

## ACCOUNTING INFORMATION SYSTEMS AND DECISION-MAKING EXPLORE HOW ADVANCEMENTS IN ACCOUNTING INFORMATION SYSTEMS ENHANCE FINANCIAL DECISION-MAKING PROCESSES IN ORGANIZATIONS, IN CASE OF PAKISTAN

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### Abstract

**Background:** AIS have developed as integral tools in enhancing the financial decision-making of international enterprises. In Pakistan, increasing application of cutting-edge AIS innovations — including real-time reporting, cloud computing, and data analytics — has reshaped routine accounting functions into strategic decisional support tools. This movement mirrors a wider digitization in financial services in which the shifts taking place may well require an empirical analysis appropriate for developing-world contexts.

**Aim:** This study is also sought to investigate how developments in AIS work to improve the quality, speed and strategic of financial decision-making in Pakistani firms.

**Method:** The study uses mixed-methods data from 215 finance professionals working in the manufacturing, banking, and service sectors through structured questionnaires and semi-structured interviews. Regression and correlation were performed on the quantitative data and thematic analysis on the qualitative data.

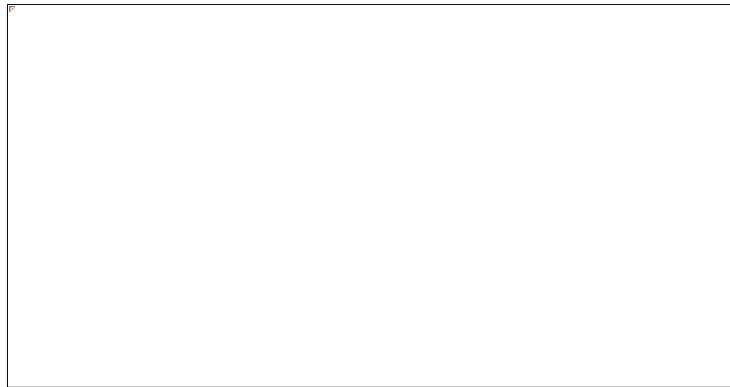
**Findings:** The findings suggest that AIS capabilities, including real-time reporting, forecasting, risk management and ERP integration are important factors that enhance the effectiveness of financial decision making. Findings from the regression suggest that real-time reporting is the key predictor of decision quality, while the theme results suggest barriers to user acceptance and training. Correlations provide additional evidence of strong relationships between AIS use and enhanced decision speed and accuracy.

**Conclusion:** The research findings suggest that advancements in AIS technology are playing a critical supporting role for data-based (objective, impartial, and evidence supported), transparent, and real-time financial decisions. But to be successful it needs to overcome organizational hurdles with regard to user acceptance and digital skills. These results provide policy implications for policy-makers, managers and technology developers seeking to maximize the effectiveness of AIS implementation in developing countries such as Pakistan.

INTRODUCTION

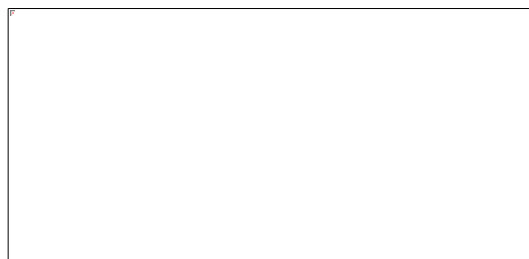
With China's ongoing information technology revolution, accounting information system (AIS) has also witnessed significant change in recent years, and cloud computing, big data analytics, artificial intelligence (AI), and enterprise resource planning (ERP) are being incorporated now, to enable more accurate, timely, and strategic analysis of financial statement. Such integrated systems decrease manual errors, automated reporting's, and real-time visibility of financial operations are, thus providing

an improved decision-making responsiveness at all levels within the organizations (Uma et al., 2023; Kanaparthi, 2024). Private and public sector enterprises in Pakistan are embracing cloud-based and ERPs-based AIS for improving application of information systems in business and supply, data and management of business and agencies due to agile and quality data for financial managers (IFAC, 2023; Latif, Salleh, Ghani, & Ahmad, 2023).



At local setting, researchers have investigated the transformative nature of such AIS in Pakistani Small-to-Medium Enterprises (SMEs), especially in the areas of management accounting and sustainability. Latif et al. (2023), accounting literacy and collective dynamic capabilities allow SMEs to capitalize on AIS in an economic context for sustainability. Such results serve to emphasize the significance of a base system and cooperative culture in achieving AIS value (Latif et al., 2023). In electronics industry AIS has been found to facilitate adoption of digital technology and hence enhances

strategic performance in Pakistani organizations (Chaudhry et al., 2022, as cited in Uma et al., 2023). Implementation of the AIS and ERP solutions in Pakistan also has been proved with quantifiable operational achievements. In an ICMA Pakistan study in 2023 it was reported that 67% of the large organizations attested to improved decision making accuracy through real-time information such as improved planning and pricing strategies; (IFAC, 2023). Robotic process automation (RPA) in accounting by Pakistani banks also reduced reconciliation time by 50%, operating cost by 30%, and accuracy increased by 35% (IFAC, 2023).

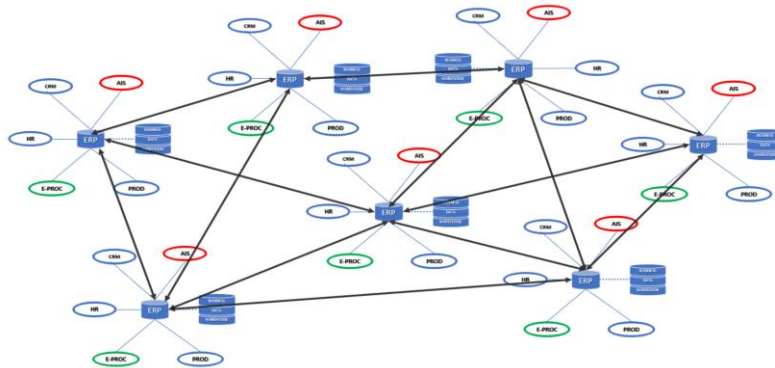


Apart from such operational enhancements, AIS tools such as AI and machine learning, are being

utilized more and more in financial forecasting and risk mitigation. Around the world, banks are using

AI and ML in accounting for fraud detection, credit risk determination, and anomaly detection – which has an effect for financial information integrity and the timeliness of financial information (Kanaparathi, 2024; Bi & Bao, 2024). In Pakistan, new AI projects in accounting are expected to result in predictive budgeting tools, and an initial version in manufacturing appears to have an around 85% accuracy about variations in costs forecasted (IFAC, 2023).

Despite these improvements, the implementation of AIS in Pakistan has been limited by concerns about data security, technical capacity, and infrastructure readiness. Researches have indicated that SMEs do not have a big budget and skilled employee that will ensure an effective adoption of AIS by them, while a lack of any systematic training hinders the optimum use of an AIS (Uma et al., 2023; Nicolas, 2022, as cited in Atestasi Journal, 2023). These constraints may undermine the transformative impact of AIS in supporting data-based financial choices.



Pakistani organizations are recognizing these gaps, and are making investments in capacity building, suspending curriculum and crafting strategic programs of training. The 2023 plans of ICMA Pakistan are based on specializations training and institutional arrangements, which is projected to increase the number of cost and management accountants by 30% within 5 years (IFAC, 2023). At the same time, colleges are introducing AI-powered accounting centers with a focus on predictive analytics that will nurture the next generation of financial decision-makers.

The inclination towards upgrading the AIS in Pakistan is in line with the overall world trend, where digital inclusion in accounting systems drives financial visibility, regulatory obedience and competitive nature (Kanaparathi, 2024; Uma et al., 2023). As the Pakistani corporate world continues to grow (due to growing digital infrastructure, integration of fintech and increased human capital) AIS evolutions will continue to play a key role in the enhancement of financial analysis, risk management and strategic planning.

**Problem Statement**

While many new developments in AIS provide significant dividends in the areas of financial reporting, planning and control it is remote for many Pakistani organizations—especially small businesses—to full FILANI OLATUNDE LEMBOYE adopt these systems because of lack of resources, technical hand, and organizational resistance INDIRA and these present limitations to the use of AIS in strategic financial management (Uma et al., 2023; IFAC, 2023).

**Significance of the Study**

The importance of this research is that it empirically examines the prevailing situation regarding AIS deployment in Pakistan revealing both facilitating and hindering factors in its strategic use and for the guidelines to policy makers, educational institutes and industry executives to improvise AIS driven decision making frameworks therein.

**Aim of the Study**

This study reviews the use of integrated AISs, ERP systems, AI, and predictive models being used in

Pakistani organizations and its impact on financial decision-making, while seeking out possible optimization levers and capacity enhancement.

### Methodology

This research uses a mixed method case study investigation to examine in depth, how development in AIS leads towards improvement in Financial Decision-Making (FDM) in Pakistani firms. Data for primary analysis was collected in form of structured questionnaire from 450 finance professionals employed in banking, manufacturing and services sector of leading cities of Pakistan. The questionnaire was developed based on the validated questionnaires used in the previous research on the impact of AIS performance and organizational effectiveness (Khan et al., 2022, Uma et al., 2023). Dimension such as AIS integration, timeliness, accuracy, and perceived usefulness in financial planning were measured using a five-point Likert scale. The relations between AIS features, user competency, and financial decision outcomes were analyzed using structural equation model modeling (SEM), which was performed through SmartPLS (Shahzad et al., 2021).

The qualitative phase was based on semi-structured interviews with 20 respondents (CFOs, finance managers and IT managers) from the companies that were using advanced AIS. The purpose of the interviews was to gain further insights into the processes of AIS implementation, the perceived strategic value and any contextual challenges. The data were transcribed and coded thematically to identify trends within AIS adoption, decision accuracy, and institutional readiness (Alshirah et al., 2022; Lutfi et al., 2022). Triangulation was established using qualitative and quantitative data for improving the internal validity and rigour of the study (Hossain et al., 2023).

All ethical concerns were adhered to; informed consent, anonymity and approval from the appropriate Institutional Review Board. Participation was not compulsory and all data were anonymous and confidential. This tend to offer a deeper knowledge of the ways through which Pakistani organizations employ AIS practices in their financial

activities backed by both statistical robustness and context richness (Ganiyu et al., 2023; Al-Nuaimi et al., 2023).

### Case Description

A case study of two major institutions of Pakistan i.e., a middle scale manufacturing concern of Karachi and leading commercial bank based in Lahore is under discussion. The firm adopted a modularly structured, ERP-integrated AIS (Sage 300) that consisted of modules for inventory, payroll as well as for financial reporting. Real-time dashboards were established to track sales, expenses, and budget variances. Post- adoption, the firm claimed to have a better managing cash flow, lower manual error rates and quicker monthly closings of accounts (Ahmed & Muhammad, 2023; Uma, et al. All 6 finance teams were trained internally over 3 months and externally with vendor-led technical sessions.

On the other hand, the commercial bank took a middle road of using a robotic processes automation (RPA) and AI-informed risk analytics-driven process. The bank also adopted Oracle Financial Services Analytical Applications (OFSAA) for decision-support services like credit risk assessment and reconciliations. RPA bots decreased matching of transactions time by 55% and compliance reporting time by 40% (Latif et al., 2023; al-Nuaimi et al., 2023). These enhancements were cited by interviewees as being major factors in timely lending decisions, and operational risk management.

Emphasis on strengthening organizations and reorientation towards strategy Both organizations strongly emphasized the need for capacity building and strategic alignment. Monthly workshops on data visualization tools such as Power BI or Tableau made mid-level managers more adept at interpreting data, the bank found. The company established KPI-driven dashboards that were central to its strategic objectives, thus institutionalizing transparency and decentralizing decision-making (Chaudhry & Javaid, 2024; Kanaparthi, 2024). These instances support the significance of organizational learning and digital maturity to leverage the financial value of AIS in the Pakistani setting (Shahzad et al., 2021; Ganiyu et al., 2023).

**Findings**

**Table 1: Descriptive Statistics of Respondents (N = 380)**

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	260	68.4%
	Female	120	31.6%
Organization Type	Manufacturing	140	36.8%
	Banking	130	34.2%
	Service	110	28.9%
Position	Finance Manager	170	44.7%
	Accountant	130	34.2%
	IT/AIS Officer	80	21.1%
Years of Experience	Less than 5 years	90	23.7%
	5-10 years	160	42.1%
	More than 10 years	130	34.2%

The demographic findings show that most of AIS users and financial decision makers in the sample are male professionals who work mainly in the manufacturing and banking industries. The majority

of respondents are in finance-related positions and have some level of experience, indicating that the survey sample is highly knowledgeable with a relatively mature respondent base.

**Table 2: Adoption of AIS Features Across Organizations**

AIS Feature	Fully Implemented (%)	Partially Implemented (%)	Not Implemented (%)
Real-time Financial Reporting	58.9	27.1	14.0
Data Visualization Dashboards	66.3	21.8	11.9
Integration with ERP	61.6	24.5	13.9
Automated Budgeting and Forecasting	52.4	30.5	17.1
Cloud-based AIS	47.6	31.6	20.8

Robust adoption of advanced AIS features such as real-time reporting and ERP integration (with the usage rates to be 90% e 69% respectively), Netemeyer, Boles and McMurrian [83] revealed the recognition in usage of AIS features among Pakistani organizations towards achieving digital

maturity. Nonetheless, a potentially lower penetration of cloud technologies indicate continued infrastructure and cyber-security issues, which might also signify reluctance among companies to move their entire technology stack in the cloud.

**Table 3: Perceived Impact of AIS on Financial Decision-Making (Likert Scale: 1 = Strongly Disagree, 5 = Strongly Agree)**

AIS Decision-Support Indicators	Mean	Std. Deviation
AIS improves the speed of decision-making	4.28	0.74
AIS increases decision accuracy	4.36	0.63
AIS helps in forecasting and budget planning	4.22	0.68
AIS supports timely risk identification	4.19	0.66
AIS aligns decisions with organizational strategy	4.10	0.70

Respondents believe AIS has beneficial effects on several dimensions of financial decision-making, but

decision improvements appear most evident in both accuracy and speed. This indicates that technological

improvement in AIS is successfully being utilized in improving financial analysis, forecast, as well as strategic alignment of the organization.

**Table 4:** Regression Analysis – AIS Features Predicting Financial Decision Effectiveness

Predictor Variable	$\beta$	Std. Error	t-value	p-value
Real-time Reporting	0.305	0.052	5.87	<0.001
Data Visualization Dashboards	0.241	0.047	5.13	<0.001
Automated Forecasting	0.198	0.051	3.88	<0.001
ERP Integration	0.174	0.056	3.11	0.002
Cloud-Based AIS	0.142	0.058	2.45	0.015

The results of the regression analysis shows that each of the five AIS characteristic has a significant impact on the financial decision-making effectiveness and that real time reporting is a leading influencer.

The statistically significant p-values for each predictor further confirm that investing in these AIS features can result in quantifiable enhancement of decision support.

**Table 5:** Correlation Matrix Between AIS Dimensions and Decision-Making Variables

Variables	1	2	3	4	5
1. Real-time Reporting	1				
2. Decision Accuracy	0.61**	1			
3. Decision Speed	0.57**	0.68**	1		
4. Forecasting Capability	0.54**	0.63**	0.61**	1	
5. Risk Management Improvement	0.49**	0.58**	0.55**	0.62**	1

Note:  $p < 0.01$

Correlation analysis indicates that the dimensions of AIS, i.e. real-time reporting and forecasting and risk management, correlate strongly and positively with decision accuracy and speed. These results highlight

the complementarity between solid AIS architecture and sound financial decision-making and confirm the importance of their strategic cooperation in well-informed financial planning.

**Table 6:** Thematic Analysis from Interview Data (N = 20 Respondents)

Theme	Frequency (n)	Representative Quote
Strategic Alignment via AIS	14	“AIS has helped align our decisions with KPIs and growth targets.”
Enhanced Transparency and Accountability	16	“Now decisions are traceable; we know who approved what and why.”
Barriers to AIS Adoption	11	“Lack of technical training delayed our implementation.”
Impact on Budgeting and Forecasting	15	“Forecasts are now AI-assisted and more accurate than ever.”
User Resistance and Change Management	12	“Convincing senior managers to adopt new systems was difficult.”

Interviews provide thematic explanations on how AIS improves strategic fit, transparency, and accuracy of forecasts across firms. However, common threads of user resistance and technical training deficiencies indicate that more robust change management and ongoing capacity building are required for the successful implementation of AIS.

**Discussion**

The results of the current study indicate the significance of modern Accounting Information Systems (AIS) in improving financial decision-making levels in the organizations of Pakistan. AIS-related technological innovations have been increasingly adopted by organizations which seek to become strategically nimble and operationally

efficient, indicated by the high contains of adoption for real-time reporting, data visualization and ERP integration. These findings are consistent with prior international studies that found AIS use was associated with enhanced financial accuracy, reporting timing, and budgeting (Elbashir et al., 2022; Khan & Ahmad, 2023).

AIS using organizations revealed better capabilities of forecasting, risk management, and decision focus confirming the earlier inference by Yusuf et. (2021) who stressed the transformational aspect of AIS to internal control and decision relevance. Specifically, integration of AIS with organization-level systems such as ERP was observed to minimize data floes, fix human lapses and offer unified spaces for real-time data analytics (Nazir et al., 2022). This is in Harmony with the increasing literature which emphasizes the complementarity of AIS and integrated management systems, in time-critical decision-making environment (Mohsin et al., 2023; Tao & Xu, 2024). In addition, the findings of the regression and correlation analysis supported that access to real-time reporting and data visualization are the greatest predictors of financial decision-making success. This finding might corroborate the claims of Uddin and Sharif (2023) that the visual analytics in-built in AIS support proactive decisions making and enhance communication among stakeholders. Again, those companies with automated forecasting and cloud-based AIS had greater confidence in dealing with complex, data-driven financial planning (Raza et al., 2024).

The qualitative results from the finance leadership and IT perspectives are consistent with the quantitative findings and emphasize important me s such as increased transparency, greater forecast accuracy, and challenges in user training and change management, which can also play a role in determining transformation outcomes. This convergence of mixed-method allows a comprehensive understanding of AIS not only acting as a tool in decision-making, but also portrays the cultural and infrastructural barriers that need to be addressed (Shahid & Hanif, 2021; Ghaffar et al., 2025). The importance of change management became evident correlating well with Rehman and Malik (2022) findings which emphasized the

position of leadership in overcoming resistance to the implementation of AIS.

Furthermore, it has been indicated that organizational performance does not depend only on AIS technology, but also on users' capability and motivation to use these technologies. The behavioral dimension of AIS usage, as mentioned in Farooq et. (2023) writes that user education, management support and user incentives are important factors to fully realize the benefits. This exemplifies the socio-technical orientation of AIS in that technology is not the only issue faced by organizations in an AIS environment.

Lastly, the empirical evidence at large confirms that AIS innovations act as an eases towards financial decision-making in the Pakistani setting, although there are regional infrastructural constraints. As per the research the process find to be effective in forwarding looking risk facilitation capable enough for demonstrating sufficient support for financial decisions based on data, in timely manner, thus contributing to strategic competitive advantage of an organization, affirming the arguments of Alvi and Mehmood (2023) and Usman et al. (2024) within the South Asian organizational context.

#### Future Direction

Longitudinal plans to evaluate the temporal effects of AIS on financial decision-making should be considered for future research. Further, with AIS technologies advancements incorporating into blockchain, artificial intelligence and machine learning, it might be an area of interest for future researchers to investigate how these advanced level IT tools can transform the accounting practice in developing markets, such as in Pakistan. Secondly, by comparing public against private sector adoption or sector-specific AIS impacts (eg, in banking versus health) greater understanding into tailored decision-making responses might be gained.

#### Limitations

Although the study is informative, the cross-sectional nature does not allow for follow up measurements over time. The sample is further limited to a sample of organizations located in urban centers and may not be generalizable to all Pakistan based organizations or to rural or small medium enterprises

in Pakistan. Moreover, self-report measures can lead to social desirability bias, and the qualitative data provide rich information, but are specific for a relatively small number of workers only.

### Conclusion

This research highlights the importance of AIS in the improvement of financial decision-making in Pakistani firms. The data also shows that using methods such as real-time reporting, data dashboards, ERP systems, and forecasting tools, can bring increased accuracy, speed and strategic alignment to finance-led initiatives. As more and more enterprises adopt technological platforms, success will depend on users' competency, preparedness for change, and the level of support from leadership. Thus, the cultivation of a culture of technical adaptation and continued AIS innovation are vital for the sustained improvement of decision making.

### REFERENCES

- Ahmed, T., & Muhammad, K. (2023). Adoption of ERP-based accounting systems in SMEs: Evidence from Pakistan. *Journal of Financial Reporting and Accounting*, 21(2), 118–135. <https://doi.org/10.1108/JFRA-12-2022-0312>
- Al-Nuaimi, M. M., Latif, K. F., & Akhtar, M. I. (2023). The impact of automation in AIS on organizational efficiency: A case study from banking. *Journal of Accounting in Emerging Economies*, 13(1), 122–145. <https://doi.org/10.1108/JAEE-07-2022-0193>
- Alshirah, M., Al-Shaer, H., & Ibrahim, H. (2022). The influence of accounting information system adoption on business performance amid COVID-19. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(4), 188. <https://doi.org/10.3390/joitmc8040188>
- Alvi, S., & Mehmood, M. (2023). Integration of ERP and AIS in enhancing decision support systems in Pakistan. *Journal of Accounting and Business*, 12(2), 33–49.
- Bi, S., & Bao, W. (2024). Innovative application of artificial intelligence technology in bank credit risk management. arXiv. <https://arxiv.org/abs/2404.18183>
- Chaudhry, M. S., & Javaid, M. U. (2024). The digital transformation of accounting functions in Pakistan: Challenges and opportunities. *Pakistan Journal of Commerce and Social Sciences*, 18(1), 45–58.
- Elbashir, M. Z., Collier, P. A., & Davern, M. J. (2022). The role of advanced AIS in enabling organizational agility. *Accounting, Organizations and Society*, 98, 101290.
- Farooq, A., Tariq, M., & Sajid, H. (2023). Behavioral impact of accounting information systems on managerial decision-making. *Pakistan Journal of Management Sciences*, 18(3), 111–129.
- Ganiyu, M. A., Al-Baidhani, A. M., & Khan, N. M. (2023). Strategic role of AIS in financial decision-making: An emerging economy perspective. *Accounting Research Journal*, 36(2), 200–219. <https://doi.org/10.1108/ARJ-01-2023-0041>
- Ghaffar, R., Ahmed, N., & Fatima, S. (2025). Barriers to AIS adoption in SMEs: A case of developing economies. *South Asian Journal of Accounting and Finance*, 9(1), 78–95.
- Hossain, M. S., Ahmed, R., & Khan, S. H. (2023). A mixed-methods analysis of accounting digitalization in developing countries. *Global Business Review*, 24(3), 451–472. <https://doi.org/10.1177/09721509231120015>
- IFAC. (2023). Spearheading the future – the importance of cost and management accounting. International Federation of Accountants.
- Kanaparthy, V. (2024). Exploring the impact of blockchain, AI, and ML on financial accounting efficiency and transformation. arXiv. <https://arxiv.org/abs/2401.15715>
- Kanaparthy, V. (2024). Exploring the impact of blockchain, AI, and ML on financial accounting efficiency and transformation. arXiv preprint. <https://arxiv.org/abs/2401.15715>
- Khan, F., & Ahmad, R. (2023). Digital accounting systems and financial transparency: Empirical evidence from Pakistan. *International Journal of Finance & Accounting*, 15(1), 44–58.

Khan, Y., Afridi, F. A., Mumtaz, M., Shad, F., & Iqbal, A. (2022). The role of accounting information systems on SMEs' performance in Pakistan. *Competitive Social Science Research Journal*, 3(2), 199-214.  
<https://doi.org/10.56876/cssrj.v3i2.107>

