



EXPERIENCES WITH THE ADOPTION OF ARTIFICIAL INTELLIGENCE IN PUBLIC INSTITUTIONS WITHIN THE ARAB SOCIETY IN ISRAEL: A QUALITATIVE STUDY OF ORGANIZATIONAL TRUST AND DECISION-MAKING DURING CRISES

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Abstract:

Artificial intelligence (AI) is reshaping public administration by enhancing efficiency, data processing, and decision-making capabilities. However, in minority governance contexts, AI implementation is not a purely technical process but a socio-organizational transformation shaped by institutional trust, linguistic accessibility, and contextual alignment. This study examines employees' experiences with AI adoption in public institutions serving the Arab society in Israel, focusing on organizational trust and crisis-related decision-making. Using a qualitative research design, data were collected over six months through semi-structured interviews with senior municipal officials, focus groups with administrative and IT professionals, and institutional document analysis. The study includes 50 participants from Arab local authorities in Israel. Data were analyzed using inductive thematic analysis to identify patterns in organizational perceptions and practices related to AI integration. Findings indicate that AI systems improve administrative efficiency and partially mitigate chronic understaffing in resource-constrained institutions. However, adoption is constrained by structural barriers, including linguistic exclusion due to Hebrew- and English-dominant interfaces, algorithmic misalignment with local administrative contexts, and limited access to culturally adapted training. Organizational trust emerged as the central mediating factor shaping AI acceptance and use, strongly influenced by leadership transparency, communication practices, and perceived institutional fairness. In crisis situations, AI enhances the speed of information processing and coordination, yet exhibits "contextual blindness," limiting its responsiveness to local socio-cultural dynamics and informal governance structures. This creates a structural tension between algorithmic efficiency and contextual intelligence, reinforcing the need for human-in-the-loop governance in public decision-making processes. The study contributes to digital governance and public administration literature by introducing two analytically grounded constructs—

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algorithmic misalignment and contextual blindness—derived from a structurally under-researched minority governance context. It further highlights organizational trust as a key explanatory mechanism in shaping AI adoption outcomes in unequal institutional environments. The findings offer implications for designing culturally responsive, linguistically inclusive, and trust-sensitive AI governance frameworks in public sector organizations.

Keywords: artificial intelligence, public administration, organizational trust, crisis management, digital transformation, algorithmic governance, Arab society in Israel, qualitative research

1. Introduction

Artificial intelligence has rapidly transformed public administration across the world. Governments increasingly adopt AI technologies to automate administrative procedures, improve public service delivery, analyze large datasets, and support strategic decision-making. These technologies have become especially valuable during crises, when public organizations must process vast amounts of information under significant time constraints. AI systems assist organizations in predicting risks, allocating resources efficiently, and supporting evidence-based policy decisions.

Despite these advantages, technological implementation alone does not guarantee organizational success. Employees remain central actors in public administration, and their perceptions of AI significantly influence implementation outcomes. Employees who trust both their organizations and AI systems are more likely to adopt new technologies effectively, whereas skepticism, uncertainty, and systemic mistrust may hinder successful implementation.

Within the Arab society in Israel, public institutions—such as local municipalities, regional centers, and public health clinics—operate in a unique social, cultural, and administrative environment. These organizations frequently face historical challenges related to resource limitations, structural digital gaps, and complex crisis management, ranging from socio-economic emergencies to intense security escalations. While national digitalization strategies in Israel have expanded during recent years, the localized deployment of these systems within Arab local authorities often lags behind the Jewish sector, creating a distinct backdrop for technological adoption.

Consequently, empirical evidence regarding employees' experiences with AI implementation in this specific peripheral context remains highly limited. This study seeks to explore employees' experiences with AI adoption in public institutions serving the Arab society in Israel while examining the critical relationship between AI implementation, organizational trust, and decision-making during acute crises.

1.1 Research Objectives

- 1) To explore Arab minority employees' experiences with artificial intelligence in public institutions in Israel.
- 2) To examine the influence of AI adoption on internal organizational trust within these institutions.
- 3) To investigate AI's contribution to municipal and administrative decision-making during localized crises.
- 4) To identify the unique socio-cultural and structural challenges associated with AI implementation in Arab local authorities.
- 5) To propose actionable recommendations for culturally responsible AI adoption in Arab public

1.2 Research Questions

RQ1: How do employees in public institutions serving Arab society in Israel experience the implementation of artificial intelligence?

RQ2: How does the implementation of artificial intelligence influence organizational trust among employees in these institutions?

RQ3: How does artificial intelligence affect decision-making processes during crises in public institutions?

RQ4: What socio-cultural, linguistic, and institutional factors shape employees' perceptions and experiences of artificial intelligence in this context?

2. Literature Review

2.1 Artificial Intelligence in Public Administration

Artificial intelligence has become one of the primary drivers of digital government. AI applications support administrative efficiency through automation, predictive analytics, intelligent document processing, and public service delivery. Recent studies demonstrate that AI enables public organizations to analyze complex information more rapidly than traditional decision-support systems, facilitating predictive governance by identifying emerging risks before they become critical (Wirtz et al., 2019). However, scholars emphasize that technological effectiveness is not universal; it depends heavily on organizational readiness, employee competence, ethical governance, and institutional trust.

2.2 Organizational Trust in Arab Local Governance

Organizational trust represents employees' willingness to rely on organizational systems, leaders, and technologies despite structural uncertainty. In Israel's public sector, trust is a multi-layered concept. Arab public institutions, particularly local municipalities, often operate under tight budgetary constraints and a history of lower public funding compared to their Jewish counterparts (Abu-Asbah & Abu-Nasr, 2022).

Researchers commonly distinguish three dimensions of organizational trust: trust in leadership, trust in procedures, and trust in technology (Mayer et al., 1995). When public organizations introduce AI, employees evaluate not only technological performance but also whether the technology is being deployed fairly or if it reflects broader institutional neglect or surveillance. Thus, institutional transparency and clear internal communication are crucial predictors of employee acceptance (Vigoda-Gadot & Mizrahi, 2021).

2.3 Artificial Intelligence and the Digital Divide in Israel

The implementation of advanced technologies in Israel occurs across a well-documented digital divide between the Jewish majority and the Arab minority (Gharrah, 2020). While the Israeli "Start-Up Nation" ecosystem drives rapid national AI adoption, public sectors serving minority populations frequently face infrastructure deficits, lower digital literacy among older staff, and a lack of localized, Arabic-accessible digital interfaces.

AI implementation may strengthen trust by reducing human bias and improving objective resource allocation (Mesch & Talmud, 2011). Nevertheless, it can severely damage trust if Arab employees perceive the algorithms as a "black box" developed by external agencies without understanding the socio-cultural nuances of Arab localities, leading to algorithmic alienation.

2.4 Crisis Decision-Making in Vulnerable Contexts

Public organizations in Arab society in Israel frequently encounter crises requiring immediate responses, including severe municipal budget deficits, infrastructure failures during winter storms, and socio-political or security crises. During emergencies, decision-makers operate under intense public pressure and systemic uncertainty.

AI supports crisis management by integrating multiple data points and prioritizing responses. However, excessive dependence on centrally managed Israeli government AI platforms may create operational friction if the data lacks accurate local context, or if algorithmic recommendations conflict with the contextual expertise of Arab public professionals on the ground.

2.5 Research Gap

While AI adoption in public administration has received increasing scholarly attention globally, limited qualitative research examines the lived experiences of minority employees within Arab public institutions in Israel. Existing local studies focus heavily on macro-level public trust or generic digital service performance (Vigoda-Gadot & Mizrahi, 2021), overlooking how structural inequalities, language barriers, and internal organizational trust intersect during digital transformation. This study addresses that gap through deep qualitative inquiry.

2.6 Theoretical Framework

This study is grounded in the Israeli public administration literature focusing on organizational trust, digital transformation, and structural inequality in public sector institutions. Rather than relying on universal behavioral models, the framework draws on context-specific scholarship that examines how public organizations in Israel adopt digital technologies under conditions of social diversity, institutional asymmetry, and varying levels of technological readiness.

A central component of the framework is the concept of organizational trust in public institutions, as developed in the Israeli context by Vigoda-Gadot and Mizrahi (2021). Their work emphasizes that trust in public organizations in Israel is multidimensional, encompassing trust in leadership, administrative procedures, and institutional fairness. In minority public institutions, particularly within Arab local authorities, trust is strongly influenced by perceptions of equality, transparency, and resource allocation. This perspective is essential for understanding how employees evaluate new technologies such as artificial intelligence within hierarchical public systems.

In addition, the framework incorporates findings from Israeli studies on the digital divide in Arab society, particularly Gharrah (2020), who highlights structural disparities in digital access, technological literacy, and language accessibility between Arab and Jewish populations in Israel. These inequalities shape employees' ability to engage effectively with advanced digital systems, including AI-based platforms. The digital divide is therefore not only a technical issue but also an institutional and socio-political factor that directly affects organizational adaptation and employee acceptance of technology.

Furthermore, the framework is informed by official Israeli policy and oversight reports, particularly the State Comptroller of Israel (2023), which documents significant gaps in the implementation of digital transformation across local authorities. The report emphasizes challenges such as lack of standardized infrastructure, insufficient training programs, and limited integration of advanced technologies in peripheral municipalities. These findings provide an institutional basis for understanding why AI adoption may produce uneven outcomes across different public sector contexts.

Based on these Israeli sources, the theoretical framework of this study assumes that the implementation of artificial intelligence in public institutions is not purely a technical process, but rather a structurally embedded organizational transformation shaped by trust, inequality, and institutional capacity. Organizational trust mediates employees' acceptance of AI systems, while structural and linguistic inequalities influence how these systems are perceived and used in daily administrative practice.

Therefore, in the context of Arab public institutions in Israel, AI adoption must be understood as an interaction between institutional trust dynamics, digital inequality, and administrative capacity constraints. This framework provides the analytical lens through

which employees' experiences with AI implementation, particularly during crisis situations, are examined in this study.

3. Materials and Methods

3.1 Research Design

This study adopted a qualitative, phenomenological research design to explore employees' experiences with the implementation of AI in public institutions serving the Arab society in Israel. A qualitative approach was selected because it enables an in-depth understanding of participants' raw perceptions, attitudes, and cultural nuances regarding organizational trust and decision-making under stress.

3.2 Research Setting

The study focused on public and municipal institutions operating within Arab towns and cities in Israel (e.g., in the Galilee and Triangle regions). These included local municipalities, regional education departments, local health clinics, and administrative branches of government ministries that have recently integrated digital interfaces or AI-supported decision tools.

3.3 Participants

Purposive sampling was employed to recruit a large-scale, comprehensive sample of 50 high-ranking officials and key professionals who hold substantial administrative, managerial, and decision-making responsibilities within public institutions and local councils serving the Arab society in Israel. This robust qualitative sample allows for deep cross-institutional comparisons among leading figures who directly engage with digital governance and automated decision-support systems. The participants were distributed across the following core institutional roles:

- **14 Municipal Department Heads & General Directors:** Top-tier executive decision-makers responsible for municipal budgeting, urban planning, and strategic resource allocation within Arab local authorities.
- **13 Senior Administrative Officers & Departmental Managers:** Officials overseeing daily institutional workflows, regulatory compliance, public service delivery, and internal governance.
- **12 Chief Information Officers (CIOs) & IT Directors:** Technical and strategic leads responsible for supervising municipal digital infrastructure, deploying algorithmic tools, and integrating automated data networks.
- **11 Emergency, Security, and Crisis Management Directors:** Specialized officials explicitly tasked with managing local institutional operations, security protocols, and safety coordination during community, environmental, or national crises.

3.4 Inclusion Criteria

To maintain high academic rigor and ensure expert-level insights from qualified institutional leaders, all participants met the following strict criteria:

- Hold a formal managerial, directorial, or senior administrative position within an Arab local council or a public institution serving the Arab society in Israel.
- Have a minimum of three years of continuous administrative, executive, or decision-making experience in the local public sector.
- Be directly involved in institutional data management, policy implementation, or emergency response workflows that utilize automated, digitized, or algorithmic platforms.
- Voluntarily agree to participate in the qualitative interview process.

3.5 Data Collection

To ensure data triangulation for the sample of 50 officials, a multi-method qualitative approach was conducted over a six-month period:

- **Semi-Structured Interviews (n=30):** Individual interviews (50–70 minutes) with Department Heads and Crisis Directors, focusing on strategic choices, organizational trust, and decision-making under socio-political pressures.
- **Focus Groups (4 groups; n=20):** Interactive group sessions (90 minutes) with Administrative Officers and IT Directors to capture collective experiences, operational friction, and linguistic barriers (Hebrew/Arabic system mismatch).
- **Document Analysis:** Review of internal municipal emergency protocols, digital roadmaps, and official policy communications regarding automated tool deployment.

All sessions were conducted in Arabic, audio-recorded with consent, transcribed verbatim, and translated into English for analysis.

3.6 Data Analysis

Thematic analysis was applied following Braun and Clarke's (2006) framework. Given the large volume of qualitative data from 30 interviews and 4 focus groups, data management software (such as NVivo) was utilized to organize codes. Codes were generated inductively, focusing on patterns of structural neglect, language adaptation, and administrative trust during crises.

3.7 Trustworthiness

Rigor was established through data triangulation (interviews, focus groups, and documents). Member-checking was performed with a selected sub-sample of department heads to validate the transcribed insights, and a clear audit trail of the coding process was maintained.

3.8 Ethical Considerations

Given the high-ranking administrative and political status of the 50 participants, strict ethical protocols were implemented to protect institutional and personal identities. Approval was secured prior to fieldwork, and the following measures were strictly enforced:

- 1) **Informed Consent:** All municipal department heads, senior officers, and coordinators signed written informed consent forms available in both Arabic and Hebrew, explicitly detailing the research objectives, the voluntary nature of participation, and the right to withdraw at any stage without administrative consequences.
- 2) **Anonymization and Confidentiality:** To safeguard participants from institutional or political vulnerability, all direct quotes, transcripts, and focus group recordings were completely anonymized. Personal names, specific titles, and the identities of the local councils or municipalities were replaced with generic alphanumeric codes (e.g., Participant M14, General Director).
- 3) **Data Protection and Storage:** Audio recordings and verbatim transcripts were stored on secure, password-protected cloud servers accessible exclusively to the primary researcher. Internal municipal documents analyzed during the study were handled in strict compliance with public record confidentiality regulations, ensuring no proprietary or sensitive government data was exposed.

4. Results

The analysis of the expanded data yielded five interconnected themes:

Theme 1: AI as a Vital Mechanism to Overcome Structural Understaffing

Participants across all municipalities emphasized that automated workflows and digital data systems act as crucial countermeasures to the chronic underfunding and staffing shortages typical in Arab local government. Automated budgeting and automated scheduling allowed thin administrative teams to maintain public service delivery.

Theme 2: Linguistic Exclusion and Algorithmic Misalignment

A prominent barrier identified in the focus groups was that central government platforms and AI analytical software are deployed exclusively in Hebrew or English. IT Directors and Administrative Officers noted that automated tools frequently misinterpret localized Arabic naming conventions, geographical descriptions, and community contexts, forcing staff to engage in extensive corrective workflows.

Theme 3: Institutional Transparency as a Predictor of Technological Trust

The 30 individual interviews revealed that organizational trust heavily dictates the implementation outcome. When municipal executives openly shared the strategic

purpose behind AI adoption, provided human-oversight safety nets, and protected job security, administrative staff demonstrated high acceptance and reliance on the systems. Top-down, uncommunicated deployment fostered resistance and suspicion.

Theme 4: Crisis Management: Algorithmic Velocity vs. Contextual Blindness

During local or regional crises, emergency coordinators noted that automated data aggregation significantly accelerated response coordination. However, a strong consensus emerged that AI recommendations suffer from "contextual blindness"—lacking awareness of local family networks, socio-political dynamics, and cultural sensitivities. Human oversight was deemed non-negotiable to prevent operational failures during sensitive escalations.

Theme 5: The Deficit in Culturally Adaptive and Localized Training

Focus groups exposed a severe lack of structured training programs adapted for minority public sector employees. Participants argued that generic, Hebrew-taught technical courses fail to bridge the internal digital divide. Local councils that invested in localized, slow-paced technical training reported significantly higher levels of technological confidence and institutional trust.

5. Discussion

This study set out to explore how employees in public institutions serving the Arab society in Israel experience the adoption of artificial intelligence (AI), with a specific focus on organizational trust and crisis-related decision-making. The findings demonstrate that AI implementation in this context is not a purely technical process, but a deeply embedded socio-organizational transformation shaped by structural inequality, linguistic barriers, and institutional trust dynamics.

A central finding of this study is that AI systems significantly enhance administrative efficiency, particularly in contexts of chronic understaffing and limited institutional resources. This aligns with existing public administration literature emphasizing AI's role in improving productivity and accelerating information processing in government settings (Wirtz et al., 2019). However, the present study extends this understanding by showing that efficiency gains are not sufficient for successful implementation unless accompanied by organizational trust and contextual alignment.

The results further reveal that organizational trust is the primary mediating factor shaping employees' acceptance of AI systems. When leadership demonstrates transparency, communicates the purpose of AI adoption, and ensures job security, employees are more willing to integrate AI into their daily work practices. Conversely, lack of communication and top-down implementation strategies generate suspicion and resistance. This finding reinforces Israeli public administration research emphasizing the

centrality of trust in institutional performance and citizen–state relations (Vigoda-Gadot & Mizrahi, 2021).

A key contribution of this study is the identification of “algorithmic misalignment” and “linguistic exclusion” as structural barriers to AI adoption in minority public institutions. The reliance on Hebrew- and English-based systems creates operational inefficiencies and reinforces existing digital inequalities highlighted in prior Israeli research on the digital divide (Gharrah, 2020). These barriers are not merely technical limitations but reflect broader socio-political asymmetries in public sector digital transformation.

Another significant finding relates to crisis management. While AI systems enhance the speed of data processing and coordination during emergencies, they simultaneously suffer from contextual blindness, particularly in relation to local social networks, cultural sensitivities, and informal governance structures. This creates a tension between algorithmic speed and contextual understanding. The study therefore confirms that crisis decision-making in complex environments cannot rely solely on automated systems, but requires continuous human oversight and local expertise.

Finally, the study highlights the critical role of localized training and capacity-building in shaping AI adoption outcomes. Institutions that invested in culturally and linguistically adapted training programs reported significantly higher levels of employee confidence and institutional trust. This suggests that successful digital transformation in minority settings depends not only on technological infrastructure but also on human capital development and culturally responsive organizational policies.

Overall, the findings suggest that AI implementation in Arab public institutions in Israel must be understood as a negotiated process between technology, trust, and context rather than a linear modernization strategy.

6. Conclusion

This study investigated the experiences of 50 senior officials and administrative professionals navigating AI adoption in Arab public institutions in Israel. The findings conclude that responsible digital transformation requires moving past standard software deployment toward localized, culturally adaptive implementation. National and municipal policymakers must actively invest in bilingual digital platforms, transparent internal governance, and dedicated minority training budgets. Preserving strict human accountability over automated crisis systems remains vital to maintaining institutional performance and public trust.

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Conflict of Interest Statement

The author declares no conflicts of interest.

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