



Robots and Rights: The Impacts of Automation and Mechanization on Human Rights

In recent years, the “future of work” has been a topic of heated debate and speculation. As automation and mechanization continues to develop through robotics and artificial intelligence, difficult questions arise regarding the broader impact of these advancements on jobs, workers, and wages. As automation and mechanization advances into new sectors where the traditional work force was built upon manual human labor, such as apparel, electronics, and agriculture, inquiries into the impacts of robots on rights must be addressed.

Robots to worker ratios are rising rapidly in factories around the world. According to Futurism, the global average is .66 robots per 100 workers. In the United States, that average is 1.64 robots per 100 workers, and in South Korea, it’s as high as 4.78 robots per 100 workers.¹ These numbers are expected to grow rapidly. With scientific and engineering advances increasing the efficacy and functioning of robots, decreasing the cost of utilizing them, and expanding the types of functions robots can perform, the labor markets in a growing number of sectors and countries may realistically reach a breaking point

While most of the research and discussion on the economic effects of “robotization” has focused on developed countries; less attention has been paid to the risks of low-skilled labors in developing countries. What will happen to workers who rely on jobs producing clothing or electronics? What about agricultural sector jobs, including planting and picking crops? The work forces in developing countries are at higher risk of absorbing the negative effects of automation and mechanization.

A recent study by the United Nations Conference on Trade and Development (UNCTAD) on the effect of robots in developing countries on industrialization and the labor market predicts that as low-skilled human labor is substituted for robots, labor markets will shift from developing to developed countries—leaving large amounts of low-skilled workers in global supply chains unemployed.² According to the World Bank, 2016 World Development Report, about two-thirds of all jobs in developing countries could experience significant automation.³ For example, in

¹ Luke Kingma, *Universal Basic Income: The Answer to Automation?* FUTURISM, <https://futurism.com/images/universal-basic-income-answer-automation/> [hereinafter Kingma Futurism].

² *Robots and Industrialization in Developing Countries*, UN Conference on Trade and Development (2016), http://unctad.org/en/PublicationsLibrary/presspb2016d6_en.pdf.

³ *Id.*

China, 77% of jobs are at risk due to automation and mechanization. Similarly, 69% of jobs in India are at risk, and 75% of jobs in El Salvador.⁴

Harvard economist Richard Freeman's three laws of robo-nomics highlight the various ways in which robotization will affect workers and the economy:

Law 1: Advances in artificial intelligence and robotics will produce machines that are better substitutes for humans—in the lingo of economics, an increasing elasticity of substitution between robot and human work.

Law 2: The cost of robot machine substitutes for humans will decrease as technology reduces production costs, placing downward pressure on wages.

Law 3: Income will increasingly come from ownership of robots or other forms of capital and the stream of income they produce, rather than from human labor.⁵

Many skeptics as to the negative impacts of automation and mechanization point to the past automation booms of the twentieth century, their positive impact on the structure of jobs, and the high ratio of employment to population during this period to debunk fears about the future of work in an age of robotization. Yet, as Freeman warns, “today’s robotization is not your parents’ automation. Enough is different about the economy and the application of artificial intelligence to justify worrying about the impact on jobs of robotization at a massive scale.”⁶

The numbers of workers who will be displaced by automation in the apparel, electronics, and agriculture sectors will be substantial. Statistics suggest that 97% of all farm laborer jobs are at risk of robotization.⁷ Yet, governments seem to be ignoring the trends from other sectors that have already been heavily automated, with great risks to their own citizens. This project therefore is aimed at fostering discussion around critical yet unexplored questions about the impact of robotization on human rights.

Project Description

“Robots and Rights: The Impacts of Automation and Mechanization on Human Rights” seeks to foster discourse and explore solutions to the challenges posed to human rights, including labor rights, from automation and mechanization.

The Project will initially map three sectors which heavily rely on low-skill human labor and were thought in the past not to be easily automated--the apparel, electronics, and agriculture sectors. These discussion papers will survey the types of automation and mechanization

⁴ Kingma Futurism, *supra*, note 1.

⁵ Richard B. Freeman, *Who Owns the Robots Rules the World*, HARVARD MAGAZINE (2016), <http://harvardmagazine.com/2016/05/who-owns-the-robots-rules-the-world>.

⁶ Freeman, *supra*, note 5.

⁷ Kingma Futurism, *supra*, note 1.

occurring in the sector, where it is occurring (both geographically and within particular supply chains), and the resulting and potential human rights impacts of this automation and mechanization.

These discussion papers will feed into a broader expert symposium, which will bring together key leaders from the human rights, labor, and development communities to discuss the actual and potential impacts of robots on various stakeholder rights in a number of sectors, and explore policy and advocacy strategies and solutions. The symposium will cover the potential impacts of robotization in other sectors as well.

Project Objectives

1. Create a body of research documenting the human rights implications of automation and mechanization in three traditionally labor-intensive sectors in order to inform a growing discussion about these issues.
2. Foster debate and discussion through a high-level symposium, which will bring together leading thinkers in the field to examine the issues and explore future policy or advocacy strategies and goals.
3. Elevate knowledge, awareness, and discussion of the human rights impacts of automation and mechanization across the business and human rights community and other civil society actors.

For more information, or to express interest in presenting research at the 2018 Symposium on Robots and Rights, please contact Cindy Woods, Legal and Policy Associate, cindy@icar.ngo.