

Understanding the Influence of Cognitive Styles on Managerial Roles: A Systematic Review & Future Research Agenda

Authors:

Rahmi Salviviani
A PhD Student
Birmingham City Business School
Rahmi.Salviviani@mail.bcu.ac.uk

Prof. Alexandros Psychogios
Professor of HRM & OB
Loughborough Business School
a.psychogios@lboro.ac.uk

Prof. Eirini Mavritsaki
Professor in Cognitive Psychology
Birmingham City University
Eirini.Mavritsaki@bcu.ac.uk

Dr. Stephanie Chua
Lecturer in Psychology
Birmingham City University
Stephanie.Chua@bcu.ac.uk

Abstract

This systematic review explores the relationship between cognitive styles and Mintzberg's managerial roles by synthesising findings from 72 empirical studies. Our analysis reveals that research on cognitive styles has predominantly focused on decisional roles while giving equal attention to interpersonal and informational roles. Managers' cognitive styles are most commonly assessed using MBTI, KAI, and CSI. Drawing from these findings, we develop a conceptual framework that outlines three key pathways through which cognitive styles influence managerial roles: (1) direct influence, (2) moderation of the relationship between internal organisational factors and managerial roles, and (3) the need for mediator factors, such as trust. While cognitive styles shape managerial decision-making, leadership, and information processing, their effectiveness depends on organisational and contextual dynamics. We propose future research directions that explore cultural and industry differences, digital transformation, and the role of training and personal development.

Keywords: *cognitive styles, managerial roles, systematic literature review*

INTRODUCTION

An organisation's survival and success depend on how effectively managers perform their managerial roles (Kumar, 2015). Mintzberg (1975) defined managerial roles as a structured set of behaviours that guide managers in addressing both internal and external challenges (Butt et al., 2022). As widely recognised in managerial studies, these roles are grouped into three domains: *interpersonal roles* to provide information, *informational roles* to process the information, and *decisional roles* to use the information (Muma et al., 2006). Each domain is divided into ten specific roles that define managerial responsibilities within an organisation, as shown below (Dandalt, 2021; Kumar, 2015; Mintzberg, 2019). In interpersonal roles, managers are figureheads by representing the organisation at events, as leaders motivating and developing employees, and as liaisons by establishing connections beyond formal hierarchies. The informational roles involve monitoring the environment, disseminating crucial information, and serving as a spokesperson to stakeholders. Lastly, within decisional roles, managers operate as entrepreneurs, initiating improvement and driving innovation; as disturbance handlers, addressing unforeseen organisational challenges; and as negotiators, facilitating stakeholder agreements.

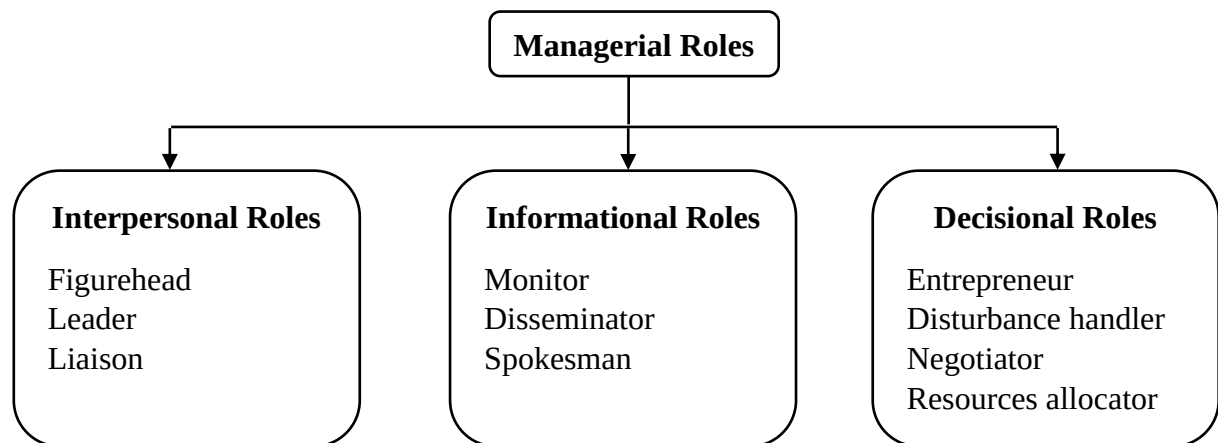


Figure 1. Mintzberg's (1975) managerial typology

In recent years, a growing number of studies have been conducted on cognitive styles in business and management. Cognitive styles refer to relatively stable yet malleable individual differences in how people perceive, process, and respond to information in their environment (Kozhevnikov et al., 2014; Lacko et al., 2023). These styles influence thinking, problem-solving, learning, and decision-making preferences, shaping how managers manage people, tasks, and complexity (Priola et al., 2004). Research indicates that personality and psychological characteristics, including cognitive styles, influence the development of strategic decisions (Armstrong et al., 2012; Hough and Ogilvie, 2005). This influence is more significant than observable characteristics such as age and educational background (Tiina Gallén, 2006). Although cognitive styles are relatively stable, they can be developed through experience and training, making them a relevant and actionable domain for improving managerial effectiveness (Fan et al., 2021).

Several instruments have been developed to measure cognitive styles (Armstrong et al., 2012a; Kozhevnikov, 2007, for a review). The Myers-Briggs Type Indicator (MBTI) is one of the most widely used tools to assess preferences across four dimensions: extraversion-introversion

(orientation to outer vs inner world), sensing-intuition (concrete vs abstract information), thinking-feeling (decision-making based on logic vs. empathy), and judging-perceiving (structured planning vs. adaptable spontaneity). The Cognitive Style Index (CSI) classifies individuals along an analytic-intuitive continuum, while the Kirton Adaptation-Innovation Inventory (KAI) distinguishes between adaptive and innovative problem-solving preferences. Most of these tools are self-reported and accessible for organisational research. Table 1 summarises several common instruments and the dimensions they measure. Although each model uses different terminologies, such as ‘field-dependent’, innovator’, or ‘intuitive’, they share a focus on how people process, structure, and act on information. The widespread use of these instruments has enabled a growing body of research linking cognitive styles to managerial contexts, including organisational behaviour, change capabilities, performance, innovation, and decision-making (Armstrong et al., 2012, 2012a; Krupskyi and Grynko, 2018; Sukoco et al., 2022).

Instrument	Measurement Type	Key Dimension/ Styles	Application Contexts
Myers–Briggs Type Indicator (MBTI) (Myers et al. 2003)	Self-report	Extraversion–Introversion, Sensing–Intuition, Thinking–Feeling, Judging–Perceiving	Leadership, team building, communication, and decision-making
Cognitive Style Index (CSI) (Allinson and Hayes, 1996)	Self-report	Analytic–Intuitive continuum	Decision-making, strategic thinking, and leadership behaviour
Kirton Adaption–Innovation Inventory (KAI) (Kirton 1976)	Self-report	Adaptation–innovation	Innovation management & change management
Dialectical Self Scale (Spencer-Rodgers et al., 2008)	Self-report	High vs. Low Dialectical Thinking	Cross-cultural leadership and conflict management
Linear/ Nonlinear Thinking Style (LNTS) (Vance et al., 2007)	Self-report	Linear (sequential, logical) vs. Nonlinear (holistic, intuitive) thinking	Problem-solving and information processing
Tolerance/ intolerance of ambiguity (Budner, 1962)	Self-report	Tolerance vs. Intolerance of Ambiguity	Decision-making under uncertainty, risk perception, and leadership in complex settings
Group Embedded Figures Test (GEFT) (Witkin et al., 1971)	Performance-based	Field-Dependent vs. Field-Independent	Attentional control and information processing
Need for Cognition (High - Low Need for Cognition) (Cacioppo & Petty, 1982)	Self-report	High vs. Low Need for Cognition	Information-seeking and management
Cognitive Style Indicator (CoSI) (Cools & Van den Broeck, 2007)	Self-report	Knowing, Planning, Creating	Team role, leadership style, innovation, and adaptability
Sternberg’s Thinking Styles (TSI) (Sternberg, 1997)	Self-report	Judicial, Legislative, Executive	Change acceptance, rule formulation, and policy innovation

Table 1. Instruments and Dimensions of Cognitive Styles

Despite the growing attention to cognitive styles in business and management research, a comprehensive synthesis of how cognitive styles influence managerial roles remains necessary. A previous systematic review by Armstrong et al. (2012a) provided a broad analysis of cognitive styles in business and management, identifying eight thematic areas: decision-making, creativity, innovation and entrepreneurship. However, this review did not focus on how cognitive styles influence managerial roles, leaving a gap in the literature. To address this gap, the present review investigates the question, "***How do cognitive styles influence managerial roles?***" as cognitive styles shape how managers process information, lead teams, make strategic decisions, and respond to complex organisational environments. While research on cognitive styles in management has grown extensively, the understanding of how these styles relate to managerial roles remains disconnected. This systematic review consolidates findings from 72 empirical studies to explore the relationship between cognitive styles and managerial roles, offering new theoretical and practical implications and proposing a future research agenda.

METHODS

This systematic review aims to map and synthesise existing empirical research on the influence of cognitive styles on ten managerial roles as defined by Mintzberg. Additionally, it explores emerging research streams, evaluates the methodologies, and identifies gaps for future research. Through a comprehensive search and synthesis of existing studies, this review organises the findings into thematic categories, establishing a framework that enhances understanding of this topic.

To define the scope of this review, we adopt the widely accepted definition of cognitive styles as *individual preferences in perceiving, processing and managing information, as well as in problem-solving, decision-making and relating to others* (Allinson & Hayes, 2012; Bendall et al., 2016; Chang et al., 2019; Kozhevnikov, 2007; Hayes & Allinson, 1994; Nosal, 2010; Rayner & Riding, 1997; Riding & Cheema, 1991; Witkin et al., 1977). For managerial roles, we employed Mintzberg's (1975) typology, which categorises managerial activities into three primary roles: *interpersonal roles* (figurehead, leader, and liaison), *informational roles* (monitor, disseminator, and spokesman), and *decisional roles* (entrepreneur, disturbance handle, negotiator, and resource allocator) (Butt et al., 2022).

We adopted a rigorous and transparent methodological approach to ensure the credibility and replicability of this review. In the **first** stage, we conducted pre-study meetings to develop a structured review protocol, finalising the research questions, search strategy, inclusion and exclusion criteria, data extraction and synthesis method. This protocol was informed by established systematic review guidelines (Boland et al., 2017; Rojon et al., 2021; Tranfield et al., 2003) to enhance methodological robustness. The review process was designed to adhere to the best practices in literature synthesis (Portyanko et al., 2022; Xiao et al., 2022), as illustrated in Figure 2.

The **second** stage, completed in March 2024, involved conducting a comprehensive literature search across three electronic databases: Scopus, Web of Science and Ebscohost, using a combination of keywords related to cognitive styles and managerial roles. The search words used were: manager* OR leader* AND "cognitive style*" OR "thinking style*" OR "individual difference*" in all fields, including title, abstract, keywords and excluding only full text. We exclude conference papers, book chapters, and non-academic reports and consider only academic articles. Additionally, we set a time range from 1970 to 2023, as the 1970s

showed the development of cognitive style studies in business and management (Kozhevnikov et al., 2014). This procedure generated a substantial number of results (N = 1,734), and the databases and numbers of documents returned are presented in Table 2.

Table 2: Data search results

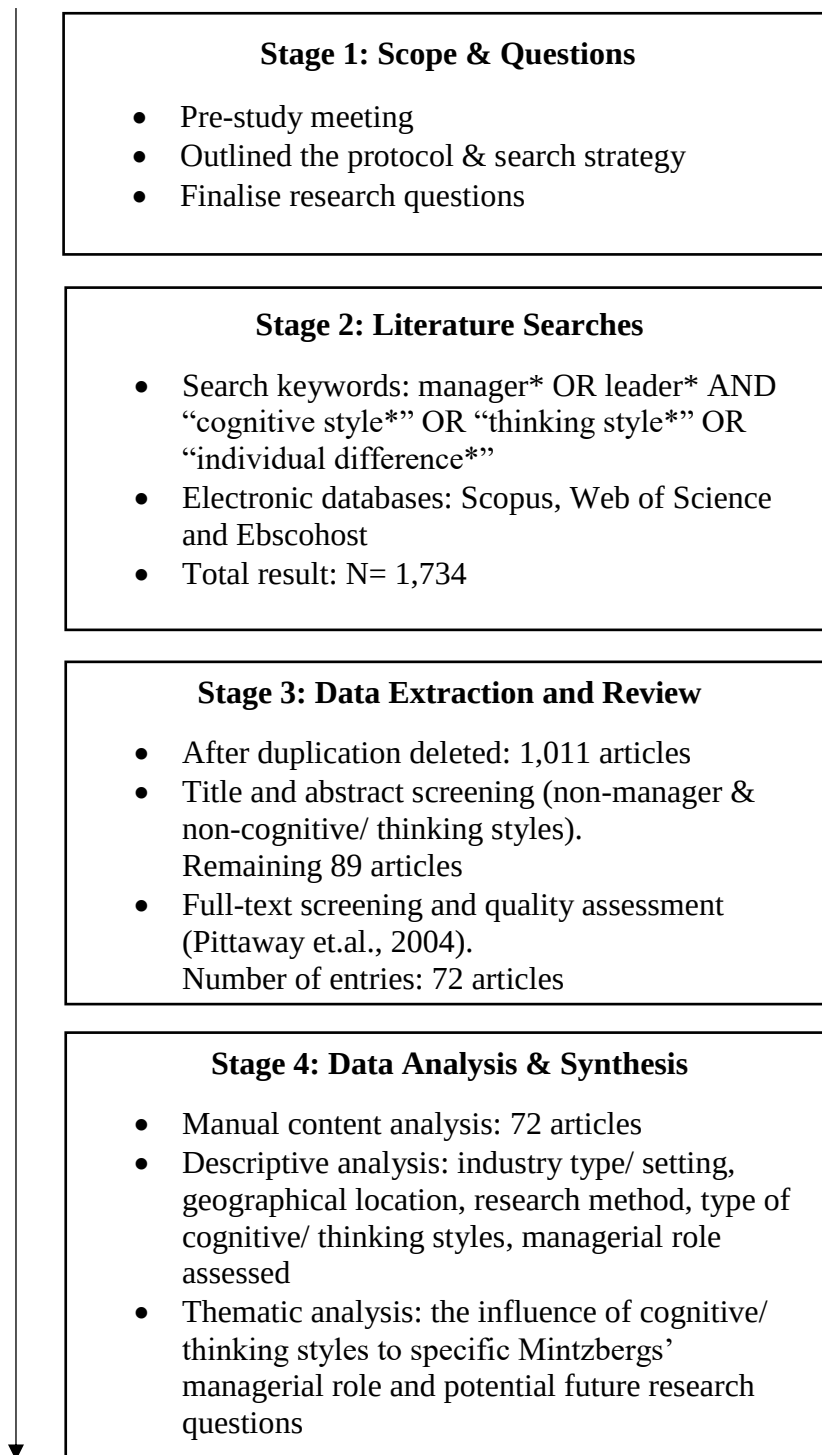
Database	Number of Entries
Scopus	929
Web of Science	264
EBSCO	541
Total	1734

The **third** stage involved reviewing and extracting data to ensure the inclusion of only relevant studies. Initially, duplicate removal reduced the database from 1,734 to 1,011 articles. Next, four authors independently screened titles and abstracts based on predefined inclusion and exclusion criteria. To enhance efficiency and transparency, we employed Rayyan.ai, which is known for its responsiveness and intuitiveness in systematic reviews (Ouzzani et al., 2016; Valizadeh et al., 2022). Articles flagged as conflicts were discussed among authors, leading to a consensus-based selection process.

At the full-text screening stage, we assessed whether each study explicitly examined the influence of cognitive styles and thinking styles (Kozhevnikov, 2007) on managerial roles. We also evaluate whether the studies discussed one or more of Mintzberg's managerial roles (such as leadership, information dissemination, strategic decision-making, or resource allocation). Only studies that addressed cognitive styles in a managerial context and at least one of Mintzberg's ten roles were included in the final synthesis. Following this step, 89 articles remained. To further ensure methodological rigour, we applied quality assessment metrics adapted from Pittaway et al. (2004), critically evaluating the methodology, theoretical robustness, implication for practice and generalizability. Based on this evaluation, a final sample of 72 empirical articles met all the specified criteria and was selected for in-depth synthesis.

In stage **four**, we employed manual content analysis for the qualitative data and synthesis of final sample articles (Johnson et al., 2020; Siddaway et al., 2019), as the influence of cognitive styles terms is assessed through various tools, and Mintzberg's managerial roles are often not directly mentioned in the articles. The approaches to content analysis strategies were conventional, directed, and summative (Hsieh and Shannon, 2005). We extracted key information into an Excel database, documenting study attributes such as title, authors, year of publication, research method, research questions, organisational type/ setting, geographical location, sample studied (supervisors, middle managers, upper managers, and owner-managers), type of cognitive/ thinking styles, managerial role assessed. Because the main objective of this review is to find the influence of cognitive and thinking styles on Mintzberg's managerial role, we organise the findings into thematic categories by identifying common themes or patterns across multiple studies (Tranfield et al., 2003). As a result, we classified our findings as follows: 17 articles for the interpersonal roles category, 17 for the informational roles category, and 38 for the decisional roles category.

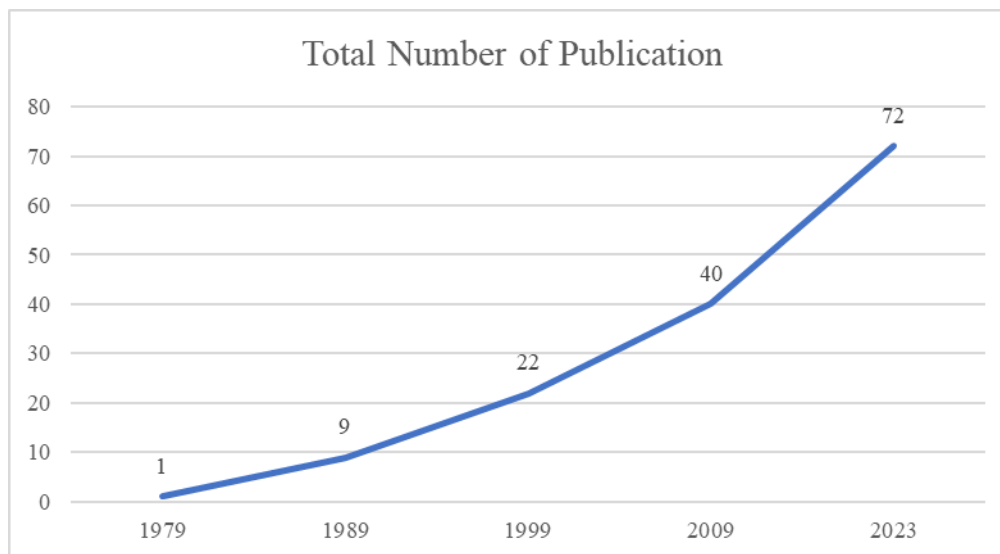
Figure 2



FINDINGS

This systematic review synthesises literature on the influence of cognitive styles on managerial roles based on Mintzberg's three categories of managers' roles. The findings are presented in two ways: descriptive findings, which provide an overview of research trends, study characteristics, and methodological approach, and thematic findings, which examine how cognitive styles influence managerial roles (Tranfield et al., 2003). Figure 3 illustrates that interest in cognitive styles and managerial roles has increased over time, starting from 2009. This figure presents the cumulative number of articles published between 1979 and 2023, illustrating an increase in scholarly interest in this topic since 2009.

Figure 3. Cumulative Publications on Cognitive Styles and Managerial Roles (1979-2023)



In the following section, we present the descriptive findings, including organisational type and setting, geographical location, sample studied, research method, and type of cognitive or thinking styles for each managerial role, followed by thematic findings. A detailed description of these descriptive findings is provided in Appendix 1, where the data are presented in tabular format for clarity and comprehensiveness.

To guide the thematic synthesis, we provide definitions of the three categories of managerial roles by integrating the cognitive styles commonly used, as identified through manual context analysis of each core article. *Interpersonal* roles refer to relationship-oriented responsibilities that include the figurehead, leader, and liaison functions (Altamony et al., 2017). As figureheads, managers often represent the organisation in ceremonial tasks. In the leader role, they are responsible for motivating, guiding, and developing employees. As liaisons, they build and maintain networks of contacts outside the formal chain of command. These functions require behavioural competencies such as emotional intelligence, empathy, effective communication style, and the ability to navigate social dynamics. However, the reviewed studies predominantly focus on the leader role and demonstrate how cognitive styles shape leader-member exchange (LMX), trust-building, communication, conflict management, and facilitation of creativity. Commonly used cognitive style assessments include the analytic-intuitive (CSI) and adaptation-innovation (KAI) styles, as well as rational-behavioural and linear-nonlinear thinking styles. These styles help explain how managers enact relationally and

adapt their leadership behaviour. However, limited attention has been given to the figurehead and liaison roles.

Informational role involves acquiring, processing, and disseminating information through the monitor, disseminator, and spokesperson functions. As monitors, managers gather and evaluate information for decision-making (Kumar, 2015). In the disseminator role, they communicate critical information across departments while spokespersons present the organisation's position to external stakeholders. These roles demand cognitive styles such as information processing style, tolerance of ambiguity, media preferences, and adaptability to technology. The reviewed studies predominantly focus on the monitoring role, revealing how cognitive styles shape information seeking, data interpretation, and technology adoption. Tools such as MBTI, KAI, and the Need for Cognition (NFC) are used to explain differences in media use, visual data preferences, and engagement with complex information. However, the study examines disseminators and none for spokesperson roles.

Decisional roles involve activities related to making judgments, solving problems, managing change, and allocating resources (Altamony et al., 2017). These include the entrepreneur, disturbance handler, resources allocator, and negotiator functions. Managers in these roles initiate innovation, resolve conflicts, distribute resources, and negotiate on behalf of the organisation. Such functions require cognitive styles related to strategic thinking, risk orientation, cognitive complexity, and adaptability. Instruments such as the Cognitive Style Index (CSI), Kirton Adaption-Innovation Inventory (KAI), and Sternberg's thinking styles are commonly used to assess these tendencies. However, most research prioritises entrepreneurial and conflict resolution functions, with limited attention to resource allocation and negotiation.

Table 3 below provides an overview of how studies are distributed across categories, along with common themes, instruments used, and regional context.

Table 3. Summary of Thematic Categories by Managerial Role Types

Role categories	No. of Entries	Key Themes	Common Instruments	Geographic Focus
Interpersonal	17	LMX, trust, communication style, team role congruence, emotional intelligence	CSI & KAI	China, UK, USA
Informational	17	Ambiguity tolerance, media use, tech. adoption, information presentation	MBTI, KAI	USA
Decisional	38	Strategic decision-making, innovation, change & conflict management, risk, ethics & resource allocation	MBTI & KAI	USA, UK

A. Descriptive Findings

Our review identified seventeen papers examining the influence of cognitive style on interpersonal roles. However, no studies specifically investigated the role of figureheads and liaisons. The dominant focus was on leader-member exchange (LMX), which aligned with Mintzberg's concept of managerial roles. In this role, the Cognitive Style Index (CSI) is mainly

used to evaluate a manager's position on the analytic-intuitive cognitive style spectrum. Quantitative research methods are widely employed to investigate the relationship between cognitive styles and managerial roles, providing empirical evidence on how these styles influence leadership effectiveness. However, these studies have a geographical imbalance, with China being the predominant country conducting such research.

Similarly, within the informational role category, we found seventeen papers, with the majority focusing on cognitive styles related to the monitor role, followed by the disseminator role as outlined in Mintzberg's managerial role categories. However, there is a gap in the literature, as no studies have addressed the role of the spokesperson. The Myers-Briggs Type Indicator (MBTI) is a widely used cognitive style assessment tool in this category. Methodologically, the survey methods combined with statistical analyses such as structural equation modelling (SEM) are used primarily to assess the relationship between cognitive styles and the informational role of managers. The studies are predominantly conducted in the USA, with data from various industries.

Lastly, our review uncovered 38 papers that researched the impact of cognitive styles on the decisional role within Mintzberg's managerial role categories. The entrepreneur role emerged as the most extensively studied within the cluster. However, there is a notable absence of research on the negotiator role. The common cognitive style assessment tools used in this cluster are the Myers-Briggs Type Indicator (MBTI) and the Kirton Adaption-Innovation Inventory (KAI). As with other managerial roles, survey methods combined with various statistics are mainly used to assess the relationship between cognitive styles and the decisional role of managers. The studies are predominantly conducted in the United States and the United Kingdom, with data from various industries.

B. Thematic Finding

1. The Influence of Cognitive Styles on Interpersonal Roles

Research on interpersonal roles and organisational citizenship behaviours (OCBs) underscores the importance of cognitive style congruence between leaders and followers. OCBs, which operate independently of formal incentives (Donkor and Segbenya, 2023), tend to improve when leaders and followers share similar cognitive styles, foster more transparent communication and build trust. For example, managers with an intuitive cognitive style enhance OCB through effective communication, with trust serving as a mediator in this relationship (Wang et al., 2023). However, mismatches in cognitive styles introduce challenges. While analytic leaders may value the creativity of intuitive followers, intuitive leaders can struggle with the systematic and detail-oriented approach of analytic followers; similarly, analytical followers find the flexible and less structured methods of intuitive leaders confusing (Armstrong and Qi, 2020). Additionally, cognitive style congruence strengthens organisational climate but does not necessarily enhance creativity, as innovative leaders do not always generate creative output when paired with like-minded followers (Tierney et al., 1999). In summary, while shared cognitive styles support OCB and organisational climate, they have a limited impact on fostering creativity among innovative individuals.

Diversity can generate conflicting values and interests within teams, leading to intra-group tensions. High-quality LMX, which fosters mutual understanding and trust over transactional interactions (Anand et al., 2011), mediates these tensions by managing cognitive complexity (Qi and Armstrong, 2019). Cognitive congruence between managers and employees enhances team communication satisfaction, with intuitive leaders fostering higher satisfaction (Erdil and

Tanova, 2015). However, effective leaders can mitigate mismatches by adapting communication strategies to align with diverse cognitive styles (Santalla-Banderali and Alvarado, 2022). Similarly, cognitive style influences how team knowledge is managed and leveraged for creativity. Systematic leaders improve creativity by establishing structured knowledge management practices, particularly in uncertain environments, while intuitive leaders foster creativity when the team possess a rich knowledge base (Sung and Choi, 2012). Thus, even though they operate differently, these styles have a positive impact on the team's creativity under various conditions.

Another critical aspect that shapes the quality of LMX is the leader's ability to actively listen to employees' voices (Carnevale et al., 2020). Leaders who actively listen enhance work engagement and individual performance, thereby creating a positive work environment (Eibl et al., 2020; Li et al., 2021). Those with an originality cognitive style are more receptive to constructive feedback, which drives higher-quality LMX than role-governance, as it resists change (Xu et al., 2023). Thus, assigning leaders based on internal needs can optimise performance in dynamic environments.

The similarity-attraction paradigm suggests favourable attraction occurs when people perceive similarity in personal characteristics with others (Abbasi et al., 2024). However, empirical evidence suggests that incongruence between leaders and followers enhances certain socio-emotional aspects of their relationship. Leaders with intuitive cognitive styles, paired with analytic members, are perceived as more nurturing and are more likely to earn greater respect. In contrast, leaders with an analytic type, paired with intuitive or analytic followers, are often seen as more dominant and less nurturing (Allinson et al., 2001). This thought supports the whole-brain approach, where cognitive diversity can lead to more balanced dyadic interaction and promote innovation (Leonard and Straus, 1997).

Effective leadership is crucial for managing conflict, which entails identifying and resolving disputes fairly and efficiently, thereby promoting a healthy work environment (Saeed et al., 2014). It is also influenced by leader traits in mitigating the negative effects of conflict (Anastasiou, 2020). While incongruence in cognitive styles, such as that between adaptors and innovators, can often spark tensions that disrupt team dynamics (Lindsay, 1985), leaders with strong dialectical thinking tend to adopt a cooperative approach to conflict management (Bai et al., 2015; Zheng et al., 2021). Such leaders enhance employees' creative self-efficacy, encouraging innovation (Han and Bai, 2020), as creative employees are more inclined to participate in innovative activities and experiment with new ideas (Han et al., 2022). Thus, adopting a dialectical thinking approach in conflict management resolves disputes and transforms conflict into a catalyst for organisational creativity.

Managers' cognitive style significantly shapes their team role preferences and leadership effectiveness. For instance, the KAI reveals that managers with higher levels of innovativeness tend to assume roles such as plant, shaper, and resource investigator positions that drive creativity and change, in contrast to the managers with a more adaptive style are more likely to perform roles focused on operational efficiency, such as completer, finisher, implementer, team worker, and specialist (Aritzeta et al., 2005). Additionally, leaders with synthesis and analyst thinking styles are more effective in innovative environments than those with pragmatist and realist thinking styles, as they are result-oriented (Alshammri and Alenezi, 2021). Leaders who combine rational and behavioural coping with imagination style positively correlate with transformational leadership, inspiring teams to exceed expectations (Curtis et al., 2017).

Emotional intelligence (EI) is a crucial factor in effective leadership, enabling managers to understand and manage their own emotions and those of others (Cherniss and Roche, 2020; Saha et al., 2023). Leaders with intuitive cognitive styles tend to exhibit higher emotional intelligence (EI) and transformational leadership approaches than their analytic counterparts, who often adopt transactional styles (Downey et al., 2006). Moreover, managers can balance masculine and feminine cognitive styles beyond gender norms, enabling adaptability in project management. (Thomas and Buckle-Henning, 2007). Additionally, linear thinkers excel at regulating their emotions, whereas nonlinear thinkers are more adept at leveraging emotions to facilitate thought (Groves and Vance, 2009). Balancing these approaches enables managers to harness EI effectively- a critical factor in high-stress environments that bolsters employee commitment.

In summary, cognitive styles influence the interpersonal roles of managers. Cognitive style congruence between leaders and followers can enhance OCB and strengthen the organisational climate, while diversity in cognitive styles may yield socio-emotional benefits and foster innovative interactions. Effective conflict management, especially through dialectical thinking, transforms interpersonal challenges into opportunities for creativity and improved performance. Moreover, cognitive style influences team role preferences and leadership effectiveness and underpins emotional intelligence as a critical component of adaptive and transformational leadership. Incorporating cognitive style considerations into leadership development strategies to foster robust interpersonal relationships, effective conflict resolution, and organisational success.

2. The Influence of Cognitive Styles on Informational Roles

In a dynamic and ambiguous environment, managers must navigate the flow of information and multiple interpretations that often lead to doubtfulness (Taylor et al., 2021). Research indicates that managers' perceptions of environmental uncertainty and ambiguity influence how they approach such situations, shaping their decision-making processes (Sniazhko, 2019). Those with a high tolerance for ambiguity tend to integrate qualitative cues and dynamic environmental signals, enabling adaptive decision-making; conversely, those with an intolerance of ambiguity rely on a quantitative, historical data strategy that may promote consistency but limit responsiveness to emerging challenges (Dirsmith and Lewis, 1982). Furthermore, evidence suggests that when ambiguity tolerance is combined with a field-dependent cognitive style, managers exhibit greater confidence in interpreting uncertain accounting information than their field-independent peers (Gul, 1984). Managers with higher cognitive complexity also interpret intricate datasets, leveraging organisational values to navigate uncertainty (Downey et al., 1977; Jia and Li, 2020). This interplay between cognitive styles and information processing raises important questions about managerial alignment with organisational objectives during uncertainty.

Cognitive styles extend into media communication and technological contexts. Ambiguous situations can erode employees' sense of ownership, making communication media critical for maintaining commitment to strategy implementation (Gulbrandsen, 2019). While managers tend to prefer rich media (e.g. face-to-face) in highly equivocal situations, differences emerge under low-equivocality conditions, where judging-style managers prefer leaner media such as email; in contrast, perceiving-style managers opt for richer interactions (Trevino et al., 1990). Digital transformation further highlights the influence of cognitive style on technology adoption (Roberts et al., 2021). Systematic and analytical managers show positive attitudes toward microcomputers, whereas intuiting-sensing managers are less critical of technology-

dependent roles (Igbaria and Parasuraman, 1989). Yet, this effect is not universal. Female managers scoring lower on feeling-thinking cognitive styles exhibit more anxiety and negative attitudes towards microcomputers than male managers (Parasuraman and Igbaria, 1990), thus underlining the importance of formal training and familiarity with technology adoption (Fisher, 1995). Moreover, while innovative managers often integrate a broad suite of software applications, their adaptive counterparts focus on efficiency and stability, using fewer tools (Foxall and Hackett, 1992). These findings emphasise that cognitive style is not an isolated predictor of technology adoption.

The way information is presented also interacts with cognitive styles. Heuristic cognitive style managers perform better when information is displayed graphically, allowing rapid pattern recognition, whereas analytic or logical managers benefit from detailed tabular information formats that facilitate in-depth analysis (Garceau et al., 1988; Lucas, 1981). Similarly, field-independent managers perceive tabular formats as more useful for financial analysis than graphical presentation (Liberatore et al., 1988). These findings suggest that aligning information presentation with cognitive preferences can enhance managerial effectiveness and accuracy in decision-making

Cognitive style further influences intra-organisational networks in bridging gaps between information needs and information processing (Chong, 1996; Zainuddin et al., 2008). The “higher differentiator” style – those who actively seek diverse sources of information – excel in flexible structures where communication is open; in contrast, the “low differentiator” style often performs better in traditional communication hierarchies (Wilson and Dolly Malik, 1995). This result calls for a critical evaluation of organisational designs: aligning communication infrastructures with the cognitive profiles of managers can potentially optimise information flow and task performance. Furthermore, flexibility is crucial for sustainable development practices and is moderated by cognitive style. Intuitive managers are adept at integrating diverse perspectives and rapidly adapting to changing environments, whereas systematic managers rely on established routines and rule-based processes that enhance consistency but may slow down adaptability. (Yu et al., 2021). Understanding this balance is essential for organisations striving for sustainable development through enhanced adaptive capability (Hahn and Knoke, 2010).

Managing information overload presents another cognitive challenge for managers (Edmunds and Morris, 2000). Managers with a high need for cognition (NFC) style excel at processing both financial and non-financial data, such as customer data, but may experience diminished effectiveness when overwhelmed by excessive information (Hioki et al., 2020). However, high NFC managers are proactive in leveraging their networks to access critical information, an ability linked to enhanced fraud detection when combined with strong ethical judgment (Anderson, 2008; Bernardi, 1994). Thus, while cognitive style can facilitate superior information processing, it also necessitates organisational measures to prevent overload and optimise network utilisation.

Finally, in their disseminator role, the managers' capability to maintain market competitiveness and innovation through knowledge management influences organisational performance (Fassehi et al., 2024; Rezaei and Katz, 2004). Cognitive style influences how managers facilitate knowledge dissemination. Managers with an adaptor style can effectively support knowledge management in regulated environments, such as the public sector, whereas a radical and innovative collaborator style may encounter challenges in this setting due to its less conventional approach (Jain and Jeppe Jeppesen, 2013). This context-dependent relationship

emphasises that effective knowledge management requires alignment between the cognitive styles of managers and the organisational environment.

In summary, studies of the influence of cognitive style on the informational role are multifaceted and context-dependent. Whether shaping the interpretation of ambiguity, guiding communication strategies, informing technology adoption, or determining data presentation preferences, cognitive styles drive a dynamic interplay between individual cognition and organisational process. Recognising and strategically aligning these styles with specific managerial functions can enhance decision-making efficiency and organisational performance.

3. The Influence of Cognitive Styles on Decisional Roles

Cognitive style shapes managerial approaches to strategic decision-making. According to Cools and Broeck (2008), distinct managerial profiles emerge: the “knowing” managers rely on analytical and straightforward, rational communication; the “planning” style balances structure and diplomacy; and the “creating” type integrates intuition with analytical reasoning for adaptive decision-making. These differences imply that the quality and effectiveness of decisions are closely tied to a manager’s cognitive style.

Managers’ cognitive styles impact decision-support systems, with analytical managers benefiting most from structured data integration, whereas heuristic managers demonstrate adaptability in unstructured environments (Green and Hughes, 1986; Zhai et al., 2020). Furthermore, evidence suggests that individuals with intuitive thinking (NT) make more decisive and higher-quality strategic decisions by integrating intuition with analysis, whereas sensing-thinking (ST) managers tend to have a less innovative and operational focus (Hough and Ogilvie, 2005). Cognitive style determines training and information preferences and shapes strategic approaches and decision quality.

Research on the entrepreneurial dimension further underscores the influence of cognitive styles on strategic decisions. Drawing on Miles and Snow’s framework (Akingbade, 2020; Blackmore and Nesbitt, 2013; Walker, 2013), organisations are characterised by strategic archetypes — defender, prospector, and analyser — that reflect how firms adapt to their competitive environments. Managers with sensing styles (ST and SF) favour defender strategies that emphasise stability and incremental growth, whereas those with intuitive style managers (NF and NT) pursue prospector strategies by proactively seeking new markets and fostering innovation (T. Gallén, 2006). Despite these differences, many organisations converge on an analyser strategy- a hybrid combining defender and prospector approaches. At the group level, challenging the traditional views which argue that higher group cohesion can lead to group thinking (irrational and dysfunctional decision-making outcome) (Chatterjee, 2014), a management team with diverse cognitive styles is more inclined to adopt prospector strategies as this diversity encourage risk-taking and innovative behaviours (Gallén, 2009). These findings suggest that leveraging cognitive diversity is critical for aligning innovation strategies with organisational effectiveness, and companies targeting radical innovation may benefit from NF managers.

Fostering innovation requires managers to assess the business environment, identify opportunities, and implement creative solutions as decision-makers (Balconi et al., 2024; Chiu and Fogel, 2017; Mueller et al., 2018). Managers with “bisociative” cognitive styles are effective in technology-driven projects, whereas those with associative styles perform better in application-oriented settings that demand systematic problem-solving and punctuality

(McDonough, 1990). Studies using KAI tools reveal that managers with innovative styles foster a creative environment and intrinsic motivation, particularly in diverse environments (Jaskyte and Kisieliene, 2006), while adaptor-type managers favour efficiency and rule-based approach, while innovator-type managers pursue riskier, novel strategies. Notably, both styles may engage in minor, safe rule-breaking when framed positively (Dew, 2009). Additionally, time flexibility enhances the performance of innovators with proactive personalities, enabling them to generate and refine creative ideas in high-pressure environments (Chen et al., 2015). These findings suggest that organisations must balance cognitive styles to optimise structured and disruptive innovation.

Innovation is fundamental for sustaining competitive advantage (Si and Chen, 2020), and managers assess the business environment, identify promising ideas or projects, and drive the implementation of innovation (Chiu and Fogel, 2017; Crowley and Bourke, 2018). Research suggests an independent cognitive style drives intra-SBU exploration, while a reflection style facilitates inter-SBU exploration, enabling organisations to shift from incremental to radical innovation (Lin and McDonough, 2014). At the executive level, intuitive cognitive styles are associated with radical innovation, which involves developing new products and markets, whereas analytic styles tend to support incremental innovation, focusing on modifying and improving existing processes and products (Visser and Faems, 2015). Moreover, managers characterised as “convergers” exhibit a higher level of innovativeness compared to “divergers”, who lead toward concrete experiences and reflective observation (Batra and Vohra, 2016). Cognitive styles also influence their willingness to adopt open innovation. A rational cognitive type systematically assesses potential benefits and barriers, while intuitive managers excel in navigating ambiguous situations, even though they may not directly drive open innovation adoption (Marzi et al., 2023). These findings suggest that cognitive styles predict the effectiveness of innovation management and shape how organisations navigate the barriers to change.

Over decades, studies using tools like KAI and MBTI have demonstrated that managers’ cognitive styles influence key factors in managing change projects, as it’s a continuous process that demands advanced skills and adaptive leadership (By, 2005; Errida and Lotfi, 2021). Project managers often exhibit more innovative cognitive profiles than their general management counterparts, and research indicates that female managers have higher levels of innovation by crossing traditional boundaries (Tullett, 1995) and working in traditionally male-dominated areas (Stum, 2009). However, the success of change initiatives also depends on employee acceptance, which is shaped by the cognitive or thinking styles of the workforce (Rehman et al., 2021; Samah, 2018). For instance, managers with legislative and judicial thinking styles are more receptive to change and tend to evaluate existing rules and programs; in contrast, the executive thinking style, which values stability and structure, tends to resist change and exhibit lower flexibility (Mollanorouzi, 2012). Thus, while boundary crossing and innovative thinking are critical, the interplay between a manager’s cognitive styles and an employee’s behavioural response is central to effective change management.

Addressing rapid environmental changes requires organisations to cultivate dynamic capabilities- continuous actions and internal resources (Kurtmollaiev, 2020). Different types of environmental change require managers with varied cognitive strengths. For instance, ENTJ-type managers, with their abilities in knowledge accumulation and transformation, are ideally suited for driving innovation, while INFJ-type managers, known for their visionary and transformative capabilities, are particularly effective in companies undergoing market or product shifts (Krupskiy and Grynko, 2018). In a public sector setting, managers with

“creating” cognitive styles are valuable for navigating complex bureaucratic transformation (Sukoco et al., 2022). Furthermore, managers with intuitive tendencies tend to thrive in dynamic, unstructured environments due to their high adaptability and ability to navigate complexity (Saini et al., 2022). In this way, empowering diverse managerial cognitive profiles enables organisations to confront environmental challenges better and sustain competitive performance.

Founder managers often exhibit more innovative cognitive styles, driving transformative initiatives and risk-taking, whereas non-founder managers adopt more adaptive styles similar to those of latent entrepreneurs (Walsh and Anderson, 1995). Their intuitive decision-making enables rapid expansion in dynamic markets, though it may compromise long-term stability (Brigham et al., 2010). Similarly, managers with intuitive cognitive styles have been found to enhance financial and non-financial performance, particularly in fast-growing firms, such as small and medium-sized enterprises operating in dynamic, and uncertain situations (Sadler-Smith, 2004). These findings challenge the conventional assumption that purely rational analysis is always optimal for financial decisions and sustained firm expansion, highlighting that innovative and adaptive cognitive styles contribute in context-specific ways.

In making new product portfolio decisions, high-analytic managers excel at deconstructing complex problems and rely on tools such as product roadmaps to evaluate complex criteria (McNally et al., 2009). Managers with a procedural rationality cognitive style emphasise systematic information gathering and continuous re-evaluation of decision criteria, ensuring that their methods adapt to the new data (Hammedi et al., 2011). Team reflexivity- where groups openly discuss and revise their decision-making process- mediates this cognitive style, even though it may delay the process. While analytic and rational approaches are fundamental for structured decisions, their impact is optimised when paired with continuous team reflection and process improvement.

The role of managers as a disturbance handler becomes paramount and suggests a “brain” to solve various business issues (Tuffour et al., 2022). Managers' cognitive styles influence how effectively they can solve problems. For example, managers with intuition feeling (NF) and intuiting thinking (NT) are adept at addressing open-problem types that demand unique, innovative solutions (Saha and Sharma, 2020). In contrast, managers with a “critical and practical” thinking type thrive in fast-paced sales environments where immediate, outcome-driven problem-solving is crucial, while those with an “initiative and managerial” type are suited to creative and collaborative tasks in advertising and marketing contexts (Belousova and Mochalova, 2020). These distinctions underscore that problem-solving effectiveness is linked to cognitive styles and that different environments require different problem-solving approaches.

Managers face a dilemma between ethical principles and benefits (Luca Casali and Perano, 2021). Ethical judgements- driven by individual moral assessment- shape ethical behaviour (Al Halbusi et al., 2021; Valentine and Godkin, 2019). Research indicates that managers with a balanced linear and nonlinear thinking style are inclined to make ethical decisions, particularly in situations involving conflicts of interest, environmental concerns, and personal integrity (Groves et al., 2008). However, cross-cultural comparisons between U.S. and Korean managers suggest that ethical reasoning is not solely determined by cognitive style; instead, the ability to align with evolving global ethical standards through training appears critical (Paik et al., 2019). Additionally, while a rational style tends to behave more ethically, those with a spontaneous style also exhibit ethical behaviour driven by gut reactions rather than calculated reasoning

(Berisha et al., 2023). These findings underscore the need for comprehensive training and personal development programs to foster ethical decision-making across diverse cognitive styles.

Strategic decisions with overloaded information become more challenging, often leading to cognitive bias (Acciarini et al., 2020). Different cognitive styles exhibit tendencies towards specific biases. For instance, sensing-thinking (ST) style managers tend to exhibit selective bias by rejecting the feasibility and novelty approach, while sensing-feeling (SF) type managers are based on external validation (Stumpf and Dunbar, 1991). Similarly, from this study, intuiting-thinking (NT) style managers are prone to positivity bias, ignoring contradictory information, while intuiting-feeling (NF) style managers frequently rely on reasoning by analogy. These varied biases influence how managers interpret data and make decisions, highlighting the importance of cognitive diversity within decision-making teams to counterbalance potential distortions. However, even within diverse groups, individual styles can dominate outcomes. Managers with ESTP style tend to make rapid, action-oriented decisions but risk overconfidence, whereas ESTJ-type managers who are more structured and systematic, may also be prone to excessive control (Cristofaro, 2017). Moreover, managers with a high need for cognitive closure favour straightforward and decisive approaches to minimise ambiguity and cognitive overload (Tetlock, 2000). Together, these findings suggest that understanding an individual's cognitive style is crucial for maintaining balanced, well-informed decision-making in the face of information overload.

In the resource allocator role, the manager's cognitive styles shape the resource management process (Fraser and Estabrooks, 2008), which begins with clearly defining the types, assembly, and deployment of resources (Zahra, 2021). Between routine and non-routine allocation, non-routine decisions are especially influenced by the cognitive characteristics of the decision-makers (Chang et al., 2002). For example, managers with a sensation style are more likely to incorporate historical expenditure data into their decisions, whereas intuitive managers tend to exclude them, seeking additional information and favouring flexibility in evaluating alternatives (Chenhall and Morris, 1991). Furthermore, how managers perceive opportunities and threats also varies by cognitive style. Those with extroverted, judging, intuiting and thinking styles perceive situations as more controllable and appraise them as opportunities, while managers with introverted, perceiving, sensing, and feeling styles are more cautious and sensitive to potential threats (White et al., 2003). This divergence is also reflected in sector-specific trends: public sector managers with ST and SF styles excel in consultative, detail-oriented processes that prioritise stability, whereas private sector managers with NT and NF styles thrive in dynamic, high-risk environments that demand innovative, collaborative decision-making (Nutt, 2006). Consistent with a previous study, managers with an intuitive cognitive style who are comfortable with ambiguity are more inclined to pursue bolder strategies, while those with a deliberative style tend to take a more calculated risk (Bonfim et al., 2018).

Financial decision-making in this arena is inherently risky and subject to individual and cultural influences (Abdul Kareem et al., 2023). Traditional views often contrast the Western analytic style with the Eastern holistic style (Ahmad, 2020; Li et al., 2022; Ogunlusi and Obademi, 2021); however, recent studies suggest that professional training and market context modulate these tendencies. For instance, Chinese fund managers who have received training in economics and finance tend to adopt a more analytical approach, whereas their Western counterparts display a higher propensity for intuitive decision-making, which is advantageous in dynamic and less structured environments (Wu, 2022). In specific contexts, such as

agriculture, farmer managers with aggressive and defensive styles, as well as those with passive and defensive styles, may struggle to scale operations due to limited interpersonal skills (Howard et al., 1997). While cognitive style is critical in financial decision-making, continuous professional development is essential for managers to navigate market challenges and organisational needs effectively.

In conclusion, the reviewed research demonstrates that cognitive styles are not merely abstract constructs but rather central determinants of managerial decision-making roles across diverse contexts. These styles shape their strategic approaches and influence training needs, decision support utilisation, and decision quality. These differences are further reflected in entrepreneurial strategies, innovation management, change management, resource allocation, and financial decision-making. Whether navigating complex, information-rich environments that trigger specific cognitive biases or balancing ethical considerations under pressure, managers' decision-making processes are intertwined with their cognitive styles. Moreover, the interplay of individual styles within management teams fosters innovation and risk-taking, serving as a critical counterbalance to potential pitfalls such as groupthink and overconfidence. These findings underscore the organisation's need to tailor managerial development, promote cognitive diversity, and invest in targeted training programs.

DISCUSSION

This systematic review highlights that cognitive styles are dynamic constructs that shape managerial behaviour. While existing research extensively explored decisional roles, there is limited focus on interpersonal and informational roles, particularly the spokesperson and negotiator roles. This gap underscores the need to investigate further how cognitive styles influence managerial communication, stakeholder engagement, and external representation.

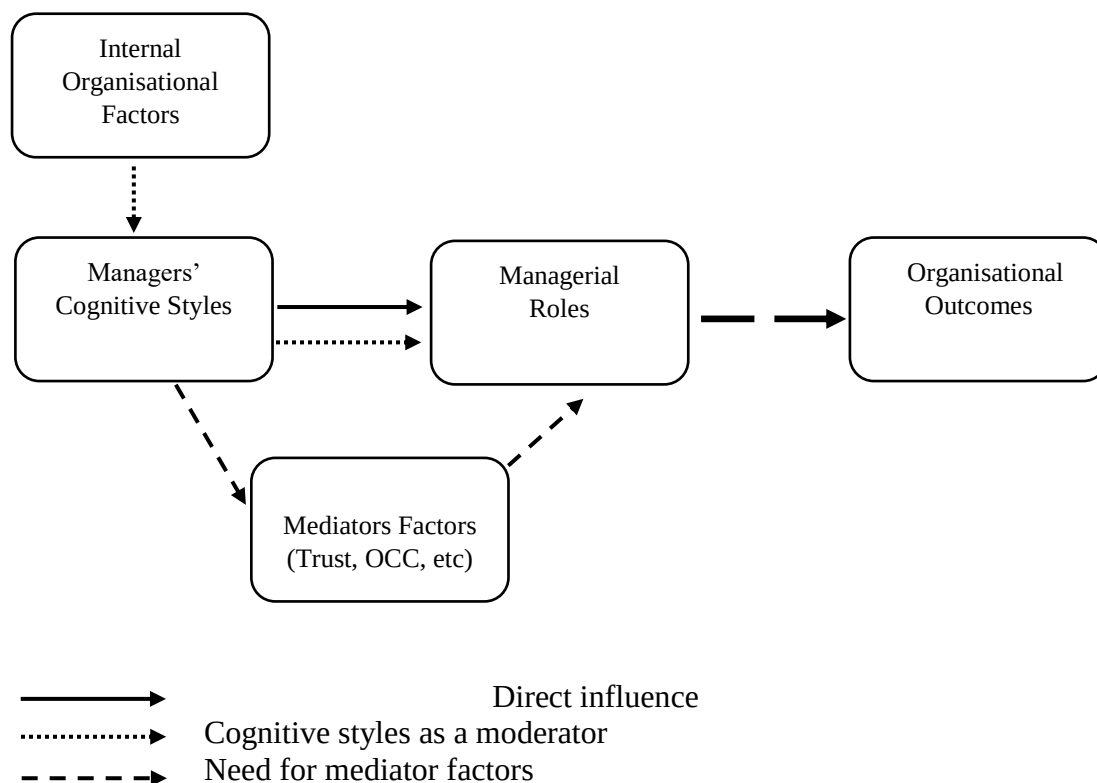
The empirical evidence synthesised in this review demonstrates that cognitive styles influence organisational outcomes through direct and indirect pathways. At the direct level, cognitive styles shape how managers make strategic decisions, resolve conflicts, process information, and communicate with organisations. However, their influence is not isolated; various internal organisational factors mediate it. Elements such as trust, team dynamics, and structural flexibility mediate how cognitive styles translate into managerial effectiveness and contribute to organisational outcomes. Beyond this mediating mechanism, cognitive styles function as moderators, determining the strength and direction of the relationship between organisational factors and managerial effectiveness. These findings reveal that cognitive styles do not operate in isolation but interact within broader organisational and environmental contexts. To structure and interpret complex relationships, we developed a conceptual framework that synthesises the direct, mediating, and moderating effects of cognitive styles on managerial roles.

Conceptual Framework: Cognitive Styles in Managerial Roles

The proposed conceptual framework illustrates how cognitive styles influence managerial roles through multiple pathways (see Figure 3). At the direct level, cognitive styles shape how managers operate and respond to organisational challenges. For instance, managers with a high dialectical thinking style integrate divergent perspectives, foster employee creativity, drive innovation and improve organisational performance (Han and Bai, 2020). Similarly, managers with a high need for cognition are more effective in information search and network utilisation compared to those with a low need for cognition (Anderson, 2008). Additionally, managers with legislative and judicial thinking styles show higher flexibility in evaluating existing rules and programs than executive managers (Mollanorouzi, 2012).

Beyond their direct influence on managerial roles, cognitive styles function as moderators and mediators. As moderators, cognitive styles influence the strength or direction of relationships between internal organisational variables and managerial effectiveness. For example, cognitive styles moderate the relationship between environmental attitude and managerial sustainable development flexibility, with intuitive styles being more adaptable to environmental changes. Meanwhile, systematic style managers tend to exhibit rule-based information processing, leading to delayed responses (Yu et al., 2021). Meanwhile, mediating factors, such as trust, LMX, and conflict management strategies, serve as mechanisms that facilitate the impact of cognitive styles on managerial processing. For instance, trust has been identified as a key mediating variable in leadership effectiveness, facilitating the relationship between leader-member cognitive style congruence and organisational citizenship behaviour (OCB) (Wang et al., 2023). These findings underscore that cognitive styles alone are insufficient predictors of managerial effectiveness. Instead, their impact is contingent on mediating factors that shape how cognitive styles interact with organisational and environmental conditions. Figure 4 visually represents these relationships, illustrating the pathways through which cognitive styles and internal organisational factors work together to drive managerial performance and lead to organisational outcomes.

Figure 4. Conceptual framework illustrating the direct, mediating, and moderating influence of cognitive styles on managerial roles



Integrated Research Agenda on Cognitive Styles in Managerial Roles

Building on these results, we propose an integrated research agenda that categorises future research questions into three primary managerial roles, interpersonal, informational, and decisional, capturing the multifaceted influence of cognitive styles on management, as shown

in Table 4 of **Appendix 2**. It presents a structured research agenda, organising key topics, research questions, and methodological, theoretical, or practical considerations to guide future investigations. This framework identifies critical gaps in existing knowledge and provides insights into how different research designs, such as longitudinal studies or qualitative approaches, can be leveraged to explore the complexity of cognitive styles in managerial roles.

Future research should explore how cognitive style congruence influences team dynamics, creativity, and communication quality in the interpersonal domain. Further investigations should examine how managers' cognitive styles shape intra-group relationships, LMX, and the implementation of knowledge management strategies. Furthermore, in the informational domain, research should focus on how cognitive styles influence managers' information acquisition, interpretation, and dissemination processes, including technology adoption, virtual collaboration, and strategies to mitigate information overload. The goal is to link cognitive styles to information-processing effectiveness, decision quality, and broader sustainability development practices. Ultimately, future research should investigate how cognitive styles influence strategic decision-making, competitive advantage, and risk management in the decision-making domain. This exploration should include examining how cognitive diversity within top management teams affects decision outcomes, how cognitive flexibility impacts innovation and change management, and how cognitive biases influence ethical decision-making.

Theoretical Contribution and Practical Implications

This review advances the theoretical understanding of cognitive styles in managerial contexts by challenging the notion that they are fixed and have a linear influence on behaviour. Instead, our findings support a dynamic and interactive model in which cognitive styles are predictors of behaviour and moderators of managerial effectiveness. Thus, cognitive styles should be assessed within the broader organisational environment to contribute to studies of managerial cognition, decision-making, and effectiveness.

From a practical standpoint, understanding cognitive styles enables organisations to develop leadership programs that align with managers' cognitive predispositions. Recognising the differences in how managers process information, approach problem-solving, and interact with employees can help design targeted training and development interventions. Moreover, cognitive styles are not entirely rigid. While they are relatively stable, evidence suggests they can be influenced by training and experience (Fan et al., 2021). Thus, it opens possibilities for personalised training programs that foster cognitive flexibility and adaptability in decision-making, strategic thinking, and managerial styles.

To translate these insights into practice, several strategies can be considered. First, organisations can embed cognitive style assessment (e.g., KAI, CSI) into managerial selection and development processes to better align cognitive traits with managerial responsibilities. For example, managers with analytic styles can be more effective in roles that demand structure, planning, and optimisation, while intuitive managers can be better for innovation, change leadership, or high-ambiguity environments. Moreover, communication platforms and decision-support systems can be tailored to match cognitive styles, such as data-heavy dashboards for analytical and visual learners or story-based tools for intuitive learners, to enhance usability and the quality of strategic decision-making. Second, cognitive profiling can inform the design of diverse managerial teams, and complementary thinking styles reduce groupthink, support more comprehensive problem-solving, and increase adaptability under

uncertainty. Third, managerial development programs can incorporate training modules that encourage cognitive flexibility, helping managers expand beyond their dominant style and perform effectively in complex situations.

Furthermore, recent shifts in the global business landscape, marked by digital transformation, AI-supported decision-making, and remote work (Barbieri et al., 2025), have introduced complex cognitive demands to managerial roles. These transformations highlight the growing significance of cognitive styles, which, according to numerous empirical studies, influence how managers interpret information, adapt to change, and participate in strategic decision-making processes. For example, cognitive conflict within teams affects digital transformation efforts and long-term financial performance, emphasising the role of cognitive alignment in strategic success (Wang et al., 2020). Similarly, recognising individual differences in cognition is important for crafting effective digital transformation strategies that match managers' processing and decision preferences (Russell et al., 2020). As artificial intelligence (AI) becomes increasingly embedded in managerial functions, supporting interpersonal, informational, and decision-making roles, these cognitive differences regain renewed importance (Madanchian et al., 2024). Emerging decision support systems (DSS) challenge managers to interface with AI-driven insights in ways that may favour particular cognitive orientations (Herath Pathirannehelage et al., 2025). Thus, it raises questions for future research: *which cognitive styles are most advantageous in digital and artificial intelligence managerial environments, and how can organisations align style profiles with evolving technology-enabled decision contexts?*

In addition to technological considerations, the cross-cultural dimension of cognitive styles remains underexplored. While existing research predominantly focuses on Western organisational settings, emerging studies suggest that cognitive styles vary across cultures (Gutchess et al., 2021). Evidence suggests that different cultures adopt distinct styles, with collectivists favouring holistic processing and individualists tending towards analytic thinking (Chua et al., 2022). These tendencies influence how managers process information, make decisions, and interact with teams, yet research exploring these differences in collectivist cultures, emerging markets, and multinational corporations remains limited. Future studies should move beyond the Western-centric perspective to examine how institutional, societal, and economic factors shape cognitive preferences.

Finally, this review calls for methodological diversification. Existing research primarily employs cross-sectional and quantitative methods, providing valuable correlations but failing to capture the long-term evolution of cognitive styles in managerial roles. Future research should integrate longitudinal studies and qualitative approaches to explore how cognitive styles change over time, how managers develop cognitive adaptability, and how organisational interventions influence cognitive diversity in managerial teams.

Limitation

While this review provides a comprehensive synthesis of cognitive styles in managerial roles, several limitations are acknowledged. First, the scope of this review was constrained by the use of three academic databases, which may have limited the inclusion of relevant studies from other regions or disciplines. Although these databases are widely regarded for their quality and coverage, the restriction may lead to the omission of regional work, particularly non-Western academic journals. Second, the review includes peer-reviewed articles published in the English language. This language and publication type restriction may have introduced a degree of

publication bias, potentially excluding other literature, dissertations, or non-English contributions. As a result, the current synthesis reflects a disproportionate focus from dominant academic centres in the Global North. Third, most studies rely on self-report instruments to measure cognitive styles. These tools, though established, often assess preferences rather than behaviour and can be subject to social desirability or response bias. Furthermore, the majority of included studies employed cross-sectional research designs, limiting our ability to infer how cognitive styles develop over time or influence managerial adaptation in evolving organisational contexts.

Together, the insights presented in this review offer a step forward in understanding the influence of cognitive styles across managerial roles. By mapping cognitive traits onto interpersonal, informational, and decisional responsibilities, this review highlights the practical relevance of cognitive styles diversity in managerial development, communication design, and strategic decision-making. It also introduces a future research agenda that is grounded and responsive to emerging managerial challenges such as digital transformation, cross-cultural leadership, and adaptive decision environments. By bridging cognitive psychology and management theory, this review encourages inclusive approaches to studying and developing managerial effectiveness.

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APPENDIX 1
Table 3
Interpersonal Role

Title	Author(s) & Year	Cluster	Managerial Role	Cognitive Styles	Geographical & Industry	Method	The Influence of Cognitive Styles on Managerial Role
The influence of leader-follower cognitive style congruence on organizational citizenship behaviors and the mediating role of trust	Wang et.al., 2023	Cognitive Styles Congruence	Leader Role	Cognitive Style Index (Analytic-Intuitive)	China - Manufacture	Quantitative research approach	Dyads with more intuitive exhibited higher levels of OCBs than analytical cognitive styles.
The Influence of Leader-Follower Cognitive Style Similarity on Followers Organizational Citizenship Behaviours	Armstrong & Qi, 2020	Cognitive Styles Congruence	Leader Role	Cognitive Style Index (Analytic-Intuitive)	China - Manufacture	Quantitative research approach	An intuitive leader finds challenge in a detailed-oriented follower; thus, this dyad shows the lowest OCB
An examination of leadership and employee creativity: The relevance of traits and relationship	Tierney et.al., 1999	Cognitive Styles Congruence	Leader Role	KAI (Adaptation-Innovation)	USA - Chemical corporation	Quantitative research approach	Congruence between leader and follower with similar innovative cognitive styles does not receive additional benefit for the employee's creativity.
Do Birds of a Feather Communicate Better? The Cognitive Style Congruence Between Managers and Their Employees and Communication Satisfaction	Erdil & Tanova, 2015	Cognitive Styles Congruence	Leader Role	Cognitive Style Index (Analytic-Intuitive)	Turkiye (dominant) – Banking	Quantitative research approach	Higher communication satisfaction is observed when managers and employees share congruent cognitive styles in intuitive dyads rather than analytical.
The influence of cognitive style diversity on intra-group relationship conflict, individual-level organizational citizenship behaviors and the moderating role of leader-member-exchange	Qi and Armstrong, 2019	Cognitive Styles on LMX	Leader Role	Cognitive Style Index (Analytic-Intuitive)	China - Manufacture	Quantitative research approach	Cognitive style diversity within groups can lead to increased intra-group relationship conflict. High-quality LMX mitigates the negative effects of cognitive style diversity on relationship conflict.
Effects of team knowledge management on the creativity and financial performance of organizational teams	Sung & Choi, 2012	Cognitive Styles on LMX	Leader Role	Modified KAI (Systematic-Intuitive)	Korea - Insurance	Quantitative research approach	Systematic leaders boost creativity by leveraging team knowledge management in uncertain environments. Meanwhile, intuitive leaders foster creativity when the team possesses high knowledge.

Title	Author(s) & Year	Cluster	Managerial Role	Cognitive Styles	Geographical & Industry	Method	The Influence of Cognitive Styles on Managerial Role
Not Threats, but Resources: An Investigation of How Leaders React to Employee Constructive Voice	Xu et.al., 2023	Cognitive Styles on LMX	Leader Role	Cognitive style scale (Originality & Rule Governance)	China – Hotel	Mixed method approach	Leaders with an originality cognitive style value employee constructive voice develop higher-quality LMX than role-governance leaders who prefer established methods and are less open to new inputs.
The effects of cognitive style on leader-member exchange: A study of manager-subordinate dyads.	Allinson et.al., 2001	Cognitive Styles on LMX	Leader Role	Cognitive Style Index (Analytic-Intuitive)	UK - Manufacture	Quantitative research approach	Leaders are perceived as more nurturing and respected, particularly when they are more intuitive than their analytic counterparts.
Counselling to resolve a clash of cognitive styles	Lindsay, 1985	Cognitive Styles on LMX	Leader Role	KAI (Adaptation-Innovation) and MBTI	UK - Banking	Qualitative research approach	Differences in cognitive styles can lead to conflict. An adaptive leader who prefers a conservative approach perceives their member ideas with an Innovative style as impractical.
Good and bad simultaneously. Leaders using dialectical thinking foster positive conflict and employee performance	Bai et.al., 2015	Cognitive Styles on LMX	Leader Role	Dialectical Self Scale (High - Low Dialectical thinking)	China – Tech manufacture	Quantitative research approach	Dialectical thinking leaders promote cooperative over competitive conflict management, positively influencing employee creativity and in-role performance.
Leaders can facilitate creativity: the moderating roles of leader dialectical thinking and LMX on employee creative self-efficacy and creativity	Han et.al., 2020	Cognitive Styles on LMX	Leader Role	Dialectical Self Scale (High - Low Dialectical thinking)	China – Tech company	Quantitative research approach	Leaders with a dialectical thinking style enhance employee creativity, especially for those with high creative self-efficacy and creativity in the workplace.
Team role preference and cognitive styles a convergent validity study	Aritzeta et.al., 2005	Cognitive Styles on Managerial/ Leadership Effectiveness	Leader Role	KAI (Adaptation-Innovation)	UK – various industries	Quantitative research approach	An adaptive cognitive style manager is effective in the roles of Implementer, Completer Finisher, Team Worker, and Specialist. On the other hand, managers with an innovative cognitive style are suited for the Plant, Shaper, and Resource Investigator roles.

Title	Author(s) & Year	Cluster	Managerial Role	Cognitive Styles	Geographical & Industry	Method	The Influence of Cognitive Styles on Managerial Role
Creative leadership and its relationship to thinking styles among Saudi University leaders	Alshammri & Alenezi, 2021	Cognitive Styles on Managerial/ Leadership Effectiveness	Leader Role	Thinking Styles (Pragmatists and realists - synthesis and analyst)	Riyadh – Public and private universities	Quantitative research approach	Synthesis and analyst-style leaders show a significant positive correlation with creative leadership qualities while having a negative correlation to Pragmatist and realist thinking styles.
Re-examining the Relationship between Thinking Styles and Transformational Leadership: What is the Contribution of Imagination and emotionality?	Curtis et.al., 2017	Cognitive Styles on Managerial/ Leadership Effectiveness	Leader Role	Rational - Behavioral coping - imagination - intuition	Australia - School	Quantitative research approach	Leaders with rational, behavioural coping and imagination styles influence transformational leadership more than intuition and emotionality styles.
Examining the relationship between leadership, emotional intelligence and intuition in senior female managers	Downey et.al., 2006	Cognitive Styles on Managerial/ Leadership Effectiveness	Leader Role	Cognitive Style Index (Analytic-Intuitive)	Australia – various industries	Quantitative research approach	Managers with intuitive cognitive styles are linked to more transformational. In contrast, analytical cognitive style was found to correlate positively with transactional leadership.
Dancing in the white spaces: Exploring gendered assumptions in successful project managers' discourse about their work	Thomas & Buckle-Henning, 2007	Cognitive Styles on Managerial/ Leadership Effectiveness	Leader Role	Carl Jung (masculine and feminine)	Canada & USA - various industries	Qualitative research approach	Successful project managers employ both 'masculine' and 'feminine' cognitive styles, adapting their approach based on project needs.
Examining managerial thinking style, EQ, and organizational commitment	Groves et.al., 2009	Cognitive Styles on Managerial/ Leadership Effectiveness	Leader Role	Linear/ Nonlinear Thinking	USA – Marketing company	Quantitative research approach	A balance between linear and nonlinear thinking increases organisational commitment levels and positively impacts innovation and productivity. Managers with linear thinking styles are better at regulating emotion, while nonlinear thinkers excel at using emotions to facilitate thought.

Informational Role

Title	Author(s) & Year	Cluster	Managerial Role	Cognitive Styles	Geographical & Industry	Method	The Influence of Cognitive Styles on Managerial Role
The effect of external reporting on managerial decision making: Some antecedent conditions	Dirsmith & Lewis, 1982	Cognitive Styles on Information Acquisition	Monitor Role	Tolerance/intolerance of ambiguity	USA – Accounting firms	Quantitative research approach	Ambiguity-intolerant managers prefer concrete and quantitative information, potentially narrowing their focus and performing data-driven decisions. Conversely, managers who are tolerant of ambiguity better cope with dynamic environments, seeking, acquiring, processing, and communicating complex and qualitative information.
The Joint and Moderating Role of Personality and Cognitive Style on Decision Making	Gul, 1984	Cognitive Styles on Information Acquisition	Monitor Role	GEFT (field-dependent, field-independent)	Malaysia - electronic companies	Quantitative research approach	A combination of field-dependent style and tolerance of ambiguity enhances managers' confidence in ambiguous situations compared to field-independent
Individual Characteristics as Sources of Perceived Uncertainty Variability	Downey et.al., 1977	Cognitive Styles on Information Acquisition	Monitor Role	Cognitive complexity	USA - various industries	Qualitative research approach	Cognitive style impact on how managers perceive environmental uncertainty. Cognitive complexity managers are better at managing uncertainty due to having more comprehensive consideration.
The Richness Imperative and Cognitive Style: The Role of Individual Differences in Media Choice Behavior	Trevino et.al., 1990	Cognitive Styles on communication	Disseminator, spokesperson Role	MBTI	USA - various industries	Quantitative research approach	Judging types of managers prefer leaner media, while perceiving cognitive style managers prefer richer media such as face-to-face. However, in high-equivocality situations, both types prefer richer media.
A Path Analytic Study of Individual Characteristics, Computer Anxiety and Attitudes toward Microcomputers	Igbaria & Parasuraman, 1989	Cognitive Styles on Technology adoption	Monitor Role	MBTI	USA - various industries	Quantitative research approach	Managers with feeling-thinking cognitive styles who are more systematic and analytical are more likely to be comfortable with microcomputers. In comparison, intuition-sensing cognitive style was unrelated to computer anxiety and attitudes toward microcomputers.

Title	Author(s) & Year	Cluster	Managerial Role	Cognitive Styles	Geographical & Industry	Method	The Influence of Cognitive Styles on Managerial Role
An examination of gender differences in the determinants of computer anxiety and attitudes toward microcomputers among managers	Parasuraman & Igbaria, 1990	Cognitive Styles on Technology adoption	Monitor Role	MBTI	USA - various industries	Qualitative research approach	Females with lower scores on the feeling-thinking cognitive style exhibit more anxiety and tend to have a negative attitude towards microcomputers than male managers.
Senior managers and executive information systems: Examining linkages among individual characteristics, attitudes, computer use, and intentions	Fisher, 1995	Cognitive Styles on Technology adoption	Monitor Role	MBTI	Canada - various industries	Mixed method approach	Different from previous studies, gender and cognitive style did not significantly influence the attitude towards technology, suggesting that familiarity and formal training are more related to the positive attitude toward technology adoption
Cognitive Style and Extent of Computer Use in Organization Relevance of Sufficiency of Originality, Efficiency and Rule Conformity	Foxall & Hackett, 1992	Cognitive Styles on Technology adoption	Monitor Role	KAI (Adaptation-Innovation)	UK - Government organisation	Quantitative research approach	Managers with a more innovative cognitive style use a broader range of software applications. In contrast, managers with a more adaptive cognitive style use fewer software applications.
An Experimental Investigation of the use of Computer-based Graphics in Decision Making	Lucas & Henry, 1981	Cognitive Styles on Technology adoption	Monitor Role	Barkin's test: heuristic and analytic decision styles	USA - various industries	Quantitative research approach	Analytic decision-makers benefit from detailed tabular data to validate or adjust prior hypotheses or models. Meanwhile, heuristic decision-makers benefit more from graphics, which provide an overall picture of data.
The Effects of Display Formats on Information Systems Design	Liberatore et.al., 1988	Cognitive Styles on Technology adoption	Monitor Role	GEFT (field-dependent, independent)	USA - manufacture	Quantitative research approach	When dealing with financial data, field-dependents tend to rate the utility of tabular formats higher than field-independents.

Title	Author(s) & Year	Cluster	Managerial Role	Cognitive Styles	Geographical & Industry	Method	The Influence of Cognitive Styles on Managerial Role
The influence of data-presentation mode on strategic decision-making	Garceau et.al., 1988	Cognitive Styles on Technology adoption	Monitor Role	Intuitive - Logical Style	Quebec – Civil service	Quantitative research approach	Intuitive managers perform better and show higher confidence in their results when using graphical data presentations. Meanwhile, managers with a logical cognitive style perform better and faster when using tabular data presentations.
Looking for a Few Good Sources: Exploring the Intra-organizational Communication Linkages of First Line Managers.	Wilson & Malik, 1995	Cognitive Styles on Information acquisition and processes	Monitor Role	Propensity to differentiate (Higher- lower differentiators)	USA – Government organisation	Quantitative research approach	High differentiator managers are better for environments with high task uncertainty, where they can utilise complex information and dynamic decision-making. Conversely, low differentiators prefer structured scenarios with lower uncertainty and may rely on leaner information for problem-solving.
Understanding sustainable development flexibility: An information perspective	Yu et.al., 2021	Cognitive Styles on Information processes	Monitor Role	(Systematic - Intuitive)	USA - various industries	Quantitative research approach	Managers with a systematic style show limited adaptability to changes and uncertainties., while managers with an intuitive style are more likely to be adaptable and responsive to uncertainties in sustainable development practices.
The interaction effect of quantity and characteristics of accounting measures on performance evaluation	Hioki et.al., 2020	Cognitive Styles on Information management	Monitor Role	Need for Cognition (High - Low Need for Cognition)	Japan – Utility company	Quantitative research approach	Managers with High NFC thoroughly evaluate complex information and use all provided information (financial and customer perspective measures) unless information overload occurs. However, managers with Low NFC tend to rely on financial information when there is no information overload.
Social networks and the cognitive motivation to realize network opportunities: A study of managers' information gathering behaviors	Anderson, 2008	Cognitive Styles on Information management	Monitor Role	Need for Cognition (High - Low Need for Cognition)	USA - various industries	Quantitative research approach	Compared to low-NFC, managers with a higher need for cognition are more proactive to information seeking, utilise their social networks, and are more effective in gathering more information.

Title	Author(s) & Year	Cluster	Managerial Role	Cognitive Styles	Geographical & Industry	Method	The Influence of Cognitive Styles on Managerial Role
Fraud Detection: The Effect of Client Integrity and Competence and Auditor Cognitive Style.	Benhardi 1994	Cognitive Styles on Technology adoption	Monitor Role	Moral Development (higher-lower moral development)	USA – Auditing firms	Mixed method approach	Managers with high moral development detected fraud more than managers with low moral development and all seniors.
Knowledge management practices in a public sector organisation: The role of leaders' cognitive styles	Jain & Jeppesen, 2013	Cognitive Styles on Technology adoption	Disseminator Role	KAI (Adaptation-Innovation)	India – Public sector	Quantitative research approach	Leaders with an adaptor style tend to conform to rules, regulations, and established procedures. Innovative and radical-style leaders negatively impact the management of knowledge practices.

Decisional Role

Title	Author(s) & Year	Cluster	Managerial Role	Cognitive Styles	Geographical & Industry	Method	The Influence of Cognitive Styles on Managerial Role
Cognitive styles and managerial behaviour: A qualitative study	Cools & Broeck, 2008	Cognitive Styles on Strategic Decision	General Decisional Role	Cognitive Style Indicator (CoSI) (Knowing, Planning, Creating)	Western Europe - various industries	Mixed method approach	Knowing style tends to be a logical approach in handling conflict, fact-based oriented in decision-making and straightforward feedback. Managers with a planning style also favour analytical approaches, but are more diplomatic, emphasising structure and quick decision-making. In contrast, managers with a creating style make decisions based on intuition, incorporate objective information and data, and give feedback directly, focusing on positive and constructive aspects.
Effects of Decision Support Systems Training and Cognitive Style on Decision Process Attributes	Green et.al., 1986	Cognitive Styles on Decision Process	General Decisional Role	Analytic vs Heuristic	USA - various industries	Quantitative research approach	Analytic-type managers who seek causal relationships and require a broader range of alternatives and various data benefit from hands-on workshops and training. In contrast, heuristic-type managers consider qualitative factors such as experience, intuition, and feelings to show less sensitivity in the training format because of their flexibility in the decision-making process.
An empirical test of cognitive style and strategic decision outcomes	Hough & Ogilvie, 2005	Cognitive Styles on Decision Process	General Decisional Role	MBTI (SF, ST, NF, NT)	USA - manufacture	Quantitative research approach	NT managers make higher-quality decisions using intuition to take cognitive leaps based on objective information. While ST found that they made the lowest quality of decision due to operational focus, with the level of decisiveness similar to NF and SF
Managers and strategic decisions: Does the cognitive style matter?	Gallen, 2006	Cognitive Styles on Strategic Decision	Entrepreneur Role	MBTI (SF, ST, NF, NT)	Finland – Wellness industry	Mixed method approach	Sensing managers tend to prefer a 'defender' strategy. On the other hand, intuitive managers are more prone to prefer 'prospector'. However, there are common preferences for an analyzer strategy as a blend of defender and prospector strategies.

Title	Author(s) & Year	Cluster	Managerial Role	Cognitive Styles	Geographical & Industry	Method	The Influence of Cognitive Styles on Managerial Role
Top management team composition and views of viable strategies	Gallen, 2009	Cognitive Styles on Strategic Decision	Entrepreneur Role	MBTI (SF, ST, NF, NT)	Finland – Wellness industry	Mixed method approach	At the group level, the management team with various cognitive styles is more likely to adopt the prospector strategy, suggesting that this diversity encourages more innovative and risk-taking behaviours.
Leadership in Innovators and Defenders: The Role of Cognitive Personality Styles	Chatterjee, 2014	Cognitive Styles on Strategic Decision	Entrepreneur Role	MBTI (SF, ST, NF, NT)	India – various industries	Quantitative research approach	Group cohesion in cognitive styles supporting innovation within the organisation. NF managers promote innovators, while ST is ideal for a 'defender' strategic orientation.
An investigation of the relationship between project performance and characteristics of project leaders	Mcdonough, 1990	Cognitive Styles and project performance	Entrepreneur Role	(Bisociative, Associative Style)	UK – various industries	Mixed method approach	The bisociative style pursuing novel solutions and driving the creation of breakthrough products. Conversely, an associative cognitive style prefers established procedures and is effective in application projects or improvement-oriented projects.
Determinants of employee creativity: A survey of Lithuanian nonprofit organizations	Jaskyte & Kisieliene, 2006	Cognitive Styles on Creativity	Entrepreneur Role	KAI (Adaptation-Innovation)	Lithuania – Non-profit organisation	Quantitative research approach	An innovative cognitive style manager promotes an adaptable work environment conducive to creativity. On the other hand, those with adaptive cognitive styles might focus on improving existing systems, adhering to rules, and maintaining stability.
Cognitive style, creativity framing and effects	Dew, 2009	Cognitive Styles on Creativity	Entrepreneur Role	KAI (Adaptation-Innovation)	Australia – various industries	Quantitative research approach	The study challenges the traditional view, which is an adaptor inclined to creative options when beneficial. Yet, both adaptors and innovators are influenced by risk-based framing and context in rule-breaking preferences.
Exploring individual-work context fit in affecting employee creativity in technology-based companies	Chen et.al., 2015	Cognitive Styles on Creativity	Entrepreneur Role	Innovative cognitive style (KAI)	Taiwan – manufacture	Quantitative research approach	An innovative style manager is more likely to enhance their problem-solving and decision-making in a conducive environment that minimises the time pressure.

Title	Author(s) & Year	Cluster	Managerial Role	Cognitive Styles	Geographical & Industry	Method	The Influence of Cognitive Styles on Managerial Role
Cognitive Frames, Learning Mechanisms, and Innovation Ambidexterity.	Lin & McDonough, 2014	Cognitive Styles on Innovation management	Entrepreneur Role	Independent & Reflection Cognitive Style	Taiwan – various industries	Quantitative research approach	An independent cognitive style manager is associated with intra-SBU learning, and a reflection cognitive style fosters inter-SBU learning. Ambidextrous cognitive frames may need to tactfully balance both types of learning and promote a culture that values exploitation and exploration.
Exploration and exploitation within firms: The impact of CEOs' cognitive style on incremental and radical innovation performance	Visser & Faems, 2015	Cognitive Styles on Innovation management	Entrepreneur Role	Cognitive Style Index (Analytic-Intuitive)	Dutch – SMEs	Quantitative research approach	CEOs with analytic cognitive styles are more likely to focus on exploitative activities. Conversely, the intuitive cognitive styles engage more in explorative activities.
Exploring the linkages of cognitive style and individual innovativeness	Batra & Vohra, 2016	Cognitive Styles on Innovation management	Entrepreneur Role	Kolb's Learning Style Inventory (Divergers, Convergers, Assimilators, Accommodators)	India – various industries	Quantitative research approach	A converger manager who prefers abstract conceptual and active experimentation show higher level of innovativeness than divergers who prefer concrete experiences and reflective observation.
Do or do not. Cognitive configurations affecting open innovation adoption in SMEs	Marzi et.al., 2023	Cognitive Styles on Innovation management	Entrepreneur Role	Intuitive & Rational Cognitive Style	UK – various industries (SMEs)	Quantitative research approach	Managers with a more rational cognitive style are seen as likely to be more willing to adopt OI, while an intuitive style did not directly influence the willingness to adopt OI.
The adaptive-innovative cognitive styles of male and female project managers: Some implications for the management of change	Tullet, 1995	Cognitive Styles on Change management	Entrepreneur Role	KAI (Adaptation-Innovation)	UK – various industries	Quantitative research approach	Managers leading change projects tend to have a more innovative cognitive style than their counterparts, with females showing higher innovation than males.

Title	Author(s) & Year	Cluster	Managerial Role	Cognitive Styles	Geographical & Industry	Method	The Influence of Cognitive Styles on Managerial Role
Evaluating the correlation between the education organization managers' thinking style in tehran province and their rate of change acceptance	Mollanorouzi, 2012	Cognitive Styles on Change management	Entrepreneur Role	Sternberg's thinking styles (Judicial, Legislative, Executive)	Tehran – Education	Quantitative research approach	Managers with judicial and legislative thinking styles are more receptive to change, while executive style shows lower acceptance of change.
Role of Cognitive Style of Manager in the Development of Tourism Companies' Dynamic Capabilities	Krupskyi & Grynko, 2018	Cognitive Styles on Organisational adaptability	Entrepreneur Role	MBTI (ENTJ, INFJ)	Ukraine – Tourism companies	Quantitative research approach	Managers with ENTJ present solutions for organisations that need innovation, while INFJ managers are preferable for organisations that need transformation.
Middle Managers' Cognitive Styles, Capacity for Change, and Organizational Performance	Sukoco et.al., 2022	Cognitive Styles on Organisational adaptability	Entrepreneur Role	Cognitive Style Indicator (CoSI) (Knowing, Planning, Creating)	Indonesia – Public Organisation	Quantitative research approach	Managers with Creating styles are posited to positively impact an organisation's capacity for change, compared to planning and knowing styles managers.
The Pattern of Executive Professionals Thinking Styles in Relation to cognitive Styles and Metacognition Skills	Saini et.al., 2022	Cognitive Styles on Organisational adaptability	Entrepreneur Role	Cognitive-style inventory (Systematic & Intuitive)	India – Public & private companies	Quantitative research approach	Systematic managers handle tasks and problem-solving in a highly structured, logical, and rule-following manner. Intuitive excels in dynamic environments where quick and innovative decision-making
Owner-Manager Adaption-Innovation Preference and Employment Performance - A Comparison of Founders and Non-founders in the Irish Smal Firm Sector	Walsh & Anderson, 1995	Cognitive Styles on Decision-Making Preferences	Entrepreneur Role	KAI (Adaptation-Innovation)	Ireland – Various industries	Quantitative research approach	Compared to non-entrepreneurs, who are more adaptive, the owner-manager shows more innovation in the decision-making approach and aligns with the classical entrepreneur profile.

Title	Author(s) & Year	Cluster	Managerial Role	Cognitive Styles	Geographical & Industry	Method	The Influence of Cognitive Styles on Managerial Role
Cognitive Style and the Management of Small and Medium-Sized Enterprises	Sadler-Smith, 2004	Cognitive Styles on Decision-Making Preferences	Entrepreneur Role	General Decision-Making Style (Rational & Intuitive)	USA – Various industries	Quantitative research approach	Managers with intuitive cognitive styles positively influence the financial and non-financial performance of the SME in a dynamic and uncertainty environment.
Cognitive misfit and firm growth in technology-oriented SMEs	Brigham et.al., 2010	Cognitive Styles on Decision-Making Preferences	Entrepreneur Role	Cognitive Style Index (Analytic-Intuitive)	USA – Tech Companies (SMEs)	Quantitative research approach	Intuitive managers are more inclined to promote business growth, even tolerating personal dissatisfaction from formalisation, while analytic managers potentially hinder growth by over-formalising their firms.
Exploring new product portfolio management decisions: The role of managers' dispositional traits	McNally et.al., 2009	Cognitive Styles on Decision-Making Preferences	Entrepreneur Role	Cognitive-style (High vs Low Analytic)	USA – Building material company	Mixed research approach	The study found that high-analytic cognitive style managers are associated with effectively managing the balance dimension in NPPM.
Antecedents and Consequences of Reflexivity in New Product Idea Screening	Hammedi et.al., 2011	Cognitive Styles on Decision-Making Preferences	Entrepreneur Role	Procedural rationality cognitive style	Europe – Tech services companies	Quantitative research approach	Mediated by reflexivity, managers with a higher tendency for procedural rationality promote systematic reflection to ensure the continual improvement of decision-making.
The impact of leaders' cognitive style and creativity on organizational problem-solving	Saha & Sharma, 2020	Cognitive Styles on Problem-Solving	Disturbance Handler Role	MBTI (SF, ST, NF, NT)	India – Various industries	Quantitative research approach	Managers with NF and NT cognitive types who have proactive creativity are suits for open problem-solving.
The relationship of thinking style and motivation features of sales and advertising managers	Belousova & Mochalova, 2010	Cognitive Styles on Problem-Solving	Disturbance Handler Role	Styles of thinking (Initiative, Critical, Managerial, Practical)	Russia – Various industries	Quantitative research approach	critical and practical managers excel in environments where outcomes are crucial, such as sales area, while initiatives and managerial types align with the environment where creative ideas and collective solutions are essential.

Title	Author(s) & Year	Cluster	Managerial Role	Cognitive Styles	Geographical & Industry	Method	The Influence of Cognitive Styles on Managerial Role
Linking linear/nonlinear thinking style balance and managerial ethical decision-making	Groves et.al., 2008	Cognitive Styles on Problem-Solving	Disturbance Handler Role	Linear, Nonlinear, Balance Thinking Styles	USA – Various industries	Quantitative research approach	Managers with a balanced cognitive style, which incorporates linear and nonlinear thinking, are willing to make ethical decisions compared to those with a predominantly linear or nonlinear thinking style.
Convergence in International Business Ethics. A Comparative Study of Ethical Philosophies, Thinking Style, and Ethical Decision-Making Between US and Korean Managers	Paik et.al., 2019	Cognitive Styles on Problem-Solving	Disturbance Handler Role	Linear, Nonlinear, Balance Thinking Styles	Korea – Various industries	Quantitative research approach	Different from the previous study, the intervention of training and integration into the global ethical standard influence managerial ethical decision-making more than thinking styles.
To behave or not to behave ethically: A question of style?	Berisha et.al., 2020	Cognitive Styles on Problem Solving	Disturbance Handler Role	General Decision-Making Style (Rational, Intuitive, Dependent, Avoidant, Spontaneous)	Kosovo – Various industries	Quantitative research approach	Managers with rational thinking styles are found to behave more ethically. Further, even though associated with impulsivity, the spontaneous style also shows ethical behaviour driven by instinctive moral actions.
The Effect of Personality Type on Choice Made in Strategic Decision Situations	Stumpf & Dunbar, 1991	Cognitive Styles on Strategic Decision	Disturbance Handler Role	MBTI (ST, SF, NT, NF)	USA – Various industries	Quantitative research approach	ST-type managers tend to show selective bias by ignoring new information that doesn't align with their current frame of reference. NT managers tend to look for patterns in information and focus more on positive elements. ST managers show a tendency towards social acceptance and act to gain social approval. NF managers show reasoning analogies bias, possibly leading to oversimplified reasoning.

Title	Author(s) & Year	Cluster	Managerial Role	Cognitive Styles	Geographical & Industry	Method	The Influence of Cognitive Styles on Managerial Role
Reducing biases of decision-making processes in complex organizations	Cristofaro, 2017	Cognitive Styles on Strategic Decision	Disturbance Handler Role	MBTI (ESTP, ESTJ)	Italy – Com Tech company	Mixed method approach.	Even though a balanced composition of cognitive styles can reduce biases, particular styles favour specific decision-making approaches. Managers with ESTP style tend to be action-oriented yet prone to overconfidence and rapid decision; ESTJ tends to be structured yet overly controlling.
Cognitive biases and organizational correctives: Do both disease and cure depend on the politics of the beholder?	Tetlock, 2000	Cognitive Styles on Strategic Decision	Disturbance Handler Role	Need for closure (Hi-Low)	USA – Various industries	Quantitative research approach	Managers with a high preference for cognitive closure adopt direct and decisive methods to avoid ambiguity and complexity in their decision-making processes. These managers, driven by conservative ideologies, rely on straightforward, rule-based strategies.
The effect of cognitive style and sponsorship bias on the treatment of opportunity costs in resource allocation decisions	Chenhall & Morris, 1991	Cognitive Styles on Resources allocation	Resources allocator Role	Jungian typology (Sensation vs Intuition)	Australia – Various industries	Quantitative research approach	Managers with a sensation cognitive style tend to focus on details, including past expenditures on assets tied to the project. On the other hand, intuitive managers often show flexibility and are more likely to perceive alternatives.
Market situation interpretation and response: The role of cognitive style, organizational culture, and information use	White et.al., 2003	Cognitive Styles on Resources allocation	Resources allocator Role	Keirsey Temperament Sorter (Extrovert-Introvert, Judging-Perceiving, Sensing-Intuiting, Thinking-Feeling)	USA – General medical surgical hospitals	Mixed method approach	Extroverted, judging, intuiting and thinking managers perceive a market situation as controllable. On the other hand, managers with introverted, perceiving, sensing, and feeling cognitive styles tend to postpone decisions as they are cautious about missing important information, making them perceive a situation as less controllable.

Title	Author(s) & Year	Cluster	Managerial Role	Cognitive Styles	Geographical & Industry	Method	The Influence of Cognitive Styles on Managerial Role
Comparing public and private sector decision-making practices	Nutt, 2006	Cognitive Styles on Resources allocation	Resources allocator Role	Jungian concepts. (ST, NT, SF, NF)	USA – Various industries	Quantitative research approach	Managers with ST and SF types are more suited to the public sector. In contrast, NT and NF-type managers tend to be more speculative, perceive risks, and suit them in the private sector.
Exploring risk perception and degree of internationalization of Brazilian Small-and-Medium enterprises	Bonfim et.al., 2018	Cognitive Styles on Resources allocation	Resources allocator Role	Deliberative & Intuitive cognitive styles	Brazil – Various industries (SMEs)	Quantitative research approach	Managers with a deliberative cognitive style engage in detailed analysis and systematic reasoning and perceive higher levels of risk in international operations. Intuitive managers make faster decisions based on past experiences, instincts, and 'gut-feeling', thus leading to bolder internationalisation strategies.
Intuition in Investment Decision-Making Across Cultures	Wu, 2022	Cognitive Styles on Resources allocation	Resources allocator Role	Cognitive Style Index (Analytic-Intuitive)	UK (western), Hongkong (eastern) – Investment industries	Mixed method approach	Easter 'holistic' managers exhibit analytical decisions due to advanced economic education. In contrast, Western 'analytic' managers tend to make intuitive decisions due to dynamics and a less structured environment.
Thinking styles and financial characteristics of selected Canadian farm managers	Howard et.al., 1997	Cognitive Styles on Resources allocation	Resources allocator Role	Life Styles Inventory (Task Oriented, Security Oriented, Aggressive/Defensive, Passive/Defensive, Dependent Style, Oppositional Style)	Canada – Farming	Quantitative research approach	Farm managers' thinking styles influence their financial characteristics and management methods. Farmers tend to be more task- and security-oriented, aggressive/defensive and passive/defensive styles. This type hinders their financial success, which requires interpersonal skills.

APPENDIX 2

Table 4

Potential Future Research Questions – **Cognitive Styles in Interpersonal Role**

Topics	Research Questions	Example of theoretical/ practical/methods consideration
The influence of Cognitive Styles congruence	How does cognitive style congruence between leaders and followers influence OCB within different organisational contexts and cultures?	Cultural and industry differences
	In what context and type of organisation does the congruence of leader-follower cognitive styles enhance employee creativity and communication?	Industry differences
	How does cognitive style congruence between managers and employees influence long-term organisational outcomes and performance?	Longitudinal study
	How does cognitive style congruence or incongruence between leaders and subordinates affect their collaboration and team performance in adapting to changing organisational challenges?	Organisational adaption
The influence of a leader's cognitive style and intra-group relationship	How does a leader's cognitive style influence team dynamics, specifically in conflict resolution, leader-member exchange, and organisational citizenship behaviours? How does this influence team effectiveness and organisational performance?	Managing team cognitive style diversity
The influence of a leader's cognitive style on knowledge management implementation	How do team leaders' different cognitive styles influence knowledge management strategies' implementation and outcomes in various organisational contexts?	Industry differences (finance and non-finance)

The influence of a leader's cognitive style on feedback and performance	What are the mechanisms of an originality cognitive style to leverage employee constructive voice to enhance LMX and drive team performance?	Insights from Originality Cognitive Style's Leaders
The influence of Cognitive Styles in facilitating LMX conflict resolution	What is the influence of training and leader development programs on improving team interpersonal and conflict resolution?	Quantitative approach, Training & development program
	How does the leader's dialectical thinking influence employees' self-efficacy and creativity in Western companies?	Insights from Western culture
The Influence of Cognitive Styles on Managerial Effectiveness	Is there a relationship between managers' cognitive styles and team role preferences in different cultural contexts?	Insights from Eastern culture
	What is the influence of different thinking styles and the creative leadership scale among managers from various profit-oriented organisations?	Industry differences
	How does a manager's thinking style influence their practice of transformational leadership across different industries?	
	How do cognitive styles and emotional intelligence influence leadership outcomes in different cultural contexts?	Insights from Eastern culture
	What are the long-term benefits to organisational performance in promoting the balanced cognitive styles of project managers?	Longitudinal study
	How do balanced linear/ nonlinear thinking styles and emotional intelligence interact to influence organisational commitment in different industries?	Industry differences

Potential Future Research Questions – **Cognitive Styles in Informational Role**

Topics	Research Questions	Example of theoretical/ practical/methods consideration
Influence of cognitive style on information acquisition	How do different cognitive styles influence managers' accounting information acquisition and interpretation across various industry and cultural contexts?	Cultural and industry differences
	How does a manager's cognitive style affect their perception of environmental uncertainty, shaping their informational behaviour and compliance with organisational values?	Organisational values compliance
Influence of cognitive style on communication	How does organisational culture influence the relationship between cognitive style and media choice in high-equivocality situations?	Organisational culture
Influence of cognitive style on technology adoption	How can understanding managers' cognitive style be leveraged to improve organisational performance during evolving technological demands?	Organisational performance
	What is the influence of training and development programs to mitigate anxiety and difficulties in technology adoption among managers with different cognitive styles and genders? How do these interventions impact managerial performance?	Role of the training & development program
	How does the integration of interactive data visualisation tools influence managers with different cognitive styles, and how does it impact their decision-making process?	Data visualisation
Influence of cognitive style on task uncertainty	How do managers' cognitive styles influence task uncertainty, and how do they affect decision-making?	Insights from non-government organisations

Influence of cognitive style on sustainable development practices	How do the cognitive styles of managers influence the implementation and effectiveness of sustainable development initiatives across various cultural contexts?	Insight from the West
Influence of cognitive style on information overload	How does information overload impact the decision quality in managers with high and low Needs for cognition when using financial and non-financial data?	Decision quality
Influence of cognitive style on information gathering and network utilisation	How do different cognitive styles influence the strategic implementation of information gathered through social networks in managerial decision-making?	Strategic implementation
Influence of cognitive style on fraud detection	How do organisational culture and ethical climate influence the effectiveness of managers with different cognitive styles in detecting fraud?	Organisational culture and ethical climate
Influence of cognitive style on Knowledge Management	How do the cognitive styles of managers influence the development, implementation, and sustainability of knowledge management strategies?	KM development, implementation and sustainability
Cognitive styles in remote or hybrid communication	How do different cognitive styles influence managerial effectiveness in remote or hybrid work environment?	Media synchronicity (case studies)

Potential Future Research Questions – **Cognitive Styles in Decisional Role**

Topics	Research Questions	Example of theoretical/ practical/methods consideration
Influence of cognitive style on managerial behaviour	How does organisational context (industry, company size, and cultural environment) moderate the influence of managerial cognitive styles on managerial behaviour (decision-making, conflict resolution, and feedback)?	Cultural and industry differences
Influence of cognitive style on Decision Support Systems generator	How can integrating cognitive style assessments into managerial training and development programs enhance organisational decision-making effectiveness and outcomes?	Role of training & development program
Influence of cognitive style on competitive advantage	How does cognitive style diversity influence the organisation's competitive advantage and long-term performance?	Organisational performance
Influence of cognitive style on strategy	Can cognitive diversity within TMTs lead to conflict, and how does this affect the decision-making process and strategy formation?	Strategy formation and conflict
	How does cognitive style cohesion within TMTs influence the organisational ability to shift between innovative and defensive strategies in organisational change?	Strategy formation and change
Influence of cognitive style on project performance	What is the role of organisational culture in moderating managers' different cognitive styles in leading different types of projects?	The role of organisational culture
Influence of cognitive style on creativity	How does cultural background influence managers' cognitive style in interpreting and acting upon creative framing cues in various industries?	Cultural and industry differences
	What is the influence of training and development programs to support managers with non-innovative cognitive styles fostering creativity with time constrain?	Role of training and development program
Influence of cognitive style on innovation	How does the organisational culture moderate the influence of managerial cognitive styles on innovation ambidexterity?	Organisational culture

	Does the influence of a CEO's cognitive style on innovation behaviour differ across various firm sizes or stages of organisational development?	Organisational differences
	How do external factors such as market competition and technology advancement influence the effectiveness of converging and diverging cognitive styles in driving innovation?	External factor
	How do different managerial cognitive styles within SMEs influence the implementation and outcomes of adopted Open Innovation strategies?	Implementation stage
	How cognitive diversity within managerial team affect decision-making and innovation during digital transformation?	Dynamic capability, team cognition (cross industries)
Influence of cognitive style on change management	What role does organisational culture support or hinder the performance of Innovative cognitive styles managers in managing change initiatives?	The role of organisational culture
	How do different cognitive styles among managers influence the implementation and success of change initiatives within various organisations?	Change implementation in different industries
Influence of cognitive style on dynamic capability	What is the influence of training and development programs on managers with different cognitive style fostering their ability to develop dynamic capabilities in innovative and transformational organisational contexts?	Role of training and development program
	How do the cognitive styles of middle managers in different countries and organisational contexts influence their capacity to perform organisational capacity of change?	Organisational and cultural differences

Influence of cognitive style on decision-making	How does the interaction between cognitive styles and metacognitive skills influence managerial performance in cross-cultural and various organisational settings?	
	How does the cognitive style of owner-managers influence the long-term growth of small firms?	Long-term effect
	How does the cognitive style of owner-managers impact the innovation capacity in the dynamic demand of technology-oriented SMEs?	Innovation capacity
	How do different cognitive styles of managers influence the decision-making processes and outcomes in New Product Portfolio Management in various industry contexts?	Different types of cognitive styles and industries
	How do the alignment and misalignment of cognitive style among managers influence the reflexivity of new product idea screening?	Cognitive style alignment
	How does combining cognitive styles influence collective problem-solving and creativity in open and closed problems?	Collective problem solving: a case study
	How do cognitive styles shape managers' interaction with AI-supported decision systems?	Trust in AI (simulation-based experiment)
Influence of cognitive style on problem-solving	Which cognitive styles most advantageous in digital and AI-augmented managerial environments, and how can organisation align profiles with technology-enable decision-making?	Strategic fit between cognitive orientation and DSS (comparative profile-matching methods)
	What is the role of training and development programs in enhancing managerial problem-solving alignment and effectiveness in various organisational contexts?	Role of training and development program

What is the long-term influence of integrating global ethical standards into training programs on the ethical decision-making of managers with different thinking styles?

What role does organisational culture play in reinforcing managers' ethical behaviour with different decision-making styles?

Role of Organisational Culture

How do managers' cognitive styles reflect biases and affect their decision-making in live strategic management environments (outside of a simulated context)?

A real case studies

Influence of cognitive style on biases in the decision-making process

Can technology-assisted decision-making tools reduce the impact of biases in managers with different cognitive styles?

The role of technology

How do political ideologies and different cognitive styles shape managers' ethical reasoning and moral decision-making processes in various organisational contexts?

Role of various tools for cognitive styles assessment and ethical decision-making and governance.

Influence of cognitive style on personal ideologies and ethical decision-making

How does the balance between cognitive types within the management team influence the effectiveness of resource allocation in a dynamic environment?

Cognitive types balance and dynamic environment

Influence of cognitive style on resources allocation

What is the influence of managers' cognitive styles on market situation interpretation?

Organisational differences & insights from East

How do organisational culture and managers' cognitive styles influence risk assessment strategies across different managerial levels in public and private sector organisations? What interventions can enhance decision-making effectiveness within these contexts?

Interaction between organisational culture, managerial level and possible intervention

What role does organisational culture play in moderating the relationship between managers' cognitive styles and risk perception in international business decisions?

The role of organisational culture

How do cognitive styles interact with professional experience to influence managers' strategic decision-making process in investment decision-making?

Professional experience in various cultures

How does integrating interpersonal skills training influence farmer managers' management methods and financial outcomes with predominantly Defensive thinking styles?

Role of training and development program