Uniglobal of Journal Social Sciences and Humanities
Journal Homepage: www.ujssh.com

The Role of Top Management in Hybrid Cloud Computing Adoption: A Systematic Review of Decision-Making Factors

Zakaria, Alrababah[1], Jessnor Elmy Binti Mat Jizat[2*]

[1&2]Faculty of Management and Economics, Universiti Pendidikan Sultan Idris (UPSI), Tanjung Malim, Perak, Malaysia

*Corresponding author: jessnor@fpe.upsi.edu.my

To Cite This Article:
Zakaria, A., & Mat Jizat, J. E. . (2025). The Role of Top Management in Hybrid Cloud Computing Adoption: A Systematic Review of Decision-Making Factor. *Uniglobal Journal of Social Sciences and Humanities*, *4*(1), 328–347. https://doi.org/10.53797/ujssh.v4i1.39.2025

Abstract: The increasing adoption of hybrid cloud computing introduces strategic and operational challenges, highlighting the critical role of top management in decision-making. While prior studies largely focus on technological and security aspects, this study addresses a growing need to explore leadership-driven factors influencing hybrid cloud adoption. Using a systematic literature review (SLR) guided by the PRISMA framework, 24 peer-reviewed articles were selected from reputable databases based on defined inclusion and exclusion criteria. This review identifies key decision-making factors shaping top management's adoption of hybrid cloud solutions across industries, framed within the Technology–Organization–Environment (TOE) framework. Technological factors included complexity, data security, relative advantage, and compatibility; organizational considerations centered on cost, resource availability, and leadership readiness; while competitive pressure emerged as the dominant environmental factor. Industry-specific findings revealed that healthcare, IT, and local government emphasized relative advantage and compatibility, whereas telecommunications prioritized innovation and operational efficiency. Small and medium-sized enterprises (SMEs) focused on scalability, cost-effectiveness, and security. Common adoption barriers included security concerns, integration complexity, and organizational readiness. The study also examined decision-making models and proposed a conceptual framework highlighting leadership's influence on hybrid cloud strategies. By shifting focus from technical to managerial perspectives, this research fills a gap in current literature and offers actionable insights for business leaders, IT executives, and policymakers. The findings support more strategic, leadership-informed approaches to hybrid cloud integration. Future studies should empirically validate these factors across varied contexts to strengthen the understanding of hybrid cloud adoption dynamics.

Keywords: Top management, hybrid cloud computing, decision making, systematic review, PRISMA

1. Introduction

The current corporate environment has been drastically altered by technological innovation, especially in the digital format, which has prompted the adoption of technologies that promise greater optimization in terms of responsiveness and scalability. Hybrid cloud computing stands out among these technologies as the foundation for innovation and expansion (Kodakandla, 2024). Hybrid cloud computing is a major participant in the field of information technology infrastructure today. It expertly combines the advantages of public clouds' extensive, real-time resources with the strict security and control that come with private clouds. This combination represents a significant advancement in data handling (Liu & Zeng, 2024). While various, non-essential apps operate in public clouds, the most crucial data is stored in private ones (Kodakandla, 2024).

The increasing use of hybrid clouds suggests a move toward IT strategies that are adaptable, responsive, and made to accommodate a range of operational requirements (Liu & Zeng, 2024). By combining cloud-based services with on-premises infrastructure, the hybrid cloud approach gives companies more operational agility, cost savings, and flexibility (Armbrust et al., 2010). Businesses are rapidly implementing hybrid cloud solutions to optimize workloads, guarantee data compliance, and improve business continuity as digital transformation speeds up across industries (Rana et al., 2019).

**Corresponding author: jessnor@fpe.upsi.edu.my*

According to Low et al. (2011), top management's support and actions are essential for fostering a positive environment and allocating sufficient funds for the adoption of new technology. Top management can offer a vision and commitment to foster an innovative atmosphere as technologies get more complicated and sophisticated (Amini et al., 2014). Because implementing hybrid cloud computing may require resource integration and process reengineering, top management is crucial (Abdollahzadehgan et al., 2013).

Support from upper management may have a direct or indirect effect on the acceptance of any new technological innovation. Additionally, top management is a critical link between the adoption of ICT innovations by individuals and organizations when evaluating the predictions and biases in IT (Ali et al., 2021). Because it directs the distribution of company resources and the integration of organizational services, top management support is crucial to the adoption of the hybrid cloud (Low et al., 2011). Hybrid cloud computing has many benefits, but implementing it is a difficult process that calls for organizational-level strategic decision-making. Top management is crucial in identifying risks, weighing advantages, and coordinating cloud adoption with corporate goals because of the financial, technological, and regulatory ramifications involved (Mell & Grance, 2009). Golightly et al. (2022) assert that the adoption of cloud computing is an organizational innovation that necessitates executive commitment in order to effectively align resources and drive transformation. Similar to this, Khan et al. (2021) point to "lack of inclination" and "lack of readiness" as major obstacles that proactive leadership can help to overcome. Senior executives, including Chief Information Officers (CIOs) and Chief Executive Officers (CEOs), develop the adoption strategy while technical teams oversee the implementation. They do this by taking into account aspects like cost-effectiveness, security, vendor management, and long-term business objectives (Berman et al., 2012).

Hybrid cloud computing usage offers both advantages and disadvantages. Although it allows businesses to use cloud resources in a dynamic way, issues with data security, interoperability, vendor lock-in, and governance are still common (Khajeh-Hosseini et al., 2012). The requirement to strike a balance between operational effectiveness, regulatory compliance, and company continuity further complicates cloud adoption decision-making (Zhang et al., 2010).

The role of top management in assessing and supporting the deployment of hybrid clouds is a significant barrier in this process. Cloud adoption necessitates strategic oversight from senior leadership, in contrast to traditional IT decision-making, where technical teams have major influence (Garrison et al., 2012). Nevertheless, there aren't many systematic studies that examine the variables affecting top management's choice to use hybrid cloud solutions. There is a knowledge gap regarding the organizational, financial, and strategic aspects that influence adoption decisions because existing research frequently concentrates on technology viewpoints rather than managerial ones (Alshamaila et al., 2013). The same is true for Khan et al. (2021), who list issues like "lack of adoption readiness" and "public cloud security concerns" but do not thoroughly examine how executive leadership overcomes these obstacles through resource allocation, governance frameworks, or strategic prioritization.

Through resource allocation, risk mitigation, and strategic priority setting, top management is essential to cloud adoption (Oliveira et al., 2014). Cost ramifications, security issues, performance and dependability, vendor management, and organizational preparedness are all factors they evaluate while making decisions. Developing frameworks that help firms make well-informed decisions requires an understanding of how senior executives assess these elements. Given the growing popularity of hybrid cloud solutions, companies can overcome obstacles and improve their cloud strategies by understanding the viewpoints of top management (Berman et al., 2012).

Although the technical components of cloud computing adoption have been studied in the past, little is known about how management decision-making affects the adoption of hybrid cloud systems (Yang & Tate, 2012). Research on cloud computing adoption models frequently overlooks top management's strategic considerations in favor of operational and technological aspects (Low et al., 2011).

This research aims to bridge this gap by conducting a systematic review of the key decision-making factors that influence top management’s approach to hybrid cloud adoption. By synthesizing existing literature, this study will provide a comprehensive understanding of managerial perspectives, offering valuable insights for business leaders, policymakers, and researchers. This study seeks to answer the following research questions;

1. What are the key decision-making factors that influence top management in adopting hybrid cloud computing?
2. What challenges do top managers perceive as barriers to adopting hybrid cloud computing?
3. What decision-making frameworks do top management executives use when evaluating hybrid cloud adoption?

Through a systematic review, this study will contribute to both academic discourse and industry practice, offering a structured analysis of how top management navigates the complexities of hybrid cloud adoption.

2. Method

2.1 Research Design

Using a systematic literature review approach, the current study examines the function of top management and how top managers' decision-making characteristics affect the adoption of hybrid clouds. In order to answer particular research questions, a systematic review is a research process that attempts to present an accurate and up-to-date summary of primary research (Higgins et al., 2019). The PRISMA 2020 checklist, which is especially made for conducting systematic literature reviews, was used in this investigation (Page et al., 2021; Bamiro et al., 2024a).

2.2 Search Strategy and Data Source

Selecting the appropriate database, in this case Scopus, was the initial stage in the literature search process. Since Scopus is a database for indexed scientific and/or academic publications, it was chosen to perform this systematic literature evaluation. Scopus is the largest and most extensive academic peer-reviewed article database. According to Rosário and Raimundo (2024), Scopus is well known for its broad coverage of journals across multiple fields, offering a comprehensive view of scholarly output beyond standard journal articles, and being suitable for multidisciplinary research. The Scopus database is well known for being one of the best abstract and citation databases in peer-reviewed literature. It has approximately 70 million records and more than 21,600 peer-reviewed journals from more than 4000 international publishers in a range of scientific disciplines (Moher et al., 2015; Salisu et al., 2025). Furthermore, Scopus allows users to conduct both basic and sophisticated searches, allowing them to further refine their results using Boolean operators based on a number of parameters such as document type, date, subject, author, and recent publications (Bamiro et al., 2024b; Idris et al., 2024). Last but not least, despite its bias towards English, Scopus is the most important indexing database for academic and scientific articles since it provides a more global perspective than other databases by covering publications from all over the world. The specific worldwide and transdisciplinary criteria of this study eventually determined the database's selection (Rosário & Raimundo, 2024). Additionally, Google Scholar was used as a supplementary source. Relevant scholarly articles relating to the research topic and research questions were obtained from Google Scholar.

However, given that other scholarly and scientific sources were not included and the study was based on certain methodological requirements, we feel that it is constrained in this regard.

A keyword-based search strategy was employed using a combination of the following search terms; hybrid cloud computing, cloud adoption decision-making, top management and IT adoption, CIO/CEO role in cloud computing, factors influencing hybrid cloud adoption

To refine the search results, Boolean operators (e.g., AND, OR) were used to combine keywords, and filters were applied to include only English-language publications.

2.3 Inclusion and Exclusion Criteria

The selection of studies followed predefined inclusion and exclusion criteria to ensure relevance and quality.

Inclusion Criteria:

This review includes empirical and theoretical studies that examine the role of top management in hybrid cloud adoption. Research published in peer-reviewed journals or high-impact conference proceedings, emphasizing decision-making factors that influence IT adoption in organizations. Studies that provide quantitative, qualitative, or mixed-method insights into managerial perspectives on cloud computing. Additionally, articles that investigates the challenges top managers face when adopting hybrid cloud computing.

Exclusion Criteria:

Studies focusing exclusively on technical aspects of cloud computing without managerial insights, articles published in non-peer-reviewed sources (e.g., blogs, opinion pieces), studies that discuss general IT adoption but do not specifically address hybrid cloud computing, duplicates or studies that lack sufficient methodological rigor and non-English articles

2.4 Data Extraction and Synthesis

The selected studies were reviewed and categorized based on several key aspects. First, their characteristics were examined, including the author(s), year of publication, research method, and study context. Next, the decision-making factors influencing top management's adoption of hybrid cloud computing were identified, such as cost, security, and compliance. Additionally, any theoretical frameworks or models used in the studies were noted, including the Technology-Organization-Environment (TOE) framework and the Diffusion of Innovation (DOI) theory. Finally, the findings and implications of each study were analyzed, focusing on the conclusions drawn, challenges encountered, and recommendations provided.

The extracted data were synthesized using a thematic analysis approach, where recurring themes and patterns in managerial decision-making were identified. This method ensured that key factors influencing hybrid cloud adoption were systematically categorized and analysed.

3. Results

As shown in Figure 1, the initial search for pertinent publications on Scopus and Google Scholar produced a total of 24 articles. To guarantee that only research concentrating on managerial decision-making in the adoption of hybrid cloud computing were taken into consideration, a set of inclusion and exclusion criteria was used, as described in the methodology section.

Because many article names lacked specifics, it was difficult to identify pertinent content. We carefully examined abstracts to identify papers that answered our study questions, eliminating those that didn't fit our requirements. Once appropriate papers were found, we eliminated duplicates and performed a two-stage screening process, evaluating abstracts and titles first, then complete texts. 24 publications that satisfied our inclusion requirements were located through this procedure, and they served as the basis for our inquiry. Figure 1 shows the PRISMA flow diagram for the articles that were found.

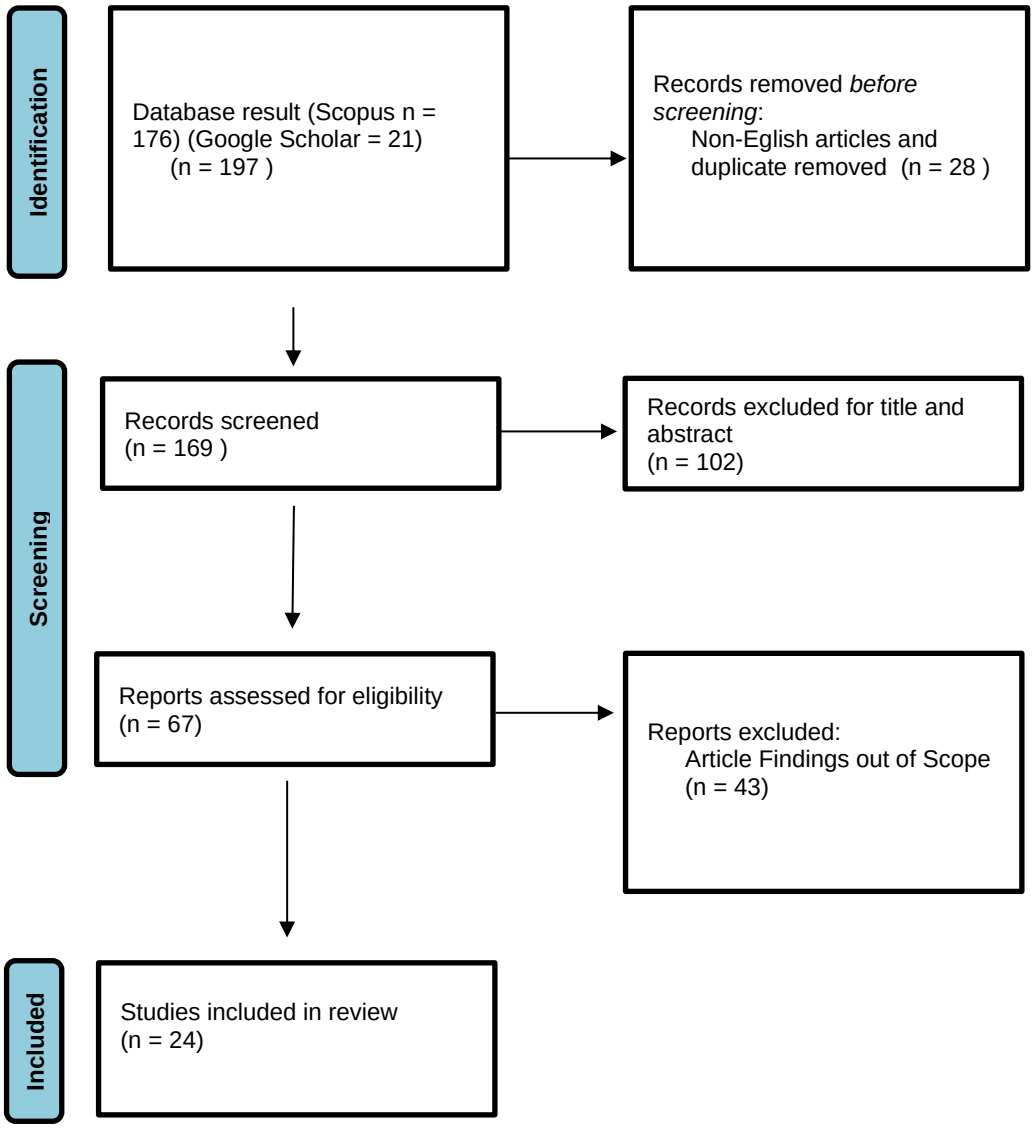

Fig. 1. PRISMA flow chart

As presented in Table 1, which outlines the data extraction process, 22 articles were published in high-impact journals, while the remaining two were sourced from conference proceedings.

Table. 1. Data Extraction Table

S/N	**Authors & (Years)**	**Study design/data collection method**	**Country of Author**	**Authors affiliation**	**Journal**	**Article type**
1	Alrababah (2024)	Qualitative Interview	Malaysia	Management and Economics	International Journal of Business and Technology Management	Journal
2	Alkandi (2022)	Quantitative Survey questionnaire	Saudi Arabia	Administrative and financial science	International Scientific Conference.	Conference proceeding
3	Al Hadwer et al. (2021)	Qualitative SLR	Saudi Arabia	Public health/Healthcare	Internet of Things	Journal
4	Ayadi (2022)	Quantitative Survey questionnaire	Saudi Arabia	Public health/healthcare	The Electronic Journal of Information Systems in Developing Countries	journal
5	Liu & Zeng (2024)	Qualitative Review	China	Technology	Innovation in Science and Technology	journal
6	Eskrootchi et al. (2020)	Quantitative Survey questionnaire	Iran	Management and medical information	Library Philosophy and Practice	Journal
7	Stieninger et al. (2018)	Quantitative Survey questionnaire	Austria	Technology	International Journal of Information Systems and Project Management	Journal
8	Oladele et al. (2021)	Quantitative Questionnaire	Nigeria	Technology (information and communication science)	Journal of Sustainable Technology,	Journal article
9	Seifert et al. (2023)	Qualitative Review	Germany	Technology	ACM Computing Surveys	Journal article
10	Khan & Ullah (2016)	Qualitative Review	Pakistan	Technology (information and communication)	The Journal of Engineering	Journal article
11	Hajjat et al. (2010)	Qualitative Case study	USA	Technology (IT)	ACM SIGCOMM Computer Communication Review	Journal article

continued

12	Khan et al. (2021)	Mixed	Pakistan	IT	Security and Communication Networks, 2021	Journal article
13	Alipour et al. (2021)	Quantitative Survey questionnaire	Iran	Healthcare	Digital health	Journal article
14	Polyviou et al. (2024)	Qualitative Interview	Greece	IT	Information Technology & People	Journal article
15	Yigitbasioglu (2015)	Quantitative Survey questionnaire	Australia	Accountancy	Journal of Enterprise Information Management	Journal article
16	Teh et al. (2024)	Quantitative Survey questionnaire	Malaysia	Technology	International Journal of Management and Enterprise Development,	Journal article
17	Khanagha et al. (2013)	Qualitative Case study	Netherlands and	Entrepreneurship	European Management Review	Journal article
18	Gutierrez et al. (2015)	Quantitative Survey questionnaire	United Kingdom	Business and management	Journal of enterprise information management	Journal article
19	Ali et al. (2021)	Quantitative Survey questionnaire	Kuwait	IT	Information Technology & People	Journal article
20	Yoo & Kim (2018)	Quantitative Survey	South Korea	IT	Sustainability	Journal article
21	Entsie et al. (2025)	Quantitative Survey	Ghana	IT	Multidisciplinary Science Journal	Journal article
22	Shuaib et al. (2019)	Qualitative Review	Saudi Arabia	IT	Ambient Communications and Computer Systems	Journal article
23	Hosseini Shirvani et al. (2022)	Qualitative Case study	Iran	Computer technology	IET software	Journal article
24	Zbořil & Svatá (2022)	Qualitative Case study	Czech republic	IT	Procedia Computer Science	Conference proceeding

3.1 Yearly Publication of Reviewed Articles

There were no limitations on the year of publication while conducting the initial search on the Scopus database and Google Scholar. However, the benchmark year for this analysis was set at 2010, the year when the earliest included publication was published.

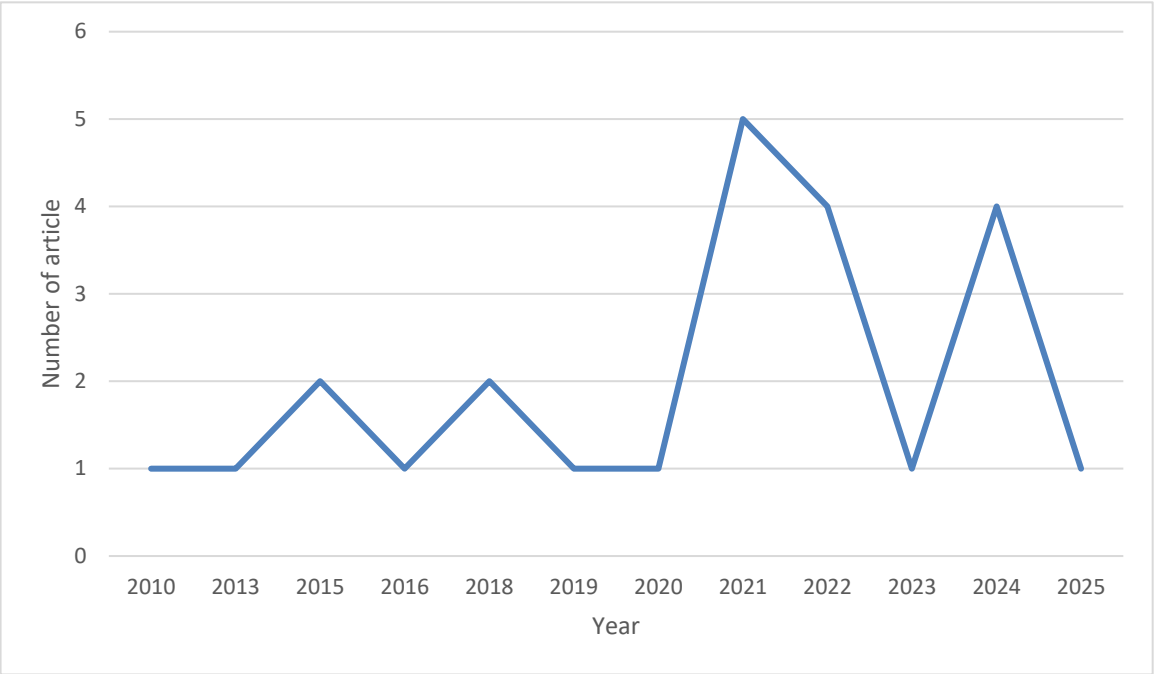

Fig. 2. Yearly Publication of Reviewed Articles.

The majority of the papers included in this study were released between 2020 and 2025, as shown in Figure 2, indicating a rise in scholarly interest in the part top management plays in the adoption of hybrid cloud computing. In particular, only 29% of the examined publications were published between 2010 and 2019, whereas 71% were published during this time frame. The rising usage of cloud technologies, improvements in hybrid cloud infrastructure, and the strategic role of executives in technology adoption are probably the main causes of this trend, which points to a recent explosion in study on managerial decision-making in hybrid cloud adoption.

With a total of five studies, 2021 had the most papers among the reviewed publications. 2024 came in second with four publications. As businesses look to strike a balance between cost, security, and operational efficiency in hybrid cloud settings, the consistent rise in studies over the previous five years suggests a growing understanding of the significance of leadership in cloud adoption strategies.

3.2 Distribution of Reviewed Articles by Methodology

Of the evaluated studies, 46% used a qualitative approach as displayed in figure3, and 12 papers (50%) used a quantitative methodology. The remaining 4% conducted their research using a mixed-methods strategy.

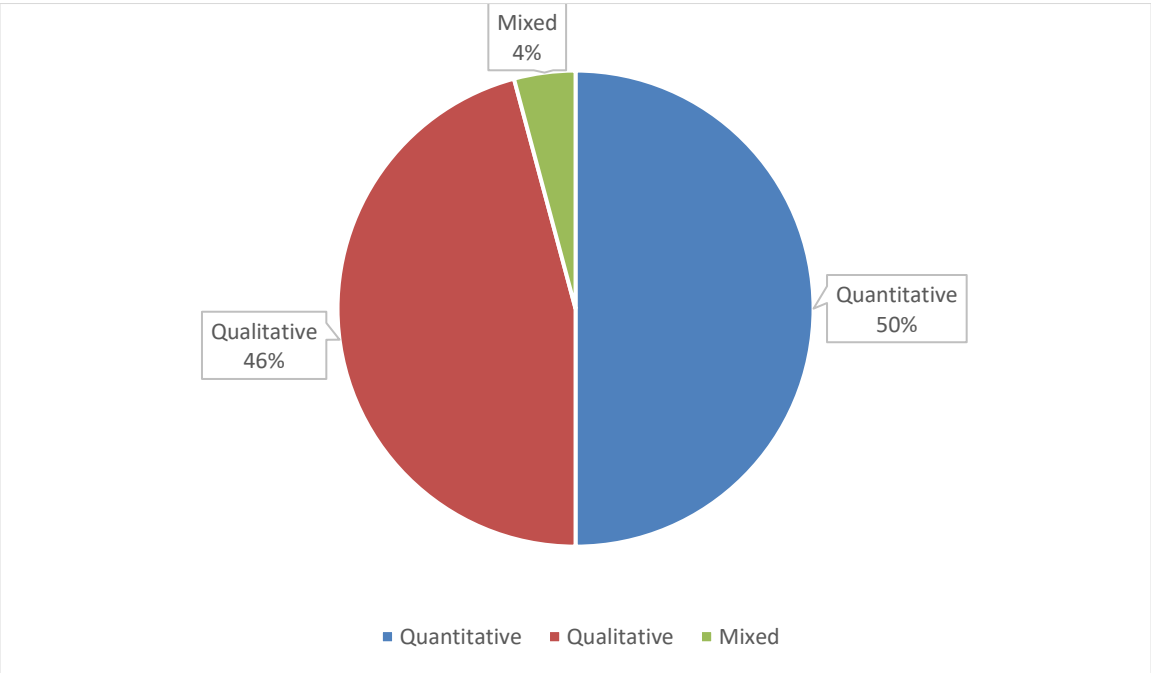

Fig. 3. Distribution of Articles by Methodology

Four of the publications that used a qualitative methodology were case studies, two collected data through interviews, and five of the articles were reviews. In contrast, survey questionnaires were used in the 12 research that used a quantitative methodology to gather data from participants.

3.3 Authors Affiliation by Country

This study examines contributions to the research topic according to the nation of affiliation of the first author. Figure 4 shows that the country with the most first-author contributions is Saudi Arabia. With three articles, Iran is next, followed by Malaysia and Pakistan, each with two articles. One first-author contribution to the subject of study has been made by each of the other nations shown in the chart.

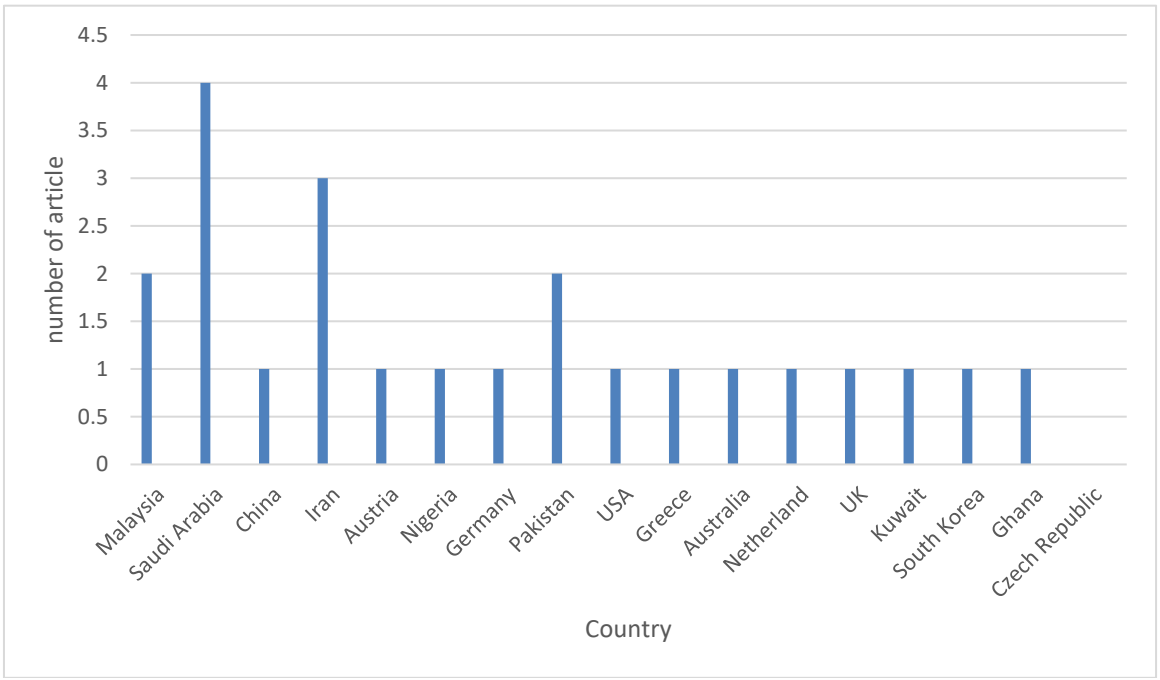

Fig. 4. Distribution of Articles by Authors Country of Affiliation.

3.4 Distribution of Articles by Country of Research

This study also looks at the regional distribution of research in this area to obtain a better understanding of how top management decision-making characteristics affect the adoption of hybrid cloud computing. The majority of research was carried out in Asian countries, as shown in Table 2, with five different countries contributing to a total of seven articles. In Europe, research was carried out in Germany and the UK, but Polyviou et al. (2024) offered a more comprehensive analysis that included all of Europe. Furthermore, research was done in Ghana and Nigeria in Africa, while two investigations were done in Australia. The other articles either did not concentrate on a particular nation or were reviews.

Table. 2. Geographical distribution of articles

S/N	Country	Number of articles	Region
1	Bahrain	1	Asia
2	Saudi Arabia	2	Asia
3	Iran	2	Asia
4	Nigeria	1	Africa
5	Australia	2	Australia
6	Malaysia	1	Asia
7	United Kingdom	1	Europe
8	South Korea	1	Asia
9	Ghana	1	Africa
10	Europe	1	Europe
11	Global	11	Global

3.5 Distribution by Industry

In the evaluated studies, we looked at how top management decision-making affects the adoption of hybrid cloud computing in different industries. Fifteen of the twenty-four studies that were examined concentrated on certain industry sectors. With four studies each, the IT and healthcare industries were most represented, as seen in Figure 5. There were two studies in the telecommunications sector and three publications in the SME sector, which was categorized as a single category. Additionally, one study each represented the local government and manufacturing sectors.

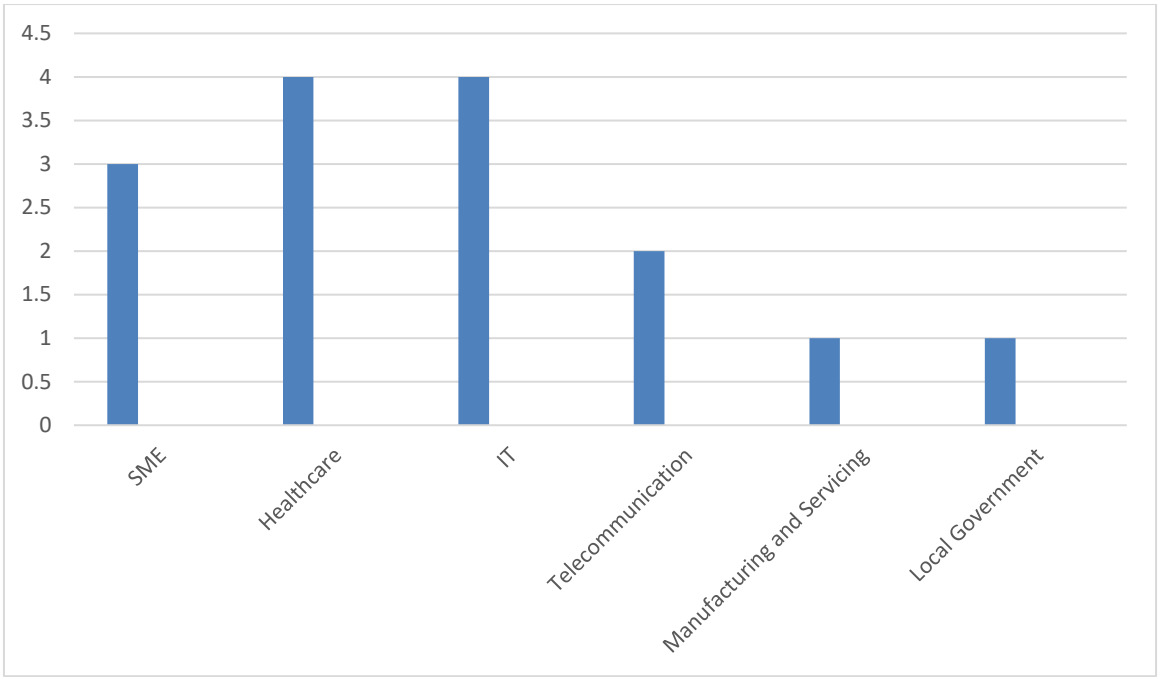

Fig. 5. Distribution of articles by industry

The adoption of hybrid cloud computing, for instance, seems to be motivated by cost-effectiveness, flexibility, and lower operational risks in the SME sector, which was the subject of three studies. This approach enables small and medium-sized enterprises to expand their IT capabilities without having to make significant investments in infrastructure (Alrababah, 2024). According to two studies, the telecom industry may place a strong emphasis on network dependability and smooth integration with current communication systems (Khanagha et al., 2013).

3.6 Frameworks and Theories

Using well-established theoretical frameworks, 13 research examined top management decision-making in the use of hybrid clouds. Table 3 illustrates how these frameworks offered organized methods for examining the variables affecting managerial choices. With five research utilizing it, the Technology-Organization-Environment (TOE) framework was the most widely used of the frameworks found. This implies that judgments about the deployment of hybrid clouds are significantly influenced by organizational preparedness, technological prowess, and external environmental factors. According to Shuaib et al. (2019), the TOE framework aids in the explanation of how businesses evaluate cloud adoption in light of internal technology resources, organizational requirements, and external constraints like industry competition or regulatory requirements.

Other frameworks employed in the reviewed studies include Institutional Theory, which analyzes how external institutional forces, such as regulatory policies, industry norms, and competitive pressures, shape top management's cloud adoption choices (Yigitbasioglu, 2015). The Analytical Hierarchy Process (AHP) provides a structured decision-making framework that enables organizations to prioritize adoption factors by evaluating multiple criteria, including cost, security, and integration (Eskrootchi et al., 2020). Similarly, the Diffusion of Innovation (DOI) Theory examines how new technologies like hybrid cloud computing disseminate within organizations, focusing on perceived benefits, complexity, and compatibility with existing systems (Entsie et al., 2025). Furthermore, the Delphi Method offers a structured expert consensus approach, gathering insights from industry professionals to refine decision-making factors through multiple rounds of evaluation (Hosseini Shirvani et al., 2022).

Together, these frameworks illustrate the multi-dimensional nature of top management decision-making in hybrid cloud computing adoption. They emphasize that technological advantages, strategic organizational priorities, external institutional pressures, and systematic decision-making processes collectively shape the adoption journey.

Table. 3. Frameworks and Theories employed in the articles reviewed

S/N	Framework/Theory	Author(s)
1	Technology-Organization-Environment (TOE)	Alkandi (2022), Al Hadwer et al. (2021), Ayadi (2022), Ali et al. (2021), Shuaib et al. (2019)
2	Analytical Hierarchy	Hosseini Shirvani et al. (2022), Khan et al. (2021), Eskrootchi et al. (2020)
3	Diffusion of Innovation (DOI)Theory	Entsie et al. (2025), Shuaib et al. (2019), Ali et al. (2021)
4	Institutional Theory	Yigitbasioglu (2015)
5	Desire Framework	Ali et al. (2021)
6	Delphi Method	Hosseini Shirvani et al. (2022)

4. Discussion

4.1 Key Decision-Making Factors That Influence Top Management in Adopting Hybrid Cloud Computing

With a focus on two primary viewpoints, this study investigates the critical decision-making elements that influence upper management's adoption of hybrid cloud computing. First, based on the evaluated literature, the study looks at how these decision-making elements differ in various businesses. This industry-specific study sheds light on how sectoral traits, legal frameworks, and particular operational requirements influence the uptake of hybrid cloud solutions. Second, the Technology-Organization-Environment (TOE) framework is used in the study to classify these elements. This categorization enables a structured understanding of the technological attributes (e.g., security, scalability, and integration capabilities), organizational factors (e.g., leadership support, financial resources, and IT expertise), and environmental influences (e.g., regulatory compliance, competitive pressure, and market trends) that impact decision-making at the top management level.

Decision Making Factors Across Industries

The industries where research has been done on the factors that influence top managers' adoption of hybrid cloud computing are shown in Figure 5 in the results section. Alkandi (2022) study looked at the factors that influence top management adoption of hybrid cloud computing in the Saudi Arabian healthcare sector. The study's findings showed that, out of the three types of context technological, organizational, and environmental some factors influenced decision makers to adopt hybrid cloud computing technology in the Saudi Arabian healthcare sector. These factors include relative advantage, technological compatibility, management support, technological readiness, and competition pressure. Additionally, the study found that the two main factors influencing Saudi healthcare institutions' use of cloud technology were relative advantage and technological compatibility. Similar to this, Ayadi's (2022) study offers a thorough analysis of the decision-making process, showing that a mix of technological viability, external competitive factors, and internal organizational preparation influence top management's decisions. A study by Eskrootchi et al. (2020) sought to determine the top management elements that affect the adoption of hybrid cloud computing in Iranian libraries at Medical Science Universities. They came to the conclusion that choosing to implement a hybrid cloud requires a comprehensive assessment of cost, performance, and strategic alignment rather than relying on discrete considerations. This supports the notion that when making decisions on cloud adoption, top management considers a variety of factors, including technological prowess, financial viability, and outside influences. Finally, Alipour et al. (2021) found that the two most important elements influencing senior management's decisions to embrace cloud computing were relative advantage and competitive pressure.

Among the examined studies, the IT sector was well-represented, contributing a sizable number of publications that addressed the study question. Top management support is a crucial determinant of cloud adoption decisions in the IT sector, according to Yoo & Kim (2018), supporting the notion that leadership is essential in propelling technological progress. This implies that leadership commitment, strategic vision, and executive buy-in are essential to the decision-making process when using hybrid clouds. Additionally, according to Yoo & Kim (2018), compatibility is the top worry for demanders (businesses implementing the technology), meaning that senior management is very focused on integrating hybrid cloud solutions with older systems to guarantee reliable operations. In a similar vein, Stieninger et

al. (2018)'s findings offer insightful information about the major deciding elements that affect top management's adoption of hybrid cloud computing in the IT sector. Their research identifies four key elements that lead to a more favorable attitude toward cloud adoption: compatibility, relative advantage, security & trust, and reduced complexity. Lastly, Gutierrez et al. (2015) contend that when assessing hybrid cloud solutions, top management should take into account both internal readiness such as technological capabilities and the capacity to handle complexity and external pressures, such as industry competition and trading partner demands.

SME-related research papers are grouped under a single industry. Alrababah (2024) outlined a number of important considerations that influence SMEs management's choices about the deployment of hybrid cloud in Bahraini. The decision of SMEs managers to embrace hybrid cloud computing was driven by elements including flexibility, scalability, data security, cost, integration with current systems, and lower risks. According to the findings of Oladele et al. (2021), perceived relative advantage, complexity, and maintenance costs of IT infrastructure have a significant impact on management's adoption decisions. When it comes to hybrid cloud computing, these factors imply that managers of SMEs are likely to balance the possible advantages of hybrid solutions—like improved scalability and business communication—against the integration challenges and financial consequences of managing both on-premise and cloud-based IT resources. Top management decisions to embrace hybrid cloud computing among SMEs are influenced by organizational characteristics, including company size, resource adequacy, and internal support, as Teh et al. (2024) point out.

Khanagha et al. (2013) carried out a case study on determining the decision-making elements that affect the adoption of hybrid cloud computing in the telecommunications sector. The case study's conclusion showed that senior management's decisions may be heavily influenced by issues like the need for innovation, resolving organizational inefficiencies, and handling technological disruptions. However, Hosseini Shirvani et al. (2022) found that senior management's decision to use hybrid cloud computing may be influenced by cost, performance, and security.

A research by Yigitbasioglu (2015) in the industrial and service sector found that mimetic pressures might cause top management to see hybrid cloud as essential or standard, particularly if other industry leaders have successfully adopted it. This element can have a big impact on top management team choices because they want to stay competitive by following market trends and using technology that their successful competitors are using. Additionally, regulatory agencies that demand adherence to particular data privacy or security standards or consumers who want more flexible and safe cloud solutions may put more and more pressure on senior management. Furthermore, if rivals use hybrid cloud solutions, it could set a market expectation and force businesses to follow suit in order to stay competitive.

According to the findings of the Ali et al. (2021) study, compatibility, complexity, cost, security concerns, anticipated advantages, and organization size were the elements that had a statistically significant and favorable influence on the adoption of hybrid cloud-based services in local governments.

Table. 4. Decision Making Factors Across Industries

Sector	Decision making factor	Author(s)
Healthcare	Relative advantage, compatibility of technology, technological readiness, competition pressure, internal organizational readiness, evaluation of cost, performance and strategic alignment	Alkandi (2022), Ayadi (2022), Eskrootchi et al. (2020), Alipour et al. (2021)
IT	Compatibility, relative advantage, security & trust, and lower complexity, industry competition and trading partner, technological capabilities and the ability to manage complexity	Yoo & Kim (2018), Stieninger et al. (2018), Gutierrez et al. (2015)
SME	Integration with existing systems, scalability, data security, cost, lesser risks associated with hybrid cloud adoption, and flexibility, perceived relative advantage, complexity, company size, resource adequacy, and internal support	Alrababah (2024), Oladele et al. (2021), Teh et al. (2024)

continued

Telecommunication	Need for innovation, overcoming organizational inefficiencies, and managing technological disruptions, cost, performance, and security	Khanagha et al. (2013), Hosseini Shirvani et al. (2022)
Manufacturing and Servicing	Mimetic pressure (industry benchmarking and peer influence.), Coercive pressure (regulatory compliance and customer demands)	Yigitbasioglu
Local Government	Compatibility, complexity, cost, security concerns, expected benefits and organization size	Ali et al. (2022)

Decision Making Factors Based on Technological, Organisational and Environmental (TOE) Dimension

This study also looked at the three main characteristics of organizational, technological, and environmental context that affect top management's decision-making. According to the results of the analysed publications, top management's interests and concerns vary along various dimensions, which influences how they implement hybrid cloud computing. But according to Table 5, which lists the main factors that have a big influence on adoption decisions, the technological background turned out to be the most important one. This is consistent with research by Oladele et al. (2021), which found that top management makes 66.4% of its decisions about cloud computing adoption based on technological considerations. It was discovered that important technological factors like security, scalability, compatibility with current systems, and general dependability weighed more in managerial decision-making than organizational and environmental issues.

According to the results of the analyzed publications, the most frequently mentioned factors in the technological environment are compatibility, relative advantage, data security, and complexity. Security and compatibility are the two most important technological considerations influencing senior management's choice to use hybrid cloud computing, according to a study by Ayadi (2022). Nevertheless, the study demonstrated that relative advantage, costs, and complexity do not significantly affect outcomes. This implies that hybrid cloud solutions that provide strong security and smooth integration with current systems should be given top priority by decision-makers. Furthermore, top management is largely motivated by favorable opinions of cloud innovation, which means that technologies that are seen as compatible and safe have a higher chance of being adopted. In a similar vein, Stieninger et al. (2018) discovered that senior management has a more favorable attitude toward cloud adoption when compatibility, relative benefit, security, trust, and reduced complexity are present. Complexity was also identified by Gutierrez et al. (2015) as a deciding factor in the UK's adoption of hybrid cloud computing. Relative advantage, compatibility, and firm size, however, did not appear to be significant factors in the adoption of hybrid cloud computing, according to the data.

In the reviewed publications, cost is the most frequently stated organizational context element. Size, resource adequacy, internal support and technical readiness are further factors that were considered. According to Teh et al. (2024), while adopting hybrid cloud computing, top management should prioritize taking organizational context into account when making decisions. Their research shows a favourable and significant relationship between cloud adoption and the organizational context, highlighting important elements including internal support, company size, and resource adequacy. In the Saudi healthcare industry, Ayadi (2022) finds that having enough resources is thought to be the most important organizational backdrop for using hybrid cloud.

Under environmental context, the most emphasized decision making criteria is competitive pressure. Ayadi (2022) indicated that the competitive pressure is a crucial environmental factor of hybrid cloud adoption of senior management in Saudi healthcare. Similar to this, Gutierrez et al. (2015) asserted that environmental variables were the most important determinants of senior managers' decisions to use hybrid cloud services in the IT sector, as trade partner and competitive pressure were the main motivators. When managers are worried about the reliability of cloud computing suppliers based on past projects, trading partner pressure was the most significant factor influencing organizations' decisions to utilize the cloud.

Table. 5. Decision Making Factors Based on Technological, Organisational and Environmental (TOE) Dimension

Dimension	Factors	Number of mentions	Author(s)
Technology	Complexity	5	Al Hadwer et al. (2021), Stieninger et al. (2018), Oladele et al. (2021), Gutierrez et al. (2015), Entsie et al. (2025)
			Ali et al. (2021), Alrababah (2024), Ayadi (2022), Stieninger et al. (2018), Ali et al. (2021)
	Data security	5	Al Hadwer et al. (2021), Stieninger et al. (2018), Oladele et al. (2021), Alipour et al. (2021)
			Alrababah (2024), Ayadi (2022), Stieninger et al. (2018), Ali et al. (2021)
	Relative advantage	4	Alrababah (2024), Liu & Zeng (2024)
			Alrababah (2024), Liu & Zeng (2024)
			Ali et al. (2021)
	Compatibility	4	
	Scalability	2	
	Flexibility	2	
	Expected benefits	1	
Organisational	Cost	5	Alrababah (2024), Liu & Zeng (2024), Eskrootchi et al. (2020), Oladele et al. (2021), Ali et al. (2021).
	Adequate Resources	2	Ayadi (2022), Teh et al. (2024)
			Alrababah (2024)
	Risks associated	1	Teh et al. (2024)
	Internal support	1	Gutierrez et al. (2015)
	Technological readiness	1	
Environmental	Competitive pressure	4	Al Hadwer et al. (2021), Ayadi (2022), Alipour et al. (2021), Gutierrez et al. (2015)

continued

Trading partner pressure	1	Gutierrez et al. (2015)
Government policy	1	Entsie et al. (2025)

4.2 Challenges Top Managers Perceive as Barriers to Adopting Hybrid Cloud Computing

Top managers' decision-making process is impacted by their perception of a number of obstacles to implementing hybrid cloud computing. According to a thorough literature study by Khan and Ullah (2016), senior managers believe that three major obstacles stand in the way of using hybrid cloud computing: integration difficulty, efficient management issues, and public cloud security concerns. According to the report, 58% of respondents named public cloud security as their top challenge. The security issue arises when a large volume of private information is left on public computers. With 28%, the second most-cited obstacle is effective management. This is because transferring from a public cloud environment to a hybrid cloud environment requires efficient management of the manageability issue of the cloud infrastructure in the hybrid cloud environment. Hybrid cloud adoption is thought to be significantly hampered by the much more complicated technical integration. Compared to on-premises systems, integrating one or more public and private clouds into a hybrid system might be more difficult.

Key technological and financial obstacles that top management may view as impeding the adoption of hybrid cloud computing, especially in the context of SaaS adoption, are highlighted in the Seifert et al. (2023) study. 52 difficulties were found in 36 publications by a structured literature analysis, with six main challenges: different SLA standards, QoS aggregation, economic implications of SLA violations, changing contractual commitments, changing trust connections, and commercial and technological uncertainty. The intricacy of these issues is further highlighted by observations from professionals in the field, which aid top managers in identifying possible hazards when using hybrid cloud. Similar to this, a study by Khan et al. (2021) identified 13 major obstacles to the adoption of hybrid clouds and divides them into four categories: lack of preparation, lack of adoption, lack of inclination, and lack of pleasure. The results show that the biggest obstacles are lack of adoption and lack of satisfaction, according to the Analytical Hierarchy Process (AHP).

The findings of Shuaib et al. (2019) highlight several challenges that top managers perceive as barriers to adopting hybrid cloud computing. These challenges are categorized into organizational, technical, and external factors, with key barriers including virtualization management, security, privacy, trust, scalability, cost estimation, and technological readiness. Additionally, technical challenges such as service-level agreements (SLA), government regulation, and compliance are identified as particularly significant.

4.3 Decision-Making Frameworks That Top Management Executives Can Adopt When Evaluating Hybrid Cloud Adoption

Theoretical frameworks were employed in the evaluated papers to analyze the major determinants of top management's hybrid cloud adoption decisions. Seven of these studies used at least one framework to organize their research. Building on these conclusions, this study looks at the fundamental components of the current frameworks and adds other elements found in the literature review. The objective is to create a thorough framework for decision-making that is suited for senior management executives and offers an organized method for assessing the deployment of hybrid clouds.

Six frameworks and theories were used in total to evaluate senior management's adoption of hybrid clouds. Table 3 shows that the most commonly used of them was the Technology-Organization-Environment (TOE) framework. Ayadi (2022) investigated Saudi top management's hybrid cloud decision-making process using the TOE framework. The results demonstrate that, as managers place a high priority on data protection and smooth integration with current systems, security and compatibility are crucial technological variables impacting adoption. Since effective implementation is fueled by leadership commitment and enough finance, top management support and resource availability are crucial from an organizational standpoint. Competitive pressure is a major environmental issue, especially in sectors like healthcare where businesses are driven to use cloud solutions in order to stay ahead of the competition.

Yigitbasioglu (2015) came to the conclusion, using Institutional Theory, that top management executives can assess the adoption of hybrid clouds by taking into account the external influences that affect their choices. According to the research, senior management team beliefs are influenced by mimetic pressures, which means that executives frequently use competitors or industry leaders who have effectively implemented hybrid cloud solutions as a point of comparison. The top management team's opinion of cloud adoption is also greatly influenced by coercive pressures from customers, regulatory agencies, and other external stakeholders.

Top management executives can assess hybrid cloud adoption by evaluating key innovation features including relative advantage, complexity, and external effects, according to Entsie et al. (2025), who base their argument on the Diffusion of Innovation (DOI) theory. The results indicate that adoption decisions are significantly influenced by the

perceived advantages of hybrid cloud computing, including cost effectiveness, scalability, and security. Government regulations also act as outside forces that have the power to help or impede adoption.

Both TOE and DOI were utilized in a study by Shuaib et al. (2019). According to their result, TOE is especially appropriate since it offers an organized method by looking at organizational, environmental, and technological aspects. Some important organizational-level components that DOI theory covers, including leadership influence and innovation traits, are absent from it, though. Consequently, an integrated framework that incorporates both TOE and DOI provides a more thorough method, allowing executives to evaluate the adoption of hybrid clouds by taking into account both internal organizational dynamics and external influences.

Using a hybrid approach that combines the analytic hierarchy process and Delphi methods, Hosseini Shirvani et al. (2022) present a comprehensive decision framework for cloud migration, ensuring diverse experiences and minimizing subjective outcomes when evaluating hybrid cloud adoption for top management. By decomposing complicated decisions into fewer parts, the Analytical Hierarchy Process assists executives in prioritizing elements that affect cloud adoption, such as cost, performance, and security. The Delphi Method, which involves asking experts iterative questions, ensures that different viewpoints are taken into account while facilitating consensus on important variables influencing the adoption of hybrid clouds.

Findings from the reviewed articles also identified some key decision making factors that should be evaluated by top management executives when adopting hybrid cloud computing.

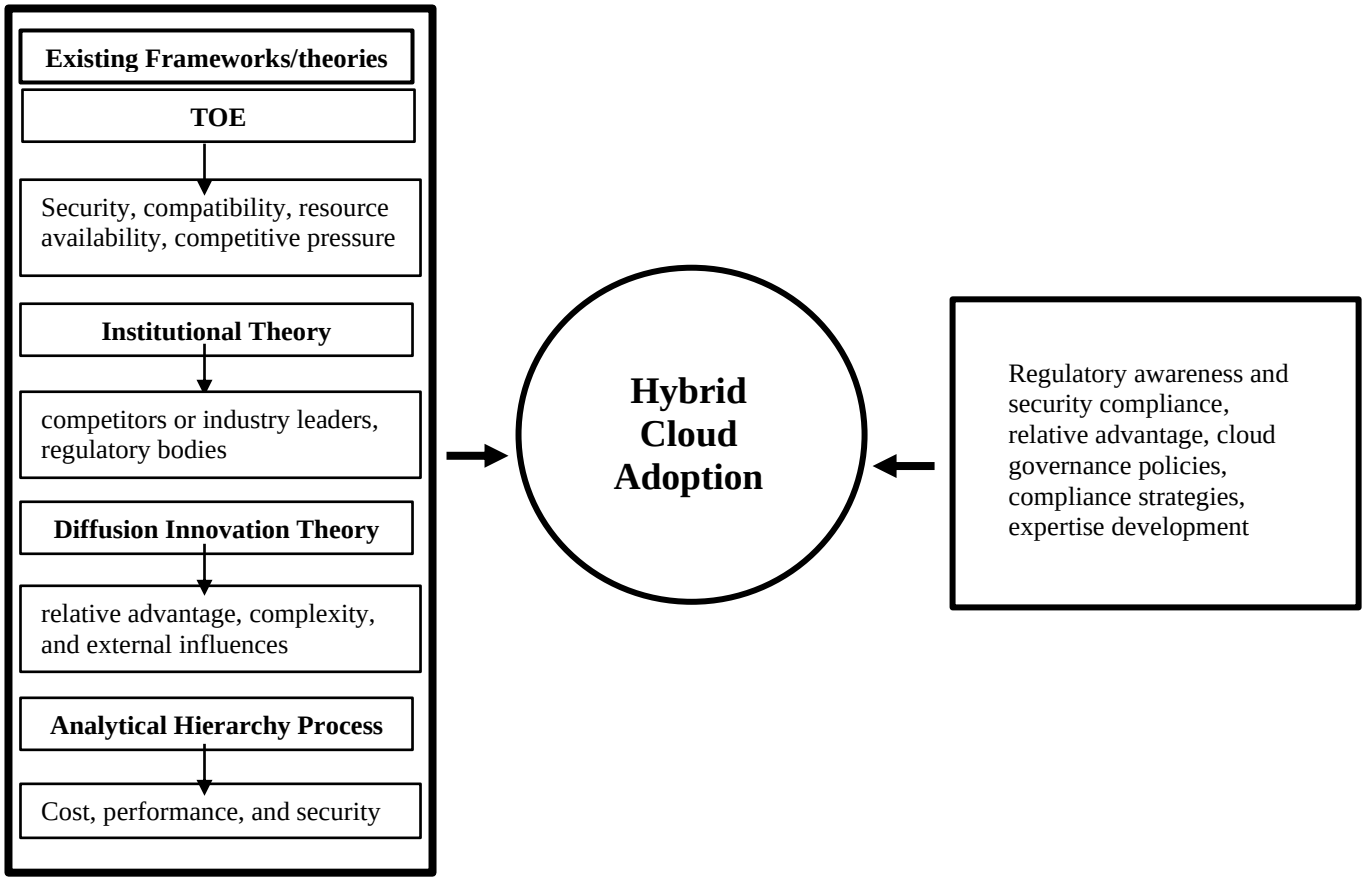

Fig. 6. Decision making framework for adopting hybrid cloud computing by top management.

Key considerations for senior management executives while implementing hybrid cloud computing are depicted in Figure 6. Essential factors derived from existing frameworks, as described in the examined literature, are highlighted in the first section of the figure. The importance of these elements in the adoption process is emphasized through a thorough explanation. Several authors' suggestions for top management's best practices for deploying hybrid cloud systems are presented in the third section.

The main decision-making criteria put forth by different authors that affect upper management's adoption of hybrid cloud computing are highlighted in the results of this systematic literature review (SLR). Alrababah (2024) asserts that regulatory knowledge and security compliance should be given top priority by top management executives when assessing the use of hybrid clouds. His research focused on SMEs in Bahrain. He added that knowing Bahrain's

data protection legislation, such as the Personal Data Protection Law (PDPL) and other pertinent rules, guarantees adherence to the law and reduces legal risks.

Top management plays a critical part in the decision-making process for hybrid cloud adoption, as their support greatly influences the organization's adoption strategy. As noted by Yoo and Kim (2018), a top-down decision-making method is crucial, maintaining alignment with company objectives. Executives must give compatibility first priority when assessing the deployment of hybrid clouds, guaranteeing a smooth interface with current legacy systems for operational stability. For cloud service providers, on the other hand, relative advantage is crucial, highlighting the advantages of adopting hybrid clouds for business purposes.

According to a case study by Zbořil & Svatá (2022), top management executives should take into account a number of crucial considerations while making decisions about implementing hybrid cloud computing. Their analysis found that management and governance are a significant factor. They asserted that in order to enable long-term hybrid cloud operations, senior management needs to set up clear cloud governance policies, compliance plans, and expertise development. Analyzing relative advantage aids executives in determining the business impact and return on investment (ROI) of using hybrid cloud solutions, which is another crucial component they found in their study.

Top management executives should understand that managerial problem-solving initiatives are an essential component of the adoption process and not merely a reaction to technology change when assessing the adoption of hybrid clouds (Khanagha et al., 2013). This means that in addition to evaluating the technical viability of hybrid cloud solutions, decision-making should incorporate strategic approaches to problem-solving in order to manage organizational difficulties, allocate resources, and handle change. Executives may guarantee a more seamless transition and optimize the advantages of hybrid cloud adoption by proactively addressing these managerial factors in addition to technology ones.

5. Conclusion

In the rapidly evolving digital landscape, hybrid cloud computing has emerged as a strategic solution for organizations seeking flexibility, scalability, and cost efficiency. However, its successful adoption depends significantly on top management's decision-making process, as they navigate technological, organizational, and environmental challenges. Understanding the key factors that influence these decisions is crucial for ensuring effective implementation. This systematic review has explored the role of top management in hybrid cloud adoption, analysing the critical decision-making factors that shape their choices. A comprehensive search of the Scopus database was conducted to search for only relevant articles that relate to the research topic under investigation and research questions. Additionally, a supplementary search was conducted on Google Scholar to deepen our search and get relevant articles. Using a set of inclusion and exclusion criteria, a total of 24 articles was finally included in this review. This current study explored key decision-making factors that influence top management in adopting hybrid cloud computing across various industry and other the technological, organisational and environmental (TOE) context. In terms of industry specific, relative advantage, compatibility and complexity where decision making factors common in healthcare, IT and local government. In the telecommunication industry need for innovation, overcoming organizational inefficiencies, and managing technological disruptions were identified as decision making factors. SMEs was categorised as one industry and the common decision making factors for adopting hybrid cloud computing by SMEs managers are scalability, data security, cost. Using the TOE context, complexity, data security, relative advantage and compatibility were the most mentioned factors under the technological context. For the organisational context, cost and adequate resources were the most identified factors. While in terms of environmental context, competitive pressure was identified as the most important factor. Furthermore, this review explored challenges top managers perceive as barriers to adopting hybrid cloud computing. Some of the identified barriers include public cloud security concerns, efficient management issues, integration complexity, lack of inclination, lack of readiness, lack of adoption, and lack of satisfaction. Finally, the study looked at decision-making frameworks top management executives can use when evaluating hybrid cloud adoption. In addition, a conceptual framework was also developed by using findings from existing frameworks and from the reviewed articles.

Practical Implications of Study

From a practical perspective, this study provides valuable guidance for IT leaders and executives by offering insights into how top management can facilitate hybrid cloud adoption. By identifying key decision-making factors, organizations can develop structured frameworks to evaluate and implement hybrid cloud solutions effectively. Additionally, the study highlights important considerations such as risk management, security, compliance, and cost control, which can help organizations mitigate potential challenges during the adoption process. Another key implication is its emphasis on bridging IT and business strategies, ensuring that cloud adoption aligns with broader organizational objectives. Moreover, the findings assist top managers in making informed choices regarding vendor selection and deployment models, ultimately supporting smoother and more strategic technology transitions.

Theoretical Implication

The study also contributes to theoretical advancements in the field of technology adoption. It extends existing theories by emphasizing the critical role of top management in decision-making, particularly in the context of hybrid cloud computing. By integrating frameworks such as the Technology-Organization-Environment (TOE) model and the Diffusion of Innovation (DOI) theory, the study provides a more comprehensive understanding of the factors influencing hybrid cloud adoption. Furthermore, it fills gaps in the literature by shifting the focus from purely technical considerations to a managerial perspective, thereby broadening the scope of research on digital transformation. Additionally, the findings open new avenues for further exploration, particularly in understanding how leadership styles and organizational culture impact cloud adoption. Ultimately, the study enhances the theoretical discourse on digital transformation by demonstrating the significance of leadership decisions in shaping technological advancements within organizations.

Limitations of Study and Suggestion for Future Research

One major limitation is that the literature search was restricted to Scopus and Google Scholar databases. While these are reputable sources for academic literature, the exclusion of other databases, may have limited the comprehensiveness of the reviewed articles. Future research should expand the scope by incorporating additional databases to ensure a more extensive and diverse collection of relevant studies. Additionally, this study primarily relies on scholarly articles and conference proceedings, which may introduce a limitation in terms of practical industry insights. While academic research provides a strong theoretical foundation, it may not fully capture the evolving real-world challenges and decision-making processes in hybrid cloud adoption. Future studies could include industry reports, white papers, case studies, and expert interviews to provide a more holistic perspective. Furthermore, this study adopts a qualitative systematic review approach, synthesizing findings from existing literature. While this method provides valuable insights, it does not offer empirical validation of the identified decision-making factors. Future research could employ a quantitative approach, such as surveys and structured questionnaires, to directly gather data from top management executives. This would allow for statistical analysis of the factors influencing hybrid cloud adoption, helping to validate and prioritize key decision-making elements.

Acknowledgment

The Chief Editors, Managing Editors, and anonymous reviewers deserve the authors' sincere gratitude and admiration for their insightful remarks, advice, and constructive criticism.

References

Abdollahzadegan, A., Che Hussin, A. R., Moshfegh Gohary, M., & Amini, M. (2013). The organizational critical success factors for adopting cloud computing in SMEs. Journal of Information Systems Research and Innovation (JISRI), 4(1), 67-74.

Al Hadwer, A., Tavana, M., Gillis, D., & Rezania, D. (2021). A systematic review of organizational factors impacting cloud-based technology adoption using technology-organization-environment framework. Internet of Things, 15, 100407.

Ali, O., Shrestha, A., Osmanaj, V., & Muhammed, S. (2021). Cloud computing technology adoption: an evaluation of key factors in local governments. Information Technology & People, 34(2), 666-703.

Ali, O., Shrestha, A., Osmanaj, V., & Muhammed, S. (2021). Cloud computing technology adoption: an evaluation of key factors in local governments. Information Technology & People, 34(2), 666-703.

Alipour, J., Mehdipour, Y., Karimi, A., & Sharifian, R. (2021). Affecting factors of cloud computing adoption in public hospitals affiliated with Zahedan University of Medical Sciences: A cross-sectional study in the Southeast of Iran. Digital health, 7, 20552076211033428.

Alkandi, I. (2022). Technological, organizational, and environmental factors influencing the adopting of cloud computing: a quantitative study. International Scientific Conference. https://doi.org/10.3846/bm.2022.692

Alrababah, Z. M. (2024). Exploring Strategic Decision-Making Process In Hybrid Cloud Computing Adoption Among Small And Medium-Sized Enterprises. International Journal of Business and Technology Management, 6(1), 387-398.

Alshamaila, Y., Papagiannidis, S., & Li, F. (2013). Cloud computing adoption by SMEs in the north east of England: A multi‐perspective framework. Journal of enterprise information management, 26(3), 250-275.

Amini, M., Bakri, A., Sadat Safavi, N., Javadinia, S. A., & Tolooei, A. (2014). The role of top manager behaviours on adoption of cloud computing for small and medium enterprises. Australian Journal of Basic and Applied Sciences (AJBAS), 8(1), 490-498.

Armbrust, M., Fox, A., Griffith, R., Joseph, A. D., Katz, R., Konwinski, A., ... & Zaharia, M. (2010). A view of cloud computing. Communications of the ACM, 53(4), 50-58.

Ayadi, F. (2022). Critical factors affecting the decision to adopt cloud computing in Saudi health care organizations. The Electronic Journal of Information Systems in Developing Countries, 88(6), e12231.

Bamiro, N. B., Zakariyah, Z., Li, Q., & Adewale, S. (2024b). Evaluating the Psychometric Properties of Economic Literacy Measures: A Systematic Review. Asian Journal of Assessment in Teaching and Learning, 14(1), 85-104.

Bamiro, N.B., Zakariya, Z., Raimi, L. and Thomas, Y. (2024a). Unlocking the nexus: exploring the mediating and moderating dynamics of risk factors in economic literacy for organizational performance - A systematic review. Journal of Economic and Administrative Sciences, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/JEAS-12-2023-0343

Berman, S. J., Kesterson‐Townes, L., Marshall, A., & Srivathsa, R. (2012). How cloud computing enables process and business model innovation. Strategy & Leadership, 40(4), 27-35.

Entsie, E., Hurson, I. B., & Vaz, A. (2025). Assessing the mediating role of top management support in the adoption of cloud computing in the public sector: The case of Ghana. Multidisciplinary Science Journal, 7(8), 2025345-2025345.

Eskrootchi, R., Arjmandi, M. K., Langarizadeh, M., & Yuvaraj, M. (2020). Key factors influencing the adoption of Cloud Computing Technology in the Medical Sciences University libraries. Library Philosophy and Practice, 4291, 1-27.

Garrison, G., Wakefield, R. L., & Kim, S. (2015). The effects of IT capabilities and delivery model on cloud computing success and firm performance for cloud supported processes and operations. International journal of information management, 35(4), 377-393.

Golightly, L., Chang, V., Xu, Q. A., Gao, X., & Liu, B. S. (2022). Adoption of cloud computing as innovation in the organization. International Journal of Engineering Business Management, 14, 18479790221093992.

Gutierrez, A., Boukrami, E., & Lumsden, R. (2015). Technological, organisational and environmental factors influencing managers' decision to adopt cloud computing in the UK. Journal of enterprise information management, 28(6), 788-807.

Hajjat, M., Sun, X., Sung, Y. W. E., Maltz, D., Rao, S., Sripanidkulchai, K., & Tawarmalani, M. (2010). Cloudward bound: planning for beneficial migration of enterprise applications to the cloud. ACM SIGCOMM Computer Communication Review, 40(4), 243-254.

Higgins, J. P., López-López, J. A., Becker, B. J., Davies, S. R., Dawson, S., Grimshaw, J. M., ... & Caldwell, D. M. (2019). Synthesising quantitative evidence in systematic reviews of complex health interventions. BMJ global health, 4(Suppl 1), e000858.

Hosseini Shirvani, M., Amin, G. R., & Babaeikiadehi, S. (2022). A decision framework for cloud migration: A hybrid approach. IET software, 16(6), 603-629.

Idris, M. O., Mustafa, M. C., Wong, K. T., Bamiro, N. B., & Ismail, A. O. (2024). Emerging Readers: Systematic Exploration of Effective English Reading Strategies for Preschoolers. Pedagogika/Pedagogy, 155(3), 147-173.

Khajeh-Hosseini, A., Sommerville, I., & Sriram, I. (2010). Research challenges for enterprise cloud computing. arXiv preprint arXiv:1001.3257.

Khan, S. U., & Ullah, N. (2016). Challenges in the adoption of hybrid cloud: an exploratory study using systematic literature review. The Journal of Engineering, 2016(5), 107-118.

Khan, S. U., Khan, H. U., Ullah, N., & Khan, R. A. (2021). Challenges and their practices in adoption of hybrid cloud computing: An analytical hierarchy approach. Security and Communication Networks, 2021(1), 1024139.

Khanagha, S., Volberda, H., Sidhu, J., & Oshri, I. (2013). Management innovation and adoption of emerging technologies: The case of cloud computing. European Management Review, 10(1), 51-67.

Kodakandla, N. (2024). Hybrid Cloud Strategies: Optimizing Resource Allocation for Competitive Advantage in US Enterprises. Journal of Current Science and Research Review, 2(01), 01-17.

Liu, W., & Zeng, Q. (2024). Hybrid Cloud Computing: An In-Depth Analysis of Integration Strategies, Characteristics, and Prospective Future Applications. Innovation in Science and Technology, 3(1), 10-13.

Low, C., Chen, Y., & Wu, M. (2011). Understanding the determinants of cloud computing adoption. Industrial management & data systems, 111(7), 1006-1023.

Mel, P., & Grance, T. (2009). The nist definition of cloud computing. national institute of standards and technology. Information Technology Laboratory, Version, 15(10.07), 2009.

Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., ... & Prisma-P Group. (2015). Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. Systematic reviews, 4, 1-9.

Oladele, O. T., Haroon-Sulyman, S. O., & Afolayan, D. D. (2021). Factors Affecting the Adoption of Cloud Computing by Small and Medium-sized Enterprises (SMEs). Journal of Sustainable Technology, 11(2).

Oliveira, T., Thomas, M., & Espadanal, M. (2014). Assessing the determinants of cloud computing adoption: An analysis of the manufacturing and services sectors. Information & management, 51(5), 497-510.

Page, M.J.; McKenzie, J.E.; Bossuyt, P.M.; Boutron, I.; Hoffmann, T.C.; Mulrow, C.D.; Shamseer, L.; Tetzlaff, J.M.; Akl, E.A.; Brennan, S.E.; et al. The PRISMA 2020 Statement: An Updated Guideline for Reporting Systematic Reviews. PLoS Med. 2021, 18, e1003583

Polyviou, A., Pouloudi, N., & Venters, W. (2024). Cloud computing adoption decision-making process: a sensemaking analysis. Information Technology & People, 37(6), 2153-2182.

Raimi, L., Bamiro, N. B., & Haini, H. (2024). Do institutional pillars support or harm entrepreneurship and economic growth? A systematic review. Journal of Entrepreneurship and Public Policy, 13(2), 278-305.

Raj, A., Dwivedi, G., Sharma, A., de Sousa Jabbour, A. B. L., & Rajak, S. (2020). Barriers to the adoption of industry 4.0 technologies in the manufacturing sector: An inter-country comparative perspective. International Journal of Production Economics, 224, 107546.

Rosário, A. T., & Raimundo, R. (2024). Sustainable entrepreneurship education: a systematic bibliometric literature review. Sustainability, 16(2), 784.

Salisu, M. A., Marafa, L., Bamiro, N. B., Shokunbi, M. O., & Raimi, B. O. (2025). Systematic review of post-COVID policies and strategies for strengthening e-commerce cooperation among ASEAN countries. Journal of Economic and Administrative Sciences.

Seifert, M., Kuehnel, S., & Sackmann, S. (2023). Hybrid clouds arising from software as a service adoption: challenges, solutions, and future research directions. ACM Computing Surveys, 55(11), 1-35.

Shuaib, M., Samad, A., Alam, S., & Siddiqui, S. T. (2019). Why adopting cloud is still a challenge?—a review on issues and challenges for cloud migration in organizations. Ambient Communications and Computer Systems: RACCCS-2018, 387-399.

Stieninger, M., Nedbal, D., Wetzlinger, W., & Wagner, G. (2018). Factors influencing the organizational adoption of cloud computing: a survey among cloud workers. International Journal of Information Systems and Project Management, 6(1), 5-23.

Teh, R., Subramaniam, A., Ho, J. A., & Basha, N. K. (2024). The mediation role of top management support in the adoption of cloud computing in Malaysian SMEs. International Journal of Management and Enterprise Development, 23(1), 73-96.

Yang, H., & Tate, M. (2012). A descriptive literature review and classification of cloud computing research. Communications of the Association for Information systems, 31(1), 2.

Yigitbasioglu, O. M. (2015). The role of institutional pressures and top management support in the intention to adopt cloud computing solutions. Journal of Enterprise Information Management, 28(4), 579-594.

Yoo, S. K., & Kim, B. Y. (2018). A decision-making model for adopting a cloud computing system. Sustainability, 10(8), 2952.

Zbořil, M., & Svatá, V. (2022). Cloud adoption framework. Procedia Computer Science, 207, 483-493.

Zhang, Q., Cheng, L., & Boutaba, R. (2010). Cloud computing: state-of-the-art and research challenges. Journal of internet services and applications, 1, 7-18.