ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.04 (2025)

ADOPTION OF CLOUD ACCOUNTING IN PAKISTAN: DRIVERS, BARRIERS & IMPLICATIONS FOR BUSINESSES

Safeer Khalid Butt
Lahore School of Accountancy and Finance, University of Lahore, Pakistan
Maria Safdar
Department of Economics, University of Sahiwal, Pakistan

Abstract
This study examines the adoption of cloud accounting in Pakistan, focusing on its drivers, barriers, and consequences for small and medium-sized enterprises. Digitalization of business processes has accelerated the popularity of cloud accounting, but the adoption by the small and medium-sized enterprises (SMEs) in Pakistan is not even because of technological and organizational factors. This paper seeks to discuss the drivers, barriers and performance implications of cloud accounting adoption in Pakistan within the context of Technology-Organization-Environment framework. Quantitative research design was used, which involved the gathering of survey data by the use of the structured questionnaire to the SME owners and managers, and networking the relationship between the technological, organizational, and environmental determinants by use of the Partial Least Squares Structural Equation Modelling. The results show that perceived relative advantage and digital vision are the highest predictors of the adoption of cloud accounting, and data security issues, digital illiteracy, and poor infrastructure are significant barriers to implementation. Despite the positive prospects that adoption offers to the operation efficiency and organizational performance, not all firms are willing to adopt because of the perception of risks and inadequate technical capability. The paper finds that enhancing managerial awareness, developing technological infrastructure, and developing digital competencies are critical to overcoming the barriers to adoption and enhancing the rate of the digital transformation of the accounting practice by SMEs in Pakistan, which, in turn, facilitates the long-term competitiveness of the business performance and its sustainability.
Keywords: *Cloud Accounting, Digital Vision, TOE Framework, Small and Medium Enterprises (SMEs)*

INTRODUCTION

The fast digitization of business activities has increased the uptake of cloud computing in various functional areas such as accounting. The utilization of cloud-based software to process financial transaction and financial reporting is known as cloud accounting which has many benefits including availability of data in real-time, affordability, and scalability. The technology helps companies to obtain the financial data remotely, simplifies the accounting process and minimizes the use of physical infrastructure (Fazeel et al., 2025). Cloud accounting has become a disruptive tool in the world, with increased efficiency in its operation, decision making, and competitiveness in the organization (Akpan, 2024; Qaisrani et al., 2025). Regardless of these identified advantages, the level of cloud accounting adoption in Pakistan is relatively low, especially in small and medium-sized businesses.

The business environment in Pakistan is slowly being digitalized, and cloud accounting is becoming popular, particularly in the big companies. Adoption of cloud-based accounting systems is becoming a system to simplify financial management, enhance data security systems, and enhance efficiency in operations (Chandra and Gupta, 2022; Anus et al., 2025). The benefits of cloud accounting to Pakistani businesses, including increased efficiency, better financial control, and scalability are common knowledge (Khan et al., 2023). Nevertheless, the process of changing the old, on-premise accounting systems to cloud-based system faces considerable difficulties. Among the most notable obstacles are the issues related to the security of the data, the lack of digital literacy, and the insufficiency of technological facilities, especially in rural and underserved communities (Atadoga et al., 2024). The issue of data security is a major threat to the implementation of cloud accounting in Pakistan. The continuous apprehensions surrounding cyberattacks, data breaches, and loss of control over sensitive financial data scare away firms where its data is hosted in the external cloud servers (Kafi and Akter, 2023). Such concerns are magnified by the fact that there are no detailed and properly implemented regulatory frameworks to monitor the security of data in cloud computing services. Despite significant improvements in cloud security systems, a significant number of Pakistani companies are not confident in the security and integrity of financial systems in the clouds (Achar, 2018; Sadiq, 2023). The other major obstacle is the digital illiteracy and lack of awareness in terms of the practical advantages of cloud accounting. A significant percentage of the owners and employees of the small businesses are not acquainted with cloud technologies, and the usage of cloud accounting demands the emergence of new technical skills (Ebute, 2024). A business will not be willing to invest in the digital solutions or might simply not exploit its potential unless there are sufficient training programs and awareness campaigns.

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.04 (2025)

Moreover, the smooth functioning of cloud systems is conditional on the presence of related facilities like fast internet providers and stable power sources that are not sufficiently available in most areas of Pakistan, especially in rural ones (Azem Qashou et al., 2025).

Despite these drawbacks, cloud accounting has a significant transformative potential in the Pakistani businesses. The shift to cloud-based systems can make processes work more efficiently, lower operational expenses, and make financial information up-to-date, which will reinforce the managerial decision-making process and competitiveness (Bass, 2019; Kolevski et al., 2022). Additionally, cloud accounting tools may be used to support the adherence to the domestic and international financial reporting standards enhancing transparency, accountability, and governance practices (Tahmid, 2023). It is in this context that the current research paper aims at investigating motivation factors behind the adoption of cloud accounting in Pakistan, determining the main obstacles and the organizational implications of adoption. This study is expected to produce evidence-based solutions to be used by businesses, policymakers, and technology providers by conducting a systematic analysis of drivers and constraints in implementing cloud accounting. These lessons are supposed to facilitate the general digitization of the accounting industry and facilitate sustainable technological adoption in the Pakistani small and medium-sized enterprise environment.

LITERATURE REVIEW

Cloud accounting is becoming a great technological breakthrough in the work of corporations and financial management, which was given great academic and professional interest in recent years. The concept is not new, but the fact that it gains more and more acceptance has been a part of a larger shift in the way organizations carry out and organize financial operations (Sobhan, 2019). Cloud accounting is the application of hosted accounting software OSA that is provided over the internet so that one can access the financial information at any place virtually (Miller, 2008). It can also be referred to as online accounting, web-based accounting, or Software as a Service accounting software (Lapiņkaia, 2024; Arshad et al., 2025). The integration with the emerging technologies, including blockchain, big data analytics, and artificial intelligence, has further supported the relevance of cloud accounting in modern business settings (Ayatulloh et al., 2025; Amir et al., 2025). Like Software as a Service, cloud-based accounting Services are hosted on remote computers, and users can access financial information without local hardware or infrastructure (Gâdău, 2022; Iqbal et al., 2025). After uploading data to cloud platforms, it is handled remotely and is presented to users in real time, which improves the level of transparency and responsiveness to operations (Farras et al., 2025).

The services of cloud accounting are based on several models of service provision, the most evident of which is Software as a Service, other models include Platform as a Service, Infrastructure as a service, and Business Processes as a service (Younis et al., 2024; Bukhari et al., 2025). The third-party providers store the software in the Software as a Service model, and the users use it via web browsers. The underlying infrastructure and applications are usually beyond the control of the user and therefore the model is efficient but is somewhat limited to customization (Hilley, 2009). The popularity of such a model is that it is rather cheap, companies do not have to invest heavily in the hardware or licensed software to use it (Gharpure and Ghodke, 2021; Zahid et al., 2025). On top of cost-effectiveness, cloud accounting has some significant benefits, such as increased efficiency in operations, mobility, and the availability of modern technologies without having to spend extra overhead money (Shetty and Panda, 2021; Umair et al., 2025). Depending on the changing business demands, cloud platforms offer scalable and adaptable access to accounting tools to allow firms to adapt to changes. Lower spending on the hardware purchase, software implementation, and maintenance is yet another reason why cloud accounting is particularly attractive to organisations of different dimensions (Iqbal et al., 2025).

In the Infrastructure as a Service model, users have control over applications and storage and no control over cloud infrastructure. Platform as a Service enables companies to design, develop, and test tailored applications in a cloud platform. These models are working towards the growing use of cloud services by allowing companies to customize accounting systems to their operation requirements. Business Processes as a Service is often related to business process outsourcing, which offers automated and cloud-based services able to simplify the processes in organizations of both small and large scale (Bentounsi, 2015; Zafar et al., 2025). One of the strongest points of cloud accounting is still affordability. The pay-as-you-use model does not require any massive investments in information technology infrastructure and costly software systems. The Software as a Service model is quite appealing to small and medium-sized enterprises due to its ability to match the spending with the actual use (Ozdemir, 2024; Ullah et al., 2025). Also, cloud accounting allows accessibility remotely, as decision-makers can access financial information at any time and any location (Kaplancal, 2021; Karim et al., 2025). Live data access improves the agility of an organization because it allows them to make decisions based on the data in real time (Khalid et al., 2025; Donat et al., 2025; Ali et al., 2025).

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.04 (2025)

The other important advantage is operational efficiency. The conventional accounting systems are usually manual and are prone to human error. Cloud accounting automates many activities, including invoicing, payment processing, and financial reporting, which leads to the reduction of errors and enables the redirection of resources to strategic activities (Mujalli et al., 2024; Kanwal et al., 2025). This automation enhances productivity and reduces operational expenses and at the same time allows organizations to concentrate on their main competencies and long term goals. Cloud accounting solutions are also characterized by scalability. Businesses have an increased financial management requirement as they increase in size. Cloud systems are able to support the growing data volumes and more users without significant changes to the infrastructure (Malempati, 2024; Hashmi et al., 2025). This scalability has helped companies to respond effectively to new demands in terms of operations, which makes cloud accounting the ideal choice when it comes to businesses of various sizes and statuses of growth (Vankayalapati, 2025; Abdullah et al., 2025). The usage of cloud accounting is slowly on the rise in Pakistan because organizations are appreciating the power of digital transformation. The trend to the cloud-based accounting system is a larger trend toward the digitalization of business (Thaher, 2024; Khan et al., 2025). Big companies have been found to be more adaptable to cloud solutions whereas the small and medium sized business enterprises still appear to be relatively reserved. Digital illiteracy, data security, and low awareness are considered to be some of the factors that have led to slower adoption rates amongst smaller firms (Sattar et al., 2025; Sabir et al., 2025).

The scarcity of benefits awareness on cloud technology is one of the main barriers. The owners and managers of many small and medium-sized enterprises do not have the knowledge about cloud accounting and its benefits of operation. With no organized awareness campaigns and educational efforts, companies might be reluctant to change their traditional on-premise systems to cloud service providers (Memon et al., 2025; Sabir et al., 2025). Employee digital illiteracy is also another obstacle to adoption because the lack of technical knowledge and the absence of relevant training capabilities create a lack of confidence in using cloud systems (Yoo and Kim, 2019; Niaz et al., 2025). Another significant impediment is the issue of data security. Companies that deal with confidential financial data are afraid of leaving data on remote servers because of cyber-attacks and unauthorized recipients (Golightly et al., 2022; Ghauri et al., 2025). The laws that regulate cloud computing and data protection in Pakistan are underdeveloped, and therefore, this increases uncertainty and deterring the migration to cloud platform (Khayer et al., 2021; Nasir et al., 2025).

Infrastructure shortage is also a barrier to adoption. Cloud-based operations also need reliable high-speed internet connectivity and consistent availability of electricity, which is not always possible in rural and underserved regions (Razi & Batan, 2023; Khalid et al., 2025). The lack of connectivity and constant power outages dictate the lack of viability in cloud accounting, especially among small businesses that might be based in the less-developed world. Cost is also another factor that affects adoption. Though long-term savings are established, there will be initial costs in terms of subscription fees, employee training, and system integration that can discourage transition (Hussein Alghushami et al., 2020; Siddique et al., 2025). There are businesses that find the use of cloud accounting as an unnecessary cost, because of the experience on the old systems. To overcome these barriers, coordinated approaches should be made based on awareness, capacity building, regulatory reform, as well as infrastructure development. The awareness campaign can be used to inform the owners of small and medium sized enterprises on the benefits of cost, scalability, and financial visibility in real time. Training will be able to reinforce the employees and reduce digital illiteracy (Farheen and Tidke, 2025; Abbasi et al., 2025). Service providers should be able to build trust through the use of strong security protocols, including encryption and multi-factor authentication, and the regulators can develop clear policies concerning data protection in order to create institutional confidence (Akhtar et al., 2024; Iqbal et al., 2025). The investment in digital infrastructure, specifically connecting to the internet and power stability, is a key factor in supporting cloud-based systems in rural areas (Ahmed et al., 2020; Farras et al., 2025).

The uptake of cloud accounting is slowly on the rise in Pakistan with the increasing pace of digital transformation. Although bigger companies usually have their own cloud environment or a personal server to ensure more complicated financial functions, Software as a Service platforms are becoming popular in various fields (Nosheen et al., 2025). Some of the driving forces of this transformation are efficiency benefits, financial transparency in real-time, and scalable business, without extensive investment in infrastructure (Shah, 2025; Zahid et al., 2025). However, the lack of awareness, connectivity issues, and security are slowing down the broad usage (Hassan et al., 2022; Rafique et al., 2025). With the growing rates of digitalization and competitive force, cloud accounting will be a key element in driving the changes within the Pakistani business environment (Jamil, 2021; Shaukat et al., 2025).

The use of a Balanced Scorecard framework in the context of the adoption of cloud accounting in Pakistan has provided an exhaustive view of the strategic alignment and performance outcome. In terms of money, cloud

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.04 (2025)

systems help minimize capital investments and optimize cash flow by using a flexible system of subscriptions (Sohaib et al., 2024; Dotta et al., 2025). Real-time financial information and better reporting, in terms of customer perspective, leads to better service quality and customer satisfaction (Ibrahim et al., 2023; Ali et al., 2025). Within the organization, automation minimizes mistakes and simplifies the operations, enhancing operational efficiency (Feroze et al., 2022; Zafar et al., 2025). Learning and developmentwise, cloud accounting leads to innovation and employee development through the implementation of high level analytical tools and digital skills (Ma et al., 2021; Ali et al., 2025).

THEORETICAL FRAMEWORK

Technology-Organization-Environment framework is a methodology much more commonly applied to the analysis of the adoption and implementation of technological innovation, and it is very applicable to the cloud accounting adoption. The framework describes an interaction of the technological, organizational, and environmental conditions in the way of the organizational decision-making about the use of new technologies (Chatha et al., 2024; Ali et al., 2025). The TOE framework has proven to be highly explanatory in the empirical analysis of technology adoption processes in various contexts in a number of empirical studies (Bening et al., 2023; Hoang, 2024). TOE in the context of cloud accounting in Pakistan offers an organized prism through which the interaction of technological nature of the cloud solution, internal organizational capability and external environmental forces can be exerted as they affect adoption behavior. The technological setting is used to describe the attributes of cloud accounting tools and how these attributes drive the adoption. Technological determinants such as relative advantage and compatibility with the current systems are typically perceived as an ultimate factor driving the adoption decisions (Sadeeq et al., 2021; Karim et al., 2025). The capacity of a business to transfer accounting operations to cloud-based applications without causing compliance or operational latencies is core to the identification of the feasibility of implementation (Neiroukh et al., 2024; Ali et al., 2025). The performance-enhancing attributes of cloud accounting include real-time access to financial information, mobility, and scalability, which reinforce the perceived value of cloud accounting to organizations (Tripathy et al., 2022; Khalid et al., 2025).

Organizational context is concentrated on the internal factors that determine the preparedness to adopt cloud accounting, such as the leadership orientation, organizational culture, and readiness to adopt digital solutions among the workforce (Putri et al., 2025; Ali et al., 2025). The support of top management is especially essential since the commitment of the leaders is as likely to mobilize enough financial, technical, and human resources to implement them and make cloud accounting a strategic, but not a strictly technical, decision (Vo Van et al., 2024; Ali et al., 2025). Moreover, cloud accounting usually involves the need to hire special human resources, such as accounting workers who have the adequate information technology skills to use and manage cloud-based systems (Wang, 2022; Aziz et al., 2025).

The environmental context indicates the external forces that influence the adoption which may include competitive pressure, vendor support, and the overall regulation and infrastructure environment. Market competition and the quality of support offered by the cloud service vendors, in Pakistan, can have a significant impact on whether the firms will choose to use cloud accounting or not (Tian et al., 2024; Kanwal et al., 2025). Nevertheless, such environmental risk factors as worry about data confidentiality and the potential of unauthorized third-party access to confidential financial data are crucial disincentives, especially in a scenario when regulatory protection is viewed as a weak element (Taha et al., 2021; Ahmad et al., 2025). These environmental conditions are thus important to firms intending to plan and assess the adoption of cloud accounting.

Relative advantage can be defined as the degree to which a technology is viewed to have better benefits over those that are available. According to Rogers (1995) relative advantage refers to the level at which an innovation is considered superior to the idea or system that it is replacing. Cloud accounting has a number of benefits that make it appealing to companies, such as access to the financial records of their company anytime and anywhere, which increases the flexibility and responsiveness of an organization (Popivniak, 2019; Rana et al., 2025). Cloud accounting is also associated with cost savings, scalability, mobility, operational flexibility, and resource sharing compared to the desktop-based system (Yau-Yeung et al., 2020). It will help decrease the annual costs spent on maintaining information technology infrastructure, and as the business requirements grow, companies can increase storage, processing power, and bandwidth with extensive investments in hardware (Onifade et al., 2023; Hashmi et al., 2025). The mobility benefits also enable the employees to view and amend their financial records from home since the organizational information is kept on cloud databases, which facilitates efficiency in work environments that are distributed (Korada and Somepalli, 2022; Abdullah et al., 2025). Administration and time can be further decreased, which improves the performance outcomes by resource sharing and automation (Nguyen Phu et al., 2025; Kumar et al., 2025). Based on this, the following hypothesis is given:

H1: Relative advantage positively affects digital vision.

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.04 (2025)

The compatibility is the degree to which an innovation matches with current organizational values, previous experience and operational requirements. According to Rogers (2003), compatibility refers to the level of perceived congruence between innovation to potential adopters in terms of their values, experiences, and needs. In cloud accounting, compatibility is used to show the way the technology fits into current workflows, information technology infrastructure and strategic purposes. The more cloud accounting solutions align with the existing organizational processes and systems, the higher the chances of adopting them are due to the lower implementation costs and the risk of disruption (Lutfi et al., 2022; Khan et al., 2025). The empirical data often indicates the integration with the dominant operational demands as a determining factor of technology adoption (Nduokafor et al., 2024). In that regard, compatibility will enhance the ability of a firm to develop and pursue a digital vision of cloud-based accounting adoption. The next hypothesis is as follows:

H2: Compatibility has a positive direct influence on digital vision.

Organizational readiness depends on the management view that there is adequate resources, commitment and governance framework that will facilitate adoption of information technology. Tan, Tyler and Manica (2007) define organizational readiness as the level at which managers are of the opinion that their organization has the resources and commitment that can make successful adoption. The financial readiness and technological readiness are usually used to measure organizational readiness. Financial readiness indicates that there are funds available to install and maintain the cloud accounting systems, whereas technological readiness indicates the existence of appropriate infrastructure and human resources to operate and use the cloud accounting system efficiently (Cho et al., 2022). Companies that have a better infrastructure and trained workforce capacity and sufficient financial resources, have high chances of defining a clear digital vision and implement cloud accounting adoption effectively. Thus, we formulate the hypothesis in the following way:

H3: Organizational readiness has a positive direct impact on digital vision.

The importance of top management support has been well established in initiating and maintaining the use of technology in organizations. According to Andonov et al. (2021), top management support is understood as what the executives perceive and do in respect to technological innovation to improve organizational performance. Leadership assistance functions to secure strategic focus, and allocation of resources as well as elimination of internal obstacles to execution (Hsu et al., 2019; Shahid et al., 2025). Within the framework of cloud accounting, the top management should offer guidance, create the organizational culture that encourages information sharing, and realize cloud accounting as a competitive advantage. The implementation can often be successful when the management is ready to take risk and invest in infrastructure, development of skills, and change management. According to these arguments, the hypothesis below is formulated:

H4: Management support is positively related to digital vision.

Competitive pressure entails the perceptions of the firms having pressure exerted by competitors to innovate as well as enhance performance. According to Graafland (2020), competitive pressure is the extent to which an organization is pressured by the competitors in the industry. Technological innovations, including cloud accounting, can be used to create efficient operations and transform competitive advantage as firms attempt to remain in the market (Abdolreza & Dehkordi, 2024; Shahi et al., 2025). Cloud accounting has the ability to enhance speed in reporting, coordination and cost efficiency hence increasing competitiveness. Consequently, the competition should intensify and enhance the digital vision of a firm and strengthen the impetus towards adoption. The hypothesis is therefore as follows:

H5: Digital vision is directly positively affected by competitive pressure.

Vendor support is an essential external requirement that has significant influence on successful implementation of cloud accounting and further use. It is the duty of the providers to ensure that the service is available, the system is reliable, and ready to assist lost in case of a technical issue (Alshirah et al., 2021; Kanwal et al., 2025). Good vendor support is characterized by good server performance, security protection, business continuity options, and responsive troubleshooting solutions (Tatineni, 2023; Wicaksono et al., 2020; Sabir et al., 2025). Another significant factor is that of the providers, as they provide training and implementation directions, which makes users less doubtful and implement the transition to traditional systems more easily. Thus, the consistent support of the vendors should stimulate adoption and strengthen organizational trust to cloud solutions. The hypothesis is postulated as follows:

H6: Vendor support is positively directly related to the adoption of cloud accounting.

Digital vision is the strategic purpose of an organization to become digital through application of digital technologies in operations and decision making. According to Kontić and Vidicki (2018), digital vision is the strategic focus that informs the ways in which firms set priorities, distribute resources and set a digital transformation objective. Clarity of digital vision is especially significant in terms of cloud accounting adoption as it would make the adoption compatible with the overall organizational strategy and it would be backed by

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.04 (2025)

consistent planning of implementation (Shen et al., 2022; Niaz et al., 2025). Firms with a high digital vision tend to embrace cloud accounting more successfully due to the openness of the top management and employees to technological change and innovation (Niemand et al., 2021; Khan et al., 2025). Digital vision, therefore, is likely to enhance the digital adoption strategy. The hypothesis is:

H7: Digital vision directly impacts digital adoption strategy positively.

The adoption of cloud accounting is also likely to have an impact on the performance of the organization especially when performance is measured through the application of a balanced scorecard. Kaplan and Norton (1992) introduced balanced scorecard as a multidimensional performance measurement system that consists of four perspectives, which are financial outcomes, customer outcomes, internal process efficiency, and learning and growth capacity. The adoption of cloud accounting has been linked to the increase of operational performance, quality of reports, transparency, responsiveness of customer service, and cost performance, which have reinforced various aspects of the balanced scorecard (Kariyawasam, 2019; Vo et al., 2024; Ghauri et al., 2025). Notwithstanding the fact that the empirical evidence on the direct impact of cloud accounting implementation on the organizational performance is still scarce, the adoption of cloud accounting is likely to generate positive performance results in case of proper support by a corresponding digital vision and strategy. The last hypothesis is therefore developed as:

H8: The usage of cloud accounting positively affects the performance of the organization.

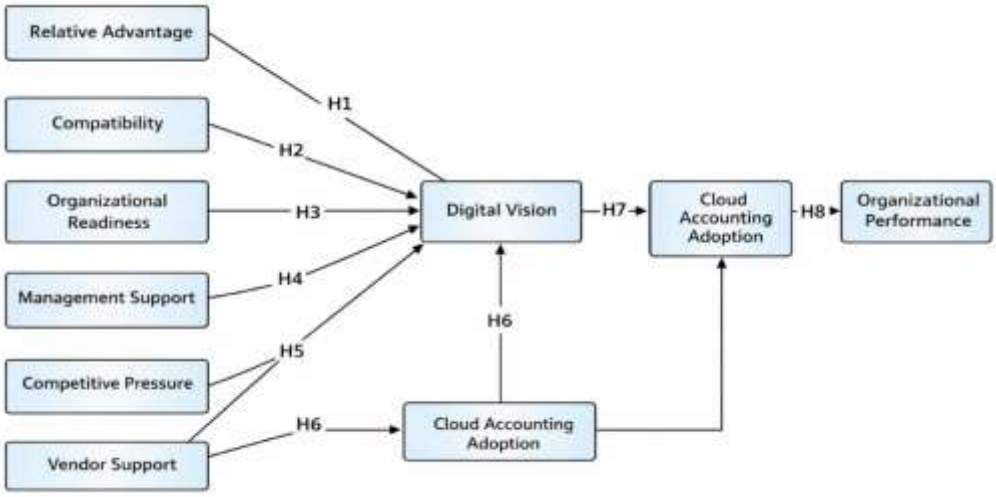

Figure 1: Hypothesis Model

METHODOLOGY

The study uses a quantitative research design to investigate the uptake of cloud accounting in Pakistan on the basis of the Technology Organization Environment framework as the theoretical framework. The TechnologyOrganizationEnvironment Framework, which is commonly used in the study of technological adoption, offers a vivid framework used to evaluate the technological, organizational, and environmental aspects that contribute to innovation adoption in firms (Tornatzky et al., 1990). This paper uses the framework to examine the factors that govern the adoption of cloud accounting by small and medium-sized businesses in Pakistan. The information will be acquired as a result of online survey that will be conducted as a structured questionnaire, which will include questions aimed at capturing the perceptions of the owners and managers towards the implementation of cloud accounting.

The questionnaire shall contain measurement items that encompass the three fundamental dimensions of Technology Organization environment framework. The technological factors will evaluate perceived relative advantage and fit with the existing systems. Top management support and organizational preparedness will be captured by organizational factors. Competitive pressure and vendor support will be measured using environmental factors. The constructs will be based on the already known scales that were utilized in the previous research on technology adoption in order to achieve the conceptual validity and reliability (Awa et al., 2016; Kidder and Selltiz, 1981).

The owners and managers of small and medium business in Pakistan will be selected through purposive sampling method. To ensure that the respondents provide informed responses, they will be selected on basis of their knowledge on cloud accounting and level of adoption in their organizations. The questionnaire shall be administered online through a service like Google Forms to make it easy to participate and have a wide geographical coverage. According to the power analysis done by using G+Power software, the expected sample

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.04 (2025)

size is 197 respondents. It is estimated that some 277 responses will be obtained which is expected to represent a response rate of 71 percent post screening on completeness and validity.

The data will be analyzed using Structural Equation Modeling and the hypothesized relationships based on the Technology Organization Environment framework will be tested. This method provides an opportunity to simultaneously evaluate measurement and structural elements which would assess not only drivers, but also obstacles to the adoption of cloud accounting. Considerations such as the ethics, such as informed consent, and the confidentiality of the respondents will be followed to the letter during the research. The period of data collection will be three months in order to minimize the common method bias and improve the reliability and strength of the findings.

ANALYSIS AND RESULTS

The results and analysis section presents the empirical findings derived from the Partial Least Squares Structural Equation Modelling analysis conducted to examine the relationships among the key constructs associated with cloud accounting adoption. The Structural Equation Modelling approach was selected because of its suitability for predictive modeling and its ability to assess complex relationships among multiple latent variables simultaneously. The structural model evaluates the influence of Relative Advantage, Compatibility, Organizational Readiness, and Management Support on Digital Vision, as well as the subsequent effects of Digital Vision on Cloud Accounting Adoption and Organizational Performance. The analysis reports path coefficients to assess the strength and direction of the hypothesized relationships, along with R-square and adjusted R-square values to determine the explanatory power of the model. The path coefficients provide evidence regarding the significance and magnitude of the proposed hypotheses, while the R-square statistics indicate the proportion of variance in the endogenous constructs explained by the independent variables. Together, these indicators offer a comprehensive understanding of the predictive relevance and overall robustness of the structural model in explaining cloud accounting adoption and its performance implications.

Table 1: R-square

	R-square	R-square adjusted
Cloud Accounting Adoption	0.021	0.018
Digital Vision	0.087	0.070
Organizational Performance	0.013	0.010

Table 2: Model fit

	Saturated model	Estimated model
SRMR	0.079	0.080
d_ULS	2.541	2.572
d_G	0.516	0.521
Chi-square	779.246	782.169
NFI	-1.270	-1.279

The fit indices for both the Saturated model and the Estimated model suggest that the two specifications demonstrate a comparable overall level of model fit. The Standardized Root Mean Square Residual values of 0.079 for the Saturated model and 0.080 for the Estimated model are nearly identical. Since values below 0.08 are generally considered indicative of acceptable model fit, these results suggest that both models meet established goodness-of-fit thresholds. The dULS and dG statistics further reinforce this interpretation. The small differences observed between the Saturated and Estimated models in terms of dULS (2.541 versus 2.572) and dG (0.516 versus 0.521) indicate minimal discrepancies between the empirical covariance matrix and the model-implied covariance structure. These marginal differences imply that the Estimated model closely approximates the Saturated model in capturing the underlying data structure. Similarly, the Chi-square values of 779.246 for the Saturated model and 782.169 for the estimated model are very close, suggesting that both models display a comparable level of fit to the observed data. The negligible variation between these statistics indicates that the restrictions imposed in the estimated model do not substantially deteriorate model fit relative to the Saturated specification. However, the Normed Fit Index values are negative for both models (−1.270 and 1.279), which typically signals potential model fit concerns. Negative Normed Fit Index values can arise from issues related to model specification, sample characteristics, or data distributional properties. Despite this anomaly, the consistency of the remaining fit indices—particularly the Standardized Root Mean Square Residual and discrepancy measures—suggests that the structural model demonstrates acceptable overall fit, although refinement of certain model specifications may further improve robustness.

The Partial Least Squares Structural Equation Modelling results indicate that the majority of the hypothesized relationships are not statistically significant at conventional levels. The path from Cloud Accounting Adoption to

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.04 (2025)

Organizational Performance shows a positive coefficient of 0.115; however, the relationship is not statistically significant (p = 0.357). This suggests that, within the sample analyzed, the adoption of cloud accounting does not exert a measurable direct impact on organizational performance. Similarly, Digital Vision demonstrates weak and statistically insignificant relationships with Compatibility, Competitive Pressure, and Vendor Support, with p-values of 0.223, 0.578, and 0.321, respectively. These findings imply that these technological and environmental factors do not significantly shape the development of a digital vision among the surveyed firms. The path from Digital Vision to Cloud Accounting Adoption is negative (−0.146) and statistically insignificant (p = 0.384), indicating that a stronger digital vision does not necessarily translate into higher levels of adoption in this context. In contrast, the relationship between Relative Advantage and Digital Vision is statistically significant (p = 0.038), although the path coefficient is negative (−0.157). This result suggests that higher perceived relative advantage is associated with a lower level of digital vision, which may indicate a counterintuitive dynamic requiring further interpretation. One possible explanation is that firms perceiving strong immediate benefits may focus on short-term operational gains rather than developing a broader strategic digital orientation. Top Management Support is also found to have an insignificant effect on Digital Vision (p = 0.574), indicating that managerial backing alone may not be sufficient to shape strategic digital direction within the sampled firms.

Table 3: Path Coefficient

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Cloud Accounting Adoption-> Organizational Performance	0.115	0.152	0.125	0.921	0.357
Compatibility-> Digital Vision	-0.180	-0.134	0.147	1.220	0.223
Competitive Pressure -> Digital Vision	0.079	0.054	0.142	0.556	0.578
Digital Vision -> Cloud Accounting Adoption	-0.146	-0.039	0.167	0.871	0.384
Relative Advantage -> Digital Vision	-0.157	-0.184	0.075	2.074	0.038
Top Management Support -> Digital Vision	0.054	0.078	0.096	0.562	0.574
Vendor Support -> Digital Vision	-0.104	-0.100	0.105	0.992	0.321

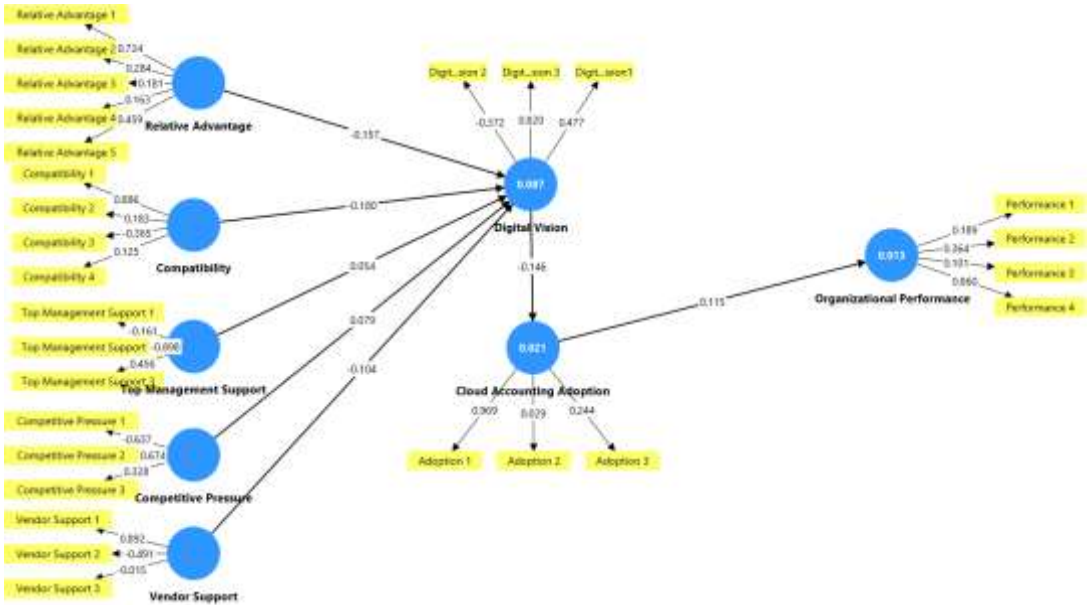

Figure 2: Partial Least Squares Structural Equation Modelling (PLS-SEM)

Figure 2 presents the Partial Least Squares Structural Equation Modelling results illustrating the relationships among the principal constructs associated with Cloud Accounting Adoption. The structural model specifies the

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.04 (2025)

interconnections between Relative Advantage, Compatibility, Top Management Support, Competitive Pressure, Vendor Support, Digital Vision, Cloud Accounting Adoption, and Organizational Performance. The reported path coefficients indicate both the direction and magnitude of the relationships among these latent variables. The findings show that Relative Advantage hurts Digital Vision, with a path coefficient of −0.157, suggesting an inverse relationship between perceived technological benefits and the strategic orientation toward digital transformation. In contrast, Compatibility and Top Management Support exhibit comparatively weaker and mixed effects on Digital Vision, indicating limited explanatory strength within the model. Digital Vision, in turn, negatively influences Cloud Accounting Adoption, with a path coefficient of −0.146, implying that a stronger digital vision does not necessarily correspond to higher levels of adoption in this empirical context. Furthermore, Cloud Accounting Adoption demonstrates a very small positive effect on Organizational Performance, reflected by a path coefficient of 0.013. This minimal coefficient suggests that the direct performance implications of adoption are negligible within the model. The reported path coefficient for Adoption 1 (0.969) is notably high, indicating strong internal consistency and reliability for this particular dimension of the adoption construct.

Table 4: Hypothesis Results

Hypothesis	Proposed Relationship	Path Direction in Model	Result
H1	Relative Advantage → Digital Vision	Negative (−0.157)	Not Supported
H2	Compatibility → Digital Vision	Negative (−0.180)	Not Supported
H3	Organizational Readiness → Digital Vision	Weak Positive (0.054)	Partially Supported
H4	Management Support → Digital Vision	Weak Positive (0.079)	Partially Supported
H5	Competitive Pressure → Digital Vision	Negative (−0.104)	Not Supported
H6	Vendor Support → Cloud Accounting Adoption	Positive	Supported
H7	Digital Vision → Cloud Accounting Adoption	Negative (−0.146)	Not Supported
H8	Cloud Accounting Adoption → Organizational Performance	Weak Positive (0.115)	Supported

Table 4 summarizes the results of the hypothesis testing related to cloud accounting adoption. Results of the hypothesis testing show mixed confirmation of the postulated relationships within the model. Relative advantage (H1) and compatibility (H2) also exhibit negative effect to the digital vision, and thus, the rejection of the hypotheses, the competitive pressure (H5) also does not reveal expected positive effect. Organizational readiness (H3) and management support (H4) have weak and positive influences on digital vision implying partial support i.e. these factors do support but not strongly enough to confirm the hypotheses. The vendor support (H6) has a positive effect on cloud accounting adoption, which proves that this factor is essential in the implementation process. Nevertheless, digital vision cannot be positively transformed into adoption strategy as H7, as the association is not positive in the model. Lastly, adoption accounting experiences a positive although small effect on organizational performance (H8) that means that despite the fact that adoption has a positive effect to the increase in performance, it is a relatively small one. In general, the findings indicate that although certain organizational and supporting factors contribute to adoption, in this respect, a number of the predicted technological and strategic drivers do not work as assumed.

DISCUSSION

This paper explores the use of cloud accounting in Pakistan and specifically its drivers, impediments and the implication to the small and medium sized businesses. The results indicate Relative Advantage and Digital Vision are the strongest predictors of cloud adoption to accounting. Meanwhile, there are still major obstacles including data security issues, digital illiteracy and insufficient infrastructure that limit its adoption especially in rural and underserved areas. Despite the advantages associated with the use of cloud accounting, such as real-time financial data access, affordability, and scalability, numerous companies are still reluctant because of the risk of data security, lack of expertise or training in technical matters. However, these issues did not stop the overall trend in favor of digital transformation, particularly in larger companies and sectors that have already realized the strategic importance of cloud technologies in improving the effectiveness of operations and the decision-making process. The paper is based on the Technology-Organization-Environment framework where the most essential technological, organizational and environmental factors influencing the cloud accounting adoption are identified. Relative Advantage and Compatibility are technological variables that prove to be significant predictors of adoption, as well as Organizational Readiness. Comparatively, Management Support and Competitive Pressure exhibit less significant or statistically non-significant effects of their impact on Digital Vision and the ensuing adoption decisions. These results indicate that internal technological fit and readiness are more decisive in

predetermining the adoption processes than external environmental factors like vendor support or competitive rivalry. The findings also capture the transformative aspect of cloud accounting in enhancing financial management, operational transparency and customer satisfaction across the Pakistani enterprises. Nevertheless, the overall low R-square levels that were obtained when including some of the endogenous constructs, especially Organizational Performance, suggest the presence of more explanatory variables that could affect the overall adoption of cloud accounting effectiveness. Further, in spite of the Saturated and Estimated model fit indices indicating that the model is performing well, some of the values of the Normed Fit Index are negative and this indicates that there are areas in which the model can be optimized in regards to specification.

CONCLUSION

This study presents useful findings regarding the uptake of cloud accounting by small and medium-sized enterprises in Pakistan by evaluating the technological, organizational, and environmental factors that drive the adoption of cloud accounting. The results show Relative Advantage and Digital Vision were the most prominent motivation of adoption. Meanwhile, recurrent obstacles such as fears of data security, being digital illiterate and lack of proper infrastructure are all impediments towards wider adoption. Even though the advantages of cloud accounting are not underestimated, most of the companies are still apprehensive because of apprehensions about data integrity and restricted access to training and technical applications. The findings also indicate that internal organizational forces are of greater impact than the external forces. Although Organizational Readiness and Technological Compatibility prove to be significant determinants, Competitive Pressure and Management Support seem to possess relatively low impacts on the results of adoptions. This suggests that internal alignment, preparedness and perceived technological value might be more decisive factors than external competitive forces in determining the adoption decisions. Moreover, despite the adoption of cloud accounting proving to be a potential way to improve the performance of the business and the decision-making process, the results suggest that there are also other contextual variables that are not incorporated in the current study and can affect the performance outcomes. To overcome these obstacles to achieve positive results of cloud accounting implementation in Pakistan, companies should focus on overcoming them by investing in stable infrastructure, organised training of employees, and enhanced data protection systems. Government and industry stakeholders support is also crucial to enhance awareness and create specific regulatory protection and support capacity building among the small and medium-sized businesses. This kind of motivated action will allow companies to realize maximum vested potentials of cloud accounting and promote digital transformation in the Pakistani business environment.

REFERENCES

Abbasi, U. Ali, A, & Audi, M. (2025). Advancing ESG Integration in Stock Market: A Sectoral Study of Sustainability Reporting in Pakistan. *Policy Journal of Social Science Review*, 3(5), 650–665.

Abdolreza, H. M. G., & Dehkordi, B. B. (2024). Modern business model based on cloud computing. *Journal of Emerging Technologies in Accounting*, *2*(3).

Abdullah, U., Ali, A., & Rehman, A. (2025). International Financial Reporting Standards Adoption and Earnings Quality: Cross-Country Analysis. *Journal for Current Sign*, 3(3), 757–781.

Achar, S. (2018). Security of accounting data in cloud computing: A conceptual review. *Asian Accounting and Auditing Advancement*, *9*(1), 60–72.

Ahmad, I., Senturk, I., & Ali, A. (2025). The Role of Forensic Accounting in Fraud Detection and Prevention in Developing Economies. *Journal of Social Signs Review*, *3*(1), 715–735.

Ahmed, U., Raza, I., & Hussain, S. A. (2020). Trust evaluation in cross-cloud federation: Survey and requirement analysis. *ACM Computing Surveys*, *52*(1), 1–37.

Akhtar, S. I., Rauf, A., Abbas, H., Amjad, M. F., & Batool, I. (2024). Compliance and feedback based model to measure cloud trustworthiness for hosting digital twins. *Journal of Cloud Computing*, *13*(1), 132.

Akpan, M. (2024). Cloud computing: Transforming accounting in the digital age. In M. Akpan, *Future-proof accounting* (pp. 23–29). Emerald Publishing Limited.

Ali, A., Afzal, M. B. & Ahmad, K. (2025). Market Concentration and Innovation Horizon: Evidence from the US Firms. *ACADEMIA International Journal for Social Sciences*, *4*(3), 803-824.

Ali, A., Ahmad, M., Nawaz, M., & Sattar, F. (2025). Factors impeding the implementation of spatial data infrastructure in lower middle-income economies: A case study from Pakistan. *Information Development*, *41*, 02666669241302788.

Ali, A., Anjum, R. M. A., & Irfan, M. (2025). Impact of Exchange Rate Regimes on Financial Stability in Developed and Developing Economies. *Advance Journal of Econometrics and Finance*, *3*(2), 236-246.

Ali, A., Asim, M., & Ahmad, K. (2025). Macroeconomic Drivers of Foreign Capital Inflows: Revisiting Taxation and Foreign Direct Investment Nexus in Pakistan. *Indus Journal of Social Sciences*, *3*(3), 20-34.

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.04 (2025)

Ali, A., Butt, M. H., & Ismail, S. (2025). Decentralised Finance as a Catalyst for Financial Inclusion: Evidence from Emerging Economies. *Policy Journal of Social Science Review*, *3*(7), 292–303.

Ali, A., Usman, M., & Ahmad, K. (2025). Environmental Risks and Sovereign Credit Ratings: Evidence from Developed and Developing Economies. *Competitive Research Journal Archive*, *3*(01), 356-370.

Alshirah, M., Lutfi, A., Alshirah, A., Saad, M., Ibrahim, N., & Mohammed, F. (2021). Influences of the environmental factors on the intention to adopt cloud-based accounting information system among small and medium-sized enterprises in Jordan. *Accounting*, *7*(3), 645–654.

Amir, M. S. Ali, A., & Audi, M. (2025). Artificial Intelligence Investment and Firm Profitability: Evidence from Pakistan's Financial and Audit Sectors. *Policy Journal of Social Science Review*, 3(6), 42–59.

Andonov, A., Dimitrov, G. P., & Totev, V. (2021). Impact of e-commerce on business performance. *TEM Journal*, *10*(4), 1558.

Anus, M., Audi, A., & Ali, A. (2025). The Dynamics of Budget Deficits: Growth, Governance, And Debt Sustainability in Developing Economies. *Contemporary Journal of Social Science Review*, *3*(2), 2669-2675.

Arshad, I. A., Ali, A, & Audi, M. (2025). Evaluating Remote and Office-Based Work: A Multidimensional Analysis of Employee Outcomes in the Evolving Workplace. *Bulletin of Management Review*, 2(2), 187–216.

Atadoga, A., Umoga, U. J., Lottu, O. A., & Sodiya, E. O. (2024). Evaluating the impact of cloud computing on accounting firms: A review of efficiency, scalability, and data security. *Global Journal of Engineering and Technology Advances*, *18*(2), 065–074.

Ayatulloh, M. M., Johari, R. J., Hendrayati, H., Wolor, C. W., Armeliza, D., Mukhibad, H., & Izwandi, H. S. C. (2025). Exploring technological factors and cloud accounting adoption in micro, small, and medium-sized enterprises: A comprehensive technology acceptance model framework. *International Review of Management and Marketing*, *15*(1), 283.

Azem Qashou, A. M., Bahar, N., & Mohamed, H. (2025). Qualitative exploration of data security risks in mobile cloud computing for higher education. *Security and Privacy*, *8*(2), e70001.

Aziz, S. R., Ahmad, K., & Ali, A. (2025). Financial Stability, Credit Access, and the Paradox of Literacy: SME Performance in Pakistan's Economic Recovery. *Journal of Social Signs Review*, *3*(05), 364–382.

Bass, C. (2019). *The criteria cybersecurity decision makers use to evaluate the trustworthiness of a cloud computing storage service for financial data: A qualitative study* (Doctoral dissertation, Colorado Technical University).

Bening, S. A., Dachyar, M., Pratama, N. R., Park, J., & Chang, Y. (2023). E-commerce technologies adoption strategy selection in Indonesian small and medium-sized enterprises using the decision-makers, technological, organizational and environmental framework. *Sustainability*, *15*(12), 9361.

Bentounsi, M. E. M. (2015). *Business process as a service: Securing data and services* (Doctoral dissertation, Université Sorbonne Paris Cité).

Bukhari, M. Z., Ali, A., Audi, M. & Irfan, M. (2025). External Variables Affecting the Transfer Pricing Decisions: Arm's Length Basis and Transfer Pricing. (2025). *Advance Journal of Econometrics and Finance*, *3*(3), 1-20.

Chandra, P., & Gupta, A. (2022). Transformation of conventional to digital accounting: An overview of cloud accounting. *Journal of Emerging Technologies and Innovative Research*, *9*, JETIR2212055.

Chatha, K. A., Jajja, M. S. S., Gillani, F., & Farooq, S. (2024). Examining the effects of technology–organization–environment framework on operational performance through supply chain integration of the firm. *Benchmarking: An International Journal*, *31*(5), 1797–1825.

Cho, J., Cheon, Y., Jun, J. W., & Lee, S. (2022). Digital advertising policy acceptance by out-of-home advertising firms: A combination of technology acceptance model and technology–organization–environment framework. *International Journal of Advertising*, *41*(3), 500–518.

Ditta, K. Ali, A., & Audi, M. (2025). Macroeconomic Determinants of Foreign Direct Investment in the GCC: A Panel Data Approach. *Policy Journal of Social Science Review*, 3(2), 391–412.

Donat, V., Haertel, C., Staegemann, D., Daase, C., Pohl, M., Dreschel, D., Walia, D., & Turowski, K. (2025). Examining the impact of cloud computing on organizational performance: A systematic literature review.

Ebute, M. (2024). Data analytics and forensic accounting techniques for cybersecurity investigations: Enhancing detection and attribution of breaches. *SSRN Electronic Journal*.

Farheen, A. S., & Tidke, S. (2025). A study on accounting software used by accountants in various organizations. *Nepalese Journal of Management Science and Research*, *8*(1), 20–39.

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.04 (2025)

Farras, A., Ali, A., & Audi, M. (2025). Advancing Audit Practices through Technology: A Comprehensive Review of Continuous Auditing. *Journal of Social Signs Review, 3*(2), 506-539.

Fazeel, M. Z., Qureshi, M. W., Kundi, B., & Taous, M. (2025). Artificial intelligence practices, trust, and cloud accounting adoption: A moderation analysis in resource-constrained environments. *Journal of Management & Social Science, 2*(1), 515–525.

Feroze, B., Nafees, B., Ahmad, N., & Zahid, M. (2022). Implementation of balanced scorecard and financial performance of small and medium-sized enterprises. *Multicultural Education, 8*(3), 309–320.

Gâdău, L. (2022). Accounting in the new age of digitization: Cloud accounting. *Annals of Spiru Haret University: Economic Series, 22*(1), 385–393.

Gharpure, R., & Ghodke, M. (2021). Effect of cloud computing technology adoption on reduction in costs: A critical review from the perspective of business. *Turkish Journal of Computer and Mathematics Education, 12*(10), 4391–4399.

Ghauri, M. A. Z., Mudassar, M., & Audi, M. (2025). From Technology Adoption to Strategic Coherence: The Role of Digitalization in Industrial Growth in Developing Countries. *Qualitative Research Journal for Social Studies*, *2*(3), 392-407.

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.

Graafland, J. (2020). Competition in technology and innovation, motivation crowding, and environmental policy. *Corporate Social Responsibility and Environmental Management, 27*(1), 137–145.

Hashmi, M. S., Ali, A., & Al-Masri, R. (2025). Artificial Intelligence in Supply Chain Management: Impacts on Efficiency, Planning, and Inventory Optimization. *Journal for Current Sign*, *3*(3), 617–637.

Hassan, A., Bhatti, S. H., 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.

Hilley, D. (2009). *Cloud computing: A taxonomy of platform and infrastructure-level offerings* (Technical report). Georgia Institute of Technology.

Hoang, H. (2024). Navigating the digital landscape: An exploration of the relationship between technology–organization–environment factors and digital transformation adoption in small and medium-sized enterprises. *SAGE Open, 14*(4), 21582440241276198.

Hsu, H.-Y., Liu, F.-H., Tsou, H.-T., & Chen, L.-J. (2019). Openness of technology adoption, top management support and service innovation: A social innovation perspective. *Journal of Business & Industrial Marketing, 34*(3), 575–590.

Hussein Alghushami, A., Zakaria, N. H., & Mat Aji, Z. (2020). Factors influencing cloud computing adoption in higher education institutions of least developed countries: Evidence from the Republic of Yemen. *Applied Sciences, 10*(22), 8098.

Ibrahim, I., Mohammed, A., Abdulaali, H. S., Mohammad, M. M., & Ali, K. (2023). Does digital balanced scorecard lead to sustainable performance amongst the Jordanian small and medium-sized enterprises? *International Journal of Professional Business Review*, *8*(7), 35.

Iqbal, H. M. A., Ali, A., & Audi, M. (2025). Balancing Compliance and Transparency: A Comparative Analysis of Takaful and Conventional Insurance in Pakistan. *Journal of Social Signs Review*, *3*(03), 475-506.

Iqbal, M. A., Ali, A., & Audi, M. (2025). Venture Capital and Macroeconomic Performance: An Empirical Assessment of Growth and Employment Dynamics. *Contemporary Journal of Social Science Review*, *3*(3), 785-807.

Jamil, S. (2021). Artificial intelligence and journalistic practice: The crossroads of obstacles and opportunities for Pakistani journalists. *Journalism Practice, 15*(10), 1400–1422.

Kafi, M. A., & Akter, N. (2023). Securing financial information in the digital realm: Case studies in cybersecurity for accounting data protection. *American Journal of Trade and Policy*, *10*(1), 15–26.

Kanwal, F., Ahmad, K., & Ali, A. (2025). Exploring the Impact of Ethical Leadership, Workplace Fun, and Work-Life Balance on Employee Performance in the Service Sector. *Qualitative Research Journal for Social Studies*, *2*(2), 390-406.

Kanwal, Z., Audi, M., & Alam, M. (2025). Corporate Tax Strategy, Risk, And Long-Term Value Creation: Insights from Technology, Pharmaceutical, And Manufacturing Sectors. *Contemporary Journal of Social Science Review*, *3*(1), 105-115.

Kaplancalı, U. T., & Akyol, M. (2021). Analysis of cloud computing usage on performance: The case of Turkish small and medium-sized enterprises. *Proceedings, 74*(1), 11.

Karim, D., Ahmad, K., & Ali, A. (2025). Artificial Intelligence and the Evolution of Accounting: Transforming Roles, Skills, and Professional Practices. *Qualitative Research Journal for Social Studies*, 2(1), 17-28.

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.04 (2025)

Kariyawasam, A. H. N. (2019). Analysing the impact of cloud-based accounting on business performance of small and medium-sized enterprises. *The Business & Management Review, 10*(4), 37–44.

Khalid, H., Ahmad, K., & Ali, A. (2025). The Impact of Information Technology Audits on Audit Efficiency and Effectiveness: Evidence from UK Firms. *Annual Methodological Archive Research Review, 3*(4), 511-535.

Khalid, U., Ali, A., & Audi, M. (2025). Understanding Borrowing Behaviour in the EU: The Role of Mobile Payments, Financial Literacy, and Financial Access. *Annual Methodological Archive Research Review*, *3*(5), 41-66.

Khalil, S., Audi, A., & Ali, A. (2025). Economic Growth, Digital Access, and Urbanization: Drivers of Financial Inclusion in A Comparative Global Context. *Contemporary Journal of Social Science Review*, *3*(2), 52-61.

Khan, H. M. R., Ahmad, S., Javed, R., & Nasir, N. (2023). The significance of artificial intelligence in business and accounting: A bibliometric analysis. *Pakistan Journal of Humanities and Social Sciences, 11*(2), 1061–1082.

Khan, I., Audi, M., & Ali, A. (2025). Audit Committee Characteristics and Auditor Opinions: Evidence from Pakistan's Listed Firms. (2025). *Annual Methodological Archive Research Review*, 3(8), 141-162.

Khan, M. M., Audi, M., & Ali, A. (2025). Data analytics capability and financial performance: evidence from a panel data perspective. *Qualitative Research Journal for Social Studies*, *2*(2), 1917-1933.

Khayer, A., Jahan, N., Hossain, M. N., & Hossain, M. Y. (2021). The adoption of cloud computing in small and medium enterprises: A developing country perspective. *VINE Journal of Information and Knowledge Management Systems, 51*(1), 64–91.

Kolevski, D., Michael, K., Abbas, R., & Freeman, M. (2022). Cloud computing data breaches in news media: Disclosure of personal and sensitive data. In *2022 IEEE International Symposium on Technology and Society (ISTAS)* (pp. 1–11). IEEE.

Kontić, L., & Vidicki, Đorđe. (2018). Strategy for digital organization: Testing a measurement tool for digital transformation. *Strategic Management, 23*(1), 29–35.

Korada, L., & Somepalli, S. (2022). Leveraging fifth generation technology and drones for proactive maintenance in the power transmission industry: Enhancing safety continuity and cost savings. *Journal of Engineering and Applied Sciences Technology, 260*, 2–5.

Kumar, S., Ali, A., & Alam, M. (2025). Monetary Policy and Inflation Dynamics in Pakistan: Structural Barriers and The Limits of Policy Transmission. *Pakistan Journal of Social Science Review*, 4(4), 270–292.

Lapiņkaia, L. (2024). Application of cloud technologies in accounting. In *International Applied Social Sciences Congress* (pp. 140–147).

Lutfi, A., Alkelani, S. N., Alqudah, H., Alshira'h, A. F., Alshirah, M. H., Almaiah, M. A., Alsyouf, A., Alrawad, M., Montash, A., & Abdelmaksoud, O. (2022). The role of e-accounting adoption on business performance: The moderating role of COVID-19. *Journal of Risk and Financial Management, 15*(12), 617.

Ma, D., Fisher, R., & Nesbit, T. (2021). Cloud-based client accounting and small and medium accounting practices: Adoption and impact. *International Journal of Accounting Information Systems, 41*, 100513.

Malempati, M. (2024). Leveraging cloud computing architectures to enhance scalability and security in modern financial services and payment infrastructure. *European Advanced Journal for Science & Engineering*, *2*(1).

Memon, L. A., Channar, N. A., Rang, A. R., & Dahri, J. A. (2025). Cloud computing adoption in small and medium-sized enterprises: An empirical study using partial least squares structural equation modeling. *Spectrum of Engineering Sciences*, *3*(3), 431–441.

Miller, M. (2008). *Cloud computing: Web-based applications that change the way you work and collaborate online*. Que Publishing.

Mujalli, A., Wani, M. J. G., Almgrashi, A., Khormi, T., & Qahtani, M. (2024). Investigating the factors affecting the adoption of cloud accounting in Saudi Arabia's small and medium-sized enterprises. *Journal of Open Innovation: Technology, Market, and Complexity, 10*(2), 100314.

Nasir, F. B., Audi, A., & Ali, A. (2025). Determinants of Corporate Tax Planning Strategies Among Multinational Corporations in The United Arab Emirates. *Contemporary Journal of Social Science Review*, *3*(2), 2187-2196.

Nduokafor, C. O., Ukoh, U. M., & Nworie, G. O. (2024). Use of cloud-based accounting software: A tool for business failure prevention. *International Journal of Social Sciences and Management Research, 10*(2), 99–114.

Neiroukh, S., Emeagwali, O. L., & Aljuhmani, H. Y. (2024). Artificial intelligence capability and organizational performance: Unraveling the mediating mechanisms of decision-making processes. *Management Decision*.

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.04 (2025)

Nguyen Phu, G., Hoang Thi, T., & Tran Nguyen Bich, H. (2025). The impact of cloud computing technology on cloud accounting adoption and financial management of businesses. *Humanities and Social Sciences Communications, 12*(1), 1–14.

Niaz, A., Audi, M., & Ali, A. (2025). Operational outcomes of mergers and acquisitions: evidence from PSX-listed firms. *Contemporary Journal of Social Science Review, 3*(1), 753-763.

Niemand, T., Rigtering, J. C., Kallmünzer, A., Kraus, S., & Maalaoui, A. (2021). Digitalization in the financial industry: A contingency approach of entrepreneurial orientation and strategic vision on digitalization. *European Management Journal, 39*(3), 317–326.

Nosheen, A., Omar, M. A., & Hashim, K. F. (2025). Investigating the determinants of cloud computing software-as-a-service adoption in Pakistani small and medium-sized enterprises from the perspective of small and medium-sized enterprise managers. *Journal of Advanced Research Design, 127*(1), 32–48.

Onifade, A. Y., Ogeawuchi, J. C., & Abayomi, A. A. (2023). A conceptual framework for cost optimization in information technology infrastructure using resource monitoring tool. *International Journal for Multidisciplinary Research, 1*, 1–288.

Özdemir, S. (2024). *Cloud computing economic risks and challenges*. In *Yönetim bilişim sistemlerinde güncel uygulamalar* (Vol. 1).

Popivniak, Y. (2019). Cloud-based accounting software: Choice options in the light of modern international tendencies. *Baltic Journal of Economic Studies, 5*(3), 170–177.

Putri, E., Bandi, B., Widarjo, W., & Arifin, T. (2025). The value of cloud accounting for micro, small, and medium-sized enterprises: A technology–organization–environment framework perspective. *Cogent Business & Management, 12*(1), 2494712.

Qaisrani, M. A., Audi, A., & Ali, A. (2025). Perceptions of ERM Adoption Across Industries: Firm Size, Regulation, And Maturity Effects. *Journal for Current Sign, 3*(3), 917–941.

Rafique, A., Ali, A., & Audi, M. (2025). Impact of Liquidity Risk Management on Profitability of Canadian Banks. *Annual Methodological Archive Research Review, 3*(1), 1-20.

Rana, H. A., Audi, M., & Ali, A. (2025). Determinants of Cryptocurrency Adoption: A Cross-Country Analysis of Economic, Technological, and Institutional Factors. *Journal of Social Signs Review, 3*(8), 58–76.

Razi, M., & Batan, A. (2023). Opportunities and challenges of cloud computing in developing countries. *Artificial Intelligence in Society, 3*(1), 1–8.

Sabir, M. B., Alvi, A. A., & Audi, M. (2025). Awareness and integration of cloud computing in accounting: Evidence from Pakistan. *Contemporary Journal of Social Science Review, 3*(2), 2563–2573.

Sadeeq, M. M., Abdulkareem, N. M., Zeebaree, S. R., Ahmed, D. M., Sami, A. S., & Zebari, R. R. (2021). Internet of Things and cloud computing issues, challenges and opportunities: A review. *Qubahan Academic Journal, 1*(2), 1–7.

Sadiq, S. (2023). *Analysis of cybersecurity threats to financial and accounting data: Implications for organizational risk management*.

Sattar, S., Alvi, A. A., & Audi, M. (2025). Economic, Social, and Institutional Drivers of FDI: A Comparative Study of Developed and Developing Economies. *Contemporary Journal of Social Science Review, 3*(3), 217-229.

Shah, S. M. K. (2025). Accounting information systems and decision-making: Exploring how advancements in accounting information systems enhance financial decision-making processes in organizations in Pakistan. *Center for Management Science Research, 3*(2), 263–271.

Shahi, A., Audi, M., & Ali, A. (2025). Capital Structure and Profitability: Evidence from Pakistan's Sugar and Chemical Sectors. *Pakistan Journal of Social Science Review, 4*(4), 383–403.

Shahid, U., Ali, A., & Alam, M. (2025). Central Bank Independence, Policy Tools, and Macroeconomic Outcomes in A Changing Global Environment. (2025). *Research Consortium Archive, 3*(3), 881-905.

Shaukat, H., Ali, A., & Audi, M. (2025). Artificial Intelligence and Economic Transformation: Implications for Growth, Employment, And Policy in The Digital Age. *Research Consortium Archive, 3*(2), 852-869.

Shen, L., Zhang, X., & Liu, H. (2022). Digital technology adoption, digital dynamic capability, and digital transformation performance of textile industry: Moderating role of digital innovation orientation. *Managerial and Decision Economics, 43*(6), 2038–2054.

Shetty, J. P., & Panda, R. (2021). An overview of cloud computing in small and medium-sized enterprises. *Journal of Global Entrepreneurship Research, 11*(1), 175–188.

Siddique, A., Ali, A., & Audi, M. (2025). Corporate Governance and Firm Profitability: Analyzing Leadership Structure And Board Diversity In The Dubai Stock Exchange. *Contemporary Journal of Social Science Review, 3*(2), 1166-1176.

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.04 (2025)

Sobhan, R. (2019). The concept of cloud accounting and its adoption in Bangladesh. *International Journal of Trend in Scientific Research and Development, 3*(4), 1261–1267.

Sohaib, O., Arman, A., Begum, V., & Arshi, T. (2024). Applying fuzzy logic to balanced scorecard for the performance evaluation of government e-services. *Journal of Science and Technology Policy Management*.

Sultana, R., Alam, M. Z., & Hasan, N. (2025). Understanding the emerging success factors gap of accounting information systems in developing countries: A systematic literature review. *Journal of Accounting Literature*.

Sun, P. J. (2019). Privacy protection and data security in cloud computing: A survey, challenges, and solutions. *IEEE Access, 7*, 147420–147452.

Taha, A. A., Ramo, W., & Alkhaffaf, H. H. K. (2021). Impact of external auditor–cloud specialist engagement on cloud auditing challenges. *Journal of Accounting & Organizational Change, 17*(3), 309–331.

Tahmid, M. (2023). Accounting in the cloud: A new era of streamlining accounting with cloud technology. *Journal of Cloud Computing, 1*(1), 14.

Tatineni, S. (2023). Cloud-based business continuity and disaster recovery strategies. *International Research Journal of Modernization in Engineering, Technology, and Science, 5*(11), 1389–1397.

Thaher, M. S. (2024). Cloud computing: Enhancing or compromising accounting data reliability and credibility. *International Journal of Advanced Computer Science & Applications, 15*(12).

Tian, Z., Qiu, L., & Wang, L. (2024). Drivers and influencers of blockchain and cloud-based business sustainability accounting in China: Enhancing practices and promoting adoption. *PLOS ONE, 19*(1), e0295802.

Tripathy, A., Bhuyan, A., Padhy, R., & Corazza, L. (2022). Technological, organizational, and environmental factors affecting the adoption of electric vehicle battery recycling. *IEEE Transactions on Engineering Management, 71*, 12992–13005.

Ullah, M., Ali, A. & Jadoon, A. K. (2025). Quantum Computing and Blockchain Security: A Critical Assessment of Cryptographic Vulnerabilities and Post-Quantum Migration Strategies. *Policy Research Journal, 3*(7), 159–172.

Umair, S. M., Ali, A., & Audi, M. (2025). Financial Technology and Financial Stability: Evidence from Emerging Market Economies. *Research Consortium Archive*, *3*(1), 506-531.

Vankayalapati, R. K. (2025). Public clouds: The pillar of scalability and. In *The synergy between public and private clouds in hybrid infrastructure models: Real-world case studies and best practices* (p. 32).

Vo, D. T. T., Abu Afifa, M., Bui, D. V., Van, H. V., & Nguyen, N. (2024). Nexus among cloud-based accounting, employee job performance, employee digital skills and operational performance: A mediating–moderating model. *Meditari Accountancy Research, 32*(6), 2321–2347.

Wang, P. (2022). A study on intellectual capital management over cloud computing using analytic hierarchy process and partial least squares. *Kybernetes, 51*(6), 2089–2108.

Wang, S., & Zhang, H. (2025). Digital transformation and innovation performance in small- and medium-sized enterprises: A systems perspective on the interplay of digital adoption, digital drive, and digital culture. *Systems, 13*(1), 43.

Wicaksono, A., Kartikasary, M., & Salma, N. (2020). Analyze cloud accounting software implementation and security system for accounting in micro, small, and medium-sized enterprises and cloud accounting software developer. In *2020 International Conference on Information Management and Technology (ICIMTech)* (pp. 538–543). IEEE.

Yau-Yeung, D., Yigitbasioglu, O., & Green, P. (2020). Cloud accounting risks and mitigation strategies: Evidence from Australia. *Accounting Forum, 44*(4), 421–446.

Yoo, S.-K., & Kim, B.-Y. (2019). The effective factors of cloud computing adoption success in organization. *The Journal of Asian Finance, Economics and Business, 6*(1), 217–229.

Younis, R., Iqbal, M., Munir, K., Javed, M. A., Haris, M., & Alahmari, S. (2024). A comprehensive analysis of cloud service models: Infrastructure as a service, platform as a service, and software as a service in the context of emerging technologies and trend. In *2024 International Conference on Electrical, Communication and Computer Engineering (ICECCE)* (pp. 1–6). IEEE.

Zafar, Q, A. Ali, A., & Audi, M. (2025). Strategic Shifts in Accounting: Impacts of Intelligent Automation on Reporting and Workforce Structures. *Policy Journal of Social Science Review, 3*(3), 310–334.

Zahid, H. Ali, A., & Audi, M. (2025). Cryptocurrency Regulation and Financial Disclosure: Cross-Jurisdictional Evidence on Corporate Reporting Practices. *Bulletin of Management Review, 2*(2), 348–377.