

Artificial Intelligence and Robotics Effects on Business and The Economy

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Abstract: *Early mechanization resulted from the Industrial Age that humanity entered long ago with the help of steam power and production. Mechatronics research is currently accelerated by the growth of the internet and mobile technologies, as well as by advancements in electronics, nanotechnology, digital applications, and other fields. The previous World Economic Forum has Robotics and artificial intelligence a significant position on the agenda, and economists like Roubini and Stiglitz have discussed the effects of these technologies on business and economics. Despite Stephen Hawking's criticism of the risks involved, business pages are filled with incredible news and stories every day about these subjects, and corporate life and professionals can no longer withstand these changes. How business is conducted utilizing new technology, including the evolution of commercial terms and labor laws, will have significant effects on national and global economies. With advancements in artificial intelligence, numerous topics and headlines related to business and economics, including the jobless rate, the Philips Curve, performance, management, CRM Analytics, customer relationship management, sales, strategic planning, mass production, Purchasing Power Parity, GDP, inflation, money, central banks, banking systems, coaching, training, accounting, taxes, etc., will face significant risks, hits, changes, exposures, as well as opportunities and gains. This theoretical and speculative essay seeks to address and explore the future of robots, mechatronics, and artificial intelligence from several angles.*

Keywords: *Artificial Intelligence (AI), Robotics, Mechatronics, Economy.*

1. Introduction

A lot of pressure is still being placed on the global economy, on nations and their budget deficits, on financial services, and businesses, particularly on the profitability and revenue sides of the financial tables, by the development of new technologies like mobile and the internet, as well as, on the other hand, by financial crises and economic developments. The most recent financial crisis had a significant impact on the world economy and hastened humanity's transition into a new era. The monetary base and money supply in rich and G-20 [1] nations were and are expanding exponentially. Cash flows, particularly to emerging nations via risk capital funds, business angels, and non-bank financial organizations [2] e.g. microfinance, mobile operators boosted new entrepreneurship, SMEs, and most of all innovation and more research in companies and industries. The "Digital Age," which was ushered in by internet and mobile technologies, has forced businesses to launch online stores and e-government programs, launch e-government initiatives, and present themselves on social media, mobile devices, and tablets to mobilize with their customer bases [3]. E-business, which includes e-signatures, e-invoices, e-commerce, the Internet, mobile banking, and e-payments, has undergone a significant shift that has boosted efficiency in both corporate and personal life. Business process reengineering, which minimizes or optimizes work processes, transitioned from the

industrial to the digital era with the aid of e-business environments. On the other hand, as information grew exponentially each day, corporate environments began to analyze big data and utilize CRM systems at the same time. Although the digital age and other sciences like mechatronics, nanotechnology, genetics, and so forth represent a step toward "Space Economics," other advancements will directly or indirectly affect business and economics more than other advancements. Artificial intelligence [4] and robotics are the names of these developments. White collars and management have taken the initiative to address new concerns and difficulties, which has led to the creation of higher education needs due to the level of information, decisions, and quality of the workforce required. Depreciation of allowance of the machines in production lines, calculation of the return on investment of these production lines, and new definitions in accounting and finance led to lower costs of the human workforce on the one hand, and new definitions in accounting and finance and the cost of capital on the other. Examples of these services include transportation, municipal services, and employee rights in the business environment. Artificial intelligence and robotics will also open new chapters in economics [5] and business, bringing with them new lifestyles and sociological side consequences. The economy's unemployment rate will rise, which is one of the obvious effects. Regarding this initial impact on the company, employing or purchasing new robots [6] will also be impacted. These robots will likely have artificial intelligence [7] compared to their first movers. This theoretical and hypothetical essay begins with an overview of the key concepts, current events, and trends that continue to influence economics, business, and finance. This essay aims to analyze and address potential disruptive changes and consequences, as well as outcomes on industries, management roles, and economic theories with visionary viewpoints that may or will occur shortly, mostly in an inventive and futuristic manner of thinking.

2. Literature Review

The first theory would be that following the 2008 Global Financial Turmoil, which was caused by the fall of Lehman Brothers, a new era named "Space Economy" began in the world's economics and finance agenda due to the major reason of economics, low resource allocation, and population optimization. By significantly relaxing the money supply and monetary base expansion after 2008, which they had already been doing steadily before 2008, central banks, who are primarily responsible for managing the value of money and price stability, played important roles. Government bailouts and quantitative easing of Central Banks were implemented by G-20 and developing countries to prevent bankruptcies and failures of banks, financial institutions, and national treasuries; to stop credit crunches; to recoup financial losses sustained during and after 2008; to accelerate economic recovery and GDP growth; to restore economic [8] balance; and, ultimately, to sustain global economic stability. In addition to the expansion of central bank's balance sheets, the shift like money in the digital age (and the liberalization of printing and issuing money as well as developments on mobile financial services, the quick development of payment systems, non-financial intermediaries and non-bank institutions such as Wal-Mart, business angels, risk venture capital, crowdfunding, and microfinance institutions starting to play an active role in the financial markets If worldwide regulation is not implemented, (Central) Bank revenues and seignorage losses will occur. Humanity and business environments, including but not limited to governments and related organizations, will search for new opportunities to reduce costs and increase revenues based on new trends

like artificial intelligence, semantic studies, robotics and mechatronics developments, big data and mining, cloud computing, neural networks, or primary trends like social media. One of the more compelling theories is that human-like robots will eventually replace humans in many corporate and business settings.

Another strategy known as "Human Adaptive Mechatronics" that was put forth by the 21st Century Centre of Excellence (COE) at Tokyo Denki University in 2003 claimed that a system that included a human in the control loop of a structured man-machine interface would enhance the operational skills of the human workforce. The advancements in mechatronics and robotics will have an impact on a variety of employment areas in the marketing and customer relationship management fields, including but not limited to sales, after-sales, operations, manufacturing lines, call center agents, security guards, and managers. Even at the front end, many departments might easily use robots. Robots that are backed and strengthened by artificial intelligence [9] could replace contact center agents or tellers. More specifically, the arguments presuppose the employment of robots and artificial intelligence in managerial positions, and the early adopters start to support that claim. However, as Amazon.com is an excellent example, banks and businesses will start hiring drone operators. However, the primary discussion points are on the negative implications of commercial drone use. Due to current laws and aviation rules, robotics and mechatronics research along with space economics work to discover solutions for the commercial usage of drones, spacecraft, and rockets. One suggestion is that production lines and organizational charts of businesses, as well as managerial boards and human resources management agendas, would be populated by robots and drones that use enormous amounts of information called big data from numerous databases or connected to cloud computing and managed by artificial intelligence.

Conclusion

This essay aims to serve as a starting point for other articles, studies, readings, and investigations. The next stage for highlighting business and economic implications would be future scholarly works supported by quantitative and market research methods, based on the hypotheses and statements in this paper. Due to their nature, the majority of the justifications, claims, and recommendations are either incomplete or just getting started. As a summary, the current effects and the anticipated disruptive changes of artificial intelligence and robotics on economics and business—the early stages of the "Space Economy"—would be as follows: By calculating the impact of the value proposition and offers to customers on the balance sheet and income statement in real-time and online, as well as by maximizing sales and delivery hours through robotics in the distribution channels, the companies will be able to manage profitability and risks more effectively. Combining subheadings in analytical CRM marketing environments with consumer behavior and neuromarketing, as well as the convergence of mechatronics, robotics, cloud computing, artificial intelligence, neural networks, customer experience, and New methods should be used to evaluate robotics and human employees in businesses. For example, employing a robot in public spaces or having a drone land in a prohibited location are examples of new security policies and guidelines that need to be created. The same reasoning would apply to employee perks including Social Security. The space economy will undoubtedly usher in a new era, as seen by its effects and ramifications on markets, commerce, and daily life.

Numerous academic institutions, theories, books, studies, hypotheses and theses, papers, and articles need to be amended. The business and economics fields also need to be revised, and they will be.

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