

Artificial Intelligence and Organizational Decision-Making in Economic Institutions: An Empirical Study of the National Fund for Non-Salaried Workers in Ghardaia

GROUNGA OUALID ^{1,*}, OULED HADDAR FATEH BELKACEM ²,

¹Ghardaia University (Algeria), (e-mail:grounga.oualid@univ-ghardaia.edu.dz)

²Ghardaia University (Algeria), (e-mail: ouledhaddar.f@univ-ghardaia.edu.dz)

Received date: 13/03/2026 ;

Revised date: 25/04/2026 ;

Publication date: 30/06/2026

Summary: This study aimed to explore the role of artificial intelligence in supporting administrative decision-making processes within the National Social Security Fund for Non-Wage Workers. Theoretical concepts related to artificial intelligence and its relationship with the decision-making process were examined. The study adopted a descriptive and analytical approach, which was deemed appropriate for the nature and objectives of the research. To collect the necessary data and information, a questionnaire was used as a research tool, and 30 questionnaires were distributed to a random sample of 30 employees within the organization. Data were analyzed using the Statistical Package for the Social Sciences (SPSS v26). The findings revealed that the institution demonstrates a moderate level of adoption of artificial intelligence technologies. Moreover, the results indicated a high level of improvement in the decision-making process, with a strong correlation between the use of artificial intelligence and enhanced decision-making (64.6% explained variance). Expert systems and neural networks were found to have a strong positive impact on decision-making, with regression coefficients of 0.812 and 0.771 respectively. Meanwhile, the intelligent agent showed a moderate yet statistically significant effect (regression coefficient of 0.460). Overall, the study confirmed the importance of integrating artificial intelligence into administrative processes to enhance efficiency and improve the accuracy and effectiveness of decision-making.

Keywords: Artificial Intelligence, Expert Systems, Neural Networks, Intelligent Agent, Decision-Making.

Jel Classification Codes : C88, D81, M15, O33

* GROUNGA OUALID, grounga.oualid@univ-ghardaia.edu.dz

I - Introduction :

Contemporary organizations are witnessing fundamental transformations in their work environment due to rapid and successive changes in the field of information technology, particularly in software and computer systems. Over the last two decades, these developments have outpaced many other scientific fields in terms of speed and impact. These innovations have contributed to creating a competitive environment that requires high-performing organizations to be flexible, adaptive, and capable of responding quickly to changing market demands, with an emphasis on concepts such as self-control, total quality management, and organizational sustainability.

In this context, the current generation of youth has access to advanced technological tools and vast knowledge resources, surpassing in quantity and quality what was available to any thinker or historian in previous decades. This environment fosters the development of future intelligent applications based on analyzing human behaviour using computational models.

On the other hand, business organizations, particularly in the public sector, face multiple challenges and various risks that affect their ability to remain competitive and sustainable. Therefore, the survival and success of these organizations in global markets require continuous exploration of effective methods and technologies that support accurate strategic decision-making.

The effectiveness of administrative decision-making depends on the availability of accurate, reliable, and sufficient information to support decision-makers, especially given the massive increase in data flowing to top management. Information systems are a crucial tool in this regard, as they enable data processing and transform it into knowledge that contributes to understanding phenomena and guiding administrative behavior. With the increasing influence of globalization, which enables rapid access to any location worldwide, artificial intelligence has emerged as one of the most influential modern sciences, contributing to the development of a competitive environment based on intelligent systems that support decision-making processes in contemporary organizations.

- Research Problem

To what extent does artificial intelligence impact the decision-making process in economic institutions? And what is the current situation in the National Fund for Non-Salaried Workers?

I.1. Concept of Artificial Intelligence

Artificial Intelligence (AI) refers to the efforts made to develop computer systems capable of performing functions that simulate human cognitive abilities, such as language learning, executing administrative tasks, thinking, learning, understanding, and interpreting meanings. This concept is closely associated with several fields of knowledge and academic disciplines, most notably computer science, psychology, mathematics, linguistics, and knowledge engineering. (Abu Keshk, 2011).

Artificial Intelligence is concerned with designing intelligent machines that behave in a manner expected of humans. (Boudah., 2015).

I. 2: Characteristics and Importance of Artificial Intelligence:

2.1 Characteristics of Artificial Intelligence:

Artificial Intelligence possesses several characteristics that enable it to operate across numerous fields, as reflected in the following:

- The ability to plan and solve problems using logical reasoning through AI applications.
- The capability to control objects and tools through robotics systems.
- The ability to distinguish between different sounds and communicate effectively, with advanced voice interaction capabilities.
- Continuous learning and self-adaptation through programs that allow development without direct supervision.
- Efficient processing of vast amounts of data provided to the system.
- The ability to detect and analyze different patterns in data effectively.

- The use of prior experiences and applying them to new situations. (Hassan, 2021).

2.2 Importance of Artificial Intelligence

The importance of Artificial Intelligence is reflected in the following aspects:

- AI is considered an effective means of transferring and storing human knowledge, as it contributes to preserving memories and experiences securely, with the possibility of accessing them in the future. This enhances the documentation and sustainability of human expertise.
- AI plays a pivotal role in many vital sectors, including disease diagnosis and treatment prescription, legal and professional consultancy, interactive education, as well as applications in security and military fields. Additionally, it has become an integral part of many daily-life applications.
- Artificial Intelligence is regarded as a promising tool that may surpass traditional methods in conducting scientific research, thereby accelerating progress across various scientific fields. The application of AI technologies benefits humanity in several domains by enabling computers to simulate the mental processes of the human mind. This grants them the ability to solve complex problems and make decisions quickly and efficiently, following logical patterns that resemble human thinking. (Al-Shams, 2022).

I. 3: The Concept of the Decision-Making Process

The decision-making process is considered one of the interrelated processes present in all managerial functions, as the success of achieving objectives depends largely on the effectiveness of this process. It represents a central axis upon which the entire subject is built. To address the topic of decision-making, it is first necessary to clarify a set of terms associated with this process, as follows:

- **Decision:** A decision is defined as a specific course of action selected from among a set of alternatives to confront future possibilities, provided that more than one alternative is available to the decision-maker.
- **Decision-Maker:** The economic individual who is capable of identifying the potential outcomes of each available alternative or course of action, ranking these outcomes according to their relative importance in relation to personal and organizational objectives, and selecting the best alternative based on judgment and knowledge. (Madahi, 2020).

Based on this, the decision-making process can be defined as follows:

- It is the process of selecting a particular course of action from among several behavioral alternatives or expected responses. Decision-making requires sufficient knowledge and conscious awareness of these alternatives, along with a precise understanding and evaluation of them to choose the most appropriate option.
- The decision-making process is also defined as a series of integrated and systematic steps aimed ultimately at finding a solution to a specific problem, addressing potential situations, or achieving predetermined objectives. These problems may be clearly defined and structured, or ambiguous and complex due to multiple dimensions and causes. In some cases, such problems may not be directly visible but are sensed through surrounding circumstances, which requires anticipation and prior forecasting. (Al-Fadl, 2016).

I. 4: The Importance of the Decision-Making Process and the Factors Affecting It

4.1 Importance of the Decision-Making Process

Decision-making is the cornerstone and core of the administrative process, through which all organizational activities are carried out and the future of the organization is determined. Its importance can be summarized as follows:

- Decision-making is a continuous process in the administrative field. Management itself is essentially a continuous and diverse series of decisions across various departments such as organization, production, planning, and marketing.
- Decision-making is the manager's primary tool. Through this process, the manager practices administrative work within the institution by determining what should be done, when it should be done, where it should be done, and who should perform it. The greater the manager's ability to make sound decisions, the higher the level of performance effectiveness. Such decisions significantly influence the success or failure of the organization.
- Strategic decisions determine the organization's objectives. These decisions are long-term in nature. For example, Japanese automobile companies focused for a long time on producing small cars, which enabled them to achieve success and made it difficult for foreign competitors to rival them in that segment. Conversely, IBM's failure to make effective decisions in response to competitors producing low-cost personal computers resulted in the company losing its leadership position in the computer market and becoming threatened with exiting the sector. This principle equally applies to nations and societies, as strategic decisions play a vital role in shaping their destiny and global standing. (Saleh, 2009).

4.2 Factors Affecting the Decision-Making Process

The decision-making process is influenced by several variables arising from both the internal and external organizational environments. These factors include:

- The psychological and social characteristics of the decision-maker, including personality traits.
- The surrounding social environment in which decisions are made.
- The hesitation of the decision-maker in selecting the optimal alternative.
- The emergence of new alternatives that were not available during the decision-making process.
- The influence of prevailing customs and traditions on individual and group behaviour.
- Lack of clarity of objectives in the mind of the decision-maker. (Sheikhi., 2016).

I.5. Stages of the Decision-Making Process

The decision-making process is one of the most prominent and essential functions in any organization. It is a continuous and ongoing function carried out through several stages:

❖ Identifying the Problem

One of the most important tasks for the decision-maker is accurately recognizing the core problem and its dimensions. This includes identifying the nature of the situation that created the problem, assessing its importance, distinguishing between symptoms and underlying causes, and determining the appropriate time to address it and make a rational and suitable decision.

❖ Collecting Data and Information

Gathering data and information is fundamental to decision-making. The decision-maker must select facts relevant to the problem and exclude irrelevant information, ensure the accuracy of available data, determine additional required information and how to obtain it, and recognize missing information to assess the level of risk and accuracy associated with the decision.

❖ Identifying Alternatives

An alternative solution represents a potential course of action that the decision-maker may adopt in dealing with a problem or opportunity. A competent decision-maker does not assume that there is only one solution. Generating multiple alternatives is a creative and superior approach to decision-making. Alternatives may be derived from previous experiences in similar situations, adapted from successful solutions implemented by others,

developed in consultation with experts, or innovatively created based on practical experience.

❖ **Evaluating Alternatives**

At this stage, alternatives are compared based on the defined objective function, available organizational resources, and other constraints that may influence problem resolution. This evaluation includes assessing the impact of each alternative on organizational activities in both the short and long term, while considering uncertainty and risk.

❖ **Selecting the Appropriate Solution**

Decision-makers select the best solution after careful evaluation. This assessment typically involves three steps:

- Identifying the potential outcomes of each alternative.
- Determining the probability of each outcome.
- Comparing the expected results and their probabilities in light of the organizational objectives.

❖ **Implementing and Monitoring the Decision**

Decision-makers must develop a plan to implement the decision and initiate execution promptly, as circumstances may change and hinder implementation. Execution may be carried out directly by the decision-makers or delegated to others. Continuous monitoring is necessary by comparing targeted outcomes with actual performance. (Zuraik, 2001).

II - Literature Review :

1- Ishan Borker, Ashok Veda, Artificial Intelligence for Hiring. International Journal of Science and Research (IJSR), Bengaluru, India, 2020

The central research problem of the study revolved around examining how Artificial Intelligence (AI) technologies can be effectively employed within recruitment processes to identify the most suitable candidate for a given position. The study sought to analyze the extent to which AI-driven recruitment systems enhance both the quality and objectivity of hiring decisions, particularly in environments characterized by high applicant volumes and information asymmetry.

From a conceptual standpoint, the research positioned AI as a transformative decision-support mechanism capable of restructuring traditional talent acquisition frameworks. Specifically, the study explored the feasibility of utilizing AI-based systems for talent screening and candidate evaluation based on predefined attributes, competencies, and behavioral indicators. By operationalizing structured data analytics and algorithmic pattern recognition, AI systems were shown to reduce subjective bias and improve consistency in candidate assessment.

The findings underscore the strategic importance of integrating AI technologies into recruitment functions. Beyond mere automation, AI systems demonstrated the capacity to simulate certain cognitive processes associated with human intellectual evaluation. This capability is reflected in their efficiency in delivering real-time responses, generating analytical feedback, and processing large datasets with high precision. Such functionalities enhance both the accuracy and effectiveness of candidate selection, while simultaneously reducing processing time and administrative burden.

Importantly, the study suggests that AI in recruitment should not be interpreted as a replacement for human judgment, but rather as an augmentative tool that strengthens evidence-based decision-making. The value of AI lies in its ability to complement human evaluators by providing structured insights and predictive indicators that inform final hiring decisions.

Overall, the research contributes to the growing body of literature that frames AI adoption in human resource management as a strategic capability. By embedding intelligent systems within recruitment processes, organizations can achieve greater fairness, operational efficiency, and alignment between candidate competencies and organizational needs.

2- Erin E. Makarius and others, rising with the machines: A sociotechnical framework for bringing artificial intelligence into the organization, Journal of Business Research, The University of Akro - United States, 2020.

The growing adoption of Artificial Intelligence (AI) within organizations reflects a structural transformation in contemporary work systems. However, despite the accelerating integration of AI technologies, their implementation frequently occurs without sufficient consideration of the human actors who are expected to interact with these systems. This oversight raises critical concerns regarding the socio-technical alignment between technological infrastructure and human capabilities.

Accordingly, the study sought to examine mechanisms through which collaboration between employees and AI systems can be systematically strengthened to foster varying levels of socio-technical capital. Rather than approaching AI merely as a technological upgrade, the research conceptualized it as a relational and integrative component within organizational ecosystems. By synthesizing theoretical foundations in social development with established knowledge in artificial intelligence, the study proposed a framework for constructing a cohesive and adaptive work environment that balances technological efficiency with human agency.

The analysis further emphasized the strategic deployment of AI across multiple organizational functions, highlighting both operational and cognitive dimensions of implementation. It argued that achieving optimal human-AI interaction requires deliberate organizational strategies that transcend automation paradigms and instead promote collaborative intelligence. Within this framework, AI does not replace human judgment; rather, it augments it. The empirical findings reinforced this perspective, demonstrating that the relationship between employees and AI systems is fundamentally complementary, with humans functioning as primary collaborators who guide, interpret, and contextualize algorithmic outputs.

Importantly, the study demonstrated that effective AI utilization necessitates sustained and structured interaction between human and machine agents. Such interaction generates outcomes of significant organizational and social value by enabling the co-creation of unique outputs that neither entity could independently produce. This co-evolutionary dynamic strengthens socio-technical capital by embedding trust, shared understanding, and adaptive learning into organizational processes.

Furthermore, the study examined neural networks as a core deep learning architecture underpinning advanced AI applications. It highlighted their capability to model complex single-step organic chemical reactions through data-driven inference mechanisms. By relying exclusively on structured data inputs, these systems can predict potential chemical reactions across various stages without direct human intervention. This example illustrates the expanding epistemological scope of AI systems—shifting from rule-based automation to probabilistic, pattern-recognition-driven prediction models.

Overall, the findings underscore that the value of AI adoption lies not merely in computational efficiency but in its integration within a broader socio-technical ecosystem. Organizations that strategically cultivate human-AI collaboration are more likely to generate sustainable competitive advantage, enhanced innovation capacity, and socially embedded technological transformation.

3- Cai, Z., Zhao, L., Li, M., & Yu, H. (2024). Artificial intelligence capability and organizational performance: Unraveling the mediating mechanisms of decision-making processes. Management Decision, 62(3), 542–561.

In a recent study titled “Artificial Intelligence Capabilities and Organizational Performance: Uncovering the Mediating Mechanisms of Decision-Making Processes” (Cai et al., 2024), the researchers examined the structural relationship between organizational AI capabilities and enhanced organizational performance through the optimization of decision-making processes. The

study adopts a process-oriented perspective, positioning decision-making as a critical intermediate mechanism through which technological capabilities are translated into measurable performance outcomes.

The findings reveal a significant and positive direct effect of AI capabilities on both the speed and quality of decision-making. This dual enhancement—accelerated processing and improved analytical accuracy—serves as a pivotal driver of overall organizational performance. By enabling real-time data processing, predictive analytics, and pattern recognition, AI systems reduce cognitive overload and information asymmetry, thereby improving managerial responsiveness and strategic alignment.

More importantly, the study identifies a **partial mediating role** of decision-making processes in the relationship between AI capabilities and organizational performance. This implies that while a substantial portion of AI's impact operates through improving decision mechanisms, another portion exerts a direct influence on performance outcomes independent of decision-making structures. Such a finding suggests that AI functions not only as a decision-support tool but also as an operational and strategic capability that reshapes organizational routines and value creation processes.

From a theoretical standpoint, this partial mediation underscores the multi-layered nature of AI integration within firms. AI capabilities enhance performance both indirectly—by refining cognitive and procedural decision architectures—and directly—by optimizing workflows, resource allocation, and adaptive responsiveness. This dual-path influence aligns with dynamic capability theory, wherein technological competencies contribute to sensing, seizing, and reconfiguring organizational opportunities.

Practically, these results highlight the strategic necessity of investing in AI as more than a technological upgrade. Organizations that embed AI within their decision-making infrastructures are likely to achieve superior managerial quality, operational excellence, and sustainable competitive advantage in increasingly volatile and data-intensive environments. The study therefore reinforces the argument that AI adoption should be conceptualized as an organizational transformation initiative rather than a purely technical intervention.

4- Rui Murta, Victor Santos²⁰²⁵, Proceedings of The International Impact of Artificial Intelligence on Customer Relationship Management.

This study investigates the impact of Artificial Intelligence (AI) implementation within the Portuguese banking sector through a qualitative case study methodology. Drawing on structured interviews with middle and senior management across five banks, the findings reveal that AI technologies possess significant transformative potential in Customer Relationship Management (CRM). Specifically, AI enhances customer engagement, automates operational processes, and supports data-driven decision-making, thereby reshaping the strategic and operational architecture of customer interactions.

From an analytical perspective, the results indicate that AI adoption contributes to a qualitative shift in service delivery models. By leveraging predictive analytics and automated communication systems, banks are able to personalize customer experiences, optimize response times, and improve the precision of service recommendations. This transformation reflects a broader movement toward digital banking ecosystems where value creation is increasingly mediated by intelligent data infrastructures.

However, the study also uncovers critical structural limitations. Despite the advanced technological capabilities available, AI applications remain predominantly confined to repetitive and rule-based tasks, whereas complex and non-routine functions continue to rely heavily on human intervention. This division suggests a constrained level of organizational process flexibility and highlights the incomplete integration of AI into higher-order cognitive and strategic functions.

Rather than replacing human expertise, AI currently operates as a complementary automation layer within predefined operational boundaries.

Moreover, a significant misalignment was identified between institutional strategies and AI service providers. This strategic–technological gap reduces the effectiveness of implemented solutions and limits their scalability. The findings suggest that AI success in CRM is not solely contingent upon technological sophistication but is equally dependent on strategic coherence and ecosystem integration.

The study further emphasizes the pressing need to address organizational barriers that hinder AI implementation. These include limited data accessibility and quality, insufficient organizational readiness, inadequate employee training, and unclear governance structures. Such constraints underscore that AI deployment represents not merely a technological transition but a comprehensive organizational transformation requiring structural, cultural, and capability-based adjustments.

In light of these insights, the study recommends aligning institutional objectives with available AI capabilities through the development of comprehensive implementation roadmaps. Strategic alignment, change management mechanisms, and workforce upskilling emerge as critical success factors for sustainable AI integration.

Finally, the authors call for further empirical research to examine how AI enhances operational effectiveness across diverse sectors. Expanding the scope of investigation would contribute to validating the findings and generalizing their applicability beyond the banking industry. By systematically addressing the identified challenges, organizations can unlock the full potential of AI technologies to deliver personalized, efficient, and strategically integrated customer relationship management systems.

III - Methods and Materials:

This section clarifies the methodological approach adopted in the study. The selection of the study population and sample was conducted carefully to ensure the validity of the results. The data collection instrument was meticulously designed, and its quality and validity were ensured through an expert review process. Appropriate statistical methods were employed to analyze the data accurately.

1- Definition of the Host Institution:

The National Social Security Fund for the Self-Employed (CASNOS), Ghardaia Agency, is a public administrative institution with a special organizational status. It is responsible for providing social security coverage to the self-employed category within the Wilaya of Ghardaia.

This includes all individuals engaged in non-salaried professional activities under the legislation governing the organization's framework (professions subject to registration in the commercial registry) within the Wilaya of Ghardaia. These categories include:

- Industrialists
- Craftsmen
- Traders
- Farmers
- Liberal professionals (lawyers, chartered accountants, pharmacists, doctors, etc.)
- Drivers of various types (private sector)
- Owners of private enterprises (SARL, EURL, SNC) (national Fund for Non-Salaried Workers Branch, 2025).

2- Research Tools and Statistical Methods:

❖ Research Instrument

A comprehensive questionnaire was designed as the primary tool for this study to investigate the causal relationship between artificial intelligence and the improvement of the decision-making process within the institution.

The questionnaire was developed based on theoretical literature and previous studies concerning AI applications in organizational environments, while taking into account the research objectives and the specified study variables.

- ❖ **Statistical Methods Used:** To achieve the study's objectives—namely analyzing the role of artificial intelligence in improving the decision-making process within the institution—a set of advanced statistical methods and specialized analytical software programs were employed. These tools were carefully selected to ensure accuracy and reliability of the results, in accordance with the nature of the collected data and the research objectives.

The statistical methods used are detailed as follows:

- ❖ **Descriptive Statistics**

- **Arithmetic Mean:** Used to measure the central tendency of respondents' answers regarding the level of AI implementation within the institution and its impact on the quality of managerial decisions.
- **Standard Deviation:** Employed to determine the dispersion of respondents' answers around the mean concerning the study variables.
- **Frequencies and Percentages:** Utilized to analyze participants' demographic data and the distribution of responses across the questionnaire dimensions.

- ❖ **Validity and Reliability Tests:** To ensure the reliability of the instrument employed in this study, the internal consistency coefficient known as **Cronbach's Alpha** was applied. This statistical measure is widely recognized as a robust and reliable indicator for assessing the consistency of measurement instruments. The study data were analyzed using the Statistical Package for the Social Sciences (SPSS) software to accurately compute Cronbach's Alpha coefficients.

Table (01): Reliability Coefficient Test for the Study Variables (Cronbach's Alpha)

Study Dimensions	Number of Items	Cronbach's Alpha
Artificial Intelligence	13	0.832
Decision-Making	16	0.854
Total	29	0.843

Source: Prepared by the researchers using the Statistical Package for the Social Sciences (SPSS), Version 26.

The reliability test results using **Cronbach's Alpha** indicated high levels of internal consistency across the study dimensions. The first dimension, **Artificial Intelligence**, comprising 13 items, achieved a reliability coefficient of **0.832**, while the second dimension, **Decision-Making**, consisting of 16 items, recorded a reliability coefficient of **0.854**.

The overall reliability coefficient of the instrument was **0.843**. Given that all reported values exceeded the accepted threshold of **0.80**, the findings confirm that the questionnaire demonstrates a high degree of reliability. Accordingly, it can be concluded that the instrument possesses sufficient internal consistency to measure the study variables accurately and can be confidently applied and generalized to similar research contexts.

IV-Results and discussion :

- The table results indicate a **moderate level of Artificial Intelligence applications** within the institution. This suggests that the organization has already begun adopting these technologies but remains in a developmental stage. The arithmetic mean (3.13) confirms that the institution has moved beyond the initial phase of AI implementation; however, it has not yet reached full technological maturity. The low standard deviation (0.2750) reflects a strong consensus among respondents regarding this assessment.
- The findings also reveal a **high level of improvement in the decision-making process** within the institution. The arithmetic mean (3.44) demonstrates that the organization has significantly

enhanced its decision-making mechanisms. The low standard deviation (0.246) indicates strong agreement among respondents, confirming the institution's success in improving decision-making processes and enhancing the overall quality of decisions.

- The results demonstrate a **strong relationship between Artificial Intelligence and the improvement of the decision-making process**. The regression coefficient (0.6710) indicates that each increase in AI usage leads to a tangible improvement in decision-making. Furthermore, AI's ability to explain 64.6% of the variance in decision-making improvement confirms its strategic importance in developing administrative processes.
- The findings reveal a **strong impact of expert systems** on improving the decision-making process. The high regression coefficient (0.812) indicates that expert systems play a fundamental role in enhancing decision quality. Additionally, their ability to explain 53.2% of the variance confirms their effectiveness as a powerful tool in supporting managerial decisions.
- The results also highlight the **effective role of neural networks** in improving decision-making. The regression coefficient (0.771) reflects a strong positive effect, with neural networks explaining 63.2% of the variance in decision improvement. This confirms their capability to process complex data and provide accurate recommendations to decision-makers.
- The table further indicates a **moderate effect of intelligent agents** on improving decision-making, with a regression coefficient of (0.460). Despite this moderate coefficient, the intelligent agent was able to explain 77.8% of the variance in decision improvement, suggesting that, when properly implemented, it significantly contributes to enhancing the accuracy and efficiency of decisions.

V - Conclusion:

demonstrated its extensive potential in improving organizational performance and managing activities with greater efficiency and effectiveness. The importance of this field lies in its diverse applications and its increasing adoption across various sectors, particularly in management and business. Intelligent models used within organizations have proven their ability to handle complex problems and make strategic decisions based on accurate data, thereby supporting the overall pursuit of achieving organizational objectives with the highest level of efficiency.

1- Theoretical Findings in Light of Relevant Literature:

Based on the theoretical literature addressing both variables of this study—artificial intelligence and support for administrative decision-making—the following findings were reached:

- Artificial intelligence is considered a modern branch of computer science that primarily aims to simulate human thinking by enabling machines to analyze, reason, and make decisions, especially in complex situations that require intelligent information processing.
- AI applications are diverse and vary in functionality depending on their types. They contribute to simplifying and facilitating the management of organizational activities, enhancing operational efficiency, and improving overall administrative performance.
- Intelligent systems play a pivotal role in decision-making due to their high accuracy and objectivity in analysis, reducing the likelihood of errors and minimizing the influence of human biases in administrative processes.
- AI contributes to preserving and documenting human expertise by transferring it to intelligent systems that can be accessed and used at any time and from any location, ensuring continuity of institutional knowledge and enhancing decision-making effectiveness.

2- Field Findings:

- AI plays a role in supporting administrative decision-making processes at the National Social Security Fund.
- Expert systems contribute to supporting administrative decision-making at the National Social Security Fund.

- Neural networks contribute to supporting administrative decision-making at the National Social Security Fund.
- Intelligent agents play a role in supporting administrative decision-making at the National Social Security Fund.

-Appendices :

Outputs of the statistical analysis program SPSSv26

Gender					
Valid		Frequency	Percent	Valid Percent	Cumulative Percent
	boy	16	53.3	53.3	53.3
	girl	14	46.7	46.7	100.0
	Total	30	100.0	100.0	

Age					
Valid		Frequency	Percent	Valid Percent	Cumulative Percent
	under 30 years	8	26.7	26.7	26.7
	30-40 years	14	46.7	46.7	73.3
	41-50 years	7	23.3	23.3	96.7
	51 years or above	1	3.3	3.3	100.0
	Total	30	100.0	100.0	

Educational Qualification					
Valid		Frequency	Percent	Valid Percent	Cumulative Percent
	Secondary education or lower	3	10.0	10.0	10.0
	Bachelor's degree	12	40.0	40.0	50.0
	Master's degree	12	40.0	40.0	90.0
	Doctorate	3	10.0	10.0	100.0
	Total	30	100.0	100.0	

Job Position					
Valid		Frequency	Percent	Valid Percent	Cumulative Percent
	Deputy Director	3	10.0	10.0	10.0
	Head of Department	3	10.0	10.0	20.0
	Head of Office	24	80.0	80.0	100.0
	Total	30	100.0	100.0	

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Decision-Making	.149	30	.088	.934	30	.663
Artificial Intelligence	.111	30	.200*	.978	30	.784
*. This is a lower bound of the true significance.						
a. Lilliefors Significance Correction						

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Artificial Intelligence	30	3.1385	.27580	.05035
Decision-Making	30	3.4458	.24605	.04492

ne-Sample Test						
	Test Value = 0					
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Artificial Intelligence	62.3	29	.000	3.13846	3.0355	3.2414
Decision-Making	76.7	29	.000	3.44583	3.3540	3.5377

Model Summary						
Model	R	R Square	Change Statistics			
			F Change	df1	df2	Sig. F Change
1	.646 ^a	.416	.06111	1	28	.000
Artificial Intelligence a. Predictors: (Constant),						
Model Summary						
Model	R	R Square	Change Statistics			
			F Change	df1	df2	Sig. F Change
1	.532 ^a	.283	.6579	1	28	.000
a. Predictors: (Constant), Expert Systems						
Model Summary						
Model	R	R Square	Change Statistics			
			F Change	df1	df2	Sig. F Change
1	.632 ^a	.399	.64310	1	28	.000
a. Predictors: (Constant), Artificial Neural Networks						
Model Summary						
Model	R	R Square	Change Statistics			
			F Change	df1	df2	Sig. F Change
1	.778 ^a	.606	.1347	1	28	.000
a. Predictors: (Constant), Intelligent Agents						

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.242	.915		9.545	.001
	Artificial Intelligence	.671	.290	.546	.1453	.000
a. Dependent Variable: Stages of the Decision-Making Process						
Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.933	.742		3.545	.001
	Expert Systems	.812	.453	.446	1.246	.000
a. Dependent Variable: Stages of the Decision-Making Process						
Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.942	.668		7.531	.001
	Artificial Neural Networks	.771	.339	.313	1.984	.000
a. Dependent Variable: Stages of the Decision-Making Process						
Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.642	.602		3.440	.001
	Intelligent Agents	.460	.290	.542	1.235	.007
a. Dependent Variable: Stages of the Decision-Making Process						

VI - Referrals and references:

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How to cite this article by the APA method:

Grounga Oualid, Ouled Haddar Fateh Belkacem (2026), **Artificial Intelligence and Organizational Decision-Making in Economic Institutions: An Empirical Study of the National Fund for Non-Salaried Workers in Ghardaia**, Economic Development Review, Volume 11 (Number 01), Algeria: University of Eloued, pp.458-470.

