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Committee: GA₂

Issue: Addressing the
economic effects of
automation of jobs

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INTRODUCTION

- The future of work is highly uncertain. It looks grim as advances in Artificial Intelligence (AI) and Robotics are expected to affect employment in an economy with matching frictions and endogenous job destruction.
- Digital automation since the 1980s has added to labor market inequality, as many production and clerical workers saw their jobs disappear or their wages decline. New jobs have been created—including some that pay well for highly educated analytical workers. Others pay much lower wages, such as those in the personal services sector.
- More broadly, workers who can complement the new automation, and perform tasks beyond the abilities of machines, often enjoy rising compensation. However, workers performing similar tasks, for whom the machines can substitute, are left worse off. In general, automation also shifts compensation from workers to business owners, who enjoy higher profits with less need for labor.

Background Information

Causes of automation of jobs:

1. Technological Advancements:

- The rapid development of artificial intelligence (AI) and robotics, has allowed machines and software to perform tasks that once required human labor. Technologies like autonomous machines, AI-driven customer service bots, and algorithms have significantly increased automation across industries.

2. Cost Efficiency for Businesses:

- Cost-cutting pressures have driven companies to adopt automation as a way to reduce labor costs. Robots and software can work 24/7 without the need for salaries, which makes them highly attractive for businesses looking to improve efficiency and profitability.
- Automation leads to fewer errors and higher precision, making it a reliable option for businesses.

3. Global Competition:

- Automation can help companies maintain competitiveness by producing goods faster, cheaper, and at a higher quality, especially in industries such as automotive, electronics, and e-commerce.

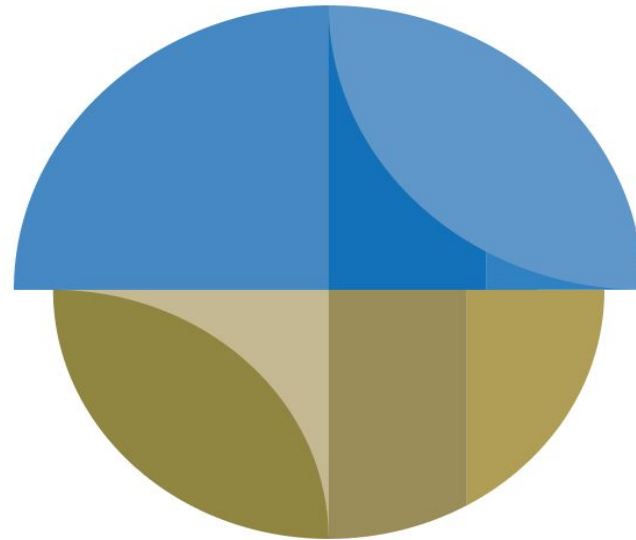
4. Labor Shortages in Certain Industries:

- In some industries, there is a shortage of skilled workers, particularly in high-demand fields such as technology, healthcare, and logistics. Automation helps fill these gaps by taking over jobs that are hard to staff, such as warehouse operations and data analysis.

Job landscape

By 2025, new jobs will emerge and others be displaced by a shift in the division of labour between humans and machines, affecting:

97 million



85 million

Growing job demand:

1. Data Analysts and Scientists
2. AI and Machine Learning Specialists
3. Big Data Specialists
4. Digital Marketing and Strategy Specialists
5. Process Automation Specialists
6. Business Development Professionals
7. Digital Transformation Specialists
8. Information Security Analysts
9. Software and Applications Developers
10. Internet of Things Specialists

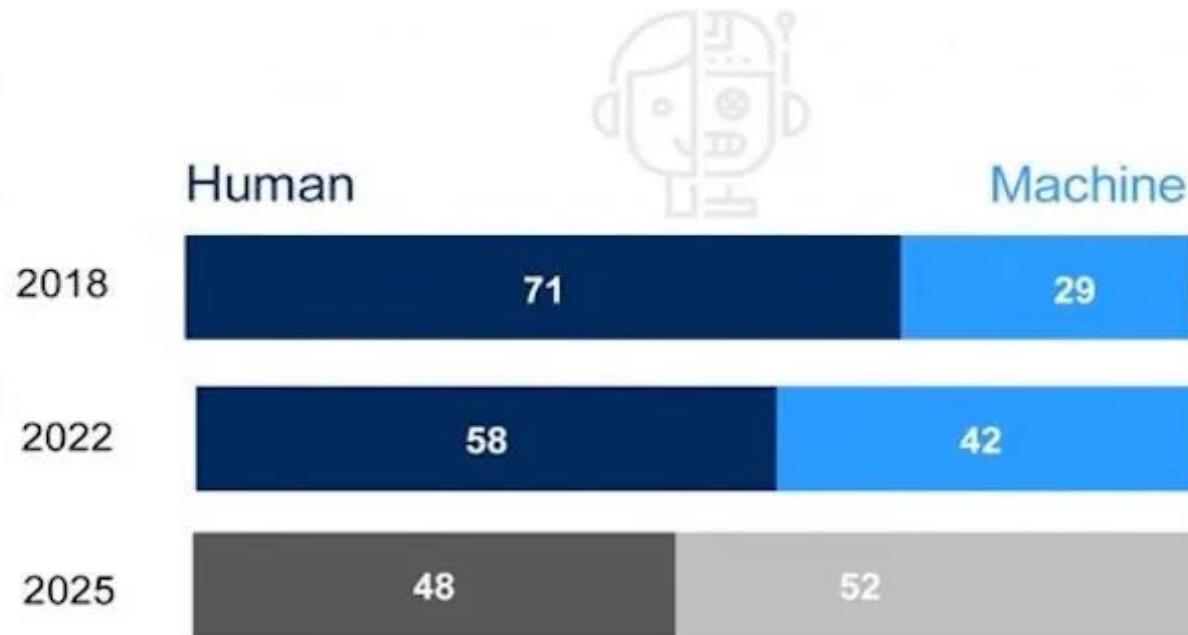
Decreasing job demand:

1. Data Entry Clerks
2. Administrative and Executive Secretaries
3. Accounting, Bookkeeping and Payroll Clerks
4. Accountants and Auditors
5. Assembly and Factory Workers
6. Business Services and Administration Managers
7. Client Information and Customer Service Workers
8. General and Operations Managers
9. Mechanics and Machinery Repairers

Job landscape and the impact automation has on its demand

Rate of automation

Division of labour as share of hours spent (%)



Source: Future of Jobs Report 2018, World Economic Forum

Rate of Automation from 2018 till 2025 - Forbes

Past Solutions

- The G20 has addressed automation challenges, promoting global cooperation on job protection. G20 countries account for 85% of global GDP, and their policies influence automation and labor worldwide.
- Denmark's "flexicurity" system allows easy job transitions with strong welfare support. Denmark spends around 3.7% of GDP on social protection measures, ensuring smooth transitions for workers.
- New sectors, like renewable energy, healthcare, and education, create jobs that are less prone to automation. Green energy initiatives in the U.S. have created over 240,000 solar energy jobs. By 2050, renewable energy could create 42 million jobs worldwide (IRENA report).
- South Korea invests heavily in STEM (Science, Technology, Engineering, Mathematics) education to prepare its workforce for tech-driven jobs, spending over \$22 billion in 2021 to boost its digital economy.

POSSIBLE SOLUTIONS

1. Reskilling and Upskilling Initiatives:

- Governments and companies should invest in programs that reskill workers with new competencies and upskill them in advanced areas to help transition into industries less affected by automation. This approach helps displaced workers secure jobs in growing sectors like technology and healthcare, reducing unemployment and bridging skill gaps.

2. International Frameworks for Economic Growth:

- UN organizations like the ILO and World Bank can promote the creation of international policy frameworks aimed at encouraging inclusive economic growth in response to automation. This can include encouraging countries to invest in sectors with high job creation potential (e.g., green energy, healthcare) and establishing safeguards for workers affected by automation.
- This coordinated global effort would mitigate the negative effects of automation on economies by fostering sectors that create jobs and ensuring that the benefits of automation are shared more equitably, reducing inequality and promoting sustainable development.

APPENDICE

1. [THE FUTURE OF JOBS AT RISK OF AUTOMATION](#)

- *This PDF provides detailed information regarding the jobs at risk due to automation and its future mainly in Southeast Asian countries.*

2. [Study: Slowing Down Automation May Have Economic Benefits](#)

- *This article talks about how slowing down of automation can bring about positive changes to the economy.*

3. <https://www.youtube.com/watch?v=UAtAA5J110w>

- *This video highlights the impact AI and automation will have on jobs in the near future.*