



## RESEARCH ARTICLE

### ROLE OF ARTIFICIAL INTELLIGENCE IN INCLUSIVE GROWTH

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#### ABSTRACT

Artificial intelligence, which already has a significant impact on our world in many different ways, is playing a larger and larger role in our lives and economy. The US and Asia have emerged as the world's leaders in the heated struggle to enjoy its benefits. Many people believe that AI will boost productivity and the economy. By analysing a lot of data, it can greatly improve the decision-making process and boost the efficiency with which things are done. It can also lead to the development of new markets, industries, products, and services, which will increase consumer demand and open up new sources of income. While these worries are still valid, there is disagreement over whether and how much the associated hazards will come to pass. They are not a given, and thoughtful policy would be possible to promote the growth of AI while restraining the unfavourable impacts. The nation has the opportunity to advance in the global race and steer AI in the direction of its people and economy. To do this, it must first come to an agreement on a shared strategy that would play to its advantages and allow for the most efficient use of the resources of the member states. This essay focuses on the crucial role artificial intelligence has played in the age of digitalization. In this study, the literature on managing company diversity and globalisation is qualitatively evaluated. It is purely conceptual because it relies on books, journal articles, conference proceedings, and websites for secondary data. The next sections cover a variety of subjects, including the idea of diversity, its advantages and disadvantages, the idea of business diversity, and globalisation. Final thoughts on the studies under consideration are offered at the end, along with suggestions for future research possibilities.

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#### INTRODUCTION

Artificial intelligence (AI) refers to computers exhibiting human-like cognitive abilities, such as learning, comprehending, reasoning, and interacting. It can take several forms, such as technical infrastructure (i.e. algorithms), a component of a (production) process, or a product for end users. It becomes increasingly plausible that AI will profoundly transform how modern cultures live and work. Currently, smart assistants on smartphones, such as Siri, perform a range of duties for their users; in addition, all Tesla vehicles are connected, and the information that any one of them learns is shared with the rest of the fleet. AI also matches prices and cars when an Uber ride is requested and curate's social media recommendations based on a user's past actions. With the rise of artificial intelligence arise fundamental questions regarding the extent to which it will impact enterprises, consumers, and the economy as a whole.

Employees are increasingly curious about what artificial intelligence (AI) means for their job and income, and businesses are eager to find methods to capitalise on the potential given by this powerful phenomenon. Organizations share the opinion that AI technologies have the ability to revolutionise manufacturing and contribute to tackling important global concerns. This study examines the role of AI in the digital era's inclusive economic changes. The WIPO report discloses that the majority of AI-related patents are in fields including telecommunications, transportation, life and medical sciences, and personal devices that compute human-computer interaction. Smart cities, agriculture, e-government, and banking and finance are the fastest-growing application domains. The WIPO study also highlighted China's rapid increase in the number of AI patents registered, noting that since 2014, China has filed the most initial patent applications. AI has the capacity to significantly contribute to global economic activities. Using early adopters and their performance as a leading signal of how enterprises as a whole may (want to) embrace AI, we estimate adoption trends by analysing many major categories of AI technology. Our average simulation, based on early data, predicts that approximately 70 percent of enterprises will embrace at least

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one of these AI technologies by 2030, and that less than half of large corporations may use the whole range of AI technologies across their organisations. In the aggregate, and after accounting for competition impacts and transition costs, AI could possibly provide an additional \$13 trillion in economic output by 2030, increasing global GDP by approximately 1.2% per year.

**AI Gaining Prominence:** The adoption of artificial intelligence has expanded dramatically over the past five years as a result of the proliferation of digital technologies and huge advances in algorithmic capabilities, access to richer data, and rising processing power. According to a global survey conducted by Gartner, 14 percent of large organisations used AI in 2019, up from 3 percent in 2018, and this percentage is projected to rise to 23 percent in 2020. The most prevalent AI applications include chatbots, process optimization, and fraud analysis of transactional data. Consumer and market segmentation, computer-assisted diagnostics, call centre virtual assistants, sentiment analysis and opinion mining, face detection and recognition, and human resources applications such as resume screening are examples of emerging uses. These applications are especially prevalent in the insurance, software and IT, telecommunications, and retail industries. Since 2015, AI companies tend to have greater valuations and more investment rounds than comparable non-AI start-ups. Companies and individuals are currently producing an unprecedented volume of data. In 2017, the volume of digital data generated exceeded eightfold that of 2009. The development of telecommunications networks, the continued deployment of the Internet of Things, and the impending large-scale deployment of 5G networks will all facilitate the production of even more data. In 2022, Internet data traffic is anticipated to be three times greater than in 2017, and the proportion of licenced devices is anticipated to increase from 13 percent in 2018 to 28 percent in 2025. Due to the fact that AI requires data to learn, these developments are expected to accelerate the development of increasingly advanced AI technology. This expansion of data has been facilitated by vast advances in processing power and data storage capacity. Google, for instance, recently introduced its Tensor Processing Unit, which has 15 to 30 times the processing capability of a Graphical Processing Unit, a major computer component that is essential to the deployment of deep learning algorithms. Demand-side factors such as the deployment of digital platforms and the emergence of other disruptive applications such as blockchain and cloud computing also contribute to the growing significance of artificial intelligence. The business model of a digital platform depends on the successful targeting of users for marketing purposes and the delivery of personalised Internet content to stimulate usage. These capabilities are crucial for digital platforms to attract the minimum number of users required for profitability. Thus, in order to attract both users and advertisers, Google and Amazon rely on AI.

**Reducing Poverty and Boosting Shared Prosperity:** Traditional routes to a nation's economic development are more vulnerable to technological change. AI is very disruptive in that it can drastically alter the cost or availability of goods and services, as well as the ways in which we collect information, manufacture goods, and interact. As technological disruptions become increasingly entangled with development concerns, achieving the twin objectives of eradicating poverty and increasing shared prosperity requires harnessing the power

of technologies such as artificial intelligence (AI) while minimising the accompanying hazards.

**Economic potential of AI:** The vast majority of research emphasises that artificial intelligence will have a big economic impact. Accenture's study of 12 industrialised economies, which collectively generate more than 0.5 percent of the world's economic output, predicts that by 2035, AI will have doubled global economic growth rates. AI will drive this expansion in three significant ways. First, it will result in a substantial boost in labour productivity (up to 40 percent) as a result of breakthrough technologies that enable more effective workforce-related time management. Second, AI will provide a new virtual workforce—referred to in the research as "intelligent automation"—capable of problem-solving and self-learning. Thirdly, the economy will also profit from the diffusion of innovation, which will have an impact on various industries and provide new revenue sources. The McKinsey Global Institute anticipates that over 70 percent of businesses will use at least one form of AI technology by 2030, but less than half of major businesses will deploy the whole spectrum. McKinsey forecasts that artificial intelligence may provide an additional \$13 trillion to the global economy by 2030, resulting in a yearly increase of approximately 1.2% of global GDP. This will mostly result from automation replacing human labour and increased product and service innovation. On the other side, AI is expected to cause a shock in labour markets and the related expenses required to manage labour-market transitions; this shock would be the result of negative externalities such as the loss of domestic consumption due to unemployment.

**Effects on firms, industries and countries:** McKinsey argues that AI and automation may, on the one hand, support the growth of enormously scaled organisations and, on the other hand, enable small players and even individuals to undertake project work that is currently predominantly undertaken by larger organisations. This could lead to the establishment of extremely small and very large organisations, resulting in a barbell-shaped economy in which mid-sized businesses are disadvantaged. In addition, there is likely to be an increase in rivalry, with corporations entering new areas outside of their prior primary businesses and a widening gap between the technology leaders and laggards in each industry. "Early adopters," or businesses that completely integrate AI solutions within the next five to seven years, would likely reap disproportionate rewards. On the opposite end of the spectrum are the slow adopters and non-adopters, who are likely to endure economic collapse. The market share will likely shift from the laggards to the leaders, who will be able to gradually attract a larger portion of their industry's profit pool. This would result in a "winner-take-all" phenomenon comparable to what is already happening on technology marketplaces. Advances in AI and technology could enable frontrunners to break decisively from the pack and become "superstars" with the highest levels of production. This can have substantial repercussions. For instance, the OECD has posed the question of why ostensibly non-competitive technologies are not distributed to all companies. It is possible that the rising productivity gap between companies can be linked to the highly unequal process of technological diffusion, which favours global frontier companies over laggards. This may occur as a result of global frontier firms' improved ability to defend their competitive advantages, which could eventually contribute to a deceleration in the economy's overall rate of

productivity growth. These widening productivity and innovation gaps will undoubtedly spark a lively policy discussion regarding the unequal distribution of the benefits of artificial intelligence.

**Managerial Implications:** The future of AI and productivity in an age of rising technical progress, we are experiencing poor productivity, according to a well-known productivity paradox. One probable explanation for this is the limited dissemination of AI skills that can increase productivity. Even with widespread adoption, their full impact may not be realised until further rounds of complementary technologies emerge. Contrariwise, some analysts assert that the ICT revolution has matured and that research productivity is dropping dramatically, resulting in diminishing effects on the economy. Considering the modest pace of expansion in physical and human capital, which might have a greater impact on overall productivity than innovation, they anticipate only a moderate evolution of productivity due to AI. According to competing viewpoints, AI will vastly boost human capital by introducing fresh teaching and training methods. As a result of erroneous measurement, some argue that, in actuality, technological growth has a significantly higher impact on productivity than many estimates indicate. The OECD anticipates that artificial intelligence will considerably improve decision-making, reduce costs, and optimise the use of production elements and consumption of resources in every area of the economy by detecting patterns in large amounts of data. Overall, it seems likely that, although AI has the potential to significantly increase productivity, the final consequences will depend on the rate of AI diffusion across the economy as well as investments in new technologies and corresponding labour capabilities. There is a possibility that the gulf between advanced and lagging nations will increase as a result of the current disparity in AI adoption levels. AI leaders, who are primarily located in rich nations, are likely to extend their lead over their counterparts in emerging nations. This effect is expected to be exacerbated by the fact that high wages in industrialised economies offer a greater incentive to replace human labour with AI than in economies with lower wages. Moreover, AI may make it economically feasible for some industries to import goods from developing nations.

AI may exacerbate performance differences between nations. Those who establish themselves as AI leaders (mainly developed nations) could reap an additional 20 to 25 percent in economic advantages relative to today, but emerging economies may only realise half of their potential upside. There may also be an increasing difference between companies, with frontrunners potentially doubling their returns by 2030 and laggards falling farther behind. For individual workers, demand and pay may increase for those with digital and cognitive abilities and experience in difficult-to-automate activities but decrease for those performing repetitive work. The rate of AI adoption and the degree to which businesses choose to employ AI for innovation as opposed to efficiency gains alone are expected to have a significant impact on economic results. Similarly, the manner in which nations choose to adopt these technologies (or not) will likely determine the amount to which their enterprises, economies, and societies may reap the benefits. The competition among firms and nations has already begun. In all circumstances, there are trade-offs that must be comprehended and managed effectively in order to realise the economic potential of AI.

This modelling builds on and is generally consistent with our previous research, but adds new results that deepen our understanding of how AI may spark a race to the bottom with major implications for firms, labour markets, and broader economies, and reinforces our perception of the need for businesses, government, and society to address the challenges that lie ahead for skills and the future of work.

## Conclusion

Similar to the Industrial Revolution, advancements in AI and related technologies may signal a crucial turning point in history. Increasing automation in manufacturing may result in an increase in wage inequality, a decline in labour demand, and an increase in skill premia in the majority of countries, as well as the demise of the manufacturing-export-led developmental model, which has historically had significant positive effects on many emerging market economies. The worst-case scenario entails the reversal of many of the development and poverty reduction accomplishments made during the past half century. While prior technological breakthroughs were connected with greater shared wealth and increased equality across and within countries, the latest advances may result in increasing inequality along both dimensions unless counterbalancing policies are implemented. The new period will be controlled by different laws and will necessitate a new type of economic analysis. In the same way that the production functions that Ricardo used to analyse agrarian and rural economies are vastly different from those in the models of a manufacturing economy that dominated the middle of the 20th century, the current economic frameworks must be adjusted and modernised to account for the models that will describe the next 50 years. For instance, the competitive equilibrium model may be even less applicable to the AI economy of the 21st century than it was to the manufacturing economy of the 20th century. There is a great degree of ambiguity regarding the conceivable technological development scenarios and their effects, but we do know that there are substantial potential downside dangers that cannot be overlooked. Economic analysis based on models appropriate to this new era has the potential to aid in the development of global and national policies that can mitigate these negative effects, thereby ensuring that this new era of innovation will result in higher living standards for all, including the billions residing in developing nations.

**Further study:** It has the potential to significantly increase economic development and productivity, but it also poses substantial concerns about job market polarisation, rising inequality, structural unemployment, and the formation of new unwanted industrial structures. Bill Gates is one of a number of individuals who propose that robots that eliminate jobs should be taxed so as to prevent new technologies from depleting the public funds that maintain civilization. In 2017, the European Parliament rejected the notion of levying a robot tax on owners to provide retraining assistance for workers displaced by robots. In the future, such a tax may be unavoidable if automation causes major drops in income tax receipts and increases the pressure on government finances (e.g., through increasing welfare and retraining expenditures). In 2018, South Korea, the most robotized country in the world, reduced the tax break for corporate investments in automation, a move that seemed to reflect the worries of some experts regarding excessive automation incentives.

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