

Factors affecting the adoption of cloud computing in Algerian universities **case study center university of Maghnia**

العوامل المؤثرة في تبني الحوسبة السحابية في الجامعات الجزائرية دراسة حالة مركز جامعة مغنية

Asma Houari¹, Khadidja Nemmiche²

¹ University Centre of maghnia (Algeria), a.houari@cu-maghnia.dz,

² University Centre of maghnia (Algeria), khadijane@yahoo.fr,

Received on.31/12/2024

Accepted on.03/06/2025

published on: 06/06/2025

Abstract:

This study presents a model merging the Technology Acceptance Model (TAM) and Diffusion of Innovation (DOI) theory to explore cloud computing adoption at the University Center of Maghnia in Telemen. A literature review identified key factors influencing cloud adoption, leading to the creation of a TAM–DOI framework and measurement tools. A quantitative survey of 57 university employees focused on three aspects: relative advantage, compatibility, and perceived ease of use. Results showed that relative advantage significantly affects adoption intentions, while compatibility and ease of use do not. The study underscores the importance of promoting the advantages of cloud computing and improving perceptions of its compatibility and ease of use for better adoption.

Keys words:

Cloud computing, Relative advantage, Compatibility, Perceived ease of use; university center Maghnia, Employees; Algeria.

JEL classification codes: I23, M15, Q33, M50.

ملخص:

تقدم هذه الدراسة نموذجًا يدمج نموذج قبول التكنولوجيا (TAM) ونظرية انتشار الابتكار (DOI) لاستكشاف تبني الحوسبة السحابية في المركز الجامعي مغنية بتمن. حددت مراجعة الأدبيات العوامل الرئيسية التي تؤثر على تبني السحابة، مما أدى إلى إنشاء إطار عمل TAM–DOI وأدوات القياس. ركز مسح كمي لـ 57 موظفًا جامعيًا على ثلاثة جوانب: الميزة النسبية والتوافق وسهولة الاستخدام المتصورة. أظهرت النتائج أن الميزة النسبية تؤثر بشكل كبير على نوايا التبني، في حين أن التوافق وسهولة الاستخدام لا يؤثران عليها. تؤكد الدراسة على أهمية الترويج لمزايا الحوسبة السحابية وتحسين تصورات توافقها وسهولة استخدامها من أجل تبني أفضل.

الكلمات المفتاحية:

الحوسبة السحابية، الميزة النسبية، التوافق، سهولة الاستخدام المتصورة؛ المركز الجامعي مغنية، الموظفون، الجزائر.

تصنيف JEL: I23, M15, Q33, M50

Corresponding author: Asma Houari, e-mail: a.houari@cu-maghnia.dz

1-Introduction

The modern world heavily relies on technology, which has revolutionized how we conduct work, interact with others, gain knowledge, and view the world. The rapid advancements in technology continuously redefine what humans can achieve, from the introduction of the internet to the popularity of smartphones, artificial intelligence, and cloud computing. According to (Alkhater et al., 2014) cloud computing is described as a unified system that merges various contemporary IT technologies into a single service. Even though technologies like virtualization and Web 2.0 have been utilized separately, cloud computing combines their capabilities to form a coherent platform. Cloud-based services empower users to access computing resources at any time, from any place, and on any device, as noted by (Almazroi et al., 2016).

IT leaders are encouraged to embrace cutting-edge technologies to reduce expenses, stay competitive, and increase profits (Harfoushi et al., 2016). The internet improves communication between users and multiple servers, enhancing the interconnectedness of the digital ecosystem (Hayes, 2008). Cloud computing enables the creation of a centralized data center by combining computer and internet resources throughout different government departments (Salam & Ali, 2020).

The idea of cloud computing has been around for decades, dating back to the 1960s, when John McCarthy envisioned a future where computing resources would be accessible to the general public on demand (Al-Thobhani, 2017). Despite the numerous definitions of cloud computing that exist, with over 20 variations identified (Shimba, 2010), a widely accepted and standardized definition has been established by the National Institute of Standards and Technology (NIST), which plays a key role in setting industry requirements.

The National Institute of Standards and Technology (NIST) detailed description of cloud computing in 2011 after conducting an extensive collaborative effort that involved reviewing and refining the definition. This definition characterizes cloud computing as a model that enables convenient and broad access to a pool of configurable computing resources, including networks, servers, storage, applications, and services. The primary goal of this model is to reduce the need for ongoing management and coordination with service providers, allowing for efficient provisioning and de-provisioning of resources (Mell & Grance, 2011).

The NIST definition outlines five main features of elasticity that allow resources to be easily adjusted based on demand. Measured service involves the provider monitoring and managing cloud services for billing, access control, resource efficiency, and capacity planning. On-demand self-service lets users access cloud services independently, while ubiquitous network access ensures availability through standard methods for all types of clients (Shaw & Singh, 2014).

Providers can cater to consumers using a shared resource system, where they distribute and adjust physical and virtual resources according to the level of need. While customers usually do not have direct control over the specific resource location, they can indicate a broader location preference, such as country, state, or datacenter. This setup enables internet users to engage with numerous servers concurrently, facilitating the exchange of information between them (Hayes, 2008).

Embracing innovative technologies such as cloud computing can give a significant edge, enhancing their output and streamlining operations (Harfoushi et al., 2016). Notably, a plethora of research has investigated the drivers behind cloud computing adoption globally, including studies by (El-Gazzar, 2014; Hashim et al., 2015; Qasem et al., 2019; Yang & Tate, 2012). Nevertheless, the outcomes of these research studies may not be applicable to all countries and sectors because of variations in economic, social, cultural, and technological circumstances. Particularly, conclusions drawn from advanced countries may not be broadly applicable to developing nations. Unfortunately, there is a limited amount of research (Alghush al., 20206; Nabil et al., 2018) that has specifically examined the adoption of cloud computing in the Arab region, with a focus on Algeria. Therefore, further investigation is necessary to gain a more comprehensive understanding of the factors that impact the adoption of this technology in Algeria.

The primary objective of this research is to thoroughly recognize and understand the various elements that affect employees' inclination to embrace and adopt cloud computing technologies within the context of university settings. In order to achieve this, a comprehensive theoretical framework was developed, which integrates and synthesizes key concepts derived from both the technology acceptance model (TAM) and the diffusion of innovations (DOI) theories. By merging these two influential frameworks, the study aims to provide a well-rounded perspective on how and why individuals within academic institutions may be more or less likely to adopt cloud computing solutions. The outcomes of this research endeavor will significantly contribute valuable insights to various organizations, with a particular emphasis on Algerian universities, highlighting the critical importance of cloud computing in enhancing and improving the operational efficiency of these higher education institutions. Additionally, this study will offer a range of practical recommendations regarding how the identified factors can positively influence the adoption of cloud computing initiatives in Algerian universities, ultimately aiming to foster a more progressive and technologically adept academic environment.

The remainder of this paper is structured as follows: Section 2 reviews the theoretical background; Section 3 outlines the research model and hypotheses development; Section 4 covers the methodology and data; Section 5 Results and Discussion; and the final section presents the conclusion.

2-Theoretical background

2.1. Cloud computing overview

Cloud computing is a rapidly evolving model that enables users to access various applications from any internet-connected device (Shirzad et al., 2012). It has transformed how individuals and organizations engage with technology, offering flexibility and scalability. The main service models are infrastructure-as-a-service (IaaS), offering virtualized computing resources; platform-as-a-service (PaaS), enabling developers to create and manage applications without worrying about infrastructure; and software-as-a-service (SaaS), which provides applications online through a subscription. Cloud computing also features four deployment models: public cloud, available to everyone and usually owned by a provider; private cloud, dedicated to a single organization for greater control; community cloud, shared by organizations with similar needs; and hybrid cloud, which merges public and private elements for enhanced flexibility. Variations of these models exist to meet specific organizational needs (Shimba, 2010).

SaaS is particularly notable for offering cloud-based applications hosted by providers, accessible via web browsers or apps, facilitating remote work (Al-Thobhani, 2017). Users benefit from reduced software maintenance responsibilities, although they may have limited customization options. Examples of SaaS providers include Salesforce.com, Rackspace, and SAP Business by Design (Zhang, 2011). IaaS, in contrast, allows users to access resources without long-term commitments, offering hardware and software services while requiring users to manage installations. Amazon Web Services provides IaaS options like Elastic Compute Cloud (EC2) and Secure Storage Service (S3) (Bhardwaj et al., 2010).

Cloud deployment models differ in accessibility and management. Private clouds offer a secure environment for sensitive data, while public clouds are accessible to anyone. Community clouds promote resource sharing among organizations, and hybrid clouds combine the advantages of various models for improved IT infrastructure management (Rani & Ranjan, 2014).

2.2. Theories adopting

Numerous theories have been developed to understand the factors influencing technology adoption (Olivera, 2011). This research integrates the Technology Acceptance Model (TAM) and Diffusion of Innovations (DOI) to explore cloud computing adoption in Algerian universities. TAM, created by Davis in 1986, investigates why users accept or reject technology, based on Fishbein and Ajzen's Theory of Reasoned Action (TRA) (Changchit & Chuchuen, 2018). It emphasizes perceived usefulness (PU) and perceived ease of use (PEOU) as key determinants of technology adoption (Sharma, 2016). PU refers to the expected enhancement in performance from using technology, while PEOU relates to how effortless it is to use, influencing adoption decisions. The DOI theory, introduced by E. Rogers in 1962, explains how innovations are adopted and spread within society (Alkhater et al., 2014; Roussou & Stiakakis,

2016). According to Rogers (1995), there are five adopter categories: innovators, early adopters, early majorities, late majorities, and laggards. Each group has different characteristics and levels of willingness to adopt innovations.

Rogers identifies key innovation traits that affect adoption speed: relative advantage, compatibility, complexity, trialability, and observability (Amini& Bakri, 2015). Relative advantage measures how much better an innovation is perceived compared to existing solutions, while compatibility assesses how well it aligns with users' values and experiences. Complexity refers to the difficulty of understanding and using the innovation, which can deter adoption. Trialability allows users to test innovations on a small scale, influencing their decision to adopt. Observability relates to how visible the innovation's benefits are, encouraging more potential adopters.

2.3. Factors that affect cloud computing adoption

Researchers have extensively studied the factors influencing cloud computing adoption. A key study by (Low et al., 2011) on high-tech firms in Taiwan identified eight critical factors: benefits, ease of use, system alignment, executive support, company size, technology readiness, and pressures from competitors and partners. The findings revealed that five factors—perceived benefits, executive support, company size, and competitive pressures—significantly boosted the likelihood of adopting cloud solutions, underscoring the complexities in decision-making and the influences shaping organizations' embrace of cloud technologies. A study by (Lian et al., 2013) examined cloud computing adoption in public sector organizations, revealing that perceived benefits significantly influenced their willingness to adopt the technology. The researchers surveyed 250 individuals from various public sector organizations in Taiwan and employed structural equation modeling (SEM) for data analysis. The findings highlighted the crucial role of relative advantage in adoption decisions among small and medium-sized enterprises. Overall, there was a substantial positive relationship between the intention to adopt cloud computing and its perceived benefits. (Alsanea, 2015) studied the factors influencing cloud computing adoption in Saudi Arabian universities, identifying eight positive influences: perceived benefits, compatibility with existing systems, support from top management, readiness for change, competitive pressures, regulatory backing, high assertiveness, and high individualism. Conversely, concerns about security, a preference for stability and certainty, and a significant power distance negatively impacted adoption. A study by (Klug & Bai, 2015) examined the impact of the Technology_Organization_Environment framework influences cloud computing adoption by IT managers in US and Canadian colleges and universities. The researchers assessed various factors, including technological characteristics (ease of use and compatibility with existing systems), organizational attributes (institution size and readiness for new technology), and external influences (government policies and vendor support). The findings

indicated that most factors significantly affected adoption; however, some advantages of cloud computing, regulatory policies, and service provider support showed no statistically significant impact. (Amini & Bakri, 2015) utilized the DOI and TOE frameworks to examine cloud computing adoption in Malaysian small and medium-sized enterprises. The study identified eight significant factors: perceived benefits, system alignment, security concerns, potential cost savings, technological readiness, managerial support, competitive pressures, and regulatory guidance. Findings indicated that each of these factors significantly influenced SMEs' decisions to adopt cloud computing. In a study conducted by (Yuvaraj, 2016), the factors influencing Indian academic librarians' adoption of cloud computing technologies were thoroughly investigated. The research highlighted that several key elements are critical in shaping their decision-making process. It found that the perceived advantages of using cloud computing, the simplicity of its implementation, the accessibility of necessary resources, and the concerns surrounding security risks are all significant contributors to the overall acceptance and integration of cloud solutions in academic libraries. These findings suggest that librarians are not only evaluating potential benefits but are also weighing practical considerations and potential drawbacks as they navigate the transition to cloud-based systems. A study by (Kumar et al., 2017) identified ten key factors influencing cloud computing adoption among Indian SMEs: perceived benefits, ease of use, competitive advantage, compatibility, security concerns, technological readiness, managerial support, company size, external pressures, and service provider support. It emphasized that relative advantage, security concerns, managerial support, external pressures, and service provider support were the primary drivers of adoption intentions. (Hassan et al., 2022) examined factors affecting cloud computing adoption among Pakistani IT employees, revealing positive correlations between perceived security, argument quality, source credibility, and perceived benefits. They also found significant links between perceived benefits, adoption attitudes, and the intention to adopt cloud computing. The research conducted by (Homan & Beránek, 2023) examined the main elements that impact the decision of small and medium-sized businesses (SMEs) in the Czech Republic to integrate cloud computing. The results emphasized four important factors: the perceived benefits compared to current methods, competitive influences, compatibility with existing systems, and the specific industry. Moreover, (Ilahi et al., 2024) employed the Technology-Organization-Environment (TOE) framework and determined that the perceived advantages of cloud computing, support from top management, technical readiness, and competitive pressures played a crucial role in SMEs' adoption of cloud technology.

3-Research model and hypotheses development

This section is dedicated to presenting a detailed research framework specifically designed to investigate the factors influencing the adoption of cloud

computing technologies. To construct this framework, we draw upon the foundational elements of the keyDOI model as well as the well-established Technology Acceptance Model (TAM) theory. By integrating these frameworks, the research highlights three critical factors that are essential for understanding the intention to adopt cloud computing solutions. These factors are based on a detailed review of existing literature and relevant hypotheses regarding their influence on adoption intentions. In the following subsections, we will analyze each of these critical factors in detail, exploring their roles comprehensively.

3.1. Relative advantage

Relative advantage, as defined by (Rogers et al., 2014), is the perception that an innovation is superior to what it replaces. This can involve factors like efficiency, performance, and benefits, influencing adoption by individuals or organizations. It includes aspects such as economic gains, social status, and technological improvements, particularly in cloud computing (Alkhatir et al., 2014). Cloud solutions offer benefits like automation, reduced hardware costs, flexibility, easier management, collaboration opportunities, and savings (Stieninger et al., 2018). Research (Chienwattanasook et al., 2021; Low et al., 2011; Stieninger et al., 2018) shows that relative advantage significantly impacts the intention to adopt cloud technology, supporting the hypothesis that greater relative advantage enhances both the intention and actual adoption of cloud services. the hypothesis is as follows:

H1: Relative advantages will positively influence the intention to adopt cloud computing in universities.

3.2. Compatibility

Compatibility, as described by (Rogers et al., 2014), is “the degree to which an innovation aligns with the values, experience, and needs of potential adopters.” Organizations are more inclined to adopt cloud computing when they believe it aligns with their existing systems and core values. This congruence encourages a smooth transition as it aligns with their objectives. Cloud technology helps companies stay current with advancements while preserving legacy systems (Gutierrez et al., 2015). Research by (Chienwattanasook et al., 2021; Stieninger et al., 2018) shows that compatibility significantly influences cloud adoption intentions, with greater compatibility leading to higher adoption rates. Therefore, the hypothesis is as follows:

H2: Compatibility will positively influence the intention to adopt cloud computing at universities.

3.3. Perceived Ease of Use

Perceived Ease of Use (PEOU), as defined by (Davis, 1989), highlights how an individual's perception of a system's usability influences their willingness to adopt it. A user-friendly system encourages adoption and ongoing use, while a complex system can deter engagement, leading to underutilization or abandonment. In this study, PEOU reflects employers' views on the ease of using cloud computing services, which are generally considered user-friendly

(AlAjmi et al., 2021). Users typically avoid systems that are complex or require advanced skills. Research indicates that PEOU significantly affects technology adoption intentions (S. Sharma et al., 2016). Furthermore, technology perceived as useful and efficient requires minimal effort (Mullins & Cronan, 2021; Rajak & Shaw, 2021; Rejali et al., 2021). The user-friendly nature of cloud computing encourages students to adopt these services, suggesting that ease of use drives their intention to integrate cloud computing in universities. Consequently, employees are more inclined to use cloud services if they find them simple, especially as they see their positive impact on performance. Thus, we propose the following hypothesis:

H3: Perceived ease of use will positively influence the intention to adopt cloud computing in universities.

4-Methodology and data

A questionnaire was developed to evaluate the proposed framework. The first step involved sourcing validated items from the technology adoption literature, tailored for a university context. Items for intention to adopt cloud computing, relative advantage, compatibility, and perceived ease of use were adapted from (Gao et al., 2018), with four items for each variable. To test our hypotheses, we distributed the questionnaire to employees at Maghnia University Center and analyzed the responses using SPSS, with each item rated on a five-point Likert scale.

Demographic Data

This section analyzes response frequencies and descriptive statistics related to the survey's personal information questions. The coding process used a template with up-coding guidelines and data-summarizing categories. Since the data reflects personal information, it is classified as ordinal non-parametric data, representing ranks and categories within the surveyed population. This includes variables such as gender, age, education level, and position. Table No. 01 presents the detailed demographic information of the respondents.

The descriptive analysis of employees' intentions to adopt cloud computing at the university center, summarized in Table 1, reveals that 63.2% of participants are female, while 36.8% are male. The majority of respondents (63.2%) are aged 36 to 45, with 28.1% aged 35 to 45, 7% aged 46 to 55, and 1.8% over 55. In terms of education, most participants (56.1%) hold a master's degree, while those with other qualifications are less prevalent. 1.8% have diplomas, 12.3% hold bachelor's degrees, 12.3% are senior technicians, 10.5% have doctoral degrees, and 7% have professional certification. The position distribution of respondents reveals that 1.8% are assistant engineers and manager accountants, 15.3% are assistant directors, analysis managers, and secretaries, 7% are state engineers, 29.8% are assistant managers, and 43.9% occupy other roles, making these the most common responses in the study.

Table 1.Profile of gender

Demographic variable	Categories	Frequency(n=57)	Percentage (%)
Gender	Male	21	36.8
	Female	36	63.2
	Total	57	100
Age	25-35	16	28.1
	36-45	36	63.2
	46-55	4	7.0
	55 or above	1	1.8
	Total	57	100
	Senior technician	7	12.3
Educational level	Professional level	4	7
	Bachelor's degree	7	12.3
	Master	32	56.1
	Doctorate	6	10.5
	Other	1	1.8
	Total	57	100
	State enginner	4	7.0
Position	Assistant manager	17	29.8
	Assistant director	3	5.3
	Assistant enginner	1	1.8
	Manager accountant	1	1.8
	Analysis manager	3	5.3
	Secretory	3	5.3
	Other	25	43.9
	Total	57	100

Source: Computed by the authors

5. Results

5.1. The reliability of a questionnaire

We used Cronbach's alpha to evaluate the reliability of our questionnaire. This coefficient ranges from 0 to 1, with higher values indicating stronger reliability. Calculating this reliability enhances confidence in the results. We assessed the correlations among questionnaire items to ensure they measure the same concept. A Cronbach's alpha above 0.7 is preferred, according to (Considine et al., 2005), as it indicates good internal consistency. The original survey had 16 items, but the fourth item was unreliable and removed, leaving 15. Table No. 2 makes it abundantly evident that the study's reliability coefficient is strong, coming in at 0.797 for all fifteen questionnaire items. From a low of 0.737 to a maximum of 0.838, the variables' dependability varied. This indicates that there is a high level of dependability in the questionnaire, making it suitable for the study.

Table 2. The Cronbach's alpha coefficient to measure the reliability of a questionnaire the variables

The variables	Number of items	Alpha Cronbach's
IACC	4	.838
RA	4	.818
COM	3	.731
PEOU	4	.771
Overall reliability of the questionnaire	15	.797

Notes:IACC: Intention to adopt cloud computing, RA: relative advantage, COM: compatibility, PEOU: perceived easy of use.

Source: computed by the authors

5.2. Internal reliability

Pearson correlation coefficients between the scores of each item in the four variables and the total score of the corresponding variable were computed in order to evaluate the validity of the internal reliability. The correlation coefficients between each item in the first variable and its overall score are shown in the tables below.

Table 3.Correlation coefficients between the score of each item and the overall score of the intention to adopt cloud computing

Items	Pearson correlation	Significance
-1-	.847**	.000
-2-	.844**	.000
-3-	.721**	.000
-4-	.871**	.000

Notes:** significant at the 0.01 Level (2-Tailed).

Source: computed by the authors

Table No. 3 reveals that all Pearson correlation coefficients between the items of the second variable and the overall score are statistically significant at the 0.01 level, ranging from 0.721 to 0.871. Therefore, the internal consistency of the items related to the intention to use cloud computing is validated, as all items are consistent with their respective variable.

Table 4. Correlation coefficients between the score of each item and the overall score of the relative advantage

Items	Pearson correlation	Significance
-1-	.704**	.000
-2-	.795**	.000
-3-	.897**	.000
-4-	.815**	.000

Notes:** significant at the 0.01 Level (2-Tailed).

Source: computed by the authors

Table 4 shows that all Pearson correlation coefficients between the items of the second variable and the overall score are significant at the 0.01 level, with values ranging from 0.704 to 0.897. This demonstrates the internal consistency of the items related to relative advantage, indicating strong alignment with their corresponding variable.

Table 5. Correlation coefficients between the score of each item and the overall score of the compatibility

Items	Person correlation	Significance
-1-	.837**	.000
-2-	.778**	.000
-3-	.811**	.000

Notes:** significant at the 0.01 Level (2-Tailed).

Source: computed by the authors

Based on the results shown in Table No. 5, it was found that all of coefficients between the items of the third variable and the total score are statistically significant at the 0.01 significance level. The correlation coefficient varied from 0.778 to 0.837. This indicates that the compatibility items demonstrate strong internal consistency with their respective variable.

Table 6. Correlation coefficients between the score of each item and the overall score of the perceived easy of use

Items	Person correlation	Significance
-1-	.758**	.000
-2-	.699**	.000
-3-	.790**	.000
-4-	.838**	.000

Notes:** significant at the 0.01 Level (2-Tailed).

Source: computed by the authors

The findings shown in Table No. 6 demonstrate that the Pearson correlation values between the separate components of the fourth element and the total score are all statistically significant at a 0.01 significance level. The values ranged from 0.699 to 0.838, suggesting a robust connection. This indicates that the components assessing perceived ease of use exhibit reliable internal coherence, as each component is closely linked to the overall element it represents.

5.3. Statistics description

The survey was broken down into the following five-point rating system. An examination of the study's perspectives on the variables is provided below. The descriptive data for the intention to embrace cloud computing are displayed in Table No. 7.

Table 7. The rating scale according to the five-point Likert scale (Pimentel, 2010)

Likert scale	Difference	Interval	Level
Strongly disagree	0.79	[1-1.79]	Low level
Disagree	0.79	[1.80-2.59]	
Neural	0.79	[2.60-3.39]	Moderate level
Agree	0.79	[3.40-4.19]	High level
Strongly agree	0.80	[4.20-5]	

Source: computed by the authors

Table 8. Analysis of responses' opinions on the dependent variable items:
"Intention to adopt cloud computing"

Items		Strongly disagreed	Disagree	Neural	Agree	Strongly agree	Mean	STD deviation	rask
IACC 1	N	1	1	11	37	7	3.84	0.727	3
		1.8	1.8	19.3	64.9	12.3			
IACC 2	N	1	4	15	31	6	3.65	0.834	4
		1.8	7.0	26.3	54.4	10.5			
IACC 3	N	1	1	9	39	7	3.88	0.709	2
		1.8	1.8	15.8	68.4	12.3			
IACC 4	N	1	1	9	36	10	3.93	0.753	1
		1.8	1.8	15.8	63.2	17.5			
Weighted everage							3.82		
Sdt. Deviation								0.621	

Source: computed by the authors

The ICCA4 received the highest average rating of 3.93 (SD = 0.753), showing comfort in recommending cloud computing. IACC3 was close behind with 3.88 (SD = 0.709), indicating a future willingness to use cloud services. ACC1 had a mean of 3.84 (SD = 0.727), suggesting potential adoption of cloud technology. IACC2 scored 3.65 (SD = 0.834), showing intent to adopt cloud computing. The weighted average for IACC was 3.82 (SD = 0.621), indicating general agreement toward cloud adoption, as illustrated in Table No. 8, since it falls within the 3.40-4.19 range. Most participants agree on the organization's cloud computing structure, reflected by the 3.82 average. This may stem from a perception of cloud benefits, social pressure to agree, or a lack of understanding among respondents. Overall, optimism about cloud technology may drive positive responses.

Table No. 9 highlights the perceived benefits of cloud computing, with respondents rating its ability to enhance task efficiency at the university center the highest (average score: 4.30, SD: 0.823). Cost savings followed closely (mean: 4.18, SD: 0.869), while flexibility received a score of 4.12 (SD: 0.888).

Increased productivity scored slightly lower at 3.89 (SD: 1.097). The overall weighted average for all benefits was 4.12 (SD: 0.744), reflecting strong agreement on its advantages. Most participants believe cloud computing will accelerate task completion, reduce costs, and boost productivity. They feel that both the institution and their organization will benefit from its adoption.

Table 9. Analysis of responses' opinions on the independent variable items "Relative advantage"

Items		Strongly agree	Disagree	neural	Agree	Strongly agree	Mean	Std. Deviation	Rask
RA1	N	1	0	7.0	22	27	4.30	0.823	1
		1.8	0	12.3	38.6	47.4			
RA2	N	1	0	11	21	24	4.18	0.869	2
		1.8	0	19.3	36.8	42.1			
RA3	N	4	1	10	24	18	3.89	1.097	4
		7.0	1.8	17.5	42.1	31.6			
RA4	N	1	2	7	26	21	4.12	0.888	3
		1.8	3.5	12.3	45.6	36.8			
Weightedverage							4.12		
Std. Deviation							0.744		

Source: computed by the authors

Table 10. Analysis of responses' opinions on the independent variable items "Compatibility"

Items		Strongly agree	Disagree	Neural	Agree	Strongly agree	Mean	Std. Deviation	Rask
COM1	N	2	2	9	29	15	3.93	0.942	2
		3.5	3.5	15.8	50.9	26.3			
COM2	N	0	2	4	32	19	4.19	0.718	1
		0	3.5	7.0	56.1	33.3			
COM3	N	0	6	11	30	10	3.77	0.866	3
		0	10.5	19.3	52.6	17.5			
Weightedverage							3.96		
Std. Deviation							0.683		

Source: computed by the authors

Table No. 10 shows attitudes towards cloud computing. COM2 had the highest average rating of 4.19, indicating a strong willingness to use cloud services that meet specific needs, with a standard deviation of 0.718. COM1 followed with a mean of 3.93, suggesting compatibility with work boosts adoption, and a standard deviation of 0.942. COM3 had a mean score of 3.77, indicating a belief that cloud computing fits their work style, with a standard deviation of 0.866. The overall average compatibility for COM was 3.96, with a standard deviation of 0.683, reflecting generally positive attitudes on a 5-point Likert scale. The findings suggest that users are more likely to adopt cloud

computing when it meets their needs and aligns with existing processes. As benefits like cost reduction and scalability are recognized, they may shape user attitudes. Studies indicate that organizations are likelier to employ cloud services when they foresee a return on investment.

Table 11.Analysis of responses' opinions on the independent variable items
"Perceived ease of use"

Items		Strongly agree	Disagree	Neural	Agree	Strongly agree	Mean	Std. Deviation	Rask
PEOU1	N	4	10	12	28	3	3.28	1.048	3
		7.0	17.5	21.1	49.1	5.3			
PEOU2	N	3	19	11	22	2	3.02	1.044	4
		5.3	33.3	19.3	38.6	3.5			
PEOU3	N	4	12	5	32	4	3.35	1.110	2
		7.0	21.1	8.8	56.1	7.0			
PEOU4	N	1	14	9	29	4	3.37	0.993	1
		1.8	24.6	15.8	50.9	7.0			
Weightedverage							3.25		
Std. Deviation							0.808		

Source: computed by the authors

Table No. 11 presents statistics on cloud computing adoption willingness. PEOU4, which assesses ease of use, had the highest average score of 3.37 with a standard deviation of 0.993. PEO followed closely with a standard deviation of 1.110. PEOU1 and PEOU2, which examine interaction clarity and task performance ease, scored 3.28 and 3.02, with standard deviations of 0.048 and 1.044, respectively. The overall PEOU average is 3.25, showing a moderate perceived ease of use on the 5-point Likert scale (2.60-3.39). The variance in standard deviations indicates mixed views, with many participants expressing neutral feelings about cloud computing usability. For some, it may be easy to use, while others find it complex, influenced by differing personal experiences. This inexperience may lead to less definitive opinions and more neutral responses, as some participants might not grasp cloud computing's features.

5.4. Pearson's Correlation Analysis

We conducted a Pearson correlation to examine the relationship between the study variables. The results in Table No.12 indicated a moderate positive correlation of 0.504 between the intention to adopt cloud computing and relative advantage, which was statistically significant at the 0.000 level of confidence. This study's results are consistent with prior research (Abied et al., 2022; Alghushami et al., 2020), showing a mild positive association between the intention to adopt cloud computing and compatibility, with a correlation coefficient of 0.125. However, this association was statistically insignificant (p-

value = 0.353). This finding aligns with other studies (Asadi et al., 2020; Ghaleb et al., 2023) that also reported a lack of significant correlation between compatibility and cloud computing adoption intention. Additionally, a weak positive correlation was found between the intention to adopt cloud computing and perceived ease of use, indicated by a correlation coefficient of 0.104; this result was also non-significant (p-value = 0.442). This aligns with the findings of (Ebadi&Raygan, 2023), who reported a non-significant correlation between perceived ease of use and cloud computing adoption intention.

Table 12.The correlation coefficients

		ICCA	RA	COM	PEOU
IACC	Correlation de Pearson	1			
	Sig. (1-tailed)		.000	.353	.442
RA	Correlation de Pearson	.504**	1		
	Sig. (1-tailed)	.000			
COM	Correlation de Pearson	.125	.348**	1	
	Sig. (1-tailed)	.353	.008		
PEOU	Correlation de Pearson	.104	.097	.132	1
	Sig. (1-tailed)	.442	.471	.326	
** Correlation is significant at the 0.01 level (2-tailed).					
Correlation is significant at the 0.05 level					

Source: computed by the authors

5.5. Hypothesis Testing

The regression model carefully examines the underlying framework by meticulously determining whether the explanatory variables—namely, perceived ease of use (PEOU), compatibility (COM), and relative advantage (RA)—are significantly associated with the intention to adopt cloud computing (IACC). Additionally, it investigates whether this particular component suggests that these elements interact collectively to influence and shape people's choices regarding the utilization of cloud computing technologies. The insights and findings gleaned from the analysis, as presented and summarized in the results shown in Table No. 13, may serve to support this assertion and highlight the interconnected role of these factors in the decision-making process.

Table 13.Linear regression

R Square	0.260
F value)	6.212
F(significance)	0.001
Beta of RA	0.434
Beta of COM	-0.058
Beta of PEOU	0.047
VIF RA	1.141
VIF COM	1.151
VIF PEOU	1.021

Source: computed by the authors

The regression model results revealed a significant connection between the intention to adopt cloud computing and the explanatory variables, as evidenced by the "t" value and its p-value. These variables explained 26% of the variation in adoption intention. The moderate strength of this relationship was further supported by the F value and its p-value, confirming the model's validity. A multicollinearity analysis showed variance inflation factors (VIF) ranging from 1.021 to 1.151, all below the threshold of 3, indicating no significant multicollinearity (Table No. 13). The results lead to the following equation:

$$\text{IACC} = 2.111 + 0.434 \text{ RA} - 0.058 \text{ COM} + 0.047 \text{ PEOU} + \text{error}$$

The results indicate that relative advantage ($p < 0.01$) significantly impacts the intention to adopt cloud computing. The positive coefficient for relative advantage (RA) suggests that perceived benefits, such as cost savings and improved efficiency, strongly affect adoption intention, supporting hypothesis H1. In contrast, compatibility (COM) and perceived ease of use (PEOU) ($p > 0.05$) are not statistically significant, indicating that while these factors may be important, their influence on adoption intention is less pronounced than that of relative advantage. Consequently, hypotheses H2 and H3 are rejected.

6. Discussion

This study explores factors affecting cloud computing adoption at the University of Maghnia, Algeria. The questionnaire shows a Cronbach's alpha of 0.797, indicating strong internal consistency. Individual alpha values range from 0.737 to 0.838 for variables like intention to adopt and perceived ease of use, confirming reliability. Pearson correlation coefficients (all $p < 0.01$) further validate these findings, with correlations from 0.699 to 0.897 indicating convergent validity (Tables 2-6). The reliability and validity of the questionnaire enhance the credibility of the study's results.

Table No. 13 indicates that relative advantage (H1) significantly influences cloud computing adoption with a positive correlation. Regression analysis highlights it as a key predictor of adoption intention ($\beta = 0.434$, $p < 0.01$). Relative advantage encompasses perceived benefits like cost savings, scalability, and improved collaboration (Marston et al., 2011; Venters & Whitley, 2012). A higher perceived relative advantage leads to a stronger intention to adopt cloud computing, as those who see these benefits are markedly more inclined to adopt the technology.

These findings indicate that organizations must communicate the benefits of cloud computing to users, corroborated by similar studies. Research by (Rogers et al., 2014) underscores that perceived advantages drive adoption of new technologies; greater benefits increase the likelihood of adoption. (Low et al., 2011) found that perceived benefits significantly influenced Taiwanese organizations' adoption decisions. (Oliveira et al., 2014) and the TOE framework by (Hinnant & Sawyer, 2007) also highlight the role of relative advantage in cloud computing adoption. Statistical results suggest a strong intention to adopt ($p < 0.05$). This implies that organizations can enhance

adoption by fostering environments that emphasize these benefits. Empirical evidence consistently shows perceived advantages shape adoption decisions. By leveraging relative advantage, stakeholders can effectively promote cloud technology integration. Ultimately, relative advantage (H1) is crucial in explaining intentions to adopt cloud computing.

Our research findings suggest that the decision to adopt cloud computing is not significantly influenced by its compatibility or ease of use, as supported by regression analysis ($p > 0.05$). This challenges common beliefs that these factors drive technology adoption (Alshamaila et al., 2013; Gupta et al., 2013). In a university context, limited adoption may arise due to insufficient infrastructure and participants' lack of experience with cloud computing. This focus on benefits may have distracted attention from crucial factors like compatibility, which, according to (Rogers et al., 2014), significantly affects technology adoption decisions.

These findings go against previous studies that explored the factors influencing the use of cloud computing in government services and were documented in later publications (Mohammed et al., 2016). The research indicated that compatibility played a positive and important role in individuals' willingness to utilize cloud computing. Another study by (Arpaci et al., 2023) focused on the adoption of cloud computing in Turkish higher education and found that the perceived ease of use had a notable impact on the intention to embrace cloud technology. The only study that we are aware of that supports our findings is (Low et al., 2011), who looked at Taiwanese businesses and found that these factors had no discernible effect on adoption intentions using regression analysis. Compatibility and convenience of use were therefore less important in our research than the relative advantage, and finally, we rejected (H2) and (H3).

7. Conclusion

Cloud computing has transformed how businesses manage IT resources, providing advantages like adaptability, flexibility, and cost savings (Müller et al., 2015). By providing online access to computing resources, companies can avoid substantial upfront investments in physical infrastructure and respond more nimbly to shifting business needs. Cloud services are primarily categorized into three types: Platform as a Service (PaaS), which offers online access to development tools; Infrastructure as a Service (IaaS), which provides virtualized computing resources via the internet; and Software as a Service (SaaS), which delivers software applications through a subscription model (Höfer&Karagiannis, 2010).

computing offers numerous advantages, it also presents several challenges, including data security risks, regulatory compliance issues, and the potential for dependence on a single vendor (Höfer&Karagiannis, 2010). As a result, organizations must weigh these factors against the potential for enhanced

operational efficiency and innovation when selecting cloud computing solutions (Chenthara et al., 2019).

The field of cloud computing is undergoing swift transformation, fueled by breakthroughs in technology and a growing need for digital innovation across multiple sectors. Our research findings provide conclusive evidence of a strong correlation between the perceived benefits of cloud computing and the likelihood of its adoption. Studies have consistently demonstrated that the recognition of advantages plays a crucial role in shaping adoption decisions. By highlighting the benefits of cloud computing, organizations can empower their employees to drive the successful implementation of these technologies.

Our study found that the willingness to adopt cloud computing was not significantly influenced by compatibility or perceived ease of use. This suggests that participants' views on how well cloud computing fits their needs and how easy it is to use did not affect their decision to adopt cloud computing in this specific context. The participants' past familiarity with cloud computing or the university's strong IT infrastructure may be the cause of this. Furthermore, the study's focus on relative advantage might have overshadowed the influence of compatibility and ease of use. These results suggest that organizations should prioritize communicating the tangible benefits of cloud computing rather than solely focusing on its technical aspects.

It is crucial to remember that this study was carried out in a particular academic environment; therefore, its conclusions might not apply to different situations. The impact of interoperability and simplicity of use across many sectors and industries needs more investigation. The University of Maghnia was the sole focus of our study, which had a small sample size and might not accurately represent the adoption of cloud computing today or all of the factors driving it.

Prior to deciding to implement cloud computing, businesses should carefully examine both the advantages and disadvantages. It is advisable them to assess other factors such as executive backing, technological preparedness, cost-effectiveness, and so on. By evaluating these elements thoughtfully, companies can enhance the advantages offered by cloud computing and minimize associated risks, ensuring that their decisions are well-informed and in line with their objectives and operational needs. Organizations must do a comprehensive needs assessment in order to properly implement cloud computing. They will be able to identify which cloud service model—IaaS, PaaS, or SaaS—best fits their business objectives with the use of this assessment. Creating a smooth integration plan is essential to guaranteeing compatibility with current systems. Effective management of cloud services also requires spending money on employee support and training. Organizations may ensure compliance and retain control over cloud resources by putting in place a governance system. Prioritizing flexibility and scalability will enable adaptation to future expansion and shifting requirements. Lastly, maintaining cloud strategies in line with

company goals, boosting operational effectiveness, and encouraging innovation require constant monitoring and enhancement of cloud performance, security, and compliance.

08- Citations:

- Abied, O., Ibrahim, O., Kamal, S. N.-I. M., Alfadli, I. M., Binjumah, W. M., Ithnin, N., & Nasser, M. (2022). Probing determinants affecting intention to adopt cloud technology in e-government systems. *Sustainability*, 14(23), 15590.
- AlAjmi, Q., Al-Sharafi, M. A., & Chellathurai, G. J. (2021). Fit-viability approach for E-learning based cloud computing adoption in higher education institutions: A conceptual model. *Recent Advances in Technology Acceptance Models and Theories*, 331–348.
- Alghushami, A., Zakaria, N. H., & Mat Aji, Z. (2020). Factors Influencing Cloud Computing Adoption in Higher Education Institutions of Least Developed Countries: Evidence from Republic of Yemen. *Applied Sciences*, 10, 8098. <https://doi.org/10.3390/app10228098>
- Alkhater, N., Wills, G., & Walters, R. (2014). *Factors influencing an organisation's intention to adopt cloud computing in Saudi Arabia*. 1040–1044.
- Almazroi, A. A., Shen, H., Teoh, K.-K., & Babar, M. A. (2016). *Cloud for E-Learning: Determinants of its adoption by University students in a developing country*. 71–78.
- Alsanea, M. (2015). *Factors affecting the adoption of cloud computing in Saudi Arabia's government sector*.
- 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.
- Al-Thobhani, N. G. (2017). Implementation of cloud computing in the General Authority for Insurance and Pensions. *Al-Andalus University*, 1.
- Amini, M., & Bakri, A. (2015). Cloud computing adoption by SMEs in the Malaysia: A multi-perspective framework based on DOI theory and TOE framework. *Journal of Information Technology & Information Systems Research (JITISR)*, 9(2), 121–135.
- Arpaci, I., Masrek, M. N., Al-Sharafi, M. A., & Al-Emran, M. (2023). Evaluating the actual use of cloud computing in higher education through information management factors: A cross-cultural comparison. *Education and Information Technologies*, 28(9), 12089–12109.
- Asadi, Z., Abdekhoda, M., & Nadrian, H. (2020). Understanding and predicting teachers' intention to use cloud computing in smart education. *Interactive Technology and Smart Education*, 17(1), 14–27.
- Bhardwaj, S., Jain, L., & Jain, S. (2010). Cloud computing: A study of infrastructure as a service (IAAS). *International Journal of Engineering and Information Technology*, 2(1), 60–63.
- Changchit, C., & Chuchuen, C. (2018). Cloud computing: An examination of factors impacting users' adoption. *Journal of Computer Information Systems*, 58(1), 1–9.
- Chenthara, S., Ahmed, K., Wang, H., & Whittaker, F. (2019). Security and privacy-preserving challenges of e-health solutions in cloud computing. *IEEE Access*, 7, 74361–74382.
- Chienwattanasook, K., Pinyokul, K., Rittiboonchai, W., Jernsittiparsert, K., & Jernsittiparsert, K. (2021). Impact of Relative Advantage and Computability on Cloud Computing Adaption: The Mediating Role Top Management Support and University Image. *Journal of Management Information and Decision Sciences*, 24(4), 1–17.
- Chiniah, A., Mungur, A. E., & Naidoo Permal, K. (2019). *Evaluation of cloud computing adoption using a hybrid TAM/TOE model*. 257–269.

Title: Factors affecting the adoption of cloud computing in Algerian...

- Considine, J., Botti, M., & Thomas, S. (2005). Design, format, validity and reliability of multiple choice questions for use in nursing research and education. *Collegian*, 12(1), 19–24.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 319–340.
- Ebadi, S., & Raygan, A. (2023). Investigating the facilitating conditions, perceived ease of use and usefulness of mobile-assisted language learning. *Smart Learning Environments*, 10(1), 30.
- El-Gazzar, R. F. (2014). *A literature review on cloud computing adoption issues in enterprises*. 214–242.
- Gao, M., Kortum, P., & Oswald, F. (2018). *Psychometric evaluation of the USE (usefulness, satisfaction, and ease of use) questionnaire for reliability and validity*. 62(1), 1414–1418.
- Ghaleb, E., Panneer Selvam, D. D. D., Singh, N., & Naji, G. (2023). Assessing the Big Data Adoption Readiness Role in Healthcare between Technology Impact Factors and Intention to Adopt Big Data. *Sustainability*, 15, 11521. <https://doi.org/10.3390/su151511521>
- Gupta, P., Seetharaman, A., & Raj, J. (2013). The usage and adoption of cloud computing by small and medium businesses. *International Journal of Information Management*, 33, 861–874. <https://doi.org/10.1016/j.ijinfomgt.2013.07.001>
- 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.
- Harfoushi, O., Akhorshaideh, A., Aqqad, N., Janini, M., & Obiedat, R. (2016). Factors Affecting the Intention of Adopting Cloud Computing in Jordanian Hospitals. *Communications and Network*, 08, 88–101. <https://doi.org/10.4236/cn.2016.82010>
- Hashim, H. S., Hassan, Z. B., & Hashim, A. S. (2015). *Factors Influence the Adoption of Cloud Computing: A Comprehensive Review*. <https://api.semanticscholar.org/CorpusID:113580694>
- Hassan, A., Bhatti, S., Shujaat, S., & Hwang, Y. (2022). To adopt or not to adopt? The determinants of cloud computing adoption in information technology sector. *Decision Analytics Journal*, 5, 100138. <https://doi.org/10.1016/j.dajour.2022.100138>
- Hayes, B. (2008). Cloud computing. *Commun. ACM*, 51(7), 9–11. <https://doi.org/10.1145/1364782.1364786>
- Hinnant, C. C., & Sawyer, S. B. (2007). Technological innovation in public organizations through digital government. In *Encyclopedia of digital government* (pp. 1511–1518). IGI Global.
- Höfer, C., & Karagiannis, G. (2010). Cloud computing services: Taxonomy and comparison. *Journal of Internet Services and Applications*, 2, 81–94. <https://doi.org/10.1007/s13174-011-0027-x>
- Homan, J., & Beránek, L. (2023). Factors Influencing Cloud Computing Adoption by SMEs in the Czech Republic: An Empirical Analysis Using Technology-Organization-Environment Framework. *Acta Informatica Pragensia*, 12, 296–310. <https://doi.org/10.18267/j.aip.217>
- Ilahi, S., Mohammed, R., Souissi, A., Hamati, M. Y. N., & Smida, R. (2024). Small and Medium Enterprises (SMEs): Key Factors Affecting the Adoption of Cloud Computing. *Saudi J. Humanities Soc Sci*, 9(2), 55–62.
- Klug, B., & Bai, X. (2015). FACTORS AFFECTING CLOUD COMPUTING ADOPTION AMONG UNIVERSITIES AND COLLEGES IN THE UNITED STATES AND CANADA. *Issues in Information Systems*, 16, 1.

- Kumar, D., Samalia, H., & Verma, P. (2017). Factors Influencing Cloud Computing Adoption by Small and Medium-Sized Enterprises (SMEs) In India. *Pacific Asia Journal of the Association for Information Systems*, 25–48. <https://doi.org/10.17705/1pais.09302>
- Lian, J.-W. (Allen), Yen, D., & Wang, Y.-T. (2013). An Exploratory Study to Understand the Critical Factors Affecting the Decision to Adopt Cloud Computing in Taiwan Hospital. *International Journal of Information Management*, 34. <https://doi.org/10.1016/j.ijinfomgt.2013.09.004>
- Low, C., Chen, Y., & Wu, M. (2011). Understanding the determinants of cloud computing adoption. *Industrial Management and Data Systems*, 111. <https://doi.org/10.1108/02635571111161262>
- Marston, S., Li, Z., Bandyopadhyay, S., Zhang, J., & Ghalsasi, A. (2011). Cloud computing—The business perspective. *Decision Support Systems*, 51, 176–189. <https://doi.org/10.2139/ssrn.1413545>
- Mell, P. M., & Grance, T. (2011). The NIST Definition of Cloud Computing. *NIST*. <https://www.nist.gov/publications/nist-definition-cloud-computing>
- Mohammed, F., Ibrahim, A. Prof. Dr. O., Nilashi, M., & Alzurqa, E. (2016). Cloud computing adoption model for e-government implementation. *Information Development*, 33. <https://doi.org/10.1177/0266666916656033>
- Müller, S., Holm, S., & Søndergaard, J. (2015). Benefits of Cloud Computing: Literature Review in a Maturity Model Perspective. *Communications of the Association for Information Systems*, 37. <https://doi.org/10.17705/1CAIS.03742>
- Mullins, J., & Cronan, T. (2021). Enterprise systems knowledge, beliefs, and attitude: A model of informed technology acceptance. *International Journal of Information Management*, 59, 102348. <https://doi.org/10.1016/j.ijinfomgt.2021.102348>
- Nabil, A. M., Kandil, A., Ragheb, M. A., Ragab, A. A., & Farouk, M. (2018). *Examining the effect of TOE model on cloud computing adoption in Egypt*. <https://api.semanticscholar.org/CorpusID:253025076>
- 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. <https://doi.org/10.1016/j.im.2014.03.006>
- Qasem, Y., Abdullah, R., Jusoh, Y., Atan, R., & Asadi, S. (2019). Cloud Computing Adoption in Higher Education Institutions: A Systematic Review. *IEEE Access*, PP, 1–1. <https://doi.org/10.1109/ACCESS.2019.2916234>
- Rajak, M., & Shaw, K. (2021). An extension of technology acceptance model for mHealth user adoption. *Technology in Society*, 67, 101800. <https://doi.org/10.1016/j.techsoc.2021.101800>
- Rani, D., & Ranjan, R. K. (2014). A comparative study of SaaS, PaaS and IaaS in cloud computing. *International Journal of Advanced Research in Computer Science and Software Engineering*, 4(6).
- Rejali, S., Aghabayk, K., & Shiwakoti, N. (2021). Assessing a priori acceptance of shared dockless e-scooters in Iran. *Transportation Research Part D Transport and Environment*, 100, 103042. <https://doi.org/10.1016/j.trd.2021.103042>
- Rogers, E. M., & Murcott, S. (1995). Attributes of innovations and their rate of adoption. *Diffusion of Innovations*, 4, 204–251.
- Rogers, E. M., Singhal, A., & Quinlan, M. M. (2014). Diffusion of innovations. In *An integrated approach to communication theory and research* (pp. 432–448). Routledge.
- Roussou, I., & Stiakakis, E. (2016). *Adoption of Digital Currencies by Companies in the European Union: A Research Model combining DOI and TAM*.

Title: Factors affecting the adoption of cloud computing in Algerian...

- Salam, N., & Ali, S. (2020). Determining Factors of Cloud Computing Adoption: A Study of Indonesian Local Government Employees. *Journal of Accounting and Investment*, 21. <https://doi.org/10.18196/jai.2102151>
- Sharma, S., Al-Badi, A., Govindaluri, S., & Alkharusi, M. (2016). Predicting motivators of cloud computing adoption: A developing country perspective. *Computers in Human Behavior*, 62. <https://doi.org/10.1016/j.chb.2016.03.073>
- Sharma, S. S. (2016). Can consumer price index predict gold price returns? *Economic Modelling*, 55, 269–278.
- Shaw, S., & Singh, A. (2014). *A survey on cloud computing* (p. 6). <https://doi.org/10.1109/ICGCCEE.2014.6921423>
- Shimba, F. (2010). *Cloud Computing: Strategies for Cloud Computing Adoption*.
- Shirzad, M., Hoseinpanah, A., Ahmadipour, M., & Rahimi, H. (2012). *E-learning based on cloud computing* (p. 218). <https://doi.org/10.1109/ICCCTAM.2012.6488101>
- Stieninger, M., Nedbal, D., Wetzlinger, W., Wagner, G., & Erskine, M. (2018). Factors influencing the organizational adoption of cloud computing: A survey among cloud workers. *International Journal of Information Systems and Project Management*, 6, 5–23. <https://doi.org/10.12821/ijispm060101>
- Venters, W., & Whitley, E. (2012). A Critical Review of Cloud Computing: Researching Desires and Realities. *Journal of Information Technology*, 27. <https://doi.org/10.1057/jit.2012.17>
- Yang, H., & Tate, M. (2012). A Descriptive Literature Review and Classification of Cloud Computing Research. *Communications of the Association for Information Systems*, 31, 35–60. <https://doi.org/10.17705/1CAIS.03102>
- Yuvaraj, M. (2016). Determining factors for the adoption of cloud computing in developing countries: A case study of Indian academic libraries. *The Bottom Line*, 29, 259–272. <https://doi.org/10.1108/BL-02-2016-0009>
- Zhang, C. (2011). Inflation persistence, inflation expectations, and monetary policy in China. *Economic Modelling*, 28(1), 622–629. <https://doi.org/10.1016/j.econmod.2010.06.009>