Assessing the economic and social impacts of investing in artificial intelligence to achieve sustainable development in the UAE and the possibility of projecting the experiment on the Algerian reality

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Abstract:

This research paper aims to shed light on the role of artificial intelligence in achieving sustainable development goals by focusing on the nature of artificial intelligence and sustainable development and the relationship between them theoretical, in addition to evaluating the role of artificial intelligence in helping to achieve sustainable development goals in the UAE and trying to project the experience on the Algerian reality.

The study concluded that the UAE is a successful model in the field of artificial intelligence, and with regard to the possibility of projecting the experiment on the Algerian reality, we find that there are many opportunities that can be taken advantage of in following the example of the Emirati experience, but it still suffers from some challenges that prevent this from being achieved, most notably infrastructure and legal legislation.

Keywords: AI; Sustainable development; UAE experience; opportunities and challenges.

JEL Classification Codes : Z0, O0, O5

ملخص:

تهدف هذه الورقة البحثية الى محاولة تسليط الضوء على دور الذكاء الاصطناعي في تحقيق اهداف التنمية المستدامة من خلال التركيز على ماهية الذكاء الاصطناعي والتنمية المستدامة والعلاقة بينهما نظري، الى جانب تقييم دور الذكاء الاصطناعي في المساعدة على تحقيق اهداف التنمية المستدامة في الامارات ومحاولة اسقاط التجربة على الواقع الجزائري.

وقد خلصت الدراسة الى ان الامارات تعتبر نموذجا ناجحا في مجال الذكاء الاصطناعي، وبالنسبة الى إمكانية اسقاط التجربة على الواقع الجزائري نجد انه هناك العديد من الفرص التي يمكن الاستفادة منها في الاحتذاء بالتجربة الإماراتية الا انها مازالت تعاني من بعض التحديات التي تحول دن تحقيق ذلك أبرزها البنية التحتية والتشريعات القانونية

كلمات مفتاحية: ذكاء اصطناعي.، تنمية مستدامة، تجربة الامارات.، الفرص والتحديات.

تصنيفات JEL: O0،Z0،O5

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1. Introduction

In today's era, sustainable development has become a central focus on the agenda of many nations and organizations. Governments and institutions aspire to achieve sustainable economic, social and environmental development, meaning that they meet current needs without compromising the ability of future generations to meet their needs. Sustainable development aims to balance economic growth, environmental preservation and the promotion of social justice. Its three objectives; the environment, the economy and society, are interrelated and mutually reinforcing. In a world witnessing rapid development in the field of technology and innovation, artificial intelligence has emerged as one of the most important development strategies in achieving sustainable development. Artificial intelligence is based on the design of models and systems capable of learning, adapting and making decisions autonomously. These systems are provided with a large set of data and information that help them extract patterns, analyze data and make smart decisions. It is thus considered a key to achieving innovation and development in many fields. Intelligence can be used Artificial in many fields, ranging from medicine, manufacturing and commerce to transportation and entertainment. AI can solve complex challenges and contribute to improving efficiency and productivity, thereby promoting economic development and serving communities.

The UAE is witnessing a strong trend towards artificial intelligence with the aim of achieving sustainable development. It recognizes that AI can be a crucial factor in promoting innovation, developing the economy and improving the quality of life. The UAE's Artificial Intelligence Strategy was adopted in 2017, which aims to develop an environment conducive to innovation and support the application of smart technologies in various sectors. The strategy is geared towards achieving sustainable development goals including promoting the digital economy, improving government services, and maximizing efficiency and environmental sustainability. The UAE is now a global hub for innovation and development in AI. It hosts many initiatives, competitions and conferences in this field, and works to provide the appropriate environment to attract talent and leading companies in this field. With this direction, the UAE aspires to be a leader in artificial intelligence and technological innovation, contributing to sustainable development and promoting a prosperous future for the country and the entire region.

Hence, the main features of the problem of our research, which can be formulated as follows: **Has artificial intelligence motivated the UAE to achieve the sustainable development goals, and what are the opportunities and challenges of projecting the experiment on Algeria?**

Our research proceeds from the premise that artificial intelligence has helped the UAE achieve the sustainable development goals.

The importance of studying: The importance of studying the topic of artificial intelligence and sustainable development lies in strategic thinking and preparing for our common future. Understanding how technology can contribute to sustainable

development can guide us towards making the right decisions and implementing policies and actions to preserve the environment and promote economic and social sustainability.

Objectives: This research aims to enhance awareness and education about artificial intelligence and its importance in achieving sustainable development in addition to understanding how technology can contribute to promoting sustainable development in various fields. Analyze and evaluate the ability of AI applications to achieve sustainable development goals, and identify challenges and opportunities associated with this field.

Divisions of the study: In order to familiarize themselves with all aspects of the study and try to answer the question posed and try to prove the sincerity of the hypothesis of our research, we have divided our study into three sections, in which we will try to address first the theoretical framework for both artificial intelligence and sustainable development, we will try to pass to the role of artificial intelligence in achieving the goals of sustainable development, and finally we will study the case of the UAE in the field of applying artificial intelligence as a modern trend to achieve sustainable development goals And the chances of dropping the experiment on Algeria.

2. Theoretical framework for artificial intelligence and sustainable development

Artificial intelligence and sustainable development are a topic of great importance, as they promote a balance between technological progress, environmental conservation and the achievement of comprehensive development of societies

2.1 Conceptual framework for sustainable development

In modern times, economic, social and environmental challenges have become interconnected and cannot be ignored. The world faces many challenges such as lack of natural resources, climate change, environmental pollution, population poverty and social inequality. These challenges require a sustainable approach that combines economic and social development with environmental conservation and balancing current and future generations.

2.1.1 Definition of sustainable development

The concept of sustainable development was first mentioned in the report of the World Commission on Environment and Development in 1987 and defined development in this report as that development that meets the needs of the present without compromising the ability of future generations to meet their needs (Ayed Ali, 2022, p. 103), as defined by the Webster dictionary as "that development that uses natural resources without allowing them to be depleted or partially or completely destroyed and referred to as that process that recognizes the need to achieve economic growth." It is compatible with the capabilities of the environment in the sense that economic development and environmental preservation are complementary processes and not contradictory (Abu Al-Nasr, Medhat, and Yasmine, 2017, p. 18).

In this study, the researchers believe that sustainable development refers to achieving a balance between meeting the needs of the current generation of human beings without compromising the ability of future generations to meet their needs. The concept is based on the principles of preserving and protecting natural resources, promoting sustainable economic development, and promoting social justice and equality among individuals.

2.1.2 Characteristics of sustainable development

The characteristics of sustainable development are as follows (Yassin and Abed, 2019, p. 76):

_It is long-term development, taking the time dimension as its basis.

Equality and consideration of the rights of future generations, as it is a development that takes into account the availability of the right of present and future generations to natural resources, equality and equity.

_It is a multidimensional and interdependent process based on planning and coordination between economic and social development on the one hand and environmental development on the other.

_They are characterized by overlap and complexity, especially with regard to what is environmental and social in development.

_The elements of sustainable development cannot be separated from each other, due to the high overlap of dimensions and quantitative and qualitative elements of this development process.

_ It gives great consideration to the human side and puts in the first place meeting its basic needs and requirements and considers it its first goal.

_ It tries to develop and develop the spiritual and cultural aspects and preserve the specificities of society.

_Spread and the international dimension by helping poor and underdeveloped countries.

2.1.3 Dimensions of sustainable development

The main dimensions of sustainable development are the following points:

Environmental dimension: This dimension is related to the preservation of the natural environment and the preservation of biodiversity. This includes using natural resources sustainably and improving energy and water efficiency. It also requires reducing pollution and harmful emissions and encouraging clean development and green technology (Batir Mohammed, 2003, p. 189).

Economic dimension: This dimension focuses on achieving sustainable economic development and enhancing prosperity and economic sustainability of society. This includes providing adequate employment opportunities, economic equity, encouraging innovation and investment in sustainable industries, and promoting financial inclusion (Attia, 2003, p. 94).

Social dimension: This dimension is related to ensuring social justice and promoting equality and effective participation of all segments of society. This includes providing health care, education and adequate housing for all, promoting women's and minority rights and providing social protection to vulnerable and marginalized groups (Batir Mohammed, 2003, p. 189).

Technological dimension: The technological dimension is an essential part of sustainable development. It is about the sustainable development and use of technology for economic, social and environmental progress. Technology promotes environmental sustainability, improves resource efficiency, promotes innovation and improves productivity. By channeling technology to meet the needs of society, sustainable development can be achieved that benefits all.

These dimensions cooperate and interconnect to achieve sustainable development. Economic development cannot be achieved without preserving the environment, and social justice cannot be achieved without sustainable economic development. By balancing these dimensions, sustainable development can be achieved that meets the needs of the present generation and does not compromise the ability of future generations to meet their needs.

2.2 Theoretical framework of artificial intelligence

In our time, the world is witnessing a strong trend towards artificial intelligence and its adoption in various fields. This trend is due to the tremendous capabilities that AI provides in data analysis, machine learning, and intelligent decision-making.

2.2.1 Definition of AI

Artificial intelligence is a term consisting of two words whose meaning reflects the nature and importance of the field. Intelligence expresses the ability to understand and learn new and changing things, including the ability to recognize patterns and make decisions. The word "artificial" refers to the process that results in things that are not naturally formed, and includes innovations and technologies created by humans (Abubakar et al., 2019, p. 11). The American scientist McCarthy Johan It coined the term artificial intelligence in 1956, and it defined it as the science and engineering of the intelligent making of intelligent machines, or it is the branch of computer science that aims to create the intelligent machine (mentioned and Malika, 2021, page 137). While W. Patterson defined it Dan Artificial intelligence is a type of branch of computer science that is concerned with the study and formation of computer systems that show some forms of intelligence, and these systems have the ability to make very useful conclusions about the problem set, and these systems can understand natural languages or understand living perception and other possibilities that need intelligence when implemented by humans (Ahmed, Mohammed, and Omar, 2018, p. 38). Artificial intelligence is defined as the ability of a machine to perform cognitive functions that It connects them to human minds, such as perception and reasoning, learning, interaction with the environment, problem solving, and even creativity" (Mohammed and Nabila, 2021, p. 250)

It is the theory and development of computer systems capable of performing tasks that require human intelligence, examples of which are visual perception, speech recognition, decision-making and learning under uncertainty" (Hisham and Hanan, 2022, p. 709). The key feature of AI is the ability to reduce and eliminate repetitive tasks. This helps shrink the functionality of the bottom layer, making AI applications more prevalent today, while increasing the number of independent software organizations available to handle advanced technologies. The benefits of AI systems

are clearly visible to digital consumers in many industries and businesses, such as customer service practices implemented by chatbots. (Yahya, 2021).

2.2.2 AI goals

The objectives of artificial intelligence vary and include several fields and applications. Here are some of the main objectives of AI:

Improve the efficiency of operations and increase productivity in various industries. By applying AI techniques, processes can be improved, errors can be reduced, and the quality of products and services improved.

_ Improve the user experience and make it smoother and more comfortable. AI can be used to design and develop products and services that effectively meet users' needs and provide them with distinctive experiences.

Improve analysis capacity and provide accurate recommendations based on available data. AI can analyze big data, extract patterns and trends, and provide recommendations based on this.

Pushing the boundaries of technology and developing it continuously. Artificial intelligence can contribute to the innovation of new technologies and innovative applications in areas such as intelligent robotics, autonomous vehicles, smart medicine, and others.

Help solve big problems and global challenges such as climate change, healthcare, cybersecurity, and others. AI can contribute to providing innovative and effective solutions to these problems.

2.2.3 Characteristics of artificial intelligence

Artificial intelligence has a set of characteristics that distinguish it and make it unique. Here are some of the key characteristics of AI (Khawla, 2023, page 356):

the use of artificial intelligence to solve the problems presented;

Ability to think, learn, perceive, acquire and apply knowledge, use old experiences and employ them in new situations;

Ability to use trial and error to explore different things and respond quickly to new situations and circumstances;

Ability to deal with difficult and complex situations and ambiguous situations, even in the absence of information;

Artificial intelligence can absorb information, analyze it, extract patterns and learn through it. Intelligent systems can adapt and improve their performance over time by experimenting and iterating processes;

Artificial intelligence can understand and process human language and interact with people through speech or writing. It relies on techniques such as text analysis, language translation and voice recognition;

Artificial intelligence can recognize, understand, and analyze images using computer vision techniques. Can recognize different shapes, colors, faces and objects;

AI can process and analyze huge amounts of data quickly and accurately. It can make data-driven decisions and provide intelligent recommendations to users;

Artificial intelligence can be applied to create intelligent robots capable of carrying out various tasks and interacting with the surrounding environment. Intelligent robots can be self-determined, learn and adapt to changes;

2.3 Artificial intelligence and achieving the sustainable development goals

AI is a powerful tool to promote sustainable development due to its unique ability to analyze big data, extract patterns and predict future trends. AI can provide innovative and effective loops to the economic, social, and environmental challenges faced by societies.

In terms of the environment, AI can contribute to the protection of the environment and the conservation of natural resources through accurate analysis of environmental data and prediction of climate changes. AI can be used to monitor air and water pollution, improve waste management, and improve energy and natural resource efficiency.

In terms of economy, AI can support sustainable development by improving process efficiency and improving business performance. Smart systems can analyze data and provide accurate recommendations for improving resource planning and production and distribution management. AI also contributes to the development of new innovations and spurs sustainable economic growth.

In terms of social aspects, AI contributes to improving the quality of life and providing fair opportunities for all. AI can be used to improve education, provide personalized healthcare and promote social equality.

Therefore, AI is a powerful tool to achieve the overall goals of sustainable development. By exploiting its potential, societies can transform into development models that balance the economy, environment and society, and achieve a balance between present and future generations. In the following, we will try in detail to address the role of artificial intelligence in achieving each of the sustainable development goals:

Eradicate poverty: AI can contribute to social and economic justice by providing employment and income opportunities for disadvantaged groups. AI can be used to develop social enterprises and empower SMEs through predictive analytics and smart technology to achieve sustainable growth (Zahran, 2020, page retrieved February 13, 2024)

Zero hunger: AI can contribute to food security by improving agricultural productivity and improving the management of agricultural resources. AI can be used to analyze agricultural data and provide accurate advice to farmers on sustainable agriculture and guide water management and harvest improvement.

Good health: AI can support improved healthcare, diagnosis of diseases and provision of appropriate treatments. AI can be used to analyze medical data, medical imagery, and genome analysis to identify disease-related factors, guide personalized health care, and improve health outcomes (watson health, n.d., retrieved February 13, 2024).

Quality education: AI can support improved access to education and improve the quality of education. AI can be used to develop smart learning technologies, provide online learning platforms, and tailor education to students' needs (UNESCO, 2019, p. retrieved 13 February 2024).

Gender equality: AI can support gender equality by providing equal opportunities in employment and reducing biases and discrimination. AI can be used to improve fair

hiring processes, analyze payroll, and promote diversity and inclusion in the workplace (Lamia, 2020, p. 120).

Affordable and clean energy: AI can support environmental sustainability by improving energy efficiency and improving the management of electrical grids. AI can be used to analyze energy data, optimize energy distribution, and develop affordable clean energy solutions (Khalifa, 2020, p. 53).

Decent work and economic growth: AI can contribute to promoting decent work and sustainable economic growth. AI can be used to analyze economic data and forecasts, improve production processes, and improve human resource management (Zahran, 2020, retrieved February 13, 2024).

Industry, Innovation and Infrastructure: AI can contribute to fostering innovation and improving industry structures and infrastructure. AI can be used to improve design, manufacturing, industrial data analysis, develop new technologies, and improve infrastructure (Stephen, 2018, p. 26).

Sustainable cities and communities: AI can contribute to sustainable cities and communities by improving resource management, improving transportation, improving safety, and promoting sustainable urban planning (Khalifa, 2020).

Climate action: AI can contribute to adapting to climate change and reducing harmful emissions. AI can be used to analyze climate data, forecast the weather, and develop innovative solutions to adapt to climate risks (Fundamentals of Artificial Intelligence: Environment and Climate, 2021, page by page, retrieved February 13, 2024).

Underwater life: AI can contribute to the preservation of aquatic environments, improved management of water resources and the conservation of biodiversity in oceans and lakes.

Partnerships to achieve the Goals: AI can support enhanced collaboration and partnerships between governments, organizations, businesses and civil society to achieve the SDGs.

Ensure water availability: AI can support improved water resources management and ensure the availability of clean and potable water. Through water data analysis, weather forecasts and smart technology, AI can improve water use, provide sustainable irrigation and improve sanitation systems.

Reducing inequality and reducing wealth differences: AI can support equality and reduce disparities in the equitable distribution of wealth and opportunities. By analyzing economic and social data and making accurate recommendations, AI can achieve a fairer distribution of wealth and promote equal opportunities (Zahran, 2020, retrieved 13 February 2020).

Ensure sustainable production, consumption and production patterns: AI can play a role in ensuring sustainable production, consumption and production patterns. By analyzing environmental data and smart recommendations, AI can help achieve environmental sustainability by improving production processes, encouraging sustainable consumption, and promoting innovation in renewable energy and clean technology.

Peace, justice and strong institutions: AI can contribute to promoting peace and justice and strengthening strong institutions. By analyzing social and political data and providing strategic recommendations, AI can support decision-making, achieve justice, and promote peace in societies (Zahran, 2020, retrieved 13 February 2024).
Life in the wild: Artificial intelligence plays a crucial role in promoting life in the wild by monitoring and protecting animals and plants, combating poaching, providing climate change prediction, and reducing collisions between wildlife and human activities.

3. The strategy of the united Arabs Emirates in achieving sustainable development the role of AI in supporting and achieving its goals and the possibility of dropping the experiment on Algeria

As part of the National Innovation Strategy, the UAE program aims to promote economic sectors that stimulate innovation. This program is implemented with the aim of promoting economic development and enhancing competitiveness in the global market by promoting innovation and developing technological and scientific capabilities. The program includes stimulating investment in the fields of artificial intelligence, advanced technology, industrial innovation, sustainability technology and other vital sectors that contribute to enhancing the growth of the national economy. The strategy aims to provide an enabling environment for innovation, enhance cooperation between the public and private sectors and strengthen international partnerships in the field of innovation.

3.1 UAE AI Strategy

In recent years, the UAE has witnessed a remarkable development in the field of artificial intelligence. This is due to the country's unwavering commitment to digital transformation and rapid technological development. A strong historical background for artificial intelligence has been formed in the UAE, where research, innovation and technological development centers have been established and investment in advanced technological infrastructure has been established.
The efforts began within the framework of a clear strategy to enhance national capabilities in the field of artificial intelligence and its use in various government and private sectors. High-level educational and research institutions have been established to enhance knowledge and training in this field, in addition to strengthening cooperation with leading global companies and institutions in the field of artificial intelligence.
In 2000, the UAE government undertook several efforts to promote the country's comprehensive development. These efforts focused on developing various economic sectors, enhancing infrastructure and improving the quality of life for citizens. Measures have been taken to encourage foreign direct investment, promote trade and diversify sources of income. In 2013, the government announced the National Innovation Strategy with the aim of enhancing R&D capabilities and promoting innovation across all sectors. The necessary funding and support were provided to startups and innovative companies and public-private collaboration was

fostered to develop new and innovative solutions. By 2014, the "Transforming Government to Smart" program was launched with the aim of developing government services and promoting the use of technology and artificial intelligence to improve the user experience and achieve higher efficiency in government operations. In 2015, the government launched the "Innovation Economy" initiative with the aim of promoting innovation and growing start-ups and innovative companies in the country. Financial and technical support and training were provided to startups and cooperation between the academic and industrial sectors was encouraged to achieve development and innovation in various industries In 2017, the UAE launched the "Artificial Intelligence Strategy" initiative, which aims to develop a smart society based on technology and innovation in all aspects of life. Specialized task forces have been formed to develop laws, policies and regulatory frameworks to promote the use of AI in different sectors. Thanks to this strong historical background and tireless efforts, the UAE has become a leading hub for artificial intelligence at the global level, contributing to economic development and promoting the country's digital transformation.

3.1.1 Pillars of the UAE Strategy for Artificial Intelligence

The pillars of the UAE strategy for artificial intelligence are as follows (Khawla, 2023, page 360):

Building a team and forming an AI Council: The formation of a specialized working group and an AI council is vital to the UAE's strategy. Experts and specialists in the field are appointed to develop policies and directives and promote cooperation between stakeholders.

Activating programs and workshops in government agencies on the applied mechanisms of artificial intelligence: The UAE aims to enhance awareness and train workers in government agencies on how to apply smart technologies and tools in various government practices.

Developing the capabilities of senior government leadership in the field of artificial intelligence: The UAE focuses on developing the capabilities of senior government leaders to understand and use artificial intelligence in strategic decision-making and achieve digital transformation.

Providing first-line services to the public through artificial intelligence: The UAE uses smart technology and artificial intelligence to improve the experience of citizens and residents by providing fast and effective services in various sectors such as health, education and transportation.

Appointing the AI Advisory Council and issuing a government law on the safe use of AI: The UAE is working to form a specialized AI Advisory Council to provide guidance and advice in this field. It also plans to pass a government law to ensure the safe and responsible use of AI.

The UAE's strategy targets artificial intelligence such as transport, environment, education, traffic, technology, water, energy, space and health (UAE Ministry of Finance, 2020).

3.1.2 Objectives of the UAE Strategy for Artificial Intelligence

The UAE's AI strategy is aligned with the UAE Centennial 2071 goals that aim to achieve inclusive and sustainable development in the country over the course of the twenty-first century. Here are some of the objectives that align with the AI strategy (Ahmed M., 2018):

Innovation and Development: The UAE aims to promote innovation and technological development through the use of artificial intelligence in various sectors. Public-private cooperation is strengthened and the spirit of innovation and technological development is encouraged.

Economic Excellence: The UAE seeks to promote digital transformation in the economic sector and increase productivity and efficiency. Through the use of artificial intelligence in various sectors, the UAE aims to achieve economic excellence and promote sustainable growth.

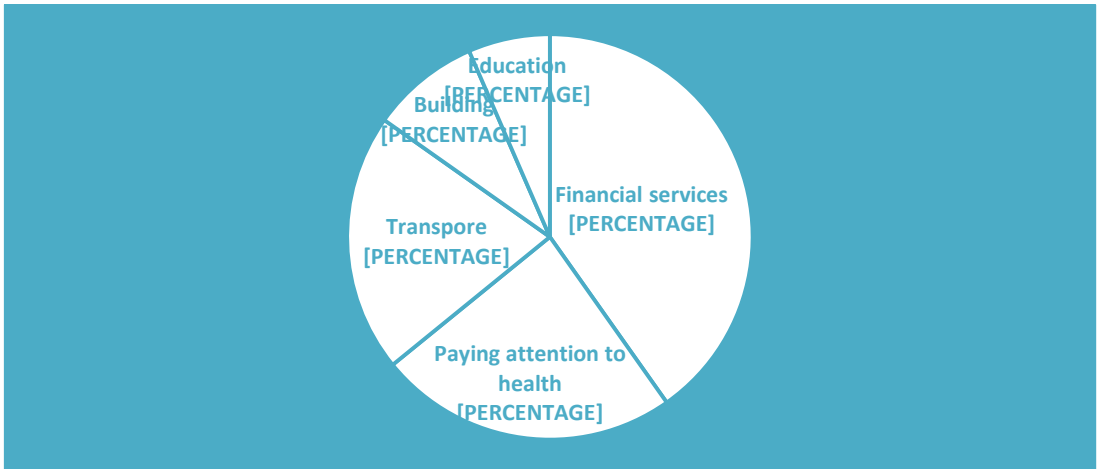
Improving the quality of life: The UAE aims to improve the quality of life for citizens and residents through the use of artificial intelligence in providing advanced and effective services in areas such as health, education and transportation. This aims to improve the life experience and meet the needs of society.

Sustainability and environmental protection: The UAE focuses on the use of artificial intelligence to achieve environmental sustainability and protect the environment. Smart technologies can be used to manage limited resources, improve energy efficiency and preserve the environment.

Enhancing cooperation and partnerships: The UAE aims to enhance cooperation and partnerships with international companies and institutions in the field of artificial intelligence. Knowledge and experience are exchanged and international cooperation is strengthened to achieve progress and development in this field.

It is expected that artificial intelligence will contribute by 2035 to enhancing economic growth at a rate of 1.6%, in addition to growth in the financial, health, transport, construction and education sectors in the first place, followed by the rest of the sectors as follows:

Fig.01: Expected Contribution of Artificial Intelligence in the United Arab Emirates for the year 2035 by Sector



Source: Based on (Expected artificial intelligence contribution to the economy of the United Arab Emirates in 2035, by sector, available at: https://www.statista.com/statistics/1244049/uae-ai-contribution-by-sector-2035/, date of view (13/2/2024))

3.1.3 Integration between AI and the UAE strategy to achieve the Sustainable Development Goals

In 2018, the UAE made significant progress and improved its ranking in several global reports. For example, the UAE ranked first regionally and seventh globally according to the 2018 Global Competitiveness Report issued by the Global Competitiveness Center of the International Institute for Management Development. Switzerland has also moved up significantly in the global ranking of the most competitive countries, outperforming countries such as Sweden, Germany and Canada.

INSEAD's 2018 Global Talent Competitiveness Report also showed the UAE's progress in talent competitiveness. The UAE has twice as high in the ranking compared to the previous year. Although the UAE is not ranked among the top 20 countries globally in this index, it leads the GCC region and the Middle East. These global reports illustrate the UAE's successes in multiple areas and reflect the country's commitment to achieving the 2030 Agenda and global aspirations. The strategy of the Federal Competitiveness and Statistics Authority plays an important role in enhancing the UAE's ranking and competitiveness globally, and reflects the country's efforts in achieving its future goals.

The UAE has worked to focus on each of the Sustainable Development Goals to achieve it, by launching new policies and innovative initiatives by each ministry or government entity concerned.

Poverty eradication: The Job-Able Motivation Policy in the UAE aims to provide job opportunities for social security beneficiaries. This policy aims to empower these individuals and enhance their effective participation in the local economy. The policy includes vocational training and orientation towards appropriate jobs. The UAE seeks to promote financial and social inclusion and achieve sustainable development through this policy. (Khawla, 2023, p. 361).

Zero Hunger: The UAE AI Strategy relies on the application of these technologies in the field of afforestation and agriculture in all its forms. UAE companies have benefited from AI technology in the areas of research and development and production of agricultural crops and food. For example, Platform uses artificial intelligence techniques to combat the red palm weevil. The stimulus investment packages initiative comes as part of this strategy, where one billion dirhams to strengthen the agricultural sector and ensure food security. The initiative aims to encourage investment and the use of advanced technology such as artificial intelligence in the development of this sector, especially in desert environments. (Al Muhairi, 2022)

Good Health and Well-being: Through the launch of the 'Healthy Kids' and 'Reassurance' apps, the UAE Ministry of Health and Prevention aims to prevent noncommunicable diseases. In addition, these applications adopt virtual reality rehabilitation technology (VR)). The Ministry has announced plans to launch an

application that uses virtual rehabilitation technology to treat many conditions such as stroke, balance disorder, developmental disorders in children, cerebral palsy, Parkinson's syndrome, and others. These applications use artificial intelligence techniques to provide distinguished and competitive health services at the local and global levels. (UAE Ministry of Health and Prevention, 2018).

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all: UAE Ministry of Education has made continuous efforts to promote the achievement of the SDGs through the integration of ICTs, including the field of artificial intelligence, into the education system. The smart learning program and the establishment of a specialized data center have been adopted as an interface to achieve the sustainable development goals in the UAE.

The Early Childhood Policy focuses on the care and education of children from birth to 8 years of age, and aims to establish a comprehensive national framework to promote learning and care for them. The inclusive education policy sets a model for UAE schools, focusing on providing quality education from birth and across the five different tracks: Specialized, General, Career, Academic, Advanced and Advanced. Through these efforts, the UAE Ministry of Education seeks to promote integrated education and ICT in the education system, and achieve the SDGs in a comprehensive and inclusive manner.) (UAE Portal to Achieve the Sustainable Development Goals, 2019).

Gender equality: In 2018, the UAE took important steps towards promoting gender pay and salary equality by passing a law aimed at ensuring that there is no discrimination between men and women in the field of wages and salaries. In addition, a new decree was issued in the same year aimed at increasing the representation of Emirati women in the Federal National Council to 50%. This decision reflects the UAE's commitment to enhancing the role of women in decision-making and empowering them to Active participation in the political and social life of the country. These steps reflect the UAE's commitment to achieving gender equality and enhancing the role of women in all fields, and emphasize that Emirati women have equal rights and equal opportunities in all aspects of life.

Clean Water and Hygiene: In 2018, the UAE launched the Demand Side Management Program 2050, an implementation plan aimed at achieving national targets related to reducing energy and water demand and improving the efficiency of their use. The UAE Water Security Strategy 2036 represents the country's first unified water security strategy. The Demand Side Management Program 2050 aims to promote sustainability and achieve Balance between demand and supply in the energy and water sectors. The plan includes the implementation of measures to improve energy and water efficiency, encourage awareness and education on sustainability, promote innovation and adopt modern technologies to improve environmental performance. The UAE Water Security Strategy 2036 is an important step towards ensuring the sustainable and efficient availability of water in the country. The strategy aims to achieve the diversity and sustainability of water resources, enhance water efficiency, develop water infrastructure, and enhance international cooperation in the field of water management.

Affordable and clean energy: By launching a web application to estimate the amount of electricity that can be generated and the expected savings in electricity bills by installing solar panels, the UAE completed the second phase of this project in 2017. It also launched the Energy Strategy 2050 in the same year, which is the first comprehensive national energy strategy based on the concept of supply and demand. This web application enables citizens and businesses to estimate the expected amount of electricity that can be generated by installing solar panels as well as anticipating potential savings in electricity bills. This application reflects the UAE's commitment to promoting renewable energy and encouraging its use to achieve environmental sustainability and reduce the country's dependence on traditional sources of energy. In addition, the Energy Strategy 2050, launched by the UAE in the same year, is an ambitious strategy aimed at balancing supply and demand in the energy sector. The strategy seeks to promote the use of renewable energy, diversify energy sources and enhance energy efficiency. This strategy reflects the UAE's commitment to energy sustainability and innovation in the country's energy sector.

Decent work and economic growth: Through the launch of a series of smart applications in 2017 and 2018, the efficiency and ease of service delivery in the country has been enhanced. Among these innovative applications is the Smart **Wajhni** app, which aims to provide career guidance to fresh graduates and help them identify available job and training opportunities. The unified portal for self-employment for skilled people was launched in 2018, and this portal aims to support Emiratization efforts by connecting national skills. Programs and services available in the public and private sectors.

The portal provides a set of facilities and incentives for companies that use it to benefit from national competencies. The move aims to encourage local recruitment and enable companies to tap into available local talent. These initiatives reflect the country's commitment to promoting Emiratization and developing national talent, promoting innovation in service delivery and enhancing the country's economic sustainability.

Industry, Innovation and Infrastructure: The UAE has maintained its regional and global leadership in many important areas. These areas include competitiveness, development, entrepreneurship, innovation, ease of doing business and trade, tourism, and investment. One of the inspiring examples of projects we are proud of in the UAE is the Artificial Intelligence Lab at the Ministry of Climate Change and Environment, which was fully developed by the Khalifa University Research Center. This lab aims to map and evaluate renewable energy using artificial intelligence techniques. The laboratory uses advanced algorithms to analyze data, manage risks related to pollution and climate forecasts. The lab acts as a smart and interactive system for real-time solar performance evaluation and environmental monitoring at the headquarters of the Ministry of Climate Change and Environment in the Emirate of Dubai. This system displays important indicators of environmental and renewable energy, and provides real-time and predictable information to help make smart environmental decisions.

Reducing inequalities: Through the launch of the National Policy for Older Persons in 2018, the UAE aims to improve the quality of social services and the well-being of individuals aged 60 and above. The Masarra Card initiative, which was launched in 2016 as part of this policy, aims to promote a sense of inclusion and belonging among senior UAE nationals. This card was issued in line with the UAE Vision 2021, which seeks to achieve sustainable development and enhance the well-being of all Community groups, including the elderly.

Sustainable cities and communities: The National Legal Framework Policy for Public-Private Partnership was developed in 2018 with the aim of developing and strengthening the PPP policy. This policy aims to finance infrastructure projects and implement the National Housing Initiative launched in 2017. The National Housing Initiative aims to establish a regulatory framework for the housing process, as well as to prepare a fair and long-term plan to ensure the provision of adequate and equitable housing. This initiative aims to promote Sustainable development and providing suitable housing opportunities for citizens.

Responsible consumption and production: Through the establishment of the National Electronic Waste Database in 2018, the collection of waste data from all relevant authorities in the UAE has been enhanced. This database aims to facilitate the management, analysis and reporting of data at the local and national levels. Through this electronic database, the collection and storage of data on waste is centralized, enabling Better understand the challenges and opportunities related to waste management in the country. This data can be used to analyze models and trends and develop effective strategies to reduce waste and promote recycling and safe waste disposal.

By using accurate and comprehensive data from the electronic database, management can improve its processes and make informed decisions regarding waste management. Thus, the country's efforts can be enhanced in achieving environmental sustainability and maintaining the cleanliness and beauty of the environment

Climate action: Through the launch of the National Climate Change Adaptation Program in 2017, the focus was on assessing climate change adaptation capacities in four key sectors, namely health, energy, infrastructure and environment. The Cabinet has approved the National Climate Change Plan 2050, which provides a comprehensive framework to support the transition to a green economy capable of addressing the effects of climate change. This initiative aims to enhance the resilience to climate change in state and improve the sustainability of key sectors. The National Climate Change Plan seeks to enhance awareness and enhance joint cooperation between the public and private sectors to achieve sustainable economic growth and protect the environment.

Life Below Water: During the Government Innovation Lab in 2014, the UAE Smart Natural Capital Map initiative was adopted. This map aims to assess the ecological and economic services of natural resources in the UAE. The map aims to enable decision-makers to make appropriate decisions regarding land use and business optimization and investments. In addition, the map will provide the tools to improve the management of resources. The natural state, and a contribution to the

achievement of the objectives of the international Convention on Biological Diversity known as the "Aichi Targets"".

Life on Land: The Electronic Permissions Program the Convention on Global Trade in Endangered Species of Fauna and Flora was launched with the aim of regulating international trade more effectively. This program aims to regulate international trade in endangered fauna and flora covered by the Convention on International Trade in Endangered Species of Fauna and Flora. Through the implementation of this program, the proportion of protected areas in the UAE has increased to 17% in 2017, compared to 12.8% in 2014. This increase reflects the country's commitment to protecting biodiversity and preserving endangered animal and plant species.

Peace, justice and strong institutions: The Smart Tower initiative was implemented in 2017, which aims to monitor traffic, track required vehicles, and provide important information to motorists regarding the traffic situation. In addition, **Hassantuk** was launched in the same year, which is the region's largest integrated system for monitoring fire-related emergencies and public safety using smart technologies and artificial intelligence applications. This initiative revolves around providing Protection and safety for society through the use of modern technology and artificial intelligence to deal with emergencies effectively and quickly.

Partnerships to achieve the goals: The smart city was established with the aim of providing the necessary support for global humanitarian operations by achieving the Sustainable Development Goals. The city plays a crucial role in achieving Goal 17, acting as a platform that brings together aid agencies and commercial companies through partnerships between humanitarian organizations, government agencies and private sector companies. An innovative platform has been developed at IHC that allows the exchange of real-time data on relief inventories Humanity, with the aim of enhancing levels of preparedness and response to emergency situations. The platform provides important data from six international humanitarian organizations, including the World Food Programme (WFP), the United Nations Humanitarian Response Repository (UNHCR), the World Health Organization (WHO) and the United Nations High Commissioner for Refugees (UNHCR).

Through the above, we find that the application of artificial intelligence in the UAE carries important economic and social implications. Economically, the use of technology and artificial intelligence contributes to economic growth and productivity. It helps in improving operations, reducing costs and increasing efficiency in various economic sectors such as industry, financial services, trade and tourism. Thanks to AI, tangible improvements in the speed and accuracy of operations can be achieved, cost savings and increased competitiveness.

Socially, AI has contributed to improving the quality of life for citizens and residents of the UAE. It provides new opportunities for learning and professional development, and contributes to the improvement of public services such as healthcare, transportation and security. In addition, the use of AI has enabled the provision of innovative solutions in areas such as education, entertainment, culture, improving community interaction with the government and enhancing communication and cooperation between individuals and stakeholders.

3.2 Opportunities and challenges of projecting the UAE's experience on the Algerian reality

The UAE is known for its progress in the use of technology and artificial intelligence in achieving sustainable development. There are many opportunities and possibilities that can be taken as a model for Algeria in this field.

3.2.1 Chances of the experiment being dropped on Algeria

Algeria has many opportunities to use AI for sustainable development. Here are some of these opportunities:

Improving strategic decisions: AI can be used to analyze data and provide accurate reports and analytical platforms that help make informed strategic decisions. AI can be used to analyze economic, social and environmental data and make recommendations to achieve sustainable development.

Improving public services: AI can be used to improve the delivery of public services such as health, education, transportation and energy. AI can be used to analyze health data, provide personal healthcare, improve the education system, improve the efficiency of public transport, and improve energy efficiency.

Promoting agriculture and food security: AI can be used to analyze agricultural and climate data and provide recommendations to improve agricultural productivity, conserve agricultural land and enhance food security.

Improving energy and infrastructure: AI can be used to improve energy efficiency, provide sustainable energy and improve the management of electrical grids. AI can also be used to analyze infrastructure data and effectively improve planning, maintenance, and provision of public services.

Promoting innovation and entrepreneurship: AI can be used to enable innovation and promote entrepreneurship in Algeria. AI can be used to develop new products and services, improve production processes, analyze consumer behavior, and provide outstanding customer experiences.

3.2.2 The challenges of projecting the experiment on Algeria

Algeria faces some challenges in applying artificial intelligence to achieve sustainable development. Among the most prominent of these challenges:

Lack of technological infrastructure: Algeria needs significant investments in building technological infrastructure to support the application of artificial intelligence. This requires the provision of the necessary infrastructure such as fast communication networks and sophisticated data centers.

Lack of skilled human resources: The application of smart technology requires the presence of skilled human cadres in the field of artificial intelligence. Algeria may face a challenge in providing experts and specialists in this field, and developing the capabilities of local human resources.

Legal and regulatory challenges: Algeria may face difficulties in developing appropriate legislation and regulations to support the application of AI. A legal and regulatory framework must be put in place that encourages innovation, protects personal data, and ensures security and privacy.

Trust and adoption: There can be a challenge in adopting smart technology and trusting its use. Algeria must educate citizens and businesses about the benefits of AI and ensure that it is used in responsible and ethical ways.
Economic and financial challenges: The application of smart technology requires significant financial investments. Algeria may face challenges in providing funding for infrastructure development, training human resources and purchasing the required technology.
Cultural and social challenges: There may be a challenge in changing the culture, customs and traditions rooted in society to accommodate smart technology. People should be educated about the benefits of AI and how to use it positively to achieve sustainable development.
Challenges in data collection and analysis: The application of artificial intelligence is based on big data and advanced analytics. Algeria may face challenges in collecting, cleaning and analyzing data effectively and turning it into valuable information for strategic decision-making.
Ethical challenges and privacy-related issues: Smart technology must be used in ways that preserve the privacy of individuals and protect their rights. A strict ethical and regulatory framework must be put in place to ensure that AI is used responsibly and ethically and that individuals' data is protected.
Challenges in integrating and interacting with existing technology: The application of AI in Algeria may require integration with existing systems and technology. Ensure that the smart technology used is compatible with the existing infrastructure and the capabilities of existing systems are taken into account to achieve smooth and effective integration.
Challenges in providing support and training: Technical support and appropriate training must be provided to human cadres concerned with the application of smart technology. People must be qualified and equipped with the skills to use and manage AI effectively.
Meeting these challenges requires a strong commitment from the government, institutions and society in Algeria. The necessary support and investment in technology, infrastructure and training must be provided to achieve sustainable AI-based development. Public-private partnerships must be strengthened, innovation encouraged and the potential of smart technology to be harnessed in achieving sustainable development in Algeria.

4. Conclusion

In conclusion, we can conclude that the UAE has provided an inspiring experience in the field of artificial intelligence for sustainable development. The use of technology and artificial intelligence to develop the economy, improve government services, promote environmental development, improve the health sector, and promote education and training are opportunities and possibilities that Algeria can benefit from to achieve sustainable development. By benefiting from the UAE's experience, Algeria can adopt an innovative and sustainable approach in the use of technology and artificial intelligence to promote innovation and achieve sustainable

development in all fields. Despite the challenges it may face, there are great opportunities for Algeria to rise and develop through the use of advanced technology and artificial intelligence.

It is important to have a strong will on the part of leaders and officials to support innovation, develop capabilities and foster collaboration between the public and private sectors. There must be a clear and sustainable strategy to employ technology and artificial intelligence in achieving sustainable development.

With the best inspiring experiences in the world, Algeria can achieve sustainable growth, development and well-being for its citizens. By embracing innovation and using modern technology, Algeria can be a leading force in sustainable development and achieve a positive transformation of society and economy. Benefiting from the UAE's experience in the field of artificial intelligence can be key to achieving sustainable development in Algeria and achieving prosperity and prosperity for the Algerian people. This requires a strong commitment and hard work to develop capacities, enhance cooperation and form strategic partnerships to exchange knowledge and experiences in this vital field.

Recommendations:

Based on the above, we present some recommendations to enable artificial intelligence as a strategic direction to achieve the sustainable development goals:

Create a strong policy framework: A strong policy framework must be put in place that supports the application and adoption of smart technology and artificial intelligence in all vital sectors. Priorities and strategic objectives for sustainable development should be identified and joint efforts organized to achieve them.

Providing training and education: AI training and education should be enhanced among local human resources. Specialized educational programs should be developed to develop the necessary skills and raise awareness of the benefits of AI and how to apply it in different industries.

Promoting research and innovation: Scientific research and innovation in AI should be supported by providing the necessary funding and resources. Collaboration between universities, research institutions and companies to share knowledge and develop new technologies can be encouraged.

Enhanced cooperation and partnerships: Public, private and academic cooperation should be strengthened to promote knowledge sharing and the development of innovative solutions. The formation of partnerships between stakeholders to exchange experiences and develop joint projects can be encouraged.

Promoting public awareness: Public awareness about AI and its role in achieving sustainable development must be promoted. Awareness campaigns and educational events can be organized to inform the public about the benefits and challenges of AI and how to use it in positive and responsible ways.

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