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Strategic Leadership, Data Governance and AI Adoption Readiness – Qatar

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ABSTRACT: Strategic leadership and data governance both raise institutional readiness, and readiness carries their effect on artificial intelligence (AI) adoption in Qatari government institutions. This study examines how strategic leadership (future vision, organizational culture, human resource empowerment) and data governance (data quality, information security and confidentiality, policies and procedures) shape organizational readiness (organizational, human, technical) for AI adoption, and tests readiness as a mediator. A cross-sectional survey of 384 employees from ministries, authorities and other government bodies was collected through stratified random sampling and analysed with SPSS and AMOS (regression, structural equation modelling, 5,000-sample bootstrap). Strategic leadership ($\beta = 0.640$) and data governance ($\beta = 0.661$) each had a significant positive effect on readiness, and readiness significantly predicted AI adoption. Bootstrap tests confirmed significant indirect effects of strategic leadership (0.205) and data governance (0.213) on adoption through readiness. The direct path from strategic leadership to adoption was not significant, consistent with full mediation, whereas data governance retained a significant direct effect, indicating partial mediation. Human readiness scored lowest among readiness dimensions. The findings position readiness as the mechanism converting leadership and governance capabilities into AI adoption in the public sector.

1. INTRODUCTION

Contemporary organizations operate in an environment reshaped by digitalization, globalization and the rapid growth of data. The VUCA framework (volatility, uncertainty, complexity, ambiguity) describes the turbulence organizations face (Abu Aliwa, 2024), and the more recent BANI framework (brittle, anxious, non-linear, incomprehensible) captures the added pressure of digital disruption and data overload, calling for flexible capabilities and leaders able to handle unpredictable change (Chandaria, 2024). Traditional leadership styles built on hierarchical control and standardized procedures worked well under relative stability and a slow pace of technological change (Ashour, 2019), but their centralization and rigidity can limit initiative, innovation and the speed of adaptation that rapid change demands (Ghazi, 2022).

Strategic leadership has emerged as a style suited to this setting. Strategic leaders formulate a clear vision, anticipate opportunities and threats, build a culture that supports change, empower human resources and align human, technological and material resources with external developments. Their influence extends beyond daily operations to reducing resistance to change and directing human capital toward effective use of new technologies (Al-Dosari, 2024; Ireland & Hitt, 2005).

In parallel, the volume, variety and velocity of organizational data have grown until data became a strategic resource for decision-making. Yet the mere availability of data does not generate value: benefits depend on its accuracy, integration, timeliness, reliability and security (Ait Talib, 2022). Data governance has therefore gained prominence as the framework of policies, standards, roles and responsibilities governing how data is managed, used and protected, ensuring a trustworthy information environment for decision-making and the use of emerging technologies (Al-Dhib & Ben Qirat, 2025; Khatri & Brown, 2010).

AI has become a strategic force reshaping work, decision-making and organizational performance. Its applications can improve operational efficiency, automate complex processes, reduce human error and analyse large volumes of data to generate predictive insights that support evidence-based decisions (Information and Decision Support Center, 2026). However, adopting AI is not merely a technical decision about acquiring software. It is a broader organizational transformation that requires an adequate level of institutional readiness: the extent to which an organization is prepared, organizationally, humanly and technically, to absorb AI and integrate it into its operations (Alsheibani et al., 2018). Readiness therefore represents the link through which leadership orientations and data governance practices become an actual capability to adopt AI.

1.1 Problem statement and research gap

The literature has addressed strategic leadership, data governance, readiness and AI adoption, but mostly as separate topics or in pairwise relationships. What is missing is an integrated model that tests how strategic leadership and data governance jointly build organizational readiness, and whether readiness explains their effect on AI adoption. This gap is particularly relevant for government institutions in Qatar, where national directions toward digital transformation, including Qatar National Vision 2030 and the 2019 National AI Strategy, call for empirical evidence on the organizational conditions that enable AI adoption.

1.2 Objectives and research questions

The study aims to (a) measure the effect of strategic leadership, through future vision, organizational culture and human resource empowerment, on organizational readiness for AI adoption; (b) measure the contribution of data governance, through data quality, information security and confidentiality, and policies and procedures, to readiness; and (c) test the mediating role of readiness in the relationship between both independent variables and AI adoption. Accordingly, the main research question is: what is the effect of strategic leadership and data governance on building organizational readiness for AI adoption in Qatari government institutions? Three sub-questions address the effect of strategic leadership, the effect of data governance, and the mediating role of readiness.

1.3 Contribution

Theoretically, the study tests a single model combining two independent variables, one mediator and one dependent variable in a Gulf public-sector context. Practically, it offers field evidence that can help decision-makers prioritize vision, culture, empowerment, data quality and security, and policy development when planning for AI adoption.

2. LITERATURE REVIEW, THEORETICAL FRAMEWORK AND HYPOTHESES

2.1 Theoretical foundations

Three theoretical lenses frame the study. First, Weiner's (2009) theory of organizational readiness for change treats readiness as a shared psychological state reflecting members' commitment to implement change and their collective confidence in their ability to do so. It depends not only on resources and technology but also on employees' perception of the importance of change and the presence of supportive organizational conditions. Second, diffusion of innovations (Rogers, 2003) and the technology–organization–environment (TOE) framework (Tornatzky & Fleischer, 1990) explain that adoption of technological innovations at the organizational level is shaped by technological, organizational and environmental contexts. Third, Lewin's three-stage model of change (unfreezing, changing, refreezing) shows that introducing technology succeeds only when people and culture are prepared, resistance is reduced and new practices are stabilized (Saib, 2018; Qurayshi, 2021). Resistance to change is a recognized cause of failure in more than a third of development strategies (Al-Husban, 2023), and it is especially visible when digitalization alters tasks and raises concerns among employees about skills and job security (Sharaf Al-Din & Boulhouach, 2025). These lenses together suggest that technology alone does not explain adoption: leadership and governance conditions must first be converted into organizational readiness.

2.2 Strategic leadership and organizational readiness

Strategic leadership is the ability to anticipate, envision and maintain flexibility while empowering others to initiate strategic change (Al-Dawi, 2019). It differs from traditional leadership by focusing on the future, relying on trust and influence rather than hierarchical authority, and challenging the status quo (Mohamed, 2019). The study adopts three dimensions found in the literature (Al-Dawi, 2019; Al-Ajili, 2023; Al-Bawarid, 2025): future vision, organizational culture and human resource empowerment.

Empirical work links these dimensions to technological change. Dahinin (2024), studying a Saudi hospital, found that clear leadership vision and employee empowerment were the factors most influential in successful digital transformation. Al-Shalabi (2023) reported a strong positive effect of strategic leadership on digital governance in Jordanian private universities, and Zabi (2021) showed that strategic leadership overcomes administrative obstacles to digital transformation through clear vision and allocation of technical and human resources. Qurmash (2020) found strategic leadership to be the main driver of the transition to a smart organization, and Ayyash (2024) found that vision and innovation of digital leaders improve the speed and quality of digital policy implementation. Alasqah and Noureldin (2025) showed that digital organizational culture mediates the relationship between digital leadership and innovation, while Alharbi (2025) reported a positive association between transformational leadership and AI adoption in Saudi organizations. Studies in Qatar and the Gulf, such as Alshamsi et al. (2025) in the UAE public sector, point to positive attitudes toward digitalization but uneven implementation across agencies.

These studies mostly examine digital transformation, digital governance or performance rather than readiness for AI adoption. Conceptually, however, a clear vision orients priorities and resource allocation (organizational and technical readiness), an innovation-oriented culture encourages learning and acceptance of change, and empowerment builds the skills and confidence employees need (human readiness). Hence:

- **H1:** Strategic leadership positively affects organizational readiness for AI adoption (H1.1 future vision; H1.2 organizational culture; H1.3 human resource empowerment).

2.3 Data governance and organizational readiness

Data governance is the exercise of decision-making authority and control over data-related matters, and includes the policies, procedures, structures, roles and responsibilities that govern data sharing, decision rights and accountability (Al-Areimi, 2020; Al-Abdaliyah, 2022). In the public sector it underpins digital services and cross-agency data exchange and requires clear frameworks for ownership, quality, protection and access (Belarbi, 2020). Qatar's National Data Policy and National Data Program reflect a move toward unified data management practices that improve quality, security and reliability and prepare the institutional environment for emerging technologies including AI (National Planning Council, 2024).

The study uses three dimensions: data quality, information security and confidentiality, and policies and procedures. Al-Abdaliyah (2024) found, in Omani government institutions, that data governance guarantees data quality and the soundness of decisions based on it. Khatib (2024) showed that AI-based governance efficiency requires accurate data and strong cybersecurity, and Al-Matri (2025) highlighted the role of accurate data in ethical decisions and in limiting algorithmic bias. Al-Majali (2026) and Al-Shammari (2023) stressed the protective role of governance and legal and regulatory controls for privacy and accountability in automated decision-making, while Furayjat (2025) called for ethical, legal and institutional frameworks governing AI use. Al-Jadawi (2023), in a survey of 384 Saudi IT executives, found that explainable AI partially mediates the relationship between data governance and organizational performance.

Again, most of these studies address governance as an outcome of AI or as a legal framework, not as an antecedent of readiness. Conceptually, policies and procedures clarify roles and oversight (organizational readiness), security awareness and responsible data handling build employee capability (human readiness), and high-quality, secure data provides the technical input AI systems require (technical readiness). Hence:

- **H2:** Data governance positively affects organizational readiness for AI adoption (H2.1 data quality; H2.2 information security and confidentiality; H2.3 policies and procedures).

2.4 Organizational readiness and AI adoption

Organizational readiness reflects the integration and alignment of an organization's structural components, making it capable of absorbing new strategic directions (Soliman & Al-Shahat, 2025). It is not limited to material resources but includes organizational responsiveness, leadership flexibility and employees' acceptance of change (Al-Jatlawi & Boushneef, 2025). The study adopts three dimensions (Badr, 2017; Al-Khasawneh, 2019; Soliman & Al-Shahat, 2025): organizational readiness (structure, top-management support, resources, monitoring mechanisms), human readiness (knowledge, skills and willingness to learn) and technical readiness (infrastructure, system integration, platforms and scalability).

AI adoption is the process through which an organization moves from recognizing the potential of AI to applying and integrating algorithm- and data-based systems in its operations and decision-making with varying degrees of autonomy (OECD,

2024; Rogers, 2003). Al-Omari (2024), surveying 242 Saudi public-sector employees, assessed readiness across leadership and strategy, culture, data, technology and talent, and found moderate adoption challenges, chiefly human ones. Sindi and Dawoodah (2025) identified digital readiness as a main requirement for adopting AI in Kurdistan universities, Al-Qahtani (2025) stressed that organizational and human readiness precede technical application, and Nabhan (2025) found digital readiness to be the main driver of AI adoption in Palestinian SMEs, with strategic leadership moderating the effect. Al-Obaidi (2025) documented uneven government AI readiness across Arab countries linked to digital maturity.

2.5 Hypothesized mediation and research model

Readiness is therefore expected to be the path through which strategic leadership and data governance reach AI adoption. The proposed model includes strategic leadership and data governance as independent variables, readiness as mediator and AI adoption as dependent variable. The model was specified with paths running through readiness, and the statistical tests determine whether mediation is full or partial.

- **H3:** Organizational readiness mediates the relationships between strategic leadership and data governance, on the one hand, and AI adoption, on the other.

3. METHODOLOGY

3.1 Research design

The study follows a quantitative, descriptive-analytical and cross-sectional design. This design suits the aim of describing practices of strategic leadership, data governance, readiness and AI adoption as perceived by employees and testing the hypothesized direct and indirect relationships among them.

3.2 Population and sample

The population comprises employees of government institutions in Qatar, including ministries, authorities and other government bodies, at all job and administrative levels. Because the population is large and institutionally diverse, stratified random sampling was used to ensure representation of institution types and job levels. The target sample size was 384, determined with the Krejcie and Morgan (1970) formula at a 95% confidence level and a 5% margin of error, and 384 valid responses were analysed.

Participation was voluntary and anonymous. Respondents were informed of the purpose of the study, assured of confidentiality and told that completing the questionnaire implied informed consent. Results are reported in aggregate only.

Table 1. Sample characteristics (N = 384)

Characteristic	Category	n	%
Gender	Male	198	51.56
	Female	186	48.44
Age	Under 30	112	29.17
	30 to under 40	148	38.54
	40 to under 50	96	25.00
	50 and over	28	7.29
Education	Diploma or less	42	10.94
	Bachelor's	186	48.44
	Master's	118	30.73
	Doctorate	38	9.90
Experience	Under 5 years	88	22.92

Characteristic	Category	n	%
	5 to under 10 years	124	32.29
	10 to under 15 years	102	26.56
	15 years and over	70	18.23
Job level	Senior leadership	62	16.15
	Supervisory	118	30.73
	Executive staff	204	53.13
Institution type	Ministry	156	40.63
	Authority	128	33.33
	Other government institution	100	26.04
Prior digital transformation / AI project	Yes	214	55.73
	No	170	44.27

Most respondents were under 40 years old (67.7%), held at least a bachelor's degree (89.1%) and had five or more years of experience (77.1%), and more than half had taken part in a digital transformation or AI project.

3.3 Instrument

The questionnaire had four parts: demographic and job characteristics, strategic leadership, data governance, and organizational readiness together with AI adoption. It contained 43 items rated on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Items were developed from the literature and adapted to the Qatari government context rather than copied from a single scale.

Table 2. Instrument structure and sources

Construct	Dimension	Items	Main sources
Strategic leadership	Future vision	4	Sashkin (1996); Hitt (2017)
	Organizational culture	4	Denison (2000); Cameron & Quinn (2011)
	Human resource empowerment	4	Conger & Kanungo (1988); Spreitzer (1995)
Data governance	Data quality	4	Khatri & Brown (2010); Wang & Strong (1996); DAMA International (2017)
	Information security and confidentiality	4	Bulgurcu et al. (2010); OECD (2024)
	Policies and procedures	4	DAMA International (2017); Data Governance Institute (2004)
Organizational readiness	Organizational, human and technical (4 items each)	12	Weiner (2009); Shea et al. (2014)
AI adoption	Single dimension	7	Rogers (2003); Tornatzky & Fleischer (1990); OECD (2024)

Example items are: "Leadership adopts a clear future vision for using AI technologies" (vision); "The organization encourages innovation in developing and using AI technologies" (culture); "Leadership provides training programs to develop employees' AI skills" (empowerment); "The data used in the organization are accurate" (quality); "The organization applies effective

controls to protect data from unauthorized access" (security); "The organization adopts written policies for data management and use" (policies); "There is clear top-management support for adopting AI technologies" (readiness); and "The organization applies AI technologies in its main operations or services" (adoption).

For interpretation, the range of the scale (5 − 1 = 4) was divided by five to obtain an interval length of 0.80: 1.00–1.80 very low, 1.81–2.60 low, 2.61–3.40 moderate, 3.41–4.20 high, and 4.21–5.00 very high.

3.4 Validity and reliability

Internal-consistency validity was assessed with Pearson correlations between each item and its dimension; all correlations were positive and significant at $p < 0.001$. Reliability and convergent validity were established as shown in Table 3: Cronbach's alpha exceeded 0.88 for every construct (0.896 for the whole instrument), composite reliability exceeded 0.70 and average variance extracted exceeded 0.50.

Table 3. Reliability and convergent validity

Construct	Items	Cronbach's α	CR	AVE
Strategic leadership	12	0.91	0.92	0.74
Data governance	12	0.93	0.94	0.79
Organizational readiness	12	0.88	0.89	0.67
AI adoption	7	0.94	0.95	0.76

3.5 Data analysis

Data were analysed with SPSS 28 and AMOS 26. Frequencies and percentages described the sample, and means, standard deviations and relative weights described responses. Pearson correlations showed the direction and strength of relationships. Simple and multiple regression tested the effects of strategic leadership, data governance and their dimensions on readiness, reporting R^2, standardized coefficients, t and F statistics and significance levels. Structural equation modelling in AMOS tested the structural model, and mediation was assessed by estimating direct, indirect and total effects with bootstrapping (5,000 resamples, 95% confidence interval). An indirect effect was considered significant when its confidence interval did not include zero.

4. RESULTS

4.1 Descriptive statistics

Respondents rated all four constructs high on the five-point scale (Table 4). Data governance obtained the highest mean (4.03), followed by strategic leadership (3.99), organizational readiness (3.88) and AI adoption (3.83), a pattern consistent with practices and enablers being more developed than actual AI use.

Table 4. Means, standard deviations and relative weights

Construct / dimension	Mean	SD	Relative weight (%)	Level
Strategic leadership	3.99	–	79.8	High
Future vision	4.01	0.97	80.2	High
Organizational culture	3.91	0.87	78.2	High
Human resource empowerment	4.03	0.98	80.6	High
Data governance	4.03	–	80.6	High
Data quality	4.03	0.94	80.6	High
Information security and confidentiality	4.01	0.86	80.2	High

Construct / dimension	Mean	SD	Relative weight (%)	Level
Policies and procedures	4.03	0.90	80.6	High
Organizational readiness	3.88	0.59	77.6	High
AI adoption	3.83	0.84	76.6	High

At item level, the highest-rated statements concerned having an organizational structure that supports AI initiatives (M = 4.16, readiness), the timely availability of data (M = 4.15, data quality) and measures to reduce cyber risks related to data (M = 4.15, security). Within readiness, the organizational dimension scored highest (M = 4.07), followed by technical (M = 3.86) and human readiness (M = 3.72). The lowest item in the whole instrument was employees' willingness to learn new AI-related skills (M = 3.48, SD = 1.22), although it still fell in the high range. Within adoption, using AI outputs to support decisions scored highest (M = 3.92), and expanding AI use according to future needs scored lowest (M = 3.67). Strategic leadership and data governance were strongly correlated (r = 0.685).

4.2 Effects on organizational readiness (H1 and H2)

Simple regression analyses show that strategic leadership and data governance, and each of their dimensions, significantly and positively affect organizational readiness (Table 5). Strategic leadership explained 41.0% of the variance in readiness and data governance 43.7%. Among leadership dimensions, organizational culture had the strongest effect (β = 0.610), followed by human resource empowerment (β = 0.570) and future vision (β = 0.520). Among governance dimensions, policies and procedures (β = 0.630) and information security and confidentiality (β = 0.590) were stronger than data quality (β = 0.480). All hypotheses H1, H1.1–H1.3, H2 and H2.1–H2.3 were supported.

Table 5. Simple regression of organizational readiness (N = 384, df = 1, 382)

Hypothesis	Predictor	R	R^2	F	β	t	p	Decision
H1	Strategic leadership	0.640	0.410	226.17	0.640	14.88	0.001	Supported
H1.1	Future vision	0.520	0.270	129.33	0.520	11.30	0.001	Supported
H1.2	Organizational culture	0.610	0.372	209.85	0.610	14.49	0.001	Supported
H1.3	Human resource empowerment	0.570	0.325	183.91	0.570	13.56	0.001	Supported
H2	Data governance	0.661	0.437	258.08	0.661	16.12	0.001	Supported
H2.1	Data quality	0.480	0.230	101.41	0.480	10.07	0.001	Supported
H2.2	Information security and confidentiality	0.590	0.348	201.27	0.590	14.19	0.001	Supported
H2.3	Policies and procedures	0.630	0.397	243.06	0.630	15.59	0.001	Supported

4.3 Structural model and mediation (H3)

In the structural model, organizational readiness had a significant positive effect on AI adoption (β = 0.624, p < 0.001). The direct path from strategic leadership to AI adoption was not significant (p = 0.147), whereas the direct path from data governance to AI adoption remained significant (β = 0.345, p = 0.018).

Bootstrap analysis with 5,000 resamples confirmed significant indirect effects through readiness for both independent variables (Table 6). For strategic leadership, a significant indirect effect combined with a non-significant direct effect is consistent with full statistical mediation. For data governance, a significant indirect effect combined with a significant direct effect indicates partial mediation. H3 was therefore supported through both mediating paths.

Table 6. Indirect effects and bootstrap results (5,000 resamples)

Path	Indirect effect	95% CI	Direct effect	Mediation
Strategic leadership → Readiness → AI adoption	0.205	[0.148, 0.227]	Not significant (p = 0.147)	Full
Data governance → Readiness → AI adoption	0.213	[0.134, 0.382]	0.345 (p = 0.018)	Partial

The model explained 54.1% of the variance in organizational readiness ($R^2 = 0.541$) and 46.1% of the variance in AI adoption ($R^2 = 0.461$), indicating substantial explanatory power.

5. DISCUSSION

5.1 Strategic leadership and readiness

Strategic leadership significantly predicted organizational readiness ($\beta = 0.640$; $R^2 = 0.410$), and all three dimensions contributed. This suggests that leaders influence readiness not by issuing technology directives but by creating the conditions that allow change: setting direction and priorities, directing resources toward them, encouraging innovation and building employee capability. A clear vision places AI inside the long-term strategic plan rather than treating it as a temporary reaction to technological trends, which agrees with the importance of vision found by Dahinin (2024) and Ayyash (2024). The effect of organizational culture, the strongest among the three dimensions, is consistent with evidence that culture shapes employees' attitudes toward change, learning and innovation (Alasqah & Noureldin, 2025; Murire, 2024). Empowerment matters because vision and policy do not become practical readiness unless employees have the knowledge, skills, authority and support to work with new applications, in line with the emphasis on talent in Al-Omari (2024) and on empowerment in Dahinin (2024).

5.2 Data governance and readiness

Data governance had a slightly larger effect on readiness ($\beta = 0.661$; $R^2 = 0.437$). Governance gives AI initiatives their informational foundation: AI systems depend on the quality of the data they use, and inaccurate, incomplete or outdated data produce unreliable outputs and limit the organization's willingness to rely on intelligent applications (Khatib, 2024; Al-Matri, 2025). The effect of information security and confidentiality reflects that wider use of AI increases the exposure of institutional, personal and operational data. Without clear safeguards, trust in intelligent systems declines and the organization may hesitate to expand their use, a concern echoed by Al-Majali (2026) and Al-Shammari (2023). Policies and procedures, which showed the strongest effect among the governance dimensions, unify practices across units, clarify responsibilities and offer a reference for decisions on data and AI use, which agrees with the call for institutional and regulatory frameworks in Furayjat (2025) and with the role of governance in Al-Jadawi (2023).

5.3 The mediating role of readiness

The central contribution is the finding that readiness transmits the effect of leadership and governance to AI adoption, but in different ways. For strategic leadership, the indirect effect was significant (0.205) while the direct effect was not, consistent with full statistical mediation: leadership appears to influence adoption mainly by building organizational, human and technical readiness. For data governance, the indirect effect was significant (0.213) and a direct effect remained ($\beta = 0.345$), indicating partial mediation: governance may influence adoption both by strengthening readiness and by directly providing the rules and protections that make organizations willing to deploy AI. The results thus support the theoretical premise that the presence of a leadership vision or a governance framework does not by itself produce adoption; these enablers have to be converted into organizational capabilities, which echoes Weiner's (2009) view of readiness and the multidimensional readiness reported by Al-Omari (2024), Sindi and Dawoodah (2025) and Nabhan (2025).

A caveat is that the proposed model assumed paths running only through readiness. The significant direct path from data governance shows that this assumption holds for leadership but not for governance.

5.4 The adoption gap and human readiness

The mean of AI adoption (3.83) was lower than those of data governance (4.03), strategic leadership (3.99) and readiness (3.88). This gap indicates that having supportive practices does not automatically translate into equivalent levels of actual AI

application, which requires completing organizational, human and technical requirements and turning them into operational capability. Within readiness, the human dimension (M = 3.72) scored below the organizational (4.07) and technical (3.86) dimensions, and the item on employees' willingness to learn new AI skills was the lowest in the survey (M = 3.48). This is consistent with studies reporting that human challenges are the most prominent in AI adoption (Al-Omari, 2024) and with literature on employee resistance when technology changes tasks and raises concerns about skills and job security (Al-Husban, 2023; Qurayshi, 2021).

5.5 Theoretical and practical implications

Theoretically, the study integrates leadership, data governance, readiness and adoption in one tested model, positions readiness as the mechanism that connects organizational enablers with adoption, and shows that the mediation pattern differs between a leadership enabler and a governance enabler. It extends readiness theory (Weiner, 2009) and the organizational context of the TOE framework to AI adoption in a Gulf public-sector setting.

For practice, four implications follow.

- **Anchor AI in strategy.** Government institutions should include AI explicitly in long- and medium-term strategic plans, with clear communication of future direction to employees, rather than running isolated technical pilots.
- **Measure readiness before projects.** Periodic assessment of organizational, human and technical readiness before launching AI initiatives can reveal gaps early.
- **Invest first in human readiness.** Continuous training in AI, data analysis and digital skills, reskilling programmes and employee participation in digital projects can raise the weakest readiness dimension and increase willingness to learn.
- **Formalize data governance as part of AI planning.** Institutions should define roles, responsibilities and access rights, strengthen information security, review policies periodically and enforce compliance, since the lowest-rated governance item concerned actual application of policies (M = 3.88). Cooperation among technical, administrative and legal units, and human oversight of AI used in decision-making, are advisable.

6. LIMITATIONS, FUTURE RESEARCH AND CONCLUSION

6.1 Limitations

The study relies on cross-sectional data collected at one point in time, so it supports statistical relationships but cannot establish causal ones. The questionnaire captures respondents' perceptions, which may be affected by self-assessment bias. The sample consists of employees in Qatari government institutions, so results cannot be generalized automatically to all public bodies, to the private sector or to other countries. Levels of leadership, governance and readiness may also differ across institutions according to their resources, technical capacity, culture and activities.

6.2 Future research

Future studies could test the model in other sectors such as higher education, health, finance and the private sector, and compare public and private organizations. Longitudinal or mixed-methods designs would allow stronger inference about causality and richer explanation of the partial mediation found for data governance. Research could examine the dimensions of strategic leadership and data governance as separate independent variables, study human readiness for AI in more depth given its lower score, and test additional mediators or moderators, such as innovation culture, organizational innovation and trust in technology.

6.3 Conclusion

This study shows that strategic leadership and data governance are both significant antecedents of organizational readiness for AI adoption in Qatari government institutions, and that readiness significantly transmits their effects to AI adoption. Readiness fully mediates the effect of strategic leadership and partially mediates that of data governance. Governments that wish to adopt AI should therefore treat it as a multidimensional institutional process: combine a clear strategic vision and an innovation-supportive culture with well-defined, secure and high-quality data governance, and convert these enablers into organizational, human and technical capabilities, with particular attention to employees' skills and willingness to learn.

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