

THE RISE OF THE ROBOTS TECHNOLOGY AND THE THREAT OF A JOBLESS FUTURE

YASSIR ELRAYAH

Collage of Technology, Eastern Michigan University, Michigan, USA

ABSTRACT

This book review discussed and analyzed Martin Ford's book "The Rise of Robots: Technology and The Threat of a Jobless Future". Ford's book discussed the role of Robots and automation in our lives and how loss of jobs is directly associated with this emerging technology. In his arguments Ford showed many examples on different sectors, however he did not explain how automation would take over tasks that require human involvement such as doctors or anesthesiologist. In addition, Ford's at one point proposed a different and questionable economic system such as the 'guaranteed minimum income'. Ford also addressed how challenging for robots to address the health care system or collage education without discussing the reasons of the high cost in both sectors. Despite Ford's effort in this book, Ford's arguments about rising robots will replace blue and white collars job is still not convincing

KEYWORDS: Robots, Automation, Artificial Intelligent

INTRODUCTION

Below is a review of the Rise of the Robots technology and the threat of a jobless future, written by Martin Ford. Ford is a software engineer and a founder of a Silicon Valley based software development firm. The author explained how automation could be a threat to our jobs and how the speed and the capacity of artificial intelligence (AI) could replace farm and factory jobs as well as scientists, analysts and most knowledge workers. The author in this book explained with examples the impact of robots on jobs and people. This book is for any one concerned or interested in the future of automation and the use of robotics. This may include CEOs, CIOs, software developers, entrepreneurs, investors and wholesale business owners. In my opinion, the authors gave a dark picture related to the increase of robotic technology in our lives. He stated how our loss of jobs related to robotics may requires us to rethink our economic systems and we should propose a new one. In this book, the author did not broaden his examples to cover different aspects of automation put in place. In addition, other researchers refuted this claim that artificial intelligence and automation would replace the workforce.

Background Information

As Ford stated, we live in a time where machines and automation are integrated in our lives. During the last few decades, machine started to perform simple and routine jobs. However, their involvement became more sophisticated. Currently, machines can prepare meals at the restaurant. They can carry out surgery and drive us from places to others without our interventions. Ford's book was his second attempt to address automation and artificial intelligent. His first book title was "The Lights in the Tunnel: Automation, Accelerating Technology and The Economy of the Future". At one point, Ford mentioned that he attended a RoboBusiness conference where he witnessed how this emerging robotic machine

performs intelligent tasks.

Book Overview

The Author indicated how industrial robots used to perform certain tasks that did not need complicated movement. Scientists applied ideas existed in videogames such as Microsoft Kinect to develop robots that move much like humans, which allows businesses to train robots by simply repeating these movements. As Ford stated, this development enhances robots learning ability and increases their usefulness resulting in replacing millions of human workers. The book discussed the impact of robotics within different sectors. Besides the manufacturing sector, machines affect the service sector even more. As a result, fast food workers are losing their jobs and diminishing fast food service industry. Agriculture sector is following manufacturing and service sector in replacing workers by robots that can pick and package even faster and more efficiently. Although, Ford tried to discuss robotics on different sectors, however he misses other important sectors as well. For example, he did not discuss in details the role of robots on the military during warfare and their roles on national security.

After that, Ford discussed the effect of machines and artificial intelligence on jobs. He stated that, in USA fewer jobs have been created compared to 1960 and 1970 represented by the low employment rates and wages that have dropped dramatically even those who get hired soon will be replaced by machines. Despite Ford's great effort to show different examples on different sectors of how the machine is taking over, however it is always about the "cause and effect" question. May be it is not only the machines that cause workers to lose their jobs. Ford should discuss other factors in parallel as well such as the economic systems, political economy, international trade and labor economics. Ford was correct when he stated, "a fundamental restructuring of our economic rules will be required." However, he did not provide details on how this could happen.

In addition, the author explained with examples how software and machines are performing knowledge worker jobs such as data analyst, radiologists and scientists. The author discussed WorkFusion Software example, which performs the majority of tasks outsourcing leaving a little to be done for employers. However, I would argue that there are certain skills automation will never replicate. For example, creativity and common sense always requires human involvement and interference. For example, doctors need to be around while an automated anesthesiologist perform the required task. On the other hand, I agree with the author when he stated that cloud computing and artificial intelligent genetic programming are some of the reasons, which allows Artificial Intelligence to speed up in replacing humans in most type of jobs.

Economically, Ford has stated in his book that decreased items demand and more machines replacing humans will result in decreased prices and deflation cycle ending in unemployment. Some advocates who concerned about automation suggested bans against technologies that threaten jobs. However, Ford's favorite proposal is the "guaranteed minimum income". In this proposal, the government would give money to every citizens regardless of employment status. This could persuade people to move to lower cost regions and improve their condition. Then the government stimulate the economy with projects that improve the infrastructure. I find this proposal unfeasible for these reasons. First, when people earn free money their attitude towards work will diminish. Furthermore, even if they move to lower cost regions, there is no guarantees that they will breathe new life into the communities. Secondly, the government relies on tax as a source of income beside other sources. Therefore, the tax system will be broken under this proposal.

The author discussed robots in the health care and how challenge it is for robots to resolve the health care systems. The author did not address the reason for the health care high cost for Americans. In addition, at one point he stated that "the advances in information technology that are disrupting other areas of the economy have so far made relatively few inroads into the health care sector" This argument contradict his main objective to explain how robots is taking white collar jobs. Unlike other chapters, in the health care challenge chapter Ford tried to offer solutions to address the health care broken system before going back to link automation to the percentage of economy, which offsets the health care cost.

When it comes to higher education. Ford has discussed the results of technologies such as the massive open online courses (MOOCs).However; he took an optimistic approach when he learned that the results were disappointing. He promised that such technology would eventually bring value to the millions of poor students around the world. Ford associated the high cost of college in recent years to the lack of information technology. However,I think the high cost is related to government public spending and priorities. Health care system, safety and security tends to draw more public investment than education. Unlike other sectors, information technology in higher education is about delivering information, which is currently abundant. Ford suggested that machine would eventually replace teaching assistants to routinely grade students. Nevertheless, we need a consciousness to better evaluate and grade students which something robots do not possess.

Strength

Ford properly outlined many examples of robots technology and automation within different sectors. He surveyed artificial technology within different sectors including manufacture, service industry and agriculture and its effects on jobs. He provided us with some background on how robots evolved from two dimension to three dimensions over time. Sometimes he discusses several systems in details such as WorkFusion software program or the massive open online courses (MOOCs).His arguments on how blue collars jobs are threaten by Artificial Intelligence and Automation are convincing. At certain points, he was successful in linking automation to the jobs and the economic systems in general.

Weakness

We live in a time where emerging technology such as Artificial Intelligent where every two years doubles in capacity. Therefore, listing of robotic examples in Ford's book will look outdated in the coming few years. To some readers these examples are already became common knowledge. In addition, the author tempted to overdramatize or exaggerate the role of robots in our lives. Ford painted a bleak picture about the automation take over jobs and the loss of economy. However sometimes he struggled to address the lack of Artificial Intelligence and automation on certain sectors such as in the healthcare and higher education. One of the strong arguments against his book point of view is related to machines are causing the loss of jobs. In my opinion there are other factors including capitalism in our economic system that promotes cutting cost and boosting profit. Therefore, we cannot only blame the machine for our economic loss.

CONCLUSIONS

In conclusion, it is interesting to see how technologies such machines, artificial intelligent and automation integrated in our lives. Between 3D printing, autonomous cars, and robots expansion within the industrial services, agriculture and manufacturing we can see that there is a clear Artificial intelligence (AI) revolution. However, Fords

argument that rising robots will replace blue and white collars jobs is still not convincing especially in sectors such as health care and higher education. In my opinion Ford' book listing of many examples of robots technology in our lives grab our attention. However, Ford need to address more the real cause of loss of jobs by considering other factors as well such as our economic systems, political economy and labor economy.

REFERENCES

1. Ford, M. (2015). *The Rise of Robots: Technology and the Threat of a Jobless Future*, 334 pp. Basic Books. \$28.99