

Harnessing Organizational Culture for Effective Knowledge Management: Insights from Non-Government Sectors with an Agile Approach

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Abstract

The effectiveness of knowledge management (KM) within organizations is closely linked to the underlying organizational culture, particularly in dynamic environments such as Internet Service Providers (ISP) and non-government institutions. This study explores the influence of Agile organizational culture on KM processes, focusing on how cultural attributes such as adaptability, collaboration, and continuous learning impact the creation, sharing, and application of knowledge. A systematic literature review (SLR) was employed, guided by the PRISMA 2020 framework, to ensure rigor and transparency. Data was collected from journals published between 2020 and 2024 across five major databases: Scopus, ScienceDirect, ACM Digital Library, IEEE Xplore, and Emerald Insight. From an initial pool of 494 articles, duplicates were removed, and titles and abstracts were screened, leaving 101 articles for further review. Subsequently, inclusion and exclusion criteria were applied, resulting in 24 articles that met the study's objectives. The analysis involved quality assessment using standardized checklists and synthesis of findings to identify the relationship between Agile culture and KM practices. Key frameworks, including the Competing Values Framework (CVF) and the Hofstede Model, were identified as effective tools for assessing and shaping organizational culture in alignment with KM objectives. The findings reveal that Agile cultural practices, when effectively integrated, enhance knowledge flow and foster innovation by promoting open communication and reducing knowledge silos. Structured assessment models like CVF and Hofstede provide organizations with a strategic approach to aligning cultural attributes with KM goals. This study contributes to understanding how Agile cultural principles can be leveraged to optimize KM within non-governmental contexts. The insights derived offer practical guidance for organizations aiming to improve KM practices through cultural alignment, thereby supporting adaptability and sustained competitive advantage. Future research could expand on this foundation by investigating cultural interventions in specific organizational settings.

Keywords: Organizational Culture, Knowledge Management, Non-Government Organizations (NGOs), Agile, Cultural Dynamics

1. Introduction

The adoption of Agile methodologies across various sectors has introduced transformative ways of managing knowledge within organizations. Agile organizational culture emphasizes flexibility, continuous learning, and collaboration, which can significantly influence how knowledge is created, shared, and utilized. In sectors such as Internet Service Providers (ISP) and non-government institutions, where adaptability and rapid decision-making are crucial, understanding the relationship between Agile culture and knowledge management (KM) is essential for improving operational efficiency and innovation.

Studies indicate that large-scale Agile implementations often encounter specific challenges, particularly in terms of knowledge sharing and coordination between teams, where knowledge silos can impede project success [1]. Additionally, the management of Big Data has become a key factor in knowledge management, with effective infrastructure and processes playing a crucial role in an organization's ability to harness and apply knowledge resources [2]. Moreover, Agile project management practices, especially in sectors like automobile manufacturing, have been identified as important enablers that mediate the relationship between KM systems and organizational innovation [3].

However, while Agile methodologies can enhance knowledge sharing, there are psychological and cultural barriers that may hinder these processes. For example, fixed mindsets within teams have been shown to restrict knowledge-sharing behaviors and reduce team efficiency [4]. Conversely, fostering an organizational culture that accepts mistakes creates an environment where employees are more inclined to share tacit knowledge, thereby promoting innovation. This has been demonstrated in comparative studies between Polish and US IT firms [5], [6]. Furthermore, in networked organizations, the balance between knowledge sharing and protection is critical, with informal practices often facilitating knowledge flow while ensuring the protection of sensitive information [7].

Organizational culture also plays a significant role in shaping the choice of project management methodologies. In the financial sector, for instance, alignment between organizational culture and project management approaches has been found to directly influence the success of projects [8]. Given the impact that organizational culture can have on KM practices within Agile frameworks, it is crucial to identify appropriate frameworks that can be utilized to assess and improve the culture of organizations, particularly within ISP companies and non-government institutions.

This paper employs a Systematic Literature Review (SLR) to address two key research questions: (1) How does an Agile organizational culture influence knowledge management in an ISP company or non-government institution? and (2) What frameworks can be used to evaluate organizational culture in these contexts? This research synthesizes insights from a range of studies to provide a comprehensive understanding of how Agile culture affects KM practices and examines frameworks to evaluate and enhance organizational culture in non-government sectors.

2. Research Methodology

2.1. Organizational Culture

Organizational culture, comprising shared values and beliefs, strongly influences knowledge creation and sharing. A learning-oriented culture that accepts mistakes fosters psychological safety, encouraging employees to share knowledge without fear of punishment, thereby reducing knowledge hiding [6]. The mindset of team members also matters: a fixed mindset limits knowledge sharing due to fear of judgment, while a growth mindset promotes continuous learning and open knowledge exchange [4].

Alignment between culture and project management methods affects knowledge management; collaborative cultures suit Agile approaches fostering iterative learning, whereas hierarchical cultures align with traditional methods [8]. Moreover, cultures valuing data-driven insights better support the integration of Big Data Analytics in knowledge management, enhancing organizational performance [9].

Finally, cross-functional teams benefit from cultures encouraging open communication and shared mental models, which improve knowledge integration across functions and problem-solving capabilities [10]. In sum, organizational culture significantly shapes effective knowledge management and organizational success.

2.2. Agile's Role in KM

The integration of knowledge management (KM) with Agile methodologies is vital for managing complex, large-scale projects. Effective KM balances traditional documentation with Agile's flexibility to capture tacit knowledge despite rapid changes [11]. Online organizations adopting Agile KM emphasize continuous learning and adaptability, leveraging digital platforms and collaborative tools aligned with Agile principles to enable real-time knowledge sharing and support decision-making [12].

Web-based tools foster collective intelligence and continuous innovation in remote environments, enhancing Agile knowledge processes through rapid knowledge dissemination [13]. However, scaling Agile in large software projects faces challenges like knowledge silos and inter-team dependencies, requiring robust KM frameworks strategically aligned with Agile to ensure seamless knowledge flow across the organization [1].

2.3. KM Infrastructure for Driving Innovation

In academic contexts, measuring knowledge management (KM) effectiveness—especially in higher education research divisions—has been explored, highlighting the need for metrics that evaluate KM's impact on outcomes and can be adapted to Agile teams [14]. In the automobile manufacturing sector, integrating Agile with KM infrastructure enhances innovation by ensuring knowledge is captured and applied to gain competitive advantage [3].

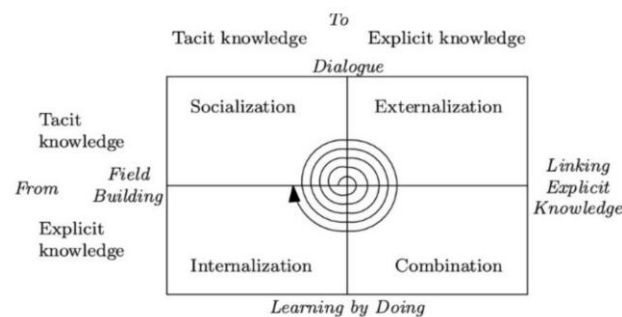


Figure 1. SECI Model

The SECI model is integral to Agile environments, supporting continuous learning and adaptation. Agile practices align with SECI's four processes: socialization (e.g., pair programming, stand-ups), externalization (documenting ideas during sprint reviews), combination (integrating insights into knowledge bases), and internalization (applying learned best practices in future work).

2.4. Knowledge Management Processes

Effective knowledge management (KM) involves a series of processes that enable organizations to create, retain, and utilize knowledge to maintain a competitive advantage.

Knowledge Discovery, it involves identifying new insights from existing data, which is crucial for improving organizational decision-making by revealing valuable patterns and trends from internal and external sources [11]. In large-scale projects, effective knowledge discovery enables organizations to adapt to changing conditions and seize emerging opportunities.

Knowledge Capture, it ensures that valuable insights are systematically documented by converting tacit knowledge—gained from personal experience—into explicit forms like reports and databases [12]. This process preserves organizational memory and enables knowledge reuse. Research indicates that effective capture depends on robust tools and infrastructure to collect and organize information efficiently.

Knowledge Sharing. It enables the distribution of captured knowledge across the organization, allowing employees to collaborate, exchange information, and build on expertise. This process is vital for fostering innovation and competitiveness by spreading insights and best practices between teams. Studies show that organizations with strong knowledge-sharing cultures adapt faster and improve processes more effectively [14].

Knowledge Application, the final KM stage, involves using acquired and shared knowledge to make decisions and implement solutions. This enables organizations to effectively tackle challenges and seize opportunities. In manufacturing, applying captured knowledge has been proven to boost innovation and operational performance. Similarly, metrics in higher education emphasize measuring the effectiveness of knowledge application to meet research goals [3].

These KM processes—discovery, capture, sharing, and application—are interdependent and form a continuous cycle that allows organizations to leverage their knowledge assets efficiently. By systematically managing these processes, organizations can ensure that knowledge flows seamlessly across different levels, leading to better strategic outcomes and sustained growth.

2.5. Knowledge Management Processes

The relationship between Agile organizational culture and knowledge management (KM) is key to improving adaptability and knowledge flow. This study uses a systematic literature review to explore how Agile principles support KM, focusing on ISP companies and non-government institutions. The research addresses two main questions:

- 1) How does an Agile organizational culture influence knowledge management in an ISP company or non-government institution?
- 2) What frameworks can be used to evaluate organizational culture in an ISP company or non-government institution?

By answering these questions, the study aims to clarify how Agile cultural practices impact KM and identify evaluation frameworks to assess and improve cultural factors. The expected outcome is actionable recommendations to enhance knowledge sharing, retention, and application, fostering adaptability and innovation in non-governmental organizations.

This study employs a Systematic Literature Review (SLR) methodology, guided by the updated PRISMA 2020 framework, to ensure transparency and thoroughness in reviewing the existing literature [15], [16]. The SLR approach enables the identification, evaluation, and synthesis of research relevant to the influence of Agile organizational culture on knowledge management within ISP companies and non-government institutions. Using PRISMA helps minimize bias and enhance the replicability of the study by providing a structured approach to data collection, analysis, and reporting.

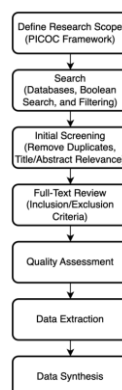


Figure 2. Research Methodology Process

Figure 2 depicts the research methodology, which begins with defining the study scope using the PICOC framework. Next, academic databases are searched with Boolean queries and filtered for relevance. Initial screening removes duplicates and assesses titles/abstracts. Selected articles undergo full-text review with inclusion/exclusion criteria, followed by quality assessment via standardized checklists. Finally, data extraction captures key information, and data synthesis uses thematic analysis to generate insights and conclusions.

Table 1. Quality Assessment Question

Criteria	Terms
Population	Knowledge management
Intervention	Agile, Organizational Culture and Framework
Control/Compare	-
Outcome	Identification of agile organization culture and framework in knowledge management
Context	ISP Company/Non-Government Institution

In the planning stages, the requirements for this study are defined using the Population, Intervention, Comparison, Outcome, and Context (PICOC) framework. This approach helps to clearly outline the scope and focus of the systematic review. These criteria, as summarized in Table 1, form the basis for addressing the research questions and ensuring that the review remains focused on the intended scope.

2.6. Identification and Selection Process

The identification process involved searching multiple academic databases, including Scopus, ACM Digital Library, IEEE Xplore, ScienceDirect, and Emerald Insight. Keywords such as "Agile" AND ("organizational culture" OR "organization culture" OR "impact" OR "influence") AND "knowledge management" AND ("framework" OR "assessment") were used in Boolean combinations to ensure comprehensive coverage. Searches were filtered to include only articles published between 2020 and 2024, written in English.

2.7. Screening and Eligibility Criteria

The initial screening involved removing duplicates and assessing titles and abstracts for relevance based on predefined inclusion and exclusion criteria in Table 2. The inclusion criteria focused on studies that addressed knowledge management practices, Agile principles, or frameworks for assessing organizational culture. Exclusion criteria included studies unrelated to knowledge management processes, those using non-empirical methods, and articles published before 2020. After the initial screening, 494 articles remained. In detail, 26 articles from Scopus, 146 articles from Science Direct, 69 articles from ACM Digital Library, 3 from IEEE Xplore, 250 from Emerald Insight.

Table 2. Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Boolean search	Paper SLR
2020-2024	Literature Review
English	Conference Notes
Conference papers, Proceedings, Research articles	Speaker Notes
Discusses knowledge management and organizational culture.	Paper not available from the source
Explores how organizational culture influences knowledge management in the analysis and conclusion sections.	
Discusses frameworks for evaluating organizational culture	

After applying the inclusion and exclusion criteria, a total of 24 articles were selected. These included 3 articles from Scopus, 13 from ScienceDirect, 2 from the ACM Digital Library, and 6 from Emerald Insight. The subsequent step involved evaluating the quality of the selected literature using a standardized quality assessment checklist.

2.8. Quality Assessment

Each article was evaluated for quality using a checklist adapted from PRISMA 2020 guidelines, which includes criteria such as the clarity of research objectives, the robustness of the methodology, and the relevance of conclusions [16]. Articles scoring at least 8 out of 9 were included in the final synthesis. This step ensured that only high-quality studies contributed to the conclusions of this review based on quality assessment criteria on Table 3.

Table 3. Quality Assessment Question

Checklist	Assessment Criteria
M1	Are the problems and their solutions clearly stated?
M2	Are the research objectives clearly defined?
M3	Does the paper explain similar findings from previous studies to describe the major contribution of the research?
M4	Does the paper provide a detailed explanation of the planned architecture or methodology?
M5	Are the research results presented clearly?
M6	Does the paper offer conclusions that are relevant to the research objectives or issues?
M7	Do the conclusions address the research questions posed in the study?
M8	Does the paper recommend future work or improvements that need to be addressed?
M9	Is the article indexed by Scopus? (Q1 / Q2 / Q3 / Q4 / not indexed)

For the 24 articles selected in the previous step, each article was evaluated using a checklist with scores ranging from 0 to 1. The scoring criteria were defined as follows: 1.0 for "Yes", 0.5 for "Partially", and 0 for "No". To qualify for further analysis, each article needed to achieve a minimum total score of 8.0. All 24 articles met this threshold, allowing them to be included in the final extraction phase.

2.9. Data Extraction and Synthesis

The next phase involved a full-text review of the remaining studies, followed by data extraction. The extraction process focused on capturing critical information such as research methods, frameworks applied, findings related to Agile culture's impact on knowledge management, and proposed evaluation frameworks. The extracted data were synthesized using thematic analysis to identify common trends and insights across the studies.

3. Results and Discussion

This section presents a discussion of the results derived from the data synthesis process for each selected article. As the conclusive part of this study, the focus is on analyzing how Agile organizational culture influences knowledge management, alongside the frameworks utilized for evaluating organizational culture, specifically in ISP companies and non-government institutions.

3.1. Statistical Analysis in Agile and Knowledge Management (KM) Research

To understand publication trends on Agile and knowledge management (KM), this study uses two statistical analyses:

- Publication Distribution by Year** counts yearly publications to identify trends, showing whether interest in Agile and KM is growing or fluctuating due to factors like industry shifts or research approaches.
- Sectoral Distribution Analysis** examines which sectors dominate the research, helping to reveal if Agile and KM studies focus more on specific industries such as technology or manufacturing.

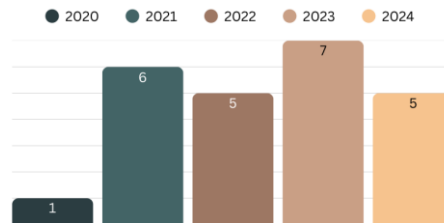


Figure 3. Publication Distribution by Year

The distribution of publications over recent years reflects the evolving interest in Agile methodologies and knowledge management (KM). In 2020, only one publication marks the early research stage, possibly delayed by the pandemic. A sharp increase to 6 publications in 2021 shows growing focus driven by the need for adaptive frameworks amid pandemic challenges.

The slight dip to 5 papers in 2022 suggests research normalization after initial growth, while a 2023 peak of 7 publications indicates renewed interest as Agile expands across sectors. In 2024, the count stabilizes at 5, signaling sustained but steady research activity. These trends highlight Agile's rising importance in KM, with the field maturing yet continuing to evolve in response to new organizational learning challenges.

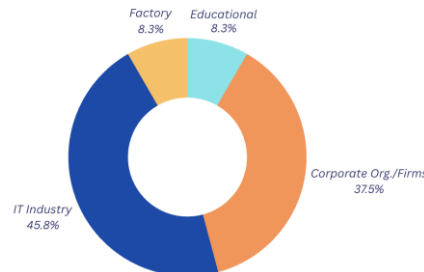


Figure 4. Publication Distribution by Sector

Figure 4's donut chart shows the distribution of research on Agile organizational culture and knowledge management (KM) across sectors. The IT industry leads with 11 papers (45.8%), reflecting Agile's deep integration in software development, project management, and knowledge-sharing essential for rapid technological change.

Corporate organizations follow with 9 papers (37.5%), highlighting growing adoption of Agile to improve internal processes, collaboration, and culture. Agile practices help large firms enhance communication, flexibility, and efficiency, fostering adaptability and innovation. This distribution indicates increasing recognition of Agile's role in enhancing KM across sectors, suggesting continued growth as industries seek better adaptability and collaboration.

3.2. The Influence of Agile Organizational Culture on Knowledge Management

The categorization of the articles into knowledge management processes is achieved by reviewing the 24 relevant articles. This process synthesizes the various influences of Agile organizational culture on knowledge management within organizations. It also identifies the key factors that play a role in this interaction, as detailed in Table 5. This

table demonstrates that Agile practices, particularly those focused on structured knowledge capture and continuous learning, have a significant impact on KM flow. It identifies organizational culture, teamwork, and digital tools as critical elements in fostering effective KM in Agile environments.

Table 4. The Influence of Agile Org. Culture on KM

Article	Influence on Knowledge Management (KM)	Influencing Factor
[11]	Balances system documentation with tacit knowledge sharing	Adaptability, Iterative Learning
[17]	Facilitates conversion of tacit knowledge into explicit through process modelling	Structured Knowledge Capture
[8]	Promotes collaboration and enhanced KM flow	Clan Culture, Collaboration
[5]	Supports tacit knowledge sharing through a culture that embraces mistakes	Learning Culture, Psychological Safety
[10]	Enhances KM by promoting knowledge integration across teams	Cross-Team Collaboration, Shared Mental Models
[12]	Fosters continuous knowledge updates and collaboration	Continuous Improvement, Adaptability
[13]	Enhances KM using digital tools for knowledge sharing	Digital Platforms, Collective Learning
[6]	Reduces knowledge hiding, enhances openness to knowledge sharing	Mistakes Acceptance, Trust
[18]	Identifies barriers to effective KM, especially in virtual environments	Remote Collaboration, Knowledge Sharing Barriers
[19]	Builds trust and motivation, critical for effective KM	Trust-Building, Open Communication
[20]	Supports continuous KM through sustainable knowledge-sharing practices	Follow-the-Sun, Social Responsibility
[21]	Reduces knowledge gaps, facilitates co-production	Knowledge Co-Production, Transparency
[1]	Highlights need for formal KM processes in large-scale Agile teams	Coordination, Inter-Team Dependencies
[22]	Supports KM through Agile-specific training practices	Tailored Training, Agile KM Needs
[23]	Creates a 24-hour KM cycle for distributed teams	Follow-the-Sun, Global Collaboration
[4]	Demonstrates the impact of fixed vs. growth mindsets on KM	Growth Mindset, Openness to Learning
[14]	Provides insights for measuring KM in Agile-adapted environments	Metrics, Knowledge Flow
[24]	Integrates quality assurance with KM for better outcomes	QA Practices, Knowledge Sharing
[25]	Supports continuous KM by leveraging knowledge-based resources	Resource Sharing, Knowledge Codification
[26]	Agile culture helps start-up leverage external knowledge for innovation	Knowledge Arbitrage, Entrepreneurial Agility
[7]	Balances knowledge sharing with protection in networked environments	Informal Knowledge Protection, Collaboration
[2]	Agile practices enhance data-driven KM in organizations	Data Sharing, Analytical KM
[3]	Agile-driven KM with structured processes supports innovation	Agile Project Management, Structured KM
[27]	Enhances KM through proactive knowledge-sharing practices	Proactiveness, Innovation in KM

The analysis of the articles has identified several key factors that influence knowledge management processes within non-government institutions. The findings indicate that factors such as interpersonal relationships, collaborative culture, and active participation play significant roles in enhancing the flow and application of knowledge within organizations. For instance, interpersonal ties are crucial for fostering a culture of knowledge sharing and collaboration. Additionally, organizational learning and

coordination between skills and learning efforts have been found to directly impact the effectiveness of knowledge transfer. These factors collectively support the creation of an environment where knowledge can be effectively discovered, captured, shared, and applied.

The study highlights that a supportive organizational culture, characterized by collaboration and a focus on continuous learning, can substantially enhance knowledge management practices. Furthermore, the research underscores the importance of frameworks and structured approaches to assess and improve these cultural aspects, ultimately contributing to the development of more effective knowledge management strategies within non-governmental organizations. The insights provided by this analysis can serve as a basis for organizations seeking to refine their knowledge management practices through targeted cultural interventions.

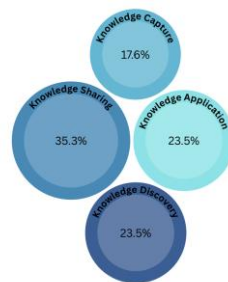


Figure 5. Distribution on Knowledge Management Processes

The Figure 5 illustrates the distribution of different knowledge management processes: Knowledge Discovery, Knowledge Capture, Knowledge Sharing, and Knowledge Application. The proportions represented in the chart highlight the relative emphasis placed on each process within the context of knowledge management practices.

- Knowledge Sharing constitutes the largest portion, accounting for 35.3% of the total, indicating that the primary focus in the studied literature is on facilitating the exchange of knowledge among individuals and teams. This emphasizes the importance of creating a culture that encourages open communication and collaboration to ensure effective knowledge flow within organizations.
- Knowledge Application makes up 23.5%, reflecting the significance of applying the knowledge gained to solve problems and enhance decision-making processes. This suggests that a considerable portion of the research prioritizes the practical utilization of knowledge to improve organizational outcomes.
- Knowledge Discovery represents 23.5%, highlighting the role of identifying new insights and patterns from existing information. This process is crucial for organizations aiming to innovate and adapt to changing environments by leveraging newly acquired knowledge.
- Knowledge Capture, comprising 17.6% of the total, points to the documentation and preservation of both explicit and tacit knowledge. This lower proportion suggests that while capturing knowledge is essential for organizational memory, it may receive less emphasis compared to sharing and application in dynamic environments.

3.3. The Model for Assessing Organizational Culture

Table 6. Organizational Culture Assessment Model

Organizational Culture Assessment Model	Article
The Competing Values Framework (CVF)	[8]
The Hofstede Model	[8]

To effectively evaluate organizational culture within non-governmental institutions, it is essential to use structured models that can diagnose and categorize different cultural attributes. Two widely recognized models for this purpose are the Competing Values Framework (CVF) and the Hofstede Model. Each of these frameworks provides a distinct perspective on understanding and interpreting organizational culture, making them valuable tools in knowledge management contexts.

- a) Competing Values Framework (CVF): The CVF is a conceptual model used to assess organizational culture by classifying it into four key dimensions: Clan Culture, Adhocracy Culture, Market Culture, and Hierarchy Culture. The Clan Culture emphasizes collaboration, with a focus on internal communication and employee development. Adhocracy Culture prioritizes innovation and adaptability, encouraging creativity and risk-taking. Market Culture is oriented towards competitiveness, striving for results and achieving external goals. Hierarchy Culture focuses on structure and stability, with a clear set of procedures and control mechanisms. The CVF enables organizations to identify their current cultural state and plan strategic shifts to align with desired outcomes, making it an effective model for understanding the dynamics of organizational culture [8].
- b) Hofstede Model: The Hofstede Model analyzes cultural dimensions at both the national and organizational levels, making it useful for comparing cultural characteristics across different contexts. It identifies six dimensions that influence behavior within organizations: Power Distance, Individualism vs. Collectivism, Masculinity vs. Femininity, Uncertainty Avoidance, Long-term vs. Short-term Orientation, and Indulgence vs. Restraint. This model provides insights into how cultural values shape workplace practices and interpersonal interactions. It is particularly valuable for multinational organizations or institutions seeking to adapt their culture to different cultural norms and improve cross-cultural management [8].

Together, CVF and Hofstede provide comprehensive tools for mapping and understanding culture in non-governmental institutions. CVF supports internal strategic planning to foster collaboration or innovation, while Hofstede offers broader insight into cultural impacts on behavior. Leveraging both enables organizations to align culture with effective knowledge management, promoting continuous learning, knowledge integration, and improved adaptability.

4. Conclusion

This study has examined the interplay between Agile organizational culture and knowledge management processes, particularly within ISP companies and non-government institutions. Through a systematic literature review, the research has highlighted how elements such as a collaborative environment, continuous learning, and adaptive leadership can significantly enhance the effectiveness of knowledge creation, sharing, and application. The study also identified key frameworks, including the Competing Values Framework (CVF) and the Hofstede Model, as valuable tools for evaluating and shaping organizational culture to better align with knowledge management goals.

The findings suggest that fostering an Agile culture can lead to more effective knowledge management practices by promoting openness, reducing knowledge silos, and encouraging innovative thinking. Additionally, the selected frameworks provide a structured approach for assessing cultural characteristics, enabling organizations to identify areas for improvement and align their culture with strategic objectives. These insights are particularly relevant for non-governmental institutions, where adaptability and efficient knowledge flow are essential for maintaining competitiveness in dynamic environments. Overall, this research contributes to the understanding of the role that organizational culture plays in shaping knowledge management practices. It emphasizes

the need for organizations to adopt tailored cultural strategies that support their knowledge management objectives, thus fostering a culture of continuous improvement and adaptability. Future studies can build on these insights by exploring the implementation of specific cultural interventions in different organizational settings, further enriching the practical applications of Agile knowledge management.

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