

Artificial intelligence and its impact on the global economy

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Abstract:

This study aims to know the impact of artificial intelligence on the global economy, as artificial intelligence has become included in many areas of life, including manufacturing, services, etc., and thus most work will be through the smart machine in the near future, and the science of artificial intelligence is a science concerned with simulating human intelligence and employing it in machines. It has implications for the global economy, and the importance of this study is evident in several aspects. From the scientific point of view, despite the existence of studies that dealt with artificial intelligence, there is still a need for more studies in this field, especially in light of the competition between countries in allocating more resources and investments to support research. And training in the field of artificial intelligence technology, and therefore it is expected that this study will constitute an addition in this field. As for the practical aspect: it is expected that this study and its findings will be beneficial for economic decision-makers in the countries. The study uses the historical and descriptive analytical approach, and the most important findings are that the impact of artificial intelligence on the global economy is positive, and that artificial intelligence will enhance the growth of the GDP of some developing countries, and the most important recommendations are for countries to work to support the development of artificial intelligence and create the environment that makes companies and institutions It innovates in order to achieve high rates of GDP.

Key words: artificial intelligence, human intelligence, economics.

Introduction:

There is no doubt that the world is in a state of development in terms of technology in various fields, and one of the most important of these developments is the development in the field of artificial intelligence technology, this field that will enter in all fields, including the economy, and artificial intelligence will be a tool of the economy in the near future Rather, it will become the most important tool for the economy, and it will also become the most important tool for the governments of countries for economic development, growth and the well-being of people. Therefore, most countries in the world have tended towards development in

this area. The science of artificial intelligence is a science concerned with simulating human intelligence and employing it in machines, as it has been defined as the scientific and technical current that includes methods, theories and techniques that aim to create machines capable of simulating human intelligence (), and in which big data is used for analysis and prediction, and the practice of human tasks, and includes All the various smart applications in various fields such as (autopilot, self-driving cars, internet search engines, automatic teller machines, autonomous weapons, voice command applications, weather forecast applications, applications that predict the rise and fall of companies' shares in the stock exchange, and sports fields with anticipation. Players' performance and employment in the best places for the team and studying the opponent through statistics, applications for drawings, panels, and more.

The study problem:

Artificial intelligence has become included in many areas of life, including manufacturing, services, etc., and thus most of the work will become by means of the machine in the near future, as well as concerned with simulating human intelligence and employing it in machines, which has an impact on the global economy and therefore the problem of the study is the question Main: What is the impact of artificial intelligence on the global economy? And subdivided into the extent to which artificial intelligence affects the economic development and growth of developing countries?

Objectives of the study:

- 1- Knowing the impact of artificial intelligence on the global economy
- 2- Knowing the efforts of countries and their development in the field of artificial intelligence.
- 3- Clarify the role of artificial intelligence in relation to the growth of the gross domestic product of developing countries.
- 4- Enriching the scientific arena with new information in science and knowledge.

The importance of the study:

The importance of this study emerges from several aspects. From the scientific point of view, despite the existence of studies that dealt with artificial intelligence, there is still a need for more studies in this field, especially in light of the

competition between countries in allocating more resources and investments by federal agencies to support research. And training in the field of artificial intelligence technology, and therefore it is expected that this study will constitute an addition in this field. As for the practical aspect: it is expected that this study and its findings will be beneficial for economic decision-makers in the countries.

Study hypotheses:

- 1-Artificial intelligence has a positive impact on the global economy
- 2-Artificial intelligence enhances the GDP growth of developing countries
- 3-Most of the human jobs will be replaced by machines in the near future

Study methodology:

The study uses the historical and descriptive analytical method.

Previous studies:

- 1- Hind Mohamed's study entitled: The Use of Neural Networks - Artificial Intelligence in Predicting Future Growth in Egypt, and the study aimed to reveal the extent of the importance of the artificial neural network in predicting the most important economic variables “growth in the period from the first quarter of 1982 - to the first quarter of In 2012 AD in Egypt, the study used the method of inductive and deductive method, and the most important results were that the dynamic method in its entirety is more accurate in terms of the degree of expectation of using the neural network at a rate equal to "19%", than in static and linear models, which fail In terms of the level of accuracy of performance in forecasting.
- 2- Samia Shahebi’s study entitled: Artificial Intelligence between Reality and Expectations is a technical and field study, aiming to find out the foundations of artificial intelligence, its characteristics and some of its living models, and the method used by the inductive and descriptive analytical study, and the most important results are that there are many obstacles in the field of artificial intelligence, the most important of which is its application framework that suffers from difficult follow-up. Technology
- 3- The study of Muhammad bin Dakhil entitled: Building an educational program based on talent and artificial intelligence standards and measuring

its effectiveness in developing modern geographical concepts, the study aimed to build a proposed educational program based on talent and artificial intelligence criteria within the geography course, and measure its effectiveness in developing modern geographical concepts, And spatial thinking skills, and the ability to make future geographic decision-making skills for gifted students at the sixth secondary level in Taif, and the results of the study revealed the presence of statistically significant differences between the variables at the level of statistical significance (0.01).

The theoretical framework of the study:

We find that many countries of the world use artificial intelligence. The great technological advancements in all sciences have made countries in a state of competition to provide their best in various sciences, especially in the field of artificial intelligence science. Development in the field of artificial intelligence has become one of the goals and strategies sought for most countries. Because supremacy in the field of artificial intelligence means development in many areas, which will be reflected positively on the economy, so that the state becomes a great power in the world of artificial intelligence, and thus dominates the world economy, and for this, countries compete to be at the forefront.

According to the monitoring estimates of competition and competition between countries in the field of technical progress, there is a data that is gradually emerging regarding the roles that the technical and technological race may play in the coming years, and according to some experts and scholars, the effects of the artificial intelligence revolution may outweigh the industrial revolution that was during the eighth century ten. Developments in this field may radically change the features of civilian and military life, especially in light of the rapid pace of technical developments in this area, which are forcing countries to re-evaluate their policies and strategies. We find that artificial intelligence consists of different goals and capabilities represented in problem-solving, creativity, moving robots (and it is considered a non-essential part of artificial intelligence, although some believe it is artificial intelligence), in addition to super intelligence, and there is no agreement between scientists regarding For super intelligence, but the way to reach it is that when a human level intelligence is reached, it can be copied and make the goal for the software for these algorithms to design a smarter agent (AI agent) and return the ball until a super intelligence is reached, and it also includes the ability to learn (Machine-Learning), the ability On the organization and understanding of science

(Knowledge Representation), the ability to analyze language (NLP), the ability to understand voice (Speech Recognition), the understanding and analysis of images and video (Computer Vision), and the development of artificial intelligence is a term that includes neural networks, deep learning technologies, and machine learning. ⁽¹⁾ Machine learning uses a lot of experimental data to train algorithms to make decisions that simulate human intelligence. ⁽²⁾

Many major countries and some developing countries have begun drawing up their plans and developing strategies to ensure supremacy in the field of artificial intelligence, and among these countries are Canada, Denmark, Finland, France, India, Singapore, South Korea, Sweden, Taiwan, Germany, Japan, Russia, and Korea, South Africa, the United Arab Emirates and Saudi Arabia, while both the United States of America and China are the two largest countries, locked in a multi-level competition to ensure global supremacy. ⁽³⁾ China aspires to be a pioneer in artificial intelligence technology in the year 2030, as the Chinese government provides large subsidies to a group of companies in the field of artificial intelligence, and the support of the Chinese government is not only with money, but also by creating the appropriate environment for companies to innovate. One of the companies testing the field of artificial intelligence is PwC, as it has tested the impact of artificial intelligence on eight major global sectors, by identifying the most urgent use of artificial intelligence in each sector. ⁽⁴⁾

The health care sector is characterized by the highest potential use cases, as it supports diagnostic processes in areas such as detection of small variables in data related to the health of a patient or comparing them to the health of another patient, as well as early detection of potential epidemics and monitoring disease cases, to help contain them and limit their spread and imaging Sectional. In the field of self-driving vehicles, cases of using artificial intelligence have witnessed a significant increase now, as it has entered fleets of self-driving cars designed for passenger participation, and also in the field of support for drivers of this type of car, such as driver assistance, engine monitoring and preventive maintenance. In financial services, artificial intelligence will contribute to individuals' financial planning

¹- Abdullah Hamdi, 5 basic information on artificial intelligence, Al-Watan newspaper, electronic version, <https://www.alwatan.com.sa/article/382763>

1- Salvatore Papillons- Will China lose the artificial intelligence race in favor of America, Society Magazine, electronic version <https://mugtama.com/translations>

2- Mohammad Abdul gadir - <https://arb.majalla.com/node/79206>

3 - A new report from PwC highlights how AI is transforming project management and changing the role of project managers <https://www.pwc.com/m1/en/media-centre/2019/ai-on-pm-pr-ar.html>

processes, detect fraud and fight money laundering. In the retail sector, artificial intelligence helps in customizing designs and production and in forecasting consumer demand, and retail establishments in some countries have begun to use deep learning to predict consumer demands in advance. In the field of energy, artificial intelligence supports smart meters and information about real-time energy consumption, in addition to helping to reduce consumption bills by operating smarter electricity networks and the ability to store energy and predict infrastructure maintenance operations. In the industrial sector, artificial intelligence promotes automatic oversight and reform of industrial processes, distribution chains, upgrading production capacity and customizing of products. To make the most of artificial intelligence, experts recommend some advice that includes defining what artificial intelligence means as well as technical developments for the related business activity, and then developing an appropriate operational plan for automation and artificial intelligence. There should also be a desire to adopt artificial intelligence, with the aim of developing the old commercial pattern. To complete the picture, the availability of adequate human resources, appropriate technology, governance and transparency are required. And artificial intelligence is spreading increasingly and very quickly in every aspect of life. ⁽⁵⁾

It is expected that the processes of developing artificial intelligence will contribute to an increase in global GDP by up to 14% between now and 2030, equivalent to 15.7 trillion dollars for the global economy, as well as an expected growth of about 6.6 trillion dollars in global GDP over The short term, which will come from productivity benefits. Over time, the productivity benefits will outpace spiraling consumer demand, resulting in an additional \$ 9.1 trillion in global GDP growth by 2030. ⁽⁶⁾

China is striving to be a pioneer in the field of artificial intelligence in the year 2030, as the Chinese government provides large subsidies to a group of companies in the field of artificial intelligence, and the Chinese government's support is not only with money, but also by creating the climate for innovation and leadership. Artificial Intelligence, about \$ 7 trillion, or 26%, an increase in GDP growth. Among the reasons explaining this is the dependence of the bulk of the Chinese GDP on industry, as it is expected that artificial intelligence will have a significant impact in the period between 2021 and 2030 and most importantly, the rate of

1- Salvatore Papillons - previous reference.

6- How much is the contribution of artificial intelligence to the global economy in 2030 - Middle East Business Journal
-- electronic version <https://middleeast-business.com/ar/>

China's investments in the field of artificial intelligence in the long term, compared to North America and Europe. In North America, the economic benefits of artificial intelligence are expected to reach \$ 3.7 trillion, or 14.5% of GDP growth by 2030, and the region is expected to witness the fastest pace of growth in the near term, supported by its current leadership in artificial intelligence technologies and applications, as well as readiness. Which characterizes the American market, but it is likely that China will catch up and overtake the United States of America in this area, given the speed of its investments in the field of artificial intelligence.

And developing markets may witness an average growth in GDP due to the delay in artificial intelligence operations, while South America will achieve a growth of 0.5 trillion dollars, or 5.4%, with the rest of the world, including Africa, Oceania and the least developed countries in Asia, to gain growth by about \$ 1.2 trillion, or 5.6% of GDP.

Conclusion: The findings and recommendations include:

First: Results: The study reached the following results:

- 1- Artificial Intelligence enhances global GDP growth in the near term
- 2- The effect of artificial intelligence on the global economy is positive.
- 3- China will be a pioneer in the field of artificial intelligence, followed by the United States of America
- 4- Artificial intelligence will enhance the GDP growth of some developing countries.

Second: Recommendations based on the results of the study, the researcher recommends the following:

- 1- Countries should work to support the development of artificial intelligence and create an environment that enables companies and institutions to innovate in order to achieve high rates of gross domestic product.
- 2-Developing countries should benefit from the experiences of major countries in the field of artificial intelligence and cooperate with each other for the sake of development
- 3- Developing countries should draw up their plans and develop strategies to keep pace with the development in the field of artificial intelligence.

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