jsu.v17i1.30323](https://doi.org/10.24815.jsu.v17i1.30323)
- Alamshahi, A., Radfar, R., & Khamseh, A. (2024). Localization of Implementation Indicators for New Technologies in the Media Industry: A Fuzzy Approach. *Journal of System Management*, 10(4), 99-115. <https://doi.org/10.30495/sjsm.2024.1118841>
- Azar, A., & Zarghami Fard, M. (2015). An analysis of cognitive mapping method in structuring qualitative data of organizational studies. *Organizational Behavior Studies Quarterly*, 3(1-2), 159-185. (in Persian) https://obs.sinaweb.net/article_12434.html?lang=en
- Azar, A., Khosravani, F., & Jalali, R. (2016). *Soft operations research: Approaches to problem structuring* (2nd ed.). Tehran: Industrial

- Management Organization Press. (in Persian) <https://shorturl.at/dtORU>
- Bianchi, F. P., & Tafuri, S. (2023). Spreading of misinformation on mass media and digital platforms regarding vaccines. A systematic scoping review on stakeholders, policymakers, and sentiments/behavior of Italian consumers. *Human vaccines & immunotherapeutics*, 19(2), 2259398. <https://doi.org/10.1080/21645515.2023.2259398>
- Blank, G., Reisdorf, B.C. (2023). Digital inequalities and public health during COVID-19: media dependency and vaccination. *Information, Communication & Society*, 26, 1045 - 1065. <https://doi.org/10.1080/1369118X.2023.2166356>
- Bryson, J. (2004). "What to do when Stakeholders matter," *Public Management Review*, Taylor & Francis Journals, vol. 6(1), 21-53, March. <https://doi.org/10.1080/14719030410001675722>
- Burgess, J., Bartolo, L., Gray, J.E., Hutchinson, J., Kaye, D.B., Matamoros-Fernández, A., Pappalardo, K., & Wikstrom, P. (2024). 'Diversity' as multidisciplinary keyword for the politics of cultural recommender systems in global digital media platforms. *International Journal of Cultural Studies*. <https://doi.org/10.1177/13678779241239342>
- Checkland, P., & Davies L. (1986). "The use of the term 'Weltanschauung' in soft systems methodology", *Journal of Applied Systems Analysis*, 13: 109-115.
- Checkland, P., & Holwell, S. (1998). *Information, systems, and information systems: Making sense of the field*. Wiley. <https://shorturl.at/C6DvE>
- Checkland, P., & Poulter, J. (2007). *Learning for action: A short definitive account of soft systems methodology and its use for practitioners, teachers, and students* (Vol. 26). Wiley Chichester. <https://shorturl.at/nwkBA>
- Checkland, P., & Winter, M. (2006). Process and content: two ways of using SSM. *Journal of the Operational Research Society*, 57(12), 1435-1441. <https://doi.org/10.1057/palgrave.jors.2602118>
- Dementieva, K.V., & Gazizov, R.R. (2023). Transformation of the Russian digital media space in 2022: structural and content features. *Communication studies*. DOI: [10.24147/2413-6182.2023.10\(1\).72-84](https://doi.org/10.24147/2413-6182.2023.10(1).72-84)
- Demirer, D. P. (2022). The role of content strategy in social media on brand post's popularity: a case of higher education institutions in Turkey. *Humanities Today: Proceedings*, 1(2), 41-57. DOI: <https://doi.org/10.26417/ejsr.v1i1i2.p134-144>
- Drossos, D., Coursaris, C., & Kagiouli, E. (2024). Social media marketing content strategy: A comprehensive framework and empirically supported guidelines for brand posts on Facebook pages. *Journal of Consumer Behaviour*, 23(3), 1175-1192. <https://doi.org/10.1002/cb.2269>
- Fatemi, S. Z., Azar, A., Moghbel BaArz, A., & Khadivar, A. (2019). Exploring the concept of strategic renewal with soft systems methodology. *Journal of Research in Strategic Management*, 13(1), 25-45. (in Persian) <https://sid.ir/paper/129841/en>
- Feng, Y., Wang, Z., Peng, Y., & Yang, S. (2020). Bibliometrics-Based Review of the Media Convergence Research Trend in China: 2008 – 2018. *2020 International Conference on Culture-oriented Science & Technology (ICCST)*, 95-100. DOI: [10.1109/ICCST50977.2020.00024](https://doi.org/10.1109/ICCST50977.2020.00024)
- Flew, T., Martin, F., & Suzor, N.P. (2019). Internet regulation as media policy: Rethinking the question of digital communication platform governance. *Journal of Digital Media & Policy*. DOI: https://doi.org/10.1386/jdmp.10.1.33_1
- Garganas, O. (2024). Digital Video Advertising: Breakthrough or Extension of TV Advertising in the New Digital Media Landscape? *Journalism and Media*. <https://doi.org/10.3390/journalmedia5020049>
- Golshahi, B., Rastegar, A. A., Feiz, D., & Zarei, A. (2022). Designing an optimal life cycle model for elites in the country: Soft systems methodology and cognitive mapping. *Social Development Quarterly (Formerly Human Development)*, 17(1), 93-120. DOI: [10.22059/IMJ.2018.262586.1007469](https://doi.org/10.22059/IMJ.2018.262586.1007469)
- Grossman, E. (2022). *Media and policy making in the digital age*. Centre for European Studies and Comparative Politics, Sciences PO, Paris, France. <https://doi.org/10.1146/annurev-polisci-051120-103422>
- Guess, A. M., Lerner, M., Lyons, B., Montgomery, J. M., Nyhan, B., Reifler, J., & Sircar, N. (2020). A digital media literacy intervention increases discernment between mainstream and false news in the United States and India. *Proceedings of the National Academy of Sciences of the United States of*

- America, 117(27), 15536–15545. <https://doi.org/10.1073/pnas.1920498117>.
- Jenkins, H. (2004). The Cultural Logic of Media Convergence. *International Journal of Cultural Studies*, 7, 33 – 43. <https://doi.org/10.1177/1367877904040603>
- Jones, A. (2023). Exploring the Future: 5 AI Trends Reshaping the Social Media Landscape | Kubbco. [online] www.kubbco.com. Available at: <https://www.kubbco.com/blog/exploring-the-future-5-ai-trends-reshaping-the-social-media-landscape> [Accessed 22 Jan. 2024]. <https://www.kubbco.com/blog/exploring-the-future-5-ai-trends-reshaping-the-social-media-landscape>
- Kainja, J. (2023). Legal and policy gaps affecting digital rights in Malawi. *Journal of Human Rights*, 31(1), 1-10(017). DOI:10.4314/jh.v31i1.1
- Kenny, V. (1984). An introduction to the personal construct psychology of George A. Kelly. *Irish Journal of Psychotherapy*, 3(1), 1-12. <https://psycnet.apa.org/record/1989-36478-001>
- Khodaei, A., Hosseinpour, M., Jamshidi, M. j., & Mohamadifar, Y. (2024). The Role of Digital Technologies in Circular Entrepreneurship with a Focus on Business Models. *Journal of System Management*, 4(10), 15-31. <https://doi.org/10.30495/sjsm.2024.918229>
- Ling, Y. (2011). Media, Audience, and Power: A Critical Introduction of Henry Jenkins's Theory of "Convergence Culture". *Journal of Shanxi University*.
- Liu, H., Wang, X., Liang, H., & Wang, L. (2022). Research on Hot Topics and Development Trend of Digital Transformation from the Perspective of Bibliometrics: —Based on the analysis of CSSCI. *Proceedings of the 3rd International Conference on Industrial Control Network and System Engineering Research*. <https://doi.org/10.1145/3556055.3556067>
- Lopes, A. R., & Casais, B. (2022). Digital content marketing: Conceptual review and recommendations for practitioners. *Academy of Strategic Management Journal*, 21(2), 1-17. <https://www.researchgate.net/publication/357746605>
- Maithil, S., Qureshi, D.A., & Singh, R. (2023). Impact of Digital Marketing on Small Scale Startup Business with Special Reference to Madhya Pradesh. *International Journal for Research in Applied Science and Engineering Technology*. <https://doi.org/10.22214/ijraset.2023.49597>
- Maitri, W. S., Suherlan, S., Prakosos, R. D. Y., Subagja, A. D., & Ausat, A. M. A. (2023). Recent Trends in Social Media Marketing Strategy. *Jurnal Minfo Polgan*, 12(2), 842–850. <https://doi.org/10.33395/jmp.v12i1.12517>
- Mingers, J. (2011). Soft OR comes of age—but not everywhere! *Omega*, 39(6), 729-741. <https://doi.org/10.1016/j.omega.2011.01.005>
- Nik Qadam Hajati, S., Rajabzadeh Qatari, A., Alborzi, M., & Hassanzadeh, GH. (2018). Representing and Structuring the Issue of Organizational Creativity Using Soft Systems Methodology. *Organizational Resource Management Research*, 7(4), 181-203. (in Persian) DOR: 20.1001.1.22286977.1396.7.4.10.1
- Peil, C., & Sparviero, S. (2017). Media Convergence Meets Deconvergence.
- Salmani Nejad, R., Azar, A., Moghabal Ba'arz, A., & Salehabadi, A. (2017). The application of soft systems methodology in structuring the financing issue through the Iranian capital market, case study: Tehran Stock Exchange. *Organizational Resource Management Studies*, 7(1), 65-88. (in Persian) DOR: 20.1001.1.22286977.1396.7.1.2.7
- Rajabzadeh Ghatari, A., Azar, A., Zarei, B., Sepehri Rad, R., (2015). A Soft System Methodology Approach for Structuring Surveillance against Occupational Carcinogenic Exposures Problem (Case Study: Petroleum Industries). *Management Research in Iran*, 3(19), 167-190. (in Persian) DOR: 20.1001.1.2322200.1394.19.3.7.9
- Shahzad, K., Khan, S.A., Ahmad, S., & Iqbal, A. (2022). A Scoping Review of the Relationship of Big Data Analytics with Context-Based Fake News Detection on Digital Media in Data Age. Sustainability. <https://doi.org/10.3390/su142114365>
- Sharma, D.A. (2019). An empirical study to analyse the awareness and influence of User Generated Content on Facebook. <https://www.pramanaresearch.org/gallery/prj-p836.pdf>
- Sitinjak, K. (2023). Menumbuh-kembangkan Spiritualitas Anak melalui Pendidikan Kristiani Berbasis Media Digital. *JURNAL TERUNA BHAKTI*. DOI: <https://doi.org/10.47131/jtb.v5i2.68>
- Tavallaei, R., Bamdad Soofi, J., Rashidi, M. M., Rezaeian, A., & Salehi Sadeghiani, J. (2014). Designing a knowledge network development model in the research and technology hubs of the oil industry using soft thinking approach

- and cognitive mapping. *Human Resource Management in Oil Industry Quarterly*, 6(20), 181-200. (in Persian) <http://iieshrm.ir/article-1-364-fa.html>
- Triyono, W.A., & Witarti, D.I. (2023). Banyuwangi TV Media Convergence In Broadcasting Local Cultural Content In The Digital Media Era. *Journal Research of Social Science, Economics, and Management*. DOI: <https://doi.org/10.59141/jrssem.v3i3.562>
- Vlad, T., Hîncea, C., Neamțu, B., & Stănică, V.I. (2023). Impact, Utilization and Applications of Digital Media for Government in Rural Settings. A Comparative US-Romania Research. *Transylvanian Review of Administrative Sciences*. DOI: <https://doi.org/10.24193/tras.70E.7>
- Volkova, I.I., & Chernyavskaya, A.G. (2021). Gaming Slang Terms in Russian Online Media: A Case Study of News Articles. *RUDN Journal of Studies in Literature and Journalism*. DOI: [10.22363/2312-9220-2021-26-3-580-588](https://doi.org/10.22363/2312-9220-2021-26-3-580-588)
- Zhou, H. (2024). The Impact of Digital Media on Adolescent Well Being and Coping Strategies. *International Journal of Social Science and Human Research*. DOI: 10.47191/ijsshr/v7-i07-55, Impact factor- 7.876