



Munich Personal RePEc Archive

The Effects of Artificial Intelligence on the World as a Whole from an Economic Perspective

Sharma, Rahul

Amity University

15 April 2021

Online at <https://mpra.ub.uni-muenchen.de/116596/>
MPRA Paper No. 116596, posted 07 Mar 2023 06:46 UTC

The Effects of Artificial Intelligence on the World as a Whole from an Economic Perspective

Rahul Sharma

Amity University Madhya Pradesh, Gwalior

E-mail: rahul.sharma@s.amity.edu

Abstract

Artificial intelligence (AI) has made tremendous advances in recent years, and there is no doubt that this technology will have a significant impact on the overall economy in terms of productivity, growth, markets, as well as innovation. A growing number of perspectives on the impact of artificial intelligence (AI) are flooding the business press, but finding one that deals with the economic impact of AI in a unique and original way is becoming increasingly difficult. In terms of adoption rates, there has been quite an uneven adoption rate of AI and ML (artificial intelligence and machine learning) methods in the economics profession, as far as adoption rates are concerned, as far as AI and ML methods are concerned. Microeconomics is one of the most prominent fields in which artificial intelligence and machine learning are being used. As a result of the explosion of data collection, especially at the consumer level (companies such as Google for example), artificial intelligence and machine learning have become increasingly apparent and feasible. It has been observed that, due to the enormous amount of information that these models require in order to be useful, their application has been heavily concentrated in the field of microeconomics, which is a field that requires a vast amount of data in order to be useful.

Keywords: *artificial intelligence, machine learning, macroeconomics, internet of things, inventory management, technology*

Introduction

As an economist, when we examine artificial intelligence from an economics perspective, we ask the same, single question that we ask when we examine any other technology from an economics perspective when we examine it from an economics perspective. In essence, what is being reduced is the cost of that which is being reduced, in other words, the cost of what is being reduced. It is often true that economists do a good job in distancing us from the fun and wizardry of technology, leaving us with a rather gloomy, but nonetheless illuminating question in regards to the technology's future. In answer to that question, there is one simple answer, a simple answer that explains why artificial intelligence (AI) has become so relevant compared to many other exciting technologies that are being developed at this time. Due to the advent of artificial intelligence, we will be able to recast it as the output of a process

that enables us to reduce the costs of many first order inputs in business and economic forecasting as a result of this advancement in artificial intelligence. A number of new technologies such as artificial intelligence, machine learning, robotics, and big data, are sure to revolutionize production processes in the near future, but they may also have a significant impact on the economy of developing countries as well. There were a number of opportunities and potential sources of growth that were readily available to the United States and Japan during the early stages of their economic development, which were remarkably different from those that were available to Africa and Australia in today's economic environment, for example.

It is important to understand that there are a number of reasons why people and our local and national economies grow. Each of us has a different idea about what it is that causes them to grow in a certain way. It is commonly believed that a wide variety of views about the drivers of economic growth can influence whole elections, and in some cases, even more than that. Macroeconomics is a social science, though macroeconomists have developed a number of theories and models to explain and forecast economic growth despite the fact that it is a social science. It's also worth mentioning that there are a number of additional factors that contribute to economic growth that we can all think of. Measurements can be made about several things, such as how much the government spends or how much consumers spend, both of which have a great deal to do with interest rates, and others which are more difficult to measure, such as positive or negative sentiment in the market or among consumers. Furthermore, there are also a number of other factors that play a similar role, such as inflation, trade dynamics (including exchange rates), the price of imported goods (such as oil), and many other factors that have an impact on all of the above and a number of other things as well, which are also equally important.

The development economies are likely to specialize in sectors that rely more on unskilled labor than advanced economies, as there is a greater number of unskilled workers in the development economies than in advanced economies. As a result of the robot revolution, there is a possibility that a permanent decline in the terms of trade in the developing region could emerge, especially if robots replace unskilled labor, but complement skilled labor, in the future. Basically, this is due to the fact that as a result of robots' use, unskilled workers will be displaced in a disproportionate manner. The cost of goods that require more unskilled labor as well as the price of goods that require more unskilled labor needs to be reduced in order to reduce their relative wages. Then the collapse of the price of its main output acts as another negative shock and, in turn, reduces the incentive for the country to invest, leading to a steep drop in performance, not only in relative terms, but also in absolute terms, as the price of its main output declines.

Current Scenario

A different type of solution would be based on artificial intelligence (AI), which is more concerned with predicting than explaining problems, and therefore is likely to be able to deal with problems of this kind, since it emphasizes prediction rather than explanation, as explained above. As a matter of fact, most traditional econometric models are not that good at forecasting in the first place, which is a big problem. It is especially challenging for models based on ordinary least squares to make good predictions when there are many predictor variables, i.e. when there are a large number of predictor variables compared to the number of observations in the model. During the generation of data in nature, there are many predictor variables that are correlated with one another; collinearity leads to an excess of irrelevant predictor variables; or it may be because the way in which the data is generated in nature is not linear.

Taking into account the example of semiconductors, a technology that has also been reduced in cost over the years, we can gain a deeper understanding of what happens when technology lowers the cost of a useful input. Three things occurred as a result of semiconductors reducing the cost of arithmetic during the period that semiconductors reduced the cost of arithmetic. Our first step was to make use of arithmetic more for applications that already had the capability of using arithmetic as an input to begin with, so that we could take advantage of that. During the 1970s, these technologies were most likely to be used by the government and the military, which were the most likely users. Our team started doing more calculations as time went on, such as demand forecasting, as these calculations were now easier and cheaper to do as a result of the fact that these calculations were now easier and cheaper to do.

The impact of artificial intelligence is evident in many industries, including manufacturing and the industrial Internet of Things, and there is no doubt that this has significant implications for the future. A branch of artificial intelligence known as artificial intelligence for industry is a branch of artificial intelligence that focuses on the creation of digital copies of physical objects that can be controlled remotely as part of a network or autonomously as part of a network in order to make them more cost-effective as part of the network. With the help of computer vision, speech recognition, natural language processing, and many other tools, it can be possible to create virtual representations of industrial machinery based on a variety of tools and techniques. Due to the reduced number of humans on site, there is a greater degree of flexibility in the operation, which in turn allows for a more efficient operation, which is a result of the reduced number of humans on site.

With prediction costs continuing to drop, we will be able to use it more and more for traditional prediction problems like inventory management as this technology allows us to predict faster, cheaper, and better as prediction costs continue to drop, so we will be able to use it more and more in traditional prediction problems like inventory management. It is also likely that we will be able to use prediction in a more widespread way to solve problems that we

haven't traditionally thought of as prediction problems in the past, as we will be able to put more emphasis on prediction in the future.

The Future

To pinpoint ways in which artificial intelligence can be used in business, it is a good idea to review organizational workflows and to break them down into tasks in order to understand how inputs are turned into outputs, which is to say the processes of turning inputs into outputs can be better understood. The next thing you need to do is find out which tasks have a significant prediction component that would benefit from having a prediction machine in place, so that you can put it into practice. After determining the return on investment for building a prediction machine to solve each of those tasks, you need to rank them from the top of the list to the bottom of the list in terms of their return on investment. As a means of predicting which AI tools, in the future, will be able to go beyond increasing efficiency and have the ability to bring about economic transformation in the future, a method known as science fictioning will be used in an effort to predict which AI tools will be able to do this. If you think of each of the AI tools you use as controlling the volume of a radio, then you could think of the knobs as radio volume knobs, and when you turn the knob, rather than turning up the volume of the radio, you are actually turning up the accuracy of the AI's predictions, rather than turning up the volume itself.

A number of the artificial intelligences that will be created as part of this exercise will be efficiency enhancing tools, which will provide a boost to the effectiveness, or some other measure of productivity, of the company as a whole through the use of these tools. The reason why advanced economies have higher wages is because their total factor productivity is higher. As a result of these higher wages, companies in advanced economies are incited to use robots more intensively in the beginning, especially if robots can easily substitute for workers in those businesses. There is no doubt that the advanced economy will benefit more in the long run as robot productivity increases. The more robots substitute for workers in our society, the larger the gap between the two becomes.

Therefore, in order to drive consumption growth, it is necessary to invest strongly in robots and traditional capital that is assumed to complement robots and human labor in order to drive strong investment in robots and traditional capital. The rise in productivity of robots is fueling a strong demand for robots in order to meet the increasing demand for robots, so that the rise in productivity of robots is fueling a strong demand for robots, so that the rise in productivity of robots is fueling a strong demand for robots. I believe that there are many ways in which this demand can be explained by the fact that robots are more widely used in advanced economies than they are in developing economies, for example. There is no doubt that this fact is exemplified by our discussion of the share of production channels earlier in the article, which exemplifies the point. Because of this effect, investment becomes diverted from developing economies in order to finance the accumulation of capital and robots in advanced economies as a result of this effect. Due to the diversion of investment from developing

countries in the wake of the global financial crisis, there has been a transitional decline in the GDP of developing countries.

Conclusion

As a result, it is apparent that the use of artificial intelligence in the future is likely to have a significant impact on the business models and strategies of companies around the world as a result of its potential to transform business models. When we think of artificial intelligence purely as a tool for prediction for decision-making, it may not seem obvious to us as to how it will affect pure strategy if we only think of it as a tool for prediction. The result of this is that if we only view AI as a tool for prediction, it may not occur to us at all how its efficiency will impact the direction of our pure strategy going forward. Taking a step back, you may even be able to see if you look at it from a different perspective, then you may even see that if you look at it from that perspective, then that outlook may have a profound influence on the strategy itself, especially if you view it from that perspective and start to think of it as a tool for forecasting with the highest level of accuracy possible. While academic economics has a reputation as a conservative field of study, despite the fact that it is generally viewed as a conservative discipline, artificial intelligence is slowly making its way into the field, despite the fact that it is generally regarded as a conservative discipline. It may be possible that economists will be able to assemble all of the ingredients they have in their heads into a stew and taste how they taste before they are able to write down and solve their trusty formal mathematical models that include all of the assumptions and complexity that they carry with them.

References

Anderson, John Robert. *Machine learning: An artificial intelligence approach*. Vol. 3. Morgan Kaufmann, 1983.

Avron, Barr, and Edward A. Feigenbaum. "The handbook of artificial intelligence." (1982).

Baisya, Rajat K., and Siddhartha Paul Tiwari. "E-governance Challenges and Strategies for Better-managed Projects." *Emerging Technologies in E-Government* (2008): 203-208.

Barr, Avron, Edward A. Feigenbaum, and Paul R. Cohen, eds. *The handbook of artificial intelligence*. Vol. 1-2. William Kaufmann, 1981.

Charniak, Eugene. *Introduction to artificial intelligence*. Pearson Education India, 1985.

Clancey, William J., and Edward H. Shortliffe, eds. *Readings in medical artificial intelligence: the first decade*. Addison-Wesley Longman Publishing Co., Inc., 1984.

Fetzer, James H., and James H. Fetzer. *What is Artificial Intelligence?*. Springer Netherlands, 1990.

Lehman-Wilzig, Sam N. "Frankenstein unbound: Towards a legal definition of artificial intelligence." *Futures* 13.6 (1981): 442-457.

McCarthy, John, and Patrick J. Hayes. "Some philosophical problems from the standpoint of artificial intelligence." *Readings in artificial intelligence*. Morgan Kaufmann, 1981. 431-450.

Miiller, Y. J. D. A. "Decentralized artificial intelligence." *Decentralised AI* (1990): 3-13.

Nilsson, Nils J. *Principles of artificial intelligence*. Springer Science & Business Media, 1982.

Nilsson, Nils J. "Artificial intelligence prepares for 2001." *AI Magazine* 4.4 (1983): 7-7.

Patterson, Dan. *Introduction to artificial intelligence and expert systems*. Prentice-Hall, Inc., 1990.

Schwartz, William B., Ramesh S. Patil, and Peter Szolovits. "Artificial intelligence in medicine." *New England Journal of Medicine* 316.11 (1987): 685-688.

Simmons, Asa B., and Steven G. Chappell. "Artificial intelligence-definition and practice." *IEEE journal of oceanic engineering* 13.2 (1988): 14-42.

Szolovits, Peter, Ramesh S. Patil, and William B. Schwartz. "Artificial intelligence in medical diagnosis." *Annals of internal medicine* 108.1 (1988): 80-87.

Thomas, Jerry W. "Market segmentation." *Quarterly Review of Marketing* 6.1 (1980): 25-28.

Tiwari, Siddhartha Paul. "Information and communication technology initiatives for knowledge." *Indian Journal of Agricultural Sciences* 78.9 (2008): 737-47.

Tiwari, Siddhartha Paul. "Strengthening E-Commerce Product Launches-Improving Efficiencies from Development to Production." Project And Technology Management Foundation (A Non-Profit Organization) Member of Asia Pacific Federation of Project Management 1.2 (2015): 4-6.

Tiwari, Siddhartha Paul, and S. P. Tiwari. "Is export-oriented and currency dynamics-based Indian soybean revolution environment-friendly." *Current Science* 114.08 (2018): 1604-1605.

Tiwari, Siddhartha Paul, and Rajat K. Baisya. "E-governance and its impact on enterprise competitiveness: Trends, Status and Challenges." MDI, Gurgaon INDIA in Association with Australian Centre for Asian Business, University of South Australia, Adelaide, AUSTRALIA 1 (2014).

Tiwari, Siddhartha Paul. "Business: Innovation & Survival, by a Googler." (2015).

Tiwari, Siddhartha Paul. "Exploring the Linkage between a Successful Digital Campaign and Gaming." *Casual Connect, Asia Pacific, Singapore* 1.1 (2014): 5-6.

Tiwari, Siddhartha Paul. "Diversity and its importance in today's corporate environment." (2015).

Tiwari, Siddhartha Paul. "Editorial: Project and Technology Management Foundation (PTMF) Newsletter (June, 2015)." (2015).

Tiwari, Siddhartha Paul. "Editorial: Project and Technology Management Foundation (PTMF) Newsletter (December, 2014)." (2014).

Tiwari, Siddhartha Paul. "Knowledge Sharing and Content Creator Best Practices Online." (2015): 5-12.

Tiwari, Siddhartha Paul. "Workshop on Digital Marketing: Credit Course, IIM, Indore." (2010): 1-24.

Tiwari, Siddhartha Paul. "External factors which shape and influence an organisation's operating environment." *Syngenta Workshop on Social, economic, political, technological & environmental trends, Singapore*. Vol. 1. 2016.

Tu, X., et al. "Cryostat with high-stability AI (artificial intelligent) control. Technical report." (1987).

Victor, L. Yu, et al. "Evaluating the performance of a computer-based consultant." *Computer programs in biomedicine* 9.1 (1979): 95-102.

Von Martial, F., and Frank Victor. "An interactive planner for open systems." *Proceedings. The Fourth Conference on Artificial Intelligence Applications*. IEEE Computer Society, 1988.

Winston, Patrick Henry. *Artificial intelligence*. Addison-Wesley Longman Publishing Co., Inc., 1984.

Winston, Patrick H., and Sarah A. Shellard. *Artificial intelligence at MIT: expanding frontiers*. MIT Press, 1990.

Winston, Patrick H. "Learning new principles from precedents and exercises." *Artificial intelligence* 19.3 (1982): 321-350.

Wilson, Stephen. "Computer art: Artificial intelligence and the arts." *Leonardo* 16.1 (1983): 15-20.

Wilson, Michael D. *MRC Psycholinguistic Database: Machine Usable Dictionary: Version 2.00*. Informatics Division, Science and Engineering Research Council, Rutherford Appleton Laboratory, 1987.

Zhang, Jianping. "A method that combines inductive learning with exemplar-based learning." [1990] *Proceedings of the 2nd International IEEE Conference on Tools for Artificial Intelligence*. IEEE, 1990.

Zhang, Z. Zhang, G. S. Hope, and O. P. Malik. "Expert systems in electric power systems-a bibliographical survey." *IEEE Transactions on Power Systems* 4.4 (1989): 1355-1362.