



The Dark Side of Artificial Intelligence in the Workplace: Social Costs, Ethical Challenges, and the Role of Human Resource Management

Abdennacer Moussi¹ 

¹ University of Biskra, Biskra, Algeria

¹ abdennacer.moussi@univ-biskra.dz

Abstract. Artificial intelligence (AI) is increasingly becoming a major factor in business management. It is changing essential areas like human resource management (HRM), decision-making, and the improvement of organizational processes. While these innovations are often seen as ways to boost efficiency, performance, and competitiveness, their social and human impacts have not been thoroughly examined, especially in the MENA region.

This paper is meant to help illuminate the “dark side” of AI in the workplace by examining the social and organizational costs that AI might entail. Rather than a traditional research design that relies on a systematic approach, the paper will take a conceptual and more analytical approach in order to examine the psychosocial and organizational impacts associated with the rising levels of AI algorithm systems.

This highlights the prominence of human resource management as a mediator, regulator, with the potential to counterbalance the adverse impact of AI, especially when considering the developing regulatory structures found commonly in institutions. Finally, the paper proposes concrete strategies to promote a more responsible and human-centered adoption of AI, adapted to the specific characteristics of the MENA region.

Keywords: Artificial Intelligence, Human Resource Management, Algorithmic systems, Management, Social and Organizational Costs, MENA Region.

1 Introduction

Artificial intelligence plays a central role in changing business practices. The adoption of AI technology in businesses and organization is aimed at enhancing efficiency in operations and decision-making, and at making them more competitive in uncertain and changing business environments. When it comes to core business functions and aspects such as human resource management, marketing, finance, and operations management, AI technology comes in as a solution for making these functions and aspects cost-free in information management. [6] [8]. However, much of the existing literature on AI focuses on productivity increases, faster data processing, and better performance. This viewpoint often downplays the significant social and human impacts that come from integrating algorithmic systems into management practices.

AI technologies are not socially neutral and can generate unintended effects, known as "social costs," that influence individuals, work groups, and organizational relationships [10] [3]. In this way, the absence of governance/ethical standards could result in the use of AI solely as a means to analyze and improve performance, at the expense of the human aspects surrounding work. [16].

Accordingly, the main question relevant to this paper can be stated as such: What are the societal and organizational costs associated with AI applications in business administration, and what is the possible regulating impact of HRM?

The purpose of this paper is to explore the negative aspects of AI through a framework that connects managerial reasoning with social costs, while emphasizing the regulatory role of human resource management. This study uses a conceptual and analytical approach, based on a critical review of literature and specific examples from organizational practices. The paper aims to add to the scientific discussion on the responsible and human-centered use of AI.

2 Literature Review

Artificial intelligence has quickly emerged as a disruptive influence in business administration. Routine tasks are being offloaded to algorithms, improving decision-making and overall performance in fields as varied as HRM, customer service, logistics, finance and accounting, and strategy and policy-making. AI is being embraced by corporate leaders for its ability to efficiently manage enormous datasets, handle uncertainty, and help organizations maintain momentum in an environment of rapid and dynamic change (Brynjolfsson & McAfee, 2014). As academics have pointed out, the promise of AI is not limited to organizational activity just faster and (potentially) cheaper. It is in fact important to keep in mind that AI should not be studied as a neutral agent of change, but rather as an established connection with a set of managerial understandings, power relations, and organizational cultures (O'Neil, 2016; Binns, 2018)

2.1 AI and Human Resource Management

In many organizations, HRM automated application screening systems are used. These systems are operated using machine learning algorithms for the fast processing of large volumes of resumes. However, biases from derived datasets may also be reflected in these systems. For example, some banks and telecommunications companies have discovered that their systems favor candidates from certain backgrounds, which put others at a disadvantage [10] [3]

AI is also used to assess employee performance in real-time. In call centers and financial services, automated dashboards enable managers to closely monitor employee productivity. These systems improve planning and speed up decision-making, but they also can cause stress, increase workload, and lead to a sense of dehumanization. Employees often struggle to understand and challenge algorithmic indicators [2] [17].

2.2 AI and Customer Relations

Customer relationship management (CRM) software and chatbots are increasingly being used in banks, insurance companies, and telecommunications firms. This technology enables the automation of communication with customers, thus cutting the associated costs and increasing the speed of response. But at the same time, there could also be a deskilling of the process of relating, which could result in reduced human interaction as well as a lack of feeling of social contributions by the human resource personnel. Some countries, banks use chatbots to address up to 60% of the demands, which demands support for the teams to cope. [8].

2.3 AI and Operations Optimization

In the industrial and logistics sector, AI aids in planning, maintenance, and supply chain management. For example, some companies use algorithms to predict material needs and adjust staff schedules. While these systems enhance operational efficiency, they can also reduce flexibility and shift some decision-making power to machines, leading to cognitive overload for managers and employees. Human Resources Management must intervene to balance performance and well-being by introducing training programs and mechanisms for human validation. [6].

3 Methodology

This study uses a conceptual and analytical approach to explore how artificial intelligence is changing social and organizational life in business administration. Since AI adoption in organizations especially in the MENA region is still gaining momentum and solid datasets are scarce, a conceptual lens fits the moment. It's less about doing calculations and more about theory building and deep critical analysis.

3.1 Research Design

This research is based on interpretive and critical ideas. It does not treat technology as something that can't be stopped. It sees AI as part of a system that includes society and technology, and that is connected to management ideas, power structures, and organizational frameworks. This view lets us avoid just talking about how to be more efficient and begin to really consider the social costs and moral problems of AI, especially where rules are weak and job markets are unstable, like in much of the MENA area.

3.2 Literature Sources

The literature review encompasses a broad range of academic literature from various sources including peer-reviewed articles, books, reports, and other institutional publications, covering interdisciplinary fields such as human resource management, organizational behavior, sociology of work, business ethics, management, and artificial intelligence. It emphasizes particularly on critical, ethical, human-oriented literature.

Additionally, apart from the international comparative studies, the research relies on the regional policies papers and documents coming from the World Bank [15], regional development agencies, and development organizations to substantiate the discourse on AI employment in the MENA labor market. The analysis of ethical AI governance in

the MENA economies is further contextualized in the national regulations, such as the Algerian Law No. 18-07 on personal data protection [11].

3.3 Methodological Limitations

This paper is purely conceptual; hence, it does not attempt to establish causality or make predictions. Its contribution lies in theorizing, providing meaningful insights, and contextualization. The framework proposed in this paper lays the ground for future empirical research, be it case studies or quantitative studies using data from MENA organizations.

4 The theoretical Framework —Artificial Intelligence, Managerial Rationality, and Social Costs

To analyze the social effects of artificial intelligence in business administration, we need a framework that extends beyond a solely technological perspective. AI isn't simply a neutral tool for making decisions; it's connected to a specific managerial way of thinking found in new types of organizational logic. From this perspective, the societal costs of AI come from the complex relationships between algorithms, management decisions, and social settings.

4.1 Managerial Rationality in the Age of AI

Traditional managerial rationality, as described in organizational theories, mainly depends on decision-making that involves resource use, predicting behavior, and process control. Herbert Simon (1957) showed that this traditional rationality is limited by the cognitive abilities of decision-makers and the uncertainty of organizational environments. AI is seen as a technological solution to these limitations in the information processing and prediction capabilities of the human mind. Algorithmic systems, especially those using machine learning, extend an instrumental rationality that promotes efficiency, measurement, and behavioral standardization. [6] However, this “algorithmic” rationality is far from objective, as it embeds biases of human reasoning, which gives AI systems a sense of impartiality to hide the social choices involved. [4].

4.2 AI as a Driver of increased Work Rationalization

Drawing from Weber's ideas on rationalization, AI Can be seen as a further expansion of organizational control. By automating tasks, measuring performance, and watching activities online, AI further standardizes work by reducing individual choice. In human resources, AI is used to recruit, evaluate, and guide people in their career growth. This puts more importance on data that can be measured and compared, which can reduce diversity, even in desired skills, making relational skills seem less important [8]. In the context of the MENA region and specifically in the Algerian context where the referred organizations are situated, the aforementioned rationalization takes place in a field marked by considerable power asymmetry. The AI system, therefore, serves to amplify control, as opposed to empowerment, and thus heighten the staff members' exposure to the technical judgment regarded as unquestionable.

4.3 The Social Costs of AI

The societal costs tied to AI happen on different levels:

- Individual: technological stress, loss of job meaning, insecurity, and the gradual de-skilling of certain tasks. [17]
- Organizational: declining social climate, diminishing trust in management, and weakening cooperation [10]
- These societal costs are not just random side effects; in fact, they stem from an algorithmic governance model which prioritizes performance and cost, cutting.

4.4 Tension Between Organizational Efficiency and Social Justice

The theoretical framework also uncovers a fundamental conflict. On one hand, AI boosts the consistency of decisions and reduces specific types of bias prevalent among human decision-makers; on the other hand, it weakens the ability and opportunity to voice dissent, negotiate differences, and recognize the diversity of individuals [7]. In the absence of a legal framework, the technocentric approach prevails in the debate at the expense of the social approach. As a result, the social costs of AI are caused by a disproportionate and disproportionate weight of economic reasoning, technical reasoning and social reasoning, hence the need to question the fundamental role of HRM as a key player in restoring this balance.

4.5 Towards an Integrative Approach to the Role of HRM

The implications of the theoretical framework suggest that HRM plays a crucial role in managing the societal implications of AI. It argues to move from technical activities to inter-linkage between goals of organization and human values [9]. It aligns with critical and humanistic perspective of HRM, which underlines to consider the ethical, social and cultural issues in deciding tech alternatives.

4.6 Discussion

The theoretical framework reveals the potential variability of social costs linked to AI, as well as their non-determination: the social perils connected with the AI-based systems are not a prescript that follow the introduction of innovation, but instead depend on the interpretative setting put forward by Human Resources Management to articulate and deal with the exploitation of AI. Four aspects emerge from this view.

First, this needs human involvement. HRM plays an important role in translating algorithmic output into calls for fairness ensuing perception by employees. Without this, organization's systems, social norms, and financial context. Therefore, HRM practices automated decision-making will be perceived as unfair at least for some employees, lowering their trust and elevating disagreement probability.

Second, context has a significant influence on social outcome. The data from Algeria and the MENA region indicate that AI-related societal expenses are influenced by should be contextualized, not standardized.

Third, change management and training are major enablers too. AI adoption must ensure knowledge and capability enhancement, and organizational readiness for change measures to reduce employee anxiety, improve adaptability and ensure continuous learning.

To conclude, ethical governance also builds trust. Inclusion of ethics in HRM - especially transparency, accountability and ability to access human review - minimizes propensity of algorithmic bias and enhances organizational legitimacy. An ethical and pro-active HRM strategy is imperative for sustainable adoption.

5 The role of HR Management in limiting the social costs of AI

5.1 HRM as a Mediator Between Algorithmic and Social Rational

HRM is one of the main connections between the logic of algorithms, where measurement and prediction are important, and social logic where recognition and respect in the workplace are important. If AI is used without proper HRM, workers might be treated as just numbers, which can harm their sense of justice and dignity [10].

Research on HR managers in Saudi Arabia revealed that they hold a generally favorable attitude towards the use of AI in HRM processes such as recruitment and performance evaluation but have apprehensions about potential displacement of employees [1]. This indicates the pivotal function of HRM in guaranteeing the social acceptability of AI-based judgments via human intervention.

5.2 Ethical Governance of AI Systems

HRM is vital for turning broad ethical values into real organizational policies, especially in sensitive areas such as recruitment, appraisals, and monitoring. Some say that any AI systems used in HR must align with ethics, including transparency, auditability, and the chance for human review.

Transparency means workers know how AI decisions are made. Auditability allows AI results to be checked for work purposes. Human review protects against fully automated decisions.

In Algeria, the data protection law supports the ethical usage of AI in HRM. Law number 18, sd07 [11], which is a law that focuses on the protection of personal data, is also applicable to AI in recruiting and evaluation processes.

By including this law in HR policies and algorithmic oversight, HRM can implement ethical AI principles in decision-making. This makes sure that employee rights are protected when technology is used to make choices. Here, HRM is not just an administrator but also a regulator and ethical guide between technology systems and what is seen as socially acceptable in the workplace.

5.3 Building Skills and Supporting Change

Intelligent systems change the nature of work by changing tasks, skills, and jobs. AI can improve productivity and decision-making, but it also often makes employees worry that their skills will become outdated, irrelevant, and that they might lose their jobs. If these fears are not handled, they can cause resistance to change, stress, and less

commitment to the organization. HRM can play an important role in proactively building skills to manage the shift. A growing number of articles state continuous training, reskilling, and learning are important for dealing with both the direct and indirect changes brought by AI.

In addition, instead of framing AI as a competitor to his intellectual skills, good HRM practices frame AI tools as an enabler of human capabilities. When guided with proper training, workers learn and enhance their digital, analytical, and interpretative skills to collaborate with intelligent systems, limiting potential risks associated with them [6] [8]. Studies conducted in the Maghreb area, specifically Morocco, Tunisia, and Algeria, showed that companies that promote digital skills training, AI literacy workshops and employee training are more likely to diminish technostress and to encourage employee resistance to structures. These practices foster employee awareness on the rationale, limits and objective of digital applications, increasing their perceived control instead of competing with the intelligent systems [5]. HRM also fosters learning in organizations when dealing with change by implementing participative process at the time of technology adoption.

Human Resource help establish trust, comprehension and common belief in an AI-adopting organization by engaging its workforce in learning and feedback activities, as well as in planned change processes, so that they can cope with changes in human skills and embrace integrity in the company while getting used to technology-based transformation.

5.4 Keeping Work Meaningful and Ensuring Quality of Work Life

On the non-technical level, the implementation of AI in the organizations creates issues in the work's nature and work life quality. Indeed, AI systems can help optimize the processes and create more value than the pure efficiency, yet, they result in increasingly low esteem perception of the employees, and low self-worth when the work life is dominated by its efficiency aspects. One of the common notions in the work spirituality and meaning of work researches is the need to highly consider the impact of shared values, social value, and purpose on employee involvement and mental health.

Research studies demonstrated that organizations which meet the key hidden employee needs like sense of worth provide greater engagement, happiness and commitment among workers. HRM serves a vital role to ensure that even system-automation-led innovations create socially and morally valuable work experiences.

It is likely that simple globalization, based on ubiquitous digital tools adapted to individual work, can have a negative impact on workers' social connections. HRM can avoid this by using AI methods in ways that respect different organizational cultures. This also requires ensuring employee independence, recognition, and involvement in making technology choices. These participatory ways permit workers to regard AI systems not as controlling but as enablers that match their own social principles [16] [13].

5.5 Towards socially responsible HRM in the age of AI

The combined social, ethical, and organizational issues of AI make it important to rethink HRM's role as a key player in corporate social responsibility.

Instead of HRM practices being driven only by technology, socially responsible HRM views AI as a way to meet targets defined by social justice, worth, and organizational unity. Technology should grow human well-being rather than only focusing on

efficiency or savings [13]. HRM then takes responsibility for the wider social results of AI-driven plans and their effects on job security, equal opportunity, and workforce involvement.

By including ethics in hiring and people analytics, HRM can lower the risks of exclusion and social separation. Socially responsible HRM acts as a system that makes sure AI is used in a way that fits with both organizational values and what society expects [16] [4].

Socially responsible HRM is a way to create fair change during the AI age. Socially responsible HRM can balance efficiency with fairness and progress with social unity. It achieves this by seeking to regulate the social burden associated with technical progress rather than struggle against them for the efficiency that derives from their innovative applications.

6 Conclusion and Recommendations

The approach of this research has therefore been to study the social effects of artificial intelligence in a disciplinary framework, that of management science and more precisely business administration. The study mainly highlighted the social costs associated with the use of this phenomenon, as well as the strategic role of human resources in regulating its effects. Several conclusions emerge from the theoretical and contextual study conducted, which covers the MENA region and more particularly, Algeria.

6.1 Key Findings

AI radically changes the management logic by focusing on efficiency, measurement and optimization. While the shift is likely to enhance decision-making, it also threatens to displace the social and human dimensions if not properly mediated.

The social costs of including artificial intelligence technologies are large and multifactorial: loss of meaning in work, intensification of work, discrimination by algorithms, stress and anxiety that translate into workers, especially in contexts where regulations are not guaranteed.

The situation is more complicated by the existence of regional divergences. The cultural conventions, institutional fragility, and economic constraints prevailing in the MENA region necessitate that HRM interventions are secure in order to preclude societal collapse, marginalization, and disengagement.

Finally, the HRM plays the role of a strategic lever to align technological efficiency with social sustainability, through human mediation, ethical governance, continuous training, change management and employee well-being preservation.

6.2 Recommendations

- An ethical and transparent AI governance mechanism should be established in organizations including a transparent use of algorithms framework, decision trace ability, appeal mechanisms, and strong data protection.

- Continuous training program and skills development are necessary to improve understanding of AI systems and fears related to labor substitution.

- AI-based assessments should be coupled with human oversight and social discourse to enhance employee involvement when forging technology practices that integrate algorithmic assessment and qualitative judgment?

- Protecting the quality and sense of working life should be the aim of HRM in developing digital processes respecting and articulating relational competences, autonomy, collective commitment and integrating specific cultural and social peculiarities into digital system layout.

- Finally, organizations must implement a system for monitoring social impacts on an ongoing basis, using indicators such as satisfaction, commitment and well-being, adapting managerial and technological practices through a cyclical process.

6.3 Future research

Finally, we recommend to future researchers to conduct an empirical testing of the theoretical model proposed in this research in Algerian firms as well as in the MENA region confirming the model practices and the expected outcomes concerning various sectors. This will help to create a solid knowledge regarding the way AI can be utilized for firms and organizations' efficiency alongside with a socially responsible path for development.

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