Committee: Economic & Social

Topic: Automation and its consequences on employment

Definitions

- *Automation*
  Automation refers to the process of automatically producing goods through the use of robots, control systems and other appliances with a minimal direct human operation.
- *Employment*
  Employment is a relationship between two parties, usually based on a contract where work is paid for, where one party, which may be a corporation, for profit, not-for-profit organization, co-operative or other entity is the employer and the other is the employee.
- *Labour-saving*
  Labour-saving consists in the introduction of an improved production method, and as a consequence it enables firms to produce the same quantity of an existing good or service with fewer workers.
- *Labour-augmenting*
  Labour-augmenting is a synonymous of product innovation.
- *Blue-collar jobs*
  Blue-collar workers refer to workers who engage in hard manual labour, and have to perform physically exhausting tasks. These workers typically include those who are involved in the agriculture, manufacturing, construction, mining, or maintenance industry.
- *The Luddite fallacy*
  The Luddite fallacy is the observation that new technology does not lead to higher overall unemployment in the economy: new technology doesn't destroy jobs; it only changes the composition of jobs in the economy.

Introduction

The role of automation has become more important in the global economy in the past decades and will become more so in the future.

Within manufacturing industries, automation has led to increased labour productivity as fewer workers are needed to produce the same number of manufactured goods. Thus,

labour-saving has risen. A perceived downside of automation is that it leads to jobs being displaced in traditional areas of work – in particular, 'blue-collar' manufacturing jobs. These concerns are related to the social and economic impact of the rapid job displacement associated with automation and globalisation, especially on the long term. In fact, Keynesian economists argue that the fall in demand for goods resulting from unemployment will precede, and thus dominate, the reduction in prices resulting from automation. This will lead to a further increase in unemployment.

Automation	
Pros	**Cons**
• More efficient production • Higher labour productivity and higher wages/profit. • Cheaper goods increases disposable income of consumers. • Avoids boring, repetitive jobs • Can enable a shorter working week • Can improve safety and remove risk of human error • Can give consumers greater choice of goods.	• Some workers displaced – possible structural unemployment • Creates winners and losers – possible increase in inequality • Automation could increase monopoly power • Loss of human interaction – dealing with computers leads to lower quality of life. • Automated systems can show lack of empathy with events.

However, other economists argue that the process of automation leads to the creation of new jobs in areas such as robot manufacture, research, marketing and software development. This is just an enduring faith in the Luddite fallacy. What these economists are arguing is that some economic mechanisms are going to compensate the short-term unemployment. First, increased profits will lead to further investment in new technology, and hence new products. In addition, competition between firms will lead to a general reduction in prices, increasing demand for products and hence labour. Finally, the reduction in wages caused by initial technological unemployment will increase demand for labour and induce a shift back to more labour-intensive methods of production, soaking up the redundant workers.

Automation Job Statistics

- 37% of workers are worried about losing their jobs due to automation.
- The number of industrial robot jobs increases by 14% each year.
- More than 70% of people are willing to augment their brains and bodies in order to improve their employment prospects.
- Three industries facing the highest risk of automation are transportation, storage, and manufacturing.
- By 2022, the total task hours completed by humans will drop by 13%.
- Robots could displace 20 million manufacturing jobs by 2030.
- Generation Z is at the highest risk of being displaced due to automation.
- 33% of new jobs in the United States are for occupations that did not exist 25 years ago.

Key issues

Technological change leads to higher economic welfare, however, while the mass of the population may see a small or considerable rise in living standards, some workers may see a dramatic drop in living standards, as they remain unemployed. Thus, there are numerous issues that the delegations should tackle.

- Automation can create winners and losers. Some will benefit significantly from automation – owners of more profitable factories, and software developers. However, those who lose jobs from the process of automation, may struggle to gain equivalent employment, especially as the ones who are likely to lose their jobs, will be those who haven't competitive qualifications.
- In recent years, there has been a rise in male unemployment and inactivity across western Europe / USA. Globalisation and automation has been suggested as one reason for these higher rates of unemployment – especially amongst unskilled male workers. Even those who have found work, often find it is in the gig economy – zero hour contracts, involving low pay and uncertainty. This has created ill-feeling towards the direction of the economy, and has created resentment towards government with political and social consequences.
- The process of automation has coincided with a rise in levels of inequality in developed countries, such as the UK and USA. There are many reasons for the rise in inequality, but the fear is that automation benefits some more than others.
- Automation may increase corporate profit, but not necessarily median wages. Since 2008, we have seen a rise in real GDP, but median wages have stagnated, especially in the USA. Company profit has increased, but the share of tax revenue paid by companies is not increasing.
- Automation can increase monopoly power of the most successful technology firms, e.g. Apple, Amazon have all benefitted from automation to gain higher market share, cut prices and grow profits.
- Loss of human element. We are moving to a society where we have less personal contact – self-service till, automated announcements and buying online. It means we can avoid having human contact and although the economy may be efficient, it could create social problems as it increases the sense of separation. This human touch is something not measured by economic statistics like GDP, but has an impact on Social Indexes.

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