

Automation: Future Threat or Revolution for Employment in India

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Abstract:

This research paper highlights one of the most dreaded terms in today's era, which is automation. A vast population around the world is gripped by the fear ebbed by automation.

The word automation sounds synonymous to loss of jobs. Majority of people fear that their jobs will soon get replaced by hi-tech robots or fully automated machinery. This threat has not only engulfed people of India but has become a globally pandemonium. The corporate houses are reconsidering the tasks that were man driven to be replaced by complex soft-wares and machinery.

Large Indian private banks such as HDFC, ICICI are now implementing software robots to automate their banking processes. Companies like TCS, Infosys, and Cognizant are automating software processes by use of Artificial Intelligence and Automation. This may lead to huge

lay offs .World Bank has released a report that is really-hard hitting. The report says 7 jobs out of 10 jobs in India are going to be replaced due to Automation. Foxconn a Chinese company, which develops iphone , recently announced that over 60,000 jobs have been replaced by automation technologies. They do the production work of handsets, which Foxconn produces.

However, the important aspect is how are you can do skill up gradation. If you are in a job, that is repetitive, believe it or not, it will be replaced by some form of Automation and if you are thinking that Automation is something that may not have that much effort you are wrong. Automation threat is real and it is going to happen. Just be preparing for it.

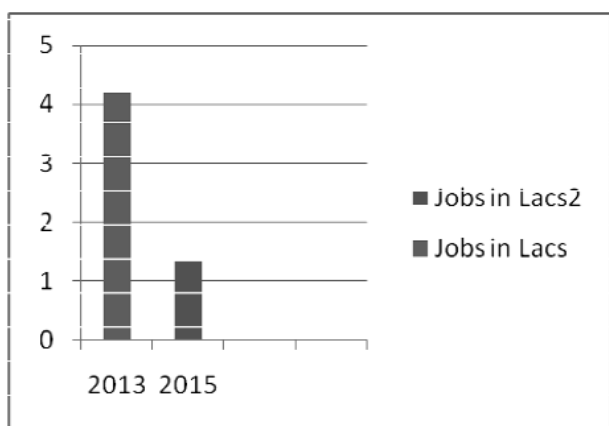
If we see, other side of Automation Technology, it is Revolution in all over the world, where mass production and revenue generation is in both

Manufacturing and Service sectors. No doubt, jobs are shrinking because of Automation in India as well employment rate will be increased in next 2 decades, but the fact is this is the era of digital technology where India has to pace up with developed countries by adopting the Automation Technology.

This Paper focuses on "is really automation is a big threat or revolution for India and impact of automation on employability in future. Keywords: Automation, Threat, Revolution, Skill, Employment

Introduction:

Indian industries are moving towards automation to reduce workforce. In India, everyday 550 jobs are reducing and 70 Lacs jobs will be reduced by 2050. Prahar is an institute in Delhi reported that in last four years unemployment rate is increasing in the ration of reducing 550 jobs per day. This big problem, for farmers, traders and Labour workforce. As per the study of Prahar Centre, analysis of Labour Bureau is given below:



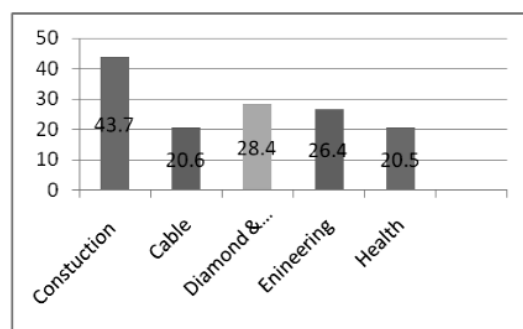
Graph 1: Jobs Reduction

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This graph shows that 1/3 jobs were available in 2015 in comparison with 2013 and unemployment rate has been increased in year 2015.

Adopting the Automation technology can be a big reason of increasing of unemployment in service and manufacturing sectors both.

As per the CARE Rotary's report, in last 4 years, 1072 companies had produces 11.88 Lacs new jobs in 2014 but in 2015, only 12,760 jobs were produced. This is big difference and many different sectors have been affected. Analysis is given below:



Graph 2: Jobs Down Fall in Different Sectors (Data in Percentage)

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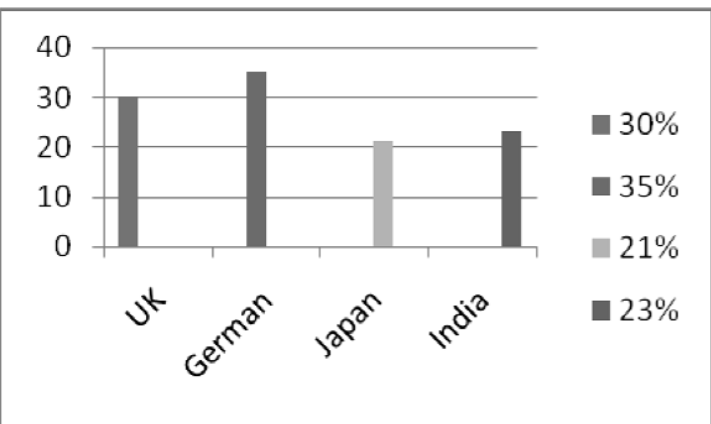
As per the report of Business standard, comparison of 2015, in 2016 and 2017, 20% down fall was observed in campus placements of IT sectors. For last six years IT companies offering the fix package of 3-3.5 Lacs to Engineering students and 90% IT companies are paying same salary to their employee for last four years. Top companies like Wipro, Infosys, and TCS hires maximum 2 Lacs graduate engineers every year but in last 4 years, companies are hiring less than

70,000 graduate engineers every year. There is big down fall in employment among the engineers.

Behind reducing the employment rate, no exact reason, but one big reason is that somewhere in finance, banking and insurance sectors are consistently going down and because of that IT sectors do not have project for their engineers. Another big reason is that 90% graduate engineers are not technical fit and not eligible for job. As per CARE rating report jobs can be increased in manufacturing sectors but engineers have to be equipped with skills.

Automation Threat:

In all over the world, Engineering, Manufacturing, Auto, IT sectors are being automated to improve the productivity and revenue of company. As per experts, as more industries will be automated, out of 10, 4 jobs will be disappearing. In UK, 30% jobs will be disappeared due to Robotics technology in coming years. As per PWC report, in German 35%, Japan 21% jobs are in danger due to Automation.



Graph 3: Jobs Loss due to Automation

Graph 3: Jobs Loss due to

Automation

From above analysis it is clear that Automation is a big threat for all over world but still not so much in India. Jobs in manufacturing sectors will greatly reduce, but we can still achieve over all jobs growth. Low skilled jobs in manufacturing are being eliminated in China at rapid rate. It is fact that jobs cut due to Automation. It will not happen immediately, but the impact will become prominent by 2020.

According to the company's research, India will make up around 23% of jobs to be lost due to automation globally by 2021.

As the world gets more competitive, it will use more automation robotics technology.

Information Technology, IT-enabled Services (ITes) and Security services followed by Banking will be first sector to feel the heat, wherein manual transaction and processing jobs will become obsolete.

Impact will be felt where the jobs cost highest in next 10 to 15 years. If India grows at 8% a year, with a labour productivity increase of 15% a year, jobs should grow at a rate of 6.5% a year.

With automation, jobs may grow within a band of 4-5% a year. For next 10 years, the cost of initial automation and robotics in high. In a country where wages are much lower than costs impact will be felt at a slower pace and much less than elsewhere. More than jobs cuts, new jobs creation is big concern of India. Jobs will

be generated at slower pace than economics growth rate .Overall India will not see job losses as much as a slower growth of jobs. Going by 2017 , world employment and social outlook report released by the international labour organization in Jan-2017, India has something to cheer about.

According to the report in 2016, a major share of the 13.4 million new jobs created in south Asia was in India.

However the same report says that Unemployment in India might go up 17.7 million in 2016, to 17.8 million in 2017 he and 18 million in a year later. Creating more opportunities for the unemployed will be crucial.

Strengthening "the mid market segment in India to create more jobs and re-skilling the workforce to take up the new jobs which will be emerging are vital.

Automation Revolution:

No Doubt, new technology means new growth, changing the world of work and reshaping labour workforce. Technologies such as smart devices like smart phones, machine learning, cloud computing, Artificial intelligence and Robots are the major advancement in past 2 decades and will have greater Economic and Social impact in future. These changes have also had significant implications for employment. The technology has created million of digital jobs directly for people involved, who use specific softwares and tools

as a main element of their work, irrespective of the Industry.

Most of the manufacturing and services industries are moving ahead to adopt automation technology to set a big revolution in country. Working environment in banking sectors in last 2 decades has completely automated. Where earlier, customers had to wait in long queue for a long time to deposit and withdraw the money from bank nowadays it has been so easy that customers does not have to wait for long time for bank works. They can deposit and withdrawal the money from automated machine exists at banks. Even thought from their home they can process the all bank work through online facility. It is not only about the banks sectors, also others sectors like agriculture, medical, construction etc. are also getting benefit of automation technology.

The "automation revolution" will change what it means to be employable. To have jobs, people will have to do creative work or work in a service industry that requires the human touch.

The definition of educational success will have to change to account for this new reality. In the future, tests will be less about rote memorization and more about critical creative thinking that machines can't yet replicate. So where will the next generation fit into this automated future?

Several fields will still require the creativity and empathy of humanity -

at least for the foreseeable future:

Entertainment: Machines can bake the bread, but they can't tackle the circus. Not only will film, television and video games still be dominated by human ingenuity, new areas will open up. Virtual reality, for example, continues to improve and has the potential to become the most addictive tech in history, offering fully immersive fantasy worlds people may never want to leave.

The service industries: Although machines might perform the actual services, humans will still be required for the social part of the equation.

People will become automation ambassadors, so to speak. Their roles will primarily be to explain the benefits and safety of using automation at home and in the workplace.

Machine training: Along similar lines as service industry ambassadors, this job will require a combination of subject-matter experts and engineers who train machines to do certain tasks. For instance, someone has to teach a machine the best way to paint a wall or repair an engine, then give it feedback. Machine trainers will act both as "zookeepers" and as mechanics to service the machines and care for the programs that operate them.

Entrepreneurship: Automation will change everything about how we conduct business today, and entrepreneurship will quickly take center stage.

Building a product and getting it manufactured at scale, marketed and sold will be the job of one entrepreneur

(rather than an entire company).

While the robot revolution may seem some way off, automation will have a big impact on all our lives. So if we want people to have satisfying, well paid jobs, we have to prepare for automation revolution.

India is Ready or not for Automation Revolution

Do workers welcome the new era of robots that will soon characterize the Fourth Industrial Revolution that is reshaping entire economies? This question hardly features in the fevered debate about automation and artificial intelligence. There's been too much speculative talk about the impact of technology in the distant future. That matters because, in the here and now, some companies are already introducing artificial intelligence and other innovations and wrestling with the early management challenges.

Workers welcome digital technologies, according to global research by Accenture Strategy, which includes social, mobile, analytics, robots and artificial intelligence in a broad definition of technologies. Five times as many think digital will improve their job prospects as those who say it will worsen them. And those who believe digital will improve their working experience outnumber the pessimists by ten to one.

Should such enthusiasm surprise us? Perhaps not. Our measure of the digital economy indicates 37.5% of the global workforce can be considered

digital. That is to say, there is already a large proportion of employment in which digital skills play a part and that can support digital business activities of one kind or another.

Clearly, many of these existing digital skills are not yet at the level of sophistication needed to exploit the full potential of digital disruption. But there is a broad foundation of skills that are relevant to emerging digital business models.

The rapid rise of the Millennials—there are in excess of 700 million in India according to the United Nations—will likely reinforce this foundation and drive even greater openness to the emerging world of robots and artificial intelligence.

Already, new intelligent systems are bringing not just greater productivity but greater precision to agriculture thanks to sensors, drones and other technologies. The finance sector is using Robo-analysts to provide financial advice to banking clients. And smart glasses are helping field workers to access data and instructions as they repair equipment. These innovations are not making super humans. They are making humans super. Artificial intelligence augments the work they do and helps them do it better.

In India, professional employees exude enthusiasm and optimism for a digital future. In our sample of 1,000 Indian workers, of whom 93% were graduates and 90% of whom were professionals, 79% believe new tech-

nologies will have a significant impact on work. 90% believe that these new technologies will have a positive impact on their work experience, higher than the 63% average in the emerging markets Accenture Strategy studied.

When asked, Indian professional workers pointed to greater efficiency as the main benefits of digital technologies in the work place. But greater mental and creative work and the opportunity to learn more also rank highly.

Despite the enthusiasm, employees the world over temper their enthusiasm with caution about the march of robots and artificial intelligence. Just over a third of the workers we polled globally are worried that robots and software will take over their jobs. That rises to 60% in India, demonstrating the dichotomy and dislocation of digital in the workplace here. Indian workers are also more worried than workers elsewhere that employers could track their every move. Meanwhile, business leaders in India are highly ambitious in transforming their businesses into digital enterprises. In many countries, especially in mature economies, businesses intend to follow rather than lead, perhaps because digital throws up many uncertainties for traditional sectors who have much to lose and, therefore, much to learn. Indian enterprises may have less to lose and more to go for. We spoke to 100 Indian C-suite decision makers in a broad range of

industry sectors. Almost three quarters represented companies with revenues of more than \$1 billion. Two-and-a-half times the proportion of business leaders here in comparison to those in Germany want their companies to be digital leaders as opposed to fast followers.

It's no wonder that senior executives share the optimism of their employees. But there's a challenge. There may be a degree of complacency about the readiness of companies to transform their businesses into digital enterprises. Two-thirds of local companies say they already have a digital strategy for talent and skills. But evidence throughout the rest of the world demonstrates that, when push comes to shove, there are difficulties among middle managers—those who have to implement changes to the digital workforce.

Among the tasks that managers devote most time to today, many are prime candidates for a degree of automation: planning and coordinating work, monitoring and reporting and maintaining standards. Artificial intelligence will increasingly free managers from these time-consuming tasks to focus on work that is more uniquely human, or "judgment work," which requires complex thinking, interpretation and higher-order reasoning. That could be providing more bespoke services to customers or more personal support to staff. And managers will be liberated to focus more on creativity and innovation.

Yet a majority of managers we spoke to around the world are uncertain whether they have the skills to succeed in their role over the next five years. Many are concerned about the impact of artificial intelligence on their jobs. Part of their resistance boils down to trust. When asked if they would trust the advice of intelligent systems in making business decisions, barely more than a tenth strongly agree, putting them out of kilter with their more positive executive-level managers.

This calls for a more proactive effort to unite managers and machines. Not only do we need to accelerate the introduction of new intelligent systems, we need to encourage experimentation to mould those systems into the fabric of evolving processes and teams. This approach will show that digital is not something that happens to the workforce but something the workforce makes happen in their organization.

The other critical step forward is to shift the expectations for management skills demanded in the future.

Managers often misunderstand the full spectrum of skills needed, assuming the greatest impact will be on the IT workforce or that digital skills will be the most important. In fact, the most critical skills required as AI and robots make their presence felt will be people development, coaching, collaboration and creative skills.

Above all, stronger interpersonal skills will be paramount if managers

are to have the confidence to inspire a more fluid, less structured workforce and to manage the introduction of new technologies in the first place. These hard-to-come-by skills will be needed so that managers can support their teams as they learn to work with robots and as robots learn to work with them.

While India is open and receptive to digital transformation, it many require a more nuanced and advanced approach to developing the core managerial skills to succeed.

Conclusion:

Automation will create 2.3 million jobs in 2020, while eliminating 1.8 millions - according to Gartner.

Gartner, Inc. is an American research and advisory firm providing information technology related insight for IT and other business leaders located across the world. Its headquarters are in Stamford, Connecticut, United States. The number of jobs affected by Automation will vary by industry, through 2019, healthcare, public sector and education will see continuously growing job demand while manufacturing will be hit hardest. Starting in 2020, Automation related job creation will cross into positive territory, reaching two million net new jobs in 2025.

Automation will improve the productivity of many jobs, eliminating millions of middle and low level positions, while also creating millions of more new positions at highly skilled,

management and even the entry level and low skilled level.

As regards automation's impact on workplace, the report predicts that by 2022, one in five workers engaged in mostly non-routine tasks will rely on automation.

References:

1. "The Impact of Robots on Productivity, Employment and Jobs", A positioning paper by the International Federation of Robotics, April 2017
2. "The Impact of Automation on Employment-Part I", Posted Date: October10,2017,Resource:https://www.ncci.com/Articles/Pages/II_Insights_QEB_Impact-Automation-Employment-Q2-2017-Part1.aspx
3. "Automation Technology & its Economic Impact on Indian Economy (A case Study on Module base)", Nand kishor Soni, Ajay Parashar, Department of Economics Barkat Ullah Universaity Bhopal Madhya Pradesh India, Govt. PG College Pipariya, IOSR Journal of Economics and Finance (IOSR-JEF) e-ISSN: 2321-5933, p-ISSN: 2321-5925. Volume 2, Issue 3 (Nov. - Dec. 2013), PP 31-35.
4. "Automation in Information Technology: Implication on Job Market In India", V.Hemanth Kumar Senior Executive -HR, Sidhi InfoTech, Bangalore, Karnataka. International Journal Of Engineering And Computer Science, ISSN:2319-7242 ,Volume 5, Issue 8 August 2016,

5. "Automation Impact: India's Services Industry Workforce to Shrink 480,000 by 2021- A Decline of 14%", by Phil Fersht -CEO and Chief Analyst, Posted on July 3,2016.

6. "Automation to Kill 70% of IT Jobs", by Venkatesh Ganesh, Posted on 9 Jan, 2018.

Resource:[http://www.thehindubusinessline.com/info-tech/automation-to-kill-70-of-it-](http://www.thehindubusinessline.com/info-tech/automation-to-kill-70-of-it-jobs/article9960555.ece)

[Jobs/article9960555.ece](http://www.thehindubusinessline.com/info-tech/automation-to-kill-70-of-it-jobs/article9960555.ece).

7. "Artificial Intelligence Imperils India Inc jobs", by Peerzada Abrar, Posted on Bengaluru, Aug 20, 2017. Resource: <http://www.thehindu.com/business/Industry/artificial-intelligence-imperils-india-inc-jobs/article19529813.ece>

8. "Why Automation Could be a Threat to India's Growth", By Edd Gent, Posted on 9th May , 2017. Resource:

<http://www.bbc.com/future/story/20170510-why-automation-could-be-a-threat-to-indias-growth>

9. "India and the Artificial Intelligence Revolution ", Shashi Shekhar Vempati, Carnegie Endowment for International Peace Publications Department 1779 Massachusetts Avenue NW Washington, DC 20036, Posted on August 2016.
