

Effect of Artificial Intelligence, Globalization, and Economic Development Strategies

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Abstract— Artificial intelligence and automation technologies have the potential to undo the progress made by poor countries and emerging markets in integrating into the global economy over the previous 50 years, leading to increased poverty and inequality. A new technology tends to save labor and resources, leading to a winner-take-all dynamic that benefits industrialized countries. We study the economic factors driving these shifts and propose solutions to avoid negative impacts on underdeveloped and emerging economies while maximizing possible rewards and Technological advancements. AI can offer. We advocate for reforms in global economic governance to ensure that underdeveloped nations benefit more from AI technologies. This could involve policies that support inclusive growth and facilitate the integration of emerging economies into the rapidly evolving global digital landscape. We propose global economic governance reforms that benefit underdeveloped countries more from AI. The globalization of artificial intelligence is accelerating the technological foundation of the world order. What are the implications of AI's growing capabilities on the environment? Machine learning and intelligent robotics can help increase environmental awareness and conservation. Other AI technologies, such as facial recognition and automated web surveillance, can strengthen the ability of states and companies to restrict activity. AI's impact on environmentalism varies greatly, strengthening certain initiatives while depowering others. However, a broad pattern is visible.

Index Terms— Environment Politics, artificial intelligence, activism, technology, surveillance, state power. (*key words*)

I. INTRODUCTION

When you hear the word artificial intelligence, what first idea enters your mind? I'm quite sure you considered watching a movie, using Siri, or using Alexa. You're not incorrect, but artificial intelligence goes much beyond those boundaries. Throughout the previous 20 years, artificial intelligence has garnered media attention. Because the majority of people are unaware of the extent and potential of its engagement. AI has shown to offer far more, even while some obvious benefits have been identified, such as more accurate predictive modeling, cost effectiveness, and better accuracy and productivity. Because AI may result in control over the upcoming globalization era, it has also greatly increased tensions between industrialized nations. Professionals are entering the sector at an increasing rate as a result of the AI power struggle, which has garnered significant attention. People strongly disapprove of given the present pace of technology improvements, their anxiety is understandable given the possibility that some professions may disappear. Because artificial intelligence (AI) can execute tasks at a much better efficiency and a much lower cost, businesses can now function without low skill positions.

This has thus created an opportunity to halt outsourcing, which has been responsible for the sharp rise in unemployment in developing nations along with the growth of high-skill jobs. The spread of artificial intelligence (AI) and its effects as a result of globalization will raise living standards and increase global economic growth, but they will also worsen income disparities between developed and developing nations, create tension between them, increase unemployment for low-skilled workers, stop outsourcing to developing nations, and decrease their share of the global economy.ⁱ However, if developing nations use AI, they will still have the chance to achieve robust growth in relative short amounts of time. This is a time of opportunity and choice? Given our unprecedented power, the next ten years may be the best or worst in human history (Erik Brynjolfsson). Recently,

The potential for artificial intelligence (AI) to grow the world economy by 16%, or roughly \$13 trillion, by 2030 was shown by economic statistics from the World Bank, the United Nations, and the World Economic Forum. What portion of that is attributable to developing nations? AI and other information technologies also tend to create natural monopolies, which result in a small number of "superstar" companies that are based in a few strong nations yet support the global economy as a whole (Anton Joseph E. Stiglitz Korinek, 2019). In what way does this enhance the "winner takes all" mentality and global homogenization that are occurring right now? What does the location of these tech giants mean for developing nations that aren't shielded from technology's disruptive effects? Compared to high-income countries, developing and emerging market economies have greater cause for concern because their comparative advantage in the global economy is based on an abundance of labor and natural resources Anton Korinek Joseph E. Stiglitz, 2019).ⁱⁱ It is reasonable to predict that the effects of the current industrial revolution would be less equitable than those of past ones. This will be seen in the loss of jobs in all occupational categories, including unskilled labor and highly specialized fields like legal and medical diagnostics (Botlík, J. 2020). We will talk about how developing nations' futures are impacted by ongoing globalization, labor force replacement and automation on a worldwide scale, as well as the waning demand for some natural resources. Citizens of developed nations look to their country to close the gaps left by the global digitalization. Low-income developing nations need to adjust to the circumstances and focus their economies on technology before the "fourth industrial revolution" takes hold and crushes them.ⁱⁱⁱ What impact will this have on wealthy nations?

The Overview and History of Artificial Intelligence in the Global World: The cognitive skills that artificial intelligence (AI) possesses, such as learning, understanding, reasoning, and interacting, set it apart from earlier discoveries. It is "connected to statistical, self-learning, and predictive machine learning approaches to enhance human Since John McCarthy's 1956 discovery of artificial intelligence, the field has advanced significantly from its humble beginnings as a symbolic description of human thought processes. In addition to the ongoing developments in other areas of technology, artificial intelligence (AI) now has the capacity to digest information, which allows it to efficiently use, expand, and explore information. These capabilities allow AI to either supplement or perhaps completely replace human decision-making, according to Haefner et al. Three primary characteristics of artificial intelligence (AI) are intentionality, intellect, and flexibility while demonstrating deep neural networks and machine learning. Artificial Intelligence has experienced periods of sharp rise and fall during the last seven decades. The Dartmouth conference (1956), the "AI winter" (1974–1980), the "second AI winter" (1987–1993), IBM's Deep Blue computer defeating Russian grandmaster Garry Kasparov (1997), Furby (1998), Roomba (2002), Siri (2011), Watson, an AI, winning the game show "Jeopardy" (2011), machines from Google and Microsoft surpassing humans at image recognition (2015), AlphaGoZero (2016), and the most recent Elon Musk algorithmic team.^{iv}

Employment and Labor Shortages: AI has dramatically increased unemployment by making many jobs obsolete, notwithstanding the surge in revenue generated. A McKinsey Global Institute study suggests that robots and artificial intelligence might displace almost 30% of the world's existing human population. labor by 2030. According to the report, "between 400 and 800 million jobs will be replaced by automation by 2030, requiring as many as 375 million people to change their entire job category." Being digitally literate is becoming more and more necessary for most jobs. Positions will shift significantly as AI takes over. More fresh positions will become available for opportunities at the same time. Experience from outside indicates that for every job lost, 2.5 new ones should be created. Although automation and artificial intelligence will hurt labor, forecasts indicate that this impact will only last temporarily. Automation technologies often impact specific activities but not occupations, which are composed of several tasks (see, for example, Acemoglu and Autor, 2011).

There will be job gains and losses at the same time. The benefits of augmenting labor with AI have been demonstrated.^v A research by MIT found that human-machine groups performed better than teams. entirely made up of either one. Similar to previous industrial revolutions, there will be a temporary loss of employment, but ultimately, job creation will triumph. The most difficult aspect is figuring out how to support those who are already facing layoffs because AI cannot address social global welfare issues. Effects of Contracting out: The necessity of outsourcing manufacturing has been significantly reevaluated in light of the new production and global economic arrangements brought about by artificial intelligence. Developed nations saw the potential to tap into a vast pool of low-skill labor within when outsourcing first began. Emerging nations for employment where operating a machine requires little to no training. Developed nations could also obtain natural resources at comparatively lower costs with minimal regulation and associated costs for extraction and environmental preservation.

Additionally, investors from industrialized nations were able to reduce shipping and transportation costs due to the close proximity of inexpensive natural resources to inexpensive labor. The availability of manpower was one of the primary grounds for manufacturing exports, which offered developing nations with high unemployment rates and little capital for manufacturing a significant edge. Outsourcing will become obsolete as the need for technology and data grows faster than that for labor and resources, and industrialized nations may decide to bring their businesses back home.^{vi}

The emergence of artificial intelligence (AI) has led to advantageous economic circumstances that enable IT executives to allocate resources towards the selective reintroduction of externalized services. Furthermore, there is just less need to outsource support of internal IT infrastructure as cloud computing becomes more prevalent. This will result in further drop in outsourcing.

Modifications to the Supply Chain: The increased focus on digitalization has resulted in a more connected supply chain than before. States are becoming more and more dependent on one another, not just when it comes to finding goods, services, and consumers, but also when it comes to searching for data for their artificial intelligences. This Increased dependence on one another has impacted the robustness of the supply chain. The economy of those nations could suffer from a single systemic interruption that has a cascading effect. States can no longer make economic decisions without having an impact on other states. Rich nations can weather economic downturns because they have robust enough economies, but underdeveloped nations will collapse without assistance. AI and Data Quality: While most artificial intelligence (AI) currently in use is task-oriented, it may eventually learn new skills. They need human intervention since they have no control over the system. When tasked with tasks beyond their capabilities, they frequently malfunction and produce incorrect results. The forecast the quality of data has a significant impact on how well algorithms operate. More data is available than ever thanks to the Big Data age, and machine learning systems may be trained using this data. The AI won't produce the desired results if the data it is fed is of poor quality. It could cause hidden biases that are difficult to identify and sway decision-making processes. "People chasing the market with AI might end up gaining," says Seth Weingram. nothing, and the possibility exists that the algorithms won't be sufficiently trained by the data. Due to its high creation costs in terms of both time and money, AI is also exceedingly expensive.^{vii}

Two factors determine an artificial intelligence's performance: the volume of data used for training and the algorithm's quality. If the AI is not taught using a diverse database, it may exhibit prejudice and make incorrect decisions even with a perfect algorithm. Developing nations are characterized by a limited data set as a result of their lack of motivation and extraction limitations. The AI will have to make decisions that might not be in their best interests because it has little to no data about such nations. Additionally, it will lead to the proliferation of prejudices, rendering their resources useless for particular social groups. Social Difficulties: From the perspective of society, people's reliance on technology is growing every day. Our lives would be unimaginable without the technology that have emerged in the last 20 years.

It is reasonable to mistrust our ability to read maps and to anticipate doubts. As AI advances in autonomous driving systems, so will our driving abilities. When AI malfunctions, there are situations in which people won't be able to respond appropriately. For instance, Tesla's self-driving technology mistook a white truck for the sky, resulting in an automobile accident that claimed the driver's life. Since AI is the pinnacle of automation, there is a greater demand for physical labor. It is anticipated that the rise in sedentary lifestyles and the decrease in physical labor would lead to a marked increase in health issues. This could lead to a population of unemployed people in industrialized nations who rely heavily on technology. However, the absence of technological resources will make poor nations unhappy.^{viii}

Technology-Driven Economic Growth: Artificial Intelligence: The topic of artificial intelligence's (AI) potential benefits for economic growth is still up for dispute in the current climate of its explosive growth. The true significance and place of AI technology in economic development (ED) is, nevertheless, only partially understood. We lead the field in this study by concentrating our investigation and analysis on the relationship between artificial intelligence and economic growth. Specifically, we adopt a two-step process. Using Bibliometrix, a bibliometric tool, we first examine 2211 papers in the subject of AI&ED, presenting the field's exterior characteristics and internal structure using various metrics and algorithms. The subsequent phase involves doing a qualitative content analysis on the clusters derived from the bibliographic coupling method, which provides an overview of the content orientations of The bibliometric analysis's findings indicate that the quantity of publications in the subject has increased dramatically in recent years, with the journal "Sustainability" being the most authoritative source. The main avenues for future study are also in deep learning and data mining. Overall, researchers in the field have become quite close to one other and have formed close communication. However, the content analysis shows that the five aspects of intelligent decision-making—social governance, labor and capital, Industry 4.0, and innovation—are the focus of the majority of study. The findings give academics a forward-looking framework for understanding the present status and possible knowledge gaps in the field of AI&ED.^{ix}

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