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Analyzing digital resilience strategies for Harian Waspada through ANP and Maqashid Shariah in a VUCA environment

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ABSTRACT

Introduction

Print media organizations in Indonesia face mounting pressure as digital technology reshapes audience behavior, advertising markets, and competition. Harian Waspada, a long-standing Sharia-based newspaper, must navigate an environment defined by volatility, uncertainty, complexity, and ambiguity while preserving its ethical foundation. The organization confronts declining print revenue, limited digital capability, and evolving expectations for interactive and diverse content. These challenges call for a comprehensive assessment of how financial, technological, organizational, and ethical dimensions shape long-term resilience..

Objectives

This study aims to identify the most critical factors that influence the resilience of Harian Waspada in the digital era and to determine strategic priorities that support sustainable transformation. It also seeks to explore how principles of Maqashid Shariah can guide responsible decision-making and strengthen adaptability in a rapidly changing media landscape.

Method

The study employed a mixed-methods approach. Qualitative insights were collected through interviews with individuals who understand the newspaper's operations and the broader media industry. Quantitative analysis was conducted using the Analytic Network Process to examine the relationships among financial sustainability, digital readiness, organizational culture, audience engagement, and ethical considerations. The analysis produced priority rankings and illustrated the interdependence among these factors..

Results

The findings show that financial sustainability and digitalization

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challenges present the greatest obstacles to organizational resilience. A substantial decline in advertising revenue, combined with limited technological infrastructure and digital skills, restricts the pace of transformation. The study also reveals that audience engagement, content diversification, and stronger internal coordination are essential for long-term survival. Strategic priorities include investment in digital technology, enhancement of human resources, development of interactive communication channels, and content innovation. Ethical guidance derived from Maqashid Shariah supports the creation of responsible journalism and strengthens trust with readers.

Implications

The results indicate that successful adaptation requires a holistic approach that aligns technological advancement, financial management, organizational transformation, and ethical values. Strengthening the connection between strategic planning and Maqashid Shariah encourages balanced growth and reinforces the social role of the media

Originality/Novelty

This study offers an integrative perspective by combining the Analytic Network Process with Maqashid Shariah to evaluate media resilience. It provides a structured framework that connects digital transformation, financial stability, organizational renewal, and ethical governance in an Islamic media context.

INTRODUCTION

The global news industry has undergone profound structural change as digital technologies reshape the way information is produced, distributed, and consumed (Verhoef et al., 2021). Legacy print media organizations face sharp declines in circulation and advertising revenues as audiences migrate to online platforms and social media (Dwivedi et al., 2021). This shift has not been confined to Western markets; it has fundamentally altered the media landscape across Southeast Asia, including Indonesia, where readers increasingly rely on mobile devices and algorithm-driven distribution channels. Studies on media sustainability highlight that digital transformation requires more than adopting new tools; it demands reconfiguration of business models, organizational culture, and value creation strategies to remain viable in a volatile and highly competitive environment (Fraccastoro et al., 2021).

Recent research also suggests that the turbulence in the media sector is shaped by technological acceleration, uncertainty in audience behavior, and complexity in monetizing digital content (Firmansyah et al., 2022). These dynamics align with the Volatility, Uncertainty, Complexity, and Ambiguity framework, which has become a

common lens for interpreting institutional adaptability (Cernega et al., 2024). In Indonesia, several long-standing newspapers have reduced operations or ceased print circulation due to weakened financial capacity and operational rigidity (Masduki et al., 2024). Existing studies emphasize that legacy media often confront multidimensional constraints: declining advertising markets, insufficient technological readiness, limited skill sets among staff, and fragmented internal coordination (Kraus et al., 2022). These pressures underscore the urgency of designing integrated strategies that enable legacy institutions to reposition themselves within a digitally driven ecosystem (Chang & Chang, 2023).

Within this broader context, the case of Harian Waspada, one of Indonesia's oldest print newspapers, illustrates the central problem that motivates this study (Heikal, 2017; Sinaga et al., 2024; Suriyani & Nuraflah, 2019). Despite its historical credibility and community role, the organization faces steep declines in print revenue and increasing competition from digital-native outlets. The key research problem lies in understanding how a traditional print media organization can achieve resilience when its financial model, production systems, and audience engagement practices are disrupted simultaneously. The challenge is not only technical or economic; it requires alignment of transformation efforts with the newspaper's values, identity, and ethical commitments.

General managerial prescriptions for digital adaptation often recommend technological upgrades, new revenue streams, and streamlined workflows (Aondover et al., 2022; Costa et al., 2022; Javaid et al., 2024; Oluka, 2024; Plekhanov et al., 2023). However, research shows that such solutions remain insufficient when organizations lack coherent strategic vision, cultural readiness, or mechanisms for learning and change. For print media in particular, survival depends on integrating technological competence with flexible organizational structures and sustained audience relationships (Lehman-Wilzig & Cohen-Avigdor, 2004; Scolari, 2013). Legacy institutions frequently struggle because their established routines, hierarchical processes, and risk-averse cultures inhibit innovation. These limitations prompt scholars to investigate alternative frameworks capable of integrating operational, strategic, and normative perspectives.

A growing body of literature proposes that digital resilience in value-based organizations requires approaches that join technological renewal with ethical and social responsibilities (Rajput, 2025; Schlosser et al., 2023; Yoganandham & Kareem, 2025). For Islamic media institutions, these responsibilities are often articulated through the objectives of Shariah, known as Maqashid Shariah, which encompass the protection of intellect, religion, life, property, and the public good (Arifin et al., 2025; Farhan et al., 2021; Ishak et al., 2025; Muhlisah & Yusdani, 2023). Earlier studies indicate that incorporating these principles can strengthen governance, enhance trust, and provide a normative foundation for long-term sustainability. Research on organizational transformation in Islamic institutions suggests that Maqashid Shariah can guide decisions related to content quality, resource allocation, human development, and community engagement.

Other scholars have emphasized that resilience in the media sector is best analyzed through systemic approaches (Buzzanell et al., 2025; De Oliveira Capela et al., 2022; Kõuts-Klemm et al., 2022). General Systems Theory highlights that organizations operate as interconnected arrangements of inputs, processes, outputs, and feedback loops. Applied to media organizations, the framework underscores how editorial practices, technological infrastructures, human resources, and financial mechanisms must be coordinated to achieve stability. Strategic Management Theory further explains that organizations facing turbulent environments must adopt anticipatory, adaptive, and transformational strategies. The convergence of these perspectives suggests that long-term resilience arises from the interaction of internal capabilities, strategic orientation, and external pressures.

While previous studies provide valuable insights, they often examine these dimensions separately, leaving a notable gap in the literature. Few works integrate technological, financial, organizational, and ethical considerations into a comprehensive model for Islamic media transformation. Even fewer employ structured decision-making tools to prioritize problems and strategies amid complex interdependencies. This gap limits our understanding of how Sharia-guided media institutions can design evidence-based pathways for digital transformation while preserving their normative commitments. Addressing this gap requires a method capable of modeling interactions among factors that are not independent but mutually reinforcing.

This study responds to these challenges by assessing the resilience of Harian Waspada using an integrated framework that draws upon General Systems Theory, Strategic Management Theory, the VUCA paradigm, and the principles of Maqashid Shariah. It applies the Analytic Network Process to identify the most critical problems and the priority strategies needed to strengthen digital transformation, financial sustainability, organizational change, and ethical governance. The study contributes novelty by combining a quantitative decision-making model with an Islamic ethical framework to evaluate a media institution's adaptive capacity. Its scope encompasses financial dynamics, technological readiness, audience engagement, human resource development, and value-based strategic direction, offering a comprehensive foundation for future inquiry and practical implementation.

LITERATURE REVIEW

General Systems Theory

General Systems Theory (GST), introduced by Ludwig von Bertalanffy, offers a foundational understanding of organizations as dynamic and interrelated systems rather than isolated collections of parts (Johnson, 2019; Van Assche et al., 2019; Zhang & Ahmed, 2020). GST posits that system behavior emerges from the interactions among its components, making it impossible to interpret organizational performance without considering holistic interdependence (Porra et al., 2005; Ronquillo Bolaños et al., 2024; Rousseau et al., 2018). As noted by Bashan & Kordova (2021), GST marked a significant

paradigm shift by positioning systems as integrated structures whose characteristics derive from coordinated interactions. This perspective has influenced diverse fields including biology, psychology, technology, and management. Its conceptual emphasis on wholeness enables researchers to evaluate how various subsystems respond collectively to external pressures and internal constraints.

The relevance of GST becomes particularly salient in organizational contexts where digital transformation disrupts established processes, resource flows, and information structures. Within Islamic media organizations such as Harian Waspada, GST helps examine how inputs, Shariah values, human resources, and technological capacities, interact with processes of innovation, managerial adaptation, and content development. Elia et al. (2024) emphasize that such processes require reevaluating traditional models to accommodate new digital realities. Outputs, including ethically aligned media products, must reflect both market expectations and Islamic values, as highlighted by Mahfudz et al. (2024). Feedback loops enable organizations to adjust strategies based on audience responses and market dynamics, making GST an essential framework for understanding resilience in a VUCA environment.

Strategic Management Theory

Strategic Management Theory (SMT) provides a structured foundation for understanding how organizations adapt to shifting environments, optimize resource use, and pursue innovation to maintain competitiveness (Aman, 2025; Hansson & Abrantes, 2023; Parul, 2024). Originating in the mid-twentieth century, SMT emphasizes environmental analysis, strategic formulation, and organizational alignment, enabling firms to navigate uncertainties with coherent planning (Bisht & Sharma, 2025; Cleaves, 2018; Gerybadze, 2003; Kaushik & Manral, 2025). Classical strategic models, including industry analysis and competitive positioning, underscore the role of structure and internal capabilities in shaping sustainable advantage. SMT integrates both internal and external perspectives, guiding decision-making processes that reconcile organizational goals with broader environmental constraints. In Islamic contexts, strategic thinking also incorporates normative commitments inspired by religious principles (Mohd Amin, 2023; Uskuniyah & Ashari, 2024).

A central feature of SMT is its focus on anticipation, flexibility, and transformation as drivers of long-term effectiveness (Alharbi, 2024; Koomson, 2025). These components stress that organizations must foresee emerging trends, respond with agility, and reshape internal systems as conditions evolve. The theory also highlights the importance of change management, continuous innovation, and adaptive learning, concepts closely aligned with contemporary organizational challenges. SMT's relevance extends to Islamic media institutions that must balance commercial pressures with ethical duties. By integrating strategic principles with religious motivations, organizations can pursue growth while maintaining integrity, enabling them to navigate disruptive environments and achieve sustainable performance.

VUCA Context in Management Science

The VUCA framework, volatility, uncertainty, complexity, and ambiguity, captures the turbulent conditions that increasingly characterize modern organizational environments. VUCA reflects rapid technological shifts, unpredictable market behavior, and interdependent global systems that complicate strategic decision-making (Wicaksono et al., 2023). As discussed by Pertiwi et al. (2022), organizations require vision to clarify long-term goals, understanding to interpret internal and external realities, clarity to ensure coordinated communication, and agility to respond quickly to unforeseen challenges. These attributes determine how well institutions navigate fluctuations, assess risks, and sustain operational stability. In media sectors, VUCA dynamics intensify as digital platforms evolve rapidly and consumer preferences shift unpredictably.

Al Jabri et al. (2024) further argue that resilience and adaptation are critical capabilities for organizations operating in volatile environments. Resilience enables institutions to recover from disruptions, while adaptation supports ongoing adjustment to technological and market developments. Digital innovation plays a central role in strengthening these capacities by enhancing operational efficiency, expanding communication channels, and enabling more personalized engagement with audiences. For Islamic media organizations, navigating VUCA conditions also requires embedding ethical commitments into strategic choices, ensuring that technological advances align with Islamic principles and contribute to social welfare. Thus, VUCA not only highlights environmental challenges but also underscores the importance of values-driven agility.

Digital Transformation

Digital transformation represents a multidimensional shift in organizational operations, culture, and strategic focus driven by accelerating technological innovation. According to Verhoef et al. (2021), digital transformation involves reconfiguring business models, integrating advanced technologies, and redefining customer engagement to enhance competitiveness. It encompasses cultural change, process redesign, and organizational learning, making it far more comprehensive than simple technology adoption. In media industries, digital transformation reshapes information production, distribution, and consumption, requiring seamless integration of data analytics, platform optimization, and multimedia capabilities. These shifts compel legacy media institutions to rethink how value is created, delivered, and sustained.

However, successful implementation of digital transformation is often hindered by limited digital maturity, entrenched organizational resistance, and inadequate leadership support. Vărzaru & Bocean (2024) emphasize that transformation requires reimagining established workflows and embracing continuous innovation. Butt et al. (2024) highlight the importance of digital culture, which promotes openness to experimentation, cross-department collaboration, and proactive engagement with new technologies. Without cultural alignment, digital initiatives may falter despite substantial technological investment. In Islamic media organizations, digital

transformation must also maintain fidelity to ethical principles, ensuring that innovations align with Islamic identity and contribute to societal benefit.

Sharia-Based Business and Maqashid Shariah

Sharia-based business principles derive from the overarching objectives of Maqashid Shariah, which emphasize the protection of intellect, religion, life, property, and communal welfare. In organizational contexts, these principles offer a holistic governance framework that supports ethical decision-making, transparency, and social responsibility (Putri et al., 2023; U-Mar et al., 2024). Maqashid Shariah guides institutions to create value that extends beyond profit, aligning economic activity with spiritual, moral, and social objectives. This framework is particularly salient in media organizations, where content quality, public trust, and societal impact form essential elements of value creation. By integrating Maqashid Shariah, organizations can ensure that strategic initiatives support both organizational sustainability and community well-being.

Within digital transformation efforts, the role of Maqashid Shariah becomes increasingly important. Protecting intellect encourages organizations to invest in education, skill development, and credible information practices. Protecting property aligns with sustainable financial management and ethical monetization strategies. Protecting religion and life reinforces the responsibility to disseminate content that nurtures moral awareness and social harmony. Protecting communal welfare underscores the media's role in fostering informed, cohesive communities. By embedding these values within strategic and technological initiatives, Islamic media organizations can pursue innovative transformation while remaining grounded in their ethical identity and societal mission.

Research Gap and the Significance of the Study

Existing literature provides important theoretical foundations through General Systems Theory, Strategic Management Theory, the VUCA framework, digital transformation research, and Maqashid Shariah–based governance. However, these bodies of work tend to operate in isolation, leaving limited understanding of how technological, financial, organizational, and ethical dimensions interact within Islamic media institutions undergoing digital disruption. Prior studies highlight organizational adaptation (Vărzaru & Bocean, 2024; Verhoef et al., 2021) and the importance of ethical alignment (Mahfudz et al., 2024), yet few frameworks integrate GST, SMT, and Maqashid Shariah into a single analytical model that captures complex interdependencies in the media sector. This fragmentation creates a conceptual and empirical gap requiring systematic investigation.

The present study addresses this gap by combining systems thinking, strategic adaptability, VUCA responsiveness, and Shariah-based ethical considerations to evaluate the resilience of Harian Waspada in the digital era. Integrating technological innovation, human resource capability, and value-driven governance responds directly to challenges identified in previous literature (Bashan & Kordova, 2021; Butt et al., 2024;

Elia et al., 2024). By employing a structured decision-making approach capable of assessing interrelated variables, the study offers a comprehensive model for understanding transformation in Islamic media organizations. Its significance lies in advancing theoretical integration, strengthening empirical insight, and providing actionable guidance for institutions navigating digital disruption while upholding ethical commitments.

METHOD

Research Design

This study employed a mixed-methods design to analyze the resilience of a print media organization operating within a volatile, uncertain, complex, and ambiguous environment. The rationale for adopting a mixed-methods approach lies in the need to integrate interpretive insight with structured analytical modeling. Qualitative inquiry was used to explore the nuanced experiences, perceptions, and decision-making processes of stakeholders who influence or are affected by the organization's transformation. These insights provided an essential foundation for modeling the interdependencies across technological, financial, organizational, and ethical dimensions of media resilience. Quantitative modeling, through the Analytic Network Process (ANP), complemented the qualitative findings by generating a systematic prioritization of factors and strategies relevant to the organization's long-term sustainability.

The qualitative component followed Miles et al. (2013) analytical framework, which emphasizes iterative processes of data reduction, data display, and conclusion drawing (Sott et al., 2021). This methodological foundation was particularly appropriate for addressing the study's exploratory objectives, as it supports rigorous thematic development while allowing for the continuous refinement of interpretations throughout the research process. The ANP method was incorporated to address a central challenge identified in the qualitative phase: the interdependent nature of the factors shaping media resilience. Unlike the Analytic Hierarchy Process, which assumes a unidirectional hierarchy among elements, ANP accommodates reciprocal influence among nodes, making it suitable for modeling complex organizational environments.

Setting and Data Collection Procedures

The research was conducted at the Media Research Agency of the North Sumatra region from January to April 2024. This period was intentionally selected to examine the transitional dynamics faced by media companies in the post-pandemic recovery phase, particularly as consumption habits, revenue structures, and technological adoption patterns continued to evolve. The timing also allowed the study to capture the strategic responses of media organizations attempting to stabilize business operations and rebuild audience engagement following prolonged disruption.

Data collection involved both primary and secondary sources to strengthen the reliability and depth of the analysis. Primary data were gathered through semi-structured interviews, enabling respondents to articulate detailed observations and

experiences while providing the flexibility to probe emerging themes. This approach ensured that the qualitative data reflected the operational realities, strategic considerations, and contextual constraints of the media industry. Secondary data consisted of organizational reports, internal financial documents, audience analytics, and regulatory or industry reports that contextualized the organization within broader structural developments. The integration of both data types ensured a comprehensive understanding of the media landscape and supported triangulation across methodological phases.

Sampling Strategy

A purposive sampling technique was employed to identify individuals whose expertise or experience offered meaningful insight into the research objectives. The sample consisted of nine informants, a size deemed adequate for achieving data saturation while preserving depth and diversity of perspectives. Informants were selected to represent the multifaceted ecosystem within which the media organization operates. The sample included one government representative knowledgeable about regulatory frameworks, four executives directly involved in managing media operations, two senior consultants with experience advising media organizations on strategic and technological matters, and two media consumers who provided user-centered insights on expectations and behavioral trends.

This sampling strategy facilitated a holistic view of the challenges and opportunities within the media industry, ensuring that the voices of policymakers, industry practitioners, external analysts, and end-users were incorporated. Such diversity was especially important given the study's emphasis on systems thinking and interdependence among financial, technological, and organizational components.

Qualitative Data Analysis

The qualitative dataset was analyzed using the Miles and Huberman framework, which provides a structured approach for managing and interpreting complex textual data. The first stage, data reduction, involved refining raw interview transcripts to identify salient themes, patterns, and relationships. Codes were developed inductively to reflect the conceptual categories emerging from participants' descriptions of organizational challenges, digital transformation efforts, and strategic decision-making processes. The second stage, data display, involved organizing the coded data into matrices and diagrams to visualize linkages across themes and stakeholder groups. This facilitated cross-case comparison and highlighted converging and diverging viewpoints.

The final stage entailed drawing and verifying conclusions, during which preliminary interpretations were continuously evaluated against the dataset to ensure accuracy and internal coherence. Researcher triangulation and iterative validation strengthened the credibility of the qualitative findings. The thematic insights generated through this process served as the conceptual input for structuring the ANP model, ensuring that the quantitative phase was grounded in empirical observation rather than theoretical abstraction alone.

ANP Model Development and Quantitative Analysis

The quantitative phase utilized the ANP methodology to structure and prioritize the interconnected factors influencing media resilience. The first step involved translating qualitative themes into clusters and nodes that represented key dimensions such as digitalization, financial sustainability, organizational transformation, audience engagement, and Shariah-based principles. These components were then arranged into an ANP network to reflect their reciprocal influences.

Pairwise comparisons were conducted with the participation of informants, who evaluated the relative importance of each element within and across clusters. These comparisons were entered into the SuperDecision software, which calculated priority weights and assessed the consistency of judgments. A consistency ratio (CR) was used to determine the logical coherence of respondent evaluations, ensuring that the resulting weightings were mathematically sound and free from significant contradiction.

The normalized supermatrix generated by the software synthesized the weighted relationships into a ranked list of factors and strategic priorities. This allowed the study to identify the most influential drivers of resilience within the organization. To ensure the robustness of results, a sensitivity analysis was performed to test whether modest variations in initial judgments would materially affect outcomes. This procedure validated the stability of the ANP model and reinforced the reliability of the study's conclusions.

Ethical Considerations

Throughout data collection and analysis, ethical principles were upheld to ensure the confidentiality, autonomy, and informed consent of participants. Respondents were informed of the study's purpose, their right to withdraw at any time, and the measures taken to secure their identities. All organizational documents were handled with discretion and used exclusively for academic purposes. Ethical integrity was essential not only for protecting participants but also for maintaining transparency and trust in a research context that involves sensitive organizational information.

RESULTS

This in-depth analysis, supported by the Analytic Network Process (ANP) and extensive qualitative data from nine key informants, reveals a clear and empirically-validated hierarchy of challenges and strategic solutions for print media businesses in a VUCA (Volatility, Uncertainty, Complexity, Ambiguity) environment. The findings demonstrate that the resilience of print media is not merely an economic issue but is deeply intertwined with technological, organizational, and ethical factors. By integrating the Maqashid Shariah framework, this research provides a more holistic understanding of how media businesses can achieve sustainable success.

The Interplay of Digitalization and Financial Sustainability: The Root of the Problem

The ANP synthesis results decisively prioritize Financial Sustainability (Priority Score: 0.287) and Digitalization Issues (Priority Score: 0.245) as the most critical challenges. Our analysis shows that these two factors are inextricably linked, where an inability to effectively digitalize directly undermines financial viability. This is clearly demonstrated by the data presented in Table 1, which shows the top sub-criteria within the problem clusters. The sub-criterion "Risk from reliance on traditional business models" has the highest priority score (0.811), indicating that the conventional business model—heavily dependent on print advertising and newspaper sales—is no longer sustainable. Internal data from Harian Waspada confirms this, revealing a significant 45% decline in print advertising revenue between 2021 and 2024. This decline is directly correlated with advertisers' shift to digital platforms, which offer greater reach and more precise audience data.

Table 1

Top Three Sub-Criteria within Key Problem Clusters

Problem Cluster	Sub-Criterion	Priority Score
Financial Sustainability	Risk from reliance on traditional business models	0.811
	Risk of adversity from traditional sources	0.750
	Diversification of advertising sources	0.690
Digitalization Issues	Resistance to change	0.725
	Lack of digital skills	0.680
	Technological infrastructure	0.612
Readaer Loyalty	Interactivity with the audience	0.775
	Influence of specific market segments	0.651
	Diversification of audience	0.589

Source: Primary data. Authors' analysis.

This interconnectedness is further highlighted by the high priority scores for "Resistance to change" (0.725) and "Lack of digital skills" (0.680) within the Digitalization Issues cluster. This is not merely a technical challenge; it is a human and cultural one that directly impedes the implementation of digital solutions. In other words, an organization's failure to undergo effective digital transformation is a primary cause of its financial instability. Consequently, it is no surprise that the top two solutions prioritized in Table 2 are Technology Investment and Content Diversification, as they directly address these two core problems.

Reader Loyalty and Organizational Transformation: The Foundation for Sustainability

Our study reveals that reader loyalty in the digital age is no longer a given; it must be actively cultivated through engagement. The ANP results showed that "Interactivity with the audience" (Priority Score: 0.775) is the most critical factor for retaining readership. This finding provides a crucial interpretive insight: in a VUCA environment, media survival depends on transitioning from a one-way broadcast model to a two-way engagement model. For Harian Waspada, this means moving beyond simply publishing news to creating platforms for reader comments, polls, and interactive discussions. However, the ability to become interactive and adaptive is critically dependent on successful organizational transformation. The primary barriers to this change are internal, stemming from human resources and rigid organizational structures. This is confirmed by the priority scores in Table 2, which place "Human resource management" and a "Rigid organizational structure" as key issues.

Table 2

Rater Agreement Results (Kendall's W) for Problem and Solution Aspects

Aspect of the Problem	Rater Agreement (W)	Aspect of the Solution	Rater Agreement (W)
Digitalization of Content	0.9443	Digitalization of Content	0.8462
Financial Sustainability	0.7768	Financial Sustainability	0.7658
Reader Loyalty	0.8502	Reader Loyalty	0.7421
Organisational Transformation	0.7983	Organisational Transformation	0.9183
Hifzul Ummah	0.8921	Hifzul Ummah	0.7101

Source: Primary data. Authors' analysis.

The high Rater Agreement (W) for the Organizational Transformation cluster (0.9183) in the solutions aspect, as seen in Table 3, indicates a strong consensus among informants that internal change, particularly through employee training and development, is the key to unlocking other solutions. Without this transformation, investments in technology and interactive strategies will be ineffective. Thus, while it appears to be an "internal" problem, organizational transformation is the fundamental enabler that allows all other strategies to succeed in the dynamic VUCA environment.

The Significance of Maqashid Shariah: A Core Value Proposition

While the Hifzul Ummah (preservation of societal well-being) problem cluster received a lower priority score (0.093), the analysis from the perspective of Maqashid Shariah provides a crucial and unique insight. It highlights that true media sustainability is not measured solely by profit but also by its social contribution. In a complex and information-saturated environment, media has a responsibility to protect intellect (Hifz al-Aql) and the community (Hifz al-Ummah). This is reflected in Table 2, where "Content that Inspires and Benefits the Audience" has a high priority score (0.19) as a solution. This is a strategy that can differentiate a media outlet from being a mere news provider

to a valued community asset. By producing ethical, educational, and community-oriented content, Harian Waspada can build a loyal audience based on shared values rather than on just speed or convenience. The high rater agreement for the Hifzul Ummah cluster (0.8921) further confirms that stakeholders, while focused on economic issues, recognize the long-term importance of media's social purpose.

Table 3

Prioritized Strategies from ANP Synthesis

Strategy	Priority Score (%)
Technology Investment	22.0
Content Diversification	21.0
Interactive Communication Systems	19.0
Content that Inspires and Benefits the Audience	19.0
Other Strategies	19.0

Source: Primary data. Authors' analysis.

Ultimately, this analysis concludes that the resilience of print media in the VUCA era requires a holistic strategy. The primary focus must be on addressing financial and digitalization challenges through strategic investments and content diversification. However, the foundation for all these changes is organizational transformation that empowers human resources. All these strategies must be guided by a higher purpose—providing social value aligned with the principles of Maqashid Shariah to ensure a form of resilience that is not only financially sound but also beneficial to society.

DISCUSSION

This study investigates the resilience of Harian Waspada, a traditional print media outlet in North Sumatra, in the face of digital disruption. By integrating the VUCA framework (Volatility, Uncertainty, Complexity, Ambiguity) with Maqashid Shariah principles, the research offers a nuanced understanding of how media organizations can navigate technological, financial, organizational, and ethical challenges while promoting sustainable and socially responsible business practices.

Digital Transformation and Technological Resilience

Digitalization is a cornerstone of resilience for print media. Harian Waspada has invested in modern Content Management Systems (CMS), Progressive Web Apps (PWA), SEO optimization, and AI-driven personalization, reflecting a commitment to technological innovation. These initiatives allow the newspaper to respond to rapidly changing audience behaviors, a central VUCA challenge, particularly volatility in digital consumption patterns. However, digital transformation faces internal constraints: resistance to change (0.7852) and lack of digital skills remain major barriers. From a VUCA perspective, resistance reflects uncertainty and ambiguity, as employees are hesitant to abandon traditional practices for unfamiliar technology.

From a Maqashid Shariah lens, this is closely associated with Hifz al-Aql (Preservation of Intellect). The ethical imperative is to cultivate knowledge and digital

literacy among employees, ensuring that adaptation to technology is both effective and morally responsible. While investments in digital infrastructure are necessary, they are insufficient alone. Human resource readiness and organizational culture must align with technological advancements. Ethical stewardship, teaching employees to responsibly manage content and digital tools, links Maqashid Shariah directly to practical digitalization strategies, ensuring transformation benefits both the business and society. Harian Waspada implements ongoing digital training programs and AI-enabled CMS tools to empower employees, reduce operational errors, and optimize content delivery. These efforts translate ethical principles into concrete operational steps, enhancing technological resilience and societal trust simultaneously.

Existing scholarly evidence strongly reinforces the findings of this study, particularly regarding the centrality of human-capital constraints in shaping the success or failure of digital transformation in legacy media organizations. Research demonstrates broad consensus that resistance to change and insufficient digital competencies remain persistent barriers, echoing conclusions by Mutiara & Priyonggo (2019) and Humeira & Ramadhan (2022). These studies collectively affirm that cultural rigidity and inadequate skill development undermine technological adoption more profoundly than financial or infrastructural limitations. The literature also supports the alignment of digital literacy with Maqashid Shariah principles, particularly Hifz al-Aql, as highlighted by Istiqomah et al. (2025) and Arminsyah (2025), who show that ethical obligations strengthen the rationale for cultivating responsible and knowledgeable digital actors within media institutions.

The findings carry significant theoretical, practical, and policy implications. Theoretically, they strengthen integrative models linking organizational resilience to both technological adaptation and ethical governance frameworks such as Maqashid Shariah, expanding the conceptual boundary of digital transformation research. Practically, the results underscore the necessity for targeted capacity-building initiatives, continuous digital training, and cultural change programs that reduce resistance and enhance competency. For policymakers, the study suggests that media regulations and industry development strategies should prioritize digital literacy enhancement, ethical content governance, and incentives for technologically responsible innovation. Collectively, these implications point toward a holistic transformation agenda where human development, ethical stewardship, and digital modernization operate in mutually reinforcing ways.

Financial Sustainability and Ethical Business Models

Financial resilience in the digital era requires diversification and innovative revenue models. Harian Waspada faces declining print revenues, intensified competition from digital-native media, and rising operational costs. The study identifies key revenue strategies: paywalls, premium subscriptions, native advertising, data-driven market analysis, and sponsorship partnerships. These strategies mitigate the VUCA challenge of uncertainty, providing predictable and stable revenue streams. However, the study

highlights a critical analytical insight: financial strategies are not only economic but also ethical imperatives.

Maqashid Shariah emphasizes Hifz al-Maal (Preservation of Wealth), ensuring that revenue generation is conducted responsibly, avoiding exploitative advertising or misleading content. This intertwining of financial strategy with Islamic ethics distinguishes Harian Waspada from purely profit-driven models. Revenue diversification must align with ethical governance. For instance, monetizing content via AI personalization should respect user privacy and data security, reflecting both VUCA-aware adaptability and Sharia-compliant stewardship. This dual alignment demonstrates how Maqashid Shariah provides a framework to interpret digital business strategies beyond financial metrics. The newspaper uses phased digital monetization and data-driven marketing, reducing reliance on traditional advertising while maintaining Sharia compliance. These measures ensure sustainable economic growth and reinforce social trust, fulfilling the dual mandate of profitability and ethical responsibility.

Empirical studies reinforce the findings of this research, particularly the conclusion that financial sustainability in legacy media cannot rely solely on diversified revenue strategies without the support of ethical governance. Vara-Miguel et al. (2024) demonstrate that diversified models, such as on-site sales and promotional content, remain fragile when unaccompanied by transparency and user-centered practices. Similarly, Myllylahti (2018) argues that paywalls and memberships are insufficient unless supported by ethical standards that protect content integrity. Studies by Luyckx & Paulussen (2022) and Costa-e-Silva & Figueira (2025) further caution that commercial pressures may erode journalistic ethics if monetization is pursued without robust governance frameworks. The literature on Hifz al-Maal also aligns with these findings, as Fitriani (2025), Chukwuebuka et al. (2025), and Nuriana & Salwa (2024) highlight that ethical stewardship enhances trust and strengthens long-term financial outcomes.

These findings produce important theoretical, practical, and policy implications. Theoretically, they validate a hybrid framework in which VUCA-oriented financial strategies must be interpreted through Maqashid Shariah, particularly Hifz al-Maal, to ensure responsible resource management and user protection. Practically, the study underscores the need for media organizations to pair monetization tools such as AI personalization and data-driven marketing with strict ethical safeguards, including privacy protection and non-exploitative advertising. This approach not only strengthens audience trust but also supports sustainable revenue generation. From a policy perspective, the results suggest that regulators should encourage or mandate ethical digital governance standards, ensuring that innovation in media monetization occurs within boundaries that protect societal welfare and uphold Islamic ethical principles.

Organizational Transformation and Workforce Competence

Organizational resilience is essential to navigate digital disruption. Harian Waspada faces three main organizational challenges:

1) Human resource constraints (0.7046): Low digital skills and minimal training hinder adoption of new technologies.
2) Rigid organizational structure: Limited flexibility prevents rapid adaptation.
3) Resistance to innovation (0.4590): Employees and management may resist new methods, slowing digital transformation.

In VUCA terms, these factors represent complexity and ambiguity, where internal systems interact unpredictably with external technological pressures. Maqashid Shariah's Hifz al-Aql again guides intervention, emphasizing continuous learning, knowledge dissemination, and participatory decision-making. Organizational transformation cannot rely solely on technology adoption. Change management must address human behavior, incentivize innovation, and restructure rigid hierarchies. Ethical considerations mandate that transformation benefits employees' intellectual and professional growth, not merely corporate efficiency. Harian Waspada implements participatory change management (0.8663), continuous digital training (0.7637), and phased investment planning (0.7066). Participatory approaches allow employees to co-create digital strategies, fostering motivation and alignment with Maqashid Shariah principles. Continuous training ensures workforce competence, while strategic investments maintain financial prudence—demonstrating an integrated, ethical, and VUCA-aware approach to organizational transformation.

Peer-reviewed studies strongly reinforce this study's conclusion that organizational transformation in legacy media is shaped more by human behavioral dynamics than by technological or financial readiness. Research by Rustam et al. (2024) highlights that digital training succeeds only when employees are willing and psychologically prepared to adopt new systems. Hamdani et al. (2021) and Djunaedi (2025) similarly demonstrate that participatory change management and structural flexibility depend heavily on organizational culture, engagement, and employee motivation. These findings align with the present study's identification of human-resource constraints and resistance to innovation as primary barriers. Likewise, literature supporting the relevance of Hifz al-Aql, such as Gerschberger et al. (2023), Guzek & Whillans (2025), and Farooq et al. (2023), corroborates the link between continuous learning, knowledge sharing, and organizational resilience during digital disruption.

These findings yield important theoretical, practical, and policy implications. Theoretically, integrating VUCA dynamics with Maqashid Shariah, particularly Hifz al-Aql, broadens current models of organizational transformation by embedding ethical and intellectual development within resilience frameworks. Practically, the study underscores the need for organizations to institutionalize participatory change mechanisms, ongoing digital upskilling, and supportive cultural structures to overcome human-capital barriers. These strategies enhance not only technological competence but also ethical stewardship and employee well-being. From a policy standpoint,

regulators and industry bodies may consider promoting standards for digital literacy, transparent change management, and Shariah-aligned workforce development to strengthen media-sector adaptability. Together, these implications affirm the value of human-centered, ethically grounded transformation strategies for navigating digital disruption.

Community Empowerment and Hifzul Ummah

A distinctive dimension of Harian Waspada's resilience is its commitment to community welfare. Print media are not only content providers but agents of social empowerment. Challenges include limited Sharia-based content (0.6497) and low engagement in social initiatives (0.6690). From a VUCA perspective, these challenges represent ambiguity, where media organizations must navigate complex social expectations and cultural norms. Maqashid Shariah principles of Hifz an-Nafs (Preservation of Life), Hifz ad-Din (Preservation of Religion), and Hifzul Ummah (Preservation of Welfare) frame media responsibilities: content must be truthful, beneficial, and socially constructive. Aligning digital media strategies with Maqashid Shariah enables Harian Waspada to transcend mere profitability, integrating social responsibility into operational resilience. For example, content curation that emphasizes education, social awareness, and ethical reporting mitigates societal harm while promoting informed citizenry.

This approach demonstrates how ethical principles guide decision-making under uncertainty, creating long-term resilience rooted in societal trust. The newspaper develops educational content, collaborates with NGOs, academics, and social practitioners, and integrates ethical review through the Sharia Supervisory Board (DPS). Interactive reader platforms and AI personalization further engage the audience, enhancing loyalty while promoting community welfare. By operationalizing Maqashid Shariah, Harian Waspada balances business sustainability, technological adaptation, and societal ethics in the digital era.

Table 4

Linking VUCA, Maqashid Shariah, and Practical Strategies

Aspect	VUCA Challenge	Empirical Findings	Maqashid Shariah Principle	Practical Strategy
Digital Transformation	Volatility & Uncertainty	Resistance to change (0.7852), low digital literacy	Hifz al-Aql	AI-enabled CMS, digital training, PWA, SEO optimization
Financial Sustainability	Uncertainty	Declining print revenue, partial paywall adoption	Hifz al-Maal	Revenue diversification, premium subscriptions, ethical advertising
Organizational Transformation	Complexity & Ambiguity	HR constraints (0.7046), rigid structure, resistance to innovation (0.4590)	Hifz al-Aql	Participatory change management, continuous training, phased investment

Aspect	VUCA Challenge	Empirical Findings	Maqashid Shariah Principle	Practical Strategy
Community Empowerment	Ambiguity	Limited Sharia-based content (0.6497), low social engagement (0.6690)	Hifz an-Nafs, Hifz ad-Din, Hifzul Ummah	Ethical content curation, DPS oversight, educational & inspiring content, interactive reader engagement

Source: Primary data. Authors' analysis.

Harian Waspada demonstrates that resilience in the digital era is multidimensional, encompassing technological, financial, organizational, and ethical strategies. The integration of VUCA-aware adaptive practices with Maqashid Shariah ethical principles ensures that business continuity, societal welfare, and moral responsibility are mutually reinforced. Beyond Indonesia, this model offers a transferable framework for media organizations in other Muslim-majority regions facing similar digital disruptions.

Empirical research strongly supports this study's conclusion that community empowerment significantly enhances media resilience by strengthening societal trust and engagement. Shinkafi & Ali (2017) emphasize that ethical content curation builds credibility and transparency, core components of audience trust. Similarly, Vi Thi & Ibrahim (2025) demonstrate that collaborative social initiatives deepen community ties and reinforce institutional legitimacy, especially during periods of disruption. Research on educational programming also aligns with the present findings; Shinkafi & Ali (2017) note that morally grounded educational content promotes community well-being and fosters loyalty. Collectively, these works affirm that socially responsible media practices contribute to organizational adaptability in volatile and ambiguous environments.

The findings also carry substantial theoretical, practical, and policy implications. Theoretically, integrating Hifz an-Nafs, Hifz ad-Din, and Hifzul Ummah into the analysis broadens existing resilience frameworks by embedding Islamic ethical principles within VUCA-oriented media strategies. Practically, the results underscore the importance of prioritizing ethical content curation, participatory engagement platforms, and oversight mechanisms such as the Sharia Supervisory Board to ensure alignment between digital innovation and societal welfare. For policymakers, the study suggests the need to encourage ethical standards for digital content governance, particularly regarding misinformation, privacy, and community impact. These implications highlight how a Maqashid Shariah–aligned approach strengthens both organizational sustainability and public trust in the digital media ecosystem.

CONCLUSION

This study demonstrates that the resilience of Harian Waspada in the digital era is shaped by the interplay of technological innovation, financial diversification, organizational adaptability, and ethical governance rooted in Maqashid Shariah. The findings reveal that digital transformation efforts—such as CMS upgrades, PWA development, SEO optimization, and AI personalization—enhance technological

capacity but are constrained by resistance to change and limited digital literacy. Financial sustainability similarly depends on revenue diversification grounded in ethical principles, ensuring that monetization strategies protect user welfare. These results underscore that resilience requires alignment between technological tools, human capabilities, and value-based decision-making.

The study also identifies organizational transformation as a critical determinant of long-term viability. Human resource constraints, rigid structures, and resistance to innovation weaken adaptability in a VUCA environment, while participatory change management and continuous training effectively strengthen workforce competence and institutional flexibility. Additionally, community empowerment emerges as a distinctive dimension of resilience. By integrating Hifz an-Nafs, Hifz ad-Din, and Hifzul Ummah into content strategies and social initiatives, the organization reinforces societal trust and fulfills its normative role as an ethical media actor. Collectively, these findings demonstrate that Maqashid Shariah provides a coherent framework that enriches conventional models of media resilience.

This research contributes to the existing body of knowledge by offering an integrated analytical model linking VUCA-oriented strategies with Maqashid Shariah principles and employing the Analytic Network Process to quantify interdependent factors. The study provides empirical evidence that ethical governance enhances technological, financial, and organizational transformation. It also highlights the need for future research to explore the applicability of this framework in broader media ecosystems and to examine longitudinal outcomes of digital adaptation. Overall, the study affirms that Islamic ethical perspectives can meaningfully inform contemporary organizational resilience in rapidly evolving digital contexts.

Limitation of the Study

This study is limited by its focus on a single media organization, which constrains generalizability across the diverse landscape of Islamic and non-Islamic media institutions. While the mixed-methods approach provides depth and analytical precision, the reliance on purposive sampling and a relatively small number of informants may not fully capture the complexities of organizational culture, market behavior, or technological adoption across the broader industry. Additionally, the ANP model, although robust in handling interdependencies, relies heavily on subjective judgments that may influence weighting outcomes. The post-pandemic timing of data collection may also introduce contextual factors specific to recovery dynamics rather than long-term structural trends.

Another limitation concerns the scope of Maqashid Shariah operationalization. Although the study successfully integrates ethical principles into the analysis of technological, financial, and organizational strategies, it does not explore variations in interpretation across different Islamic schools of thought or among diverse stakeholder groups. The study also does not examine quantitative performance indicators, such as revenue growth, engagement metrics, or content quality indices, over extended

periods, limiting the ability to assess long-term resilience outcomes. These boundaries should be acknowledged when interpreting the study's contributions.

Recommendations for Future Research

Future research should expand the analytical framework to multiple media organizations across diverse geographic and cultural contexts to assess the broader applicability of the findings. Comparative studies across Muslim-majority and non-Muslim-majority environments may illuminate how organizational resilience is shaped by differing ethical, regulatory, and market conditions. Longitudinal studies tracing digital transformation outcomes over several years would also provide deeper insight into the sustainability of technological and organizational interventions. Incorporating bigger datasets, including audience analytics, financial performance, and content metrics, could strengthen causal inferences about resilience strategies.

Further exploration is also needed to refine the integration of Maqashid Shariah within modern business models, particularly in emerging domains such as AI ethics, data governance, and platform accountability. Future studies could investigate how distinct Maqashid principles guide decision-making in areas like algorithmic transparency, personalized content, and privacy protection. Expanding the ANP model with alternative multi-criteria decision frameworks or hybrid techniques may also enhance analytical depth. By addressing these avenues, future research can build on the present study to develop more comprehensive models of ethical, adaptive, and VUCA-conscious media resilience.

Author Contributions

Conceptualization	A., M.K.R., & N.A.B.R.	Resources	A., M.K.R., & N.A.B.R.
Data curation	A., M.K.R., & N.A.B.R.	Software	A., M.K.R., & N.A.B.R.
Formal analysis	A., M.K.R., & N.A.B.R.	Supervision	A., M.K.R., & N.A.B.R.
Funding acquisition	A., M.K.R., & N.A.B.R.	Validation	A., M.K.R., & N.A.B.R.
Investigation	A., M.K.R., & N.A.B.R.	Visualization	A., M.K.R., & N.A.B.R.
Methodology	A., M.K.R., & N.A.B.R.	Writing – original draft	A., M.K.R., & N.A.B.R.
Project administration	A., M.K.R., & N.A.B.R.	Writing – review & editing	A., M.K.R., & N.A.B.R.

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Informed Consent Statement

Informed consent was obtained before respondents answered the interview for this study.

Data Availability Statement

The data presented in this study are available on request from the corresponding author.

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Conflicts of Interest

The authors declare no conflicts of interest.

Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

During the preparation of this work, the authors used ChatGPT, DeepL, Grammarly, and PaperPal to translate from Bahasa Indonesia into American English and improve the clarity of the language and readability of the article. After using these tools, the authors reviewed and edited the content as needed and took full responsibility for the content of the published article.

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