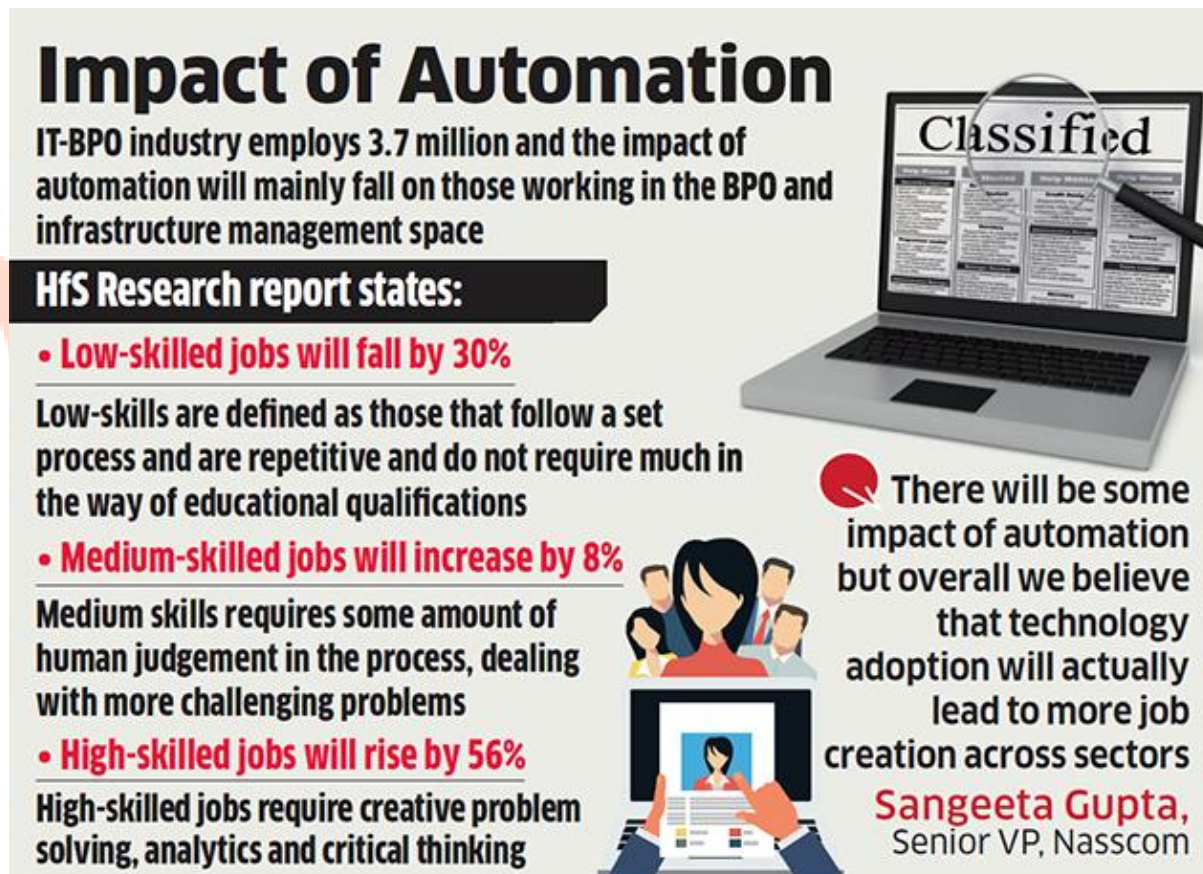


Impacts of Automation

1) Introduction

- The term automation is defined as the use or introduction of automatic equipment in a manufacturing or other process or facility.
- Technological innovation in recent years has made computers, robots and software so sophisticated that machines are now entering the realm once thought to belong exclusively to humans



Impact of Automation
IT-BPO industry employs 3.7 million and the impact of automation will mainly fall on those working in the BPO and infrastructure management space

HfS Research report states:

- **Low-skilled jobs will fall by 30%**
Low-skills are defined as those that follow a set process and are repetitive and do not require much in the way of educational qualifications
- **Medium-skilled jobs will increase by 8%**
Medium skills requires some amount of human judgement in the process, dealing with more challenging problems
- **High-skilled jobs will rise by 56%**
High-skilled jobs require creative problem solving, analytics and critical thinking

There will be some impact of automation but overall we believe that technology adoption will actually lead to more job creation across sectors

Sangeeta Gupta,
Senior VP, Nasscom

- According to research report by World Bank, automation has threatened about 69% jobs in India, while it is 77% in China and about 85% in Ethiopia.
- By 2025 about 70% of India’s population would be of working age, hence automation has posed severe threats on jobs in India.

2) Positive impact of Automation

- Computers today can recognize patterns and generate insights being used for fraud detection, medical diagnostics, legal research, and auditing

- Artificial intelligence algorithms can process thousands more documents – and then act faster – than any human and are free from human biases
- Their productivity also need not be interrupted by rest breaks or lapses of concentration
- The new technological revolution will create tremendous societal benefits – the creation of new goods, services, markets and jobs, greater productivity, etc.
- Reductions in operation expenses and increases in production speed
- Automation has the potential to make a business significantly more efficient by reducing opportunities for human error.
- Product volume availability in markets is much assured compared to manual goods which may fail to meet timeline for huge volume demand
- Better & Uniform Quality goods with longer Durability
- This can free workers up to focus their energies on more complex and productive tasks, further increasing workplace efficiency.
- One of the Goals of SDGs includes efforts “to increase significantly the availability of high-quality, timely and reliable data”.
- The more real-time data we have, the earlier we can correct ourselves and set a path toward goals that will improve the lives of individuals.
- Machines do not unionise, demand pay hikes leading to freedom from trade union strikes and even holidays are not required.
- Digitisation and automation of approval processes will expedite the whole process, and entrepreneurs would not seek shortcuts leading to corruption

3) Automation in India

- Automation is thus clearly an integral part of the kind of manufacturing that we in India hope to do
- Leaders of the IT services industry have repeatedly spoken about how automation is the next big thing in their industry as revenue growth rates slow down and people costs remain high
- The jobs that India is targeting through foreign direct investment is the jobs that is repeatable and programmable, and hence most vulnerable to automation
- Automating the ration shops
 - 1) Chhattisgarh and Odisha have shown extraordinary success in making PDS work efficiently and equitably
 - 2) Digitization and automation with appropriate intervention of ICT and software applications have played a critical role in making FPS deliver to maximum number of eligible people.

- 3) Automation mean that every sack of grains or canter of kerosene oil would be digitally marked at the source and tagged with RFID so that its movement can be tracked till it reaches its destination
- 4) FPS automation mean that only eligible people would get rations and nobody would be cheated
- 5) Automation mean that there would be no pilferage

- Automation in RTI

- 1) Automating systems for disclosure may be the best option to strengthen transparency.
- 2) As the RTI starts its second decade, we need India's government to ensure that information provision has a more impersonal face.
- 3) This requires the government to invest in a data infrastructure that will allow it to go from passive to active transparency.
- 4) Such active transparency brings huge benefits to citizens who can directly access data without filing requests.
- 5) With MoRD on making MGNREGA Public Data Portal usable, there is a hope that active transparency is possible in India.

- Automation can serve purposes outside the immediate operational concerns of the particular programme.
- Innovative Solutions taken by Karnataka e.g. NCDEX (National Commodity and Derivatives Exchange) Spot Exchange for automation of auction process in mandis

4) Negative impact of Automation

- A recent report from the International Labour Organization found that more than two-thirds of South-East Asia's 9.2 million textile and footwear jobs are threatened by automation
- On the other hand, automation often involves high start-up costs that may be difficult to offset.
- Automation in manufacturing has deprived millions from jobs. Many industries like car manufacturing industry uses automation in almost every process of manufacturing.
- Will aggravate economic inequalities of income.
- Developing countries that depend for their competitive advantage on low-cost, low-skilled labour will suffer massive loss and re-localization of highly skilled workers to global opportunities.
- Innovation is boosting pay for highly skilled workers while having a more negative impact on those with low to medium skills.
- Jobs that involve any kind of routine or repetitive work – mental or physical – are increasingly at risk of being ousted by automation.

- As X-rays and other medical records are digitised and computer algorithms become better at interpreting them, radiologists are acting more as fact checkers than as medical sleuths
- Creates inequality and makes it difficult for people to live in or move to places where new jobs are emerging
- Advances in productivity, mainly driven by the development of digital technology, and the resulting economic growth, no longer cause employment and workers' incomes to rise

5) Solution

- India must be prepared to utilise its huge human capital by infusing creative and productive skills.
- India needs to invest in social and physical infrastructure to enhance people's education, health skills etc., it need huge public spending.
- There is a need to adopt radical change in the approach on important aspects like learning and we must focus on outcomes.
- Government should take this issue very seriously and adopt measures to enhance the job creations in India; else India's demographic dividend may turn into demographic disaster.

